Methamphetamine use in rural Australia: Patterns, prevalence and correlates of use in non-metropolitan vs metropolitan users

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Methamphetamine: A hot topic

• Growing media, political, and public attention directed towards methamphetamine, particularly crystal methamphetamine (“ice”)

• ACC: Methamphetamine “poses the highest risk to the Australian community and is of significant national concern” (2015)

• Use associated with significant harms

• Particular concerns regarding use in rural areas
Poorer health outcomes in rural areas:
- Higher rates of:
  - Mortality
  - Unemployment
  - Suicide
  - Mental illness
  - Injury
  - Chronic illness
  - FDV
  - AOD use

Anecdotal reports of increasing ice use

Lack of data
- No current data on prevalence of methamphetamine use in rural vs metropolitan areas
- No studies looking at trends over time
- Media and political rhetoric not evidence-based
- Unable to effectively plan treatment services and policy responses
Research questions

1. How do rates of lifetime and recent methamphetamine use vary in rural vs metropolitan areas?

2. How do rates of recent ice use vary in rural vs metropolitan areas?

3. How has this changed over time?

Method: Data

• Secondary analysis of two national datasets
• Three time points

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Time points</th>
<th>N*</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Drug Strategy Household Survey (NDSHS)</td>
<td>2007</td>
<td>22,519</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>25,786</td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>23,512</td>
</tr>
<tr>
<td>Alcohol and Other Drug Treatment Services National Minimum Dataset (AODTS)</td>
<td>2006/07</td>
<td>139,808</td>
</tr>
<tr>
<td></td>
<td>2009/10</td>
<td>139,608</td>
</tr>
<tr>
<td></td>
<td>2012/13</td>
<td>154,489</td>
</tr>
</tbody>
</table>

* NDSHS: N of participants  
AODTS: N of treatment episodes
Method: Measures

Meth use: NDSHS
- Lifetime methamphetamine use (ever used for non-medical purposes)
- Recent methamphetamine use (used for non-medical purposes in past 12 months)
- Recent ice use

Meth use: AODTS
- Methamphetamine as principal drug of concern (including amphetamine, methamphetamine, amphetamine analogues, and amphetamines not further defined)

“Remoteness” based on Australian Standard Geographical Classification:
- Cities
- Inner regional
- Rural (including outer regional, remote, and very remote)

Method: Analyses

- Frequency analyses with weighted data (NDSHS)
- Unweighted frequency analyses (AODTS)
- Significance testing (z-tests) on reliable data (SE <25%)
Results: Meth use by location

- Lifetime, recent, and ice use all significantly (p<.05) higher in rural areas.

Results: Ice use by location over time

- Rural ice use increased significantly (p<.05) between 2007 and 2013.
Results: Form used by location

Main form of methamphetamine used by geographic location, 2013

<table>
<thead>
<tr>
<th>Form</th>
<th>Rural</th>
<th>Regional</th>
<th>Cities</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>10%</td>
<td>0%</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>Liquid</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Crystal</td>
<td>50%</td>
<td>50%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Base</td>
<td>10%</td>
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<td>10%</td>
</tr>
<tr>
<td>Tablet</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Results: Ice use by demographics and location

Recent ice use by demographic characteristics and geographical location, 2013

<table>
<thead>
<tr>
<th>Gender</th>
<th>Rural</th>
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<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Female</td>
<td>0.9%</td>
<td>0.7%</td>
<td>1.2%</td>
<td>1.1%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Rural</th>
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<th>Cities</th>
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<tbody>
<tr>
<td>14-17</td>
<td>5.2%</td>
<td>0%</td>
<td>0.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td>18-24</td>
<td>6.1%</td>
<td>2.6%</td>
<td>3.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>25-29</td>
<td>4.8%</td>
<td>3.5%</td>
<td>4.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>30-29</td>
<td>2.7%</td>
<td>2.8%</td>
<td>1.9%</td>
<td>2.1%</td>
</tr>
<tr>
<td>40+</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>0.4%</td>
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</table>

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Rural</th>
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<th>Cities</th>
<th>Australia</th>
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</thead>
<tbody>
<tr>
<td>Employed</td>
<td>2.3%</td>
<td>1.3%</td>
<td>1.4%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.7%</td>
<td>3.2%</td>
<td>5.5%</td>
<td>4.7%</td>
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<tr>
<td>Not in the labour force</td>
<td>1.4%</td>
<td>0.3%</td>
<td>0.9%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

Significantly (p<.05) higher ice use in rural areas among:
- Males
- 18-24 year olds
- Employees

Significantly (p<.05) lower ice use in rural areas among:
- The unemployed
Results: Treatment episodes by location over time

Methamphetamine-related treatment episodes significantly (p<.01) increased in all areas, but this increase was proportionally smaller in rural services.

Discussion

- Disproportionately large increase in methamphetamine use in rural areas
- Consistent with other data showing higher levels of risky AOD use in rural areas
  - Lower educational achievement
  - Low SES
  - Higher unemployment
  - Isolation
  - Deliberate targeting of rural communities by illegal distribution networks (?)
Discussion - I

- Need for appropriate primary and secondary interventions in rural areas
  - Tailored to at-risk subpopulations
- High levels of use among employed individuals in rural areas
  - Opportunity for prevention and early intervention in workplace settings
- Important role for GPs and other primary care providers

Discussion - II

- Smaller proportion of treatment episodes for methamphetamine in rural areas, despite high rates of use
  - Limited access to treatment facilities
  - Lack of relevant expertise
  - Greater concern with other drugs
  - Greater severity of problems in metropolitan areas
- Numerous treatment barriers for methamphetamine users:
  - Engagement and retention
  - Limited access to treatment services
  - Lack of evidence-based treatment options
  - Stigma
  - High demand / low capacity
  - Lack of anonymity / confidentiality
Thank you

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