Impacts of Minnesota’s Primary Seat Belt Law

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CERS’s “Safe Six”
Six Policies Strongly Supported By Research

• Primary seat belt laws
• Sobriety checkpoints
• Motorcycle helmet mandate
• Graduated driver’s licenses
• Automated speed enforcement
• Breathalyzer-based ignition locks
Do Citizens Support Such Laws?

• Many policymakers and news reporters consider many of these policies too unpopular to enact
Are they really “unpopular” and “controversial” with Americans?
We Asked Drivers

- Randomized national probability sample of 1,205 registered voters who drive weekly
- 20-minute phone interviews, March 23, 2010 to May 6, 2010
- Margin of error is +/-2.8% for entire sample
- In partnership with Critical Insights of Portland, Maine

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Primary Seat Belt Laws

“Allowing law enforcement officials to stop and ticket drivers for failure to obey seatbelt laws.”

• 72% of Americans support
  – 42% “very supportive”
  – 31% “somewhat supportive”
Support Regardless of Ideology

<table>
<thead>
<tr>
<th>Policy</th>
<th>Conservatives</th>
<th>Moderates</th>
<th>Liberals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Seat Belt Law</td>
<td>71%</td>
<td>73%</td>
<td>73%</td>
</tr>
<tr>
<td>Sobriety Checkpoints</td>
<td>83%</td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td>Motorcycle Helmet Mandate</td>
<td>83%</td>
<td>85%</td>
<td>88%</td>
</tr>
<tr>
<td>Graduated Driver’s Licenses</td>
<td>90%</td>
<td>85%</td>
<td>88%</td>
</tr>
<tr>
<td>Automated Speed Enforcement</td>
<td>63%</td>
<td>60%</td>
<td>70%</td>
</tr>
<tr>
<td>BreathalyzerIgnition Locks</td>
<td>89%</td>
<td>87%</td>
<td>88%</td>
</tr>
</tbody>
</table>

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Support Regardless of Residence

<table>
<thead>
<tr>
<th></th>
<th>Urban/Small City</th>
<th>Suburban</th>
<th>Rural/Small Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Seat Belt Law</td>
<td>77%</td>
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<td>70%</td>
</tr>
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<td>Automated Speed Enforcement</td>
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<td>89%</td>
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Use of Seat Belts Saves Lives

Use of Seat Belts:
• Saved 280,486 lives from 1975 – 2010
• Could have saved 366,905 MORE lives if there was 100% use
• NHTSA, “Traffic Safety Facts 2010”
Primary Seat Belt Laws

“Allowing law enforcement officials to stop and ticket drivers for failure to obey seatbelt laws.”
AND IN MINNESOTA
Predicted Impact

2009 and 2010 CERS Reports:
• Primary Seat Belt Laws would result in
  • 7 – 8 % reduction in fatalities
  • Saving 17 rural lives in MN in 2006 and
  • 14 more in 2008
Actual Impact Estimate

• 2009 – 2011
• 68 Fewer Deaths
• 320 Fewer Serious Injuries
• $45 million in avoided hospital charges
  – Including $10 million in taxpayer savings
• 93% Seatbelt Use
• 70% of Minnesotans support the law
Success of Minnesota’s Seat Belt Law, 2009 – 2011

- 68 Fewer Deaths
- 320 Fewer Serious Injuries
- $45 Million in Avoided Hospital Charges, including $10 Million Taxpayer Savings for Medicare, Medicaid
- 93% Seat Belt Use — Record High
- 70% Minnesotans Support the Law
WHERE DID THESE NUMBERS COME FROM?
HOW MUCH OF THIS DECLINE IS DUE TO THE PRIMARY SEATBELT LAW?
Challenge: “Isolating” the Impact

- How is “post-primary” different from what would have happened if primary had not passed?
- Change in fatalities?
- Change in injuries?
- Can this be monetized?
- Were Minnesota tax dollars saved?
Two Methods

Method 1
• Compared June 2009 – June 2011 with trend extended from 5 years prior

Method 2
• Compared June 2009 – June 2011 with trend extended from average of 3 years prior
Pros and Cons

Method 1
- Allows for trends over time
- Greater potential for confounding factors

Method 2
- Shorter time period reduces confounding factors, e.g. fleet turnover
- “Snapshot:” Eliminates time trends
Method 1 (5 year trend) Results

<table>
<thead>
<tr>
<th></th>
<th>Fatalities</th>
<th>Incapacitating Injuries (“A”)</th>
<th>Serious Injuries (“B”)</th>
<th>Minor Injuries</th>
<th>No Injury (property only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend (expected w/o Primary)</td>
<td>647</td>
<td>1963</td>
<td>12,898</td>
<td>40,862</td>
<td>288,817</td>
</tr>
<tr>
<td>2009-2011 Actual</td>
<td>579</td>
<td>1642</td>
<td>12,466</td>
<td>41,672</td>
<td>288,096</td>
</tr>
<tr>
<td>Reduction (increase)</td>
<td>68</td>
<td>321</td>
<td>432</td>
<td>(810)</td>
<td>721</td>
</tr>
</tbody>
</table>
Method 1 Results

Type A Injuries

Type B Injuries

Type C Injuries

Fatalities
Method 2 (3 year average trend) Results

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<thead>
<tr>
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<th>Fatalities</th>
<th>Incapacitating Injuries (&quot;A&quot;)</th>
<th>Serious Injuries (&quot;B&quot;)</th>
<th>Minor Injuries</th>
<th>No Injury (property only)</th>
</tr>
</thead>
<tbody>
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<td>Trend (expected w/o Primary)</td>
<td>671</td>
<td>2192</td>
<td>13,676</td>
<td>41,230</td>
<td>286,685</td>
</tr>
<tr>
<td>2009-2011 Actual</td>
<td>579</td>
<td>1642</td>
<td>12,466</td>
<td>41,672</td>
<td>288,096</td>
</tr>
<tr>
<td>Reduction (increase)</td>
<td>92</td>
<td>550</td>
<td>1210</td>
<td>(442)</td>
<td>(1411)</td>
</tr>
</tbody>
</table>
This impact in Dollars

- MN Dept of Health has data on costs of hospital visits (CODES)
- Used this data to determine average cost for each injury type
- Data is for injuries and hospital charges only
- Not comprehensive
Impact in Dollars

Average MN hospital charge by injury type (post – 2009):

- Incapacitating: $188,139
- Serious: $22,238
- Minor: $3022
Overall Dollars Saved

Method 1: $45,054,748 saved
  • Incapacitating: 321* $118,139 = $37,898,991 saved
  • Serious: 432* $22,238 = $9,602,368 saved
  • Minor: (810)* $3022 = $2,446,611 more spent

(Method 2: $90,609,909 saved)
Overall Dollars Saved

National Safety Council estimates comprehensive costs:

• Medical expenses
• Wage and productivity
• Vehicle damage
• Etc.
• Includes costs of fatalities
Overall Dollars Saved

National Safety Council estimates:

• Fatality: $4,508,500
• Incapacitating: $227,300
• Serious: $58,000
• Minor: $27,600
• Property only: $2,500
• Total MN Savings: $382,645,480 (method 1)
HOW MUCH DID MINNESOTA TAXPAYERS SAVE?
Payers of Hospital Charges

Private: 72%
Public: 22%
- Medicaid: 11%
- Medicare: 8%
- Other gov’t: 3%
Unknown: 6%
Public Dollars Saved
(Hospital Injury Charges Only)

Method 1: $9,912,000
• Medicaid: $4,956,000
• Medicare: $3,604,400
• Other gov’t: $1,351,600

(Method 2: $19,934,200)
Conclusions

Primary Seatbelt Law is having intended effect:

• Lives are being saved
• Injuries are less severe
• Fewer MN health dollars have been spent
• More people are buckling up
• Public supports it