Overview

- Adult belt use lower in rear seats than in front
  - Data
  - Consequences
- Reasons
  - Laws and enforcement
  - Programs and messaging
  - Beliefs
- Special case: taxis and limos
- Solutions
  [if I tell you the solutions, you won’t listen to the next 10 minutes]
Adult rear seat belt use rates

Consequences of lower belt use

- 838 unbelted rear seat adult fatalities in 2014 (FARS)
- Rear seat belt effectiveness: 44% cars, 78% LTVs (NHTSA)
- If all 838 had been belted:
  about 414 would have survived
- If use rate had been 75% (the FARS front seat rate):
  about 155 would have survived
- Increased risk to front seat occupants: "In a crash at 30 mph an unbelted adult rear-seat passenger belt is thrown forward with the force of a 3 1/2-ton elephant charging straight through the front."
Reason: Laws

<table>
<thead>
<tr>
<th>Adult Law</th>
<th>Front Seat</th>
<th>Rear Seat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>Secondary</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>No law</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

Primary: any unbelted occupant may be ticketed at any time
Secondary: unbelted occupants may be ticketed only if police stop the vehicle for another reason
Last state to enact or upgrade a rear seat law: MD secondary law 2013

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Belt use by law type: primary, secondary, none

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Laws

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Figure 1. Rear seat belt use laws for adults, November 2015.

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District of Columbia (Primary)

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No law

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Reason: Messaging and programs

- Most law states have “belt use required in all seats” messages
  But …
- No state or national campaigns explicitly target rear seat belt use by adults

Reason: Beliefs – “I’m safe in the back seat”

- True for older vehicles, but little difference in newer ones
- Perhaps due to “kids safer in back” campaigns
- The real message point: rear seat adults are 3 times more likely to die in a crash if they are unbelted (FARS)

<table>
<thead>
<tr>
<th>Injury</th>
<th>Belted</th>
<th>Unbelted</th>
</tr>
</thead>
<tbody>
<tr>
<td>O - None</td>
<td>36.3 %</td>
<td>6.0 %</td>
</tr>
<tr>
<td>C - Possible</td>
<td>14.4 %</td>
<td>7.7 %</td>
</tr>
<tr>
<td>B - Minor</td>
<td>21.8 %</td>
<td>19.4 %</td>
</tr>
<tr>
<td>A - Serious</td>
<td>14.1 %</td>
<td>27.1 %</td>
</tr>
<tr>
<td>K - Fatal</td>
<td>13.3 %</td>
<td>39.8 %</td>
</tr>
</tbody>
</table>

Rear seat passenger vehicle occupants age 8 and older in fatal crashes, 2014
Taxis and limousines

- Some states exempt taxis and limos from rear belt laws
- Self-reported belt use in New York City taxis, 2012-13: 38%
- John Nash and Bob Simon fatalities—unbelted in rear seat
- Some NYC emergency rooms now have a term for the frequent injuries they see when unbelted rear seat passengers strike a taxi’s partition: “partition face” (NY Times)

Solution #1: Laws

Solution #2: Enforcement

- Enforce rear seat belt laws with the same vigor as front seat laws
Solution #3: Education

- Include rear seat positions in belt use education
- Consider campaigns directed to rear seat occupants

Solution #4: Taxis and limos

- Include taxis and limos in belt use laws, enforcement, and education

Solution #5: Front seat belt use

Higher front seat use produces higher rear seat use
Conclusion

Increasing rear seat belt use is a quick, easy, and cheap way to save lives and reduce injuries

Questions and comments

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