

Fatality Facts 2021

Motorcycles and ATVs

Overview

Motorcycles are less stable and less visible than cars and often have high performance capabilities. When motorcycles crash, their riders lack the protection of an enclosed vehicle, so they're more likely to be injured or killed. The federal government estimates that per mile traveled in 2021, the number of deaths on motorcycles was nearly 24 times the number in cars.

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Because serious head injury is common among fatally injured motorcyclists, helmet use is important. Helmets are about 37 percent effective in preventing motorcycle deaths

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and about 67 percent effective in preventing brain injuries.³ Yet only 17 states and the District of Columbia mandate helmet use by all riders.

All-terrain vehicles (ATVs) are not designed for on-highway use, but in recent years hundreds of riders died in crashes on public roads annually.

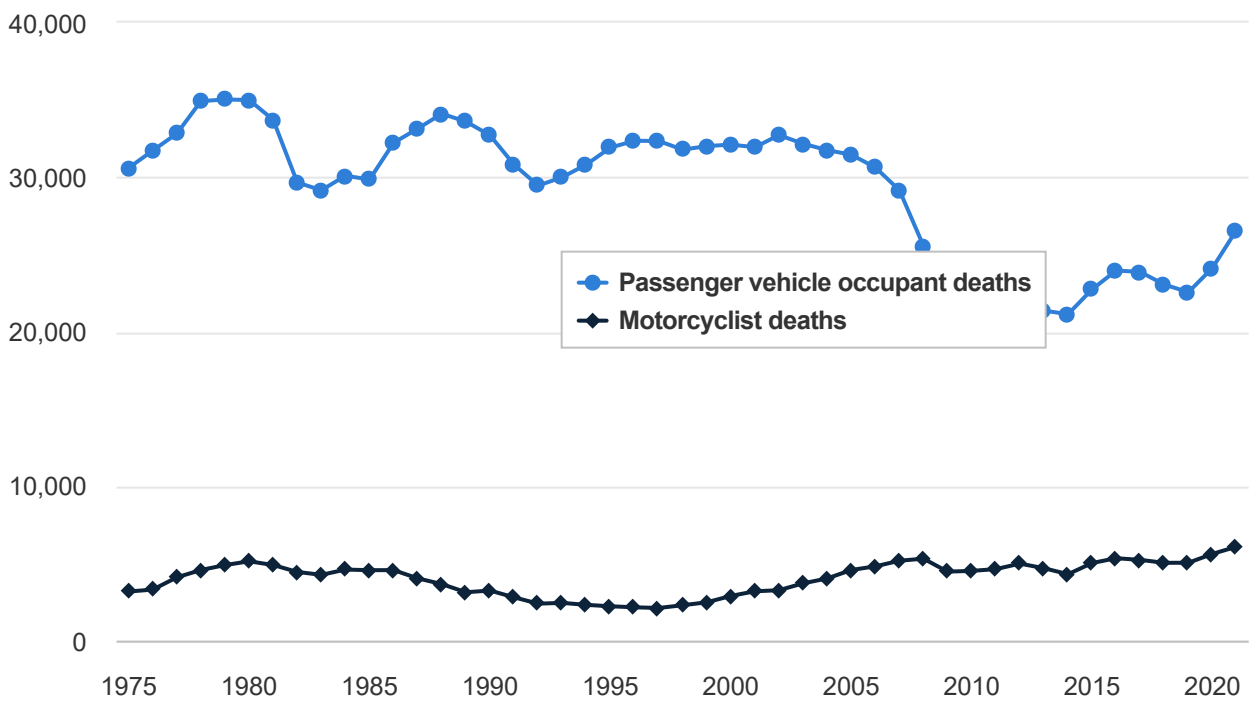
The following facts are based on analysis of data from the U.S. Department of Transportation's [Fatality Analysis Reporting System](#) (FARS).

Posted May 2023.

Trends

A total of 6,084 motorcyclists died in crashes in 2021. That is the highest number recorded and a 21 percent increase since 2019. Motorcycle deaths accounted for 14 percent of all motor vehicle crash deaths in 2021 and were nearly triple the number of motorcyclist deaths in 1997.

Passenger vehicle occupant deaths and motorcyclist deaths, 1975-2021



Passenger vehicle occupant and motorcyclist deaths as a percentage of all motor vehicle crash deaths, 1975-2021

Year	Passenger vehicle occupant deaths		Motorcyclist deaths		All motor vehicle deaths	
	Number	%	Number	%	Number	%
1975	30,601	69	3,180	7	44,525	100
1976	31,724	70	3,306	7	45,523	100
1977	32,823	69	4,099	9	47,878	100
1978	34,923	69	4,574	9	50,331	100
1979	35,026	69	4,892	10	51,093	100
1980	34,996	68	5,138	10	51,091	100
1981	33,711	68	4,896	10	49,301	100
1982	29,656	67	4,449	10	43,945	100
1983	29,154	68	4,260	10	42,589	100
1984	30,094	68	4,602	10	44,257	100
1985	29,848	68	4,562	10	43,825	100
1986	32,224	70	4,566	10	46,087	100
1987	33,145	71	4,034	9	46,390	100
1988	34,105	72	3,661	8	47,087	100

Passenger vehicle occupant and motorcyclist deaths as a percentage of all motor vehicle crash deaths, 1975-2021

Year	Passenger vehicle occupant deaths		Motorcyclist deaths		All motor vehicle deaths	
	Number	%	Number	%	Number	%
1989	33,599	74	3,135	7	45,582	100
1990	32,711	73	3,243	7	44,599	100
1991	30,810	74	2,805	7	41,508	100
1992	29,457	75	2,395	6	39,250	100
1993	29,994	75	2,445	6	40,150	100
1994	30,820	76	2,317	6	40,716	100
1995	31,914	76	2,226	5	41,817	100
1996	32,354	77	2,161	5	42,065	100
1997	32,343	77	2,116	5	42,013	100
1998	31,781	77	2,294	6	41,501	100
1999	32,008	77	2,483	6	41,717	100
2000	32,109	77	2,895	7	41,945	100
2001	31,938	76	3,195	8	42,196	100
2002	32,724	76	3,267	8	43,005	100
2003	32,166	75	3,710	9	42,884	100
2004	31,750	74	4,026	9	42,836	100
2005	31,455	72	4,575	11	43,510	100
2006	30,628	72	4,810	11	42,708	100
2007	29,155	71	5,174	13	41,259	100
2008	25,547	68	5,307	14	37,423	100
2009	23,507	69	4,467	13	33,883	100
2010	22,351	68	4,517	14	32,999	100
2011	21,413	66	4,630	14	32,479	100
2012	21,906	65	4,986	15	33,782	100
2013	21,361	65	4,691	14	32,894	100
2014	21,131	65	4,302	13	32,744	100
2015	22,741	64	5,026	14	35,485	100
2016	23,957	63	5,337	14	37,806	100

Passenger vehicle occupant and motorcyclist deaths as a percentage of all motor vehicle crash deaths, 1975-2021

Year	Passenger vehicle occupant deaths		Motorcyclist deaths		All motor vehicle deaths	
	Number	%	Number	%	Number	%
2017	23,866	64	5,229	14	37,473	100
2018	23,046	63	5,038	14	36,835	100
2019	22,557	62	5,044	14	36,355	100
2020	24,135	62	5,619	14	39,007	100
2021	26,585	62	6,084	14	42,939	100

The rate of unlicensed fatally injured motorcycle drivers during 2021 was higher than the rate of unlicensed fatally injured passenger vehicle drivers (38 percent vs. 20 percent). Both rates increased substantially from 2019 to 2020 and were virtually unchanged in 2021.

Passenger vehicle and motorcycle driver deaths by driver's license status, 2012-2021

Year	Passenger vehicle drivers						Motorcycle drivers					
	No valid license		Valid license		Total*		No valid license		Valid license		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2012	2,366	15	13,464	85	15,915	100	1,216	26	3,399	73	4,652	100
2013	2,319	15	13,174	85	15,577	100	1,227	28	3,165	72	4,422	100
2014	2,512	16	12,879	83	15,495	100	1,116	28	2,900	72	4,041	100
2015	2,583	16	13,942	84	16,629	100	1,375	29	3,326	70	4,732	100
2016	2,866	16	14,660	83	17,641	100	1,445	29	3,516	70	4,998	100
2017	2,928	16	14,703	83	17,751	100	1,514	31	3,390	69	4,941	100
2018	2,781	16	14,359	83	17,263	100	1,404	30	3,270	69	4,724	100
2019	2,742	16	14,027	83	16,878	100	1,494	31	3,224	68	4,763	100
2020	3,717	20	14,402	79	18,316	100	2,032	38	3,231	61	5,307	100
2021	4,121	20	15,898	78	20,261	100	2,184	38	3,544	61	5,785	100

*Total includes other and/or unknowns

Thirty-eight percent of motorcyclist deaths in 2021 occurred in single-vehicle crashes, and 62 percent occurred in multiple-vehicle crashes.

Motorcyclist deaths by crash type, 1975-2021

Year	Single-vehicle		Multiple-vehicle		All crashes*	
	Deaths	%	Deaths	%	Deaths	%
1975	1,149	36	2,025	64	3,180	100
1976	1,247	38	2,042	62	3,306	100
1977	1,579	39	2,503	61	4,099	100
1978	1,720	38	2,831	62	4,574	100
1979	1,919	39	2,957	60	4,892	100
1980	2,067	40	3,046	59	5,138	100
1981	1,952	40	2,920	60	4,896	100
1982	1,844	41	2,605	59	4,449	100
1983	1,835	43	2,425	57	4,260	100
1984	1,925	42	2,677	58	4,602	100
1985	1,928	42	2,634	58	4,562	100
1986	1,929	42	2,637	58	4,566	100
1987	1,661	41	2,373	59	4,034	100
1988	1,518	41	2,143	59	3,661	100
1989	1,382	44	1,753	56	3,135	100
1990	1,406	43	1,837	57	3,243	100
1991	1,238	44	1,567	56	2,805	100
1992	1,074	45	1,321	55	2,395	100
1993	1,021	42	1,424	58	2,445	100
1994	981	42	1,336	58	2,317	100
1995	927	42	1,299	58	2,226	100
1996	906	42	1,255	58	2,161	100
1997	898	42	1,218	58	2,116	100
1998	1,013	44	1,281	56	2,294	100
1999	1,098	44	1,385	56	2,483	100
2000	1,270	44	1,625	56	2,895	100
2001	1,422	45	1,773	55	3,195	100
2002	1,495	46	1,772	54	3,267	100

*Total includes other and/or unknowns

Motorcyclist deaths by crash type, 1975-2021

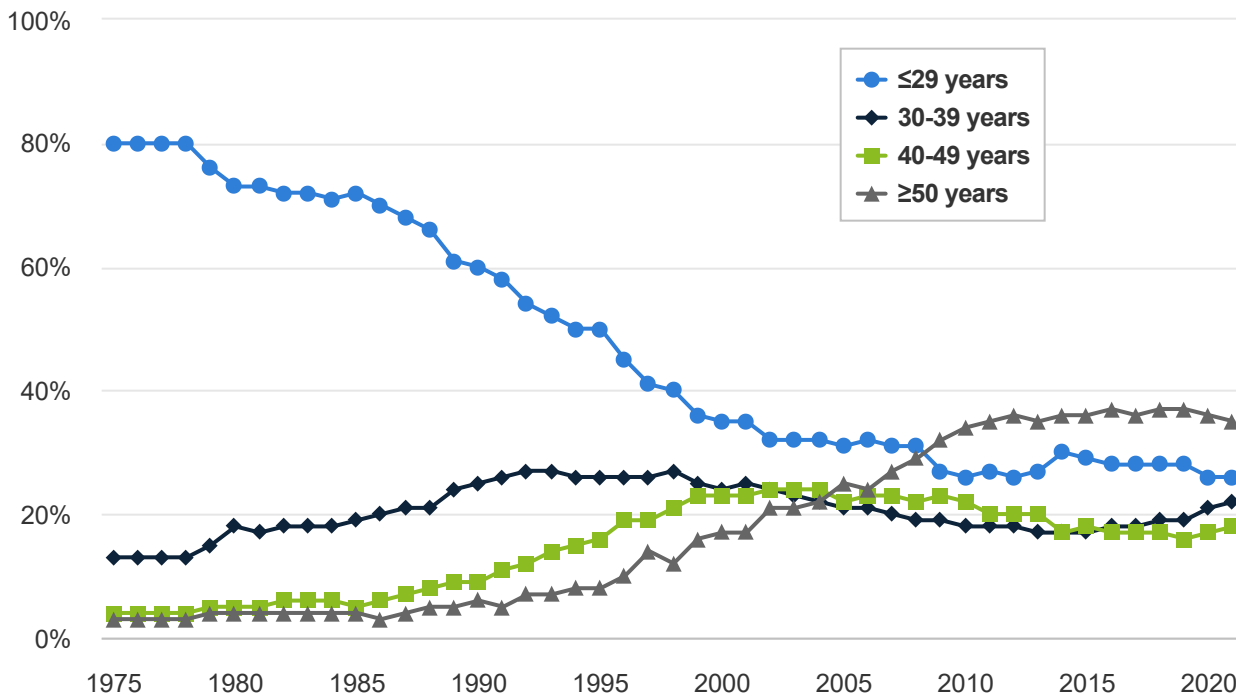
Year	Single-vehicle		Multiple-vehicle		All crashes*	
	Deaths	%	Deaths	%	Deaths	%
2003	1,569	42	2,141	58	3,710	100
2004	1,754	44	2,272	56	4,026	100
2005	1,971	43	2,599	57	4,575	100
2006	2,082	43	2,722	57	4,810	100
2007	2,262	44	2,910	56	5,174	100
2008	2,394	45	2,909	55	5,307	100
2009	1,987	44	2,478	55	4,467	100
2010	2,023	45	2,494	55	4,517	100
2011	2,088	45	2,542	55	4,630	100
2012	2,133	43	2,853	57	4,986	100
2013	1,938	41	2,753	59	4,691	100
2014	1,799	42	2,503	58	4,302	100
2015	1,994	40	3,032	60	5,026	100
2016	2,081	39	3,256	61	5,337	100
2017	1,971	38	3,258	62	5,229	100
2018	1,879	37	3,159	63	5,038	100
2019	1,959	39	3,085	61	5,044	100
2020	2,250	40	3,369	60	5,619	100
2021	2,298	38	3,786	62	6,084	100

*Total includes other and/or unknowns

Age and sex

In the late 1970s the proportion of fatally injured motorcyclists who were 50 and older started to increase, rising from 3 percent of all rider deaths in 1975 to 14 percent in 1997 and 35 percent in 2021. In contrast, 26 percent of the fatally injured motorcyclists in 2021 were younger than 30, compared with 80 percent in 1975.

Percentage of motorcyclist deaths by age, 1975-2021



Motorcyclist deaths by age, 1975-2021

Year	≤29 years		30-39 years		40-49 years		≥50 years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%
1975	2,538	80	428	13	129	4	81	3	3,180	100
1976	2,631	80	429	13	143	4	101	3	3,306	100
1977	3,279	80	537	13	149	4	129	3	4,099	100
1978	3,639	80	613	13	185	4	130	3	4,574	100
1979	3,732	76	747	15	233	5	173	4	4,892	100
1980	3,756	73	918	18	278	5	182	4	5,138	100
1981	3,594	73	850	17	262	5	181	4	4,896	100
1982	3,210	72	808	18	253	6	167	4	4,449	100
1983	3,074	72	776	18	239	6	165	4	4,260	100
1984	3,285	71	833	18	275	6	195	4	4,602	100
1985	3,265	72	861	19	247	5	184	4	4,562	100
1986	3,218	70	913	20	268	6	156	3	4,566	100
1987	2,727	68	853	21	286	7	168	4	4,034	100
1988	2,426	66	774	21	290	8	170	5	3,661	100

*Total includes other and/or unknowns

Motorcyclist deaths by age, 1975-2021

Year	≤29 years		30-39 years		40-49 years		≥50 years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%
1989	1,927	61	760	24	288	9	157	5	3,135	100
1990	1,961	60	816	25	277	9	188	6	3,243	100
1991	1,629	58	728	26	296	11	151	5	2,805	100
1992	1,299	54	652	27	280	12	164	7	2,395	100
1993	1,267	52	665	27	335	14	176	7	2,445	100
1994	1,168	50	607	26	346	15	195	8	2,317	100
1995	1,103	50	576	26	359	16	188	8	2,226	100
1996	965	45	555	26	420	19	221	10	2,161	100
1997	860	41	556	26	405	19	294	14	2,116	100
1998	921	40	612	27	475	21	285	12	2,294	100
1999	898	36	612	25	570	23	403	16	2,483	100
2000	1,006	35	706	24	677	23	501	17	2,895	100
2001	1,134	35	798	25	729	23	532	17	3,195	100
2002	1,042	32	780	24	769	24	674	21	3,267	100
2003	1,179	32	837	23	903	24	789	21	3,710	100
2004	1,297	32	875	22	971	24	883	22	4,026	100
2005	1,441	31	975	21	1,027	22	1,131	25	4,575	100
2006	1,524	32	1,000	21	1,107	23	1,178	24	4,810	100
2007	1,581	31	1,043	20	1,173	23	1,372	27	5,174	100
2008	1,620	31	989	19	1,178	22	1,518	29	5,307	100
2009	1,186	27	851	19	1,016	23	1,411	32	4,467	100
2010	1,171	26	814	18	996	22	1,535	34	4,517	100
2011	1,228	27	827	18	944	20	1,630	35	4,630	100
2012	1,290	26	913	18	990	20	1,792	36	4,986	100
2013	1,281	27	817	17	953	20	1,640	35	4,691	100
2014	1,276	30	725	17	747	17	1,553	36	4,302	100
2015	1,477	29	855	17	884	18	1,808	36	5,026	100
2016	1,508	28	963	18	905	17	1,955	37	5,337	100

*Total includes other and/or unknowns

Motorcyclist deaths by age, 1975-2021

Year	≤29 years		30-39 years		40-49 years		≥50 years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%
2017	1,481	28	964	18	892	17	1,889	36	5,229	100
2018	1,396	28	934	19	864	17	1,844	37	5,038	100
2019	1,388	28	962	19	816	16	1,876	37	5,044	100
2020	1,486	26	1,192	21	930	17	2,006	36	5,619	100
2021	1,555	26	1,310	22	1,078	18	2,133	35	6,084	100

*Total includes other and/or unknowns

Ninety-two percent of motorcyclists killed in 2021 were males.

Motorcyclist deaths by age and sex, 2021

Age	Male		Female		Total*	
	Number	%	Number	%	Number	%
<16	28	90	3	10	31	100
16-19	195	94	11	5	208	100
20-24	562	94	37	6	600	100
25-29	672	94	42	6	716	100
30-34	670	92	55	8	725	100
35-39	549	94	35	6	585	100
40-44	478	90	56	10	534	100
45-49	491	90	52	10	544	100
50-54	502	90	56	10	558	100
55-59	487	90	54	10	541	100
60-69	659	90	72	10	732	100
≥70	288	95	14	5	302	100
Total*	5,587	92	488	8	6,084	100

*Total includes other and/or unknowns

Fifty-seven percent of the female motorcyclists who died in crashes in 2021 were passengers, and their deaths

represented 92 percent of the passenger deaths. The vast majority of male motorcyclists who died were drivers.

Motorcyclist deaths by person type and sex, 2021						
Person type	Male		Female		Total*	
	Number	%	Number	%	Number	%
Driver	5,564	96	212	4	5,785	100
Passenger	23	8	276	92	299	100
Total	5,587	92	488	8	6,084	100

*Total includes other and/or unknowns

Helmet use

In 2021, 60 percent of fatally injured motorcycle drivers were helmeted. Helmet use was lower, at 46 percent, for people killed as passengers on motorcycles.

Helmet use of fatally injured motorcycle drivers and passengers, 2021						
	Helmet		No helmet		Total*	
	Number	%	Number	%	Number	%
Driver	3,445	60	2,144	37	5,785	100
Passenger	138	46	150	50	299	100
Total	3,583	59	2,294	38	6,084	100

*Total includes other and/or unknowns

In 2021, 87 percent of fatally injured motorcyclists were helmeted in states with helmet laws that cover all riders, in contrast to only 31 percent in states with no helmet law. In states with helmet laws that cover only some riders, 42 percent of fatally injured motorcyclists were helmeted.

Helmet use of fatally injured motorcyclists by helmet law status, 2021						
	Helmet		No helmet		Total*	
	Number	%	Number	%	Number	%
No law	85	31	179	66	270	100
Partial law	1,474	42	1,902	54	3,493	100
Universal law	2,024	87	213	9	2,321	100

*Total includes other and/or unknowns

Helmet use of fatally injured motorcyclists by helmet law status, 2021

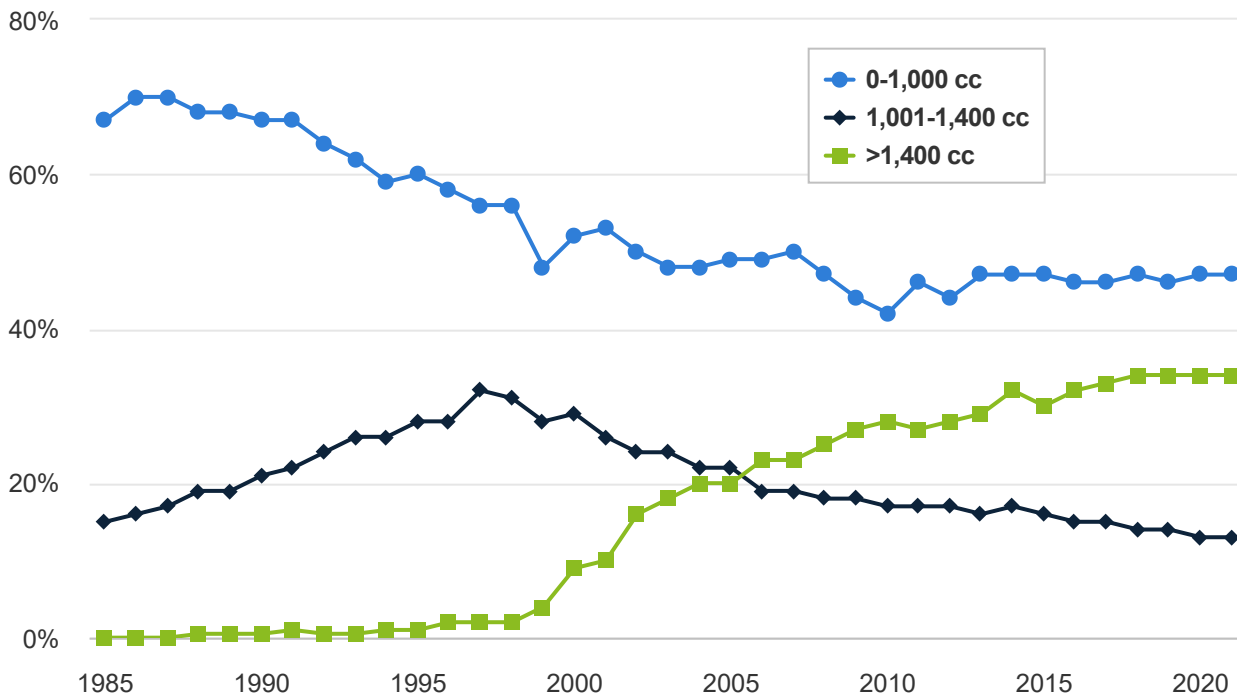
	Helmet		No helmet		Total*	
	Number	%	Number	%	Number	%
Total	3,583	59	2,294	38	6,084	100

*Total includes other and/or unknowns

Motorcycle type and engine size

Engine sizes of motorcycles whose drivers were killed in crashes have gone up dramatically. Among motorcycle drivers killed in 2021, 34 percent drove motorcycles with engine sizes larger than 1,400 cc, compared with 9 percent in 2000 and less than 1 percent in 1990.

Percentage of motorcycle driver deaths by motorcycle engine size, 1985-2021



Motorcycle driver deaths by motorcycle engine size, 1985-2021

Year	0-1,000 cc		1,001-1,400 cc		>1,400 cc		Total*
	Number	%	Number	%	Number	%	Number
1985	2,682	67	614	15	0	0	4,021

*Total includes other and/or unknowns

Motorcycle driver deaths by motorcycle engine size, 1985-2021

Year	0-1,000 cc		1,001-1,400 cc		>1,400 cc		Total*
	Number	%	Number	%	Number	%	Number
1986	2,822	70	625	16	0	0	4,019
1987	2,515	70	602	17	0	0	3,590
1988	2,219	68	617	19	6	<1	3,281
1989	1,879	68	539	19	3	<1	2,780
1990	1,937	67	620	21	5	<1	2,895
1991	1,672	67	556	22	13	1	2,496
1992	1,389	64	522	24	8	<1	2,172
1993	1,371	62	586	26	11	<1	2,212
1994	1,244	59	540	26	15	1	2,092
1995	1,215	60	568	28	22	1	2,020
1996	1,135	58	552	28	38	2	1,962
1997	1,079	56	618	32	33	2	1,937
1998	1,169	56	650	31	46	2	2,089
1999	1,099	48	644	28	99	4	2,286
2000	1,371	52	779	29	234	9	2,651
2001	1,553	53	781	26	309	10	2,953
2002	1,506	50	737	24	482	16	3,031
2003	1,641	48	830	24	614	18	3,423
2004	1,797	48	813	22	724	20	3,711
2005	2,092	49	932	22	865	20	4,253
2006	2,200	49	862	19	1,018	23	4,492
2007	2,425	50	917	19	1,120	23	4,853
2008	2,360	47	877	18	1,245	25	4,970
2009	1,847	44	736	18	1,144	27	4,163
2010	1,772	42	731	17	1,182	28	4,207
2011	1,980	46	755	17	1,183	27	4,341
2012	2,027	44	791	17	1,316	28	4,652
2013	2,063	47	703	16	1,281	29	4,422

*Total includes other and/or unknowns

Motorcycle driver deaths by motorcycle engine size, 1985-2021

Year	0-1,000 cc		1,001-1,400 cc		>1,400 cc		Total*
	Number	%	Number	%	Number	%	Number
2014	1,890	47	678	17	1,286	32	4,041
2015	2,244	47	741	16	1,400	30	4,732
2016	2,314	46	759	15	1,581	32	4,998
2017	2,295	46	726	15	1,606	33	4,941
2018	2,197	47	664	14	1,586	34	4,724
2019	2,193	46	679	14	1,624	34	4,763
2020	2,486	47	705	13	1,781	34	5,307
2021	2,697	47	757	13	1,982	34	5,785

*Total includes other and/or unknowns

Among the motorcycles whose drivers were killed in 2021, 94 percent of touring bikes had engines larger than 1,400 cc, while virtually all supersport bikes had engine sizes of 1,000 cc or smaller.

Fatally injured motorcycle drivers by motorcycle type and engine size, 2021

	0-1,000 cc		1,001-1,400 cc		>1,400 cc		Total *	
	Number	%	Number	%	Number	%	Number	%
Cruiser/standard	459	26	438	25	836	48	1,733	100
Touring	1	<1	66	6	1,117	94	1,184	100
Sport-touring	16	23	53	77	0	0	69	100
Sport/unclad sport	589	80	140	19	9	1	738	100
Supersport	1,152	99	17	1	0	0	1,169	100
Off-road	121	100	0	0	0	0	121	100
Other/unknown	359	47	43	6	20	3	771	100
Total	2,697	47	757	13	1,982	34	5,785	100

*Total includes other and/or unknowns

Among fatally injured motorcycle drivers in 2021, 83 percent of cruiser or standard motorcycle drivers were 30 or older, as were 93 percent of touring bike drivers. In contrast, 46 percent of fatally injured supersport and sport/unclad sport drivers in 2021 were younger than 30.

Fatally injured motorcycle drivers by age and motorcycle type, 2021

	<30 years		30-39 years		40-49 years		50+ years		Total *	
	Number	%	Number	%	Number	%	Number	%	Number	%
Cruiser/standard	297	17	320	18	331	19	784	45	1,733	100
Touring	80	7	143	12	258	22	701	59	1,184	100
Sport-touring	6	9	9	13	11	16	43	62	69	100
Sport/unclad sport	339	46	188	25	117	16	93	13	738	100
Supersport	540	46	387	33	173	15	68	6	1,169	100
Off-road	69	57	31	26	9	7	12	10	121	100
Other/unknown	164	21	176	23	117	15	311	40	771	100
Total	1,495	26	1,254	22	1,016	18	2,012	35	5,785	100

*Total includes other and/or unknowns

At 81 percent, helmet use was highest among fatally injured drivers of supersport motorcycles in 2021, followed closely by sport/unclad sport at 80 percent and then sport-touring at 67 percent. About half of fatally injured drivers of touring motorcycles and of cruisers or standard motorcycles were helmeted.

Helmet use of fatally injured motorcycle drivers by motorcycle type, 2021

	Helmet		No helmet		Total*	
	Number	%	Number	%	Number	%
Cruiser/standard	897	52	794	46	1,733	100
Touring	590	50	559	47	1,184	100
Sport-touring	46	67	17	25	69	100
Sport/unclad sport	590	80	132	18	738	100
Supersport	946	81	179	15	1,169	100
Off-road	35	29	82	68	121	100
Other	204	53	165	43	382	100
Unknown	137	35	216	56	389	100
Total	3,445	60	2,144	37	5,785	100

*Total includes other and/or unknowns

When and where they died

Fifty-nine percent of motorcyclist deaths in 2021 occurred during May-September. Fatalities peaked in June and were lowest in February.

Motorcyclist deaths by month, 2021		
Month	Deaths	%
January	201	3
February	181	3
March	419	7
April	548	9
May	683	11
June	730	12
July	721	12
August	723	12
September	720	12
October	569	9
November	326	5
December	263	4
Total	6,084	100

Forty-nine percent of motorcyclist deaths in 2021 occurred on weekends, and those deaths were more likely to occur after 6 p.m. compared with weekdays.

Motorcyclist deaths by time of day, 2021					
	Weekend (6 p.m. Friday - 6 a.m. Monday)		Other times		Total
	Number	%	Number	%	
Midnight - 3 a.m.	330	11	178	5	508
3 a.m. - 6 a.m.	117	4	110	4	227
6 a.m. - 9 a.m.	77	3	241	7	318
9 a.m. - noon	184	6	258	9	442
Noon - 3 p.m.	435	15	470	16	905

*Total includes other and/or unknowns

Motorcyclist deaths by time of day, 2021					
	Weekend (6 p.m. Friday - 6 a.m. Monday)		Other times		Total
	Number	%	Number	%	
3 p.m. - 6 p.m.	544	19	749	24	1,293
6 p.m. - 9 p.m.	720	24	659	22	1,379
9 p.m. - midnight	538	18	436	14	974
Total*	2,962	100	3,122	100	6,084

*Total includes other and/or unknowns

Fifty-four percent of motorcyclist deaths in 2021 occurred on major roads other than interstates and freeways. Deaths were more likely to occur in urban than rural areas (67 percent vs. 32 percent).

Motorcyclist deaths by location of crash, 2021						
Road Type	Urban		Rural		Total*	
	Number	%	Number	%	Number	%
Interstates and freeways	592	10	103	2	695	11
Noninterstate major roads	2,398	39	863	14	3,261	54
Minor roads	1,102	18	997	16	2,099	35
Total*	4,093	67	1,966	32	6,084	100

*Total includes other and/or unknowns

Alcohol involvement

Twenty-nine percent of fatally injured motorcycle drivers in 2021 had a blood alcohol concentration (BAC) at or above 0.08 percent; in single-vehicle crashes this was 43 percent.

Estimated number and percent of fatally injured motorcycle drivers with high BACs by crash type, 2021					
Crash type	Deaths	Estimated deaths with BACs \geq 0.08		Estimated deaths with BACs \geq 0.15	
	Number	Number	%	Number	%
Single-vehicle	2,166	930	43	618	29
Multiple-vehicle	3,619	729	20	411	11
All crashes	5,785	1,659	29	1,029	18

Forty-nine percent of motorcycle drivers killed at night (9 p.m. - 6 a.m.) in 2021 had BACs at or above 0.08 percent.

Estimated number and percent of fatally injured motorcycle drivers with high BACs by time of day, 2021					
Time of day	Deaths	Estimated deaths with BACs \geq 0.08		Estimated deaths with BACs \geq 0.15	
	Number	Number	%	Number	%
Nighttime (9 p.m. - 6 a.m.)	1,618	786	49	506	31
Other times	4,167	873	21	522	13
Total	5,785	1,659	29	1,029	18

ATVs

Deaths of ATV riders on public roads have increased dramatically since 1982, the first year they were explicitly identified in FARS. The proportion of fatally injured ATV riders who were 40 and older increased from 9 percent in 1982 to 45 percent in 2021. The proportion younger than age 20 decreased from 54 percent in 1982 to 20 percent in 2021. These data focus on straddle-type ATVs, as opposed to side-by-side models that have increased in popularity recently.

Deaths of ATV riders on public roads by age, 1982-2021														
Year	<13 years		13-19 years		20-29 years		30-39 years		40-49 years		50+ years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
1982	6	17	13	37	7	20	6	17	0	0	3	9	35	100
1983	2	5	18	43	12	29	5	12	2	5	3	7	42	100
1984	4	9	17	36	14	30	6	13	5	11	1	2	47	100
1985	9	20	20	43	12	26	1	2	1	2	3	7	46	100
1986	11	18	20	33	21	34	6	10	1	2	2	3	61	100
1987	12	16	18	24	23	31	10	14	6	8	5	7	74	100
1988	14	18	26	34	21	27	7	9	5	6	4	5	77	100
1989	13	14	39	41	21	22	10	11	6	6	6	6	95	100
1990	12	10	44	36	37	31	13	11	8	7	7	6	121	100
1991	10	8	34	29	42	36	18	15	6	5	8	7	118	100

*Total includes other and/or unknowns

Deaths of ATV riders on public roads by age, 1982-2021

Year	<13 years		13-19 years		20-29 years		30-39 years		40-49 years		50+ years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
1992	8	7	44	37	39	33	12	10	4	3	12	10	119	100
1993	11	11	42	41	23	23	20	20	2	2	4	4	102	100
1994	10	9	42	37	31	27	12	11	8	7	10	9	113	100
1995	9	9	34	33	32	31	12	12	4	4	11	11	102	100
1996	16	11	44	30	43	29	23	16	6	4	16	11	148	100
1997	10	8	47	36	33	25	18	14	5	4	17	13	130	100
1998	17	12	55	37	29	20	23	16	12	8	11	7	147	100
1999	13	8	60	35	46	27	26	15	11	6	17	10	173	100
2000	12	6	73	34	63	30	30	14	18	8	17	8	213	100
2001	19	8	69	31	51	23	46	21	19	8	20	9	224	100
2002	21	8	69	28	69	28	39	16	21	8	31	12	250	100
2003	22	7	83	28	73	24	49	16	43	14	31	10	301	100
2004	22	7	99	29	101	30	39	12	33	10	43	13	337	100
2005	29	9	87	26	89	26	46	14	40	12	46	14	337	100
2006	16	4	95	26	102	28	61	17	41	11	47	13	362	100
2007	17	5	79	21	116	32	60	16	60	16	36	10	368	100
2008	24	6	83	22	98	26	65	17	46	12	61	16	377	100
2009	16	5	70	21	81	24	54	16	61	18	53	16	335	100
2010	16	5	51	16	66	21	47	15	56	18	80	25	316	100
2011	10	3	47	15	74	24	54	18	54	18	66	22	305	100
2012	15	5	40	13	79	26	56	18	53	17	61	20	304	100
2013	14	4	48	15	73	23	61	19	48	15	76	24	320	100
2014	18	6	37	11	81	25	64	20	46	14	79	24	325	100
2015	19	6	42	13	73	22	53	16	50	15	97	29	334	100
2016	15	4	51	14	81	23	60	17	49	14	98	28	354	100
2017	14	5	51	17	70	23	44	15	36	12	88	29	303	100
2018	12	5	29	12	45	19	42	17	47	19	68	28	243	100
2019	8	3	34	13	48	19	44	17	33	13	87	34	254	100

*Total includes other and/or unknowns

Deaths of ATV riders on public roads by age, 1982-2021

Year	<13 years		13-19 years		20-29 years		30-39 years		40-49 years		50+ years		Total*	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2020	11	3	50	15	78	23	63	19	50	15	85	25	337	100
2021	10	3	49	17	59	20	43	15	48	16	84	29	293	100

*Total includes other and/or unknowns

Eight percent of fatally injured ATV riders wore helmets in 2021.

Helmet use among fatally injured ATV riders on public roads, 2021

	Helmet		No helmet		Total*	
	Number	%	Number	%	Number	%
Driver	21	8	214	83	259	100
Passenger	1	3	27	82	33	100
Total*	22	8	242	83	293	100

*Total includes other and/or unknowns

Sixty-eight percent of fatally injured ATV riders were killed in crashes involving no other vehicles in 2021, compared with 44 percent of passenger vehicle occupants killed in crashes and 38 percent of motorcyclists.

Crash deaths by number of involved vehicles and vehicle type, 2021

Crash type	ATV riders		Motorcyclists		Passenger vehicle occupants	
	Number	%	Number	%	Number	%
Single-vehicle	200	68	2,298	38	11,623	44
Multiple-vehicle	93	32	3,786	62	14,962	56
All crashes	293	100	6,084	100	26,585	100

Among ATV riders killed in single-vehicle crashes in 2021, 62 percent involved the ATV rolling over during the crash. This was comparable with SUVs, pickups, and large trucks, but higher than cars (40 percent).

Occupant deaths in single-vehicle crashes by rollover, 2021

	Rollover		No rollover		Total	
	Number	%	Number	%	Number	%
ATV	123	62	77	39	200	100
Car	2,311	40	3,405	60	5,716	100
SUV	1,784	58	1,308	42	3,092	100
Pickup	1,475	55	1,199	45	2,674	100
Large trucks	295	68	140	32	435	100

ATV rider deaths on public roads in 2021 were highest in July. Fifty-three percent of the deaths in 2021 occurred during May-September.

ATV rider deaths on public roads by month, 2021

	Deaths	%
January	14	5
February	22	8
March	30	10
April	30	10
May	35	12
June	32	11
July	36	12
August	29	10
September	24	8
October	20	7
November	11	4
December	10	3
Total	293	100

Seventy-five percent of ATV riders killed on public roads in 2021 were on rural roads. Of those, 88 percent were on minor roads.

ATV rider deaths by road type and land use, 2021

Road type	Urban		Rural		Total*	
	Number	%	Number	%	Number	%
Noninterstate major roads	22	8	23	8	45	15
Minor roads	45	15	193	66	238	81
Total*	67	23	219	75	293	100

*Total includes other and/or unknowns

In 2021, 42 percent of fatally injured ATV drivers on public roads had BACs at or above 0.08 percent. Impairment was highest at 58 percent among fatally injured ATV drivers ages 40-49.

Estimated number and percent of fatally injured ATV drivers with high BACs on public roads by age, 2021

Age	Deaths	Estimated deaths with BACs \geq 0.08		Estimated deaths with BACs \geq 0.15	
	Number	Number	%	Number	%
<20	44	5	11	3	7
20-29	50	24	47	19	38
30-39	38	15	40	12	31
40-49	46	27	58	17	38
50+	81	38	47	27	33
Total	259	108	42	78	30

Footnotes

1

National Highway Traffic Safety Administration. (2023). *Traffic safety facts, 2021: Motorcycles* (Report No. DOT HS-813-466). U.S. Department of Transportation.



2

Deutermann, W. (2004). *Motorcycle helmet effectiveness revisited* (Report No. DOT HS-809-715). National Highway Traffic Safety Administration.



National Highway Traffic Safety Administration. (2008). *Traffic safety facts, laws: Motorcycle helmet use laws* (Report No. DOT HS-810-887W). U.S. Department of Transportation.



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