Traffic Fatalities on Urban Roads and Streets in Relation to Speed Limits and Speeding, United States, 2010–2019

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Prior to 2015, traffic fatalities in rural areas were higher than in urban areas; however, between 2010 and 2019, motor vehicle crash fatalities in urban areas increased by 34%, while those in rural areas decreased by 10%. Consequently, in 2019, traffic fatalities in urban areas were higher than in rural areas (19,595 vs. 16,340). As population and vehicle miles traveled in urban areas continue to grow, so do urban crash projections, underscoring the need to better understand this traffic safety phenomenon.

Although speeding occurs on all road types, urban roadways account for a disproportionate number of speeding-related fatalities. Of the 9,478 traffic fatalities in 2019 in which speeding was cited as a factor, 54% occurred on urban roadways (National Center for Statistics and Analysis, 2021). Despite lower speed limits on many urban roads, the high volume of pedestrians/bicyclists and high density of junctions can increase risks. In 2019, speeding-related pedestrian fatalities on urban roads increased 3% relative to 2018, and speeding-related fatal angle crashes occurring at intersections increased 9%. Given the diversity of road users and their interactions on urban roads, it is vital to improve understanding of speeding-related fatal crashes on urban roads in order to identify solutions.

This study examined characteristics of traffic fatalities in urban settings in relation to various factors, with a particular focus on those occurring on non-limited access roadways (e.g., arterials, collectors, local streets). Further, this study sought to highlight countermeasures that have been proven effective in reducing those types of fatalities. This study showed that speeding-related fatalities on non-limited access roadways in urban areas have trended upward from 2010 to 2019. Nearly half of them occurred on roads with speed limits of 35 mph or lower, and about one in five were victims in angle collisions. Additionally, speeding was involved in 38% of fatalities that occurred at or nearby interchange areas. Although most victims from these crashes were speeders themselves, other road users were fatally injured as well, including pedestrians, bicyclists, passengers in speeding vehicles, and occupants in opposing vehicles. Thus, it is essential to implement effective speed management strategies to set and maintain adequate and safe speeds for all road users and countermeasures to improve intersection safety in consideration of various factors such as road functions, traffic conditions, and roadside activities.

METHODS

The purpose of this study was to describe traffic fatalities that occurred on urban non-limited access roads and streets (hereafter referred to as *urban roads and streets*) in the United States from 2010 to 2019, with a focus on the speed limits in effect at crash locations as well as the involvement of speeding. Data were from the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS), which is a national census database for fatal traffic crashes.

Fatalities were considered to have been speeding-related if any vehicle involved in the crash was reported to have been exceeding the posted speed limit, driving too fast for conditions, or racing. In analyses of speed limits, crashes that occurred at the intersection of roads with different speed limits were classified according to the highest speed limit. Likewise, for crashes with multiple records of traffic control device types, they were classified with a higher regulatory traffic control (e.g., in a case of being controlled by stop sign vs. uncontrolled, the crash was classified with a regulatory traffic control for the traffic control device–type attribute).

The main analyses examined the annual number and percentage of traffic fatalities on urban roads and streets that involved speeding as well as their distribution in relation to speed limit. Additional analyses examined the involvement of speeding and distribution of speed limit in relation to characteristics including the victims' role in the crash as well as characteristics of the crash location (type of road, relationship to intersection, traffic control devices present, lighting conditions, etc.).

This study was intended to be descriptive, and thus tests of statistical significance were not performed.

RESULTS

Overall trend

The total number of traffic fatalities on urban roads and streets increased substantially over the study period, from 11,286 in 2010 to 16,066 in 2019 (Figure 1). The share of total U.S. traffic fatalities that occurred on urban roads and streets also increased, from 34% in 2010 to 44% in 2019.

While the number of traffic fatalities on urban roads and streets in which police reported that speeding was a factor increased from 3,360 in 2010 to 4,009 in 2019, speeding-related traffic fatalities accounted for a smaller proportion of all fatalities on urban roads and streets in 2019 (25%) than in 2010 (30%) (Figure 2).

The numbers of fatalities on urban roads and streets increased over the study period on roads of all categories of speed limit (Figure 3). Streets with speed limits of 25 mph or lower consistently accounted for 9–10% of all fatalities. The percentage of fatalities on roads with speed limits of 30–35 mph decreased slightly, whereas the percentage of fatalities on roads with higher speed limits increased correspondingly. This likely is attributable to a corresponding shift in the types of roads on which fatalities occurred. The number and percentage of fatalities that occurred on local streets decreased over the study period from 2,978 (26%) in 2010 to 1,996 (13%) in 2019; however, the decrease in the number of fatalities on local streets was fully offset by an even larger increase in fatalities on urban arterials and collectors (Figure 4).

Involvement of speeding in relation to posted speed limit

As shown in Table 1, while a vast majority of fatalities on urban roads and streets occurred on roads with speed limits of 30 mph or higher (87%), nearly half of speeding-related fatalities occurred on roads with speed limits of 35 mph or lower. Further, among people killed on roads with speed limits of 25 mph or lower, nearly one-third were victims of speeding-related crashes.

Crash type

As shown in Table 2, collisions with pedestrians/bicyclists accounted for a greatest proportion of all fatalities on urban roads and streets over the study period (29%), followed by roadway departure (24%) and angle collisions (23%). For those major crash types, most fatalities occurred on roads with speed limits ranging from 30 mph to 45 mph. Among fatalities in collisions with pedestrians/bicyclists, 83% occurred on roads with speed limits of 45 mph or slower.

Regardless of crash types, speeding was relevant to a considerable proportion of fatalities; however, among fatalities in roadway departure crashes, speeding was involved in almost half of those deaths. Among speeding-related fatalities in vehicle-to-vehicle collisions, about 60% occurred in angle collisions, while 20% and 16% occurred in front-to-rear and front-to-front collisions, respectively. Among fatalities in angle collisions, about a quarter were related to speeding. Interestingly, speeding was involved in over 40% of fatalities in front-to-rear collisions.

Junction type

Table 3 shows that 45% of all fatalities on urban roads and streets occurred at or in the vicinity of junctions (e.g., intersections, interchanges, driveway access points). Among them, nearly nine in ten occurred at or in the vicinity of intersections. Most junction-related fatalities occurred on roads with speed limits of 45 mph or lower; however, those at or near interchanges tended to occur on roads with speed limits of 50 mph or higher.

For speeding-related fatalities, about 40% occurred at or in the vicinity of junctions. Although fatalities at or near interchanges accounted for a small proportion of the total fatalities, speeding was involved in 38% of them.

Traffic control device

Among all fatalities occurring at or in the vicinity of intersections, those occurring at or near signalized intersections accounted for a greatest proportion (47%) followed by those occurring at or near uncontrolled intersections (30%) (see Table 4). Over 40% of signalized intersection–related fatalities occurred on roads with speed limits of 40 mph or 45 mph.

Similarly, 46% of speeding-related fatalities occurred at or near signalized intersections. Further, about a quarter of fatalities in crashes occurring on roads with regulatory signs were related to speeding.

Light condition

Table 5 shows almost 60% of all fatalities on urban roads and streets occurred at dawn, dust, or in darkness. Among them, about 60% occurred in darkness on lit roads, while a third occurred in darkness on unlit roads. A third of fatalities on unlit roads in darkness occurred on roads with speed limits of 50 mph or higher.

About 40% of speeding-related fatalities occurred in daylight, while more than half occurred in darkness. Among speeding-related fatalities occurring in darkness, nearly seven in ten occurred on lit roads. The results also show that more people died in crashes in daylight than those in darkness on lit roads; however, speeding was relevant to a higher number of deaths on lit roads in darkness compared to daylight.

Characteristics of fatalities

Slightly over a half of fatalities on urban roads and streets were occupants in passenger vehicles (see Table 6), and about three in ten were non-motorists (i.e., pedestrians or bicyclists). Among fatally injured non-motorists, about 70% were struck by a vehicle on roads with speed limits ranging from 30 mph to 45 mph. Among speeding-related fatalities, nearly 70% were occupants in passenger vehicles, 23% were on motorcycles, and 8% were non-motorists. Nearly 40% of fatally injured motorcyclists were killed in speeding-related crashes. Among speeding-related fatalities in angle collisions—the top crash type in speeding-related multiple-vehicle collisions—about a half were drivers who sped, but over a third were occupants in not-speeding vehicles (Figure 5).

Additionally, slightly fewer than a quarter of fatalities in speeding-related crashes were female (Table 7). In relation to age, one-in-ten fatalities in speeding-related crashes were aged 18 years or younger. Among fatalities ages 16 to 18, 44% were killed in speeding-related crashes. Likewise, among fatalities ages 19 to 24, 45% were killed in speeding-related crashes.

When looking by person type in Table 8, 60% of fatalities in speeding-related crashes were male speeders. Among speeders who were fatally injured in crashes, about 40% were aged 25 to 39, about a quarter were young adults ages 19 to 24, and another quarter were middle-aged people (40 to 64 years).

Meanwhile, among occupants killed while riding in speeding vehicles, 40% were female, 30% were young adults ages 19 to 24, and 16% were teens ages 16 to 18. Among fatalities in not-speeding vehicles, 44% were female, 35% were aged 40 to 64, and 23% were older adults ages 65 or older.

Similarly, among non-motorists killed by speeding vehicles, middle-aged people (40 to 64 years) accounted for a greatest proportion (42%), and the elderly (65 years or older) accounted for about 17%. Further, 43% of them were killed on roads with speed limits of either 30 or 35 mph, and nearly one in five were killed on roads with speed limits of 25 mph or lower.

DISCUSSION

This Research Brief examined the characteristics of traffic fatalities on urban roads and streets from 2010 through 2019, with an emphasis on the speed limits present at crash locations as well as the role of speeding. The number of traffic fatalities on urban roads and streets increased by 42% over the decade examined. This led to an increased total number of traffic fatalities nationwide, despite little change in the annual number of fatalities on rural roads, and a substantial decrease in the annual number of fatalities on Interstate highways and other limited-access facilities.

While the relationship between vehicle travel speeds and the risk of crash occurrence is complex and controversial (Elvik 2005; Hauer 2009), the relationship between the speed at which a crash occurs and the injuries sustained by victims is straightforward: higher impact speeds greatly increase the risk that crash victims will sustain disabling injuries or die (Tefft 2013; Kim et al., 2021). Most of the research on the relationship between speed and safety, however, is based on studies of crashes in two specific environments: rural roads and freeways (Cameron & Elvik, 2010). The dearth of research on speed and safety on urban roads and streets, in conjunction with increasing traffic fatalities on urban roads and streets in recent years, were the motivation for this study.

The fatal traffic crash data from 2010 to 2019 show an increasing trend in the number of speeding-related fatalities on urban roads and streets, although the percentage of all fatalities reported to have involved speeding decreased. Most of the traffic fatalities on urban roads and streets occurred on roads with speed limits of 40 mph or higher; however, nearly half of those that involved police-reported speeding occurred on lower-speed roads.

Interestingly, among fatalities in front-to-rear and sideswipe crashes, which are expected to result in less severe injuries than other crash types, 43% and 33%, respectively, were reported being involved in speeding. Additionally, most fatalities in these crash types occurred on roads with speed limits of 40 mph or higher. Similarly, most interchange-related fatalities occurred on roads with speed limits of 40 mph or higher, and 38% of them were related to speeding. These findings suggest that those crashes might have occurred while vehicles were merging or weaving at high speeds. Along these lines, Wu et al. (2013) found that crash rates at merging segments were significantly higher than those at straight, diverge, and sharp curve segments only in uncongested traffic flow in which vehicles usually travel at free flow speeds. As reported in some studies, high speed narrows driver's peripheral vision (Bartmann et al., 1991; Rogé et al., 2004), delays detection and perception times, and increases kinetic energy and stopping distance. All these adverse effects of speed would increase crash risks especially at or in the vicinity of intersections or interchanges where interactions and conflicts between vehicles are prevalent.

A majority of victims from these crashes were speeders themselves who tended to be male and/or young adults. Indeed, multiple studies showed that male or young drivers were more likely to be speeders in general, compared to their counterparts (Truelove et al., 2017; Mohamad et al., 2019). Speed, however, also kills many other road users—pedestrians, cyclists, passengers in speeding vehicles, and occupants in opposing vehicles. Passenger victims in speeding vehicles tended to be female and/or younger (e.g., teens or young adults), while those outside speeding vehicles (i.e., occupants in not-speeding vehicles or non-motorists) tended to be older (e.g., middle-aged or older adults). Further, although victims of speeding-related crashes are prevalent across all urban roads and streets regardless of posted speed limits, fatalities of occupants in not-speeding vehicles tended to occur on higher-speed roads, whereas fatalities of non-motorists tended to occur on lower-speed roads.

Potential countermeasures

The foremost step in speed management is setting an appropriate speed limit. It is especially critical for urban roads and streets where vehicles and vulnerable road users mix. The AAA Foundation for Traffic Safety's previous study showed that posted speed limits were often set based mainly on the analysis of roadway operations (Kim et al., 2019) conducted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), which regulates traffic control devices on U.S. roadways. This practice has led many states and local jurisdictions to raise speed limits and consequently increase traffic safety concerns from the public and stakeholders. Considering these prolonged concerns, a new edition of this manual is underway including a wide range of changes—e.g., reduced reliance on the 85th percentile operating speed as a key factor for setting speed limits—aiming for greater protection of vulnerable road users and improvement of safety and operation (Federal Highway Administration, 2020a).

Additionally, an initiative to reduce speed limits in urban core areas was globally developed and implemented. For example, 20 is plenty is a program promoting the safety of pedestrians, bicyclist, and motor vehicles on local streets in neighborhoods by setting a speed limit of 20 mph (City of Madison, 2021). As shown in the present study, a majority of non-motorists were fatally struck on roads with speed limits between 30 mph and 45 mph. According to Tefft (2013), only five in ten pedestrians will survive when being struck by a vehicle at an impact speed of 42 mph, while nine in ten will do so at an impact speed of 23 mph. Correspondingly, many European countries and local jurisdictions in the U.S. adopted this initiative and reported significant reductions in deaths and injuries from traffic crashes (Pilkington, 2000; Bornioli et al., 2020).

Importantly, however, an increasingly large majority of all traffic fatalities on urban roads and streets occur on arterials and collectors rather than on local streets. These tend to be larger roadways and often have higher speed limits. On some such roads, variable speed limits can be beneficial for providing more adequate speeds, quickly adapting to changing circumstances, such as congestion, crashes, weather, and road surface conditions. The speed limits, determined based on prevailing information on the road at a specific time, enhance traffic flow and safety by increasing compliance with speed limits and reducing speed variances (Khondaker & Kattan, 2015). Well deployed variable speed limits can also reduce rear-end, sideswipe, and other crashes on high-speed arterials (Khondaker & Kattan, 2015; Avelar et al., 2020).

To increase compliance with posted speed limits, other speed management programs or countermeasures are often implemented concurrently (Federal Highway Administration, 2022; 2016). For example, mid-block curb extensions, such as chokers or pinchpoints, are created by extending the sidewalk at mid-block toward a road, thereby narrowing roads and shortening the crossing distance for pedestrians and other road users. These countermeasures have been shown to slow traffic speed (Chai et al., 2011). Another approach, chicane, uses two or three curb extensions, placed on alternating sides of the street and staggered to form s-shaped curves. Chicane has also been shown to reduce vehicle speeds as well (Marek & Walgren, 1998). Additionally, a speed feedback sign that displays a vehicle's speed over the threshold speed has been widely used for many years. This low-cost countermeasure has been installed in residential areas (e.g., community entrance) and school zones with a variety of forms (e.g., with an action message like "SLOW DOWN") to remind drivers to slow down and obey the posted speed limit (Federal Highway Administration, 2016; Karimpour, 2021).

Some countermeasures explicitly aim to provide better protection for non-motorists. The AAA Foundation for

Traffic Safety's recent study (Tefft et al., 2021) revealed that a majority of increased pedestrian fatalities over the past decade occurred on urban non-freeway arterials, at non-intersection locations, and/or in darkness. Since a large proportion of urban roads include interactions and conflicts between vehicles and non-motorists, separating users in space—for example, by installing bicycle lanes, sidewalks, or paved shoulders—can improve safety for all road users (Gan et al., 2005; Avelar et al., 2021). Additionally, multiple studies reported enhanced crosswalk visibility reduced pedestrian crashes in various locations (Elvik & Vaa, 2004; Chen et al., 2012; Zegeer et al., 2017). Potential enhancements include crosswalks with patterns (e.g., bar pairs, continental, ladder) that are marked using highly reflective materials, markings/signs indicating yield to or stop for pedestrians placed in advance of crosswalks, and crosswalk lighting.

Further, traffic crashes and injury severities can be reduced by improving design at intersection areas where collisions that result in severe injury or fatality are highly likely to occur. The present study indicated that a substantial proportion of front-to-rear and sideswipe crashes, which are usually considered less severe than other crash types, were more likely to result in fatalities when speed was a factor (e.g., speeding being involved or occurring on high-speed roads). Conflicts between vehicles while weaving or merging at or near intersection or interchange areas often lead to these crash types. To mitigate these conflicts, dedicated left- or right-turn lanes can be configured at intersections to provide sufficient space for decelerating or stopping and waiting prior to a turn (Harwood et al., 2002). The present study also indicated that an angle collision is the most common crash type in speeding-related collisions between vehicles on urban roads and streets. These crashes are often attributable to conflicts between vehicles making a left turn and oncoming vehicles going through an intersection. Reduced left-turn conflict intersections—e.g., Restricted Crossing U-turn (RCUT), Median U-turn (MUT)—can improve intersection safety by offering provisions to make a U-turn within a short distance after an intersection, as opposed to a direct left-turn at the intersection (Jagannathan, 2007). These intersections simplify turning decision-making for drivers, minimize the potential for severe crashes such as head-on or angle, and create more crossing opportunities for non-motorists (Jagannathan, 2007; Al-Omari et al., 2020). Another safety countermeasure at intersections is a roundabout, which has been long known to be highly effective for calming traffic and reducing conflicts (Elvik, 2003; Qin, 2013).

Strategies and countermeasures presented above are in line with the National Roadway Safety Strategy that the U.S. Department of Transportation recently announced (United States Department of Transportation, 2022). This strategy adopted a "Safe System Approach" as a guiding paradigm to resolve traffic safety issues (Federal Highway Administration, 2020b; Mark & Ngo, 2022). This holistic and comprehensive approach centered on the ideas that humans make mistakes and are so vulnerable that a system designed with multiple layers of protection is needed to prevent crashes in the first place or to minimize the harm to humans involved in crashes. "Safe Speed" is one of key components of this approach to achieve successful implementation.

As shown in this study, speed is a factor of many traffic fatalities occurring on urban roads and streets. This issue is critical since vulnerable road users are often involved in crashes occurring in these areas. Speeding has been a persistent and prevalent traffic safety challenge across all roads, even on corridors with low-speed limits. Arterials or collectors with high posted speed limits exacerbate this problem by increasing crash risks and severity while interacting between vehicles, pedestrians, and bicyclists. Thus, continued efforts are needed to set and maintain safe speeds for all road users and to develop and implement speed management programs or countermeasures in consideration of various factors such as road functions, traffic conditions, and roadside activities.

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ABOUT THE AAA FOUNDATION FOR TRAFFIC SAFETY

The AAA Foundation for Traffic Safety is a 501(c)(3) nonprofit, publicly supported charitable research and education organization. It was founded in 1947 by the American Automobile Association to conduct research to address growing highway safety issues. The organization's mission is to identify traffic safety problems, foster research that seeks solutions, and disseminate information and educational materials. AAA Foundation funding comes from voluntary, tax-deductible contributions from motor clubs associated with the American Automobile Association and the Canadian Automobile Association, individual AAA club members, insurance companies and other individuals or groups.

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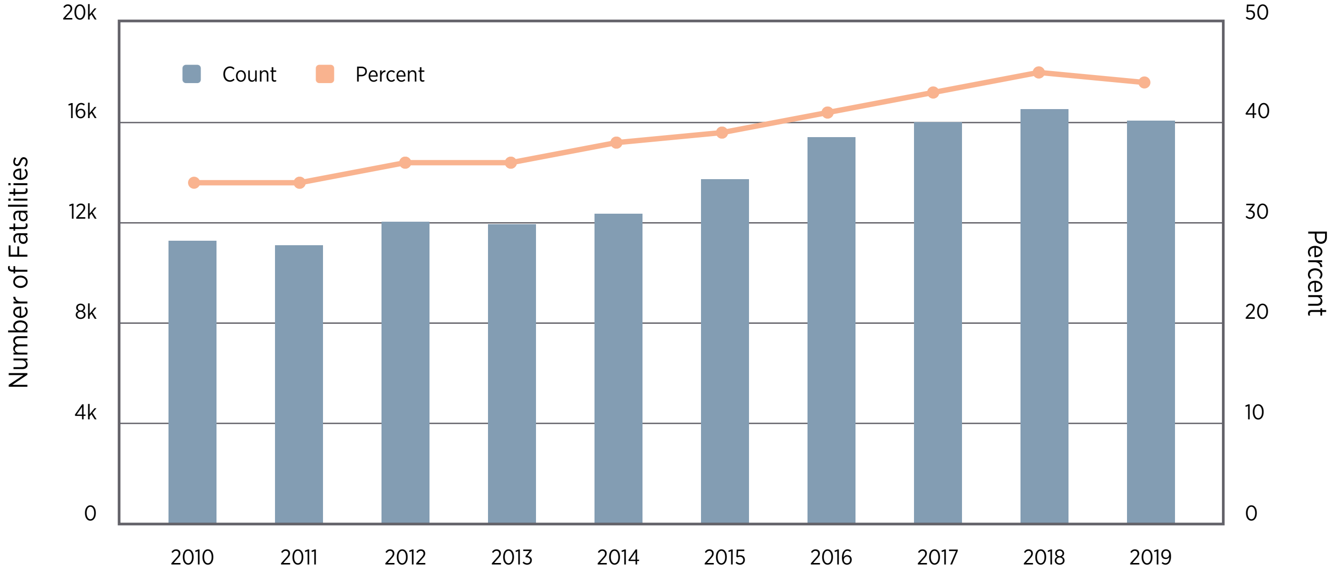

Figure 1: Annual number of fatalities on urban roads and streets and percent of all traffic fatalities on urban roads and streets, United States.

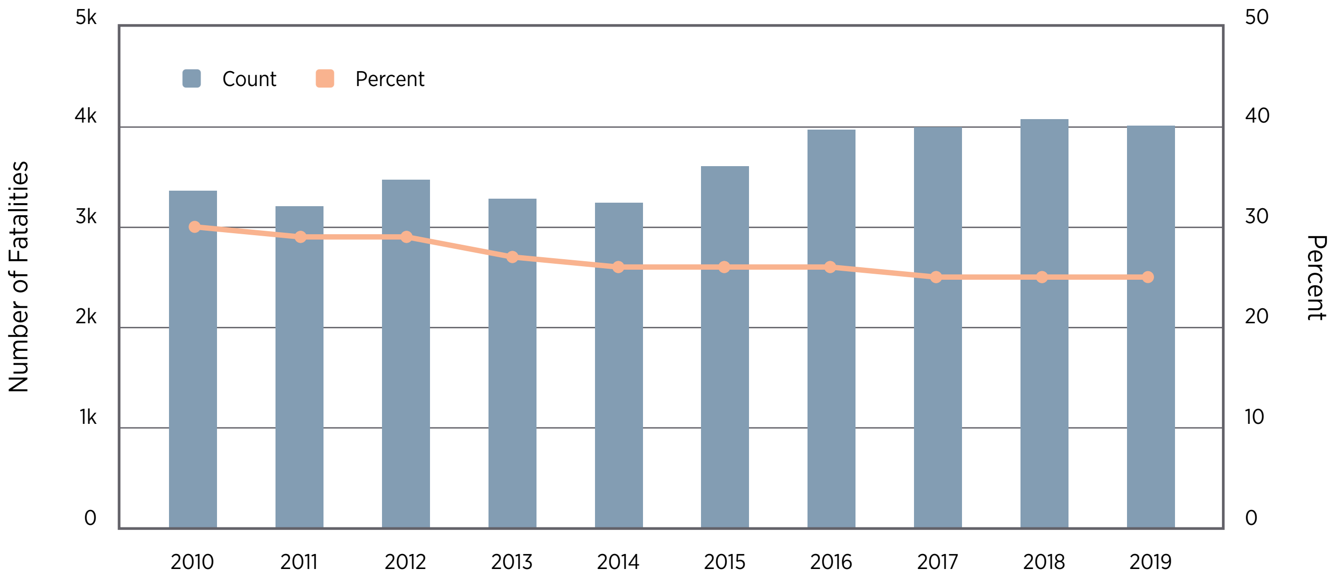

Figure 2: Annual number of speeding-related fatalities on urban roads and streets and percent of all fatalities on urban roads and streets that were speeding-related, United States.

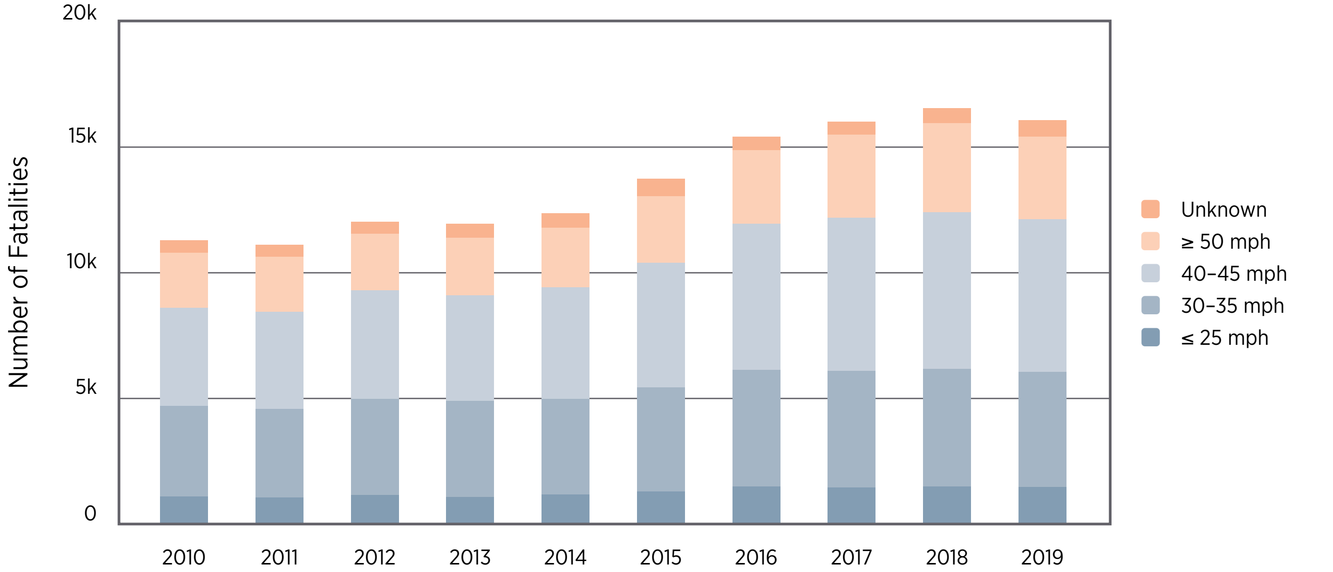

Figure 3: Annual number of fatalities on urban roads and streets by posted speed limits, United States.

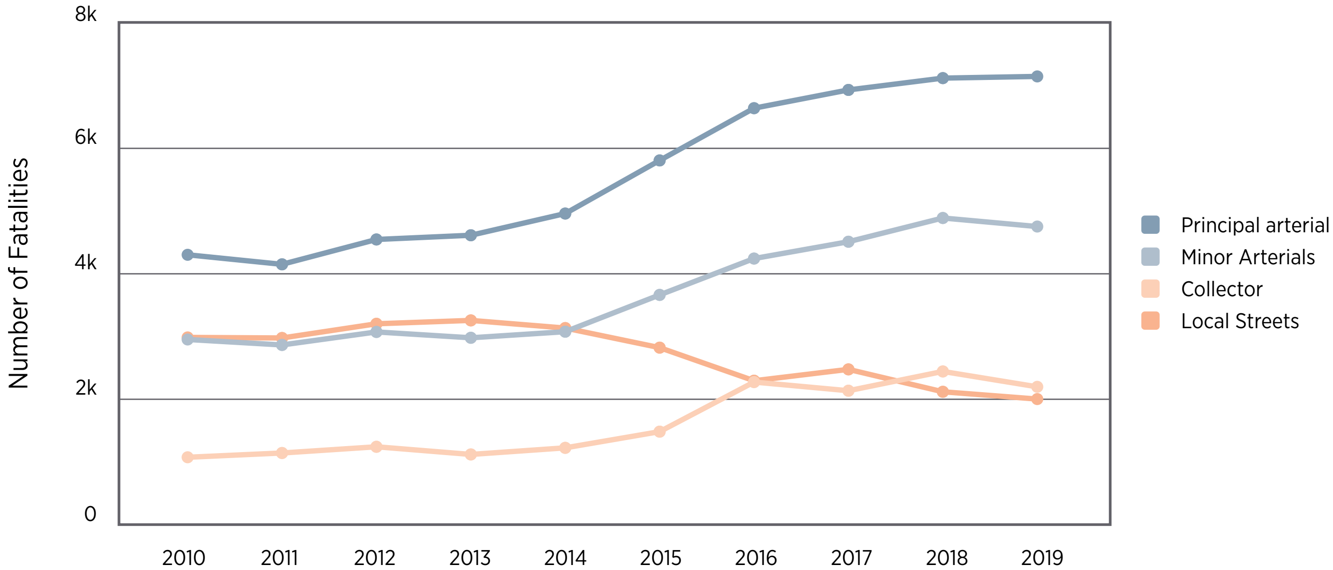

Figure 4: Annual number of fatalities on urban roads and streets by road class, United States.

Table 1: Number of fatalities on urban roads and streets by posted speed limits and involvement of speeding, United States, 2010–2019.

Posted speed limits (miles per hour)	Not speeding-related		Speeding-related		Unknown		Total
	N	Row %	N	Row %	N	Row %	N
≤ 25	7,570	59	4,273	33	959	7	12,802
30–35	25,908	63	12,815	31	2,519	6	41,242
40–45	35,184	71	12,297	25	2,422	5	49,903
≥ 50	20,000	74	5,714	21	1,262	5	26,976
Unknown/Not specified	3,659	65	1,104	20	830	15	5,593
Total	**92,321**	**68**	**36,203**	**27**	**7,992**	**6**	**136,516**

Table 2: Number of fatalities on urban roads and streets by crash type, involvement of speeding, and posted speed limit, United States, 2010–2019.

	Speeding-related			Posted speed limits (miles per hour)					Total
	Not speeding-related	Speeding-related	Unknown	≤ 25	30–35	40–45	≥ 50	Unknown/ Not specified	
Collision with pedestrians/ bicyclists	33,497	2,831	3,103	4,603	13,471	14,553	4,569	2,235	39,431
Roadway departure	15,318	15,791	1,919	3,478	11,311	10,797	6,388	1,054	33,028
Collision with fixed objects/others	2,491	1,221	299	972	1,475	895	400	269	4,011
Front to rear	3,567	2,873	295	223	1,371	2,747	2,238	156	6,735
Front to front	8,850	2,202	573	405	2,543	4,610	3,813	254	11,625
Angle	22,583	8,180	1,108	1,622	8,236	13,435	7,768	810	31,871
Side swipe	1,709	889	138	146	692	1,097	755	46	2,736
Unknown/other	4,309	2,218	552	1,353	2,145	1,772	1,045	764	7,079
Total	**92,321**	**36,203**	**7,992**	**12,802**	**41,244**	**49,906**	**26,976**	**5,588**	**136,516**

Table 3: Number of fatalities on urban roads and streets by junction type, involvement of speeding, and posted speed limit, United States, 2010–2019.

	Speeding-related			Posted speed limits (miles per hour)					Total
	Not speeding-related	Speeding-related	Unknown	≤ 25	30–35	40–45	≥ 50	Unknown/ Not specified	
Non-Junction	47,607	21,857	4,951	6,636	22,008	26,867	16,396	2,508	74,415
Intersection	24,706	7,354	1,347	2,583	9,848	13,147	6,673	1,156	33,407
Intersection related	13,622	4,999	1,212	2,889	7,152	6,528	2,099	1,165	19,833
Driveway access	676	149	38	95	224	264	110	170	863
Driveway access related	4,066	1,250	215	369	1,391	2,436	988	347	5,531
Interchange area	182	134	20	12	65	110	138	11	336
Interchange related	410	267	37	50	132	216	257	59	714
Other/unknown	1,052	193	172	168	422	335	315	177	1,417
Total	**92,321**	**36,203**	**7,992**	**12,802**	**41,242**	**49,903**	**26,976**	**5,593**	**136,516**

Table 4: Number of fatalities in intersection and intersection-related crashes on urban roads and streets by traffic control device type, involvement of speeding, and posted speed limit, United States, 2010–2019.

	Speeding-related			Posted speed limits (miles per hour)					Total
	Not speeding-related	Speeding-related	Unknown	≤ 25	30-35	40–45	≥ 50	Unknown/ Not specified	
No control	11,152	3,634	927	1,854	5,617	5,441	2,135	666	15,713
Regulatory signs	8,445	2,892	418	1,672	3,483	3,294	2,902	404	11,755
Traffic signals	18,326	5,668	1,123	1,870	7,654	10,763	3,669	1,161	25,117
Other signals	214	106	16	48	131	107	41	9	336
Unknown/ not reported	191	53	75	28	115	70	25	81	319
Total	**38,328**	**12,353**	**2,559**	**5,472**	**17,000**	**19,675**	**8,772**	**2,321**	**53,240**

Table 5: Number of fatalities on urban roads and streets by light condition, involvement of speeding, and posted speed limit, United States, 2010–2019.

	Speeding-related			Posted speed limits (miles per hour)					Total
	Not speeding-related	Speeding-related	Unknown	≤ 25	30-35	40–45	≥ 50	Unknown/ Not specified	
Daylight	42,239	13,882	2,691	6,062	16,801	20,663	12,846	2,440	58,812
Dawn/dusk	3,785	1,369	290	572	1,565	1,955	1,137	215	5,444
Dark/lit	28,075	13,987	3,123	4,722	16,862	17,219	4,461	1,921	45,185
Dark/unlit	17,381	6,619	1,536	1,309	5,600	9,621	8,321	685	25,536
Dark/unknown light condition	581	242	194	89	286	319	140	183	1,017
Unknown	260	104	158	48	128	126	71	149	522
Total	**92,321**	**36,203**	**7,992**	**12,802**	**41,242**	**49,903**	**26,976**	**5,593**	**136,516**

Table 6: Number of fatalities on urban roads and streets by occupant in different vehicle type, involvement of speeding, and posted speed limit, United States, 2010–2019.

	Speeding-related			Posted speed limits (miles per hour)					Total
	Not speeding-related	Speeding-related	Unknown	≤ 25	30–35	40–45	≥ 50	Unknown/ Not specified	
Occupant of passenger vehicle	41,870	24,308	3,417	5,153	19,228	25,145	17,994	2,075	69,595
Occupant of large truck/ bus	592	154	67	86	191	218	286	32	813
Occupant of motorcycle	13,498	8,337	1,087	2,147	7,213	9,094	3,780	688	22,922
Pedestrian	29,898	2,516	2,891	4,290	12,030	12,827	3,917	2,241	35,305
Bicyclist/other cyclist	4,652	463	327	652	1,787	1,926	775	302	5,442
Other/unknown	1,811	425	203	474	793	693	224	255	2,439
Total	**92,321**	**36,203**	**7,992**	**12,802**	**41,242**	**49,903**	**26,976**	**5,593**	**136,516**

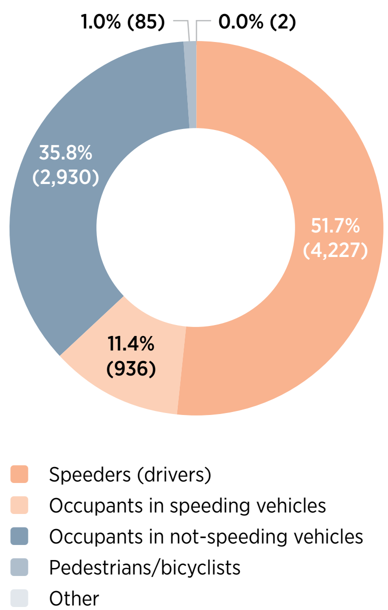

Figure 5: Number of fatalities in speeding-related angle collisions on urban roads and streets by person type, United States, 2010–2019.

Table 7: Number of fatalities on urban roads and streets by gender and age of person killed, involvement of speeding, and posted speed limit, United States, 2010–2019.

		Speeding-related			Posted speed limits (miles per hour)					Total
		Not speeding-related	Speeding-related	Unknown	≤ 25	30–35	40–45	≥ 50	Unknown/ Not specified	
Gender	Male	64,013	27,635	5,742	9,157	29,930	35,823	18,558	3,922	97,390
	Female	28,182	8,552	2,236	3,631	11,265	14,014	8,407	1,653	38,970
	Unknown	126	16	14	14	47	66	11	18	156
Age	<16	3,427	1,233	241	873	1,449	1,441	874	264	4,901
	16–18	2,756	2,393	249	565	1,577	1,899	1,167	190	5,398
	19–24	9,039	8,210	994	1,640	5,500	6,769	3,673	661	18,243
	25–39	18,705	11,834	2,025	2,826	9,824	11,959	6,750	1,205	32,564
	40–64	34,879	9,377	3,131	3,934	14,540	17,742	9,305	1,866	47,387
	≥ 65	23,155	3,096	1,306	2,918	8,211	9,921	5,165	1,342	27,557
	Unknown	360	60	46	46	141	172	42	65	466
Total		**92,321**	**36,203**	**7,992**	**12,802**	**41,242**	**49,903**	**26,976**	**5,593**	**136,516**

Table 8: Number of fatalities in speeding-related crashes on urban roads and streets by person type, United States, 2010–2019.

		Speeders (drivers)	Occupants in speeding vehicles	Occupants in not-speeding vehicles	Pedestrians/ bicyclists	Other	Total
Posted speed limit (miles per hour)	≤ 25	2,531	800	344	563	35	4,273
	30–35	7,627	2,221	1,627	1,285	55	12,815
	40–45	7,469	1,847	2,143	803	35	12,297
	≥ 50	3,523	893	1,100	184	14	5,714
	Unknown	669	175	112	141	7	1,104
Gender	Male	18,914	3,551	3,009	2,058	103	27,635
	Female	2,895	2,380	2,317	917	43	8,552
	Unknown	10	5	0	1	0	16
Age	<16	75	598	318	213	29	1,233
	16–18	1,123	949	197	116	8	2,393
	19–24	5,527	1,798	592	283	10	8,210
	25–39	8,520	1,594	1,120	586	14	11,834
	40–64	5,463	733	1,883	1,248	50	9,377
	≥ 65	1,092	240	1,212	517	35	3,096
	Unknown	19	24	4	13	0	60
Total		**21,819**	**5,936**	**5,326**	**2,976**	**146**	**36,203**