



*Statement of*

National Transportation Safety Board

*Before the*

Committee on Transportation  
North Dakota Senate

— *On* —

Senate Bill 2121  
Primary Safety Belt Enforcement

Bismarck, ND • January 15, 2021



*An Independent Federal Agency*

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of each accident we investigate and make safety recommendations aimed at preventing future accidents and crashes. The recommendations that arise from our investigations and safety studies are our most important product.

Motor vehicle crashes are responsible for more deaths than crashes in all other transportation modes combined, accounting for more than 90 percent of all transportation-related deaths every year. Research has consistently shown that seat belts effectively reduce the risk of serious injury in the event of an accident, especially when used by all vehicle occupants in all seating positions, yet seat belts aren't used as often as they should be. In addition to injuries and fatalities, failure to use seat belts can result in significant economic cost. Primary enforcement of seat belt laws has been proven to increase seat belt use and save lives.

### **Seat Belts are Effective**

The benefits of safety belt use are significant and well documented. The National Highway Traffic Safety Administration (NHTSA) has estimated that lap/shoulder belts reduce the risk of fatal injury to front seat occupants of passenger cars by 45 percent, and reduce the risk of moderate to severe injuries by 50 percent. The numbers for light truck occupants are even higher.<sup>1</sup>

Seat belts are the best defense against motor vehicle injuries and fatalities because they protect vehicle occupants from the extreme forces experienced during crashes. Unbelted vehicle occupants frequently injure other occupants during a crash, and unbelted drivers are less likely than belted drivers to be able to control their vehicles. Further, rear seat passengers are three times more likely to die in a crash if they are unbelted.<sup>2</sup> In addition, seat belts prevent occupant ejections. In 2018, only 1 percent of vehicle occupants using seat belts were ejected, while 27 percent of unrestrained vehicle occupants were ejected. Among those occupants completely ejected from their passenger vehicles, 82 percent died.<sup>3</sup>

In fact, our most recent seat belt recommendation to the states resulted from our investigation of a 2014 crash in Davis, Oklahoma, in which four college athletes were killed when they were ejected from the medium-size bus in which they were riding. None of the passengers was wearing a seat belt. Our investigation concluded that the bus passengers' lack of restraint use contributed to the severity of the injuries. Our recommendation asks states to mandate the use of seat belts on all vehicles equipped with them, including intercity motorcoaches and other passenger vehicles.<sup>4</sup>

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<sup>1</sup> NHTSA National Center for Statistics and Analysis. *Occupant Protection in Passenger Vehicles: 2018 Data*. Traffic Safety Facts. Report No. DOT HS 812 967. Washington, DC: NHTSA, June 2020, p. 4.

<sup>2</sup> Governor's Highway Safety Association. "Unbuckled in Back: An Overlooked Issue in Occupant Protection." November 2015.

<sup>3</sup> NHTSA *Occupant Protection in Passenger Vehicles: 2018 Data*, p. 8.

<sup>4</sup> NTSB. *Truck-Tractor Semitrailer Median Crossover Collision With Medium-Size Bus on Interstate 35, Davis, Oklahoma, September 26, 2014*. NTSB/HAR-15/03. Washington, DC: NTSB, 2015. (See Safety Recommendation H-15-42.)

NHTSA estimates that seat belts saved the lives of nearly 15,000 motor vehicle occupants age 5 and older in 2018, nationwide. Further, had all passenger vehicle occupants age 5 and older used seat belts in 2018, more than 2,500 additional lives could have been saved. From 1975 through 2018, seat belts saved almost 375,000 lives nationwide.<sup>5</sup> In North Dakota, 44 lives were saved by seat belts in 2017, and another 18 could have been saved if all vehicle occupants had worn their belt.<sup>6</sup>

### **Seat Belt Use is Too Low**

Unfortunately, seat belt use in the United States remains lower than in other industrialized nations, which have usage rates well over 90 percent. In 2018, daytime, front seat, seat belt use in the United States was 89.6 percent; however, in North Dakota, only 82.5 percent of vehicle occupants used a seat belt. Only four states had lower use rates.<sup>7</sup>

In 2018, only 74 percent of all occupants involved in fatal crashes were belted. Among those who were fatally injured, only 53 percent were known to be restrained.<sup>8</sup> On the other hand, 87 percent of motor vehicle crash survivors that same year were restrained.<sup>9</sup>

Drivers who choose not to buckle up tend to exhibit multiple high-risk behaviors and are more frequently involved in crashes. According to the National Automotive Sampling System (crash data composed of representative, randomly selected cases from police reports), belt use among motorists is lowest in the most severe crashes.<sup>10</sup> Fatal crashes are the most violent motor vehicle crashes and often result from high-risk behaviors, such as speeding and impaired driving.

Seat belt use is also substantially lower than the national observed belt use rate among special populations, such as impaired drivers and teen drivers. In 2017, 64 percent of fatally injured drivers, for which restraint use was known, who were driving while impaired were not using seat belts.<sup>11</sup> During that same year, 58 percent of fatally injured teen drivers who had been drinking were not restrained.<sup>12</sup>

### **Primary Enforcement Seat Belt Laws Do Increase Seat Belt Use**

Although 49 states require motor vehicle occupants to use seat belts, 15 states—including North Dakota—allow only secondary enforcement of their seat belt laws, meaning that police officers cannot issue a citation for a seat belt violation unless the vehicle has been stopped for

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<sup>5</sup> NHTSA *Occupant Protection in Passenger Vehicles: 2018 Data*, p. 6.

<sup>6</sup> NHTSA National Center for Statistics and Analysis. *Lives Saved in 2017 by Restraint Use and Minimum-Drinking-Age Laws*. Traffic Safety Facts CrashStats. Report No. DOT HS 812 763. Washington, DC: NHTSA, 2019.

<sup>7</sup> NHTSA National Center for Statistics and Analysis. *Seat Belt Use in 2018—Use Rates in the States and Territories*. Traffic Safety Facts CrashStats. Report No. DOT HS 812 947. Washington, DC: NHTSA, 2020.

<sup>8</sup> NHTSA *Occupant Protection in Passenger Vehicles: 2018 Data*, p. 7.

<sup>9</sup> NHTSA National Center for Statistics and Analysis. *Occupant Protection in Passenger Vehicles: 2018 Data*, p. 7.

<sup>10</sup> <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810948>

<sup>11</sup> NHTSA National Center for Statistics and Analysis. *Alcohol-Impaired Driving: 2017 Data*. Traffic Safety Facts Report No. DOT HS 812 630. Washington, DC: NHTSA, 2018.

<sup>12</sup> NHTSA National Center for Statistics and Analysis. *Young Drivers: 2017 Data*. Traffic Safety Facts Report No. DOT HS 812 753. Washington, DC: NHTSA, 2019.

another reason. With primary enforcement, police officers execute a traffic stop and cite unbelted vehicle occupants without needing another reason for making the stop. According to the 2019 National Occupant Protection Use Survey (NOPUS), average seat belt use was 92 percent in states authorizing primary enforcement, compared to 86.2 percent in states authorizing only secondary enforcement.<sup>13</sup> States that have enacted primary enforcement seat belt laws historically have seen seat belt use rates increase between 5 and 18 percentage points.<sup>14</sup> This increased use is based on drivers' realization that they may be stopped for violating the seat belt law.

Primary enforcement of seat belt use laws has also been associated with a reduction in fatalities. A 2004 study examining 10 states that moved from secondary to primary enforcement of seat belt use laws concluded that the change resulted in a 7-percent reduction in fatalities.<sup>15</sup> Likewise, an analysis of six states that changed from secondary enforcement to primary enforcement between 2000 and 2004 found that in all six states, the change from a secondary to a primary law produced a substantial and highly statistically significant increase in the proportion of front-seat passenger vehicle occupant fatalities who were wearing seat belts.<sup>16</sup>

Primary enforcement seat belt laws remain the best way to raise and maintain seat belt use rates. Numerous scientific publications and the US Guide to Community Preventive Services' systematic review of all available scientific literature show that primary enforcement seat belt laws increase seat belt usage, and with increased usage comes fewer injuries and fatalities.<sup>17</sup>

### **Economic Costs from the Failure to Use Seat Belts are Significant**

Although opponents to strong seat belt laws claim that nonuse is a personal choice and affects only the individual, the fact is that motor vehicle injuries and fatalities have a significant societal cost. NHTSA calculated that the lifetime cost to society for each motor vehicle fatality is about \$1.4 million. More than 80 percent of these costs are attributed to lost workplace and household productivity.<sup>17</sup>

Although the affected individual covers some of these costs, those not directly involved in crashes pay for more than three-quarters of all crash costs, primarily through insurance premiums, taxes, and travel delay. In 2010, the costs borne by society rather than the crash victims totaled more than \$187 billion; approximately 7 percent of total economic costs were borne by public sources (federal and state government).<sup>18</sup> Motor vehicle injuries and deaths experienced by

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<sup>13</sup> NHTSA National Center for Statistics and Analysis. *Seat Belt Use in 2019—Overall Results*. Traffic Safety Facts Research Note. Report No. DOT HS 812 875. Washington, DC: NHTSA, December 2019.

<sup>14</sup> Centers for Disease Control and Prevention. *Motor Vehicle Safety*. Primary Enforcement of Seat Belt Laws. Washington, DC: CDC, 2015.

<sup>15</sup> <https://www.nhtsa.gov/staticfiles/nti/pdf/811524.pdf>

<sup>16</sup> Hedlund J, Gilbert SH, Ledingham K, and Preusser, D. *How States Achieve High Seat Belt Use Rates*. Report No. DOT HS 810 962. Washington, DC: NHTSA, p. 38.

<sup>17</sup> Dinh-Zarr TB, Sleet DA, Shults RA, et al. Task Force on Community Preventive Services Reviews of Evidence Regarding Interventions to Increase Use of Safety Belts. *Am J Prevent Med*, vol. 21, no. 4S, pp. 48–65.

<sup>17</sup> Blincoe LJ, Miller TR, Zaloshnja E, and Lawrence BA. 2015. *The Economic and Societal Impact of Motor Vehicle Crashes, 2010*. (Revised) Report No. DOT HS 812 013. Washington, DC: NHTSA.

<sup>18</sup> NHTSA. *The Economic and Societal Impact of Motor Vehicle Crashes*, p. 2

unbelted crash vehicle occupants cost an estimated \$10 billion just for medical care, lost productivity, and other injury related costs.<sup>19</sup>

NHTSA also estimates that each critically injured survivor of a motor vehicle crash costs an average of \$1 million. Medical expenses and lost productivity account for 82 percent of the cost of the most serious level of nonfatal injury.<sup>20</sup> In a 1996 study,<sup>21</sup> NHTSA found that the average inpatient cost for unbelted crash victims was 55 percent higher than for belted crash victims. In 2000 alone, seat belts might have prevented more than 142,000 injuries.

## **Conclusion**

It is clear that seat belts save lives and reduce the risk of serious injury in the event of a crash. However, state laws still fall short of protecting all vehicle occupants in all vehicles equipped with seat belts. A comprehensive primary enforcement seat belt law should cover all vehicle occupants in all seating positions, in all vehicles, and include sufficient penalties to promote compliance with the law. By allowing police officers to stop vehicles directly for seat belt violations, North Dakota would show that it takes seat belt use very seriously.

For five decades, the NTSB has advocated for legislation requiring seat belt use in passenger vehicles. We have investigated many crashes where seat belts would have saved lives or prevented serious injuries. Since 1995, we have recommended that every state enact a primary seat belt law covering every seating position in a vehicle. Based on scientific studies and our own highway crash investigations, we are confident that a significant number of lives will be saved, and injuries prevented, if North Dakota authorizes primary enforcement of its existing seat belt use law.

Thank you again for providing us an opportunity to testify on this important issue.

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<sup>19</sup> *Ibid*, p. 3.

<sup>20</sup> *Ibid*, p.1.

<sup>21</sup> Crash Outcome Data Evaluation System (CODES) Project Seat Belt and Helmet Analysis, Research Note (Revised). National Center for Statistics and Analysis. Washington, DC: NHTSA, February 15, 1996.