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Some Conclusions

• Traffic Calming Works

• Evaluation Important

• Kids can still be kids and be safe
Safe Routes to School

• 2005 US DOT legislation $612 million
  – by 2012, total about $1.12 billion
  – 10,000 of nation’s 100,000 schools
  – get kids walking / biking (safely) to school

• 130 of 2,000 NYC schools
  • Traffic and pedestrian signals, exclusive pedestrian crossing times, speed bumps, speed boards, sidewalk extensions; ~ 700 ft. buffer
NYC SRTS Evaluation Program

• Data and Analysis
  – 186,000 geocoded pedestrian crashes 2001-2010
  – Geocoded school centroids
  – Census tract injury counts
    • Mon-Fri, 7AM-9AM or 2PM-4PM (excluding Summer, Holidays)
  – Compare SRTS census tracts vs non-SRTS census tracts pre and post program implementation (2008)

• Results
  – 44% decrease (95% CI 17%, 65%) in SRTS census tracts following program implementation
  – 0% change (95% CI -8%, 8%) in non-SRTS census tracts following program implementation
School-Aged Pedestrian Crashes per 10,000 Population During Travel To-From School Hours, SRTS Intervention Census Tracts (Yes) vs. Non-Intervention Census Tracts (No), New York City 2001-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>No Count/Population * 10000</th>
<th>Yes Count/Population * 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2002</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2003</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2004</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>2005</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>2007</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Changepoint

most likely changepoint SRTS census tracts 2\textsuperscript{nd} quarter 2008 (quarter 30.5, 95% Cr I 30, 31)

non-SRTS census tracts largely unchanged
Difference in Differences

\[ \log(\mu_t) = \beta_0 + \beta_1 \text{Period}_t + \beta_2 \text{SRTS} + \beta_3 \text{Period}_t * \text{SRTS} + \log(\text{Population}_t) \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>SRTS Vs. No SRTS</th>
<th>Completed SRTS Vs. Not Completed SRTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \beta_0 ) (Pre-Changepoint, Non-SRTS)</td>
<td>-9.43 (-9.55, -9.31)</td>
<td>-8.51 (-8.69, -8.33)</td>
</tr>
<tr>
<td>( \beta_1 ) (Pre-Changepoint, SRTS)</td>
<td>0.95 ( 0.42, 1.48)</td>
<td>0.03 (-0.32, 0.38)</td>
</tr>
<tr>
<td>( \beta_2 ) (Post-Changepoint, Non-SRTS)</td>
<td>-0.13 (-0.40, 0.14)</td>
<td>-0.33 (-0.76, 0.10)</td>
</tr>
<tr>
<td>( \beta_3 ) (Post-Changepoint, SRTS)</td>
<td>-0.58 (-2.01, 0.85)</td>
<td>-0.38 (-1.34, 0.58)</td>
</tr>
</tbody>
</table>

- 44% risk reduction (95% CI 87% decrease, 130% increase)
  - compared to incomplete SRTS: 32% risk reduction (95% CI 74% decrease, 78% increase)
Some Conclusions

• Traffic Calming Works
  – expensive, but we can rationally and effectively use public resources to address public health and safety
  – education and enforcement still important

• Evaluation Important
  – MAP-21 removes SRTS as stand-alone program
  – difficult to tease out effects of any single program
  – NYC experience unique?

• Kids can still be kids and be safe