

Speeding Involvement in Fatal Crashes

Speeding is a major factor contributing to motor vehicle crash fatalities both nationally and in Washington State. From 2007 to 2016 speeding-related crashes accounted for 112,580 motor vehicle crash fatalities nationally, which was about 31 percent of all motor vehicle crash fatalities during this period.¹² Speeding-related crashes in Washington State claimed 1,817 lives during the same ten-year period, which was about 37 percent of all crash fatalities in the state. In 2016 alone, 27 percent of fatalities nationally and 29 percent of fatalities statewide involved speeding.

The Washington Traffic Safety Commission (WTSC) considers a crash to be speeding-involved if any driver in the crash was charged with a speeding-related offense. For example, a law enforcement officer indicated driving too fast for conditions; or exceeding the posted speed limit was a contributing factor in the crash. Speeding generally occurs with other risky behaviors simultaneously: thus, drivers under the influence of alcohol tend to speed more.³

Controlling vehicle speed can prevent crashes, and reduce their impact by lessening the severity of injuries sustained by the victims. An average speed decrease of one kilometer per hour (0.6 mile per hour) typically results in a three percent lower risk of a crash-involved injury, and a four to five percent decrease of crashes that result in fatalities.^{3,4}

This report intends to present an in-depth review of speeding-involved fatal crashes through the Washington Fatality Analysis Reporting System (WA-FARS). It illustrates Washington-specific fatal crash trends (including crash and driver factors) to support prevention efforts targeting speeding drivers in Washington.

Did you know?

- *Between 2015 and 2017, one in every three fatal crashes involved speeding as a contributing factor.*
- *Speeding is rarely a factor by itself in fatal crashes. From 2015 to 2017, only 14 percent of speeding drivers in fatal crashes had speeding as the single contributing crash factor.*
- *Speeding is most prevalent in young drivers ages 16-25 involved in fatal crashes – 31 percent from 2015 to 2017.*
- *Of all age groups involved in fatal crashes, speed is more likely to be a contributing factor for male drivers than female drivers.*
- *Speeding male drivers are more likely than speeding female drivers to be impaired, unbelted, or unlicensed.*
- *Speeding female drivers are more likely to be distracted than speeding male drivers.*
- *70 percent of speeding-involved fatal crashes between 2008 and 2017 were lane departures.*
- *80 percent of speeding-involved fatal crashes between 2009 and 2017 occurred on wet road surfaces.*
- *Of speeding-related fatal crashes between 2015 and 2017, 64 percent of speeding drivers were cited for driving too fast for conditions.*

Attitudes towards Speeding

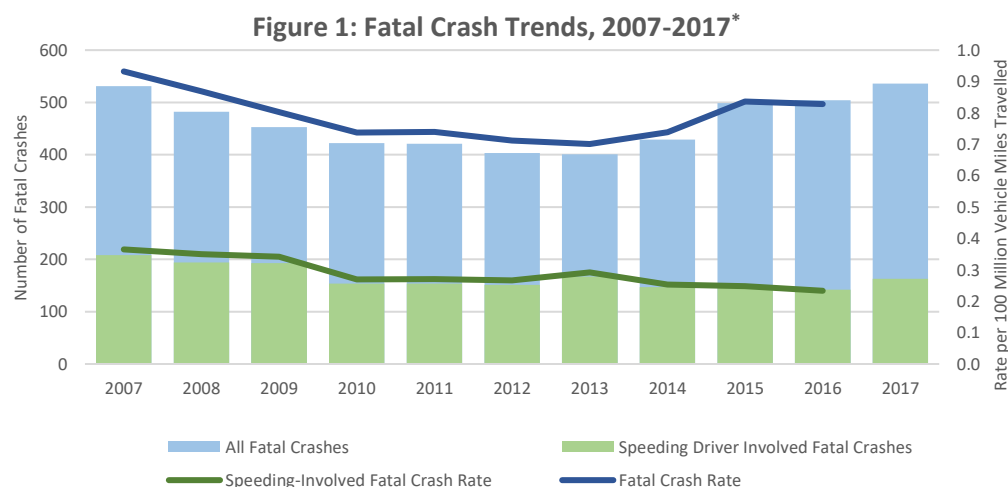
Each year since 2008 the AAA Foundation for Traffic Safety has conducted a survey, the *Traffic Safety Culture Index*, to measure attitudes towards traffic safety-related behaviors. The 2017 *Traffic Safety Culture Index* revealed a common contradiction among US drivers between what is considered socially acceptable and how drivers behave at the wheel.⁵ According to the survey, speeding on freeways and residential streets was prevalent. About half of drivers (50.3 percent) reported driving 15 mph over the speed limit on a freeway, with 18.8 percent reporting that they did it fairly often in the past month. Additionally, 47.6 percent reported driving 10 mph over the speed limit in a residential area over the past 30 days, with 12.9 percent indicating that they did it fairly often.

Despite the high proportion of individuals who drove over the speed limit, the proportion of individuals who deemed this behavior socially acceptable was relatively small. Only 23.9 percent of drivers believed that driving 15 mph over the speed limit on a freeway is completely or somewhat acceptable. A smaller proportion of people (14.0 percent) thought driving 10 mph over the speed limit on a residential street to be acceptable. Based on these results, to achieve any positive change in driver behavior regarding speeding, it is crucial to address the gap between personal behavior, and social norms and expectations.

Speeding Driver Involved Fatal Crash Statistics

Fatal Crash Trends:

Washington's speeding-involved fatal crashes totaled about 31 percent of all fatal crashes between 2015 and 2017. In other words, one in every three fatal crashes during this period involved speeding as a contributing factor.



* The 2017 fatal crash counts are preliminary, and the VMT information for 2017 is not currently available.

Even though the number of speeding-involved crashes stabilized at 150-160 crashes per year, the rate for speeding-involved fatal crashes per 100 million vehicle miles travelled (VMT) decreased steadily—from 0.37 per VMT in 2007, to 0.23 in 2016. A combination of factors could be responsible for this decline in the speeding-involved fatal crash rate. However, one immediately noticeable factor is that in 2013 after the stable period following the 2007 Great Recession, annual VMT started rising while the number of speeding-involved fatal crashes did not show the same upward trend during this period.⁶ Thus, the decline in fatal crash rates may partially be related to this VMT increase (Figure 1).

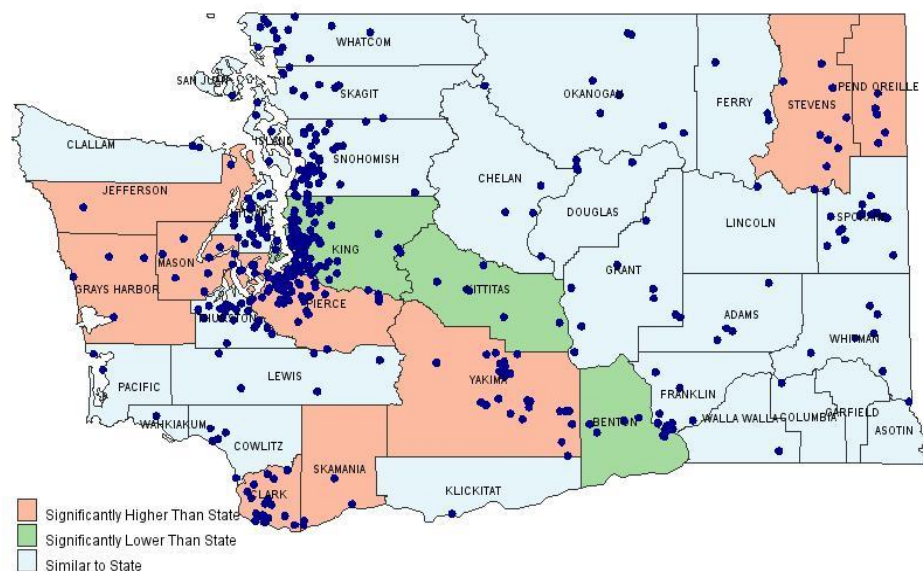
*Geographical Distribution:**

Fatal crashes involving speeding drivers occurred in all Washington counties between 2014 and 2016 (Figure 2).*

Each blue dot on the map represents a fatal crash in which at least one driver was speeding.

We calculated young driver-involved crash rates per 100 million VMT in each county compared to the state rate, and found nine counties with significantly higher ($p < 0.05$) speeding-involved fatal crash rates than the state rate per 100 million VMT: Jefferson, Grays Harbor, Mason, Pierce, Yakima, Skamania, Clark, Stevens and Pend Oreille. These are mostly rural counties except Pierce and Clark. King, Kittitas and Benton Counties had a lower rate than the state for speeding-involved fatal crashes per 100 million VMT.

Figure 2: Speeding Driver Involved Fatal Crashes and Fatality Comparisons by County, 2014-2016
(County Rate per 100,000,000 Vehicle Miles Travelled (VMT))



* The 2017 VMT information is not currently available.

King County was unique in that it contained the highest number of speeding-involved fatal crashes, while showing relatively low risk per the amount of VMT exposure observed in the county. It is the state's most travelled county by motor vehicles.

Crash Factors:[†]

Until 2013 speeding-involved fatal crashes used to occur mainly on rural roads (Figure 3). In 2013 highway urban and urbanized area boundaries were updated based on the 2010 U.S. census. Some of the previously rural roads became urban after an extensive review as required by the federal law.⁷ Even though speeding-involved fatal crashes appeared to be an urban phenomenon after 2013, it was simply a by-product of urban sprawl.

From 2008 to 2017 the majority of speeding-involved fatal crashes in Washington State, about 70 percent, were lane departures (Figure 4). Lane departure crashes include running off the road or crossing into an oncoming lane of traffic. There is a close correlation between speeding and fatal crashes involving lane departures, because the higher the speed of a vehicle, the shorter amount of time the driver has to avoid a crash. When the roads are curvy, slippery, or visibility is low, driving too fast for these conditions escalates the risk of losing control of the vehicle and running off the road.

Every year less than one percent of speeding-involved fatal crashes also involved pedestrians. That said, any crash involving a non-motorist and a speeding motor vehicle is likely to be fatal due to non-motorists' lack of protection and vulnerability.⁸

Figure 3: Speeding Involved Fatal Crashes by Rural and Urban Roads, 2008-2017

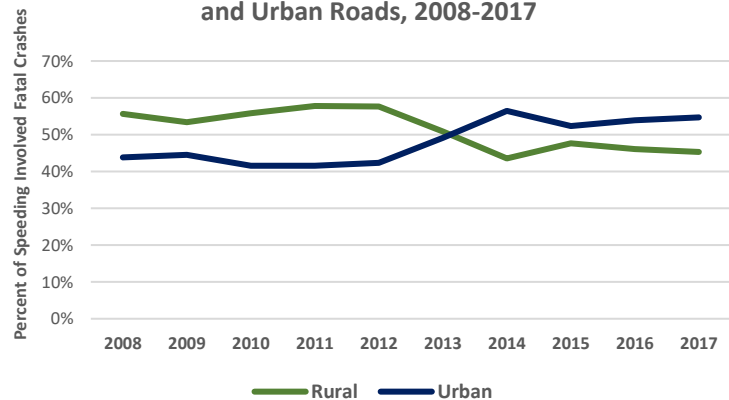
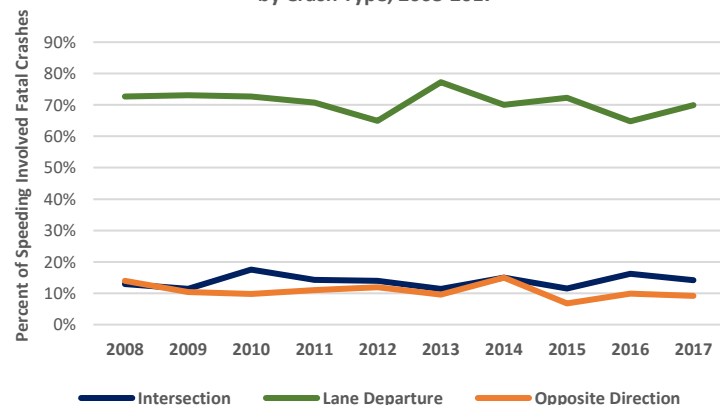


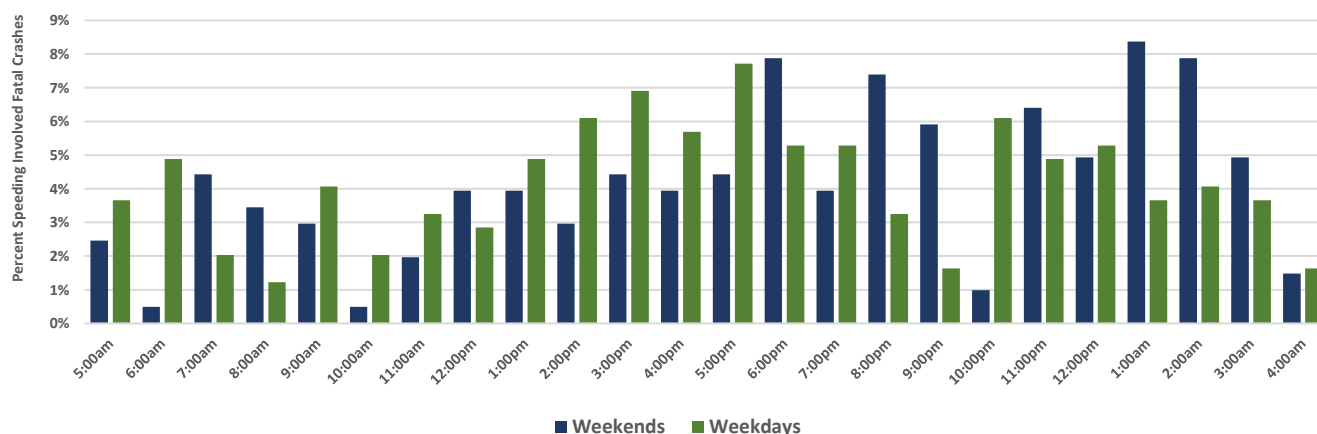
Figure 4: Speeding Driver (Ages 16-25) Involved Fatal Crashes by Crash Type, 2008-2017



[†] The 2017 fatal crash counts are preliminary.

The distribution of speeding-involved fatal crashes by time of day differs slightly between weekdays and weekends (Figure 5). Between 2015 and 2017 speeding-involved fatal crashes on weekdays concentrated mostly around the early rush hour period—from 3 p.m. to 5 p.m. This is a time when traffic is most heavy, as people are eager to go home. On weekends, however, speeding-involved crashes mostly occurred at night between 6 p.m. and 2 a.m.

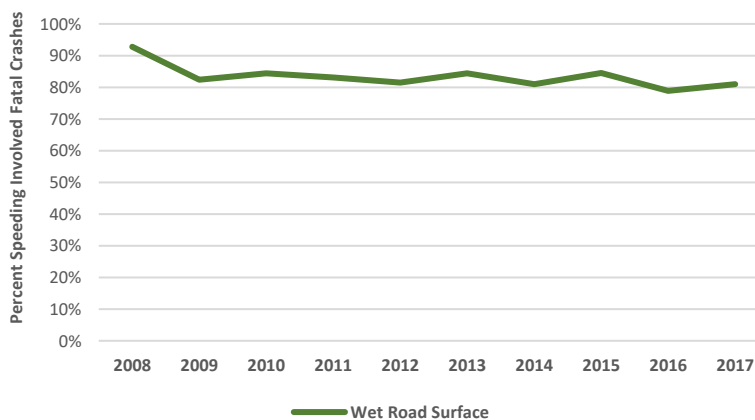
Figure 5: Speeding Involved Fatal Crashes by Crash Time and Weekend/Weekday, 2015-2017



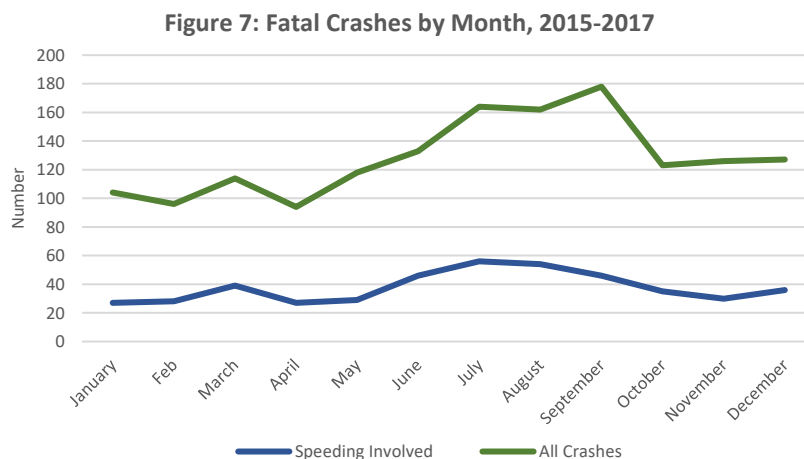
In general, Washington drivers are more likely to have higher fatal crash rates than drivers in most other states when the weather is snowy or rainy, or the road conditions are icy or wet.⁹ It appears that speeding is one of many factors contributing to these high fatal crash rates.

As shown in Figure 6, a large proportion of speeding-involved crashes tend to happen on wet road surfaces. From 2008 to 2017, roughly four out of five speeding-involved fatal crashes occurred on wet road surfaces. This might not come as a surprise, since both speeding and wet road surface conditions create greater potential for loss of vehicle control.

Figure 6: Speeding Involved Fatal Crashes by Various Crash Factors, 2007-2016



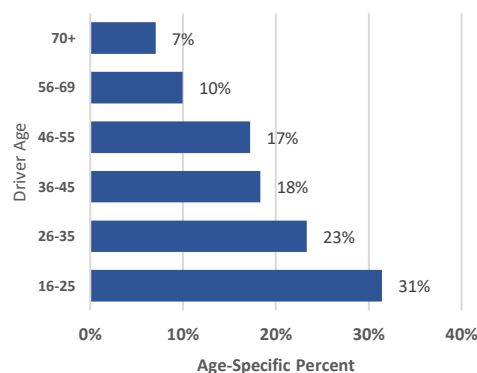
For all drivers—both nationally and in Washington State—fatal crash numbers tend to be higher during the summer months and holidays.¹⁰ The seasonal distribution of speeding-involved fatal crashes and all fatal crashes is very similar. They both follow a pattern of higher number of fatal crashes in the summer months (June-September) than the rest of the year (Figure 7).



Demographic Factors:[†]

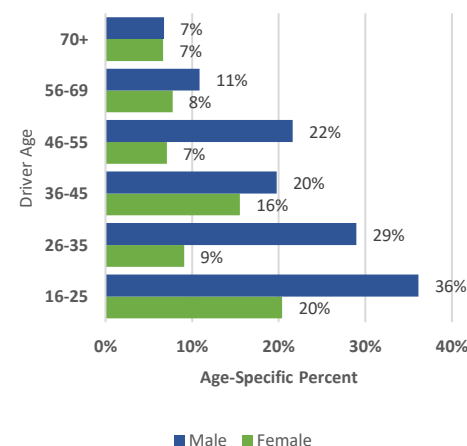
Driver age is an important factor in speeding-involved fatal crashes.¹¹ Figure 8 illustrates the age-specific percentage of drivers involved in speed-related fatal crashes. Speeding was the most prevalent in young drivers ages 16-25 involved in fatal crashes – 31 percent from 2015 to 2017. The prevalence decreased with age. Speeding was the least prevalent as a fatal crash factor in drivers ages 70 and older.

Figure 8: The Percentage of Speeding Drivers by Age, 2015-2017



Gender is another risk factor for speeding-involved fatal crashes. Arranged by age group and gender, Figure 9 shows the percentage of drivers from 2015 to 2017 who were speeding when involved in fatal crashes. Male drivers in all age groups, except ages 70 and older, were more likely to be speeding than female drivers. Similar driver age and gender patterns in fatal crashes involving speeding are also observable nationally.⁴

Figure 9: The Percentage of Speeding Drivers by Age and Gender, 2015-2017



Risky Behaviors:[†]

Seat Belt Use: Even though seat belt use is now a common practice among motor vehicle occupants of all ages,^{12,13} drivers speeding at the time of fatal crashes tend to have a higher propensity towards risky behaviors: and lack of seat belt use is one of these risky behaviors (Figure 10). Between 2008 and 2015 the proportion of speeding drivers who were also unbelted during fatal crashes was about 60 percent. In 2017 the proportion rose to 70 percent.

As shown in Figure 11, from 2015 to 2017 lack of seat belt use was more common among male drivers involved in fatal crashes (69 percent) than female drivers (53 percent). Lack of seat belt use was the number one risky behavior in speeding male drivers involved in fatal crashes from 2015 to 2017.

Impaired Driving: Drivers' speed choice is influenced by a number of factors; impairment is one factor that leads to speeding while driving.³ Among speeding drivers involved in fatal crashes from 2008 to 2017, about two in every three drivers were also impaired by alcohol, drugs, multiple drugs, or drug(s) mixed with alcohol. The actual prevalence hovered around 60-70 percent during this ten-year period (Figure 10).

As shown in Figure 11, between 2015 and 2017 impairment was slightly more common among male speeding drivers involved in fatal crashes (63 percent) than speeding female drivers (55 percent). However, it is important to note that during this period over half of both male and female speeding drivers in fatal crashes were impaired.

Figure 10: Other High Risk Behaviors of Speeding Drivers in Fatal Crashes, 2008-2017

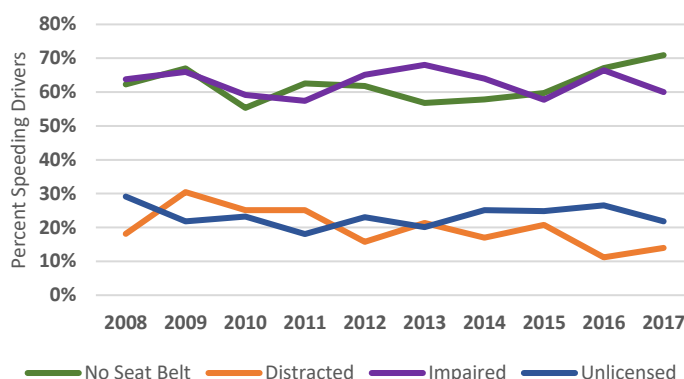
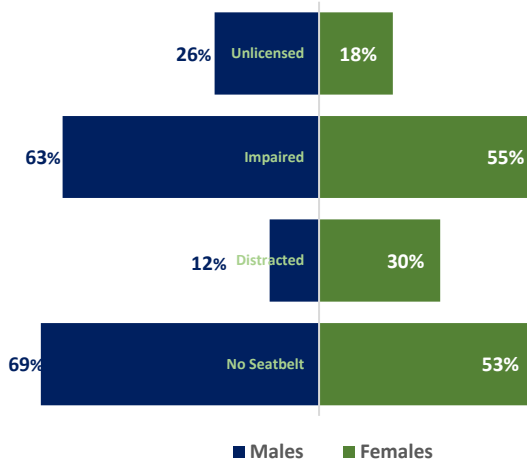


Figure 11: Gender Differences in Other Risky Behaviors Engaged by Speeding Drivers, 2015-2017



Distracted Driving: Distracted driving among speeding drivers in fatal crashes is less common than unbelted driving and speeding, or impaired driving and speeding. In 2009 one in every three speeding drivers were also distracted. By 2017 it increased to one in seven speeding drivers. From 2009 to 2017 the percentage of speeding drivers who were also distracted at the time of a fatal crash decreased from 30 percent in 2009 to 14 percent 2017 (Figure 10).

Some of the decline in speeding-involved fatal crashes that were also distracted could be attributed to Washington’s changing social norms in regards to hand-held electronic device use while driving, leading to the distracted driving law that came into effect on July 23, 2017. The new distracted driving law, known as the Driving under the Influence of Electronics (E-DUI) Act, prohibits cell phone use by drivers, even when stopped at a light. It prohibits typing, accessing information, or watching videos on any electronic device—including tablets, laptops or video games. The first ticket costs the driver \$136, and the fine goes up to \$234 for a repeat. The new law also makes it possible for these citations to be reported to the driver’s insurance company.

Distracted driving is one area in which data shows more female distracted drivers than male distracted drivers. This is also true of speeding female drivers in fatal crashes. Among fatal crashes of speeding drivers who were also distracted from 2015 to 2017, 12 percent of drivers were male, while 30 percent were female (Figure 11).

Unlicensed Drivers: In Washington about one in four speeding drivers involved in fatal crashes was unlicensed. The percentage of speeding drivers in fatal crashes who were also unlicensed was about 30 percent in 2008, decreasing to 22 percent in 2017 (Figure 10). In fatal crashes from 2015 to 2017, the number of speeding unlicensed drivers was 26 percent of males and 18 percent of females (Figure 11).

Speeding and Co-Occurring Risky Behaviors: Speeding is rarely a factor by itself in fatal crashes. Table 1 illustrates all combinations of risky driver behaviors that co-occur with speeding in fatal crashes. From 2015 to 2017 only 14 percent of speeding drivers in fatal crashes had speeding as the single contributing crash factor (Table 1). Eighty six percent of the time, speeding drivers in fatal crashes involved one or more other risky behaviors, such as speeding and impairment (27 percent) or speeding, impairment, and seat belt non-use (12 percent).

The far left column of Table 1 shows the percentages of speeding drivers in fatal crashes. Those involved in one or more co-occurring risky behaviors is marked with “Yes” in the table. For example, if a row lists “Yes” multiple times for driver speeding, driver impaired, driver distracted, and driver not belted, the percentage on the left indicates the percent of drivers with these factors co-occurring at the time of fatal crash.

Table 1: Co-occurring Crash Factors in Speeding Drivers Involved in Fatal Crashes, 2015-2017

Percent Drivers	Driver Speeding	Driver Unlicensed	Driver Impaired	Driver Distracted	Driver Not Belted
14%	Yes				
11%	Yes				Yes
3.1%	Yes			Yes	
3.7%	Yes			Yes	Yes
27%	Yes		Yes		
12%	Yes		Yes		Yes
3.9%	Yes		Yes	Yes	
1.1%	Yes		Yes	Yes	Yes
3.9%	Yes	Yes			
1.8%	Yes	Yes			Yes
1.1%	Yes	Yes		Yes	
0.2%	Yes	Yes		Yes	Yes
12%	Yes	Yes	Yes		
3.9%	Yes	Yes	Yes		Yes
1.1%	Yes	Yes	Yes	Yes	
0.7%	Yes	Yes	Yes	Yes	Yes
Total Number of Speeding Drivers =457					

Fatality Analysis Reporting System

The Fatality Analysis Reporting System (FARS) is the source of speeding driver data in this report. The WTSC contracts with the National Highway Traffic Safety Administration (NHTSA) to provide FARS data for Washington State. FARS is a nationwide census of fatal traffic crashes that characterizes the crash, the vehicle, and the people in each reported crash. FARS contains more than 140 coded data elements collected from official documents, including Police Traffic Crash Reports (PTCR), state driver licensing and vehicle registration files, death certificates, toxicology reports, and Emergency Medical Services (EMS) reports. To be included in FARS, a crash must involve a motor vehicle traveling on a road that is open and accessible to the public and result in the death of a person (either vehicle occupant or non-motorist) within 30 days of the crash.

Contact Information

For more information about this report, please contact the Washington Traffic Safety Commission, Research and Data Division at (360) 725-9860.

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