Estimating the Effect of Standard Enforcement of a Rear Seat Belt Law for Rear Seat Fatality Prevention in North Carolina

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Between 2011 to 2015 in North Carolina there were 327 rear seat passenger fatalities (209 were unrestrained → 64% of fatalities)

57% in states with standard enforcement

64% in states without standard enforcement
Background

- For rear seat occupants involved in a fatal crash between 2011 to 2015 in North Carolina:
  - 89.1% of restrained rear seat occupants survived the fatal crash
  - Only 62.2% of unrestrained rear seat occupants survived the fatal crash

- By age group percentage of rear seat occupant fatalities who were unrestrained
  - 0 to 7 years old → 26%
  - 8 to 15 years old → 64%
  - 16 to 17 years old → 71%
  - All NC fatalities → 64%

- NHTSA found 14% increase in rear seat belt use with standard enforcement
Methodology

• Three methods were used to evaluate effect of standard enforcement:
  – 100% usage of seat belts, while considering that the forces in some collisions are too violent for even the properly restrained to survive
  – Comparing states with and without standard enforcement
  – 14% increase in rear seat belt use
Results

• 100% usage of seat belts → 30 lives saved annually
  – $285 million estimated economic savings
• State comparison → 10 lives saved annually
  – $100 million estimated economic savings
• 14% increase in rear seat belt use → 14 lives saved annually
  – $130 million estimated economic savings
Questions?

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