



Drug injection trends among participants in the Australian Needle and Syringe Program Survey, 2011–2015.

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Medicine

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KEY FINDINGS

- Methamphetamine was the most commonly reported drug last injected nationally in 2015 and 2014, surpassing heroin, which was the most commonly injected drug in previous years (2011–2013). Over the period 2011 to 2015, prevalence of methamphetamine injection increased from 27% in 2011 to 36% in 2015.
- Reports of heroin injection were stable over the period 2011 to 2015, with approximately one third of respondents in each of the survey years reporting last injecting heroin.
- Pharmaceutical opioids remained the third most commonly reported class of drugs last injected nationally in all years 2011 to 2015, although prevalence declined significantly from 15% in 2011 to 10% in 2015. Reports of methadone as the last drug injected remained stable, accounting for between 6% and 7% of respondents over the period 2011 to 2015.
- The proportion of respondents who reported last injecting performance and image-enhancing drugs (PIEDs) increased significantly over the period 2011 to 2015, driven by reports of PIEDs injection in Queensland, where prevalence increased from 7% in 2011 to 12% in 2015.
- Approximately half of all respondents reported daily or more frequent injecting in the month prior to the survey, in all years 2011 to 2015.
- The proportion of respondents who reported injecting in a public place declined nationally, from 42% in 2011 to 37% in 2015.
- Over the period 2011 to 2015, 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 and stable nationally, ranging from 1.2% in 2011 to 2.1% in 2015; however, the proportion of men testing HIV antibody positive increased significantly from 1.4% in 2011 to 2.2% in 2015.
- Hepatitis C virus (HCV) antibody prevalence was stable over the period 2011 to 2015, ranging from 53% to 57%.

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 recent drug injection trends among ANSPS participants between 2011 and 2015.

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 Australian NSP Survey (ANSPS) by completing a brief self-administered survey and providing a capillary blood sample. The ANSPS methodology is described in detail elsewhere (MacDonald, 1997) 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 2011 to 2015.

The number of participating NSP services ranged from from 47 to 52, the number of respondents ranged from 2304 to 2407 and the response rate ranged from 41% to 48% over the past five years (2011–2015, Table 1).

Table 1. ANSPS sample size distribution by jurisdiction, 2011-2015

Jurisdiction	2011	2012	2013	2014	2015
ACT	100	78	100	99	110
NSW	694	712	686	761	639
NT	70	50	70	70	60
QLD	552	624	565	490	532
SA	213	203	248	228	238
TAS	68	75	70	69	48
VIC	506	463	448	436	459
WA	192	186	220	225	218
Total	2395	2391	2407	2378	2304
Response rate	41%	46%	44%	48%	41%
Nº of sites	52	52	50	50	47

NATIONAL TRENDS

Demographic characteristics

Approximately two thirds of survey respondents were male across all survey years 2011 to 2015, and a small minority (<1%) of respondents identified as transgender. As in previous years, in 2015 the majority (82%) of respondents identified as heterosexual, with 8% identifying as bisexual and 4% identifying as homosexual.

The median age of survey respondents increased from 37 years in 2011 to 40 years in 2015 and the median time since first injection increased from 17 years in 2011 to 20 years in 2015 (Figure 1). There was a concurrent decrease in the proportion of young people (aged less than 25 years), from 8% to 5% over the period 2011 to 2015 (χ^2 trend $p<0.001$), however the proportion of new initiates (people who commenced injection within the last three years) remained stable at 6% to 7% in all years 2011 to 2015 (Figure 2). The median age at first drug injection also remained stable in all years 2011 to 2015, ranging from 18 to 19 years of age.

Figure 1. Median age and median years since first injection, 2011 – 2015

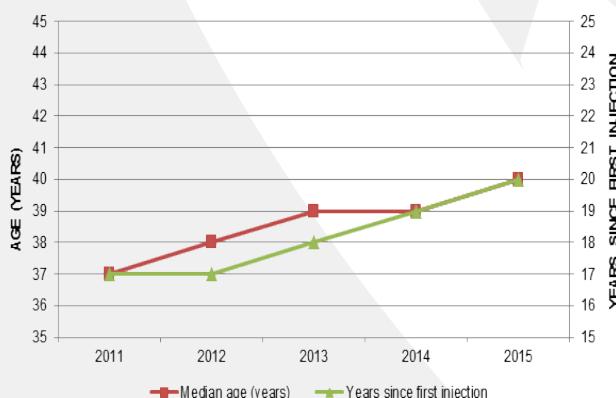
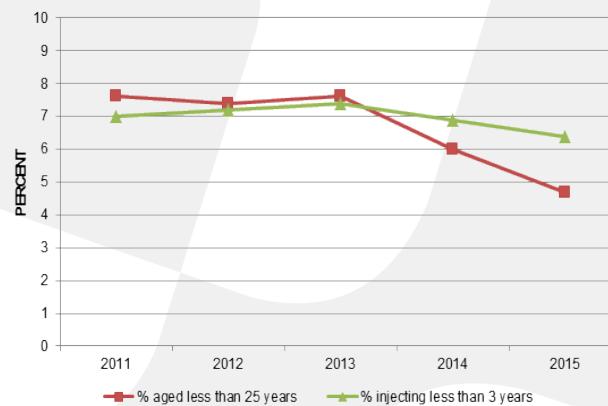


Figure 2. Proportion of young people and new initiates, 2011 – 2015



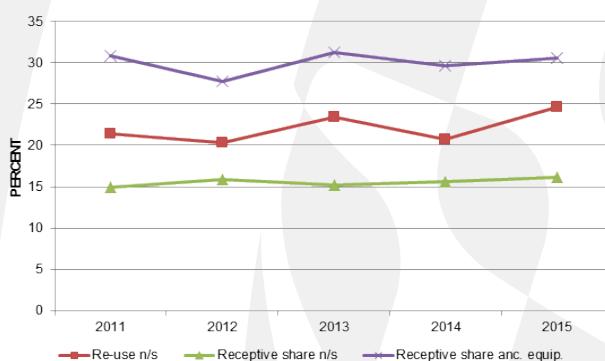
The proportion of respondents who reported an Aboriginal and/or Torres Strait Islander background increased significantly from 12% to 15% over period 2011 to 2015 (χ^2 trend $p=0.004$). Across all survey years, the majority of respondents were born in Australia (ranging between 85% and 87%), with the United Kingdom and Ireland (5%) and New Zealand (3%) the predominant countries of birth outside Australia in 2015. The majority of respondents reported that their parents spoke English at home (range 92% to 94% over the period 2011 to 2015). The proportion of respondents who reported imprisonment in the 12 months prior to survey participation was stable over the five year period, ranging from 10% to 11%. Among those reporting incarceration in the past year, approximately one third (range 29% to 36%) reported injecting while in prison in each of the five survey years.

Injecting risk behaviour

Daily or more frequent injecting was reported by approximately half the respondents in each of the survey years 2011 to 2015. Prevalence of at least one public injection (including injection in a car, beach, park, street or squat) during the month prior to the survey declined from 42% in 2011 to 37% in 2015 (χ^2 trend $p=0.021$).

As shown in Figure 3, the proportion of respondents who reported re-use of needles and syringes (including one's own) in the month preceding the survey was stable at between 21% and 25% over the period 2011 to 2015 (χ^2 trend $p=0.064$). Prevalence of receptive sharing of needles and syringes (range 15% to 16%, χ^2 trend $p=0.684$) and prevalence of receptive sharing of ancillary equipment (range 28% to 31%, χ^2 trend $p=0.538$) were also stable over the same period. As in previous years, spoons and water were the most commonly identified ancillary items receptively shared in 2015.

Figure 3. Prevalence of re-use and receptive sharing of needles and syringes and other drug preparation equipment, 2011 – 2015

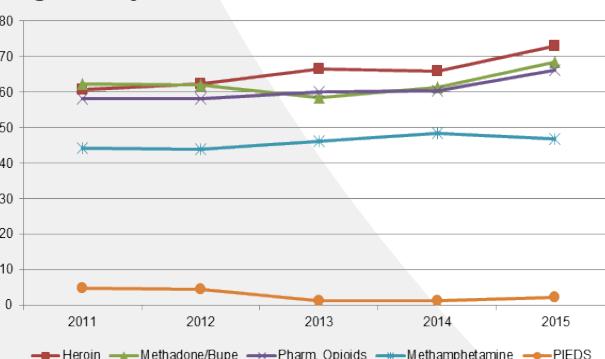


HIV and HCV antibody prevalence

HIV antibody prevalence was low and stable nationally in the period 2011 to 2015, ranging from 1.2% to 2.1% (χ^2 trend $p=0.086$). However, there was a significant increase nationally in the proportion of men testing HIV antibody positive in the past five years, from 1.4% in 2011 to 2.2% in 2015 (χ^2 trend $p=0.017$). In 2015, HIV antibody prevalence was highest in New South Wales (3.1%), followed by Victoria (2.2%), Queensland (1.3%) and Western Australia (1.0%). No respondents in the Australian Capital Territory or Tasmania tested HIV antibody positive in any of the past five years.

Between 2011 and 2015, HCV antibody prevalence remained stable both nationally (range 53% in 2011 to 57% in 2015, χ^2 trend $p=0.139$) and across all jurisdictions. In 2015, prevalence of HCV antibody was higher among respondents aged 35 years or more, those who reported first injecting drugs more than ten years ago, respondents who reported injecting daily or more frequently, and those reporting imprisonment in the year preceding survey completion. In all survey years, HCV antibody prevalence was also higher among participants who reported heroin, OST or pharmaceutical opioids as the last drug injected compared to those who reported last injecting methamphetamine (Figure 4).

Figure 4. Hepatitis C antibody prevalence (%) by drug last injected, 2011-2015



National and jurisdictional trends in drug last injected

Table 2. Drug last injected among ANSPS respondents, 2011 - 2015

	2011 n=2395	2012 n=2391	2013 n=2407	2014 n=2378	2015 n=2304	p-trend
Heroin (%)	33	33	29	31	31	0.107
Methamphetamine (%)	27	26	29	33	36	<0.001
Pharm. opioids (%)	15	14	14	11	10	<0.001
Methadone (%)	7	7	7	6	6	0.063
Buprenorphine (%)	4	4	3	2	3	0.001
Bup-naloxone (%)	2	2	2	2	1	0.087
PIEDs (%)	5	7	7	7	6	0.032
Cocaine (%)	1	1	1	1	1	0.798
Other drugs (%)	5	6	7	8	5	0.072
Not reported (%)	<1	<1	1	<1	0	0.156

Methamphetamine

Nationally, methamphetamine was the most commonly reported drug last injected since 2014. Reports of methamphetamine injection increased significantly from 27% in 2011 to 36% in 2015 (χ^2 trend $p<0.001$). In 2015, methamphetamine was the most commonly injected drug in the majority of jurisdictions, including New South Wales (32%), Queensland (34%), South Australia (53%), Tasmania (42%), and Western Australia (45%).

Heroin

Reports of heroin injection were stable over the period 2011 to 2015 (χ^2 trend $p=0.107$), with around a third of respondents last injecting heroin in each of the survey years. In 2015, heroin was the second most commonly reported drug last injected nationally (31%). However, at the jurisdictional level, heroin remained the most commonly reported drug last injected in the Australian Capital Territory (45%) and Victoria (52%) in 2015. Reports of heroin injection were highest in Victoria in all survey years (range 52% to 65%) with the exception of 2014 when they were highest in the Australian Capital Territory (56%). Heroin injection was uncommon in the Northern Territory (2%) and in Tasmania there were no reports of heroin as the drug last injected in 2015.

Pharmaceutical Opioids

Pharmaceutical opioids were the third most commonly reported class of drugs last injected nationally in all years from 2011 to 2015. However, prevalence declined significantly from 15% to 10% over the period 2011 to 2015 (χ^2 trend $p<0.001$). In 2015, pharmaceutical opioids were the most commonly reported class of drugs last injected in the Northern Territory (42%), the second most commonly reported class of drugs

last injected in Tasmania (31%) and the third most commonly reported class of drugs last injected in Queensland (17%). In all other jurisdictions, fewer than 10% of respondents reported pharmaceutical opioids as drugs last injected: Australian Capital Territory (1%), Victoria (3%) South Australia (5%), New South Wales (8%) and Western Australia (8%).

Methadone and Buprenorphine

Methadone was reported as the last drug injected by less than ten percent of the ANSPS sample in all years 2011 to 2015 and prevalence remained stable over this period (χ^2 trend $p=0.063$). At the jurisdictional level, Tasmania had the highest prevalence of methadone as the last drug injected in all years between 2011 and 2015 (range 14% to 31%). Prevalence of methadone injection was lowest in Victoria, where <3% of respondents reported methadone as their last drug of injection in all years 2011 to 2015.

The prevalence of buprenorphine as the last drug injected declined from 4% to 2% over the period 2011 to 2015 (χ^2 trend $p=0.001$). Conversely, prevalence buprenorphine-naloxone injection remained low and stable over the period 2011 to 2015 (range 1% to 2%, χ^2 trend $p=0.087$).

Performance and image enhancing drugs (PIEDs)

A significant increase in the prevalence of performance and image enhancing drugs (PIEDs) as the last drug injected occurred nationally over the period 2011 to 2015 (χ^2 trend $p=0.032$, Figure 2), with the increase most notable in Queensland where prevalence increased significantly from 7% in 2011 to 12% in 2015 (χ^2 trend $p=0.016$). Prevalence of PIEDs injection in New South Wales remained stable at between 9% and 12% (χ^2 trend $p=0.387$). In all other jurisdictions, prevalence of PIEDs injection was less than 3%.

In 2015, 38% of new initiates (less than 3 years since first injection) reported last injecting PIEDs. In New South Wales and Queensland, more than half of men who were new initiates to injection reported last injecting PIEDs (51% and 60% respectively).

Cocaine

Nationally, cocaine was reported as the last drug injected by a minority of respondents ($\leq 1\%$ across all survey years). The majority of reports of cocaine injection occurred in New South Wales, where prevalence ranged from 1% to 3%. There were no reports of cocaine as the last drug injected in Tasmania in any of the past 5 years (2011-2015) and no reports of cocaine as the last drug injected in the Australian Capital Territory, Western Australia or the Northern Territory in 2015.

SUMMARY

Nationally in 2015, while just over half (51%) of ANSPS respondents reported last injecting an opioid, methamphetamine was the most commonly reported drug last injected (36%), followed by heroin (31%). Over the period 2011 to 2015, prevalence of methamphetamine injection increased significantly (from 27% in 2011), while prevalence of heroin injection was stable at approximately one third of respondents in all survey years. Pharmaceutical opioids remained the third most commonly reported class of drugs last injected in all years 2011 to 2015, although prevalence declined from 15% in 2011 to 10% in 2015. The proportion of respondents who reported methadone as the last drug injected remained stable at between 6% to 7% over the period 2011 to 2015. Nationally, prevalence of PIEDs as the drug last injected increased, ranging from 5% to 7% across the five year period and reports of PIEDs injection were highest in Queensland and New South Wales.

REFERENCES

Memedovic, S., Iversen, J., Geddes, L. and Maher, L. (2016). Australian Needle and Syringe Program National Data Report 2011-2015. 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.

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