



Speeding

The Issue:

Excess speed can contribute to both the frequency and severity of motor vehicle crashes. At higher speeds, additional time is required to stop a vehicle and more distance is traveled before corrective maneuvers can be implemented. Speeding reduces a driver's ability to react to emergencies created by: driver inattention; unsafe maneuvers of other vehicles; roadway hazards; vehicle issues (such as tire blowouts); or, hazardous weather conditions. Increases in speed can mean life or death for vulnerable road users (VRU) such as pedestrians, bicyclists and roadside first responders who lack the protective structure of a vehicle.

The Impact:

In 2021, 42,915 people were killed in traffic crashes.¹ Twenty-seven percent of those fatalities, or 11,780 people, were speeding related, a five percent increase from 2020, which saw a 17 percent increase from the previous year (2019).² The National Highway Traffic Safety Administration (NHTSA) has identified speeding as one of “three major behavioral factors” that contributed to the dramatic spike in overall traffic fatalities from 2019 to 2020.³ An estimated 308,013 people were injured in speeding-related crashes (13 percent of total people injured) in 2020, the most recent year for which data is available.⁴

The Facts:

- Small changes in speed can have a big impact on safety. Crash tests conducted in 2019 showed that modest five to ten miles-per-hour (mph) increases in speed can have a severe impact on a driver's risk of injury or even death.⁵
- Speed increases have major implications for pedestrians. The average risk of death for a pedestrian is 10 percent at an impact speed of 23 mph, 25 percent at 32 mph and 50 percent at 42 mph.⁶
- In 2020, the latest year for which this data is available:
 - 35 percent of male drivers aged 15 – 20 involved in fatal crashes were speeding.
 - 34 percent of motorcycle riders involved in fatal crashes were speeding – more than drivers of any other vehicle type.⁷
- Most speeding-related fatalities (87 percent) occurred on roads that were not interstate highways.⁸
- More than half (53 percent) of speeding passenger vehicle drivers in fatal crashes were unbuckled, compared to 24 percent of non-speeding drivers.⁹
- In 2020, 12 percent of motorcycle riders involved in fatal crashes were both speeding and unhelmeted.¹⁰
- Thirty-seven percent of speeding drivers who were involved in fatal crashes had blood alcohol concentrations (BACs) of .08 percent or higher in 2020, compared to 17 percent of non-speeding drivers.¹¹
- Speed-related crashes cause \$52 billion in economic costs and \$203 billion in comprehensive costs. These costs account for 21 percent of all economic costs and 24 percent of all societal harm (measured as comprehensive costs) from motor vehicle crashes.¹² If these costs were updated for

inflation alone, in 2022 they would equate to \$67 billion in economic costs and \$263 billion in comprehensive costs.¹³

- Speed-related crashes cost employers nearly \$10 billion in 2018 (expressed in 2019 dollars), the majority as a result of off-the-job crashes.¹⁴

Public Opinion on Speeding

- Drivers acknowledge that excess speed is dangerous, yet there is a disconnect in their actions:
 - Just over 45 percent of drivers surveyed drove 15 mph over the speed limit on a freeway in the past month, even though 80 percent of those surveyed say doing so is moderately to extremely dangerous.¹⁵
 - More than 35 percent of drivers surveyed drove 10 mph over the speed limit on a residential street in the past month, even though 88 percent of those surveyed believe doing so is moderately to extremely dangerous.¹⁶
 - More than 80 percent of respondents in a March 2022 survey say drivers are more aggressive now compared to just before the start of the COVID-19 pandemic (March 2020), and 79 percent say people are driving faster.¹⁷
 - Sixty-eight (68) percent of respondents in a December 2021 survey are “extremely” or “very” concerned about speeding, and 66 percent said not enough is being done to reduce dangerous behavior on our roadways.¹⁸

The Solutions: Laws, Technology and Roadway Safety Infrastructure

Policy Decisions That Impact Speeding-Related Crashes:

- A 2009 study in the American Journal of Public Health examining the long-term effects of the 1995 repeal of the national speed limit estimated that 12,545 deaths and 36,583 injuries in fatal crashes were attributed to increases in speed limits across the U.S. between 1995 and 2005.¹⁹
- According to research performed by the Insurance Institute for Highway Safety (IIHS) over the past 25 years, rising speed limits have cost nearly 37,000 lives.²⁰
- Surveys conducted by the AAA Foundation find that the most common factor considered when establishing or changing a speed limit is how fast most traffic tends to travel on a given road, known as the 85th percentile speed.²¹
- The 85th percentile speed is the speed at or below which 85 percent of the vehicles on a road tend to travel. This speed is measured and then the limit is set or modified. However, this method ignores evidence from IIHS and others that people often drive faster than the speed limit, and average speeds tend to increase whenever speed limits are raised, creating a feedback loop of repeated speed limit increases.²² In its Most Wanted List of Transportation Safety Improvements, the National Transportation Safety Board (NTSB) recommends removing the guidance from the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) that speed limits in speed zones be within five mph of the 85th percentile speed.²³

Automated Enforcement (AE): NHTSA, NTSB, IIHS, the Centers for Disease Control and Prevention (CDC) and others have identified AE as an effective means to deter dangerous behavior on our roadways.²⁴

- A 2020 review by the Congressional Research Service (CRS) found that speed camera programs are effective in reducing speeding and/or crashes near cameras.²⁵
- Speed cameras alone resulted in a 19 percent reduction in the likelihood that a crash resulted in a fatal or incapacitating injury.²⁶
- In 2021, AAA, Advocates, Governors Highway Safety Association, IIHS and the National Safety Council jointly released the Automated Enforcement Checklist to convey their support for the proven technology and to help communities implement successful AE programs.²⁷

Safety Technologies and Safety Standards Can Protect Vehicle Occupants and Other Road Users

The U.S. Department of Transportation (DOT) must expeditiously use its authority to advance minimum performance standards for vehicle safety technologies which can prevent or mitigate crashes and protect vehicle occupants and road users. These safety technologies should be standard, not optional, equipment in new vehicles. This action will achieve safety equity by both ensuring that the technology responds to and benefits all road users and that consumers buying new vehicles are not charged extra for the technology. Moreover, requiring equipment as standard can reduce the base cost of technology due to economies of scale.

Advanced Driver Assistance Systems (ADAS):

- According to the AAA Foundation for Traffic Safety, equipping all cars, pickup trucks, vans, minivans and SUVs with forward collision warning (FCW) / automatic emergency braking (AEB) that respond to pedestrians / bicyclists as well as vehicles could prevent 1.9 million crashes, nearly 900,000 injuries, and more than 4,700 deaths annually.²⁸
- The Infrastructure Investment and Jobs Act (IIJA, Pub. L. 117-58), signed into law on November 15, 2021, directs the U.S. DOT to issue final rules on minimum performance standards and requirements for ADAS technologies including AEB, FCW, lane departure warning (LDW) and lane keeping assist (LKA). However, the law does not mandate that the technology will be capable of responding to pedestrians, bicyclists and other road users as appropriate, does not include a date certain for rulemaking and compliance for ADAS in passenger vehicles, and does not include Class 3 – 6 trucks for the AEB requirement.²⁹

Vehicle Connected and Speed Curbing Technology:

- Speed assistance systems, such as intelligent speed assistance (ISA), can provide information to drivers about present speed limits, warn drivers when a car's speed is above the limit, prevent a car from exceeding the speed limit, or maintain a set speed.³⁰ Rating this technology in new vehicles as part of an improved U.S. New Car Assessment Program (NCAP), as is already done in Europe, could incentivize automakers to equip more U.S. models with speed assistance systems.
- Vehicle-to-everything (V2X) technology offers the potential to improve safety by relaying signals to the vehicle about upcoming traffic lights and speed limits, among other messaging.³¹ Completion of a 2017 Notice of Proposed Rulemaking (NPRM) to require vehicle-to-vehicle (V2V) technology, combined with research that has been conducted by with the Federal Highway Administration (FHWA) on the needs and benefits of vehicle-to-infrastructure (V2I), could significantly advance safety.
- The most recent edition of the NTSB Most Wanted List of Transportation Safety Improvements calls for requirements and performance standards for advanced speed-limiting technology, such as variable speed limiters and intelligent speed adaptation devices, in all new heavy vehicles, including trucks, buses and motorcoaches.³²

Road Safety Infrastructure Improvements and The Safe System Approach³³

The Safe System Approach (SSA) assumes that humans will make mistakes and that we must anticipate this and make accommodations to account for limited human injury tolerances through five elements: Safe Vehicles, Safe Road Users, Safe Roads, Safe Speed and Post-Crash Care. By improving the design and operation of roadways to accommodate all road users safely, the SSA seeks to avoid conflicts between road users (drivers of vehicles, motorcycle riders, pedestrians, bicyclists, micromobility riders, wheelchair users and others) and minimize impact forces when they do occur in order to prevent fatalities and serious injuries.

Infrastructure improvements consistent with the SSA to limit conflicts include:

- Curbing speed - This can be accomplished by reducing speed limits, employing automated enforcement to augment traditional enforcement, adding speed humps, using real-time speed feedback signs, performing road diets and installing roundabouts.
- Prioritizing infrastructure to promote safety - This includes changes such as adding lighting and sight lines, leading intervals, pedestrian hybrid beacons, curb extensions, accessible sidewalks, rumble strips, protected intersections, separated bike lanes, and road separations which take into account all users.

Localities can advance these and other infrastructure improvements systemically by requiring their adoption as appropriate in all road design and maintenance projects.

The Infrastructure Investment and Jobs Act, Pub. L. 117-58, includes multiple provisions that advance the SSA including expanded funding for safety infrastructure upgrades. It also provides support and guidance for localities planning to apply for such, permits use of certain federal funds for automated enforcement programs in school and work zones, directs requirements for vehicle safety improvements including crash avoidance technologies, and ensures funds are used to improve vulnerable road user safety.

November 2022

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