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Key points

- Between 2003 and 2007, approximately one third of Australian NSP Survey participants reported heroin as the last drug injected and a further third reported methamphetamine as the last drug injected.
- Heroin was the most common drug last injected in NSW, Victoria and the ACT, whilst methamphetamine was most commonly reported in QLD, SA and WA in all years since 2003.
- The proportion of survey participants reporting a pharmaceutical opioid as the last drug injected increased nationally, from 9% in 2003 to 14% in 2007. Prevalence of pharmaceutical opioid injecting was substantially higher in the Northern Territory than in all other jurisdictions, while the increase in prevalence between 2003 and 2007 was most notable in NSW, QLD, and WA.
- The proportion of survey respondents reporting methadone as the last drug injected increased from 6% in 2003 to 10% in 2007, and the proportion reporting last injecting buprenorphine increased from <1% to 5% during this period.
- Both the median age of survey participants and the median duration of injecting increased over the period 2003 to 2007. This was accompanied by a decline in the proportion of young people and the proportion of new initiates in the survey sample. These trends are not considered to be an artefact of the Australian NSP Survey methodology (Topp et al 2008).
- Rates of public injecting, daily injecting, needle/syringe re-use and receptive sharing remained stable over the period 2003 to 2007.

Drug injection trends among participants in the Australian Needle and Syringe Program Survey, 2003–2007

Introduction

The collaboration of Australian Needle and Syringe Programs (NSPs) has conducted sentinel surveillance of human immunodeficiency virus (HIV) and hepatitis C virus (HCV) antibody prevalence and associated risk behaviours among injecting drug users (IDU) annually since 1995. All clients attending selected NSPs are asked to complete a brief self-administered anonymous questionnaire and provide a capillary blood sample for HIV and HCV antibody testing. This issue of the *Drug Trends Bulletin* reports national and jurisdictional drug injection trends from the Australian NSP Survey, 2003 to 2007.

The number of participating NSP sites varied annually with 43 participating sites in 2004 and 53 in 2007. The number of survey participants ranged from 1800 in 2005 to 2495 in 2003 and the annual response rate ranged from 50% in 2004 to 36% in 2006 and 2007. The number of NSP clients surveyed varied between jurisdictions and across years. See Table 1 for sample sizes by jurisdiction, 2003-2007.

Table 1. Sample size distribution by jurisdiction, 2003 – 2007

Jurisdiction	2003	2004	2005	2006	2007
ACT	28	60	39	52	22
NSW	646	785	729	683	701
NT	23	62	29	20	31
QLD	587	745	291	501	417
SA	255	355	211	200	220
TAS	107	118	137	150	168
VIC	228	237	194	195	243
WA	161	133	170	160	110
Total	2495	2035	1800	1961	1912
Response rate	45%	50%	42%	36%	36%
No of sites	48	43	52	45	53

National Trends

Demographic characteristics

Approximately two thirds of NSP Survey respondents were male in all survey years. The majority (77 to 82%) were heterosexual, with between 8% and 9% identifying as bisexual and 4% to 6% identifying as homosexual. The proportion of participants identifying as Aboriginal or Torres Strait Islander increased from 8% in 2003 to 11% in 2007. The proportion that reported their parents spoke a language other than English at home decreased from 11% to 5% over the same period.

The median age of survey participants increased from 31 years in 2003 to 35 years in 2007 while the proportion of young people (aged less than 25 years) declined from 21% in 2003 to 10% in 2007 (Figure 1). Over the same period, the median duration of injecting increased from 11 years in 2003 to 15 years in 2007 and the proportion of new initiates (those injecting for less than 3 years) declined from 8% in 2003 to 5% in 2007 (Figure 2). Median age of first drug injection remained stable at 18 years for all survey years.

Figure 1: Median age of NSP Survey respondents and proportion of respondents (%) aged less than 25 years, 2003-2007

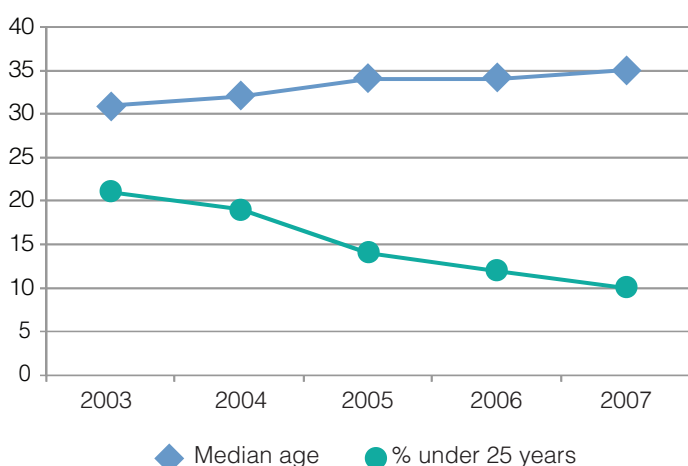
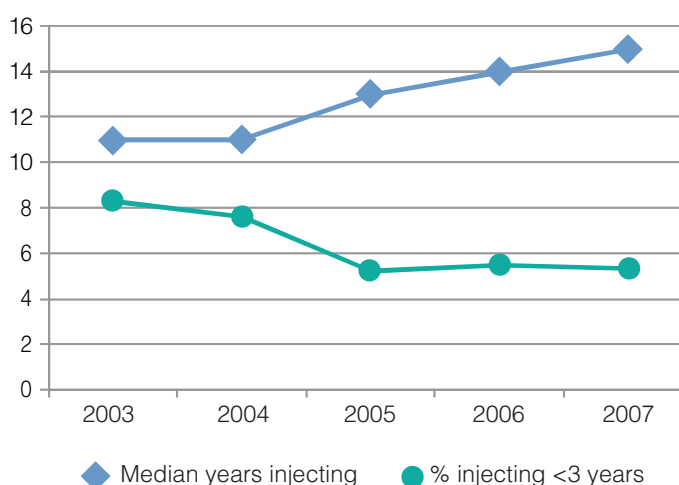


Figure 2: Median duration of injecting (years) and proportion of respondents (%) injecting for less than 3 years, 2003-2007



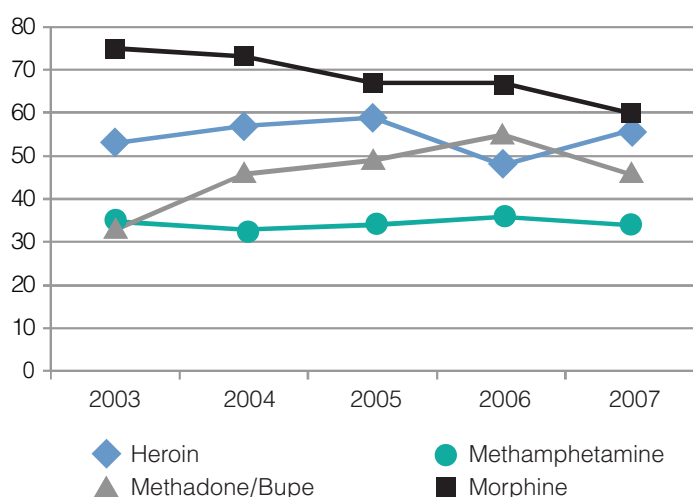
In 2006, a study was conducted to examine whether the increasing median age of participants identified in the sample was an artefact of the survey methodology, caused by an ageing cohort of injectors participating in the survey year after year. An analysis of both survey participants and non participants, as well as repeat and non repeat respondents failed to support the notion of an ageing cohort of injectors existing only within the NSP Survey sample. The study concluded that repeat participants were unlikely to have undue influence on the survey results, and that the NSP Survey sample is likely to be as representative a sample of injectors as it is practical to obtain (Topp et al, 2008).

Frequency of injection

The proportion of NSP Survey respondents reporting daily or more frequent drug injection in the month prior to survey completion remained stable at between 46% in 2003 and 49% in 2005.

Prevalence of daily or more frequent injection was highest among morphine injectors although prevalence in this group decreased from 75% in 2003 to 58% in 2007. Participants reporting methamphetamine as the last drug injected were less likely than those reporting other drugs to inject daily, with approximately one third reporting daily injection or more.

Figure 3: Proportion of NSP survey respondents (%) reporting daily or more frequent injection by last drug injected, 2003-2007



Needle/syringe re-use and receptive sharing

Re-use of a needle/syringe (either one's own or someone else's) in the month prior to survey completion remained relatively stable at between 24% and 27% over the period 2003 to 2007. The proportion of methamphetamine injectors reporting syringe re-use was slightly lower, at around 20% for all years, compared to those last injecting other drugs.

Receptive sharing in the month prior to the survey also remained relatively stable at between 13% and 18% over the last five years. There were no discernable differences in the reporting of receptive sharing according to drug last injected. The majority of those reporting receptive sharing had used a needle/syringe after one person, most commonly a partner or close friend.

Of those that stated they had re-used a needle/syringe, only 40% reported receptive sharing. This would indicate that, in each of the last five years, 13% to 14% of survey participants re-used their own used needles/syringes.

Public injecting

Prevalence of public injecting remained relatively stable at between 39% and 42% over the period 2003 to 2007, although there were substantial differences in prevalence of public injecting by state. The lowest prevalence was reported in the Northern Territory (NT) where between 20% and 30% of respondents reported at least one injection in a public place in the month preceding the survey. Prevalence of recent public injecting was highest in Victoria where between 56% and 64% reported having injected in a street, car, public toilet or squat in the month prior to completing the survey.

National and jurisdictional trends in last drug injected

Table 2 illustrates national trends in the drugs last 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 NSP Survey respondents, 2003-2007

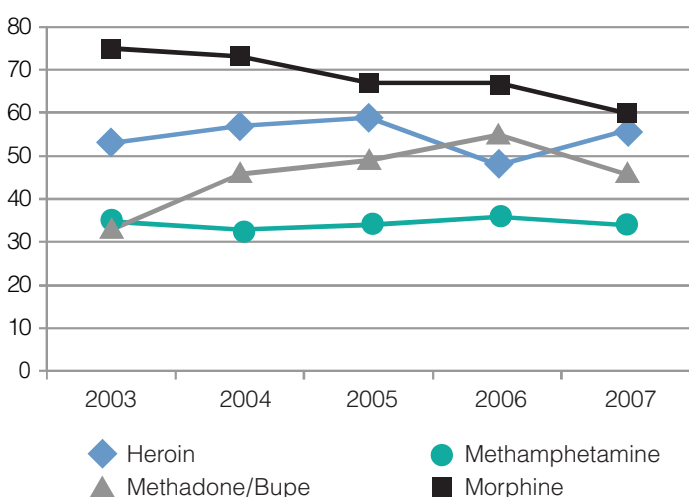
	2003 n=2495	2004 n=2035	2005 n=1800	2006 n=1961	2007 n=1912
Anabolic Steroids (%)	2	1	1	2	1
Cocaine (%)	1	2	3	2	2
Heroin (%)	36	36	34	26	31
Methadone (%)	6	7	9	9	10
Methamphetamine (%)	33	33	32	38	30
Morphine/Other Opioids (%)	9	8	9	12	14
Buprenorphine (Subutex)	<1	2	3	5	5
Other drugs (%)	10	9	4	4	6
Not reported (%)	2	2	4	3	2

Methamphetamine

Nationally, the proportion of respondents who reported methamphetamine as the last drug injected between 2003 and 2007 and was relatively stable at approximately one third of survey participants. In all of the past five years, amphetamine was the most commonly reported drug last injected in Queensland, South Australia and Western Australia, and the second most commonly reported last drug injected in all other states and territories. Prevalence of methamphetamine as last drug injected increased between 2003 and 2007 in the Australian Capital Territory and New South Wales.

The mean age of participants reporting methamphetamine as last drug injected ranged between 33 and 35 years over the period 2003 to 2007, which was significantly lower than non-methamphetamine injectors (Figure 4, $p < 0.05$ in all survey years). Methamphetamine injectors also reported significantly shorter injecting histories when compared to non-methamphetamine injectors, although the mean duration of injecting for methamphetamine injectors was still relatively lengthy at greater than 10 years for all survey years from 2003 to 2007.

Figure 3: Proportion of NSP survey respondents (%) reporting daily or more frequent injection by last drug injected, 2003-2007



Heroin

The proportion of survey participants reporting heroin as the last drug injected was also relatively stable at approximately one third of respondents over the past five years. Heroin was the most commonly reported drug last injected in New South Wales and Victoria and the second most commonly reported drug last injected in Queensland, South Australia and Western Australia for all survey years. Relatively equal proportions of respondents reported heroin and methamphetamine as the last drug injected in the Australian Capital Territory in recent years. Heroin was rarely reported as the last drug injected in Tasmania and there were no reports of heroin as the last drug injected in the Northern Territory over the period 2003 to 2007.

Methadone and buprenorphine

Nationally, the proportion of respondents reporting methadone as the last drug injected increased from 6% in 2003, but has remained stable at 9% to 10% since 2005. Methadone was most commonly reported as the last drug injected in Tasmania where it was reported by approximately one third of survey respondents in all years from 2003 to 2007. Prevalence of methadone as the last drug injected was lowest in Victoria and there were no reports of this in 2007.

In contrast, prevalence of buprenorphine injecting was highest in Victoria over the same period, with the exception of 2007, where prevalence was slightly higher in the Northern Territory. There was an increase in buprenorphine injecting at a national level from <1% in 2003 to 5% in 2007.

NSP survey participants were not specifically asked about buprenorphine-naloxone (Suboxone) injection and as a result it is possible that some instances of buprenorphine-naloxone injection have been identified as buprenorphine injection by participants.

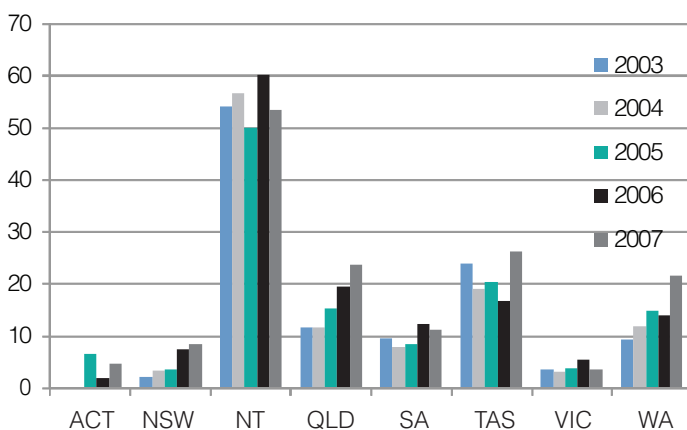
There were no mentions of buprenorphine-naloxone or Suboxone in any of the cases where respondents identified 'other' as the drug last injected and specified the drug due to its absence from list of available options.

Pharmaceutical Opioids

In recent years, there has been an increase in the proportion of survey participants that reported a non-morphine narcotic analgesic such as Oxycontin or Oxynorm as the last drug injected. In the 2007 NSP Survey, the drug category "morphine" was changed to "morphine/other opioids" to reflect this emerging trend, and data from previous survey years were re-coded accordingly.

Although there was significant variability both within and between jurisdictions, the national prevalence of a pharmaceutical opioid as the drug last injected increased nationally from 9% in 2003 to 14% in 2007. As shown in Figure 4, there were substantial increases in the prevalence of pharmaceutical opioids as the last drug injected in New South Wales (2% to 8%), Queensland (12% to 24%) and Western Australia (9% to 22%). However, the prevalence of pharmaceutical opioid injection remains significantly higher in the Northern Territory than in any other state or territory.

Figure 4: Prevalence of morphine injection (%) by jurisdiction, 2003-2007



Cocaine injection

Nationally, prevalence of cocaine injection among NSP survey respondents remained low at between 1% and 3% over the period 2003 to 2007. Prevalence was highest in New South Wales ranging from 2% to 6% over the past five years. In 2007, cocaine was reported as last drug injected by 4% of respondents in New South Wales, less than 1% of respondents in Queensland and South Australia, and there were no reports of cocaine injecting in any other states or territories.

Other drugs

Anabolic steroids were reported as last drug injected by a small number of participants (2% or less) in all survey years. In 2007, prevalence of anabolic steroid injection was most common in NSW where it was reported by 2% of survey participant. One percent of participants reported last injecting anabolic steroids in Queensland, South Australia and Victoria and there were no reports in any other state or territory.

During the period 2003 to 2007 there were very few reports of benzodiazepines as last drug injected and prevalence was less than 1% in all states and territories in all years. In 2007 there was only one report of a benzodiazepine as the last drug injected in the sample.

Summary

Results from the Australian NSP Survey suggest that while heroin and methamphetamine remain the drugs most frequently injected among NSP Survey respondents across Australia, patterns of drug use vary between states and territories. Heroin was the most common drug last injected in New South Wales, Victoria and the Australian Capital Territory, while methamphetamine injection was more predominant in Queensland, South Australia and Western Australia. Morphine was the drug last injected by the majority of NSP Survey participants in the Northern Territory, while methadone was more commonly injected in Tasmania than in any other state or territory.

As discussed in the December 2007 Drug Trends Bulletin (Fetherston et al, 2007), both the IDRS and the NSP Survey provide valuable data on patterns of drug use among injecting drug users over time. While both surveys have different aims and methodologies, the consistencies between the two datasets validate the contribution that both make to Australia's sentinel surveillance system.

References

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