The National Methamphetamine Symposium
Making Research Work in Practice
12 May 2015 | Arts Centre, Melbourne

Understanding trends in Methamphetamine use and harm:
Implications for harm reduction

Paul Dietze
Understanding trends in Methamphetamine use and harm: Implications for harm reduction

Paul Dietze, Centre for Population Health
AUSTRALIA is in the midst of an ice epidemic, with the drug being linked to a growing number of crimes, and higher quantities of the amphetamine seized at our borders.

And there is no end in sight to our addiction.

Experts say the popularity of the drug caught Australia unawares, with the usage on par with the crack cocaine epidemic in the United States.

In recent months even the Prime Minister has admitted the war on drugs may be unwinnable.
Is ‘ice’ the problem?

- Crystal methamphetamine = methamphetamine = speed powder = methamphetamine = base

- Reports of greater ease in obtaining methamphetamine, increased drug quality/purity (ACC, 2014)

- Increased harms
(Meth)amphetamine-related ambulance attendances

Lloyd et al. (2014).

Ambo Project Report

Note: Regional data available from June 2011
Has been an actual increase in the prevalence of methamphetamine use?
- NDSHS findings
  (past-year meth/amphetamine use – 2.1% in 2010 and 2013)

Why should we care?
- Practice/policy must be based on sound evidence to appropriately meet the needs of consumers and the wider community
- Responses to (methamphetamine use and harms) are often ill-informed and possibly counter-productive (eg ‘faces of meth’, Montana Meth Project)
IDRS: Victorian trends in methamphetamine use

Cogger et al. (2015)
EDRS: Victorian trends in methamphetamine use

Truong et al. (2015)
BDO: trends in methamphetamine use

Lim et al. (2015).
BDO: trends in methamphetamine use

Lim et al, unpublished.

- Red line: region
- Blue line: metro
- Black line: total
(Meth)amphetatmine-related ambulance attendances

Note: Regional data available from June 2011

Lloyd et al. (2014).
Ambo Project Report
So what is going on?
Average purity of methamphetamine seizures, VIC, 2007/08–2013/14

Source: Victoria Police Forensic Services Department, 2008–2014
So what is going on?
Average purity of heroin and methamphetamine seizures, VIC, 2009–2013

Purity-adjusted price of heroin and methamphetamine, 2009 to mid-2013

- Heroin experienced several mini peaks and troughs.
- Powder meth. declined.
- Crystal meth. declined.
- Both forms of methamphetamine had similar purity-adjusted prices.

Observations: Preferred drug and drug used most in the last month

<table>
<thead>
<tr>
<th>Preferred drug</th>
<th>2009</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>73%</td>
<td>64%</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Cannabis</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drug used most</th>
<th>2009</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Cannabis</td>
<td>19%</td>
<td>28%</td>
</tr>
<tr>
<td>Other</td>
<td>14%</td>
<td>35%</td>
</tr>
</tbody>
</table>
IDRS/EDRS median days used (past 6 months)

Lim et al. (2015).
Purity Perceptions: “High” purity

% IDRS & EDRS participants

Year

2008 2009 2010 2011 2012 2013 2014

IDRS Powder MA  
IDRS CMA  
EDRS Powder MA  
EDRS CMA  

Burnet Institute, unpublished
Ecstasy-related ambulance attendances

Lloyd et al. (2014).
Ambo Project Report

Note: Regional data available from June 2011
heroin-overdose ambulance attendances

Lloyd et al. (2014). *Ambo Project Report*
Methamphetamine harms (MIX cohort)

<table>
<thead>
<tr>
<th>ED Utilisation</th>
<th>Drug used</th>
<th>IRR/OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any</td>
<td>Heroin</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Methamphetamine</td>
<td>1.64 (1.12-2.41)</td>
</tr>
<tr>
<td>Frequent</td>
<td>Heroin</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Methamphetamine</td>
<td>6.67 (2.64-16.85)</td>
</tr>
</tbody>
</table>
NSP coverage in past 2 weeks (MIX)

<table>
<thead>
<tr>
<th>Coverage</th>
<th>MA use</th>
<th>No MA use</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%+</td>
<td>65</td>
<td>81</td>
</tr>
<tr>
<td>&lt;100%</td>
<td>35</td>
<td>19</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 48.46, \ p < 0.001 \]
Time of use (MIX)

**Time purchases were first used by drug**

- Heroin
- Meth (powder)
- Meth (crystal)
- Benzos
- P.O.

*Scott et al 2014*
## Risk Behaviours for BBVs - IDRS

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Odds Ratio (95%CI)</th>
<th>Adjusted Odds Ratio (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Syringe re-use</strong></td>
<td>No MA use</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>MA use</td>
<td>1.82 (1.31-2.51)</td>
</tr>
<tr>
<td><strong>Receptive sharing</strong></td>
<td>No MA use</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>MA use</td>
<td>2.72 (1.2-6.17)</td>
</tr>
<tr>
<td><strong>Distributive sharing</strong></td>
<td>No MA use</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>MA use</td>
<td>2.72 (1.2-6.17)</td>
</tr>
</tbody>
</table>

McCormack, in preparation
Cohort of 255 regular methamphetamine users recruited in Melbourne in 2010-followed in 2011 (and 2015)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Baseline</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regular use</strong></td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Stable Use</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>Decreasing use</td>
<td></td>
<td>70%</td>
</tr>
<tr>
<td>Increasing use</td>
<td></td>
<td>21%</td>
</tr>
<tr>
<td><strong>ABSTINENT</strong></td>
<td></td>
<td>32%</td>
</tr>
<tr>
<td><strong>Dependence</strong></td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Remission</td>
<td></td>
<td>45%</td>
</tr>
<tr>
<td>Escalation</td>
<td></td>
<td>5%</td>
</tr>
</tbody>
</table>

Quinn, 2012
UnMet: Service avoidance

105 (41%) ‘service avoiders’, who were:

<table>
<thead>
<tr>
<th></th>
<th>Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More likely to be employed</td>
<td>2.37 (1.34-4.18)</td>
</tr>
<tr>
<td>Less likely to regret decisions</td>
<td>0.47 (0.26-0.86)</td>
</tr>
<tr>
<td>Less likely to incur/cause methamphetamine-related injuries</td>
<td>0.34 (0.14-0.78)</td>
</tr>
<tr>
<td>Lower frequency of ‘recent’ methamphetamine use</td>
<td>0.31 (0.17-0.55)</td>
</tr>
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</table>

• Most use not perceived to be problematic/harmful/severe enough to warrant professional support, e.g.:
  - “I don’t think it’s a problem…I don’t feel I’m addicted to it and it’s not affecting my life in a bad way” Elise, 24-year-old female;
  - “I don’t find I have a problem with [methamphetamine]…I’m not picking at imaginary things on my skin, I don’t have festering sores” Rob, 34-year-old male
UnMet: Unrecognised need?

Service avoiders

- 50% classified as methamphetamine-dependent;
- 46% using methamphetamine >weekly;
- 50% primarily injected methamphetamine;
- 62% experienced methamphetamine-related financial problems last 6 months;

- There is a need for initiatives targeting this group addressing concepts of ‘problematic’ use and aiming to prevent transition to riskier/more harmful use patterns;
  - Along these lines, need to address constructs of ‘functionality’ that may distort perceptions/awareness of ‘problematic’ use (e.g., employment);
UnMet: Barriers to treatment access

- **Preference for self-treatment** (e.g., due to pride, dignity, accepting responsibility);
  - “I got myself into this pickle…should be up to me to get out of it”;
- **Stigma**;
  - “They don’t take you in if you’re using speed, ‘cause they think you’ll be violent”;
- **Staff turnover, lack of holistic services**;
  - “They always move...you’re always repeating yourself like a bloody record”;
- **Adverse past experiences**;
  - “…once we’ve been shit in the face it takes a lot of courage for us to go back and do it again”;
- **Lack of methamphetamine-specific services, staff knowledgeable about methamphetamine**;
  - “[Unlike heroin] there’s nothing out there that helps with speed”;
- **Lack of desire to reduce/cease use** (e.g., use is functional, enjoyable);
- **Adequate support networks already in place**.

Quinn, 2012
UnMet: Remission from dependence

Of participants classified as methamphetamine-dependent at baseline, 33% had remitted from dependence at followup.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Adjusted Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being younger</td>
<td>0.93 (0.88-1.00)</td>
</tr>
<tr>
<td>Maintaining/gaining employment</td>
<td>3.14 (1.21-8.14)</td>
</tr>
<tr>
<td>Greater increase in social support</td>
<td>1.08 (1.01-1.16)</td>
</tr>
<tr>
<td>Not seeking assistance from family/peers</td>
<td>0.13 (0.03-0.55)</td>
</tr>
</tbody>
</table>

- Accessing services (drug treatment, relevant health/social support services) was not associated with remission from dependence.
Harm Reduction

Drugs like ice have Australia hooked

This story was published: 5 MONTHS AGO  |  JUNE 04, 2014  |  11:35AM

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Harm Reduction

• Needle and syringe programs:
  – Engagement/referral
  – Opening hours
  – Vending machines
  – Regional areas
  – Investment

• Primary Care:
  – GPs
  – Primary health centres for injecting drug use or drug use?

• Consumption facilities/other equipment:
  – Injecting, but what about other equipment?
  – Bans or support?
Harm Reduction

• Safe use education
  – Dose titration?
  – Help and referral

• De-escalation education and training:
  – Front line workers
  – First responders
  – Mental health triage

• Media/Social Marketing Campaigns
  – Targets?
  – Effectiveness?

• Drug Driving
  – Testing & deterrence
Helpful images?
Users say it makes them feel wonderful and helps them cope—while it ‘fries’ their brains’ nerve ends and sends them insane. Will Ice, the drug turning Hawaii into a battleground, take off here?

ICE

THE NEW VICE

BY MIKE SAFE AND MIKE SAGER

They may have caught their man, but Sydney drug squad detectives were unsure what they had caught him with. The tiny packet of clear to white crystals, like crumbled rock candy, was unlike anything they had seen before.

At first they thought it was the amphetamine known as speed, a stimulant that has existed for many years in various forms.

But laboratory tests discovered otherwise. The substance was a smokeable crystal methamphetamine, a more potent variation of speed and capable of delivering a heavy and immediate hit or “rush”.

On the streets it is known as Ice.

The drug that has turned Hawaii (population 1,083,000) into a battleground, relating to nearly 80 per cent of its drug crime, has reached Australia. Two years after the first warning signals from the Australian Federal Police monitoring post in Honolulu, Ice appears to be a reality here.

“We’re apprehensive,” says Detective Sergeant Brent Martin, of the Sydney southern region drug

PHOTOS BY KEN SAKAMOTO
THE ICE STORM

Sleepless binges, manic sexual urges, psychotic episodes ... methamphetamine is filling hospitals around the country with its victims.
Mark Whittaker reports.

Scott remembers when he lost his mind. The first time it happened, the personal trainer from Melbourne was in New York studying drama and literature, doing a bit of bar work, shooting up crystal to go out partying. Towards the end of his year overseas he went on a three-day bender and came home to a friend’s apartment where he was staying. The friend rolled over in his bed and he was wearing a huge, fluorescent African mask.

Scott fled to the kitchen, where he saw a movie being projected on to the walls showing policemen about to bust in and arrest him. His friend came out: “What’s wrong? What’s wrong?” How dare he put that huge, freaky mask on then pretend not to know what was up. Scott ran on to the street and spent the next three days scurrying across Manhattan, cowering from the sirens that he knew were coming to get him. He hadn’t slept or eaten in six days when he knocked on another friend’s door and was given a sleeping pill. When he woke, he was normal again.

Returning to live in Sydney in 2000, Scott found crystal was just taking off there. He gave it a miss for a while, but its pull was irresistible. It wasn’t like he was an addict. He had a job and lots of friends. His body was hard.

Over the next three years he continued binging on the drug, often going for five sleepless days and then two to four weeks without touching the stuff. But he got to the point where, half the time he had it, he descended into a psychosis every bit as fierce as his New York episode. “I must have had psychosis maybe 30 or 40 times. I put myself through the same ordeal of imagining people were trying to kill me. Sometimes I’d see people filming on my bedroom wall my parents being tortured. Sometimes I would imagine the tracks and the cars in the street had meat mincers inside them and were trying to run me down so they could mince me up alive.”

He felt guilty about missing work at his new job. He had deadlines, people to manage. And he was certain they were all bitching about him. So he quit. His circle of friends changed. He went to the theatre less. But he still knew he wasn’t an addict; addicts used drugs every day.

The memory of the first time he’d shot up the drug kept pulling him back. It was like the first cigarette of a
Acknowledgements

• Participants of the listed studies

• Burnet Staff: all who contributed to this paper, everyone else (plus non-Burnet staff) who assisted with data collection

• Turning Point and other data custodians

• Victoria Police Forensic Sciences Centre

• David Moore
Predictors/correlates of service utilisation – Discussion (1)

- Service utilisation:
  - GPs most common source of professional support. Possibly indicates greater accessibility, availability, familiarity, utilisation for other health issues vs. other service types;
  - One-on-one drug counsellors most common drug-specialist service type. Possibly indicates:
    - Presence of barriers to high-threshold services (Pennay & Lee, 2010);
    - Preference for low- vs. high-threshold service types; and,
    - The ability of some individuals to address dependent, harmful use patterns without intensive professional support (*important to consider with regard to positive changes to psychosocial factors over follow-up period*).
Factors associated with service access:

- **Greater perceived need/motivation** to change methamphetamine use patterns, address related harms (e.g., self-treatment, seeking help from family/peers);
  - Suggests a need to develop initiatives for users engaging in harmful use patterns who aren’t yet experiencing ‘readiness to change’, to promote earlier treatment engagement and reduce/prevent harms;

- **Service utilisation for other issues** (mental health, other drug use);
  - Such contact possibly diminishes certain barriers for some methamphetamine users, means they’re more receptive to utilising services for methamphetamine;
  - Suggests a need to facilitate pathways to professional support for those not in contact with the service sector (e.g., non-injectors engaging in harmful use patterns, given injecting associated with service utilisation).

Quinn, 2012