Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

OTS CALIFORNIA OFFICE OF TRAFFIC SAFETY

TRAFFIC SAFETY FACTS

Speeding-Related Crashes

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INTRODUCTION

A speeding-related crash is defined as one where a driver is speeding, racing, driving too fast for the conditions, or driving in excess of the posted speed limit. In the United States, in 2019, over one in four (26.3 percent) fatalities involved speeding, a proportion that has remained steady since 2017 following a decline in the prior decade. Speeding reduces a driver's ability to steer safely around curves or objects, reduces the amount of time a driver has to react to a dangerous situation, and extends safe stopping distances.

Historically, road safety efforts focused on changing human behaviors to prevent crashes. The Safe System approach reframes efforts to save lives by expecting crashes to happen and focusing attention on reducing the severity of injuries when a crash occurs. By understanding the nuances of speeding-related crashes, transportation professionals can better address every aspect of crash risks and implement multiple layers of protection to ensure that everyone traveling on California roadways will go safely. Analyses presented in the police traffic services program area refer to speeding-related fatal and serious injuries.

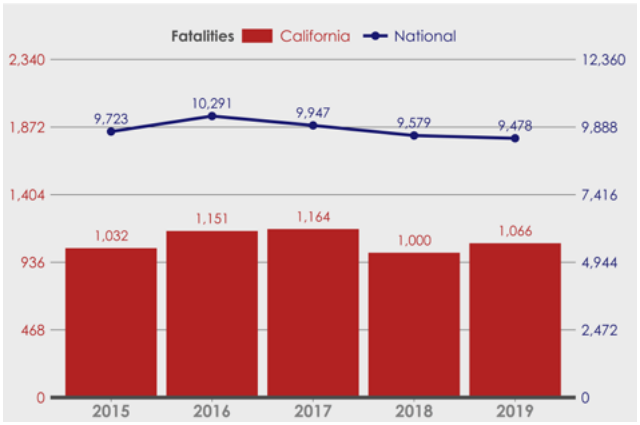
While the effects of the COVID-19 pandemic on transportation injuries in 2020 are not yet fully known, early work in California has found that while the number of injury crashes dropped, especially in the early lockdown period, the severity of crashes increased. This may be due to an increased prevalence of risky behaviors, including speeding, by these drivers, though it may also be partially caused by a reduction in congestion-related minor crashes.

KEY FINDINGS

NATIONAL DATA

- In the United States, there were 9,478 people killed in a speeding-related traffic crash in 2019, a 1.1 percent decrease from 9,579 in 2018, and a 2.5 percent decrease from 9,723 in 2015 (see Figure 1).
- In 2019, 26.3 percent of the nation's 36,096 motor vehicle fatalities were speeding-related. Drivers involved in a fatal speeding-related crash were also more likely to engage in other risky behaviors compared to non-speeding drivers.
- Of all speeding drivers in fatal crashes, 36.7 percent had a BAC of .08 or higher compared to only 16.0 percent of non-speeding drivers involved in fatal crashes in 2018.
- In 2018, only 46.2 percent of speeding passenger vehicle drivers involved in fatal crashes were known to be restrained, compared to 72.7 percent of non-speeding drivers.
- In 2018, 31.7 percent of motorcyclists involved in fatal crashes were speeding, more than any other vehicle type.

Figure 1: Speeding-Related Fatality Trends, Nationwide and California, 2015-2019



Source: FARS 2015-2018, FARS ARF 2019

- According to AAA's 2019 Traffic Safety Culture Index report, about half (48.3 percent) of drivers reported driving 15 mph over the speed limit on freeways and slightly fewer (41.5 percent) reported driving 10 mph over the speed limit on residential streets in the past 30 days. This self-reported behavior differed from their beliefs about speeding: 19.3 percent of drivers at least somewhat approve of speeding by 15 mph or more on a freeway, while 12.5 percent approve of speeding by 10 mph on a residential street.

CALIFORNIA DATA

State-level Analysis

The figures in this section refer to drivers, passengers, bicyclists, and pedestrians fatally or seriously injured in a speeding-related crash in California in 2019. These numbers are the products of UCB SafeTREC analysis.

KEY FINDINGS

- In California, there were 1,066 people killed in speeding-related traffic crashes in 2019, a 6.6 percent increase from 1,000 in 2018, and a 3.3 percent increase from 1,032 in 2015.
- In 2019, 29.6 percent of California's 3,606 motor vehicle fatalities were speeding-related.
- The 2020 OTS Traffic Safety Survey reported that 35.9 percent of drivers surveyed perceive that it is safe to drive 10 mph over the speed limit on freeways. When asked about the safety of driving 5 mph over the speed limit in a residential area, 25.6 percent of drivers surveyed believe it is safe; both are significant decreases from 59.5 percent and 39.5 percent, respectively, of drivers in 2019 ($p<0.01$). The survey also found "speeding and aggressive driving" was the second-most commonly mentioned safety problem on California roadways, comprising 19.1 percent of responses. Speeding and aggressive driving has been a top three concern consistently since 2010.

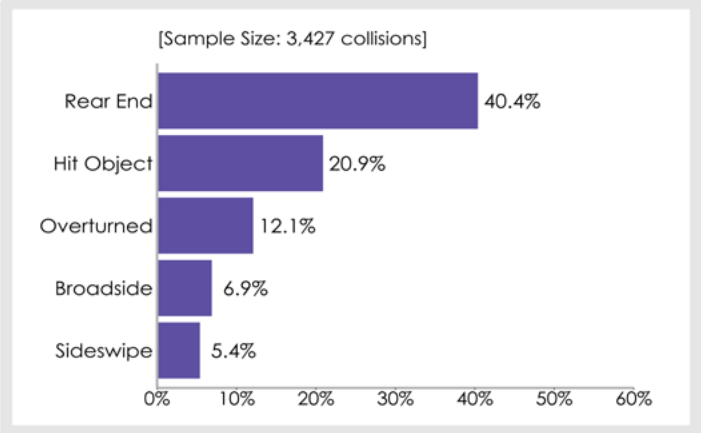
Speeding-Related Fatal and Serious Injury Crashes by County

- The highest number of speeding-related fatal and serious injuries were in Los Angeles, San Bernardino, San Diego, Riverside, Orange, Alameda, Sacramento, and Santa Clara counties (see Figure 4).
- The highest rate of speeding-related fatal and serious injury per population were concentrated in more rural parts of California in Alpine, Sierra, Mono, Del Norte, Trinity, Plumas, Amador, and Siskiyou counties.

Primary Crash Factors for Speeding-Related Fatal and Serious Injury Crashes

- This program area is defined by crashes in which drivers are speeding; therefore, 100 percent of the crashes in this program area had a primary crash factor of unsafe speed.

Figure 2: Top Five Crash Types for Speed-Related Fatal and Serious Injury Crashes, California, 2019



Source: Provisional SWITRS 2019

Crash Types for Speeding-Related Fatal and Serious Injury Crashes

- Over one-third (40.4 percent) of speeding-related crashes were rear end crashes. Other common crash types for speeding-related crashes were hitting an object at 20.9 percent and overturned vehicle at 12.1 percent (see Figure 2).

Speeding-Related Fatal and Serious Injury Crash Victim Demographics

- About three-quarters (72.3 percent) of fatal and seriously injured speeding-related crash victims were males. Just under half (46.5 percent) of all fatal and seriously injured speeding-related crash victims were aged 15 to 34.
- Race was not reported for 27.0 percent of the speeding-related fatalities. Of the 778 fatalities with a known race, 80.4 percent (or 626) were white.

CALIFORNIA DATA *(continued)*

Figure 3: Time of Day and Day of Week for Speeding-Related Fatal and Serious Injury Victims, California, 2019

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
Midnight-3AM	53	44	41	46	47	114	127	472 [10.7%]
3-6AM	44	39	42	46	35	38	70	314 [7.1%]
6-9AM	73	83	66	89	71	56	42	480 [10.9%]
9AM-Noon	56	52	71	47	68	78	107	479 [10.9%]
Noon-3PM	77	65	79	87	90	129	118	645 [14.6%]
3-6PM	89	107	121	101	130	115	105	768 [17.4%]
6-9PM	99	90	88	72	124	90	82	645 [14.6%]
9PM-Midnight	70	60	80	71	97	129	80	587 [13.3%]
Unknown	2	2	5	2	1	3	3	18 [0.4%]
TOTAL	563 [12.8%]	542 [12.3%]	593 [13.5%]	561 [12.7%]	663 [15.0%]	752 [17.1%]	734 [16.7%]	4,408 [100.0%]

FSI Num+% 1 - 43 44 - 66 67 - 80 81 - 100 101 - 130

Source: FARS ARF 2019; Provisional SWITRS 2019

Time and Day of Speeding-Related Fatal and Serious Injuries

- Nearly one-quarter (23.2 percent) of fatal and serious injuries from speeding occurred on weekdays between 3pm and 9pm. About one-third (33.7 percent) of fatal and serious injuries occurred on weekends (see Figure 3).

Crash Location of Speeding-Related Fatal Injury Crash Victims

- About three-quarters (73.6 percent) of speeding-related fatalities occurred in urban areas compared to 26.4 percent on rural roads. However only about 17.1 percent of travel took place on rural roads in 2019.
- Over one-third (40.3 percent) of all speeding-related fatalities occurred on non-interstate principal arterials. The next most common locations for speeding-related fatalities were non-interstate minor arterials at 20.2 percent, interstates at 16.3 percent, and non-interstate collectors at 16.0 percent.

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COUNTY TABLE: SPEED-RELATED CRASHES

Figure 4: Speed-Related Fatalities and Serious Injuries, by Number and Rate, 2019

County	Population	Fatalities	Serious Injuries	Fatal & Serious Injuries (FSI)	FSI per 100K Population
Alameda	1,668,965	40	155	195	11.68
Alpine	1,123	0	5	5	445.24
Amador	37,724	6	9	15	39.76
Butte	214,532	9	24	33	15.38
Calaveras	44,403	2	9	11	24.77
Colusa	22,045	0	4	4	18.14
Contra Costa	1,147,269	21	92	113	9.85
Del Norte	27,207	4	14	18	66.16
El Dorado	188,818	17	23	40	21.18
Fresno	1,018,437	36	51	87	8.54
Glenn	29,072	2	0	2	6.88
Humboldt	133,820	6	21	27	20.18
Imperial	188,962	6	7	13	6.88
Inyo	18,463	0	3	3	16.25
Kern	909,697	37	84	121	13.30
Kings	153,522	1	6	7	4.56
Lake	64,080	3	7	10	15.61
Lassen	28,972	1	5	6	20.71
Los Angeles	10,210,966	235	779	1,014	9.93
Madera	157,686	9	21	30	19.02
Marin	260,969	5	37	42	16.09
Mariposa	17,842	0	2	2	11.21
Mendocino	88,125	7	19	26	29.50
Merced	281,592	13	37	50	17.76
Modoc	9,458	0	1	1	10.57
Mono	13,585	2	7	9	66.25
Monterey	443,397	7	39	46	10.37
Napa	139,874	4	14	18	12.87
Nevada	97,808	1	23	24	24.54
Orange	3,195,197	58	154	212	6.64
Placer	394,626	7	34	41	10.39
Plumas	18,450	2	6	8	43.36
Riverside	2,428,464	78	228	306	12.60
Sacramento	1,548,760	43	146	189	12.20
San Benito	62,051	3	6	9	14.50
San Bernardino	2,176,150	91	252	343	15.76
San Diego	3,346,937	73	244	317	9.47
San Francisco	897,114	8	71	79	8.81
San Joaquin	767,935	34	98	132	17.19
San Luis Obispo	277,276	7	36	43	15.51
San Mateo	776,002	11	57	68	8.76
Santa Barbara	452,066	10	41	51	11.28
Santa Clara	1,960,932	40	122	162	8.26
Santa Cruz	272,185	5	27	32	11.76
Shasta	177,620	10	25	35	19.70
Sierra	3,127	2	3	5	159.90
Siskiyou	44,000	5	11	16	36.36
Solano	439,990	11	40	51	11.59
Sonoma	495,058	9	30	39	7.88
Stanislaus	554,212	22	49	71	12.81
Sutter	102,808	8	13	21	20.43
Tehama	65,163	4	6	10	15.35
Trinity	13,374	2	4	6	44.86
Tulare	477,731	16	34	50	10.47
Tuolumne	52,557	3	7	10	19.03
Ventura	844,213	22	65	87	10.30
Yolo	220,723	4	22	26	11.78
Yuba	78,061	4	13	17	21.78
Total	**39,761,195**	**1,066**	**3,342**	**4,408**	**11.09**

Source: FARS ARF 2019, Provisional SWITRS 2019, California Department of Finance 2020

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