Traffic Safety Facts

2019 Data

April 2021

DOT HS 813 112

NHTSA

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

Motorcycles

The following definitions apply to terms in this fact sheet:

- For the purposes of this fact sheet, motorcycles include two- and three-wheeled motorcycles, off-road motorcycles, mopeds, scooters, mini bikes, and pocket bikes.
- The motorcycle rider is the person operating the motorcycle; the passenger is a person seated on, but not operating, the motorcycle; the motorcyclist is a general term referring to either the rider or passenger.
- Drivers or motorcycle riders are considered to be alcohol-impaired when their blood alcohol concentrations (BACs) are .08 grams per deciliter (g/dL) or higher.

Key Findings

- In 2019 there were 5,014 motorcyclists killed, which accounted for 14 percent of traffic fatalities.
- The number of motorcyclist fatalities in 2019 decreased from 2018, from 5,038 to 5,014.
- An estimated 84,000 motorcyclists were injured in 2019, a 2-percent increase from 82,000 motorcyclists injured in 2018.
- Per vehicle miles traveled in 2019, motorcyclist fatalities occurred nearly 29 times more frequently than passenger car occupant fatalities in traffic crashes.
- Thirty percent of motorcycle riders involved in fatal crashes in 2019 were riding without valid motorcycle licenses.
- In 2019 motorcycle riders involved in fatal crashes had higher percentages of alcohol impairment than drivers of any other motor vehicle type (29% for motorcycles, 20% for passenger cars, 19% for light trucks, and 2% for large trucks).
- Forty-two percent of motorcycle riders who died in single-vehicle crashes in 2019 were alcohol-impaired.
- Motorcycle riders killed in traffic crashes at night were almost three times more frequently alcohol-impaired than those killed during the day in 2019.
- In States without universal helmet laws, 57 percent of motorcyclists killed in 2019 were not wearing helmets, as compared to 9 percent in States with universal helmet laws.

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 National Automotive Sampling System (NASS) General Estimates System (GES) and Crash Report Sampling System (CRSS). Refer to the end of this publication for more information on FARS, NASS GES, and CRSS.

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

U.S. Department of Transportation

National Highway Traffic Safety Administration

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Overview

In 2019:

- There were 5,014 motorcyclists killed in motor vehicle traffic crashes – lower than the 5,038 motorcyclists killed in 2018.
- Two-wheeled motorcycles accounted for 91 percent of all motorcycles involved in fatal crashes.
- Motorcyclists accounted for 14 percent of all traffic fatalities and 17 percent of all occupant (driver and passenger) fatalities.
- Of the 5,014 motorcyclists killed in traffic crashes, 94 percent (4,733) were riders and 6 percent (281) were passengers.
- There were an estimated 84,000 motorcyclists injured in 2019, a 2-percent increase from 82,000 motorcyclists injured in 2018.

Table 1 presents information about motorcyclists killed and injured from 2010 to 2019. From 2010 to 2019 motorcyclist fatalities increased by 11 percent and peaked in 2016. The number of registered motorcycles and motorcycle vehicle miles traveled (VMT) are also presented in Table 1, along with the respective fatality and injury rates.

Table 1

Motorcyclists Killed and Injured, and Fatality and Injury Rates, 2010-2019

Year	Killed	Registered Vehicles	Fatality Rate per 100,000 Registered Vehicles	VMT (millions)	Fatality Rate per 100 Million VMT
2010	4,518	8,009,503	56.41	18,513	24.40
2011	4,630	8,437,502	54.87	18,542	24.97
2012	4,986	8,454,939	58.97	21,385	23.32
2013	4,692	8,404,687	55.83	20,366	23.04
2014	4,594	8,417,718	54.58	19,970	23.00
2015	5,029	8,600,936	58.47	19,606	25.65
2016	5,337	8,679,380	61.49	20,445	26.10
2017	5,226	8,664,108	60.32	20,149	25.94
2018	5,038	8,659,741	58.18	20,076	25.09
2019	5,014	8,596,314	58.33	19,688	25.47
Year	**Injured**	**Registered Vehicles**	**Injury Rate per 100,000 Registered Vehicles**	**VMT (millions)**	**Injury Rate per 100 Million VMT**
2010	82,000	8,009,503	1,028	18,513	445
2011	82,000	8,437,502	968	18,542	441
2012	93,000	8,454,939	1,103	21,385	436
2013	89,000	8,404,687	1,056	20,366	436
2014	92,000	8,417,718	1,093	19,970	461
2015	89,000	8,600,936	1,032	19,606	453
2016†	104,000	8,679,380	1,203	20,445	511
2017†	89,000	8,664,108	1,023	20,149	440
2018†	82,000	8,659,741	945	20,076	408
2019†	84,000	8,596,314	975	19,688	426

Sources: FARS 2010-2018 Final File, 2019 Annual Report File (ARF); NASS GES 2010-2015 and CRSS 2016-2019; VMT and Registered Vehicles – Federal Highway Administration (FHWA)

†CRSS estimates and NASS GES estimates are not comparable due to different sample designs. Refer to end of document for more information about CRSS.

Motorcycles made up 3 percent of all registered vehicles in the United States in 2019 and accounted for only 0.6 percent of all VMT. Per registered vehicle in 2019, the fatality rate for motorcyclists (58.33) was more than 6 times the fatality rate for passenger car occupants (9.42) and almost 9 times the fatality rate for light-truck occupants (6.80), as shown in Table 2. The injury rate for motorcyclists (975) was lower than the injury rate for passenger car occupants (1,152), but higher than the injury rate of light-truck occupants (648).

Per VMT in 2019, the fatality rate for motorcyclists (25.47) was 29 times more than the passenger car occupant fatality rate (0.89) and nearly 40 times the fatality rate for light-truck occupants (0.64). The motorcyclist injury rate (426) was almost 4 times more than the injury rate of passenger car occupants (109) and nearly 7 times the injury rate of light-truck occupants (61).

Table 2
Occupant* Fatality Rates, by Vehicle Type, 2018 and 2019

Rate		Vehicle Type					
		Motorcycles		Passenger Cars		Light Trucks	
		Fatality Rate	Injury Rate	Fatality Rate	Injury Rate	Fatality Rate	Injury Rate
2018	Per 100,000 Registered Vehicles	58.18	945	9.70	1,137	7.05	652
	Per 100 Million VMT	25.09	408	0.92	108	0.67	62
2019	Per 100,000 Registered Vehicles	58.33	975	9.42	1,152	6.80	648
	Per 100 Million VMT	25.47	426	0.89	109	0.64	61

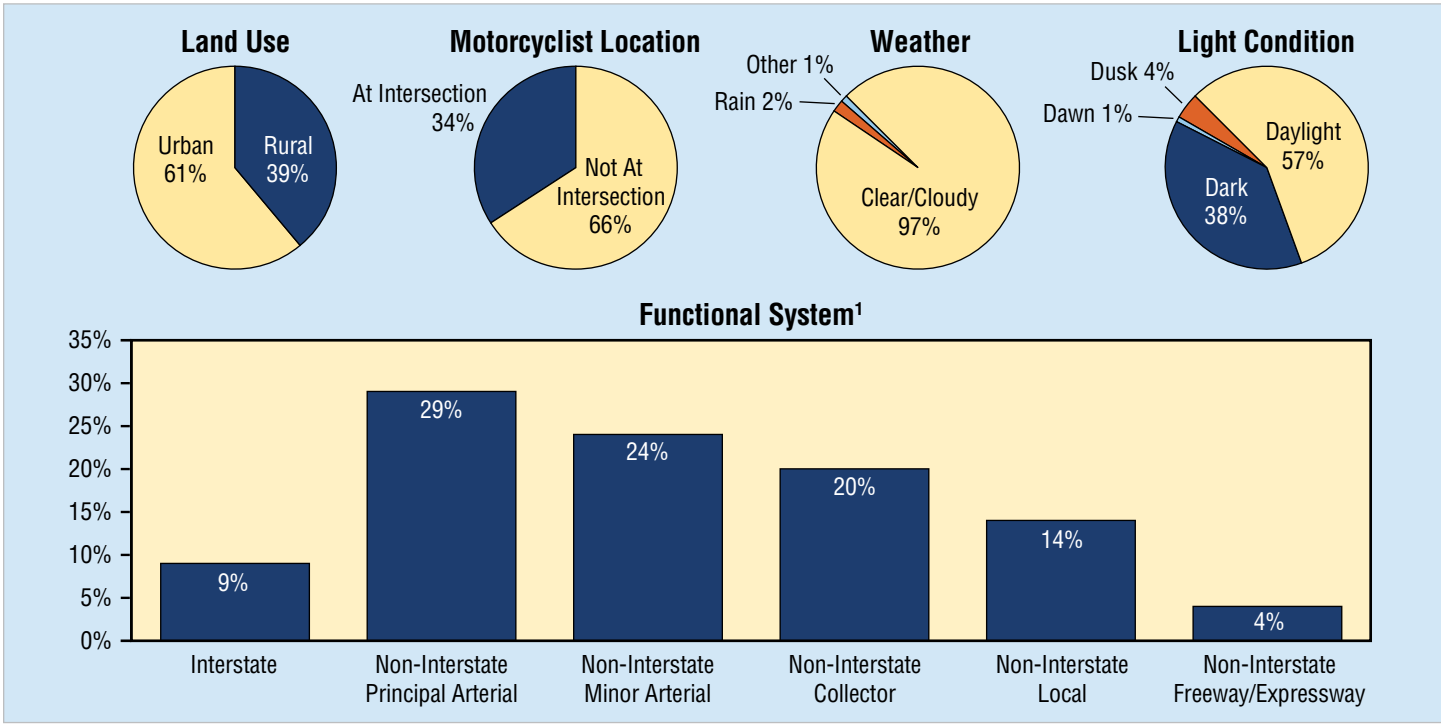
Sources: FARS 2018 Final File, 2019 ARF; CRSS 2018-2019; VMT and Registered Vehicles – FHWA
*Includes both riders/drivers and passengers.

Crash Characteristics

Figure 1 displays information about the environment surrounding the motorcyclist fatalities in 2019 including land use, motorcyclist location, light condition, weather, and functional system.[1] In 2019 (based on known values):

- 61 percent of the motorcycle fatalities occurred in urban areas compared to 39 percent in rural areas.
- 66 percent occurred at locations that were not intersections compared to 34 percent at intersections.
- 97 percent occurred in clear/cloudy conditions compared to 2 percent in rain conditions and 1 percent in snow/sleet, fog, or other conditions.
- 57 percent occurred during daylight compared to 38 percent in the dark, 4 percent during dusk, and 1 percent during dawn.
- 91 percent occurred on non-interstate roads compared to 9 percent on interstates.

Figure 1
Motorcyclist Fatalities in Relation to Land Use, Motorcyclist Location, Weather, Light Condition, and Functional System, 2019



Source: FARS 2019 ARF
Note: Unknowns were removed before calculating percentages.

[1] Definitions for the different functional system can be found at www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/fcauab.pdf

Crash Involvement

The most harmful event in 2019 for 2,811 (55%) of the 5,114 motorcycles involved in fatal crashes was collisions with motor vehicles in transport.

In two-vehicle crashes, 76 percent of the motorcycles involved in fatal crashes were struck in the front. Only 7 percent were struck in the rear.

Motorcycles were more frequently involved in fatal collisions with fixed objects than were other vehicle types. Twenty-three percent of motorcycles involved in fatal crashes in 2019 collided with fixed objects, compared to 16 percent for passenger cars, 13 percent for light trucks, and 4 percent for large trucks.

In 2019 there were 2,495 fatal two-vehicle crashes each involving a motorcycle and another type of vehicle. In 41 percent (1,034) of these crashes, the other vehicles were turning left while the motorcycles were going straight, passing, or overtaking other vehicles. Both vehicles were going straight in 558 crashes (22%).

Motorcyclists

Age

The 55-and-older age group accounted for 22 percent of motorcyclists killed in 2010, and increased to 28 percent in 2019. Over the 10-year period from 2010 to 2019, motorcyclist fatalities among the 55-and-older age group increased by 40 percent, from 1,000 to 1,399. In 2010, the average age of motorcycle riders killed in traffic crashes was 42, whereas in 2019 the average age was 43.

Weekday is defined as Monday 6 a.m. to Friday 5:59 p.m. and weekend is defined as Friday 6 p.m. to Monday 5:59 a.m. Table 3 shows that in 2010 and 2019 roughly half the motorcyclists were killed in traffic crashes during the weekend versus weekday. Additionally, motorcyclist fatalities on weekdays have increased by 16 percent from 2,244 in 2010 to 2,612 in 2019.

Based on the weekday and weekend definitions above, there are 108 weekday hours (4.5 days) and 60 weekend hours (2.5 days). There are 234 weekdays in a year (52 weeks x 4.5 days) and 130 weekend days (52 weeks x 2.5 days). There were more than 1.6 times as many motorcyclist fatalities in traffic crashes in 2019 on weekends (18.4) versus weekdays (11.2), which decreased from 1.8 times in 2010 (17.4 versus 9.6). Among the different age groups, the 50-to-54 and 45-to-49 motorcyclists have the highest rate of motorcyclists killed in traffic crashes on weekends (2.2 and 2.1, respectively) and weekdays (1.1) in 2010. In 2019 the 25-to-29 motorcyclists had the highest rate of fatalities during the weekend (2.5) and weekday (1.5).

Table 3
Motorcyclist Fatalities, by Age Group and Day of Week, 2010 and 2019

Age Group	2010			2019		
	Weekday	Weekend	Total*	Weekday	Weekend	Total*
<15	12	3	15	10	8	18
15-20	133	106	239	135	103	238
21-24	218	202	422	241	205	447
25-29	244	251	495	346	325	674
30-34	203	182	385	267	234	502
35-39	194	234	429	240	210	450
40-44	214	262	476	189	187	376
45-49	250	269	520	211	222	435
50-54	252	284	536	230	241	473
55-59	207	203	411	258	248	508
60-64	155	153	308	198	183	381
65+	161	119	281	287	222	510
Total*	**2,244**	**2,268**	**4,518**	**2,612**	**2,390**	**5,014**

Source: FARS 2010 Final File, 2019 ARF
Weekday — Monday 6 a.m. to Friday 5:59 p.m.
Weekend — Friday 6 p.m. to Monday 5:59 a.m.
*Includes unknown age and unknown day of week.

Motorcycle Engine Size

Table 4 presents motorcyclist fatalities by the engine size (displacement) of the motorcycles. Twenty-four percent of motorcyclists killed in traffic crashes in 2019 were riding motorcycles with engine sizes from 1,001 to 1,500 cubic centimeters (cc), down from 33 percent in 2010. Twenty-six percent of motorcyclists killed in 2019 were riding motorcycles with engine sizes of 1,501 cc or higher, up from 14 percent in 2010.

The number of motorcyclist fatalities on motorcycles with engine sizes of 1,000 cc or less showed an increase of 15 percent during this time. Motorcyclist fatalities on motorcycles with engine sizes between 1,001 and 1,500 cc decreased by 19 percent (from 1,475 to 1,195), while the number of motorcyclists killed on motorcycles with engine sizes 1,501 cc or higher increased by 103 percent (from 638 to 1,292).

Table 4
Motorcyclist Fatalities, by Engine Size (cc), 2010 and 2019

	Engine Size (cc)										Total	
	Up to 500		501–1,000		1,001–1,500		1,501 & Higher		Unknown			
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2010	209	5%	1,650	37%	1,475	33%	638	14%	546	12%	4,518	100%
2019	372	7%	1,768	35%	1,195	24%	1,292	26%	387	8%	5,014	100%

Source: FARS 2010 Final File, 2019 ARF
Notes: Other motorcycle characteristics beside engine size (displacement) influence power and speed capability. NHTSA has not determined that there is a causal relationship between displacement and fatality risk. FHWA motorcycle registration data not available by engine size.

Speeding

NHTSA considers a crash to be speeding-related if the driver was charged with a speeding-related offense or if an investigating police officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor in the crash. Thirty-three percent of all motorcycle riders involved in fatal crashes in 2019 were speeding, compared to 19 percent for passenger car drivers, 15 percent for light-truck drivers, and 8 percent for large-truck drivers. As shown in Table 5, motorcycle riders 21-to-24 years old involved in fatal crashes had the highest speeding involvement at 49 percent.

Table 5
Motorcycle Riders Involved in Fatal Crashes, by Age Group and Speeding Involvement, 2019

	Speeding Involvement				Total	
	Speeding		Not Speeding			
Age Group	Number	Percent	Number	Percent	Number	Percent
<15	0	0%	13	100%	13	100%
15-20	103	44%	129	56%	232	100%
21-24	229	49%	234	51%	463	100%
25-29	316	46%	368	54%	684	100%
30-34	223	43%	297	57%	520	100%
35-39	178	38%	288	62%	466	100%
40-44	142	37%	247	63%	389	100%
45-49	129	30%	301	70%	430	100%
50-54	111	23%	375	77%	486	100%
55-59	110	21%	406	79%	516	100%
60-64	80	20%	311	80%	391	100%
65+	64	12%	456	88%	520	100%
Total*	**1,685**	**33%**	**3,426**	**67%**	**5,111**	**100%**

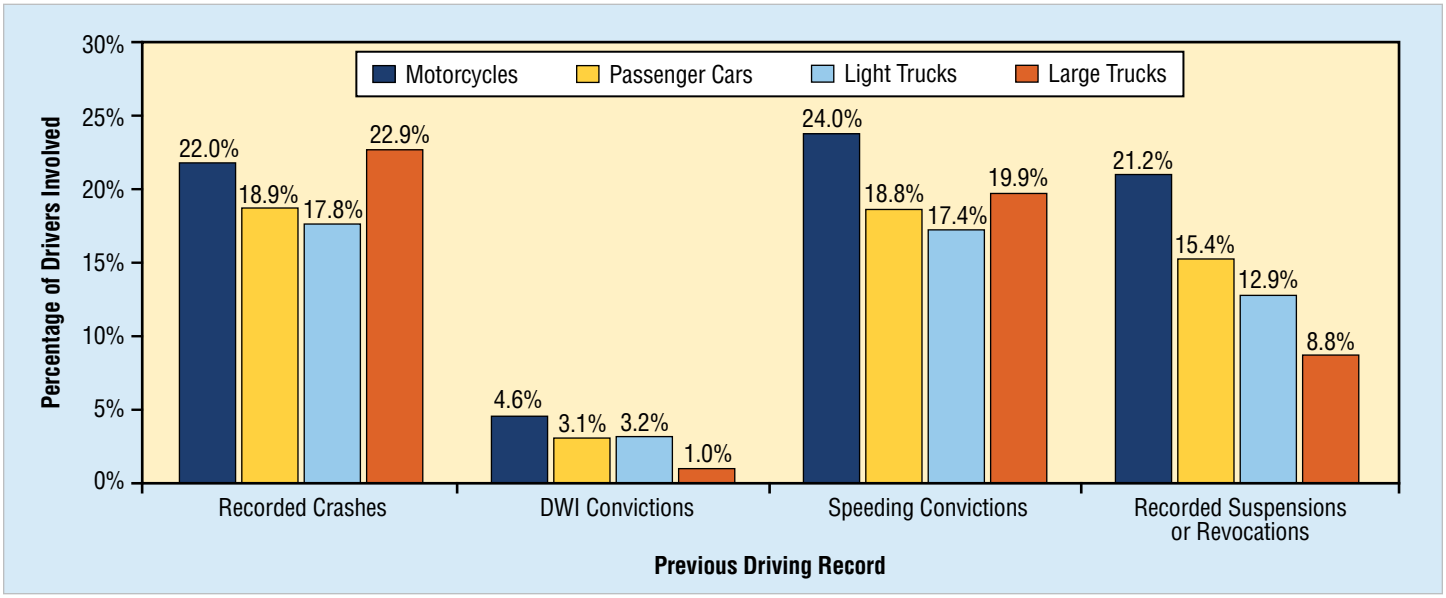
Source: FARS 2019 ARF
*Includes unknown age.

Licensing and Previous Driving Records

Thirty percent of motorcycle riders involved in fatal crashes in 2019 were riding without valid motorcycle licenses at the time of the crashes, while only 13 percent of passenger vehicle (passenger cars and light trucks) drivers in fatal crashes did not have valid licenses. A valid motorcycle license includes a rider having a valid driver license (non-CDL license status) with a motorcycle endorsement or a motorcycle-only license.

As shown in Figure 2, motorcycle riders involved in fatal crashes had the highest percentages of drivers with previous driving records as compared to other vehicle drivers. Motorcycle riders involved in fatal crashes were 1.4 times more likely than passenger car drivers to have previous license suspensions or revocations (21.2% and 15.4%, respectively). Note that FARS records drivers' previous driving records that occurred within 5 years from the crash date.

Figure 2
Previous Driving Records of Drivers Involved in Fatal Crashes, by Vehicle Type, 2019



Source: FARS 2019 ARF
Note: Excludes all drivers with previous records that were unknown.

Alcohol

In 2019 there were 4,733 motorcycle riders killed in traffic crashes. Of those, 1,383 (29%) were alcohol-impaired (BAC of .08 g/dL or higher). In addition, there were 354 (7%) motorcycle riders killed who had lower alcohol levels (BACs of .01 to .07 g/dL).

Motorcycle riders involved (killed or survived) in fatal crashes in 2019 had higher percentages of alcohol impairment than any other type of motor vehicle driver (29% for motorcycle riders, 20% for passenger car drivers, 19% for light-truck drivers, and 2% for large-truck drivers).

The highest percentages of alcohol-impaired motorcycle rider fatalities were in the 40-to-44 age group (40%) followed by the 35-to-39 age group (38%), 30-to-34 age group (35%) and 45-to-49 age group (35%), when compared to other age groups.

Forty-two percent of the 1,886 motorcycle riders who died in single-vehicle crashes in 2019 were alcohol-impaired as compared to 21 percent of the 2,847 motorcycle riders who died in multiple-vehicle crashes as shown in Table 6. Forty-eight percent of those killed in single-vehicle crashes on weekends in 2019 were alcohol-impaired.

Table 6
Alcohol-Impaired Motorcycle Riders Killed, by Crash Type and Day of Week, 2010 and 2019

Crash Type and Day of Week		2010			2019		
		Total Motorcycle Riders Killed	Alcohol-Impaired		Total Motorcycle Riders Killed	Alcohol-Impaired	
			Number	Percent		Number	Percent
Single-Vehicle	Weekday	869	302	35%	908	328	36%
	Weekend	1,055	500	47%	968	462	48%
	Total*	**1,930**	**805**	**42%**	**1,886**	**797**	**42%**
Multiple-Vehicle	Weekday	1,259	175	14%	1,604	253	16%
	Weekend	1,019	226	22%	1,242	333	27%
	Total*	**2,278**	**400**	**18%**	**2,847**	**586**	**21%**
Total	Weekday	2,128	477	22%	2,512	581	23%
	Weekend	2,074	726	35%	2,210	795	36%
	Total*	**4,208**	**1,205**	**29%**	**4,733**	**1,383**	**29%**

Source: FARS 2010 Final File, 2019 ARF
Weekday — Monday 6 a.m. to Friday 5:59 p.m.
Weekend — Friday 6 p.m. to Monday 5:59 a.m.
*Includes riders involved in fatal crashes when day of week was unknown.
Note: Percentages are computed based on unrounded estimates.

Motorcycle riders killed in traffic crashes at night were almost three times more frequently found to be alcohol-impaired than those killed during the day (44% and 15%, respectively).

The reported helmet use rate for alcohol-impaired motorcycle riders killed in traffic crashes was 54 percent as compared to 67 percent for those with no alcohol (BAC=.00 g/dL).

State

NHTSA estimates that helmets saved the lives of 1,872 motorcyclists in 2017. If all motorcyclists had worn helmets, an additional 749 lives could have been saved (latest data available).[2]

Helmets are estimated to be 37-percent effective in preventing fatalities to motorcycle riders and 41 percent for motorcycle passengers. In other words, for every 100 motorcycle riders killed in crashes while not wearing helmets, 37 of them could have been saved had all 100 worn helmets.[2]

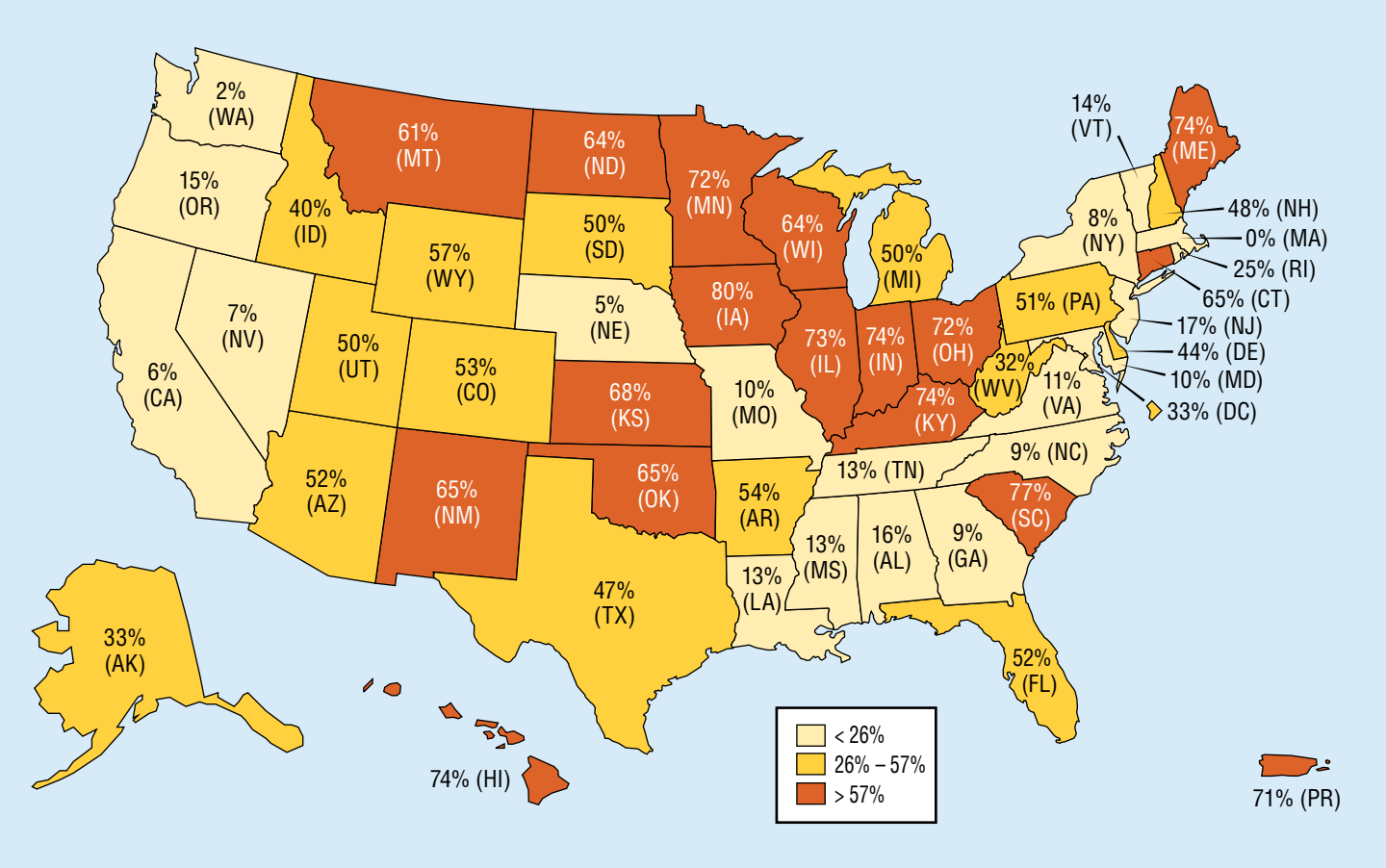
According to results from the National Occupant Protection Use Survey (NOPUS), the overall rate of DOT-compliant motorcycle helmet use in the United States was 70.8 percent in 2019. Helmet use continued to be significantly higher in States that required all motorcyclists to be helmeted than in other States.[3]

Reported helmet use rates for motorcyclists killed in 2019 were 62 percent for riders and 47 percent for passengers, compared with 63 percent and 53 percent, respectively, in 2018. Figure 3 presents the percentage of motorcyclists killed who were not helmeted by each State in 2019, based on known helmet use.

[2] National Center for Statistics and Analysis. (2019, December). Lives and costs saved by motorcycle helmets, 2017 (Traffic Safety Facts Crash•Stats Report No. DOT HS 812 867). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812867

[3] National Center for Statistics and Analysis. (2020, June). Motorcycle helmet use in 2019 – Overall results (Traffic Safety Fact Research Note. Report No. DOT HS 812 936). National Highway Traffic Safety Administration. Available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812936

Figure 3
Percentage of Known Unhelmeted* Motorcyclists Killed, 2019



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

All motorcycle helmets sold in the United States are required to meet Federal Motor Vehicle Safety Standard (FMVSS) 218, the performance standard that establishes the minimum level of protection for helmets designed for use by motorcyclists.

In 2019 only 19 States, the District of Columbia, and Puerto Rico required helmet use for all motorcyclists. Excluding the District of Columbia and Puerto Rico, the known helmet use percentages in fatal crashes ranged from 68 percent (West Virginia) to 100 percent (Massachusetts) for these 19 States.

In 28 States helmet use was required for only a subset of motorcyclists (typically, motorcyclists under age 18), and 3 States (Illinois, Iowa, and New Hampshire) did not require helmet use for motorcyclists of any age. The known helmet use percentages in fatal crashes ranged from 20 percent (Iowa) to 75 percent (Rhode Island) for these 31 States.

The most current information on helmet use laws is available on the Governors Highway Safety Association (GHSA) website at www.ghsa.org/state-laws/issues/motorcyclists. In States without universal helmet laws, 57 percent of motorcyclists killed in 2019 were not wearing helmets, as compared to 9 percent in States with universal helmet laws. According to NOPUS, in 2019 DOT-compliant motorcycle helmet use in States requiring all to use helmets was 89.2 percent compared to 56.5 percent in other States.

Table 7 shows that 39 percent of the 5,014 motorcyclists killed nationwide in traffic crashes were not helmeted, based on known helmet use. The State-level unhelmeted percentages ranged from a high of 80 percent (Iowa) to a low of 0 percent (Massachusetts).

Table 8 presents the percentage of motorcycle riders killed who were alcohol-impaired, by State where the crashes occurred. The percentages ranged from a low of 15 percent (South Dakota) to a high of 64 percent (Rhode Island), compared to the national average of 29 percent.

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

Table 7

Motorcyclist Fatalities, by State and Helmet Use, 2019

State	Helmet Use						Total		Percent Based on Known Helmet Use	
	Helmeted		Unhelmeted		Unknown					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Helmeted	Unhelmeted
Alabama	78	84%	15	16%	0	0%	93	100%	84%	16%
Alaska	4	67%	2	33%	0	0%	6	100%	67%	33%
Arizona	77	44%	84	48%	14	8%	175	100%	48%	52%
Arkansas	27	42%	32	50%	5	8%	64	100%	46%	54%
California	437	92%	28	6%	9	2%	474	100%	94%	6%
Colorado	48	47%	54	52%	1	1%	103	100%	47%	53%
Connecticut	15	33%	28	61%	3	7%	46	100%	35%	65%
Delaware	10	56%	8	44%	0	0%	18	100%	56%	44%
District of Columbia	2	67%	1	33%	0	0%	3	100%	67%	33%
Florida	280	47%	303	51%	8	1%	591	100%	48%	52%
Georgia	151	89%	15	9%	4	2%	170	100%	91%	9%
Hawaii	5	25%	14	70%	1	5%	20	100%	26%	74%
Idaho	15	60%	10	40%	0	0%	25	100%	60%	40%
Illinois	37	27%	100	72%	1	1%	138	100%	27%	73%
Indiana	32	25%	89	70%	6	5%	127	100%	26%	74%
Iowa	9	20%	35	80%	0	0%	44	100%	20%	80%
Kansas	13	32%	28	68%	0	0%	41	100%	32%	68%
Kentucky	24	26%	68	74%	0	0%	92	100%	26%	74%
Louisiana	69	79%	10	11%	8	9%	87	100%	87%	13%
Maine	7	26%	20	74%	0	0%	27	100%	26%	74%
Maryland	66	88%	7	9%	2	3%	75	100%	90%	10%
Massachusetts	28	61%	0	0%	18	39%	46	100%	100%	0%
Michigan	62	46%	61	46%	11	8%	134	100%	50%	50%
Minnesota	13	28%	33	72%	0	0%	46	100%	28%	72%
Mississippi	33	83%	5	13%	2	5%	40	100%	87%	13%
Missouri	106	86%	12	10%	5	4%	123	100%	90%	10%
Montana	9	39%	14	61%	0	0%	23	100%	39%	61%
Nebraska	21	84%	1	4%	3	12%	25	100%	95%	5%
Nevada	38	68%	3	5%	15	27%	56	100%	93%	7%
New Hampshire	15	50%	14	47%	1	3%	30	100%	52%	48%
New Jersey	68	80%	14	16%	3	4%	85	100%	83%	17%
New Mexico	17	31%	32	58%	6	11%	55	100%	35%	65%
New York	122	90%	11	8%	3	2%	136	100%	92%	8%
North Carolina	186	89%	19	9%	3	1%	208	100%	91%	9%
North Dakota	4	36%	7	64%	0	0%	11	100%	36%	64%
Ohio	45	28%	116	72%	1	1%	162	100%	28%	72%
Oklahoma	23	34%	42	62%	3	4%	68	100%	35%	65%
Oregon	46	81%	8	14%	3	5%	57	100%	85%	15%
Pennsylvania	85	48%	87	49%	4	2%	176	100%	49%	51%
Rhode Island	9	69%	3	23%	1	8%	13	100%	75%	25%
South Carolina	35	23%	115	75%	3	2%	153	100%	23%	77%
South Dakota	6	43%	6	43%	2	14%	14	100%	50%	50%
Tennessee	130	84%	20	13%	5	3%	155	100%	87%	13%
Texas	207	50%	187	45%	22	5%	416	100%	53%	47%
Utah	16	47%	16	47%	2	6%	34	100%	50%	50%
Vermont	6	75%	1	13%	1	13%	8	100%	86%	14%
Virginia	91	89%	11	11%	0	0%	102	100%	89%	11%
Washington	89	98%	2	2%	0	0%	91	100%	98%	2%
West Virginia	19	68%	9	32%	0	0%	28	100%	68%	32%
Wisconsin	31	36%	54	64%	0	0%	85	100%	36%	64%
Wyoming	6	40%	8	53%	1	7%	15	100%	43%	57%
U.S. Total	**2,972**	**59%**	**1,862**	**37%**	**180**	**4%**	**5,014**	**100%**	**61%**	**39%**
Puerto Rico	10	29%	24	71%	0	0%	34	100%	29%	71%

Source: FARS 2019 ARF
Note: Shading indicates requiring helmet use for all motorcyclists.

Table 8

Motorcycle Rider Fatalities, by State and Their BACs, 2019

State	Total Fatalities	Motorcycle Rider Fatalities, by Their BACs					
		BAC=.01+ g/dL		Alcohol-Impaired (BAC=.08+ g/dL)		Alcohol-Impaired (BAC=.15+ g/dL)	
		Number	Percent	Number	Percent	Number	Percent
Alabama	90	31	35%	27	30%	19	21%
Alaska	4	2	50%	1	25%	1	25%
Arizona	169	58	34%	46	27%	25	15%
Arkansas	58	15	26%	12	20%	8	13%
California	451	157	35%	123	27%	75	17%
Colorado	93	37	39%	28	30%	24	25%
Connecticut	43	22	51%	18	41%	10	24%
Delaware	15	6	41%	5	34%	3	19%
District of Columbia	3	1	33%	1	27%	1	40%
Florida	559	182	32%	149	27%	96	17%
Georgia	164	46	28%	38	23%	21	13%
Hawaii	20	8	38%	5	26%	4	20%
Idaho	24	11	47%	9	37%	7	27%
Illinois	131	61	46%	48	37%	28	21%
Indiana	120	40	33%	35	29%	21	17%
Iowa	38	20	54%	17	44%	9	23%
Kansas	36	13	37%	12	34%	7	19%
Kentucky	83	20	24%	16	19%	12	14%
Louisiana	85	32	38%	29	34%	18	21%
Maine	25	9	35%	8	30%	7	28%
Maryland	71	24	34%	18	25%	12	17%
Massachusetts	44	22	49%	20	44%	14	32%
Michigan	126	44	35%	38	30%	21	17%
Minnesota	41	18	44%	14	34%	12	29%
Mississippi	37	12	33%	8	22%	3	7%
Missouri	120	40	33%	29	24%	14	11%
Montana	22	11	51%	9	42%	8	37%
Nebraska	24	10	42%	7	30%	6	23%
Nevada	55	21	38%	14	26%	10	19%
New Hampshire	27	15	56%	8	29%	5	18%
New Jersey	79	38	49%	28	36%	13	17%
New Mexico	49	20	40%	15	30%	9	18%
New York	129	50	39%	33	26%	21	16%
North Carolina	203	60	29%	48	23%	28	14%
North Dakota	9	3	32%	3	32%	2	17%
Ohio	148	66	45%	49	33%	30	21%
Oklahoma	66	22	34%	17	25%	13	20%
Oregon	53	22	42%	15	28%	8	15%
Pennsylvania	166	53	32%	39	24%	20	12%
Rhode Island	11	10	91%	7	64%	4	36%
South Carolina	140	53	38%	45	32%	26	18%
South Dakota	14	3	23%	2	15%	2	11%
Tennessee	147	47	32%	42	28%	28	19%
Texas	400	178	44%	147	37%	85	21%
Utah	34	9	27%	7	21%	4	11%
Vermont	7	1	16%	1	16%	0	0%
Virginia	93	35	37%	32	35%	24	25%
Washington	89	36	40%	26	29%	14	16%
West Virginia	27	13	47%	11	39%	8	28%
Wisconsin	79	27	34%	23	29%	15	18%
Wyoming	12	6	48%	5	43%	4	32%
U.S. Total	**4,733**	**1,737**	**37%**	**1,383**	**29%**	**854**	**18%**
Puerto Rico	34	12	34%	11	31%	7	21%

Source: FARS 2019 ARF
Note: Percentages are computed based on unrounded estimates.

Important Safety Reminders

For Motorcyclists:

- Wearing a helmet is the single most effective way to protect yourself from a head injury. Use a motorcycle helmet for every ride, and ensure your passengers also use a helmet.
- Make sure your helmet has a valid U.S. Department of Transportation (DOT) label; the label means the helmet meets the Federal Motor Vehicle Safety Standards – this is also known as the FMVSS 218 standard. Novelty helmets without this label may not meet the same standard and will not provide the best protection needed in a crash.

- Check the fit of your helmet to ensure optimal protection.
- Wear protective gear like a sturdy jacket, pants, boots, and gloves; safety gear provides protection in case of falls or crashes, and improves comfort during the ride.
- Make yourself visible by using high-visibility colors and retro-reflective materials to maximize the ability of drivers to see you.
- Motorcycle riding requires full attention, skill, and coordination. Avoid combining riding with drinking alcohol or using other impairing drugs.

For Drivers:

- Always be on the look-out for motorcyclists.
- A motorcycle's smaller size means it can be hidden in your vehicle's blind spot.
- A motorcycle's size and narrow profile can make it difficult to judge its distance and speed. Take extra care when judging when to turn or merge.
- "Lane sharing" is when a motorcyclist travels in the same lane as another vehicle, for example when passing. In some States this is legal; it can help ease congestion.
- Keep a safe distance from the motorcycle in front of you; motorcyclists can slow their motorcycles by downshifting instead of using their brakes. This means the brake lights won't come on.
- Remember that motorcyclists sometimes change positions in their lane to avoid debris on the road.

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

The updated final counts for the previous data year will be reflected with the release of the recent year's ARF. For example, along with the release of the 2019 ARF, the 2018 Final File was released to replace the 2018 ARF. The final fatality count in motor vehicle traffic crashes for 2018 was 36,835, which was updated from 36,560 in the 2018 ARF. The number of motorcycle fatalities from the 2018 Final File was 5,038, which was updated from 4,985 from the 2018 ARF.

The 2016 and 2017 Final Files have been amended, but this amendment did not change the overall number of fatal crashes or fatalities. However, the number of motorcycle fatalities from the 2017 amended Final File was 5,226, which was updated from 5,229 from the 2017 Final File.

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. The new system, called CRSS, replaced the National Automotive Sampling System (NASS) General Estimates System (GES) in 2016. More information on CRSS can be found at www.nhtsa.gov/crash-data-systems/crash-report-sampling-system-crss.

Methodology Change for Estimating People Injured

NCSA changed the methodology of estimating people nonfatally injured in motor vehicle traffic crashes. The new approach combines people nonfatally injured from both FARS and NASS GES/CRSS. This is done by extracting people nonfatally injured in fatal crashes from FARS with people nonfatally injured in police-reported injury crashes from NASS GES/CRSS. The old approach extracted people nonfatally injured from only NASS GES/CRSS, regardless of crash severity. This change in methodology caused some estimates of people injured to change for prior years.

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

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

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