



## Speeding

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### **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 perilous weather conditions. Increases in speed can mean life or death for vulnerable road users (VRU) such as pedestrians, pedalcyclists, roadside first responders, roadway workers and others who lack the protective structure of a vehicle.

### **The Impact:**

- In 2022, 42,514 people were killed, and an estimated 2.4 million people were injured in traffic crashes.<sup>1</sup> Early projections for 2023 and the first half of 2024 show traffic fatalities remain high.<sup>2</sup> 29% of those fatalities in 2022, or 12,151 people, were speeding related.<sup>3</sup> 13% of people injured in traffic crashes, or 300,595 people, were in crashes deemed speeding related.<sup>4</sup>
- Early estimates from 2023 indicate a 4% decrease in fatalities in speeding-related fatalities; however, the 11,608 estimated fatalities are still 21% more fatalities than the 9,592 fatalities in 2019 (before the COVID-19 pandemic).<sup>5</sup>
- The National Highway Traffic Safety Administration (NHTSA) has identified speeding as one of “three major behavioral factors” that explain some traffic fatality increases from 2020 to 2021, but NHTSA notes it “cannot say that these factors were the only ones contributing to the rise in fatalities.”<sup>6</sup>

### **The Facts:**

- Small changes in speed can have a big impact on safety. Crash tests showed that modest five to 10 mile-per-hour (mph) increases in speed can have a severe impact on a driver's risk of injury or death.<sup>7</sup>
- In a 2022 Insurance Institute for Highway Safety (IIHS) study of speed limit reductions in Seattle, WA, a five-mph reduction in speed limits was associated with a 17% reduction in odds of a crash in the downtown area involving a police-reported injury. On arterial roads (high-capacity urban roads that are not freeways) in the downtown area, the speed limit reduction was associated with a 20% decrease in odds of a crash involving a police-reported injury.<sup>8</sup>

- Speed increases have major implications for pedestrians. The average risk of death for a pedestrian is 10% at an impact speed of 23 mph, 25% at 32 mph, and 50% at 42 mph.<sup>9</sup>
- In 2022, the latest year for which this data is available:
  - 35% of male drivers aged 15 to 20 involved in fatal crashes were speeding.
  - 35% of motorcycle riders involved in fatal crashes were speeding – more than drivers of any other vehicle type.<sup>10</sup>
- Most speeding-related fatalities (87%) occurred on roads that were not interstate highways.<sup>11</sup>
- Drivers who speed tend to exhibit other risky behaviors.
  - More than half (52%) of speeding passenger vehicle drivers in fatal crashes were unbuckled, compared to 22% of non-speeding drivers.<sup>12</sup>
  - In 2022, 11% of motorcycle riders involved in fatal crashes were both speeding and unhelmeted.<sup>13</sup>
  - In 2022, 38% of speeding drivers involved in fatal crashes had blood alcohol concentrations (BACs) of .08% or higher compared to 18% of non-speeding drivers.<sup>14</sup>
- Speeding-related crashes cause \$46.4 billion in economic costs and \$225 billion in comprehensive costs (2019).<sup>15</sup> These costs account for 14% of all economic costs and 16% of all societal harm (measured as comprehensive costs) from motor vehicle crashes.<sup>16</sup> If these costs were updated for inflation alone, in 2024 they would equate to \$57 billion in economic costs and \$276 billion in comprehensive costs.<sup>17</sup>
- Speeding-related crashes cost employers nearly \$10 billion in 2018 (expressed in 2019 dollars); the majority are a result of off-the-job crashes.<sup>18</sup> If this cost were updated for inflation alone, in 2024 it would equate to \$12 billion.<sup>19</sup>

### **Public Opinion on Speeding:**

- Drivers acknowledge that excess speed is dangerous, yet there is a disconnect in their actions.
  - In a 2023 AAA Foundation report, approximately half (48.1%) of drivers surveyed drove 15 mph over the speed limit on a freeway in the past month, even though 78% of those surveyed say doing so is moderately to extremely dangerous.<sup>20</sup>
  - Approximately 35% of drivers surveyed drove 10 mph over the speed limit on a residential street in the past month, even though 90% of those surveyed believe doing so is moderately to extremely dangerous.<sup>21</sup>
  - More than 80% 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% say people are driving faster.<sup>22</sup>
  - In a December 2021 survey, 68% of respondents said they are “extremely” or “very” concerned about speeding, and 66% said not enough is being done to reduce dangerous behavior on our roadways.<sup>23</sup>

## **The Solutions: Laws, Technology and Roadway Safety Infrastructure**

### **Policy Decisions That Impact Speeding-Related Crashes:**

- A study in the American Journal of Public Health examining the long-term effects of the 1995 repeal of the national speed limit estimated 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.<sup>24</sup>
- According to research performed by IIHS over the past 25 years, rising speed limits have cost nearly 37,000 lives.<sup>25</sup>
- Surveys conducted by the AAA Foundation find 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.<sup>26</sup>
- The 85th percentile speed is the speed at or below which 85% of the vehicles on a road tend to travel. This speed is measured and then the limit is set or modified. 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.<sup>27</sup>
- The National Transportation Safety Board (NTSB) has recommended 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 85<sup>th</sup> percentile speed among other countermeasures to curb excessive speed.<sup>28</sup>

**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.<sup>29</sup>

- A 2020 review by the Congressional Research Service (CRS) found that speed camera programs are effective in reducing speeding and/or crashes near cameras.<sup>30</sup>
- Speed cameras alone caused a 19% reduction in the likelihood that a crash resulted in a fatal or incapacitating injury.<sup>31</sup>
- In 2021, AAA, Advocates for Highway and Auto Safety, 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.<sup>32</sup>

### **Vehicle Safety Technology and Safety Standards Can Protect Vehicle Occupants and Other Road Users**

The U.S. Department of Transportation (DOT) must expeditiously 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 fees 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) which respond to pedestrians and bicyclists as well as vehicles could prevent 1.9 million crashes, nearly 900,000 injuries, and more than 4,700 deaths annually.<sup>33</sup>
- The Infrastructure Investment and Jobs Act (IIJA, Pub. L. 117-58) 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).<sup>34</sup>
  - In May 2024, U.S. DOT issued a Final Rule to require passenger vehicles be equipped with AEB that detect pedestrians.<sup>35</sup> NHTSA estimates that this action will save 362 lives and mitigate over 24,000 injuries annually. It is estimated to result in yearly cost benefit of between \$5.8-\$7.2 billion.<sup>36</sup> In July 2023, DOT issued a NPRM to require heavy vehicles weighing over 10,000 pounds to be equipped with AEB.<sup>37</sup>

### 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 vehicle speed is above the limit, prevent a vehicle from exceeding the speed limit, or maintain a set speed.<sup>38</sup> 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. ISA is required on all new vehicles sold in Europe as of July 2024.<sup>39</sup>
- 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.<sup>40</sup> In November 2023, the NHTSA withdrew the 2017 proposed rulemaking on vehicle-to-vehicle (V2V) communications.<sup>41</sup> In August 2024, the U.S. DOT published a final report titled “Saving Lives with Connectivity: A Plan to Accelerate V2X Deployment.”<sup>42</sup> Notably absent from the U.S. DOT plan is any indication of a target for rulemaking to implement this lifesaving safety technology. The NTSB has included V2X as a focus Issue area.<sup>43</sup> Completion of a 2017 NPRM to require vehicle-to-vehicle (V2V) technology, combined with research that has been conducted by the Federal Highway Administration (FHWA) on the needs and benefits of vehicle-to-infrastructure (V2I), could significantly advance safety.
- The NTSB has recommended that NHTSA require ISA in all new vehicles that, at a minimum, warns drivers when they exceed the speed limit. The NTSB also recommended that NHTSA develop guidelines for states to pilot ISA interlock programs for repeat speeding offenders.<sup>44</sup>

### **Road Safety Infrastructure Improvements and the Safe System Approach<sup>45</sup>**

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 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 that consider all road users.

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

The IJA 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.

October 2024

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<sup>2</sup> Traffic Safety Facts: Crash Stats, Early Estimate of Motor Vehicle Traffic Fatalities in 2023, NHTSA, Apr. 2024, DOT HS 813 561, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813561>; Traffic Safety Facts: Crash Stats, Early Estimate of Motor Vehicle Traffic Fatalities For the First Half (January – June) of 2024, NHTSA, Sep. 2024, DOT HS 813 633, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813633>.

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<sup>4</sup> Traffic Safety Facts 2022 Data: Speeding, NHTSA, Jul. 2024, DOT HS 813582, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813582>.

<sup>5</sup> Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2023, NHTSA, May 2024, DOT HS 813581, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813581>; Traffic Safety Facts 2022 Data: Speeding, NHTSA, Jul. 2024, DOT HS 813582, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813582>.

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<sup>7</sup> Impact of Speeds on Drivers and Vehicles – Results from Crash Tests, AAA Foundation for Safety, Humanetics, and IIHS, Jan. 2021, available at <https://www.iihs.org/api/datastore/document/bibliography/2218>.

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<sup>9</sup> Impact Speed and a Pedestrian’s Risk of Severe Injury or Death, AAA Foundation for Traffic Safety, Sep. 2011., available at <https://aaafoundation.org/wp-content/uploads/2018/02/2011PedestrianRiskVsSpeedReport.pdf>.

<sup>10</sup> Traffic Safety Facts 2022 Data: Speeding, NHTSA, Jul. 2024, DOT HS 813582, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813582>.

<sup>11</sup> Traffic Safety Facts 2022 Data: Speeding, NHTSA, Jul. 2024, DOT HS 813582, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813582>.

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