



## Drug injection trends among participants in the Australian Needle and Syringe Program Survey, 2009-2013

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Medicine

National Drug and Alcohol Research Centre

### KEY FINDINGS

- Nationally, heroin and methamphetamine were the most commonly reported drugs last injected in 2013. Over the period 2009 to 2013, prevalence of heroin injection declined (from 34% in 2009 to 29% in 2013) and methamphetamine injection increased (from 24% in 2009 to 29% in 2013).
- Pharmaceutical opioids remained the third most commonly reported class of drugs last injected in all years 2009 to 2013 and prevalence declined from 16% in 2009 to 14% in 2013. The proportion of respondents who reported methadone as the last drug injected also declined from 9% in 2009 to 7% in 2013.
- Nationally, prevalence of performance and image enhancing drugs (PIEDs) as the drug last injected increased from 2% in 2009 to 7% in 2013. Reports of PIEDs as the last drug injected were predominantly confined to NSW and Queensland in all years between 2009 and 2013.
- The proportion of respondents who reported daily or more frequent injection in the month prior to the survey declined from 50% in 2009 to 44% in 2013.
- The proportion of respondents who reported injection in a public place also declined nationally, from 45% in 2009 to 39% in 2013.
- Between 2009 and 2013, reports of re-use of needles and syringes, receptive sharing of needles and syringes and receptive sharing of ancillary drug preparation equipment remained stable nationally.
- HIV antibody prevalence was low nationally in all years between 2009 and 2013, however, prevalence increased from 1.2% in 2009 to 2.1% in 2013.
- Nationally, HCV antibody prevalence was high and increased nationally, from 50% in 2009 to 54% in 2013.

The Australian Needle and Syringe Program Survey (ANSPS) functions as a strategic early-warning system designed to monitor the prevalence of selected blood borne viral infections and associated risk behaviour among people who inject drugs (PWID). This bulletin summarises drug injection trends among ANSPS participants between 2009 and 2013.

### INTRODUCTION

The collaboration of Australian Needle and Syringe Programs has conducted annual sentinel surveillance of human immunodeficiency virus (HIV) and hepatitis C virus (HCV) antibody prevalence and associated risk behaviours among PWID since 1995. Each year during a one to two week period, all clients attending selected Needle and Syringe Programs (NSPs) are invited to participate in the ANSPS by completing a brief self-administered survey and providing a capillary blood sample. The ANSPS methodology is described in detail elsewhere (MacDonald, 1997, Iversen, 2014) and ANSPS samples are representative of the broader NSP client population (Topp 2008). This Drug Trends Bulletin supplement reports national and jurisdictional trends from the ANSPS for the period 2009 to 2013.

The number of participating NSP sites remained stable over the period 2009 to 2013, with 50 sites participating in 2013. Total number of respondents ranged from 2391 to 2697 and the response rate ranged from 39% to 46% over the past five years (Table 1).

**Table 1. ANSPS sample size distribution by jurisdiction, 2009 to 2013**

Jurisdiction	2009	2010	2011	2012	2013
ACT	63	97	100	78	100
NSW	830	680	694	712	686
NT	77	83	70	50	70
QLD	801	550	552	624	565
SA	248	216	213	203	248
TAS	122	106	68	75	70
VIC	334	445	506	463	448
WA	222	219	192	186	220
<b>Total</b>	<b>2697</b>	<b>2396</b>	<b>2395</b>	<b>2391</b>	<b>2407</b>
Response rate	45%	39%	41%	46%	44%
No of sites	51	52	52	52	50

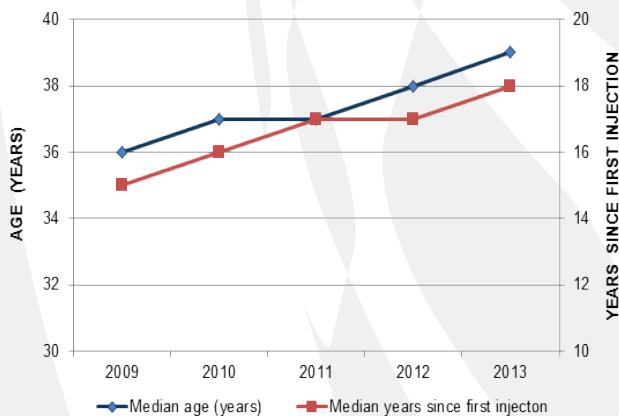
## NATIONAL TRENDS

### Demographic characteristics

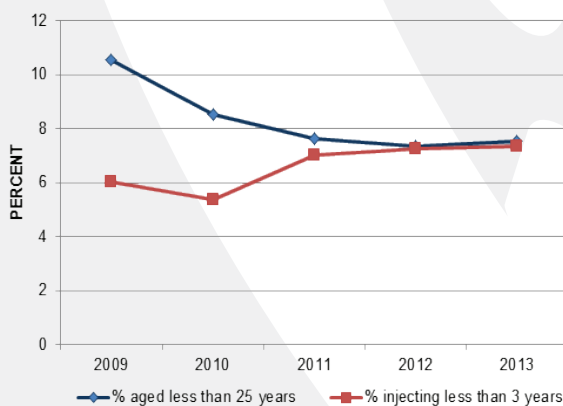
The gender ratio of male to female respondents was approximately 2:1 in all survey years 2009 to 2013 and a small minority (<1%) of respondents identified as transgender. In 2013, the vast majority (80%) of respondents identified as heterosexual with smaller proportions identifying as bisexual (7%) and homosexual (4%).

Over the past 5 survey years, the median age of survey respondents increased from 36 years in 2009 to 39 years in 2013 and the median time since first injection increased from 15 years in 2009 to 18 years in 2013 (Figure 1). There was a concurrent decrease in the proportion of young people (aged less than 25 years), from 11% in 2009 to 8% in 2013 ( $\chi^2$  trend  $p < 0.001$ ), although the proportion of new initiates (respondents who first injected less than three years previously) increased from 5% in 2010 to 7% in 2013 ( $\chi^2$  trend  $p = 0.009$ ) (Figure 2). Between 2009 and 2013, the median age of first injection was stable at 18 or 19 years.

**Figure 1. Median age and median years since first injection, 2009 - 2013**



**Figure 2. Proportion of young people and new initiates, 2009 - 2013**



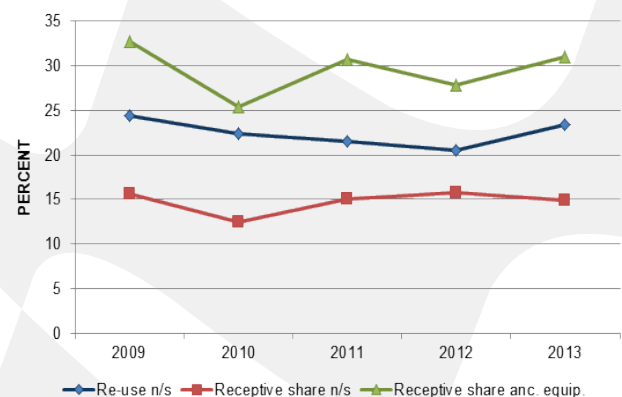
The proportion of respondents who reported an Aboriginal and/or Torres Strait Island background remained stable at between 11% and 13% over the past five years. Consistent with previous years, in 2013 the majority of respondents were born in Australia (86%) and New Zealand (3%) and the United Kingdom (4%) accounted for more than half of those born overseas. Over the period 2009 to 2013, a majority of respondents (range 93% to 95%) reported that their parents spoke English at home. The proportion of respondents who reported imprisonment in the 12 months prior to survey participation remained stable at between 9% and 13% over the same period. Approximately one third (range 29%-34%) of the recently incarcerated group reported injection drug use whilst in prison.

### Injecting risk behaviour

Over the period 2009 to 2013, the proportion of respondents who reported daily or more frequent injection during the month prior to the survey declined from 50% in 2009 to 44% in 2013 ( $\chi^2$  trend  $p = 0.027$ ). Reports of injection in a public place (car, beach, park, street or squat) during the month prior to the survey also declined from 45% in 2009 to 39% in 2013 ( $\chi^2$  trend  $p = 0.005$ ) over the same period.

As shown in Figure 3, the proportion of respondents who reported reuse of needles and syringes (including one's own) in the month preceding the survey was stable at between 21% and 24% over the period 2009 to 2013 ( $\chi^2$  trend  $p = 0.244$ ). Prevalence of receptive sharing of needles and syringes (range 12% to 16%,  $\chi^2$  trend  $p = 0.606$ ) and prevalence of receptive sharing of ancillary equipment (range 25% to 33%,  $\chi^2$  trend  $p = 0.7867$ ) were also stable over the same period. As in previous years, spoons and water were the most commonly identified receptively shared ancillary items in 2013.

**Figure 3. Prevalence of re-use and receptive sharing of needles and syringes and other drug preparation equipment, 2009 - 2013**



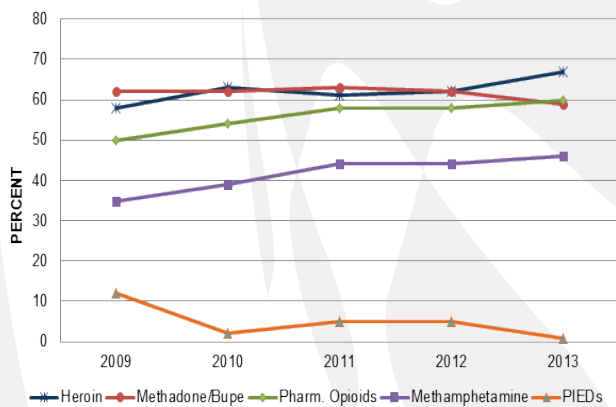
### HIV and HCV antibody prevalence

Although HIV antibody prevalence was low in all of the past five years, prevalence increased from 1.2% in 2009 to 2.1% in 2013 nationally ( $\chi^2$  trend  $p = 0.006$ ). In 2013, HIV antibody prevalence was highest in New South Wales (NSW), Northern Territory (NT) and South Australia (SA) at ~3%. No

respondents in Tasmania or the Australian Capital Territory (ACT) tested HIV antibody positive in any of the past five years.

Between 2009 and 2013, HCV antibody prevalence increased from 50% to 54% nationally ( $\chi^2$  trend  $p=0.020$ ). HCV antibody prevalence remained stable in most jurisdictions, however there was a significant increase in Victoria (55% to 67%,  $\chi^2$  trend  $p<0.001$ ) and a significant decrease in NSW (58% to 54%,  $\chi^2$  trend  $p=0.021$ ). In 2013, prevalence of HCV antibody was highest among respondents aged 35 years or more and among respondents who reported their first injection was more than ten years ago (63% and 62% respectively). HCV antibody prevalence was higher among participants who reported opioids as the last drug injected than those who reported last injecting methamphetamine (Figure 4).

**Figure 4. Hepatitis C antibody prevalence (%) by drug last injected, 2009 - 2013**



## National and jurisdictional trends in drug last injected

National trends in the last drug injected over the period 2009 to 2013 are shown in Table 2.

**Table 2. Drug last injected among ANSPS respondents, 2009 - 2013**

	2009 n=2697	2010 n=2396	2011 n=2395	2012 n=2391	2013 n=2407
Heroin (%)	34	34	33	33	29
Methamphetamine (%)	24	26	27	26	29
Pharmaceutical opioids (%)	16	16	15	14	14
Methadone (%)	9	7	7	7	7
Buprenorphine (%)	5	4	4	4	3
Bup-naloxone (%)	1	2	2	2	2
PIEDs (%)	2	2	5	7	7
Cocaine (%)	2	1	1	1	1
Other drugs (%)	4	7	5	6	7
Not reported (%)	2	<1	<1	<1	1

## Heroin

Nationally, 29% of respondents reported heroin as the drug last injected in 2013. At the jurisdictional level, heroin was the most common drug last injected in the ACT (56%) and Victoria (54%) in 2013. In NSW, the proportion of respondents who reported heroin as the last drug injected declined from 37% in 2009 to 26% in 2013 ( $\chi^2$  trend  $p<0.001$ ) and for the first time since 1996, heroin was not the most commonly reported drug last injected in NSW in 2013. Reports of heroin injection were uncommon in the NT (10%) and Tasmania (3%).

## Methamphetamine

Nationally, methamphetamine was also reported as the last drug injected by 29% of respondents in 2013, and an increase in prevalence was observed between 2009 (24%) and 2013 (29%) ( $\chi^2$  trend  $p=0.009$ ). At the jurisdictional level, methamphetamine was the most commonly reported drug last injected in South Australia (38%), Western Australia (36%) and Queensland (29%) in 2013. Reports of methamphetamine as the last drug injected were less common in the NT, where prevalence was 11% in 2013.

## Pharmaceutical Opioids

Pharmaceutical opioids were the third most commonly reported class of drugs last injected in all years from 2009 to 2013 nationally, although prevalence declined from 16% in 2009 to 14% in 2013 ( $\chi^2$  trend  $p=0.032$ ). Pharmaceutical opioids were the most commonly reported class of drugs last injected in the NT (61%) and in Tasmania (33%) in 2013. Reports of pharmaceutical opioids as drugs last injected were less common in the ACT (4%), Victoria (4%), NSW (8%) and WA (13%).

## Methadone and Buprenorphine

The proportion of respondents who reported methadone as the last drug injected declined from 9% in 2009 to 7% in 2013 ( $\chi^2$  trend  $p=0.011$ ) nationally. At the jurisdictional level, prevalence of methadone as the last drug injected was highest in Tasmania in all years between 2009 and 2013 (range 27% to 40%). Reports of methadone as the last drug injected were uncommon in Victoria (range 2% to 3%) although prevalence of buprenorphine as the last drug injected was highest in this state (range 3% to 8%). Nationally, prevalence of buprenorphine as the last drug injected remained stable at between 3% and 5% over the period 2009 to 2013. Reports of buprenorphine-naloxone as the last drug injected were uncommon at less than 2% in all years over the same period.

## Performance and image enhancing drugs (PIEDs)

Nationally, reports of PIEDs as the class of drugs last injected increased from 2% in 2009 to 7% in 2013 ( $\chi^2$  trend  $p<0.001$ ), although there was substantial jurisdictional variation. A significant increase in prevalence of PIEDs injection was evident in NSW (4% in 2009 to 11% in 2013,  $\chi^2$  trend  $p<0.001$ ) and Queensland (1% in 2009 to 13% in 2013,  $\chi^2$  trend  $p<0.001$ ). Prevalence of PIEDs injection was low and stable at 2% or less in all other jurisdictions in all



years between 2009 and 2013, with the exception of the NT where prevalence was 4% in 2013.

### Cocaine

Nationally, cocaine was reported as the last drug injected by a minority (<2.5%) of respondents in all years between 2009 and 2013. The majority of reports of cocaine injection occurred in NSW, where prevalence ranged from 2% to 6%. There were no reports of cocaine as the last drug injected in the ACT or Tasmania in 2013.

### SUMMARY

Nationally, heroin (29%) and methamphetamine (29%) were the most commonly reported drugs last injected in 2013. Over the period 2009 to 2013, prevalence of heroin injection declined (from 34% in 2009) and methamphetamine injection increased (from 24% in 2009). Pharmaceutical opioids remained the third most commonly reported class of drugs last injected in all years 2009 to 2013, although prevalence declined from 16% in 2009 to 14% in 2013. The proportion of respondents who reported methadone as the last drug injected also declined from 9% in 2009 to 7% in 2013. Nationally, prevalence of PIEDs as the drug last injected increased from 2% in 2009 to 7% in 2013, although reports were predominantly confined to NSW and Queensland in all years between 2009 and 2013.

### REFERENCES

Iversen, J., Chow, S. and Maher, L. (2014). Australian Needle and Syringe Program National Data Report 2009-2013. The Kirby Institute, UNSW Australia. ISSN: 1448-5915.

MacDonald, M., Wodak, A.D., Ali, R., Crofts, N., Cunningham, P.H., Dolan, K.A., Kelaher, M., Loxley, W.M., van Beek, I. & Kaldor, J.M. (1997). HIV prevalence and risk behaviour in needle exchange attenders: a national study. *Medical Journal of Australia*, 166, 237-240.

Topp, L., Iversen, J., Wand, H., Day, C., Kaldor, J. & Maher, L. (2008). Representativeness of injecting drug users who participate in HIV surveillance: Results from Australia's Needle and Syringe Program Survey. *Journal of Acquired Immune Deficiency Syndromes*, 47(5), 632-638.

### SUGGESTED CITATION

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