

# ADDRESSING AMERICA'S TRAFFIC SAFETY CRISIS: EXAMINING THE CAUSES OF INCREASING U.S. TRAFFIC FATALITIES AND IDENTIFYING SOLUTIONS TO IMPROVE ROAD USER SAFETY



**TRIP**

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The number and rate of traffic fatalities in the U.S. surged starting in 2020, even as the rate of vehicle travel plunged while the nation grappled with the impact of the COVID-19 pandemic. This trend of increasing traffic fatalities continued in 2021, as vehicle travel returned to near pre-pandemic levels. From 2021 to 2022 the number and rate of traffic fatalities in the U.S. decreased slightly, though both measures remain significantly above pre-pandemic levels.

This report documents the increase in traffic fatalities and fatality rates from 2019 to 2022 at the national and state levels, examines causes for this increase, and prescribes a broad, comprehensive approach to reducing traffic fatalities in the U.S.

**TRAFFIC FATALITIES AND VEHICLE TRAVEL DURING COVID-19**

In 2019, there were approximately 3.3 trillion miles of travel on the nation’s roads and highways and 36,096 traffic fatalities, including motorists, pedestrians and bicyclists, resulting in a traffic fatality rate of 1.11 traffic fatalities per 100 million vehicle miles of travel (VMT).<sup>1</sup>

Starting in March 2020 the transportation impact of COVID-19 was significant, as most activity was largely curtailed in an effort to slow the spread of the virus. In April 2020 vehicle travel in the U.S. bottomed out at a level 40 percent lower than in April 2019.<sup>2</sup> By the end of 2020, overall U.S. vehicle travel was 11 percent lower than in 2019.<sup>3</sup> By 2021 vehicle travel had rebounded to four percent below pre-pandemic levels before rising to less than one percent below 2019 VMT in 2022.<sup>4</sup>

However, from 2019 to 2022, while vehicle travel decreased as a result of the pandemic and then began to rebound, the number of traffic fatalities and the rate of traffic fatalities per 100 million VMT soared and has remained significantly higher than pre-pandemic levels.

The number of U.S. traffic fatalities increased 19 percent from 2019 to 2022, from 36,096 to 42,795, and the nation’s fatality rate per 100 million VMT increased 22 percent during that time, from 1.11 to 1.35.<sup>5</sup> This significant increase in the number of fatalities and the rate of fatalities per 100 million VMT happened while vehicle travel in the U.S decreased by one percent overall from 2019 to 2022.

**Chart 1. Percent Change in U.S. Vehicle Travel, Traffic Fatalities and Traffic Fatality Rate from 2019 to 2022.**

U.S. TRAFFIC FATALITY AND VEHICLE MILES OF TRAVEL (VMT) DATA					
	2019	2020	2021	2022	2019-2022 Change
Traffic Fatalities	36,096	38,824	42,939	42,795	+19%
Fatalities per 100 Million VMT	1.11	1.34	1.37	1.35	+22%
VMT (Billions)	3,261,772	2,903,622	3,140,088	3,230,879	-1%

**Source: TRIP analysis of National Highway Traffic Safety Administration and Federal Highway Administration data.**

Data for the number of fatalities, fatality rate and vehicle miles of travel for every state and the District of Columbia for 2019, 2020, 2021 and 2022 can be found in the [Appendix](#).

While motorcycle travel accounts for less than one percent of annual VMT in the U.S. (0.6 percent in 2021), there were 6,000 motorcyclist fatalities in 2022, representing 14 percent of traffic fatalities.<sup>6</sup> U.S. motorcyclist fatalities increased by 20 percent from 2019 to 2022, from 5,015 to 6,000.<sup>7</sup> This coincides with the share of motorcyclists not wearing helmets, which increased from 17 percent to 29 percent from 2019 to 2021.<sup>8</sup>

Pedestrians and bicyclists account for approximately one-fifth of roadway traffic fatalities. From 2019 to 2022, the number of pedestrians killed increased by 18 percent, from 6,205 to 7,345, and the number of bicyclists killed increased by 26 percent, from 846 to 1,068.<sup>9</sup> From 2019 to 2022, the

total number of pedestrians and bicyclists killed increased by 19 percent, from 7,051 to 8,413, and accounted for 20 percent of all traffic fatalities in 2022.<sup>10</sup>

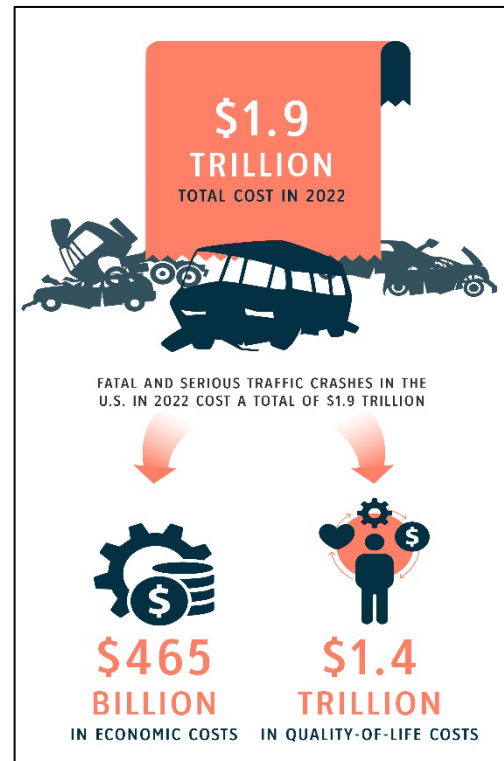
From 2019 to 2021, traffic fatalities in U.S. highway work zones increased by 13 percent, from 845 to 956.<sup>11</sup>

## THE COST OF TRAFFIC CRASHES

Traffic crashes in the U.S. result in a significant economic burden. According to a [2023 National Highway Traffic Safety Administration \(NHTSA\) report](#), the tangible economic costs of traffic crashes can be estimated through empirical measurements, including medical care, lost productivity, legal and court costs, insurance administrative costs, workplace costs, congestion impacts (travel delay, excess fuel consumption and pollution), emergency services, and property damage.<sup>12</sup> NHTSA has also estimated the annual value of the lost quality-of-life cost of traffic crashes causing serious injury or death. The lost quality-of-life costs include the loss of remaining lifespan, extended or lifelong physical impairment, or physical pain.

Based on NHTSA's traffic crash cost methodology, TRIP estimates that fatal and serious traffic crashes in the U.S. in 2022 caused a total of \$1.9 trillion in the value of societal harm, which includes \$465 billion in economic costs and \$1.4 trillion in quality-of-life costs.<sup>13</sup>

Data for the economic cost, the quality-of-life cost and the total societal harm cost for every state and the District of Columbia for 2022 can be found in the [Appendix](#).



## CAUSES OF THE INCREASE IN U.S. TRAFFIC FATALITIES

In 2011 U.S. traffic fatalities dropped to 32,749, the lowest level since 1949 when there were 30,246 traffic fatalities.<sup>14</sup> By 2019, U.S. traffic fatalities had increased to 36,096.<sup>15</sup> Beginning in March 2020, when initial restrictions due to the COVID-19 pandemic were implemented, the number and rate of traffic fatalities began to increase, even as the rate of vehicle travel decreased dramatically.

This significant increase in traffic fatalities since the onset of the pandemic appears largely related to increased risks being taken by drivers. In an [October 2021 report](#), the National Highway Traffic Safety Administration found that “after the declaration of the public health emergency in March 2020, driving patterns and behaviors in the United States changed significantly. Of the drivers who remained on the roads, some engaged in riskier behavior, including speeding, failure to wear seat belts, and driving under the influence of alcohol or other drugs.”<sup>16</sup>

The AAA Foundation for Traffic Safety (AAAFTS) drew similar conclusions about the role of increased risks being taken by drivers at the onset of the pandemic. A survey taken of drivers in October and November 2020 by the AAAFTS asked whether their level of driving had decreased, remained the same or increased since the beginning of COVID-19 related restrictions, and whether the motorist had engaged in a variety of risky driving behaviors in the previous 30 days. The survey found

that 59 percent of drivers reported reducing their level of driving since the onset of the pandemic, 37 percent had maintained their level of driving, and four percent had increased their level of driving.<sup>17</sup>

In a February 2022 [brief](#) about the survey, the AAAFTS noted that drivers who maintained or increased their pre-COVID travel levels indicated that they were more likely to engage in risky driving behavior. “It is possible that many of the individuals who were willing to travel—and even increase their travel—despite the health risks associated with the pandemic were already more willing than average to take other risks,” the AAAFTS report found.<sup>18</sup>

**Chart 2. Self-Reported Risky Driving Behavior in Previous 30 Days by Level of Driving During COVID-19 Pandemic.**

Driving Behavior	Reduced Driving	No Change	Increased Driving
Speeding on freeways	45%	44%	65%
Speeding on residential streets	35%	34%	51%
Unbelted driving	9%	17%	21%
Alcohol-impaired driving	5%	7%	13%
Talking on cellphone	34%	42%	43%
Reading text messages	31%	36%	50%
Changing lanes aggressively	19%	22%	43%

**Source: AAA Foundation for Traffic Safety**

NHTSA data indicates that the number of people killed in the U.S. in police-reported alcohol involved crashes increased 22 percent from 2019 to 2022.<sup>19</sup>

NHTSA found that the number of unrestrained occupants of passenger vehicles (those not wearing a seat belt) killed in the U.S. increased by 20 percent from 2019 to 2022, from 10,369 to 12,484.<sup>20</sup> The share of adult front-seat passengers wearing seat belts reached 92 (91.6) percent in 2022, an increase from 91 (90.7) percent in 2019 and the highest rate yet recorded.<sup>21</sup>

NHTSA also found that the number of people killed in speeding-related traffic crashes in the U.S. increased by 23 percent from 2019 to 2022, from 9,478 to 11,649 -- 27 percent of U.S. traffic fatalities in 2022.<sup>22</sup> The number of people killed in speeding-related traffic crashes in 2022 was six percent lower than the 12,330 people killed in speeding-related crashes in 2021.<sup>23</sup>

From 2019 to 2021, the number of fatalities in distraction affected traffic crashes increased by 13 percent, from 3,119 to 3,522.<sup>24</sup> Driver distraction is a specific type of driver inattention that occurs when drivers divert attention from the driving task to focus on some other activity. Often discussions regarding distracted driving center around cell phone use and texting, but distracted driving also includes things such as eating, talking to passengers, adjusting the radio/climate controls, or adjusting other vehicle controls. A distraction-affected crash is any traffic crash in which a driver was identified as distracted at the time of the crash.<sup>25</sup>

## A PRESCRIPTION FOR REDUCING U.S. TRAFFIC FATALITIES

In early 2022 the U.S. Department of Transportation adopted a [National Roadway Safety Strategy](#), a comprehensive roadmap for addressing the nation’s roadway safety crisis based on a [Safe System](#) approach that acknowledges the following: humans make mistakes and are physically vulnerable; traffic deaths and serious injuries are unacceptable; traffic deaths and serious injuries need to be reduced by the provision of a redundant transportation system that reduces or minimizes crashes and ensures that, if crashes do occur, they do not result in serious injury or death.<sup>26</sup>

Successfully implementing the safe system approach will require complimentary actions by governmental, non-profit, private, healthcare and academic organizations.

Chart 3. The Safe System Approach



Source: Federal Highway Administration

The Safe System approach, which is also being adopted by state and local transportation agencies has five objectives:

- **Safer People:** Encourage safe, responsible behavior by people who use our roads, and create conditions that prioritize their ability to reach their destination unharmed.
- **Safer Roads:** Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.
- **Safer Vehicles:** Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.
- **Safer Speeds:** Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.
- **Post-Crash Care:** Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

Improving safety on the nation's roadways will require that additional steps are taken to make further progress in achieving the Safe System's objectives. NHTSA, which provides states with roadway safety grants, requires states to submit a [state highway safety plan](#). The state plans outline numerous

steps states are taking to improve traffic safety. Elements of these state roadway safety plans aimed at addressing the Safe System objectives include:

- Safer People: education on speeding, impaired or distracted driving; education on safe pedestrian and bicycling behavior; education on driving safely around large commercial vehicles; enforcement of commercial driver license and vehicle weight requirements; extension of safety belt laws and their enforcement to include all passenger vehicle occupants; enhancing enforcement action of speeding, impaired, aggressive and distracted driving, particularly at high-risk locations; increase penalties, particularly for repeat offender drivers; and increased enforcement at work zones.
- Safer Roads: converting intersections to roundabouts; removing or shielding roadside objects; the addition of left-turn lanes at intersections; improved signalization and lighting at intersections; adding or improving median barriers; improved roadway lighting; adding centerline or shoulder rumble strips; improving pedestrian and bicycle facilities, including sidewalks and bike lanes and providing pedestrian crossing islands; improved work zone safety measures; wider lanes and paved shoulders; upgrading roads from two lanes to four lanes; providing or improving lane markings; updating rail crossings; eliminating vertical pavement drop-offs; and providing large truck parking spaces.
- Safer Vehicles: Support the development, testing and deployment of connected and autonomous vehicle technology such as collision avoidance, lane departure avoidance systems and turning detection systems.
- Safer Speeds: Where appropriate, provide roadway features to encourage safer speeds, including traffic roundabouts and curb extensions; improved signage and dynamic speed signing at high-risk locations; education on the consequences of speeding; and increased speeding enforcement, particularly at high-risk locations.
- Post-Crash Care: Reduce crash response time including the use of emergency vehicle preemption technology; improve emergency response to multi-vehicle or hazardous material crashes; and increase access to level one or two trauma centers for seriously-injured crash victims.

Consistent with the Safe System approach, safety at highway work zones can be improved by implementing a [comprehensive work zone safety strategy](#) that includes ensuring a proper work zone layout, prioritizing work zone safety training, ensuring the use of high visibility safety apparel and appropriate traffic control devices, creating an internal traffic control plan and implementing strategies to reduce aggressive driving.

## FUNDING HIGHWAY SAFETY IMPROVEMENTS

Increasing investment in roadway safety improvements is likely to pay off in the form of reduced fatal and serious traffic crashes. The U.S. has a \$146 billion backlog in needed roadway safety improvements, according to a 2017 [report](#) from the AAA Foundation for Traffic Safety. The report found implementing these cost-effective and needed roadway safety improvements on U.S. roadways would save approximately 63,700 lives and reduce the number of serious injuries as a result of traffic crashes by approximately 350,000 over a 20-year period.

Additional funding for improved roadway safety has been provided by the bipartisan [Infrastructure Investment and Jobs Act](#) (IIJA), which was signed into law in November 2021 and

provides a significant boost in federal investment in roads, bridges and transit, and offers an opportunity for the nation to make progress in improving the safety, reliability and condition of America's transportation system. The IIJA provides \$454 billion over the five-year period from 2022 to 2026 for investment in highways and transit, resulting in a 38 percent increase in federal investment starting in 2022.<sup>27</sup>

The IIJA provides additional resources to address traffic safety, including the following programs: \$6 billion for the Safe Streets and Roads for All program; \$17 billion for the Highway Safety Improvement Program (HSIP); \$4 billion for improved crash data and vehicle, behavior, and truck safety programs; \$300 million for rural road safety; and \$120 million for tribal road safety.<sup>28</sup>

## CONCLUSION

America faces a roadway safety crisis, with motorist, motorcyclist, pedestrian and bicyclist fatalities in 2022 at a level significantly higher than just three years earlier. The tremendous toll of fatalities and serious injuries that occur on the nation's roadways are a significant economic and, more critically, personal burden on Americans. The causes of the recent surge in traffic fatalities in the U.S. appear largely to be the result of the public taking greater risks on the nation's roadways, including speeding, impaired driving and reduced motorcycle helmet use.

Addressing the nation's traffic safety challenge will require a comprehensive approach based on a belief that deaths and serious injuries on our roadways are unacceptable, and that people will make mistakes, but those mistakes should not lead to death or serious injury. Making a commitment to eliminating fatal and serious injuries on the nation's roadways will require robust investment and coordinated activities by transportation and safety-related agencies in providing the needed layers of protection for the nation's motorists, pedestrians and bicyclists, including safe road users, safe roads, safe vehicles, safe speeds and high-quality post-crash care.

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## ENDNOTES

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- <sup>1</sup> Federal Highway Administration, Highway Statistics 2019 (2021)
- <sup>2</sup> Federal Highway Administration (2022). Traffic Volume Trends. [https://www.fhwa.dot.gov/policyinformation/travel\\_monitoring/tvt.cfm](https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm)
- <sup>3</sup> Federal Highway Administration, Highway Statistics 2020 (2022).
- <sup>4</sup> Federal Highway Administration (2022). Traffic Volume Trends. [https://www.fhwa.dot.gov/policyinformation/travel\\_monitoring/tvt.cfm](https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm)
- <sup>5</sup> National Highway Traffic Safety Administration.
- <sup>6</sup> National Highway Traffic Safety Administration (2023). Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2022. [Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories 2022 \(dot.gov\)](#) and TRIP analysis of NHTSA data.
- <sup>7</sup> [Ibid.](#)
- <sup>8</sup> National Highway Traffic Safety Administration (2022). Motorcycle Helmet Use in 2021 – Overall Results. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813270>
- <sup>9</sup> National Highway Traffic Safety Administration (2023). Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2022. [Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories 2022 \(dot.gov\)](#) and TRIP analysis of NHTSA data.
- <sup>10</sup> [Ibid.](#)
- <sup>11</sup> National Work Zone Safety Information Clearinghouse (2023). Work Zone Data at a Glance. <https://workzonesafety.org/work-zone-data/>
- <sup>12</sup> The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised) (2023). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/>
- <sup>13</sup> TRIP analysis based on The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised) (2023). National Highway Traffic Safety Administration <https://crashstats.nhtsa.dot.gov/> and travel data from the Federal Highway Administration and inflation data from the Bureau of Economic Analysis.
- <sup>14</sup> TRIP analysis of National Highway Traffic Safety Administration data (2022).
- <sup>15</sup> [Ibid.](#)
- <sup>16</sup> National Highway Traffic Safety Administration (2021). Continuation of Research on Traffic Safety During the COVID-19 Public Health Emergency: January – June 2021. [https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-10/Traffic-Safety-During-COVID-19\\_Jan-June2021-102621-v3-tag.pdf](https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-10/Traffic-Safety-During-COVID-19_Jan-June2021-102621-v3-tag.pdf)
- <sup>17</sup> AAA Foundation for Traffic Safety (2022). Self-Reported Risky Driving in Relation to Changes in Amount of Driving During the COVID-19 Pandemic. <https://aaafoundation.org/wp-content/uploads/2022/02/AAAFTS-Risky-Driving-During-the-Pandemic-Brief-Final.pdf>
- <sup>18</sup> [Ibid.](#)
- <sup>19</sup> National Highway Traffic Safety Administration (2023). Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2022. [Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories 2022 \(dot.gov\)](#) . Traffic fatality data for police-reported alcohol involved crashes are only available for the first six months of 2022.
- <sup>20</sup> [Ibid.](#)
- <sup>21</sup> National Highway Traffic Safety Administration (2023). Seat belt use in 2022 – Overall Results. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813407>
- <sup>22</sup> National Highway Traffic Safety Administration (2023). Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2022. [Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories 2022 \(dot.gov\)](#) .
- <sup>23</sup> [Ibid.](#)



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<sup>24</sup> National Highway Traffic Safety Administration (2023). Distracted Driving in 2021.

<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813443>

<sup>25</sup> National Highway Traffic Safety Administration (2023). Distracted Driving in 2021.

<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813443>

<sup>26</sup> U.S. Department of Transportation National Roadway Safety Strategy, 2022.

<https://www.transportation.gov/NRSS>

<sup>27</sup> American Association of State Highway and Transportation Officials (2021). AASHTO Comprehensive Analysis of the Bipartisan Infrastructure Bill. INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA) P. 10.

<https://policy.transportation.org/wp-content/uploads/sites/59/2021/09/2021-09-15-AASHTO-Comprehensive-Analysis-of-IIJA-FINAL.pdf>

<sup>28</sup> U.S. Department of Transportation (2022). U.S. Transportation Secretary Pete Buttigieg Announces Comprehensive National Roadway Safety Strategy. <https://www.transportation.gov/briefing-room/us-transportation-secretary-pete-buttigieg-announces-comprehensive-national-roadway>

The American Traffic Safety Services Association (2021). Sorting fact from fiction with the Infrastructure Investment and Jobs Act.

<https://www.atssa.com/Blog-News/ATSSA-Blog/sorting-fact-from-fiction-with-the-infrastructure-investment-and-jobs-act>