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## **The Effect of Seat Belt Usage Rates on Motor Vehicle Casualties in the US**

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The effectiveness of seat belt usage in reducing mortality and morbidity among traffic accident victims has been well established. Population usage rates have been increasing from eleven percent in 1980 to sixty-eight percent in 1995, as measured by observational surveys sponsored by the National Highway Traffic Safety Administration (NHTSA). Safety incentive grants from NHTSA to the States with higher than average usage rates are expected to total \$500 million during 1999-2003. Longitudinal annual motor vehicle-related fatality levels are analyzed by state to estimate the effect of the population usage rate on fatalities in the presence of known cofounders such as alcohol use and youthful drivers. Consideration of alternative multivariate methodologies (Ordinal Least Squares, Ordinary Least Squares with Autocorrelation, and Panel Data) applied to fifteen years of data shows that the population usage rate is associated with a small effect on fatalities that for most methodologies is not statistically significant. Such a result calls into question the current policy of basing the states grant incentive program on overall seat belt usage rates derived from observational surveys.

**Learning Objectives:** In this session, participants will: (1) be exposed to the difference between effectiveness at the individual level and effectiveness at the societal level; and (2) presented with the analytical modeling difficulties associated with policy evaluation

**Keywords:** Evaluation, Injury Control

**Presenting author's disclosure statement:**

**Organization/institution whose products or services will be discussed:** None

I do not have any significant financial interest/arrangement or affiliation with any organization/institution whose products or services are being discussed in this session.

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