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Identifying Opportunities to Decrease Vehicle Occupant Fatalities

Background

Seat belt use in the United States increased steadily in the last decade, but significant variability exists across the States. In 2014, State seat belt use ranged from a low of 68.9 percent to a high of 97.8 percent. Although higher use rates are generally associated with States having primary enforcement seat belt laws, several notable exceptions existed in both directions (primary law States with lower than average use rates and secondary law States with higher than average use rates; Chen, 2015). The same type of variability was seen with respect to belt use among fatally injured motor vehicle occupants.

The premise behind this study was the possibility that higher performing States have organizations, strategies, or procedures that are more effective at increasing seat belt use than those employed by the lower performing States. Encouraging States with relatively low use rates to emulate the practices in higher performing States raises the potential for significantly improving nationwide seat-belt-use rates, reducing the number of vehicle occupant deaths and unbelted fatalities. By highlighting programmatic and other performance gaps between these two groups of States, the results from this study have the potential to provide a foundation for future strategic technical assistance initiatives to address these issues.

Method

NHTSA selected nine States for the study. Five States formed the “high-belt-use” group because they showed relatively high observed seat belt use, low total fatality rates per population, and low percentages of motor vehicle fatalities in which occupants were unbuckled. The four States in the “low-belt-use” group were associated with somewhat lower-than-average performance in 2013 with respect to the belt use and fatality factors. NHTSA based the State selection both on a ranking of multiple relevant criteria and a subjective assessment of which States had potential to provide interesting insights. As the study States represented a convenience sample and since this research was not an evaluation of specific States or their approaches, this report does not identify the nine States. Also, while the States in each group are distributed somewhat across the country, their selection was not based on any attempt to represent the entire United States or to achieve a balanced geographic sample.

The first step involved the enumeration of a large set of relevant variables that could be obtained from readily available sources such as websites and published documentation. After enumerating the list, researchers made an attempt to secure data for each variable. The second step involved the collection of published information on highway safety from each State. The third step involved contacting a highway safety representative in each State to discuss relevant topics that might ultimately discriminate between the two groups of States. Data analysis consisted of a review of information and quantitative data. The analyses and resulting recommendations are intended to be as comprehensive as possible and address: legislation; planning (including problem identification, goal setting, selection and use of performance measures); administration and management approaches (including leadership, staffing, funding levels); choice, intensity, and process of relevant safety programs/countermeasures; enforcement approach; adjudication approach; extent and type of communications and outreach; integration of the enforcement, adjudication, and communication functions; involvement of non-governmental advocacy group activities; demographic and socioeconomic factors and how the States address them vis-à-vis occupant protection; and any other relevant factors associated with higher occupant protection use rates.

Results and Discussion

States in the high-belt-use group had a greater proportion of residents with a bachelor’s degree or higher, higher per capita and median household incomes, a lower proportion of residents at or below minimum wage, and fewer children living in poverty compared to the States in the low-belt-use group. Similarly, residents in the group of high-belt-use States tended to be in better health and engage in fewer risky activities such as smoking. The States in the low-seat-belt-use group were smaller in area but had a greater proportion of their populations living in rural areas. While State highway safety officials in the low-belt-use States cannot change the underlying population factors listed above, they may be able to tailor their highway safety activities to fit population characteristics.

Political and legislative support for general highway safety, and occupant protection in particular, seemed to be lagging in the group of low-belt-use States, as evidenced by the substan-

tially lower fines for failure to wear a seat belt or properly use a car seat in the low use States. The relatively small highway safety offices (in terms of number of staff members) in at least two of the States in the low-use group inevitably affected their ability to administer and monitor occupant protection activities adequately. The lack of a dedicated occupant protection coordinator in three of the four States in the low-use group likely hindered their occupant protection efforts. One particular point emphasized by States in the high-use group involved the importance of having a “champion” to push through legislation and an experienced occupant protection coordinator dedicated to the job and willing to work relentlessly to promote occupant protection in the State, especially in areas of the State where occupant protection had not been a priority in the past.

Two other notable differences between the two groups of States relate to the amount and focus on paid and earned media. Most high-use States use extensive paid media combined with substantial and successful earned media efforts. States in the low-use group appear to have executed little of either paid or earned media for occupant protection in the past. Again, the lack of paid and earned media use by these States appears to stem from a lack of personnel to coordinate the media efforts at State and local levels.

Finally, another difference between the low- and high-use State groups was the availability of internal research staff capable of conducting, managing, and interpreting research. No State in the low-use group had researchers on staff (partly due to small staffs in two States), while all but one of the high-use group had researchers and analysts in their highway safety agencies. If the States in the low-use group needed research, they generally relied on external entities (e.g., universities, contractors) to conduct and interpret research. The high-use States also relied on external entities to conduct much of their research, but their internal research staff was involved in the oversight of the research that provided both interpretation of results and a bridge between the research and program activities. This appeared to allow a more efficient deployment of resources since there was constant monitoring of the impacts of various occupant protection efforts, thereby providing improved feedback.



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Summary

Based on these findings and observations, the researchers identified four specific programmatic factors and activities characteristic of the high-belt-use group of States that the low-use group could adopt with a reasonable expectation that they would increase seat belt use.

1. Build political, law enforcement, and community support to promote seat belt use. This can be accomplished through the creation of an occupant protection coordinator position at the State Highway Safety Office (SHSO), by working with a “champion” in the public sector, and by holding statewide and local conferences dedicated solely to occupant protection.
2. Increase enforcement of seat belt laws throughout the year. Raising the priority of seat belt enforcement and helping elevate the importance of seat belt use among law enforcement agencies throughout the year appears essential.
3. Develop in-house research and data analysis capabilities within the SHSO. Having in-house analysis and interpretation capabilities appears vital to a safety program to guide program activities and understand their impacts on safety.
4. Determine what motivates a State’s population. The differences in the State populations suggest the low-performing States need to conduct surveys or focus groups with sub-populations of interest to gauge responses to media and law enforcement approaches.

How to Order

Please download a copy of *Identifying Opportunities to Decrease Vehicle Occupant Fatalities* (DOT HS 812 435; 34 pages), prepared by Dunlap and Associates, Inc., from (<https://www.nhtsa.gov/document/identifying-opportunities-decrease-vehicle-occupant-fatalities>). Carole Guzzetta was the NHTSA Project Manager.

Reference

Chen, Y. Y. (2015). *Seat belt use in 2014 – Use rates in the states and territories* (DOT HS 812 149). Washington, DC: National Highway Traffic Safety Administration.

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