Methamphetamine-Related Deaths Before and After Prescription Pseudoephedrine Legislation

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Background
The national Combat Methamphetamine Epidemic Act of 2005 (CMEA) enacted in March 2006 attempting to control methamphetamine precursors included a number of restrictions including 30-day purchase limits on pseudoephedrine, identification verification, and placement of the substance behind the counter. In July 2006, an even more restrictive law was enacted in Oregon requiring a prescription to obtain pseudoephedrine. While all states were subject to CMEA, at that time, Oregon was the only state to require a prescription for pseudoephedrine.

It is unknown if overall methamphetamine use and methamphetamine-related deaths were more significantly decreased in Oregon as compared to other states that were subject only to the national regulations.

Objective
To evaluate the short- and long-term effects of the 2006 Oregon prescription pseudoephedrine law on methamphetamine-related deaths compared to a similar metropolitan area that was not subject to a statewide prescription pseudoephedrine law.

Methods
Data on drug-related deaths from 2003-2012 was obtained from the Medical Examiner Offices of Multnomah County, Oregon including Portland, and from King County, Washington including Seattle.

Methamphetamine-related deaths from 3-year period immediately before the enactment of the law (2003-2005) were compared deaths from 2007-2009 (short term) and from 2010-2012 (long term).
The rates of change in deaths were then compared between the two similar metropolitan areas.

Table 1: Methamphetamine-related deaths per 100,000 population

<table>
<thead>
<tr>
<th>Year</th>
<th>Multnomah County, OR</th>
<th>King County, WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2005</td>
<td>10.5</td>
<td>3.4</td>
</tr>
<tr>
<td>2007-2009</td>
<td>9.0</td>
<td>2.8</td>
</tr>
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<td>2010-2012</td>
<td>12.5</td>
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Results
• In Multnomah County, OR, there was a nonsignificant 14% decrease in methamphetamine-related deaths per year when comparing pre- and immediate post-legislation years (1.4; 95% CI -21, 27; p=0.561)
• In King County, WA, there was a nonsignificant 17% decrease in methamphetamine-related deaths per year when comparing pre- and immediate post-legislation years (1.7; 95% CI -19, 26; p=0.552)
• There was a nonsignificant increase in methamphetamine-related deaths per year in both Multnomah County (5 (15.3%); 95% CI -14, 24; p=0.383) and King County (3 (22.7%); 95% CI 9, 19; p=0.263) when comparing pre- and immediate post-laws to later years
• There was no significant difference between deaths in Multnomah and King counties in the short term (RR 0.98 (95% CI 0.79, 1.23; p=0.910) or long term (RR 1.05 (95% CI 0.79, 1.29); p=0.905)

Discussion
A 2006 Oregon law that required a prescription for pseudoephedrine was associated with no change in short- or long-term methamphetamine-related deaths compared to a similar county in a neighboring state that did not enact a law.
The years immediately following the law were associated with a short-term decrease in methamphetamine-related deaths, but a similar trend was also seen in King County, Washington, suggesting alternative variables may have been contributing.
Potential explanations include national legislation or changes in the methamphetamine source, purity, and price secondary to the decrease in methamphetamine labs.

Conclusion
The Oregon law restricting pseudoephedrine to prescription-only was not associated with a decrease in methamphetamine-related deaths.

Figure 1: Methamphetamine-related deaths in Multnomah County, OR and in King County, WA
CMEA = Combat Methamphetamine Epidemic Act of 2005

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