



## Young Driver Safety

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### **The Issue:**

Teen and young adult novice drivers are more likely to be involved in fatal crashes because they lack driving experience and tend to take greater risks. Compared to more experienced drivers, teens are not as skilled at recognizing hazards and controlling the vehicle, resulting in more loss-of-control and run-off-road crashes. Research has found that teen drivers are more prone to losing focus and are less likely to slow down to compensate for slick roads or poor visibility.<sup>1</sup>

### **The Impact:**

Motor vehicle crashes are a leading killer of teens in the U.S.<sup>2</sup> In 2020, 4,561 young drivers (aged 15 – 20) were involved in fatal crashes, an increase of 14 percent.<sup>3</sup> On average, more than seven teens were killed in the U.S. each day of 2020 as a result of motor vehicle crashes.<sup>4</sup> In crashes involving young drivers, fatalities totaled 5,037 in 2020, an increase of 15 percent from 2019. Among those, 1,885 were young drivers, 1,081 were passengers of young drivers, and the remaining 2,071 victims were non-occupants and the occupants of the other vehicles.<sup>5</sup> Additionally, 189,950 young drivers were injured in motor vehicle crashes in 2020.<sup>6</sup> The estimated economic cost of police-reported crashes involving young drivers between 15 and 20 years old was \$40.8 billion (2002).<sup>7</sup> When adjusted for inflation only, these costs amount to \$64.77 billion in 2022 dollars.<sup>8</sup>

Widespread public concern about young drivers exists, with 58 percent “extremely” or “very” concerned about inexperienced new young drivers, according to an opinion poll commissioned by Advocates and conducted by ENGINE Insights in December 2021.<sup>9</sup>

### **The Facts:**

- The fatal crash rate per mile driven is nearly three times as high for 16- to 19-year-olds as it is for ages 20 and over. Risk is highest at ages 16-17.<sup>10</sup>
- Over 65 percent of teenage motor vehicle crash deaths in 2020 occurred between the hours of 3 p.m. and 3 a.m. The hours of 9 p.m. to midnight accounted for 19 percent of fatalities alone, while the periods of 3 p.m. to 6 p.m. and 6 p.m. to 9 p.m. each accounted for 15 to 16 percent.<sup>11</sup>

### ***Risky Driving***

- In 2020, seven percent of teen drivers (ages 15 to 19) who were involved in fatal crashes were distracted at the time of the crash. Crashes involving a distracted teen driver claimed the lives of 265 people of which 116 were the teens.<sup>12</sup> However, issues with underreporting crashes involving cell phones remain because of gaps in police crash report coding, database limitations, and other challenges.
- Researchers found that teen drivers participating in a 2022 study were speeding in approximately 40 percent of trips and exhibited handheld phone use more than 30 percent of the time. In five percent of trips, teens sped while using a handheld cellphone.<sup>13</sup>
- In a 2016 study by Liberty Mutual Insurance Group and Students Against Destructive Decisions, 27 percent of high school students admitted to texting while driving, and 68 percent admitted to using apps while driving.<sup>14</sup>
- Drivers ages 15 to 20 have the highest proportion of distraction-related fatal crashes.<sup>15</sup>
- The Center for Disease Control and Prevention’s Youth Risk Behavior Surveillance System (YRBSS) found that nearly 40 percent of high school students who drove in the past 30 days reported sending a text or email while driving in 2019.<sup>16</sup> An earlier review of the YRBSS also found that students who reported frequent

texting while driving were less likely to wear a seatbelt, more likely to ride with a driver who had been drinking, and more likely to drink and drive.<sup>17</sup>

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

### **Graduated driver licensing (GDL)**

GDL programs introduce teens to the driving experience gradually by phasing in full driving privileges over time and risk settings. These programs have been effective in reducing teen crash deaths. Optimal GDL laws have multiple components, including a three-stage licensing process and restrictions on nighttime driving, number and age of passengers, and cell phone usage. No state has a comprehensive GDL law which includes the optimal elements recommended by Advocates for Highway and Auto Safety in its annual *Roadmap to Safety*.<sup>18</sup>

- In states which have adopted GDL programs, studies have found overall crash reductions among teen drivers of about 10 to 30 percent.<sup>19</sup>
- Compared to GDL programs without any of the seven GDL components evaluated by the NHTSA, fatal crash involvement rates were 16 to 21 percent lower in GDL programs which included age requirements plus three or more months of waiting before the intermediate stage, a nighttime driving restriction, and either supervised driving of at least 30 hours or a passenger restriction.<sup>20</sup>
- Fatal crash rates are 21 percent lower for 15-17-year-old drivers when prohibited from having any teenage passengers in their vehicles, compared to when two or more passengers were permitted.<sup>21</sup>
- For 16- and 17-year-old drivers, a 15 percent reduction in fatal crash incidence was associated with a limit of no more than one teen passenger for six months or longer, when compared to no passenger limit.<sup>22</sup>
- States with nighttime driving restrictions show crash reductions of up to 60 percent during restricted hours.<sup>23</sup>
- Delaying the minimum age for obtaining a learner's permit was associated with lower fatal crash rates for 15- to 17-year-olds combined; a one-year delay (e.g., from age 15 to 16) reduced the fatal crash rate by 13 percent.<sup>24</sup>
- A minimum holding period of five to six months reduces fatal crash rates by nine percent; however, extending the holding period to nine months to a year results in a 21 percent reduction.<sup>25</sup>
- A 2010 survey conducted by the Insurance Institute for Highway Safety (IIHS) shows that parents favor GDL laws which are as strict as or even stricter than currently exist in any state. More than half think the minimum licensing age should be 17 or older.<sup>26</sup>
- Almost three-quarters (74 percent) of teens approve of a single, comprehensive law which incorporates the key elements of GDL programs.<sup>27</sup>
- Some teens delay obtaining a driver's license. As a consequence, they are not required to participate in age-specific GDL programs and do not benefit from the process. According to research by the Children's Hospital of Philadelphia Center for Injury Research and Prevention (CHOP CIRP) and the AAA Foundation for Traffic Safety, "only 44 percent of respondents reported that they obtained a driver's license within 12 months of the minimum age for licensing in their state, and only 54 percent reported that they obtained a license before their 18<sup>th</sup> birthday."<sup>28</sup>
- Aging out of GDL is a problem because drivers who begin the licensing process at age 18, 19 or 20 still have a high crash risk due to inexperience and brain development.<sup>29</sup> As a result, older teen novice drivers are missing out on, yet still need, the safety benefits of GDL programs.<sup>30</sup> A study showed that while GDL programs have likely contributed to a significant decline in teen driver crashes over the decade of 2005-2014, the improvements are not as strong for 18- to 20-year-olds who have aged out of GDL.<sup>31</sup>

### **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 that 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.<sup>32</sup>
- IIHS has found that if all vehicles in crashes with teen drivers were equipped with front crash prevention (FCW and/or AEB), LDW / LKA, and blind spot monitoring, 32 percent of crashes involving a teen driver, 27 percent of injured teen drivers, and 36 percent of teen driver deaths could be prevented.<sup>33</sup>
- 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.<sup>34</sup>

### **Road Safety Infrastructure Improvements and The Safe System Approach<sup>35</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 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 that 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.

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<sup>1</sup> Driving technology promises large safety benefits for teens; Insurance Institute for Highway Safety (IIHS), Sep. 2, 2021, available at <https://www.iihs.org/news/detail/driving-technology-promises-large-safety-benefits-for-teens>

<sup>2</sup> Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC). WISQARS (Web-based Injury Statistics Query and Reporting System). U.S. Department of Health and Human Services; Available at <https://wisqars-viz.cdc.gov:8006/explore-data/home>. Accessed Nov. 10, 2022.

<sup>3</sup> Traffic Safety Facts, 2020 Data: Young Drivers, NHTSA, June 2022, DOT HS 813 313, available at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813313>.

<sup>4</sup> Teenagers, Insurance Institute for Highway Safety, available at <https://www.iihs.org/topics/teenagers>.

<sup>5</sup> Traffic Safety Facts, 2020 Data: Young Drivers, NHTSA, June 2022, DOT HS 813 313, available at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813313>.

<sup>6</sup> Traffic Safety Facts, 2020 Data: Young Drivers, NHTSA, June 2022, DOT HS 813 313, available at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813313>.

<sup>7</sup> Traffic Safety Facts 2002: Young Drivers, NHTSA, DOT HS 809 619, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/809619>.

<sup>8</sup> CPI Inflation Calculator, US Bureau of Labor Statistics, [https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm). Based on Jan. 2002 to Jan. 2022.

<sup>9</sup> ENGINE'S CARAVAN SURVEY Public Opinion Poll, January 2022, available at <https://saferoads.org/wp-content/uploads/2022/01/Advocates-January-2022-Poll-Report-Final.pdf>.

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