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## Key findings

- Heroin was the most frequently reported drug last injected among ANSPS respondents with one in three reporting last injecting this drug in 2009.
- Methamphetamine was the second most frequently reported drug last injected, although prevalence declined in recent years, from 32% in 2005 to 24% in 2009.
- Pharmaceutical opioids replaced methadone as the third most commonly reported last drug injected in 2007. Prevalence of pharmaceutical opioids as last drug injected increased during the past five years to 16% in 2009, while prevalence of methadone injection remained stable at around 9%.
- The proportion of respondents reporting cocaine, buprenorphine or anabolic steroids as last drug injected has remained low and stable, with prevalence of 5% or less in all of the past five years.
- Reported prevalence of injecting risk behaviours (including frequency of injecting, public injecting, re-use and receptive sharing of needles and syringes, and receptive sharing of ancillary equipment) were all relatively stable over the period 2005 to 2009.

Drug injection trends among participants in the Australian Needle and Syringe Program Survey (ANSPS), 2005 - 2009

### Introduction

The collaboration of Australian Needle and Syringe Programs (NSPs) has conducted sentinel surveillance of human immunodeficiency virus (HIV) and hepatitis C virus (HCV) and associated risk behaviours among people who inject drugs annually since 1995. In October each year, all clients attending selected NSPs over a one to two week period are invited to participate in the Australian NSP Survey (ANSPS). Participation involves completion of a brief self-administered anonymous questionnaire and the provision of a capillary blood sample which is subsequently tested for HIV and HCV antibodies. This issue of the Drug Trends Bulletin reports national and jurisdictional drug injection trends from the ANSPS over the period 2005 to 2009.

Between 44 and 53 NSP sites participated in the ANSPS in each of the past five years. In 2009, there were no new NSP sites included in the survey, and 84% of respondents were recruited from NSP sites that had participated in the ANSPS in each of the past five years. As can be seen in Table 1, the number of NSP clients surveyed varied from 1800 to 2697, and the annual response rate ranged from 38% to 45%.

**Table 1. Sample size distribution by jurisdiction, 2005 - 2009**

| Jurisdictions | 2005        | 2006        | 2007        | 2008        | 2009        |
|---------------|-------------|-------------|-------------|-------------|-------------|
| ACT           | 39          | 52          | 22          | 31          | 63          |
| NSW           | 729         | 683         | 701         | 899         | 830         |
| NT            | 29          | 20          | 31          | 75          | 77          |
| QLD           | 291         | 501         | 417         | 508         | 801         |
| SA            | 211         | 200         | 220         | 196         | 248         |
| TAS           | 137         | 150         | 168         | 57          | 122         |
| VIC           | 194         | 195         | 243         | 308         | 334         |
| WA            | 170         | 160         | 110         | 196         | 222         |
| <b>Total</b>  | <b>1800</b> | <b>1961</b> | <b>1912</b> | <b>2270</b> | <b>2697</b> |
| Response rate | 44%         | 38%         | 39%         | 39%         | 45%         |
| N° of sites   | 49          | 44          | 52          | 53          | 51          |

## National Trends

### Demographic characteristics

In each of the past five years, approximately two thirds of ANSPS respondents were male. Over the same period, the majority of respondents identified as heterosexual (81% to 83%), with smaller proportions identifying as bisexual (8% to 10%) and homosexual (3% to 6%). The proportion of Indigenous participants (10% to 12%) and the proportion of participants born in Australia (84% to 86%) remained relatively stable over the last five years. Rates of incarceration were also stable over the period, with between 48% and 50% of participants reporting a history of imprisonment and 13% to 14% reporting imprisonment in the 12 months prior to survey completion.

While the ANSPS has documented annual increases in the both the mean age of survey participants and the mean duration of injecting since 2001, further increases were not observed in 2009 (Figure 1). Similarly, observed declines in both the proportion of young injectors (aged less than 25 years) and the proportion of new initiates (those injecting for less than three years) did not continue in 2009 (Figure 2). The median age of first drug injection remained stable at 18 years in all of the past five years.

### Frequency of injecting

The proportion of survey respondents who reported injecting daily or more frequently in the month prior to survey completion remained stable at between 47% and 50% during the past five years. During the same period, prevalence of daily injecting was highest (at 50% or greater) among survey respondents who reported last injecting heroin, pharmaceutical opioids or buprenorphine. Conversely, prevalence of daily injecting was lower (at less than 50%) among respondents who reported last injecting methamphetamine, methadone, cocaine or anabolic steroids.

### Re-use and receptive sharing

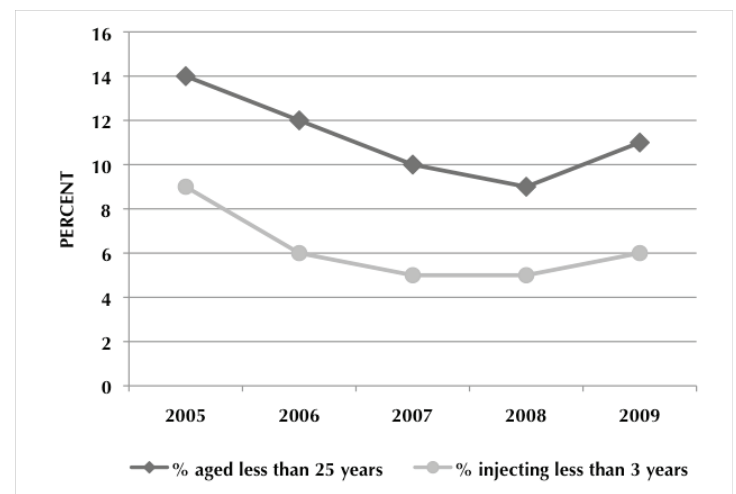
The proportion of participants reporting reuse of needles and syringes (including their own) in the month preceding the survey was stable at 25% to 28% over the past five years (Figure 3), as was the proportion of participants reporting receptive sharing or re-use of someone else's used needle and syringe in the previous month (13% and 16%). Among those who reported receptive sharing, re-use after only one person was most commonly reported, typically a regular sex partner or close friend. Receptive sharing of ancillary equipment

(water ampoule, drug mix, filter, spoon or tourniquet) was also stable in all of the past four survey years (comparable data available only from 2006). One in three participants reported receptive sharing of an item of ancillary injecting equipment in the preceding month, with spoons, water ampoules and filters most commonly identified.

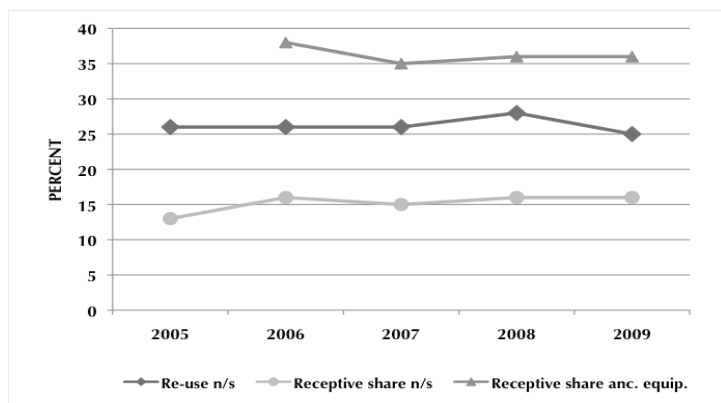
Figure 1. Mean age and mean duration since first injection, 2005 - 2009



Figure 2. Proportion of young injectors and new initiates, 2005 - 2009



**Figure 3. Prevalence of re-use and receptive sharing of needles and syringes and ancillary equipment, 2005 - 2009**



### Public injecting

Over the past five years, most participants reported injecting in their own home (81% to 90%) or at a friend's place (38% to 43%) in the month prior to completing the ANSPS. Prevalence of public injecting remained stable at between 44% and 47% over this period, with public injecting most commonly taking place in a car (30% to 33%), public toilet (21% to 23%) or in an open public space such as a street, park or beach (21% to 23%).

### National and jurisdictional trends in last drug injected

Table 2 illustrates national trends in drugs injected during the most recent injecting episode. National and jurisdictional trends for the most commonly reported drugs identified by survey participants are described in the following section.

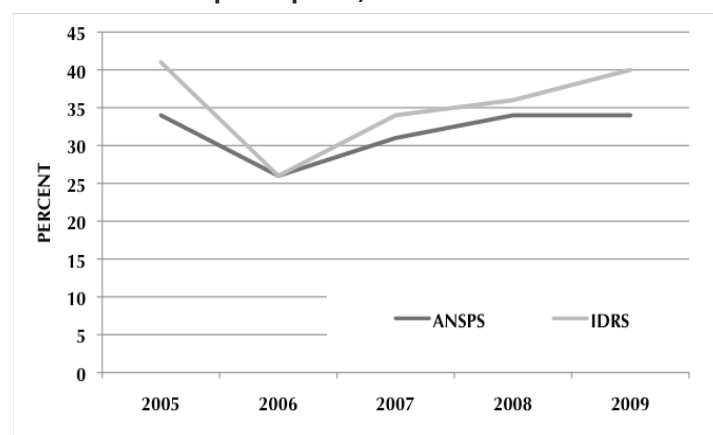
**Table 2: Drug last injected among ANSPS respondents, 2005-2009**

|                            | 2005<br>n=1800 | 2006<br>n=1961 | 2007<br>n=1912 | 2008<br>n=2270 | 2009<br>n=2697 |
|----------------------------|----------------|----------------|----------------|----------------|----------------|
| Anabolic Steroids (%)      | 1              | 2              | 1              | 2              | 2              |
| Cocaine (%)                | 3              | 2              | 2              | 2              | 2              |
| Heroin (%)                 | 34             | 26             | 31             | 34             | 34             |
| Methadone (%)              | 9              | 9              | 10             | 8              | 9              |
| Methamphetamine (%)        | 32             | 38             | 30             | 28             | 24             |
| Pharmaceutical opioids (%) | 9              | 12             | 14             | 15             | 16             |
| Buprenorphine (%)          | 3              | 5              | 5              | 5              | 5              |
| Other drugs (%)            | 4              | 4              | 6              | 3              | 2              |
| Not reported (%)           | 4              | 3              | 2              | 2              | 2              |

### Heroin

Nationally, heroin was the most commonly reported drug last injected by ANSPS respondents in all years except 2006, when the proportion fell to a low of 26%. Since then, prevalence of heroin as last drug injected increased nationally to 34% in 2009 ( $\chi^2$  trend  $p$  value < 0.001). This is consistent with trends observed among participants in the Illicit Drug Reporting System (IDRS) (Stafford & Burns, 2010; Figure 4).

**Figure 4. Prevalence of heroin as last drug injected among ANSPS and IDRS participants, 2005 – 2009**

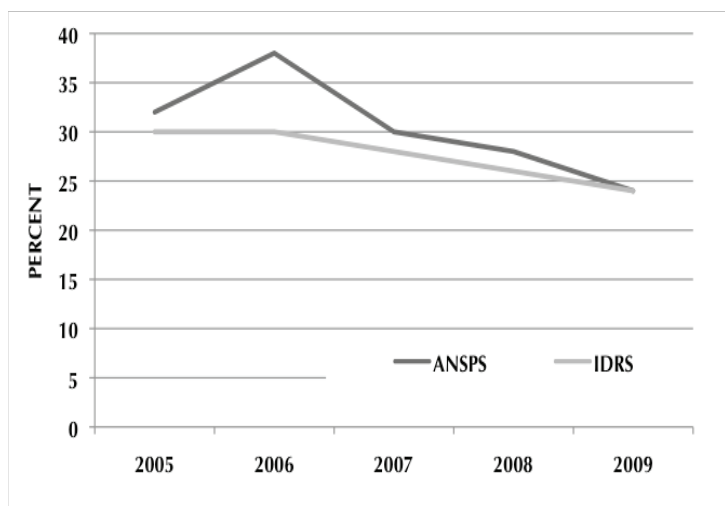


At the jurisdictional level, heroin was the predominant drug last injected in four of the eight jurisdictions (Australian Capital Territory, New South Wales, Victoria and Western Australia). In 2009, prevalence of heroin as the last drug injected was highest in Victoria, at 61%, and lowest in Tasmania and the Northern Territory, at 3%. As was the case nationally, significant increases in the prevalence of heroin as last drug injected were observed between 2006 and 2009 in South Australia (20% to 34%,  $\chi^2$  trend  $p$  value = 0.003), Victoria (36% to 61%,  $\chi^2$  trend  $p$  value < 0.001), and Western Australia (19% to 33%,  $\chi^2$  trend  $p$  value = 0.001).

### Methamphetamine

Reports of methamphetamine as the last drug injected declined from a national high of 38% in 2006 to 24% in 2009 ( $\chi^2$  trend  $p$  value < 0.001). Declines in the prevalence of methamphetamine as last drug injected were also observed over the same period among participants in the IDRS (Stafford & Burns, 2010; Figure 5). At the jurisdictional level, significant declines in methamphetamine as last drug injected were also observed in all states, but not in the two territories. Despite the decline in prevalence in recent years, methamphetamine remained the predominant drug last injected in Queensland and South Australia in all years between 2005 and 2009.

**Figure 5. Prevalence of methamphetamine as last drug injected among ANSPS and IDRS participants, 2005 - 2009**



### ***Methadone and buprenorphine***

Reports of methadone as the last drug injected among ANSPS respondents remained stable nationally at 8% to 10% between 2005 and 2009. Reports of methadone injection also remained stable during the past five years in all jurisdictions except Tasmania. In Tasmania, where prevalence of methadone injection is the highest of all jurisdictions, one in three ANSPS respondents reported last injecting methadone, and methadone has been the predominant drug last injected since 2007. Prevalence of methadone as last drug injected was lowest in Victoria where only 2% to 3% of ANSPS respondents reported last injecting this drug in all years since 2005.

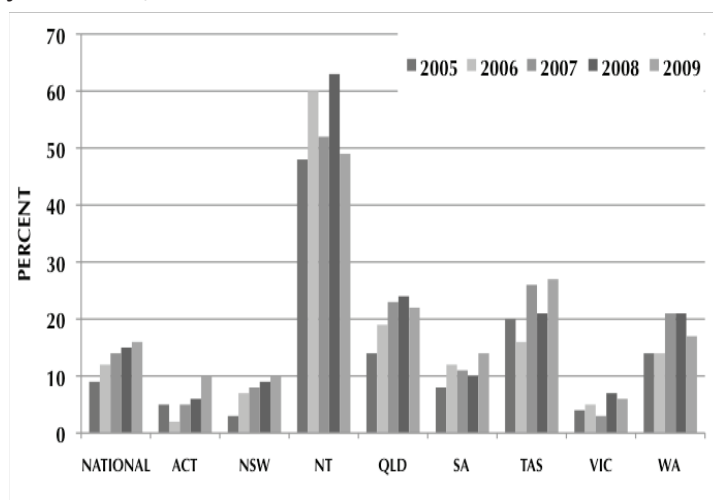
The proportion of ANSPS respondents reporting buprenorphine as last drug injected has also remained stable nationally (range 3% and 5%) and in all jurisdictions over the past five years. Prevalence of buprenorphine as last drug injected was highest in Victoria (range 7% to 11%) and Western Australia (range 6% to 11%), and lowest in New South Wales and Tasmania at 3% or less in all of the past five years.

### ***Pharmaceutical Opioids***

Nationally, pharmaceutical opioids were the third most commonly reported drug last injected following an increase in the prevalence of reports of the injection of this drug from 9% in 2005 to 16% in 2009 ( $\chi^2$  trend  $p$  value < 0.001). Significant increases over the period were also observed in New South Wales (3% to 10%,  $\chi^2$  trend  $p$  value < 0.001) and Queensland (14% to 22%,  $\chi^2$  trend  $p$  value < 0.006). Despite these increases, there is some evidence that the trend is

slowing with declines in prevalence observed in Queensland and three other jurisdictions between 2008 and 2009 (Figure 6). In the Northern Territory, the proportion of respondents who reported last injecting a pharmaceutical opioid ranged from 48% to 63% which was significantly higher than any jurisdiction.

**Figure 6. Proportion of ANSPS participants (%) reporting pharmaceutical opioids as the last drug injected by jurisdiction, 2005 to 2009.**



### ***Other drugs***

During the period 2005 to 2009, national prevalence of cocaine as the last drug injected was low at between 2% and 3%. In each of the past five years, the majority of the respondents who reported cocaine as the last drug injected were from New South Wales (range 77% to 86%). There were no reports of cocaine as the last drug injected in the Australian Capital Territory.

Anabolic steroids were also reported as the last drug injected by a small number of participants (2% or less) over the last five years. There were no reports of anabolic steroids as the last drug injected in the Australian Capital Territory, and prevalence of 1% or less was observed in Tasmania, Victoria, and Western Australia in all years since 2005.

## Summary

Although variations in the patterns of last drug injected were observed between and among jurisdictions, heroin and methamphetamine continued to dominate as the two most commonly injected drugs among ANSPS participants. Reports of heroin as the last drug injected increased over the period 2006 to 2009, while reports of methamphetamine injection declined. Pharmaceutical opioids continued to be the third most commonly identified drug last injected nationally. While there were significant increases in the proportion of respondents reporting this drug class over the period 2005 to 2009, this trend may be declining with a smaller proportional increase (0.6%) in prevalence observed between 2008 and 2009 than in previous years. The proportion of ANSPS respondents reporting methadone, buprenorphine, anabolic steroids and cocaine as the last drug injected has remained stable nationally, with prevalence of 10% or less in all of the past five years.

## References

National Centre in HIV Epidemiology and Clinical Research (2010). *Australian NSP Survey: Prevalence of HIV, HCV and injecting and sexual behaviour among IDUs at needle and syringe programs - National data report 2005-2009*. Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Stafford, J. and Burns, L. (2010) *Australian Drug Trends 2009. Findings from the Illicit Drug Reporting System (IDRS)*. Australian Drug Trend Series No. 37. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.