



Buckling Up in the Back: Backing Primary Enforcement Laws



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Background

Rear-seat safety belt use lags behind front-seat safety belt use, significantly increasing rear-seat passengers' chance of death or injury in a crash and leading to a larger proportion of unbelted, rear-seat passenger deaths in comparison to front-seat motorists and passengers. As of 2018, only nineteen states have instituted primary enforcement laws that cover all vehicular passengers. Safety belts are a proven lifesaving device and save more than 13,000 motorists and passengers per year nationally.

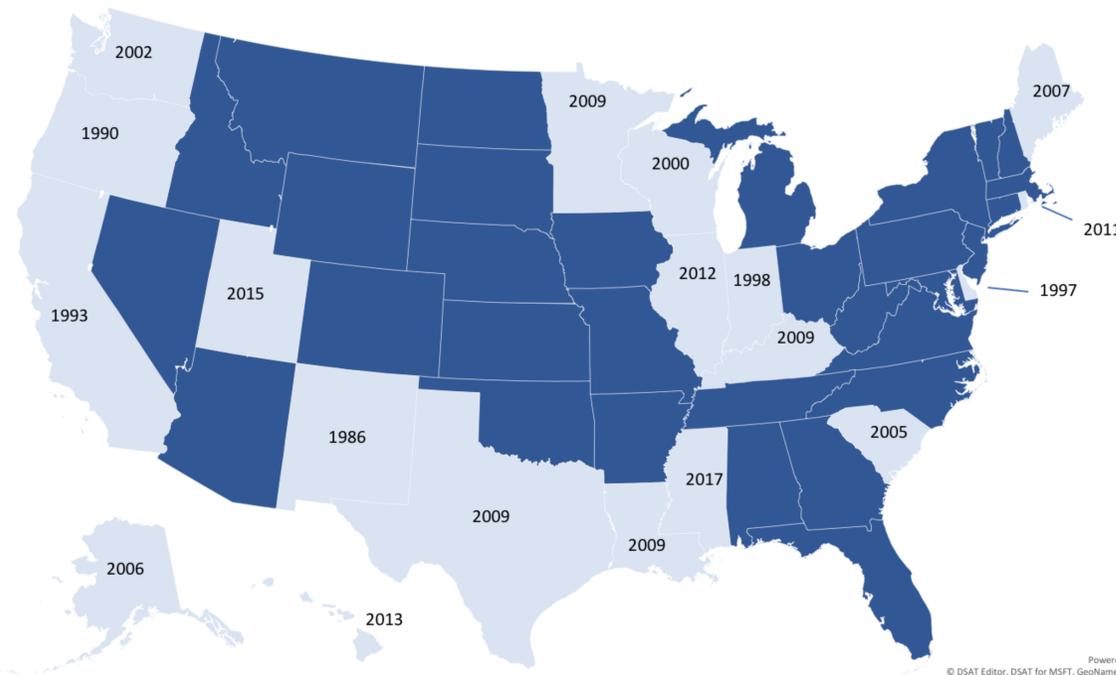
Objective

To compare the unrestrained, rear-seat fatality ratios of States that have adopted rear-seat primary seat belt legislation with States that have not.

Methods

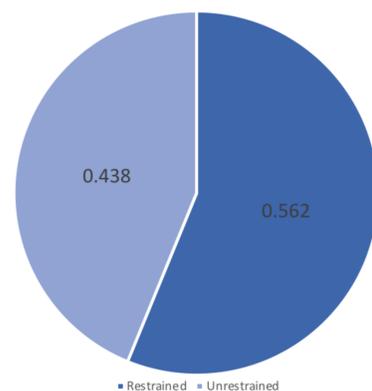
Traffic fatalities between 2014-2016 involving rear-seat occupants over the age of 16 were gathered through the Fatality Analysis Reporting System (FARS) online database. Utah is excluded from analysis due to primary enforcement legislation adoption in 2015. Data analysis was performed using Stata 14 statistical software.

States with Rear-Seat Primary Laws and Year of Adoption

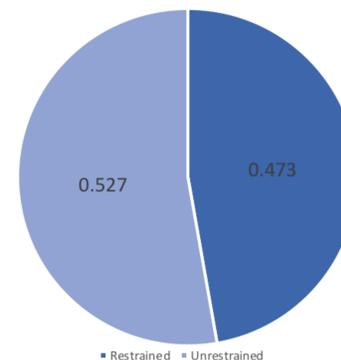


Results

Mean Restrained and Unrestrained Fatality Ratio U.S. States with Rear-seat Primary Law



Mean Restrained and Unrestrained Fatality Ratio U.S. States without Rear-seat Primary Law



Results

States that had adopted a rear-seat primary law had a mean unrestrained fatality ratio of 0.438, and states that had not adopted a rear-seat primary law had a mean unrestrained fatality ratio of 0.527. States with rear-seat primary legislation had unrestrained fatality ratios 18.5% lower ($t=3.28, p=0.001$) between 2014-2016 than states that had not adopted similar legislation.

Conclusion

Lower unrestrained, rear-seat fatality ratios suggest a higher rate of rear-seat, restrained passengers in U.S. states with rear-seat primary legislation. Utilizing NHTSA's potential lives saved calculation, it can be calculated that if all states had rear-seat primary legislation between 2014-2016, 362 lives could have potentially been saved.

Discussion

These findings build evidence that rear-seat primary laws should be more widely considered as State agencies set goals towards a zero-fatality traffic system.

