

## TRAFFIC SAFETY FACTS

# Pedestrian Safety

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### PROBLEM IDENTIFICATION AND DATA ANALYSIS

Everyone is a pedestrian, whether or not walking is one's primary mode of travel. As a commute mode, walking is gaining in numbers. In 2020, pedestrian deaths accounted for 16.8 percent of all crash fatalities and nearly one-quarter (24.3 percent) of pedestrian fatalities involved a hit-and-run crash. From 2011 to 2020, pedestrian fatalities increased 46.2 percent while other traffic deaths only increased by 14.4 percent. From 2019 to 2020, pedestrian fatalities increased 3.9 percent, despite a 13.2 percent reduction in driving. Compared with all other racial categories, American Indian/Alaska Native persons had a substantially higher per-capita rate of fatalities among pedestrians. Black persons had the second highest rate of pedestrian traffic deaths. Preliminary 2021 data suggest that this trend will continue in the near future, reporting that 8,730 people died in roadway fatalities in the first quarter, a 10.5 percent increase from the same period in 2020.

These increases are a continuation of a longer trend of increasing pedestrian fatalities, especially at night. From 2010 to 2019, the number of pedestrian fatalities that occurred in the dark increased 53.8 percent compared to a 16.2 percent increase in daytime pedestrian fatalities.

Larger vehicles cause more severe injuries when they strike pedestrians; new research from the Insurance Institute for Highway Safety shows that turning crashes are more likely with larger vehicles. When compared with passenger cars, pickups had the greatest increase, 269.6 percent, in the odds of being involved in a crash that killed a pedestrian while turning left. Minivans and large vans had the next largest odds increase, 172.0 percent, while pickups and SUVs were associated with a 93.6 percent increase. Pickups and SUVs were also associated with significantly increased odds of killing a pedestrian in a right turn crash compared to a car at 88.6 percent and 63.4 percent, respectively.

The United States Department of Transportation uses the Safe System Approach to work towards zero roadway fatalities and serious injuries. The Safe System Approach recognizes that people may make unsafe decisions and designs a system with many redundancies in place to protect everyone, especially the most vulnerable road users. The Federal Highway Administration names safe road users, safe vehicles, safe speeds, safe roads, and post-crash care as key elements of a Safe System. These elements together create multiple layers of protection to improve safety.

Analyses presented in the pedestrian program area include fatal and serious injuries to pedestrians. FARS only includes pedestrians on foot, whereas SWITRS fatal and serious injury analysis includes both pedestrians and persons on personal conveyances, e.g., skateboards, wheelchairs, etc. Pedestrian crashes are defined as crashes where one or more victims is a pedestrian.

## KEY FINDINGS

## NATIONAL DATA

- NHTSA reports that 17 pedestrians died every day, averaging a pedestrian fatality every 1.3 hours in traffic crashes in 2020.
- Pedestrian fatalities increased 3.9 percent from 6,272 in 2019 to 6,516 in 2020 (see Figure 1).

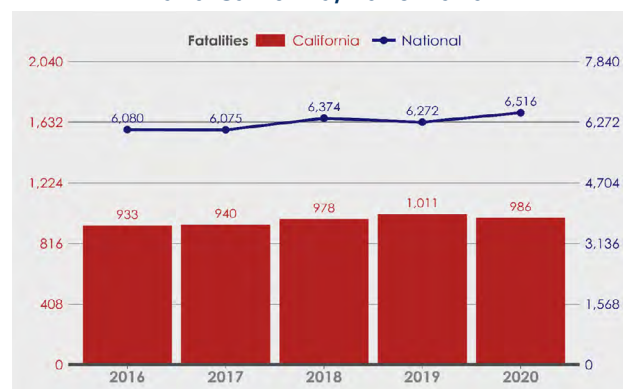
## CALIFORNIA DATA

- Pedestrian fatalities rose 5.7 percent from 933 in 2016 to 986 in 2020. The one-year decrease from 2019 was 2.5 percent from 1,011 pedestrian fatalities.
- In the 2021 Traffic Safety Survey conducted by UC Berkeley SafeTREC, Californians were asked to think of the times they had been a pedestrian or bicyclist in the past six months and to identify the safety problems they experienced. "Cars going too fast" was noted by 54.5 percent and "cars not stopping" was reported by 48.4 percent of respondents. "Distracted Drivers (by cell phones)" was reported by 38.2 percent of respondents.

## Fatal and Serious Injury Pedestrian Crashes by County

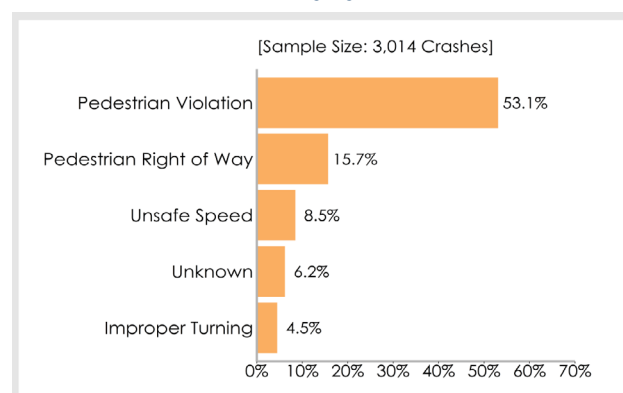
- The counties with the highest numbers of pedestrian fatalities were Fresno, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Sacramento, and Santa Clara. Per capita, the counties with the highest rate of pedestrian fatalities were Butte, Colusa, Fresno, Imperial, Lake, Lassen, Madera, and Sutter. See Figure 3.
- Similarly, the counties with the highest numbers of pedestrian serious injuries were Los Angeles, Orange, Riverside, Sacramento, San Bernardino, and San Diego, as well as Alameda and San Francisco. Per capita, the counties with the highest rate of pedestrian serious injuries were Amador, Del Norte, Humboldt, Los Angeles, San Francisco, Stanislaus, and Yuba.
- Five counties had no pedestrian fatalities or serious injuries in 2020, including Alpine, Modoc, Mono, Sierra, and Trinity.

Figure 1: Pedestrian Fatality Trends, Nationwide and California, 2016-2020



Source: FARS 2016 - 2019 Final File, 2020 ARF

Figure 2: Top Five Primary Crash Factors for Pedestrian Fatal and Serious Injury Crashes, 2016-2020



Source: Provisional SWITRS 2020

## Primary Crash Factors of Pedestrian Fatal and Serious Injury Crashes

- The most common primary crash factor in a pedestrian fatal and serious injury crash was pedestrian violations, at 53.1 percent, followed by pedestrian right-of-way violations at 15.7 percent. Pedestrian violations occur when a pedestrian commits a violation, whereas a pedestrian right-of-way is defined as when a pedestrian's right-of-way is violated (see Figure 2). However, neither indicates which party is at fault for the crash.

## Time and Day of Pedestrian Fatal and Serious Injuries

- Half (50.7 percent) of all pedestrian deaths occurred at night, between 6pm and midnight. The largest proportion of pedestrian deaths in 2020 occurred on Thursday and Friday (16.4 percent and 15.4 percent, respectively). Pedestrian deaths were most frequent in January and December (10.8 percent and 10.2 percent, respectively).
- Similarly, nearly half (48.0 percent) of all pedestrian serious injuries occurred at night, between 6pm and midnight. The largest proportion of pedestrian serious injuries occurred on Friday and Saturday (16.2 percent and 15.3 percent, respectively).

## Pedestrian Fatal and Serious Injury Victim Demographics

- Seventy-two percent of the pedestrians killed in traffic crashes were male. Across all age groups, more male pedestrians died than female pedestrians. The age group with the highest number of pedestrian fatalities were age 25 to 34 (18.9 percent) and age 55 to 64 (17.8 percent).
- Nearly two-thirds (64.4 percent) of the pedestrians seriously injured in traffic crashes were male. Across most age groups, more male pedestrians were seriously injured than female pedestrians. Similarly, the age group with the highest number of pedestrian serious injuries were age 25 to 34 (21.5 percent), followed by age 35 to 44 (16.2 percent) and by age 55 to 64 (15.8 percent).
- Race was unknown in FARS for 39.8 percent, or 392 of the pedestrian fatalities. Of the 594 fatalities with a known race, about 74.6 percent were white, followed by 16.0 percent Black or African American.

## Crash Location for Fatally-Injured Pedestrian Victims

- The vast majority (89.5 percent) of pedestrian fatalities occurred in urban areas compared to 10.4 percent in rural areas.
- Almost three-quarters (70.5 percent) of all pedestrian fatalities occurred on non-interstate principal or minor arterial roadways.

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## COUNTY TABLE: PEDESTRIAN SAFETY

Figure 3: Pedestrian Fatalities and Serious Injuries, by Number and Rate, 2020

County	Population	Fatalities	Serious Injuries	Fatal & Serious Injuries (FSI)	FSI per 100K Population
Alameda	1,681,700	27	73	100	5.95
Alpine	1,199	0	0	0	0.00
Amador	40,506	0	5	5	12.34
Butte	211,216	10	14	24	11.36
Calaveras	45,277	0	1	1	2.21
Colusa	21,826	1	1	2	9.16
Contra Costa	1,166,669	27	49	76	6.51
Del Norte	27,745	1	4	5	18.02
El Dorado	191,282	2	6	8	4.18
Fresno	1,008,860	42	35	77	7.63
Glenn	28,822	0	2	2	6.94
Humboldt	136,514	5	16	21	15.38
Imperial	178,537	7	8	15	8.40
Inyo	18,977	0	1	1	5.27
Kern	907,021	31	53	84	9.26
Kings	153,085	4	7	11	7.19
Lake	68,099	4	4	8	11.75
Lassen	32,025	2	0	2	6.25
Los Angeles	10,012,474	257	743	1,000	9.99
Madera	156,519	6	5	11	7.03
Marin	262,410	1	8	9	3.43
Mariposa	17,123	0	1	1	5.84
Mendocino	91,602	1	3	4	4.37
Merced	280,873	10	15	25	8.90
Modoc	8,703	0	0	0	0.00
Mono	13,185	0	0	0	0.00
Monterey	439,008	9	16	25	5.70
Napa	138,433	4	4	8	5.78
Nevada	102,392	3	2	5	4.88
Orange	3,184,513	69	87	156	4.90
Placer	405,308	4	12	16	3.95
Plumas	19,666	0	1	1	5.09
Riverside	2,421,480	80	76	156	6.44
Sacramento	1,585,666	50	111	161	10.15
San Benito	64,110	1	4	5	7.80
San Bernardino	2,181,983	79	112	191	8.75
San Diego	3,303,736	85	143	228	6.90
San Francisco	870,985	12	83	95	10.91
San Joaquin	780,676	21	35	56	7.17
San Luis Obispo	282,996	4	5	9	3.18
San Mateo	763,497	11	36	47	6.16
Santa Barbara	448,659	3	24	27	6.02
Santa Clara	1,933,516	35	59	94	4.86
Santa Cruz	272,360	8	19	27	9.91
Shasta	181,881	6	9	15	8.25
Sierra	3,233	0	0	0	0.00
Siskiyou	44,091	0	1	1	2.27
Solano	453,405	10	24	34	7.50
Sonoma	489,880	6	18	24	4.90
Stanislaus	553,995	18	41	59	10.65
Sutter	100,751	4	6	10	9.93
Tehama	65,643	1	0	1	1.52
Trinity	16,135	0	0	0	0.00
Tulare	473,482	9	19	28	5.91
Tuolumne	55,500	0	1	1	1.80
Ventura	844,545	12	34	46	5.45
Yolo	216,544	3	8	11	5.08
Yuba	81,468	1	7	8	9.82
<b>Total</b>	<b>39,541,786</b>	<b>986</b>	<b>2,051</b>	<b>3,037</b>	<b>7.68</b>

Source: FARS ARF 2020; Provisional SWITRS 2020; California Department of Finance 2021.