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## Is the wellbeing of people who inject drugs worse for those who use methamphetamines rather than heroin?

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Medicine

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### KEY FINDINGS

- One third of PWID used mostly methamphetamines.
- Methamphetamine injectors were more likely than opioid injectors to be unemployed, or to have been homeless or recently involved in crime.
- Methamphetamine injectors were more likely to have very high mental distress or report a mental health problem compared with those who mostly injected opioids. Methamphetamine injectors were less likely to be in treatment and more likely to re-use needles/syringes compared with those who mostly injected opioids.

### INTRODUCTION

The harms associated with injection of opioids are well documented (1), but few reports consider the differences in health experienced by those who also inject crystal methamphetamine or ice. Anecdotal reports describe exacerbation of health problems for people who regularly use methamphetamines, and despite the emergence of specific treatments for methamphetamine use, engaging this group of people who inject drugs is challenging (2, 3).

Recent Drug Trends reports have shown an increase in the proportion of participants who inject methamphetamines (commonly crystal methamphetamine). This is often linked to greater availability, with significant numbers of participants injecting mostly methamphetamines, despite a preference for heroin (4).

The annual Illicit Drugs Reporting system offers an opportunity to compare the harms associated with injection of methamphetamines and opioids in a large sample of regular drug users. Here we report on mental and physical health issues and justice involvement in a recent national sample of individuals who inject methamphetamines rather than opioids.

### METHOD

The annual Illicit Drugs Reporting System (IDRS) recruits people who regularly inject illicit drugs in each state and territory of Australia as a sentinel population to demonstrate trends in use and associated health issues. The 2016 national sample comprised 877 people who regularly inject drugs (PWID). Face to face interviews yielded information about injection during the preceding six months of heroin and methamphetamine, as well as illicit use (consumption of a substance not directly prescribed to the user, or for purposes other than the intended medical use) pharmaceutical opioids and stimulants. Participants who reported most often injecting heroin or other opioids were classified as opioid injectors; those who reported most often injecting methamphetamine

or other amphetamine-type stimulants were classified as methamphetamine injectors.

Participants reported on any mental health (MH) problems experienced in the last six months, and were assessed for symptoms of psychological distress using the Kessler-10 scale (K10) (5). Both composite scores and a binary variable indicating very high levels of psychological distress (K10 score over 30) were used. Help seeking behaviour (having visited a MH professional) and receipt of medication for MH problems were reported for the last six months, the latter as a proxy for severity. Physical health was also queried, including injection-related harms, as was involvement with the criminal justice system.

Demographic factors considered included participant gender, age, relationship status (single/not single), sexual identity (heterosexual/not heterosexual), employment (at least part time/less than part time), education level (any tertiary qualification/no tertiary qualification) and whether the person had been homeless during the past six months.

Differences between group means for methamphetamine injectors and opioid injectors (e.g. mean age or K10 scores) were assessed by paired t-tests. Proportional differences were assessed for binary variables. A threshold of  $p < 0.05$  for difference was applied in all cases. Analyses were conducted in Stata 13 (StataCorp, Texas, USA).

## NATIONAL TRENDS

Nearly two-thirds (59%) of participants predominantly injected opioids, and just over one-third (24.9%) injected mostly amphetamine-type substances (Table 1). Most of those who had injected opioids recently were *predominantly* opioid injectors, while fewer than half of those who had recently injected stimulants used these most of the time. Opioid injectors tended to use more frequently than methamphetamine injectors. The majority of heroin injectors (79%) cited opioids as their drug of choice: only 55% of methamphetamine injectors nominated methamphetamine as *their* choice, with 34% preferring heroin.

**Table 1: Prevalence, intensity and initiation of heroin and methamphetamine injection in a national sample of people who inject drugs (PWID; n=877), 2016**

Substance	Prevalence	Intensity of injection		Age of initiation	
	Last 6 months %	> weekly %	times/month	Mean age Years (SD)	< 16 %
Any recent opioid use	79.4				
<b>Inject mostly opioids</b>	<b>59.0</b>	<b>86.3**</b>	<b>44***</b>	<b>20.1 (6.5)</b>	<b>22.4</b>
Any recent methamphetamine use	72.8				
<b>Inject mostly methamphetamines</b>	<b>34.9</b>	<b>78.3</b>	<b>32</b>	<b>19.7 (6.7)</b>	<b>25.8</b>

Recent = last 6 months; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.005$  for difference between opioid and methamphetamine injectors

**Table 2: Characteristics of PWID, by drug type most often injected, 2016**

	Opioid Injectors	Methamphetamine injectors	All injectors
Mean age (years)	43.8	41.4	42.8
Female (%)	31.5	28.7	31.0
Single (%)	65.6	73.0*	68.5
Non-hetero (%)	9.28	13.2*	10.7
Unemployed (%)	84.5	88.9*	86.3
Tertiary qualified (%)	60.0	50.2**	56.2

Unemployed = employed less than part-time; tertiary = completed a qualification after Year 12

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.005$  for difference between opioid and methamphetamine injectors

**Table 3: Wellbeing of PWID by drug most often injected, 2016**

Health/lifestyle indicator	Predominant recent use		
	Opioids %	Methamphetamines %	Total %
K-10 very high distress	14.5	41.4***	23.0
Self-reported mental health problem	40.1	46.6*	43.1
Consulted MH professional	26.9	30.5	28.3
Prescription for MH problem	22.1	27.3*	25.0
Fair/Poor general health	44.9	36.1*	41.8
Currently in treatment	48.3	33.4***	42.4
Reused needles	33.5	42.2**	37.0
Involved in crime last month	33.3	44.6***	37.8
Homeless last 6 months	34.2	48.7***	40.0

K10 = Kessler 10 scale of psychological distress: Very high distress= K10>30; MH = mental health; \* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.005$  for difference between opioid and methamphetamine injectors

Table 2 shows the characteristics of those injecting predominantly opioids or predominantly methamphetamines in this sample. Overall, PWID were mostly male, single, heterosexual and unemployed. Just over half had a tertiary qualification (mostly trade/technical). Methamphetamine injectors were more likely than opioid injectors to be unemployed or non-heterosexual, while opioid injectors were more likely to have a tertiary qualification.

Mental health problems were common in this sample. Although mean Kessler-10 scores did not differ significantly between the two groups, very high distress levels were more likely among methamphetamine injectors (Table 3). They were also more likely to self-report a mental health problem (most commonly depression, anxiety or PTSD) and be prescribed medication for this.

Other factors set methamphetamine injectors apart from those who predominantly injected opioids. Methamphetamine injectors were less likely to be currently in treatment or to have at least started treatment for their substance use in the last year, more likely to have re-used needles and/or syringes and more likely to have been involved in crime during the last month. They were also more likely to report having been homeless during the last six months.

## CONCLUSION/SUMMARY/IMPLICATIONS

People who inject predominantly methamphetamines (e.g. ice) were less likely to be in treatment for their substance use, more likely to suffer very poor mental health, more likely to have re-used needles and/or syringes and more likely to have been involved in crime than those who inject mostly opioids. This suggests they may be at greater risk of psychological, health and social harms.

## ACKNOWLEDGEMENTS

The IDRS project is supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund and is coordinated by the National Drug and Alcohol Research Centre (NDARC). The IDRS team would like to thank the Australian Government Department of Health (AGDH) for their continued assistance and support of the IDRS. The authors would also like to acknowledge researchers from the following institutions who contributed to the data collected for this study: National Drug and Alcohol Research Centre, Macfarlane Burnet Institute for Medical Research and Public Health, National Drug Research Institute and the University of Tasmania. We would like to extend our thanks to the agencies and individuals who assisted with recruitment and interviewing and finally the people who inject drugs who were willing to be interviewed and share their experiences.

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## SUGGESTED CITATION

Salom, C.L. & Alati, R. (2017). Is the wellbeing of people who inject drugs worse for those who use methamphetamines rather than heroin? *Illicit Drugs Reporting System Bulletin* July 2017. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.