Spotlight on Highway Safety



Pedestrian Traffic Fatalities by State

JANUARY - JUNE 2022 PRELIMINARY DATA



2022 PRELIMINARY DATA

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ACKNOWLEDGMENTS

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Published February 2023

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INTRODUCTION

What does 3,434 represent? For one, it is the entire population of Plain City, Ohio.¹ It's City Planner Derek Hutchinson, who enjoys fishing, woodworking, playing guitar and riding his motorcycle. It's Robert and Sue Miller, co-owners of Dutchman Hospitality Group, whose seven restaurants serve up the flavorful foods and simple comforts of the area's Amish and Mennonite communities. And it represents Liz Weingard, Plain City Elementary School Principal and mom to eight-year-old triplets. Plain City is a town of real people, with the same hopes and dreams as the rest of us.

Three thousand, four hundred thirty-four is also the estimated number of people killed by drivers in the first half of 2022 in 49 states and the District of Columbia (D.C.) while performing the simple act of walking. Imagine an entire community the size of Plain City, Ohio wiped out in the course of six months.

And this number certainly is an undercount. Oklahoma was unable to provide projections in time for this publication. Therefore, the state is excluded from all analyses in this report. In fact, if we assume that pedestrian deaths in Oklahoma followed a similar trend as previous years, the estimated total for all 50 states and the District of Columbia grows to 3,475.

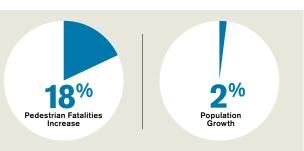
Sadly, pedestrian fatalities have been increasing at an alarming rate for more than a decade. The annual number of pedestrian deaths has grown steadily from 4,109 in 2009 to 6,516 in 2020, now accounting for 17% of all traffic fatalities.² Pedestrian fatalities skyrocketed in 2021 to an estimated 7,485 deaths – the highest number in 40 years. Worse yet, preliminary state data for the first six months of 2022 suggest pedestrian deaths are continuing to increase and will reach another historic high this year.

SHSOs, in partnership with federal, state and local safety stakeholders, are tasked with addressing behavioral safety issues that contribute to traffic crashes and regularly collect this and other traffic safety data.

Pedestrian deaths during the first half of the year rose 5% from 2021 to 2022, or an additional 168 lives lost. Looking back to the first half of 2019, the last pre-pandemic year, 519 more pedestrians died in 2022 – an 18% increase in just three years. Between the first halves of 2019 and 2022 pedestrian fatalities rose at a pace nine times higher than population growth (Figure 1).

Figure 1

Pedestrian fatalities increased at a pace nine times higher than population growth between the first halves of 2019 and 2022.



¹ City and Town Population Totals: 2020-2021. (n.d.) U.S. Census Bureau. https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-cities-and-towns.html

² Fatality Facts 2020: Pedestrians. (n.d.). IIHS-HLDI Crash Testing and Highway Safety. https://www.iihs.org/topics/fatality-statistics/detail/pedestrians

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Each year, GHSA surveys the State Highway Safety Offices (SHSOs) for preliminary counts of pedestrian deaths for the previous year and uses this information to estimate changes in national pedestrian fatality numbers and rates. These data inform strategy and countermeasure selection that includes education and equitable traffic enforcement.

This GHSA report provides a first look at the fatality trends months before the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS) data are available. It presents individual data for nearly all states as well as projected pedestrian fatality rates per population – at both state and national levels – and per vehicle miles traveled at the national level.

Later this year, GHSA will publish a follow-up report analyzing the 2021 FARS data when it is released. This forthcoming publication will also examine preliminary state data for all 12 months of 2022 and explore proven pedestrian safety countermeasures as well as innovative approaches to keep pedestrians safe on America's roadways.

EARLY ESTIMATES OF 2022 DATA

GHSA's projection of 3,434 pedestrians killed as a result of traffic crashes in the first half of 2022 in 49 states and D.C. means 168 more walkers lost their lives than the year before. This is a 5% increase compared with the same period in 2021 (Table 1).

An adjustment factor of 1.01 was applied to the raw state-supplied data to account for the historical underreporting of fatalities in preliminary data. This factor is derived by comparing the final state data against the preliminarily reported numbers in prior years.

At the state level, the projected number of pedestrian deaths for the first half of 2022 varies significantly, largely correlating with state population and density. For example, California – the most populous state – reported the most deaths (504), compared with just three each in less populous North Dakota, Rhode Island, South Dakota and Vermont.

Table 1 includes data for the first six months of 2019 and 2020 to offer a better understanding of state level trends over time. Note that 2020 was an atypical year due to the impact of the pandemic on travel patterns, particularly for the first half of the year. For 15 states, 2022 represents the second consecutive year of increased pedestrian fatalities. Only two states – Kansas and Nevada – saw two straight years of declines.

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Table 1

Pedestrian Fatalities by State, Jan-June, 2019-2022

Sources: State Highway Safety Offices and GHSA data analysis

				2022 Proliminary	Change from	2021 to 2022
State	2019 Final	2020 Final	2021 Final	2022 Preliminary (Adjusted)	#	%
Alabama	52	43	51	52	1	1.96
Alaska	3	4	7	4	-3	-49.37
Arizona	110	103	117	119	2	1.98
Arkansas	30	29	32	26	-6	-18.33
California	460	463	506	504	-2	-0.30
Colorado	31	38	42	42	0	0.88
Connecticut	21	28	16	26	10	61.90
Delaware	14	11	8	15	7	87.50
District of Columbia	6	6	11	10	-1	-9.09
Florida	385	339	414	443	29	6.90
Georgia	109	103	165	172	7	4.35
Hawaii	25	12	12	14	2	20.81
Idaho	4	5	8	6	-2	-21.43
Illinois	70	77	70	92	22	31.69
Indiana	35	45	47	56	9	20.10
Iowa	10	12	15	11	-4	-26.67
Kansas	7	25	20	13	-7	-34.27
Kentucky	34	30	32	46	14	44.92
Louisiana	59	73	81	73	-8	-9.44
Maine	7	3	9	7	-2	-22.22
Maryland	49	56	63	68	5	7.94
Massachusetts	32	18	35	47	12	33.00
Michigan	65	70	73	65	-8	-10.76
Minnesota	19	20	24	19	-5	-19.16
Mississippi	31	38	45	41	-4	-9.11
Missouri	48	50	41	53	12	28.38
Montana	8	6	9	12	3	33.71
Nebraska	7	9	3	11	8	266.67
Nevada	39	42	40	38	-2	-3.92
New Hampshire	4	8	2	5	3	150.00
New Jersey	79	80	80	79	-1	-1.30
New Mexico	42	42	38	41	3	8.67
New York	121	101	131	130	-1	-0.90
North Carolina	109	124	122	122	0	0.30
North Dakota	5	3	4	3	-1	-25.00
Ohio	60	64	76	67	-9	-12.42
Oregon	39	31	35	59	24	69.32
Pennsylvania	77	64	65	84	19	29.83
Rhode Island	3	10	3	3	0	0.00
South Carolina	83	74	82	75	-7	-8.15
South Dakota	3	5	9	3	-6	-66.67
Tennessee	65	69	71	82	11	15.51
Texas	309	333	376	368	-8	-2.05
Utah	12	12	20	31	11	53.08
Vermont	1	1	3	3	0	0.00
Virginia	58	54	52	79	27	52.03
Washington	44	39	58	68	10	17.03
West Virginia	12	9	15	13	-2	-14.78
Wisconsin	13	21	23	30	7	28.35
Wyoming	6	2	5	4	-1	-20.00
Total	2,915	2,904	3,266	3,434	+168	5%

NOTE: Oklahoma is excluded from this table due to a problem with its reporting system.

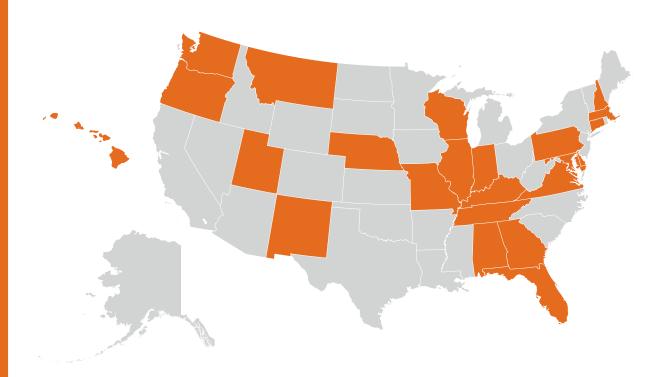
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A CLOSER LOOK AT THE CHANGES

For 2022, 24 states reported increases in pedestrian fatalities, while 21 states and D.C. reported decreases. In four states, the projected number of pedestrian deaths for the first six months of the year was unchanged from 2021. Figure 2 illustrates the 24 states with increases.

<u>Figures 3</u> and <u>4</u> sort the data by the change in the number of fatalities year-over-year and the percent changes those numbers represent, providing a useful visual reference.

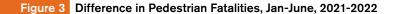
Figure 2 States with an Increase in Pedestrian Traffic Fatalities in the First Half of 2022

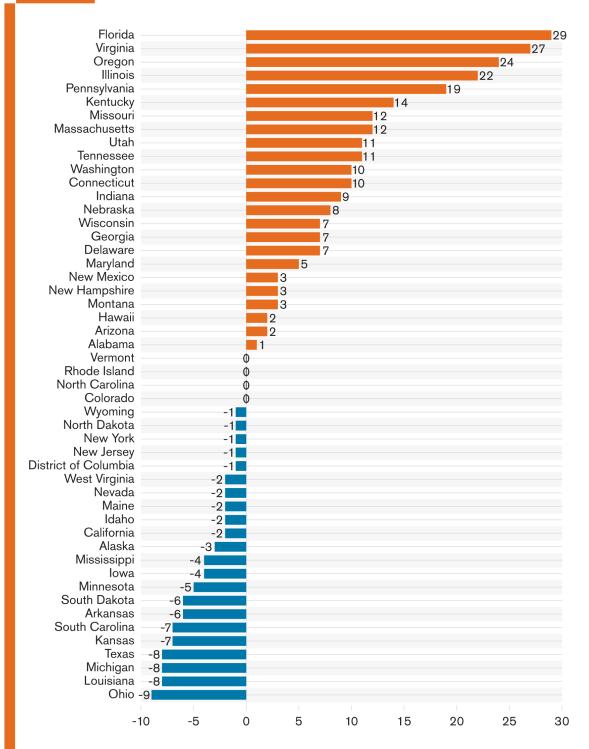


Ohio had the largest absolute decline, with nine fewer fatalities, while South Dakota had the largest percentage drop, falling 67%, from nine pedestrian deaths during the first half of 2021 to three in 2022. Alaska (-49%) and Kansas (-34%) also had notable percentage drops.

It is important to note that for states with small population numbers, just a small shift in the number of deaths can represent a conspicuously large percentage change. For example, Nebraska had a 267% increase in the number of deaths in 2022, increasing from three to 11. On the other hand, seven additional pedestrian deaths in Georgia translates to a 4% increase. For this reason, less populated states tend to dominate both extremes in Figure 4.

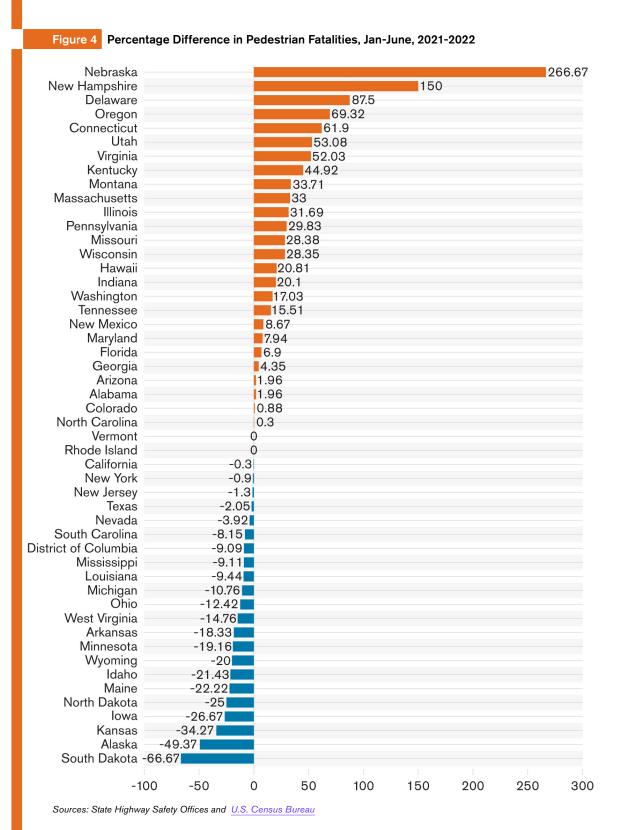
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Source: State Highway Safety Offices and GHSA data analysis

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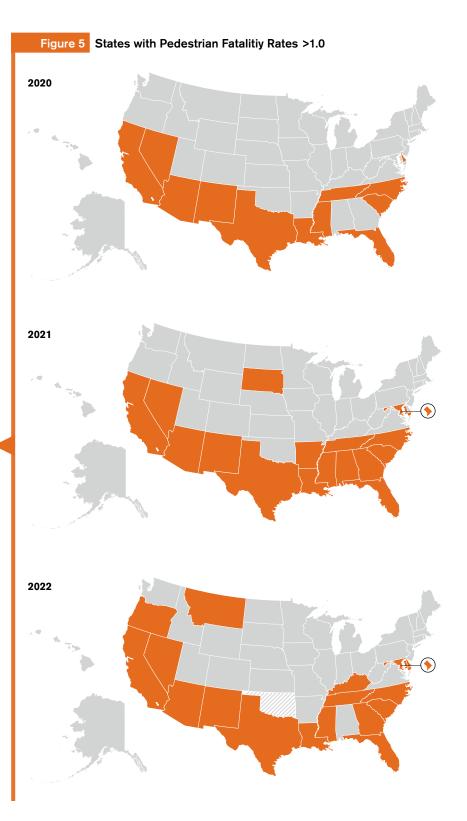
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PEDESTRIAN FATALITY RATES

Table 2 and Figure 6 illustrate the differences in pedestrian fatality rates, comparing the number of fatalities by state population. The rate is calculated by dividing the number of fatalities per every 100,000 of state population. For example, 10 fatalities in a state with 1,000,000 population would yield a rate of 1.00.

The overall rate for 2022 calculated from the reporting states remains unchanged at 1.04. In both 2019 and 2020, the rate was 0.90. Eighteen states and D.C. now have fatality rates above 1.0 (up from 12 states in 2020 and 17 states and D.C. in 2021), despite having data from one fewer state in 2022. Figure 5 illustrates this growth.

The largest pedestrian fatality rates per 100,000 population were in Florida (1.99) and New Mexico (1.94). Rhode Island (0.27) and Idaho (0.31) had the lowest rates.



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Table 2

Pedestrian Fatality Rate by State Per 100,000 Population Jan-June, 2021-2022

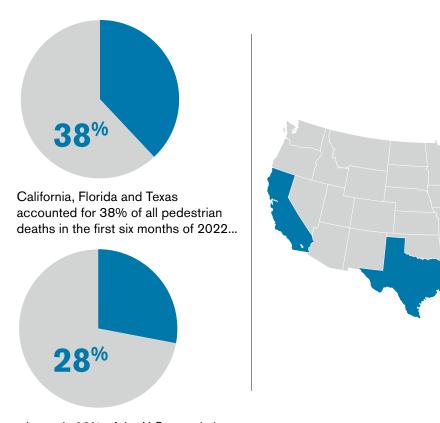
Sources: State Highway Safety Offices and U.S. Census Bureau

		••••	Change from 2021
State	2021	2022	to 2022
Alabama	1.01	1.02	0.01
Alaska	0.96	0.55	-0.41
Arizona	1.61	1.62	0.01
Arkansas	1.06	0.85	-0.21
California	1.29	1.29	0.00
Colorado	0.72	0.72	0.00
Connecticut	0.44	0.72	0.28
Delaware	0.80	1.47	0.67
District of Columbia	1.64	1.49	-0.15
Florida	1.90	1.99	0.09
Georgia	1.53	1.58	0.05
Hawaii	0.83	0.97	0.14
Idaho	0.42	0.31	-0.11
Illinois	0.55	0.73	0.18
Indiana	0.69	0.82	0.13
Iowa	0.47	0.34	-0.13
Kansas	0.68	0.44	-0.24
Kentucky	0.71	1.02	0.31
Louisiana	1.75	1.59	-0.16
Maine	0.66	0.51	-0.15
Maryland	1.02	1.10	0.08
Massachusetts	0.50	0.67	0.17
Michigan	0.73	0.65	-0.08
Minnesota	0.42	0.33	-0.09
Mississippi	1.53	1.39	-0.14
Missouri	0.66	0.86	0.20
Montana	0.82	1.07	0.25
Nebraska	0.15	0.56	0.41
Nevada	1.27	1.20	-0.07
New Hampshire	0.14	0.36	0.22
New Jersey	0.86	0.85	-0.01
New Mexico	1.80	1.94	0.14
New York	0.66	0.66	0.00
North Carolina	1.16	1.14	-0.02
North Dakota	0.52	0.38	-0.14
Ohio	0.65	0.57	-0.08
Oregon	0.82	1.39	0.57
Pennsylvania	0.50	0.65	0.15
Rhode Island	0.27	0.27	0.00
South Carolina	1.58	1.42	-0.16
South Dakota	1.01	0.33	-0.68
Tennessee	1.02	1.16	0.14
Texas	1.27	1.23	-0.04
Utah	0.60	0.92	0.32
Vermont	0.46	0.46	0.00
Virginia	0.60	0.91	0.31
Washington	0.75	0.87	0.12
West Virginia	0.84	0.73	-0.09
Wisconsin	0.39	0.51	0.12
Wyoming	0.86	0.69	-0.17
National Rate	1.04	1.04	

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As in 2021, California, Florida and Texas had the highest number of pedestrian fatalities. Together, these three states accounted for more than a third (38%) of all pedestrian deaths during the first half of 2022. However, they collectively comprise only 28% of the U.S. population. The fact that all three tend to have warmer climates (which can prompt more people to walk) and large urban centers (leading to more potential vehicle-pedestrian conflicts) may help explain this disparity.

Figure 6 Highest Pedestrian Fatalities vs. Population, 2022



...but only 28% of the U.S. population.

Sources: State Highway Safety Offices and U.S. Census Bureau

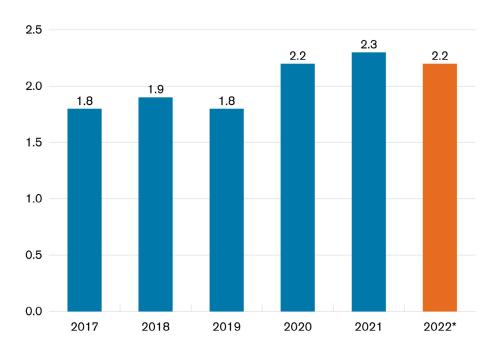
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Another useful rate calculation is the number of pedestrian fatalities in relation to total vehicle miles traveled (VMT). Unfortunately, there is no similar national, authoritative, statistically valid calculation for the number of "pedestrian miles walked" that could be used to compare fatalities against pedestrian exposure.

The Federal Highway Administration (FHWA) reports 1,587.1 billion VMT from January through June 2022, an approximately 5% increase from the prior year. This computes to a rate of 2.2 pedestrian fatalities per 1 billion VMT over the first six months of 2022, a negligible decrease from the 2021 rate of 2.3. That is, a similar increase in both VMT and fatalities equals a relatively steady rate of pedestrian deaths per VMT.³

Figure 7 shows the projected 2.2 rate in 2022 compared with the five previous years.

Figure 7 Pedestrian Fatalities per 1 Billion Vehicle Miles Traveled (VMT), Jan-June, 2017-2022



^{*} Projected

Sources: State Highway Safety Offices, GHSA data analysis and FHWA

³ Removing the approximately 24.4 billion VMT reported for Oklahoma in the first half of 2022 from the denominator results in a rate that also rounds to 2.2.

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WHAT CAN WE DO

As with any systemic problem, there is no single solution. It requires a multi-pronged approach to prevent vehicle-pedestrian collisions and the resulting injuries and loss of life.

In 2021, the United States Department of Transportation adopted the nation's first *National Roadway Safety Strategy* (NRSS), which calls for a comprehensive, holistic approach to preventing traffic crashes. The foundation of the NRSS is the Safe System approach, which is grounded in six guiding principles: deaths and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared, safety is proactive and redundancy is crucial. GHSA fully supports the NRSS and its call for all safety disciplines to work collaboratively to create layers of protection that help keep all roadway users safe.

A key component of the Safe System approach is to build an environment that separates people traveling at different speeds (i.e., vehicles and pedestrians) as much as possible, thus preventing the potential conflict that can lead to crashes. Of course, pedestrians and vehicles will continue to share space for the foreseeable future, but other countermeasures are available to incorporate facilities for safe pedestrian travel, reduce vehicle speed and increase visibility for all road users. Another valuable engineering solution is the application of traffic calming measures such as speed humps or curb extensions. Slower vehicles reduce the likelihood of crashes and – if there is a crash – reduce the severity of injury.

In a Safe System, education and equitable enforcement work hand-in-hand with engineering solutions. For example, state and local transportation officials educate road users about the need for infrastructure changes, such as roundabouts and pedestrian activated signals, and explain how to use them to maximize the safety benefits. Law enforcement officers educate both drivers and pedestrians through community policing efforts. Law enforcement agencies can also carry out equitable enforcement focused on preventing the most dangerous driving behaviors such as excessive speeding, impaired driving and distracted driving, as well as directly addressing motorists who are driving unsafely near pedestrians.

Later this year, GHSA will publish its annual analysis of the 2021 FARS data, which has yet to be released. That report will include a pedestrian fatality projection for all 12 months of 2022 (again based on state-provided data), as well as a more in-depth look at proven and promising pedestrian safety efforts being conducted across the county.

⁴ Zero Deaths and Safe System. (n.d.). U.S. Department of Transportation Federal Highway Administration. https://highways.dot.gov/safety/zero-deaths

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CONCLUSION

GHSA projects 3,434 pedestrians died between during the first six months of 2022 based on preliminary state data reported by 49 states and D.C. This is a 5% increase among states reporting in both 2021 and 2022, representing a second straight year of rising fatalities, after a drop in 2020 (likely influenced by reduced exposure during the height of the pandemic shutdowns).

More reporting states (24) saw increases than decreases (21 plus D.C.), with four states' fatality numbers remaining unchanged from the previous year. States with more urban centers, greater populations and warmer climates tended to have higher a number of fatalities. Less populous, rural states had fewer. The national pedestrian fatality rates – both in terms of population and VMT – largely held steady from 2021 to 2022.

Everyone who walks deserves to get to their destination safely. There are proven strategies to improve pedestrian safety, including a Safe System approach. Unfortunately, there is still a long way to go before this approach is fully adopted and implemented across the country. GHSA will examine the current efforts and promising approaches that are underway in a forthcoming publication, which will also analyze the final national 2021 fatality data (FARS) and project the 2022 annual pedestrian fatality number and rate based on preliminary state data.