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Medical Research. Practical Action.

Challenging the notion of an 'ice epidemic' in Victoria with drug trend monitoring data

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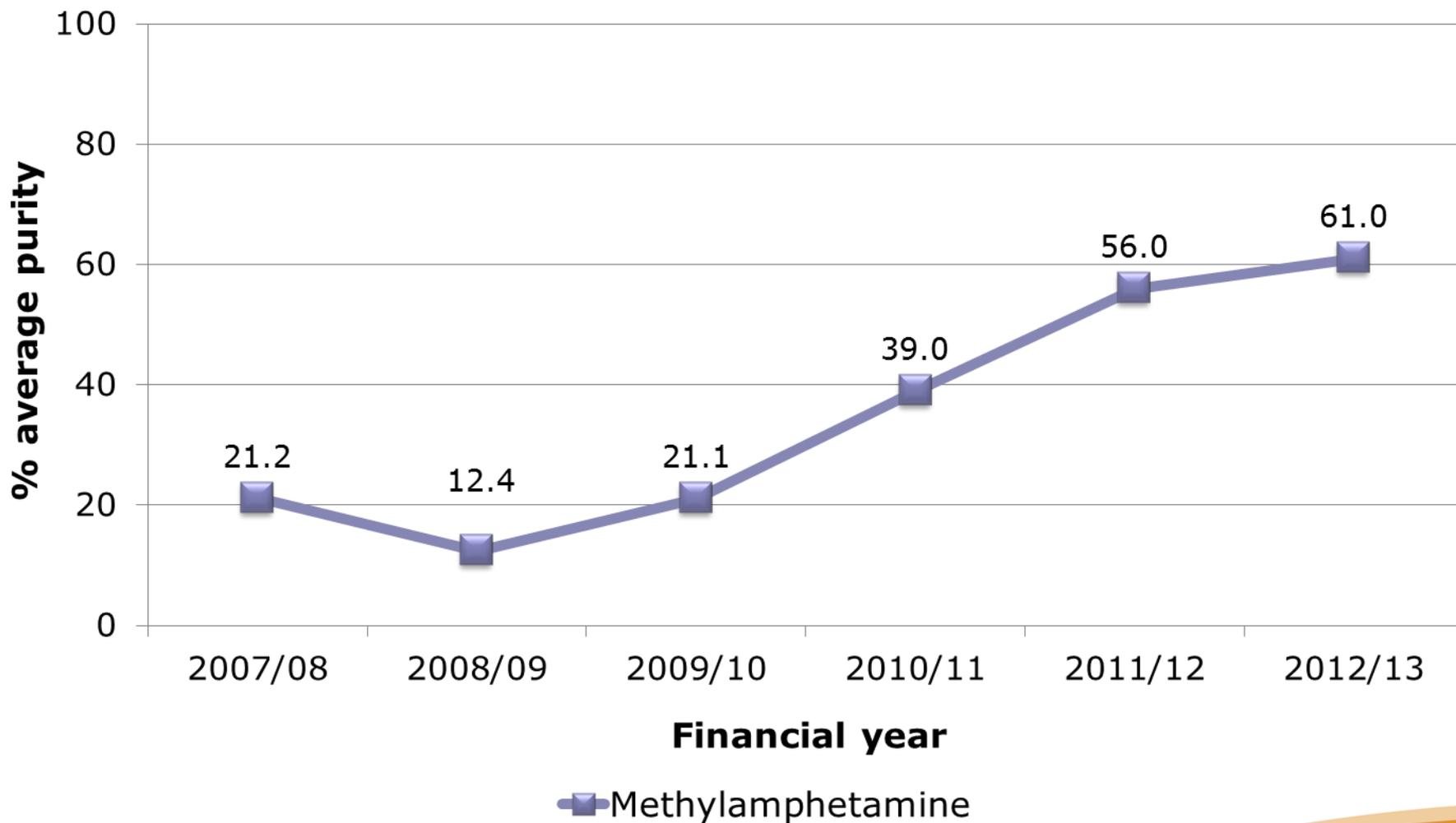
Background (1)

- Media have widely reported an 'ice epidemic' in Victoria;
 - In 2014, over 100 articles have been published about methamphetamine in the state's two leading newspapers;
 - Headlines suggest the existence of a methamphetamine 'crisis' of 'plague' proportions that has 'spread to every level of society';
 - Frequent reports of crimes committed while methamphetamine-intoxicated (often unsubstantiated).

Background (2)

- This concern is underpinned somewhat by evidence of increased methamphetamine-related harms, e.g.:
 - A rise in amphetamine-related ambulance attendances: 880 in Melb. in 2011-12 vs. 1394 in 2012/13 (Lloyd et al., 2014);
 - Increased detections/seizures (at border and in-country);
- Also reports of greater ease in obtaining methamphetamine, increased drug quality/purity.

Average purity of methamphetamine seizures, VIC, 2007/08–2013/14



Source: Victoria Police Forensic Services Department, 2008–2014

Background (3)

However...

- It remains unclear whether there has been an actual increase in the prevalence of methamphetamine use, particularly given 2013 NDSHS findings (stable prevalence of past-year meth/amphetamine use in Vic – 2.1% in 2010 and 2013);
- It's important to quantify/clarify the 'true' extent of the issue to correctly inform practice/policy;
 - Practice/policy must be based on sound evidence to appropriately meet the needs of methamphetamine users and the wider community;
 - International experience suggests that responses to methamphetamine use and harms are often ill-informed and possibly counter-productive (e.g., Wakefield et al., 2010).

Aim

- Triangulate data from three Melbourne drug surveillance systems to provide indications of any changes in methamphetamine use among drug-using subgroups since 2008.

Method (1)

- Data were analysed from three serial cross-sectional projects (based on Lim et al., ANZJPH, in press):
 - The Big Day Out (BDO) Study: ~1000 young music festival attendees each year;
 - Ecstasy and related Drugs Reporting System (EDRS; Vic): 100 ERD users;
 - Illicit Drug Reporting System (IDRS; Vic): 150 PWID;
- All involve annual surveys of the target groups;
 - EDRS and IDRS ask about specific methamphetamine forms, incl. use frequency;
 - BDO Study – asks about any methamphetamine use in last month.

Method (2)

Data analysis:

- 2008-2014 for BDO Study, 2008-2013 for EDRS/IDRS;
- 'Recent' use: past month for BDO, past six months for EDRS/IDRS;
- To assess trends in prevalence of methamphetamine use among the three samples:
 - Chi-square test for trend;
 - Poisson regression to test trends in median days of use.

Results (1) – Sample characteristics

- BDO participants (2005-2008; N=5284): <50% male, median age=18-19, majority Australian-born (Lim et al., 2010).
- EDRS participants (2013; N=100): 53% male, mean age=26 years, 85% heterosexual, 16% unemployed, 2% Indigenous, 4% current drug treatment (Papanastasiou et al., 2014).
- IDRS participants (2013; N=150): 71% male, median age=40 years, 91% heterosexual, 90% unemployed, 13% Indigenous, 52% current drug treatment (Cogger et al., 2014).

Results (2; BDO)

Year	MA* use past month n/N (%)
2008-2013	825/9582 (8.5)
2008	338/2330 (14.4)
2009	85/1035 (8.0)
2010	82/1351 (6.0)
2011	118/1354 (8.7)
2012	72/1255 (5.7)
2013	61/1362 (4.3)
2014	69/895 (7.6)
Statistical significance of trend**	p<0.001

*Any form of methamphetamine

** χ^2 test for trend used for prevalence of use; Poisson regression used for median days

Results (3; EDRS)

Year	MA* use past 6 mths n/N (%)	Median days MA* used past 6 mths (IQR)#	ICE use past 6 mths n/N (%)	Median days ICE used past 6 mths (IQR)#
2008-2013	452/601 (75.2)	6 (3-24)	184/601 (30.6)	6 (2-20)
2008	77/100 (77.0)	6 (3-13)	22/100 (22.0)	4.5 (2-13)
2009	72/100 (72.0)	5 (2-12)	13/100 (13.0)	3 (1-6)
2010	72/100 (72.0)	5 (2-20)	18/100 (18.0)	3 (1-10)
2011	76/101 (75.2)	12 (4-39)	38/101 (37.6)	8 (3-14)
2012	84/100 (84.0)	10 (6-24)	48/100 (48.0)	8.5 (3-27)
2013	71/100 (71.0)	8 (3-24)	45/100 (45.0)	10 (2-24)
Statistical significance of trend**	p=0.28	p<0.01	p<0.001	p=0.01

*Any form of methamphetamine

** χ^2 test for trend used for prevalence of use; Poisson regression used for median days

Results (4; IDRS)

Year	MA* use past 6 mths n/N (%)	Median days MA* used past 6 mths (IQR)#	ICE use past 6 mths n/N (%)	Median days ICE used past 6 mths (IQR)#
2008-2013	587/899 (65.3)	13 (4-45)	411/901 (45.6)	6 (2-24)
2008	103/150 (68.7)	12 (5-42)	58/150 (38.7)	6 (2-12)
2009	105/150 (70.0)	14 (5-62)	48/150 (32.0)	4.5 (1-19.5)
2010	90/151 (59.6)	10 (3-25)	55/151 (36.4)	5 (2-15)
2011	97/150 (64.7)	18 (5-30)	79/150 (52.7)	6 (3-20)
2012	101/148 (68.2)	12 (4-48)	89/150 (59.3)	6 (2-35)
2013	91/150 (60.7)	15 (4-50)	82/150 (54.7)	13 (4-48)
Statistical significance of trend**	p=0.24	p=0.70	p<0.001	p<0.001

*Any form of methamphetamine

** χ^2 test for trend used for prevalence of use; Poisson regression used for median days

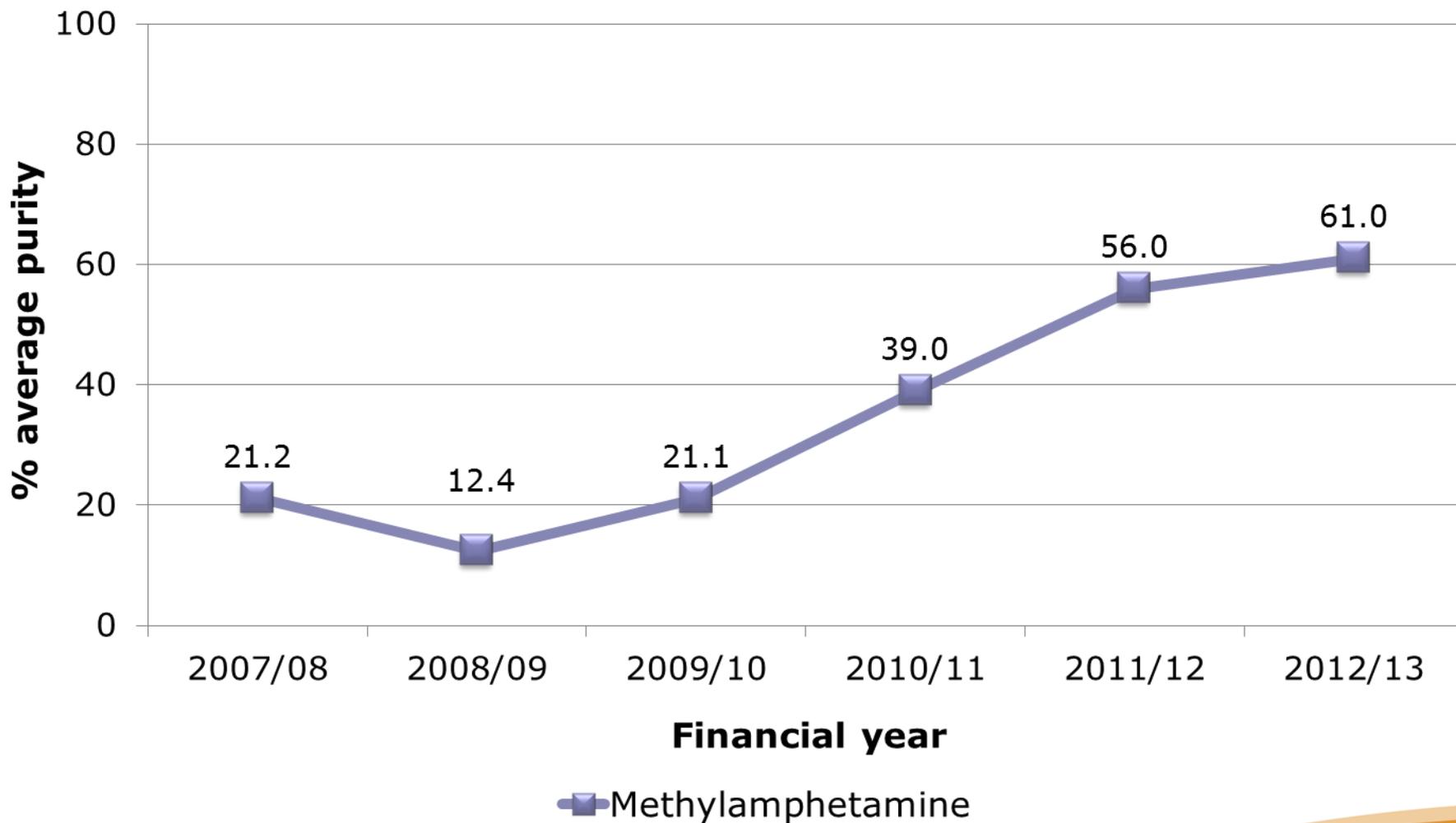
Results (5) – Summary

- Among the 3 target groups, overall prevalence of methamphetamine use did not increase during 2008-2013;
 - Accords with NDSHS findings;
- However, increased prevalence and frequency of crystal methamphetamine/ice use was observed among the EDRS and IDRS samples;
 - Indicates a possible shift to ice use from other methamphetamine forms among EDRS/IDRS participants.

Discussion (1)

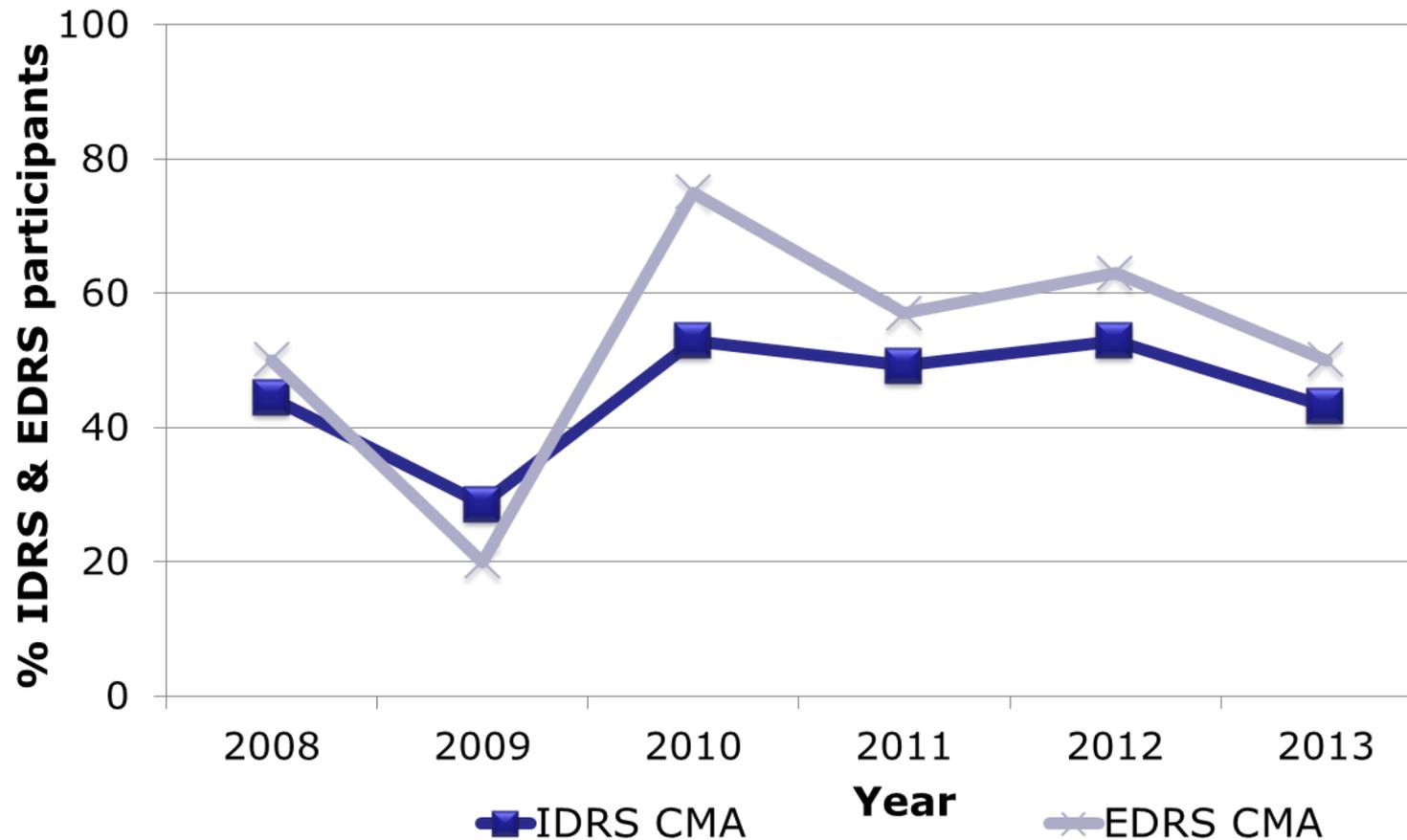
- Crystal methamphetamine/ice is typically the purest/most potent form of methamphetamine;
 - Increased frequency of ice use among EDRS and IDRS participants highlights the potential for users to experience greater harms;
 - Increased methamphetamine purity recorded over the data collection period;
 - User perceptions of ice purity stable?
- Observed increase in harms – result of increased frequency of use of more pure methamphetamine among drug-using sub-groups vs. increased prevalence among general pop.?
 - Need to understand harms in the context of increased methamphetamine purity.

Average purity of methamphetamine seizures, VIC, 2007/08–2013/14



Source: Victoria Police Forensic Services Department, 2008–2014

Trends in IDRS/EDRS participant reports of 'high' purity CMA, 2008–2014



Discussion (2)

- Such findings need to be considered in developing policy/practice responses to methamphetamine;
- Need: targeted prevention and treatment programs vs. population-wide interventions;
 - Overseas experience: minimal benefit.
- Harm reduction initiatives need to focus on methamphetamine potency/toxicity.

Limitations

- All data were obtained from cross-sectional purposive samples:
 - May not be representative of the general population or of all methamphetamine users;
 - Precludes the investigation of temporal associations between exposures and outcomes;
 - Observed 'trends' over time should be interpreted with caution.
- Samples were largely restricted to Melbourne residents;
 - Rural/regional data are needed.

Acknowledgements

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Thank you!

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