



Seat Belts

The Issue:

Seat belt use is a proven lifesaver. Seat belts serve as the first line of defense against injury or death for vehicle occupants when crashes occur. According to the National Highway Traffic Safety Administration (NHTSA), the combination of an airbag plus a lap and shoulder belt reduces the risk of death in frontal crashes by 61%, compared to a 50% reduction for belts alone and a 34% reduction for airbags alone.¹

In states with primary enforcement all-occupant seat belt laws, police officers may ticket the driver if any occupant is unbelted or may ticket the unbelted occupant, depending on the language in the law. In states with secondary enforcement laws, police officers may issue a citation for a seat belt violation only if the vehicle has been stopped for another (non-seat belt) traffic infraction.

The Impact:

- 42,514 motor vehicle crash fatalities occurred on U.S. roads in 2022.² Early projections for 2023 and the first half of 2024 show traffic fatalities remain high.³ Among passenger vehicle occupant fatalities in 2022, it is estimated that half were unrestrained.⁴
- In 2022, more than 25,000 passenger vehicle occupants died in motor vehicle crashes.⁵
- For passengers who survived fatal crashes in 2022, only 14% were unrestrained, compared to 50% of those who died lacked restraint use.⁶
- 11,302 unrestrained passenger vehicle occupants died in crashes in 2022.⁷
- NHTSA has identified a lack of seat belt use as one of “three major behavioral factors” contributing to the death toll on U.S. roads.⁸
- 65% of respondents to a January 2022 opinion poll indicated they are “very” or “extremely” concerned with the lack of use of seat belts or child safety seats.⁹

The Facts:

- From 1975 to 2019, seat belts prevented over 403,000 fatalities and saved society approximately \$2.5 trillion in economic costs.¹⁰
- The use of seat belts in passenger vehicles saved an estimated 14,653 lives nationwide in 2019. An additional 2,398 lives would have been saved in 2019 if all unrestrained vehicle occupants had worn their seat belts.¹¹

- In 2022, among passenger vehicle occupant fatalities with known restraint use, 48% seated in the front row and 60% of those in the second row were unrestrained.¹²
- In fatal crashes in 2022, 83% of passenger vehicle occupants, who were totally ejected from the vehicle, were killed. Only 1% of the occupants reported to have been using restraints were totally ejected, compared with 26% of the unrestrained occupants.¹³

Rear Seat Belt Use:

- Rear seat passengers are more than twice as likely to die in a crash if they are unbelted.¹⁴
- Adults are not buckling up in the rear seat as much as they are in the front seat, with rear seat belt use 10 to 15% lower than in the front seat.¹⁵
- Rear seat belt use by passengers in fatal crashes was lower than front seat belt use in almost every state and was substantially lower in many states.¹⁶
- Unbelted rear seat passengers pose a serious threat to the driver and other vehicle occupants as well as themselves. Unbelted rear seat passengers are referred to as “back seat bullets” because they can be thrust at high rates of speed into the driver resulting in loss of control of the vehicle, and into other occupants causing fatalities and serious injuries. The chance of death for a belted driver seated directly in front of an unrestrained passenger in a serious head-on crash was 2.27 times higher than if seated in front of a restrained passenger.¹⁷
- An Insurance Institute for Highway Safety (IIHS) poll found nearly 40% of people surveyed sometimes did not buckle up in the rear seat because no law requires it. If such a law existed, 60% of poll respondents said it would convince them to use seat belts in the back seat.¹⁸

Seat Belt Use and Costs

- NHTSA estimated deaths and injuries resulting from non-use of seat belts cost society more than \$11 billion annually in medical care, lost productivity and other injury-related costs based on 2019 data.¹⁹ When adjusted solely for inflation, this would equate to more than \$13.5 billion in 2024.²⁰
- Non-restraint use cost employers \$7.4 billion in 2018 (expressed in 2019 dollars), \$5.7 billion of which was attributed to off-the-job non-restraint use.²¹
- The average inpatient costs for crash victims who do not use seat belts are 55% higher than for those who use them.²²
- Regarding personal choice and individual rights in relation to highway safety laws, the U.S. District Court for Massachusetts held in a decision affirmed by the U.S. Supreme Court that, “...from the moment of injury, society picks the person up off the highway; delivers him to a municipal hospital and municipal doctors; provides him with unemployment compensation if, after recovery, he cannot replace his lost job; and, if the injury causes disability, may assume the responsibility for his and his family’s continued subsistence.”²³

The Solutions: Laws, Technology and Roadway Safety Infrastructure

State Primary Enforcement Seat Belt Laws ([See Advocates' Roadmap to Safety Report for more information about state laws](#)).

- Seat belt use is higher in states with primary enforcement laws compared to those with secondary enforcement laws or with no seat belt use law.²⁴ Some states have experienced a 10-15% increase in seat belt use rates when primary laws were enacted.²⁵
- If every state with a secondary seat belt law upgraded to primary enforcement, about 1,000 lives and \$4 billion (2005 US\$) in crash costs could be saved every year.²⁶ When adjusted for inflation, the cost is nearly \$6.47 billion in 2024.²⁷
- While numerous studies report primary enforcement seat belt laws do not result in increased ticketing of people of color, the potential for harassment is an ongoing concern not limited to, nor created by, these laws.
 - **Meharry Medical College Study:** Overall rates of seat belt compliance improved in states with primary laws compared to those with secondary laws, an 18% and 15% increase among black and white motorists, respectively. The study concluded that “black-white disparities in seat belt use were mitigated in states with primary seat belt laws,” and that “enacting primary laws in other states might reduce or eliminate racial disparities in seat belt use.”²⁸
 - **Meharry Medical College Study:** In secondary law states, black motorists were only 67% as likely to wear seat belts in urban areas as white motorists.²⁹
 - **American Journal of Preventive Medicine:** Studies of states that changed from a secondary to a primary law found either no difference in the rate of white versus non-white drivers ticketed, or they found a greater increase in the proportion of white drivers ticketed after the enactment of a primary law.³⁰
 - **NHTSA Study of the change to primary enforcement laws in Oklahoma, Maryland and the District of Columbia made the following determinations:**
 - “...citation data that identified race confirmed there was either no difference in non-white versus white ticketing, comparing secondary to primary enforcement, or a greater increase in ticketing went to whites following the change to a primary enforcement law.”
 - “Non-whites more than whites reported feeling the threat of receiving a ticket for not wearing a safety belt, even though there was no significant relationship between race and those who actually received a safety belt ticket.”³¹
 - **NHTSA Study:** The relationship between primary enforcement belt laws and minority ticketing, the share of citations for Hispanics and African Americans changed very little after states adopted primary enforcement belt laws. There were significant gains in seat belt use among all ethnic groups, none of which were proportionately greater in any minority group.³²
 - **2021 NHTSA Study, *Seat Belt Use, Race, and Hispanic Origin*:** Support for primary enforcement seat belt laws is strong across races including Asian, Black, Hispanic, Multiracial and White.³³ A range from 69% (Multiracial) through

89% (Asian) agreed that “police should be allowed to stop a vehicle if they observe a seat belt violation when no other traffic laws are being broken.”³⁴

Rear Seat Safety Improvements Lagging Behind Front Seat

- Front seat safety improvements in recent model vehicles have closed the gap that formerly made rear seats safer than the front. Advances in safety technology have lagged in the rear seat.³⁵
- Current regulation does not require an evaluation of injuries to rear seat occupants in frontal crashes. In terms of frontal crashes, only the strength of seat belts is evaluated in the rear seat, unlike regulations for the front seat, which ensure occupants do not suffer bodily harm by evaluating injuries of the head, neck, chest, pelvis and legs.³⁶
- To ensure rear seat safety improvements and testing are consistent with the front seat, the creation of a rear seat crashworthiness rating is needed as well as safety technology upgrades such as inflatable seat belts, rear seat belt reminders, seat belt pre-tensioners and load limiters.
- In September 2023, NHTSA issued a Notice of Proposed Rulemaking (NPRM) to require seat belt reminders in the front passenger seat and rear designated seating positions.³⁷ The rulemaking process remains incomplete to date.³⁸
- The Economic Commission for Europe of the United Nations (UN/ECE) updated Regulation 16 in 2018 to require rear seatbelt reminders in all rear seating positions in passenger vehicles, pickup trucks, and vans beginning in late 2022.³⁹
 - Rear seat belt reminder systems must include occupant detection to improve accuracy, minimize false positive alerts, and effectively capture all potential rear seat occupants including children (and those in child restraint systems). This is not new technology that needs to be invented. According to Consumer Reports, 30% of its rated model year 2021 vehicles were equipped with rear seat belt reminder systems.⁴⁰

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/bicyclists as well as

vehicles could prevent 1.9 million crashes, nearly 900,000 injuries, and more than 4,700 deaths annually.⁴¹

- 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).⁴²
 - In May 2024, U.S. DOT issued a Final Rule to require passenger vehicles be equipped with AEB that detect pedestrians.⁴³ 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.⁴⁴ In July 2023, DOT issued a NPRM to require heavy vehicles weighing over 10,000 pounds to be equipped with AEB.⁴⁵

Rear seat belt reminders:

- Children and teens constitute a large proportion of rear seat occupants in crash data.⁴⁶ Between 2012 and 2021, approximately 900 unbelted second row occupants of passenger cars and light trucks died in crashes on U.S. roads annually.⁴⁷
- Between 2018 and 2021, on average nearly 15,000 unbelted second row occupants were injured annually.⁴⁸ Considering the effectiveness of seat belts and that more than half of all fatally injured rear seat occupants in passenger cars and light trucks were unbelted during that time,⁴⁹ rear seat belt reminders and seat belt use could have helped to eliminate or mitigate a large portion of these fatalities and injuries.
- IIHS estimates that improved seat belt alerts could increase belt use by as much as 34%, preventing an estimated 1,500 front seat occupant fatalities every year.⁵⁰ The 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21, Pub. L. 112-141) directed the U.S. DOT to issue a requirement for rear seat belt reminders by October 1, 2015, yet this directive remains unfulfilled.
- The U.S. DOT issued an NPRM to require seat belt reminders in the front passenger seat and rear designated seating positions in September 2023.⁵¹ The Final Rule is currently under review at the Office of Management and Budget.⁵² The U.S. DOT should issue the overdue standards and requirements expeditiously.

Road Safety Infrastructure Improvements and the Safe System Approach⁵³

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 users.

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

The IIJA 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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