VICTORIAN
DRUG TRENDS
2011

Findings from the
Illicit Drug Reporting System
(IDRS)

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Table of Contents

List of Tables

List of Figures

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Abbreviations

ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AGDH&A	Australian Government Department of Health and Ageing
AIHW	Australian Institute of Health and Welfare
ATS	Amphetamine-Type Stimulants
A&TSI	Aboriginal and/or Torres Strait Islander
AUDIT-C	Alcohol Use Disorders Identification Test-Consumption
AV	Ambulance Victoria
BBVI	blood-borne viral infection
CPH	Centre for Population Health
DPMP	Drug Policy Modelling Project
ED	hospital emergency department
EDRS	Ecstasy and related Drugs Reporting System
GP	general practitioner
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
IDRS	Illicit Drug Reporting System
KE	key expert
K10	Kessler Psychological Distress Scale
LSD	lysergic acid diethylamide
MDMA	3,4-methylenedioxymethamphetamine
MSM	men who have sex with men
MVA	motor vehicle accident
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NHMD	National Hospital Morbidity Database
NSP	Needle and Syringe Program
ORT	opiate replacement therapy
OTC	over the counter
PDI	Party Drugs Initiative
PBS	Pharmaceutical Benefits Scheme

PCR	patient care record
PWI	Personal Wellbeing Index
PWID	people who inject drugs regularly
REU	regular ecstasy user
SD	standard deviation
SEADS	South East Alcohol and Drug Services
SF-8	Short-Form 8 Health Survey
SHARPS	Southern Hepatitis/HIV/AIDS Resource and Prevention Service
STI	sexually transmitted infection
TGA	Therapeutic Goods Administration
UNSW	University of New South Wales
VACIS	Victorian Ambulance Clinical Information System
VDoH	Victorian Department of Health
VIFM	Victorian Institute of Forensic Medicine

Glossary of Terms

Cap	Small amount, typically enough for one injection
Illicit pharmaceuticals	Pharmaceuticals (e.g. antidepressants, antipsychotics, benzodiazepines, morphine, oxycodone, methadone, buprenorphine) obtained from a prescription in someone else's name; through buying them from a dealer or obtaining them from a friend, partner, etc. The definition does not distinguish between the inappropriate use of licitly obtained pharmaceuticals, such as the injection of buprenorphine or morphine, and appropriate use
Licit pharmaceuticals	Pharmaceuticals obtained by a prescription in the user's name. This definition does not take account of "doctor shopping" practices; however, it differentiates between prescriptions for self as opposed to pharmaceuticals purchased through a dealer or prescribed to a partner, friend, etc.
Lifetime injection	Injection (typically intravenous) on at least one occasion in the participant's lifetime
Lifetime use	Use on at least one occasion in the participant's lifetime via one or more of the following routes of administration: injecting, smoking, snorting or swallowing
Point	0.1 gram, although may also be used as a term referring to an amount for one injection (similar to a 'cap'; see above)
Recent injection	Injection (typically intravenous) in the last six months
Recent use	Use in the last six months via one or more of the following routes of administration: injecting, smoking, snorting or swallowing
Session	A single continuous period of drug use
Use	Use via one or more of the following routes of administration: injecting, smoking, snorting or swallowing

Guide to days of use/injection

6 days	Monthly use/injection (past six months)
12 days	Fortnightly use/injection
24 days	Weekly use/injection
90 days	Use/injection every second day
180 days	Daily use/injection

Executive Summary

Background

In 1998, the Australian Government Department of Health and Ageing (AGDH&A) commissioned the National Drug and Alcohol Research Centre (NDARC) to implement a national Illicit Drug Reporting System (IDRS), aimed at monitoring emerging trends related to the use of heroin, methamphetamine, cocaine and cannabis. The IDRS study provides nationally comparable data with respect to patterns of illicit drug use and related harms and provides a basis for better informing future policy and research initiatives.

The majority of available data sources related to patterns of illicit drug use and related morbidity and mortality are *lag indicators,* where the most recent data available may be up to 12 months old in some cases and are therefore insufficient on their own for strategic early warning purposes. The IDRS serves as a strategic early warning mechanism because it supplements available secondary indicator data sources with *lead indicators*, such as direct surveys with groups of people who inject drugs (PWID) and key experts (KE). Findings from successive IDRS studies conducted in metropolitan Melbourne have informed health, law enforcement and community sector responses to illicit drugs in Victoria since 1997[1]. Some recent examples of where the IDRS methodology or Victorian data have been used include:

- in the development of research into cocaine markets in Victoria and New South Wales (Shearer, Johnston et al. 2005);
- in Stage One of Australia's Drug Policy Modelling Project (DPMP) (Moore, Caulkins et al. 2005);
- in policy development and review activities and inquiries conducted by the Victorian Government (Di Natale and Ritter 2003; Drugs and Crime Prevention Committee 2004; Drugs and Crime Prevention Committee 2006; Victorian Department of Health 2006; Victorian Department of Health 2007);
- in the annual *Victorian Drug Statistics Handbook* (Cogger and Lloyd 2011);
- in a national survey examining attitudes, understanding and experiences of drug-driving (Mallick, Johnston et al. 2007);
- in research into the use of amphetamine-type stimulants (ATS) and early intervention of methamphetamine-related harms (Jenkinson and Quinn 2008); and
- in research into the self-reported well-being of PWID (Dietze, Stoove et al. 2010).

Victorian IDRS data have also been disseminated widely at conferences and community forums and through posters, magazine articles and peer-reviewed publications.

Summary of 2011 Victorian IDRS methodology

The Centre for Population Health (CPH) at the Macfarlane Burnet Institute for Medical Research and Public Health conducted the Melbourne arm of the 2011 IDRS study between June and September 2011. The project consisted of:

1. a structured survey of 150 PWID recruited from a number of sites across the metropolitan Melbourne area;

[1] For specific examples of how previous Victorian IDRS findings have been utilised please refer to: Fry & Miller, 2001 & 2002; Jenkinson, Fry & Miller, 2003; Jenkinson, Miller & Fry, 2004; Jenkinson & O'Keeffe, 2005 & 2006; Jenkinson & Quinn, 2007.

2. semi-structured interviews with 18 KE from a variety of professional settings, selected according to their knowledge about illicit drug use and level of contact with illicit drug users, during the six months preceding the survey; and
3. analysis of secondary indicator data.

Data collected via these three methods were analysed in order to identify illicit drug-related trends in Melbourne for the 2010/2011 financial year. Where appropriate, these data were also compared to findings from the 1997-2010 IDRS studies.

Demographics of the sample

One hundred and fifty PWID were interviewed for the 2011 Victorian IDRS. The mean age was 36.7 and 75% of the sample was male. Eighty-nine percent of survey participants were born in Australia and 10% reported that they were Aboriginal and/or Torres Strait Islander. Eighty-seven percent of respondents were not employed at the time of the interview and 51% resided in stable accommodation.

Consumption pattern results

Current drug use

The mean age at which survey participants reported their first injection of a drug was 18 years, with the first drug usually being amphetamine (56%) or heroin (39%). This was a significant change (both $p<0.01$) from the previous year, when 58% reported heroin as their first drug injected and 39% reported amphetamine.

The sample's main drugs of choice were heroin, methamphetamine or cannabis and the most commonly injected drugs of the preceding month were heroin, methamphetamine and buprenorphine.

Heroin

Heroin continues to be the most commonly used injectable illicit drug among the IDRS survey participants, with 81% reporting use within the six months preceding interview. Sixty percent of survey participants reported that heroin was their drug of choice compared with 68% of survey participants in 2010.

The prevalence of recent heroin use among the sample was comparable to previous years (85% in 2010 and 79% in 2009); however, the frequency of heroin use decreased from a median of 74 days in the six months preceding interview in 2010 to 63 days in 2011. This figure has fluctuated over the past few years, with no clear trend.

Among the 121 survey participants reporting recent heroin use, all had injected, with only small numbers of survey participants reporting recent heroin smoking. As in past years, PWID reported most commonly using white or off-white rock heroin.

Methamphetamine

The IDRS currently collects information on the use, price, purity and availability of the three main forms of methamphetamine: 'speed', crystal methamphetamine and 'base,' as well as amphetamine liquid and pharmaceutical stimulants such as dexamphetamine.

Reports of any recent methamphetamine use among the 2011 IDRS sample were frequent (65% of survey participants); however, patterns of use varied between different methamphetamine types. In particular the prevalence of recent crystal methamphetamine use increased in comparison to 2010 (53% vs. 36%). The frequency of recent methamphetamine use was relatively stable compared with previous years.

Cannabis

Cannabis was the most widely used illicit drug in the 2011 IDRS sample, similar to previous years. Ninety-eight percent of survey participants in 2011 reported using the

drug in their lifetime and 85% in the preceding six months. Frequency of reported cannabis use was 120 days in the preceding 180, with 44% of respondents reporting daily use. Hydroponic cannabis was again the most commonly recorded type of cannabis used.

Other drugs

Other opioid use was common in the 2011 IDRS sample, as in previous years, but the type of opioid varied amongst the survey participants.

Fifty-two percent of respondents reported recent methadone use and 21% recent illicit methadone use. Nine percent reported recent injection of methadone, which occurred on a median of five days.

Twenty-five percent of respondents reported recent buprenorphine use and 18% reported recent illicit buprenorphine use. Recent buprenorphine injection was reported by 21% of survey participants and injection of any form of buprenorphine on a median of 48 days.

Buprenorphine-naloxone use in the preceding six months was reported by 43% of the sample and 29% reported recent illicit use. Recent injection of this drug was reported by 25%, an increasing trend mostly likely representing the expanding percentages of patients prescribed this drug in the community over time. Either licit or illicit buprenorphine-naloxone was recently injected on a median of 14 days.

Thirty-four percent of survey participants reported recent use of morphine, with the majority reporting recent illicit use (33%) versus licit use (3%). Thirty-three percent of the sample had injected either licit or illicit morphine recently on a median of five days. More prevalent reports of morphine as the last drug injected (1%, 5%, 1%) and drug most often injected (1%, 7%, 1%) had returned to 2009 levels following spikes in 2010 (numbers reported in brackets are 2009, 2010, 2011 respectively).

Oxycodone use (combined licit and illicit) had increased slightly compared to 2010 with 41% of the sample indicating recent use (31% in 2010) and 36% recent injection (29% in 2010) on a median number of four days. Similarly to morphine, more of the sample reported illicit versus licit use (37% versus 8%).

Use of other opioids (and in particular injection of these) was limited. Thirty-nine percent of the sample reported using over the counter (OTC) codeine recently on a median of eleven days but only one participant reported recent injection. The ibuprofen-codeine combination product Nurofen Plus® was the main brand used by participants.

Thirty-seven percent of participants reported recent use of ‘other’ opioids with three participants reporting recent injection. Panadeine Forte® was the main ‘other’ opioid that was used by the sample.

Participants of the Victorian IDRS frequently report poly-drug use. Thus use of additional prescription and non-prescription drugs which were not opioids was also common in the 2011 sample.

For example, almost all of the IDRS survey participants reported lifetime use of both alcohol and tobacco, with 70% reporting alcohol and 95% tobacco use in the past six months. The majority of recent tobacco users were daily smokers (96%), while alcohol was consumed approximately once a week (median=24 days in the previous six months).

Similarly, 71% of the sample reported recent use of benzodiazepines, although a much smaller proportion reported recent injection (2%). Illicit recent use of benzodiazepines (excluding alprazolam) was reported on a median of 10 days, whereas recent illicit use of alprazolam was reported on a median of 13 days. Sixty-nine percent of the sample reported recent use of illicit alprazolam, the highest single report in the Victorian IDRS of

illicit use of a prescribed medication. Diazepam and alprazolam were the main benzodiazepines used by respondents.

In the 2010 and 2011 Victorian IDRS survey, participants were informally asked about their use of Unisom® capsules (diphenhydramine hydrochloride), given indications of use raised by KE previously. Whereas, in 2010, 10% reported using it in the previous six months, 11% reported doing so in 2011.

The sample were asked for the first time about licit and illicit quetiapine use (Seroquel®). Sixty-four percent had ever used quetiapine (licit or illicit), with 30% having used illicit quetiapine in the last six months on a median of five days. There were almost no reports of injection of quetiapine. The main form of administration was by swallowing the drug.

Pharmaceutical stimulants continued to be used by small numbers of survey participants in the 2011 sample; however, almost all use was of illicit and not licit forms of these drugs. Sixteen percent reported use in the last six months with 10% citing recent injection of illicit pharmaceutical stimulants on a median of two days.

Reports of recent cocaine use among the IDRS sample remained infrequent, with 17% of survey participants reporting having used cocaine during the six months preceding interview and 13% injecting the drug. Among those reporting recent use, the frequency of use remained low (median=three days).

Few IDRS participants reported using hallucinogens and ecstasy. Seven percent of respondents reported recent use of hallucinogens but only small numbers (<5) reported recent injection, whilst 11% reported recent ecstasy use and 3% recent injection of this drug.

Drug market: Price, purity, availability and purchasing patterns

Heroin

The median price for a 'cap' of heroin was roughly stable at $50; however, the reported price per gram had dropped to $250. Heroin was reported as easy or very easy to obtain and the purity low to medium. The source was generally a known dealer at an agreed public location. The average purity of seizures by Victorian police in 2010-11 of 18% was lower than that found in 2009-10 (26.5%).

Methamphetamine

The median reported prices of points of speed and crystal methamphetamine were $50 and $100 respectively. Grams of speed were priced at $200 and grams of crystal methamphetamine at $800. Methamphetamine types in general were considered easy to obtain. The drug was generally sourced through known dealers or friends and purity varied from low to medium if speed through to medium to high if crystal methamphetamine. The average purity of seizures by Victorian police was 39%, which was higher than in the preceding year (21%).

Cocaine

Only a small number of survey participants were able to report on the price, purity and availability of cocaine. These participants suggested a stable price of $400 for a gram. Current purity was reported to be variable with variable ease of access by the respondents. The mean purity of cocaine seizures was 26%, which is much lower than the previous year's figure of 42%.

Cannabis

Prices remained remarkably stable for cannabis with $20 per gram being proposed for both hydroponic and bush cannabis. An ounce was reported to cost $250 for hydroponic and $210 for bush cannabis. Both types of cannabis were reported to be easy or very

easy to obtain and commonly purchased from known dealers or friends. Potency was medium to high and stable.

Methadone

A limited number of survey participants were able to give purchasing details for illicit methadone. The price was described as stable. Availability was reported as easy to obtain and stable.

Buprenorphine

The cost of illicit buprenorphine was reported to be $20 for an eight milligram tablet. There were a variety of responses to the question of accessibility but it was most commonly described as easy to obtain.

Buprenorphine-naloxone

The median price for buprenorphine-naloxone combination was five dollars for a two milligram tablet. The median price of eight milligrams was $20. Illicit buprenorphine-naloxone was reported to be very easy or easy to obtain and access to illicit supplies of the drug stable.

Morphine

The most commonly reported purchased amount and brand of morphine was 100 milligram tablets of MS Contin®. These were reported to cost a median of $50 and the price was stable compared to 2010. Perceptions of availability varied widely; however, most survey participants reported stability in ease of access to illicit forms of morphine. Morphine was more likely to be purchased from friends (51%) than street dealers (20%).

Oxycodone

Eighty milligrams of OxyContin® was the most commonly reported dose and brand of oxycodone reported to be purchased by respondents. These tablets cost a median of $40 which was stable in comparison to 2010. Similarly to morphine, perceptions varied over ease of availability to this drug illicitly amongst the sample; however, again it was agreed that ease of such access had remained stable. Again, like morphine, the drug was most frequently purchased through friends (46%).

Health-related trends associated with drug use

Overdose and drug-related fatalities

More than half the survey participants reported an overdose of heroin in their lifetime (59%) but overdose in the preceding twelve months was limited to 16% of respondents. There were 1,088 non-fatal heroin overdoses attended to by Ambulance Victoria during 2010. Only seven survey participants reported overdosing on other drugs in the year preceding interview with no clear pattern in the drugs implicated.

Drug treatment

During the 2010-2011 financial year, 54,457 courses of treatment were delivered to 28,207 clients[2] in Victorian specialist alcohol and drug services[3]. Alcohol was the most frequent drug of concern, followed by cannabis and then heroin.

During 2011, DirectLine responded to 40,101 calls; a drug of concern[4] was identified in 52% of these calls and the distribution of these calls was similar to 2010. Heroin was

[2] Clients in specialist alcohol and drug services include both drug users and non-users. Non-users may include partners, family or friends.

[3] Federal and state government funded.

[4] A caller or user may have more than one drug of concern and totals have been adjusted for multiple drugs of concern.

identified as a drug of concern in 12% of all drug-identified calls. Other opiates were indicated in an additional 32% of all drug-identified calls. Eight percent of all drug-identified calls indicated amphetamine as the drug of concern. Cannabis accounted for a further 12% of drug-identified calls whilst, similarly to previous years, cocaine only accounted for a very small percentage of such calls of concern (1%).

According to the Victorian Department of Health, in 2011 13,763 clients were recorded as being on pharmacotherapy programs, with the largest percentage prescribed methadone (66%, n=9,030). Around one-third of pharmacotherapy clients were prescribed buprenorphine-naloxone (30%, n=4,078) and the remainder of clients were receiving buprenorphine (5%, n=655).

Hospital separations

Hospital admissions for opioids in Victoria have remained stable compared to previous years; however, these continue to account for the highest proportion of drug-related admissions. The highest ever number of hospital admissions relating to amphetamines was recorded during 2008-09. Admissions relating to cocaine and cannabis have remained stable.

Injecting risk behaviours and health problems

Eleven percent of Victorian IDRS 2011 survey participants reported borrowing a used needle in the preceding month and 22% reported lending a used needle to someone else. Reports of recently lending and borrowing needles were roughly similar to previous years but reports of sharing any other injecting equipment decreased across all categories from 2010.

Blood-borne viral infections attributable to illicit drug use were fairly stable in Victoria in 2010, although hepatitis C remains highly prevalent among PWID. Other injection-related health problems, such as skin problems and infections, were generally reported more frequently by the 2011 cohort than in 2010.

KE noted particular issues with regards to injection-related skin problems and infections requiring significant primary care. These issues were noted as being compounded by the ageing of the PWID population.

Mental health problems and psychological distress

Seventy-nine percent of the sample reported that they had experienced a mental health problem in the six months preceding the interview with most reporting experience of high prevalence disorders such as depression and anxiety. There were, however, some significant percentages of respondents reporting lower prevalence conditions such as schizophrenia and bipolar disorder (both 9%).

Driving risk behaviour

Of the 62 respondents who reported recently driving a vehicle, 19% reported having driven under the influence of alcohol and 73% after taking illicit drugs. Of the respondents who commented on the self-perceived effect of illicit drugs on their driving ability, the majority (71%) reported that they believed it had no effect or slightly improved their driving skills.

Law enforcement-related trends associated with drug use

Reports of criminal activity

Forty-six percent of survey participants reported being arrested in the 12 months preceding the IDRS study, with the largest proportion being related to property crime. Forty-seven percent reported engaging in any crime in the preceding month and 63% reported ever having been to prison.

Arrests

The number of heroin-related arrests remained stable in 2009-2010 compared to the previous reported year; however, arrests related to methamphetamine (3,590-3,223) dropped slightly and arrests related to cannabis (6,884-7,066) and cocaine (148-196) increased.

Expenditure on illicit drugs

The median amount spent by Victorian IDRS respondents the day prior to the survey was $20 (an amount which includes those respondents who reported not spending any money the day before).

Special topics of interest

Heavy Smoking Index for nicotine dependence

In the Fagerstrom test for nicotine dependence, a score of 3 is equivalent to very low dependence on tobacco. The mean score of IDRS participants was 3.1. One-fifth of daily smokers recorded a score of five or above indicating high nicotine dependence.

Alcohol Use Disorders Identification Test (AUDIT-C)

In the AUDIT-C test, a cut-off score of five or above indicates that further assessment is required for problems with alcohol dependence and risky drinking. The mean score for the 2011 survey participants was 6.1 and 60% of the sample scored five or more.

Pharmaceutical opioids

Fifty-three percent of IDRS participants reported using pharmaceutical opioids in the past six months, with common reasons being to relieve pain or to seek an opioid effect. Most of those using pharmaceutical opioids had only ever sought them from illicit sources (63%).

Over the counter codeine

Thirty-seven percent of participants reported using over the counter codeine to relieve pain in the last six months, generally acute short-term pain (for example, a headache or toothache). The most common brand used was Nurofen Plus®.

Injecting equipment use in the last month

Victorian IDRS participants most commonly utilised 1ml needle/syringes for their injecting drug use. These items were also the most commonly identified by participants as having been cleaned and re-used.

Physical and mental health (SF-12)

Participants scored lower on the physical component score (PCS) and mental component score (MCS) than Australian norms, indicating poorer physical and mental health among this sample of PWID.

Health service usage

GPs were the most commonly accessed health service by PWID; however, 17% of respondents had visited a hospital ED in the last four weeks. This concords with literature which suggests PWID have an over-dependence on acute crisis and emergency interventions (Kerr, Wood et al. 2004).

Online activity

More than half of participants reported that they had not used the internet in the past six months. Of those who said they had, very few had utilised the internet to obtain information about drugs or to buy drugs (10%). Nineteen percent of participants described text messaging as their preferred method of obtaining drugs.

Policy

Ninety-nine percent of participants support needle and syringe programs, as compared with between 67% and 80% of the general population in Australia. Similarly high numbers of the PWID sample also indicated support for methadone and buprenorphine programs, regulated injecting rooms and a trial of prescribed heroin. Participants generally had higher levels of support for these initiatives than the general population. Participants generally supported the legalisation of various drugs for personal use at higher rates than the general population and supported increased penalties for the sale and supply of illicit drugs at lower rates than the general population.

Conclusions

The results of the 2011 Victorian IDRS study indicate that the majority of illicit drug markets in Melbourne have remained stable over the last 12 months.

Key changes detected in the 2011 IDRS were:

- Heroin was once again reported to be the main drug of choice, similar to the 2010 sample but in contrast to the 2009 sample (where it was reported to be methamphetamine).
- A significant drop in the price paid per gram of heroin (from $325 to $250).
- Differing patterns of use of the three main types of methamphetamines were noted, with speed use declining and ice and base use increasing. Overall, methamphetamine use increased from 2010 levels but did not equal the high levels seen in 2009.
- The continuing emergence of illicit markets and inappropriate use of other 'licit' medications, aside from benzodiazapines, including opiate replacement drugs such as buprenorphine-naloxone, prescription opioids such as oxycodone and antipsychotics such as quetiapine.
- A significant decrease in sharing of injecting equipment besides needles and syringes.
- An increase in injection-related injury and disease requiring significant wound management and, in some cases, hospitalisation.
- An increase in problem drinking behaviours among PWID.
- A range of issues relating to the ageing of the PWID population.

On the basis of these findings, we recommend:

1. Continued monitoring of illicit drug markets for trends in price, purity, availability, patterns of drug use and related outcomes;
2. Further research on the impact on ageing on the PWID population, with particular attention paid to the types of primary and secondary health services required to effectively service this population;
3. Closer monitoring of illicit alprazolam, quetiapine and buprenorphine-naloxone use and potential associated health impacts;
4. Funding for needle and syringe program consumables which help to prevent injection-related injury and disease (e.g. sterile water, wheel filters);
5. Research on alcohol consumption patterns amongst PWID and impact on overall health, particularly with regard to the high prevalence of hepatitis C in this population.

1. Introduction

In 1998, the Australian Government Department of Health and Ageing (AGDH&A) commissioned the National Drug and Alcohol Research Centre (NDARC) to implement a national Illicit Drug Reporting System (IDRS), following a successful pilot study in Sydney (1996) and a multi-state trial (1997) (Hando, O'Brien et al. 1997; Hando and Darke 1998; Hando, Darke et al. 1998). The 1998 IDRS study was conducted in New South Wales, Victoria and South Australia (McKetin, Darke et al. 1999), with each state undertaking a survey of people who inject drugs (PWID), a key expert (KE) survey and analysis of available secondary indicator data. In 1999, the IDRS study was replicated in New South Wales, Victoria and South Australia, with all other remaining states and territories participating through the collection of secondary indicator data and completion of KE interviews. In 2000, the IDRS became a truly national drug trend monitoring system when all states and territories conducted the complete study. This is the fourteenth year that the IDRS study has been conducted in Melbourne.

The aim of the IDRS study is to monitor emerging trends related to the use of heroin, methamphetamine, cocaine and cannabis. The IDRS study provides nationally comparable data with respect to patterns of illicit drug use and related harms and provides a basis for better informing future policy and research initiatives.

The *Victorian Drug Trends 2011* report summarises data collected during the months of June through November 2011 as part of the Melbourne arm of the 2011 IDRS study. The findings of this report pertain primarily to the 2010-2011 financial year, unless otherwise indicated. The report provides an outline of the methods utilised in collecting data for this period and then presents a socio-demographic and drug use history overview of the sample of PWID. The main study findings are then presented for recent trends in the use of heroin, methamphetamine, cannabis and other drugs. Following this, drug-related harms, general health and other issues of significance are examined.

For details regarding illicit drug trends for the whole of Victoria up to 2009, readers should refer to the annual *Victorian Drug Statistics Handbook* (Cogger and Lloyd 2011). Readers are also referred to the forthcoming Australian Drug Trends 2011 monograph for national IDRS data and jurisdictional comparisons (available from NDARC, University of New South Wales, Sydney).

1.1. Study aims

The primary aims of the 2011 Victorian IDRS were:

- To document the market characteristics (i.e. price, purity, availability) and patterns of use of heroin, methamphetamine and cannabis among PWID in Victoria;
- To identify and document any drug-related harms and relevant trends among this population; and
- To detect and document emerging drug trends of national significance that may require further and more detailed investigation.

2. Method

This study replicates the IDRS methodology used annually since 1997, incorporating: a survey of PWID, interviews with KE recruited from a variety of professional settings and analysis of secondary indicators of illicit drug trends in Victoria. The information provided by these three methods has been used to identify trends and outcomes associated with illicit drug use in Victoria.

2.1. Survey of PWID

Structured face-to-face interviews were conducted with 150 current PWID recruited from metropolitan Melbourne during June-July 2011. In order to be eligible to participate in the study, respondents must have reported that they had injected at least monthly in the six months prior to interview and had resided in Melbourne for at least the previous 12 months. Convenience sampling was facilitated by posted advertisements and recruitment notices distributed throughout needle and syringe programs (NSP), assistance from staff at these services with advising potential participants of the research and snowballing methods (recruitment of friends and associates via word of mouth).

Five agencies assisted the research team as recruitment and interview sites for the PWID survey component of the study:

- Southern Hepatitis/HIV/AIDS Resource and Prevention Service (SHARPS), Frankston (Peninsula Health);
- Access Health, St Kilda (Salvation Army);
- InnerSpace, Collingwood (North Yarra Community Health);
- 131B, Footscray; and
- South East Alcohol and Drug Services (SEADS), Dandenong (Southern Health).

The structured interview schedule employed in this study comprised core questions used in previous IDRS studies conducted in Melbourne. The interview schedule contained questions relating to demographics; drug use; the price, purity and availability of drugs; crime; risk-taking behaviour; health; and general trends. The average duration of each interview was approximately 51 minutes (range=20-125 minutes) and survey participants were reimbursed $40 for their time and out-of-pocket expenses. Ethics approval for this study was obtained from the Alfred Hospital Human Research Ethics Committee and the Victoria Police Human Research Ethics Committee.

2.2. Survey of KE

A total of 18 KE (11 males and 7 females) participated in face-to-face interviews between July and November 2011. The majority were recruited from the pool of KE who had taken part in previous IDRS and/or Ecstasy and related Drug Reporting System (EDRS) studies. Other KE participants were recruited as replacements for, or alternatives to, previous participants drawn from the same agencies/services, on the basis of referrals received from professionals in the field, or as individuals representing agencies/services not previously surveyed.

KE involved in the 2011 IDRS consisted of: direct health workers, e.g. hospital staff, general practitioners (GPs), drug and alcohol nurses and pharmacists (n=2); NSP and outreach workers, drug and alcohol counsellors and social workers (n=9); law enforcement personnel (n=4); and others including lawyers, policy makers, forensic investigators, researchers and court services workers (n=3). Excluding law enforcement personnel, participants were selected on the basis of having had average weekly contact

with illicit drug users over the preceding six months; and/or contact with 10 or more different illicit drug users during that period; and/or expert knowledge in one or more areas relating to the use, possession, manufacture and/or trafficking of illicit substances.

While some KE participants were screened after they had received sample copies of the KE interview schedule, project information sheet and consent form – providing them with the opportunity to consider whether they would be able to address questions from the interview schedule – other KE were deemed eligible after telephone screening and did not wish or request to receive an advance copy of materials. The KE interview schedule included sections on the characteristics of people currently involved in the drug market, characteristics of the drug market itself (price, purity and availability) and recent trends in illicit drug use.

As per 2010, the 2011 survey focused on the drug or drugs KE perceived to be 'most problematic' at the time of interview. A total of 17 responses were elicited in this area of questioning. The drugs named as most problematic by KE were most commonly prescription opiates (n=8), alprazolam (Xanax, a short-acting benzodiazepine) (n=3) and antipsychotics (n=3). Other drugs nominated by KE as problematic included heroin, crystal methamphetamine, dexamphetamine, steroids, Unisom and over the counter codeine.

KE interviews took an average of 50 minutes to complete (range=35-75 minutes). Detailed notes were made by the interviewer(s) during each interview and raw data was transcribed and coded soon after the conclusion of the interview using Microsoft Excel.

2.3. Other indicators

Information collected from the PWID survey and KE interviews was supplemented by data obtained from a number of secondary indicator sources. Data relating to trends for the 2010-2011 financial year are reported, unless otherwise indicated. For secondary indicators where current data are unavailable, the most recently available data have been included.

Indicator data sources presented in this report include:

Surveys reporting on the prevalence of illicit drug use in Victoria

- Data on the prevalence of drug use in the community are typically derived from large-scale population surveys. The most recent population survey from which estimates of illicit drug use within the community are available is the 2010 National Drug Strategy Household Survey (NDSHS) (Australian Institute of Health and Welfare 2011).

Drug seizure purity levels

- The Drug Analysis Branch of the Victoria Police Forensic Services Department conducts purity analyses for all drug seizures made by the Victoria Police. Since 2001, the Victoria Police Forensic Services Department has provided drug purity data for inclusion in the IDRS report. This report presents data for the 2010-2011 financial year.

Drug-related arrest data

- Information pertaining to drug-related arrests in Victoria has been obtained from the Australian Crime Commission (ACC). The Victoria Police and the Australian Federal Police (AFP) provide arrest data to the ACC for the Illicit Drug Data Report. This report presents drug-related arrest data for the 2009-2010 financial year.

Specialist drug treatment presentations

- The Victorian Department of Health (VDoH; formerly the Department of Human Services or DHS) funds community-based agencies to provide specialist alcohol and drug treatment services across the state. The collection of client information is a mandatory requirement and occurs via a formalised client data collection system called the Alcohol and Drug Information System (ADIS). The ADIS data presented in this report represents courses of treatment and client numbers for the 2010-2011 financial year.
- The Drugs and Poisons Regulation Group of the VDoH maintains a database that records all methadone, buprenorphine and buprenorphine-naloxone permits in Victoria. This is the major source of information regarding the characteristics of consumers of the Victorian pharmacotherapy programs and is an important source of information regarding treatment for opiate dependence. Data from the quarterly phone census of client numbers for the period January 1985 to October 2011 are presented in the current report.
- DirectLine is a 24-hour specialist telephone service in Victoria (operated by Turning Point Alcohol and Drug Centre) that provides counselling, referrals and advice about drug use and related issues. All calls to DirectLine are logged to an electronic database that can provide information about callers' drugs of concern, calls from drug users and calls about drug users. This report presents data for the period 1999 to 2010.

Ambulance attendances at non-fatal drug overdoses and other episodes

- Turning Point Alcohol and Drug Centre manages an electronic drug-related ambulance attendance database, comprising information obtained from the Victorian Ambulance Clinical Information System (VACIS) as well as those previously extracted and coded from ambulance Patient Care Records as part of Turning Point's 'Ambulance Attendance at Heroin Overdose Project' (Dietze, Cvetkovski et al. 2000). Reliable data is available from June 1998 (with missing data for various short periods from that time). Although the database includes overdose-related calls for all types of drugs, the dataset is best suited to the monitoring of non-fatal, opioid-related overdose, due to the availability of a biological marker of opioid (primarily heroin) involvement (i.e. the administration of naloxone and subsequent patient response). Data for the period 2007 to 2010 are presented in this report.

National Hospital Morbidity Database

- The National Hospital Morbidity Database (NHMD) is compiled by the Australian Institute of Health and Welfare (AIHW). It is a collection of electronic records for admitted patients in public and private hospitals in Australia. *Principal diagnosis* (the diagnosis established after study to be chiefly responsible for occasioning the patient's episode of care in hospital) has been reported. This report presents drug-related (opioid, amphetamine, cocaine and cannabis) hospital admissions for Victoria and Australia, 1999/2000-2008/2009.

Heroin-related fatalities

- Mortality information from heroin-related deaths was obtained from data collated by the Victorian Institute of Forensic Medicine (VIFM) and the VDoH from the National Coronial Information System. This report presents data from 1991 to 2009.

Blood-borne viral infections surveillance data

- Blood-borne viral infections (BBVI), such as the human immuno-deficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV), are a major health risk for individuals who inject drugs. The Communicable Diseases Section, Public Health Branch of the VDoH, records notifications of infectious diseases in Victoria. Data from 1999 to 2010 are presented in this report.
- The Australian Needle and Syringe Program Survey has been conducted yearly by the National Centre in HIV Epidemiology and Clinical Research (NCHECR) since 1995. It is designed to supplement sentinel BBVI surveillance efforts via a short questionnaire on demographic and behavioural characteristics of NSP clients and serological testing of finger-prick blood samples. Data presented in this report are from the 2004 to 2010 data collections (National Centre in HIV Epidemiology and Clinical Research 2010).

2.4. Data analysis

For continuous, normally distributed variables, *t*-tests were employed, with the mean and standard deviation (SD) reported. The *rank-sum* test was used to compare non-parametric continuous variables, with medians and ranges reported. Categorical variables were analysed using χ^2 tests for percentages and χ^2 tests for trends over time. All analyses on PWID survey data were conducted using Stata 11.0 SE (Statacorp LP, Texas, 2011), with a significance level of $p<0.05$.

Content analysis was used for the open-ended responses in KE interviews (Kellehear 1993). Categorical data for KE estimates of drug price, purity and availability were analysed using Microsoft Excel.

3. Demographics

3.1. Overview of the IDRS participant sample

A total of 150 PWID were interviewed in 2011. Participants were recruited from five different sites across Melbourne: St Kilda (Inner South), Dandenong (Outer South), Frankston (Outer South-East), Collingwood (Inner North) and Footscray (Inner West), with 30 survey participants recruited from each site. The majority of survey participants resided in areas local to the recruitment sites.

Participants typically heard about the study either from the NSP (54%, n=71) or through word of mouth (40%, n=52). Thirty-six survey participants (25%) reported having participated in a previous IDRS study. The demographic characteristics of the 2011 PWID sample were roughly comparable to 2010 and are summarised in Table 1. Three-quarters of survey participants were male and aged around 37 years. Just over half of respondents reported living in secure accommodation at the time of interview, with just under a third residing in a boarding house, hostel or shelter and a further 17% reporting homelessness or having no fixed address.

The majority of survey participants were born in Australia (89%), with other survey participants being born in the United Kingdom, New Zealand, Vietnam and Cambodia, among other countries. Those born outside of Australia had resided here for a median of 32 years (range=16-40). Fifteen survey participants identified as being of Aboriginal and/or Torres Strait Islander (A&TSI) origin (10%), compared with 9% in 2010 and 6% in 2009.

The mean grade completed at school was Year 10 (range=Grade 3-Year 12). Fifty-two percent of survey participants had acquired trade or technical qualifications since leaving school and 8% had attained a university qualification. The large majority of survey participants (87%) were unemployed at the time of interview and therefore most (96%) reported receiving a government pension, allowance or benefit as their main source of income. Participants reported receiving a median range of income of $66-634 per week and more than half of the sample reported having ever been imprisoned.

Table 1: Demographic characteristics of the PWID sample, 2010-2011

	2010 (N=151)	2011 (N=150)
Mean age (years)	35 (SD=7.3)	37 (SD=7.6)
Male (%)	70	75
Heterosexual (%)	91	91
Aboriginal and/or Torres Strait Islander (A&TSI) (%)	9	10
Accommodation (%)		
Own house/flat (includes renting)	52	34
Parents'/family house	7	11
Boarding house/hostel	20	24
Shelter/refuge	3	3
Drug treatment residence	0	0
No fixed address/homeless	14	17
Unknown	4	
Employment (%)		
Not employed	89	87
Full-time	3	1
Part-time/casual	6	7
Home duties	0	2
Student	1	0
Mean school education (years)	10	10
Tertiary education (%)		
None	54	39
Trade/technical	37	52
University/college	9	8
Prison history (%)	57	63

Source: IDRS PWID interviews

4. Consumption patterns

Table 2 summarises the drug consumption patterns of the 2011 Victorian IDRS PWID survey participants. The mean age at which survey participants reported their first injection was 18 years, with the first drug injected being either usually heroin or methamphetamine. Heroin was also the most common drug of choice, followed by cannabis or methamphetamine. Heroin was also reported to be the most commonly injected drug in the previous month and most frequently the last injected drug.

Table 2: Injection history and patterns of current drug use, 2010-2011

	2010 (N=151)	2011 (N=150)
Mean age at first injection (years)	18 (SD=5.1)	18 (SD=6.1)
First drug injected (%)		
Heroin	58	39
Amphetamine	39	56
Other drugs	3	5
Drug of choice (%)		
Heroin	68	60
Methamphetamine	15	19
Cannabis	9	11
Morphine	3	1
Cocaine	1	3
Other drugs	4	7
Drug injected most often in last month (%)		
Heroin	68	60
Methamphetamine	11	22
Morphine	7	1
Buprenorphine	10	14
Other drugs	4	3
Last drug injected (%)		
Heroin	67	59
Methamphetamine	13	21
Morphine	5	1
Cocaine	0	0
Buprenorphine	11	14
Other drugs	4	5
Frequency of injecting in last month (%)		
Weekly or less	25	28
More than weekly	35	36
Once a day	13	13
Two to three times per day	22	17
More than three times per day	5	3
Currently in drug treatment (%)	58	59

Source: IDRS PWID interviews

4.1. Current drug use

Thirty-four percent of respondents reported having injected drugs at least once per day in the preceding month in 2011 compared with 40% in 2010 and 37% of 2009 survey participants.

Eighty-eight survey participants (59%) reported receiving treatment for their drug use at the time of the survey. Methadone substitution therapy was the most common reported treatment amongst this group (59%, n=52), followed by buprenorphine-naloxone (Suboxone®) maintenance therapy (20%, n=12), then buprenorphine substitution therapy (Subutex®) (11%, n=10) and drug counselling (7%, n=6). The time-range of the current treatment episodes varied between two weeks and 20 years with a median of two years. Forty-one of 150 respondents denied ever having been in any form of drug treatment (27%).

Table 3 shows the self-reported lifetime drug use and that of the preceding six months (hereafter 'recent') of the PWID survey sample. Almost all respondents reported lifetime use of tobacco, methamphetamines, heroin, cannabis, alcohol and benzodiazepines.

The drugs most commonly reported as being used in the six months preceding interview were tobacco, benzodiazepines, heroin, cannabis and alcohol. The drugs most commonly reported to have been injected during the past six months were heroin (81%) and methamphetamine (65%).

The main reasons given by the 35% (n=52) of survey participants who reported most commonly injecting a drug other than their drug of choice were: their choice of drug is non-injectable (i.e. cannabis) (8%, n=12); that it was more available (7%, n=11); or that it was cheaper (6%, n=9).

Table 3: Drug use history and current patterns of drug use, 2011

	Ever used (%)	Ever injected (%)	Injected last 6mths (%)	Med. days injected* last 6mths	Ever smoked (%)	Smoked last 6mths (%)	Ever snorted (%)	Snorted last 6mths (%)	Ever swallowed+ (%)	Swallowed last 6mths+ (%)	Used^ last 6mths (%)	Med. days in treatment* last 6mths	Med. days used^ last 6mths*
Heroin	99	99	81	63	42	5	17	0	21	3	81		63
Homebake heroin	25	24	3	4	2	0	1	0	1	0	3		4
Any heroin (inc. homebake)	99	99	81	60	42	5	17	0	21	3	81		66
Methadone (prescribed)	71	15	4	9					69	40	40	180	180
Methadone (not prescribed)	57	18	6	2					50	17	21		3
Physeptone (prescribed)	3	1	0	0	0	0	0	0	3	1	1	0	21
Physeptone (not prescribed)	19	13	3	2	0	0	0	0	9	1	4		2
Any methadone/physeptone	85	31	9	5					82	49	52		180
Buprenorphine (prescribed)	47	32	7	93	2	1	1	0	43	7	9	180	123
Buprenorphine (not prescribed)	51	41	15	30	2	1	3	1	29	5	18		30
Any buprenorphine (exc. Buprenorphine-naloxone)	71	57	21	48	4	1	4	1	55	10	25		48
Buprenorphine-naloxone (prescribed)	49	27	8	20	0	0	0	0	45	19	21	180	150
Buprenorphine-naloxone (not prescribed)	53	37	19	7	1	0	1	0	32	13	29		5
Any buprenorphine-naloxone	75	51	25	14	1	0	1	0	57	28	43		26
Morphine (prescribed)	25	16	3	6	1	0	1	1	17	1	3	2	6
Morphine (not prescribed)	77	74	31	4	1	0	1	0	30	5	33		4

	Ever used (%)	Ever injected (%)	Injected last 6mths (%)	Med. days injected* last 6mths	Ever smoked (%)	Smoked last 6mths (%)	Ever snorted (%)	Snorted last 6mths (%)	Ever swallowed+ (%)	Swallowed last 6mths+ (%)	Used^ last 6mths (%)	Med. days in treatment* last 6mths	Med. days used^ last 6mths*
Any morphine	83	77	33	5	1	0	1	1	37	5	34		4
Oxycodone (prescribed)	19	11	6	42	1	1	0	0	15	3	8	117	35
Oxycodone (not prescribed)	75	68	34	3	1	1	0	0	31	7	37	80	2
Any oxycodone	81	69	36	4	1	1	0	0	39	9	41		3
Over-the-counter codeine	65	2	1	12	0	0	1	0	64	38	39		11
Other opiates (not elsewhere classified)	69	5	2	12	0	0	1	0	67	35	37		6
Speed powder	98	97	49	9	24	4	55	7	43	5	49		10
Amphetamine liquid	25	21	3	2					6	0	3		2
Base/point/wax	39	39	11	3	7	2	2	0	4	0	11		3
Ice/shabu/crystal	90	85	52	6	45	13	2	2	7	1	53		6
Any form methamphetamine#	99	98	65	16	53	15	56	7	45	5	65		18
Pharmaceutical stimulants (prescribed)	9	5	1	180	0	0	0	0	9	1	1		101
Pharmaceutical stimulants (not prescribed)	35	23	10	2	0	0	1	0	25	7	16		2
Any form pharmaceutical stimulants	39	25	10	2	0	0	1	0	30	7	16		3
Cocaine	69	50	13	3	9	1	41	6	10	1	17		3
Hallucinogens	76	6	1	3	1	0	1	1	76	7	7		4
Ecstasy	73	31	3	7	1	0	5	1	68	11	11		3
Alprazolam (prescribed)	31	3	0	0	1	0	1	0	30	19	20		178
Alprazolam (not prescribed)	81	11	7	5	1	0	1	0	81	62	63		9
Any form alprazolam	88	14	7	0	1	0	1	0	87	67	69		13

	Ever used (%)	Ever injected (%)	Injected last 6mths (%)	Med. days injected* last 6mths	Ever smoked (%)	Smoked last 6mths (%)	Ever snorted (%)	Snorted last 6mths (%)	Ever swallowed+ (%)	Swallowed last 6mths+ (%)	Used^ last 6mths (%)	Med. days in treatment* last 6mths	Med. days used^ last 6mths*
Benzodiazepines (prescribed)	75	7	1	1	1	0	1	0	75	45	46		180
Benzodiazepines (not prescribed)	73	9	1	3	0	0	1	1	71	45	47		10
Any form benzodiazepines	92	12	2	4	1	0	2	1	92	69	71		55
Seroquel (prescribed)	24	0	0	0	0	0	0	0	27	15	15		180
Seroquel (not prescribed)	56	1	1	1	0	0	0	0	56	30	30		5
Any form Seroquel	64	1	0	0	0	0	0	0	64	40	40		0
Alcohol	99	7	0	0					98	70	70		24
Cannabis	98										85		120
Inhalants	32										2		4
Tobacco	98										95		180
Steroids	8										1		52
Other drugs	14										11		6

Source: IDRS PWID interviews

^ Refers to any route of administration (injecting, smoking, swallowing and/or snorting)

* Among those who had used/injected

+ Refers to/includes sublingual administration of buprenorphine

Category includes speed powder, base, crystal/ice and amphetamine liquid (does not include pharmaceutical stimulants)

NR=Not reported

Ninety-seven percent of respondents (n=145) reported using at least one drug type on the day preceding interview, with the most commonly used drugs being reported as tobacco, cannabis, benzodiazepines, heroin and alcohol (Table 4).

Table 4: Drug use on day prior to interview, 2005-2011

Type of drug (%)	2005 (N=150)	2006 (N=150)	2007 (N=149)	2008 (N=150)	2009 (N=150)	2010 (N=151)	2011 (N=150)
Cannabis	48	44	42	53	43	51	59
Heroin	45	37	40	45	37	36	33
Alcohol	25	23	21	24	28	28	32
Benzodiazepines	27	18	31	30	23	17	37
Buprenorphine	25	17	12	10	16	9	12
Methadone	12	11	17	25	26	12	28
Buprenorphine-naloxone	-	3	3	8	5	7	14
Morphine	7	6	9	7	3	5	3
Other opiates	0	1	4	3	0	0	1
Antidepressants	14	1	7	4	9	6	8
Speed	9	15	10	13	8	8	3
Base	0	0	0	0	1	0	0
Crystal methamphetamine	0	1	2	2	3	1	8
Cocaine	1	1	1	3	2	0	0
Oxycodone	-	-	-	-	-	1	1

Source: IDRS PWID interviews

4.2. Heroin

4.2.1.1. Key points

- **Recent use by 81% of survey participants – this figure is stable compared to 2010, when it was 85%**
- **Median frequency of use decreased to 63 days from 74 days in 2010**
- **White or off-white rock was the most commonly used form of heroin**

4.2.2. Prevalence of heroin use

Heroin was the most widely used injectable illicit drug by the 2011 IDRS PWID respondents. Ninety-nine percent of the sample (n=149) reported lifetime use of heroin and 81% (n=122) reported recent use. The prevalence of recent heroin use among the

IDRS sample has remained relatively stable over the last five years. However, the percentage of respondents who nominated heroin as their main drug of choice in 2011 was 60%, which was lower than the 2010 sample where 68% selected it as their drug of choice. This change did not reach statistical significance.

Of the 445 survey participants interviewed in Victoria as part of the Australian Needle and Syringe Exchange Program Survey in 2010, 60% (n=265) reported that heroin was the last drug they had injected (Iversen, Topp et al. 2011).

Over the past five years, the percentage of NSP survey participants reporting heroin as their most recent drug of injection has fluctuated from as high as 61% in 2010 to a low of 36% in 2006.

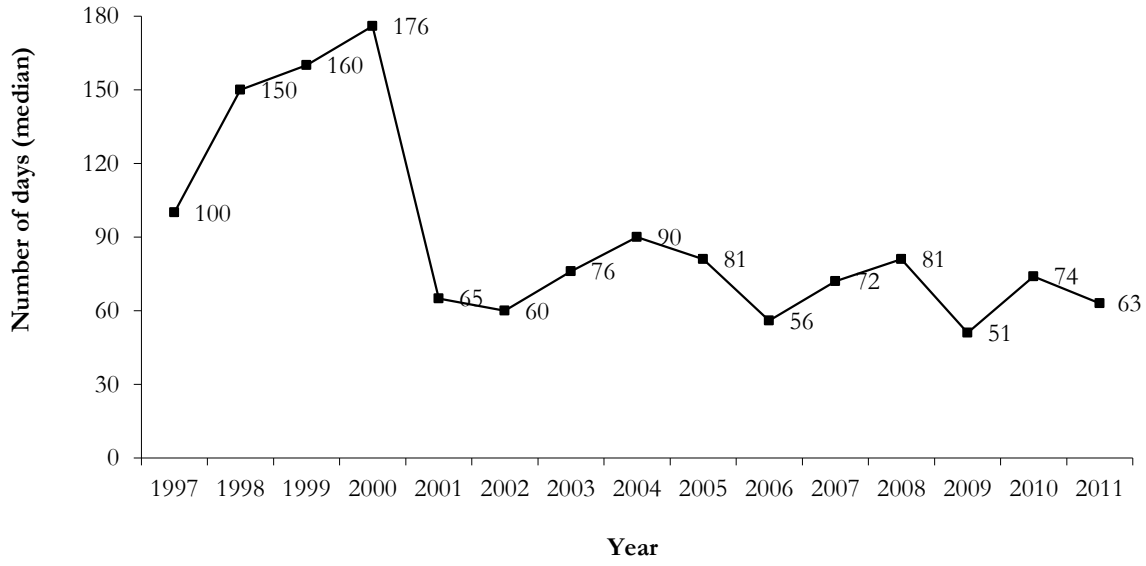
4.2.3. Current patterns of heroin use

One hundred and twenty-two survey participants (81%) in the 2011 IDRS survey reported recent heroin use, with all reporting recent injection. Very small percentages of recent heroin users also reported smoking heroin (heating heroin and inhaling the resulting vapours) (5%) and consuming heroin orally (3%). KE reported that the majority of heroin users were injecting the drug.

Whilst the frequency of recent heroin use decreased to 63 days from a median of 74 days in 2010, this decrease was not statistically significant (Figure 1).

As with previous years, the reported frequency of heroin use in the IDRS may be skewed by the significant proportion of survey participants accessing pharmacotherapy treatment, who may then be able to limit their heroin use to once or twice per week.

Figure 1: Number of days of heroin use in previous six months, 1997-2011



Source: IDRS PWID interviews

Few KE mentioned heroin as a problematic drug; however, most noted that they considered the heroin-using population to be somewhat stable. The demographic profile of heroin users, as described by these KE, was similar to that of previous years' samples: predominantly males, aged in their 20s to 50s, with low levels of education. Most KE described an 'ageing cohort' of heroin users who are facing a raft of age-related

health problems associated with their drug use. While this was seen by KE as having an impact on drug use (one KE called it a 'maturing out') whereby individuals are no longer capable of maintaining high levels of drug use and many are on pharmacotherapy programs, this doesn't have a positive impact on economic or social disadvantage as entering the workforce or gaining stable accommodation with little history in either of these areas becomes increasingly difficult with age. Similarly, the levels of physical disability experienced by these individuals further reduces their capacity to engage in meaningful activity, whether that be recreational or employment related.

KE reported that most heroin users with whom they had contact had experienced some level of interaction with the criminal justice system, with many having long criminal histories and health problems resulting from many years spent in prison. One KE described the heroin-using population as 'over-policed'. As noted above, the ageing cohort of heroin users described by KE means that longer incarceration histories are becoming more common.

As in previous years, heroin was noted to have a significant effect on all parts of a user's life, leading to BBVI and overdose risk, employment and housing issues, social support issues and mental and general health problems. High prevalence mental health disorders such as depression and anxiety were most commonly noted; however, KE considered that the incidence and severity of these disorders has been slowly increasing, without any increase in services available to this population. General health issues of particular concern to KE include injecting-related wounds, decreased liver function and poor oral health. These issues were noted as often compounded by ageing.

Some KE discussed the lack of ready access to opioid substitution therapy as being of particular concern. The importance of accessible services which are in close geographic proximity to where the individual spends their time was highlighted.

4.2.4. Forms of heroin used

The use of different coloured heroin may require an additional step, such as the use of citric acid or heating, in the preparation for injection. In 2011, IDRS survey participants were asked about the different colours and forms of heroin used recently and whether they used heat or acid to prepare the drug mix for their most recent injection.

Among those who reported recent heroin use, white or off-white rock was the most commonly used form (Table 5). There was a decrease from 2010 in terms of both percentages of respondents reporting powder use as well as those reporting use of brown/beige heroin.

Table 5: Colours and forms of heroin used in the preceding six months, 2010-2011

(Bracketed numbers on the right are from 2010 for comparison)

Heroin colour and form	Forms of heroin used in the preceding six months (n=122) (2010 (n=116))	Form of heroin most used in the past six months (n=121) (2010 (n=121))
White/off-white (%)		
Powder	25 (54)	8 (11)
Rock	89 (87)	79 (70)
Brown/beige (%)		
Powder	13 (31)	2 (1)
Rock	21 (60)	7 (18)
Other colour (%)		
Powder (yellow)	0 (0)	0 (0)
Rock (yellow)	7 (0)	3 (0)
Homebake heroin (%)	3 (5)	NR

Source: IDRS PWID interviews

One hundred and eighteen survey participants completed the questions relating to their most recent episode of heroin use. Fifteen (13%) reported using heat to prepare their most recent heroin injection, with heat predominantly being used to prepare brown or beige heroin (9 of the 13 respondents who reported the colour of heroin for which heat was used).

Recent IDRS have reported that the majority of heroin used in Melbourne is white or off-white rock. In accordance with this, in 2011, 79% of responding recent heroin users reported most frequently using white or off-white rock heroin. The number of participants reporting use of others forms of heroin dropped significantly from 2010, with large drops in use of white/off-white powder recorded (54% to 25%, $p<0.01$) and in use of brown/beige powder (31% to 13%, $p=<0.01$).

One law enforcement KE described heroin currently being seized in Melbourne as coming in ‘block’ form, which is similar to the shape of a house-brick and white or off-white in colour. These ‘blocks’ weigh about 350g each.

4.3. Methamphetamine

4.3.1. Key points

- **The prevalence of recent speed and base use among the 2011 IDRS survey participants (49% and 3% respectively) was consistent with 2010 figures. Reports of recent crystal methamphetamine use increased significantly since 2010 (53% vs. 36%). Amphetamine liquid use remained stable (3% vs. 3%)**
- **Frequency of recent pharmaceutical stimulant use remained stable**

4.3.2. Prevalence of methamphetamine use

Different forms of methamphetamine are currently available in Australia. The IDRS survey currently collects information from PWID on the use, price, purity and availability of the three main forms of methamphetamine: speed, base and crystal methamphetamine (ice), along with information on the use of amphetamine liquid and pharmaceutical stimulants (e.g. dexamphetamine).

It is estimated that around 2% of the Victorian population aged 14 years and over used methamphetamine in the 12 months prior to the 2010 NDSHS (Australian Institute of Health and Welfare 2011). However, as in previous years, almost all of the IDRS PWID survey respondents (98%, n=147) reported having ever used at least one of the three main forms of methamphetamine (speed, base or crystal methamphetamine). However, recent use of methamphetamines was reported by just over half of survey participants (53%, n=79), a figure similar to that reported in 2010 (58%), but a significant drop from 70% (n=105) in 2009 ($p<0.05$). While 20% of IDRS respondents reported methamphetamine to be their main drug of choice compared with 15% in 2010, this increase was not statistically significant.

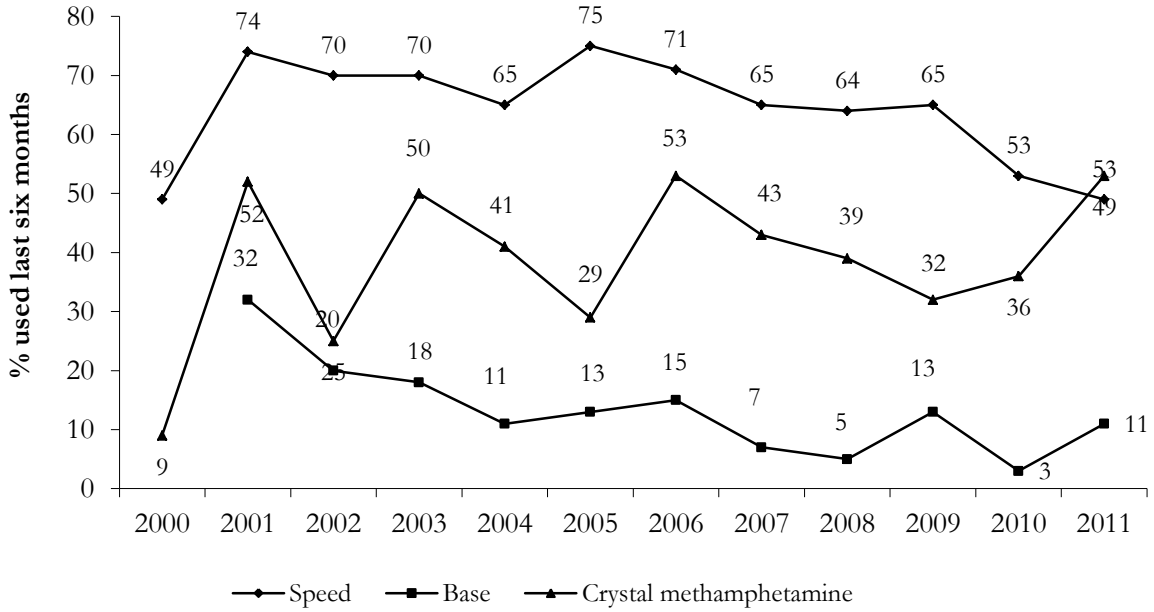
Reports of lifetime injection of methamphetamine were common, with 97% of survey participants reporting lifetime speed injection and 85% of survey participants reporting lifetime injection of crystal methamphetamine. However, there was a statistically significant increase in the percentage of survey participants reporting a form of methamphetamine as the drug most often injected in the last month (22%) in comparison with 11% in 2010 ($p<0.05$). While the percentage of IDRS respondents reporting a form of methamphetamine to be their last drug injected increased from 13% in 2010 to 21% in 2011, this difference was not statistically significant.

In 2010, 13% of the 445 NSP clients interviewed in Victoria as part of the Australian NSP survey reported that the drug they had most recently injected was methamphetamine (Iversen, Topp et al. 2011). The percentage of NSP survey interviewees reporting methamphetamine as their most recent drug of injection has decreased from a peak of 35% in 2006, with the 2010 figure being identical to the 2009 figure of 13%.

4.3.3. Current patterns of methamphetamine use

Ice was reportedly the most commonly used type of methamphetamine, recently used by 53% of respondents (Figure 2). This was a significant increase from the 2010 figure of 36% of survey participants ($p<0.01$). Similarly, there was a significant increase in the recent use of base methamphetamine from 3% in 2010 to 11% in 2011 ($p<0.01$). In contrast, reports of recent use of speed (49%) were stable in comparison with 2010 (53%).

Figure 2: Percentage of PWID reporting recent methamphetamine use, 2000-2011



Source: IDRS PWID interviews

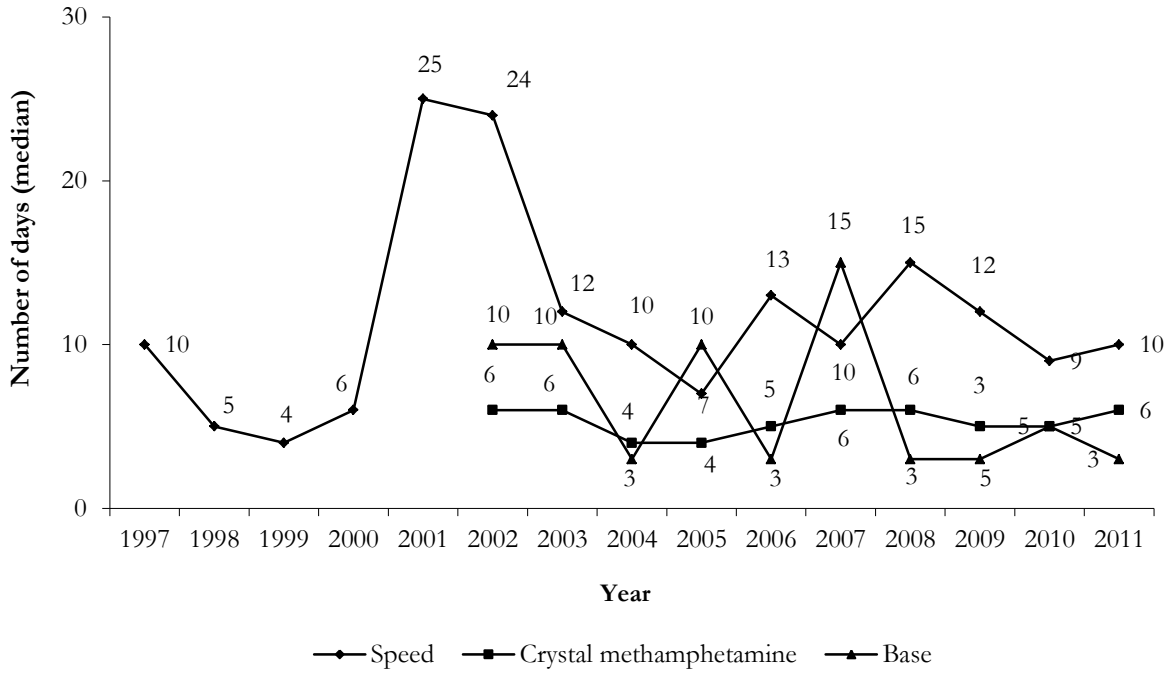
Injecting was the most commonly reported route of administration for methamphetamine, with recent injection of ice reported by 52% of respondents and recent injection of speed reported by 49%. Reports of recent injection of base, amphetamine liquid and pharmaceutical stimulants were uncommon. Reports of recent use of methamphetamine by other routes of administration were also uncommon, with only 13% of IDRS survey participants reporting recent smoking of ice and 7% reporting recent snorting of speed.

Methamphetamine was reported by a small number of KE as a particularly problematic drug class amongst the clients with whom they had contact in 2011. Primary concerns related to mental health issues, aggression and criminal behaviour amongst methamphetamine users. Primary methamphetamine users were described by KE as a distinctively separate group from primary heroin users. Primary methamphetamine users purchase drugs from different dealers and use in different patterns, for instance bingeing over a number of days without sleep.

KE suggested that anxiety and depression were common mental health issues amongst methamphetamine users, but raised particular concern with regards to drug-induced psychosis and the increased harms this can cause to both the individuals concerned and the broader community, for example through violence or aggression. Law enforcement KE described methamphetamine users going on 'crime sprees' that could last a number of days due to the stimulant and disinhibitory effects of the drug.

Frequency of reported recent methamphetamine use in 2011 was relatively stable compared with recent years (Figure 3).

Figure 3: Number of days of methamphetamine use in the previous six months, 1997-2011*



Source: IDRS PWID interviews

* Data not available for base and crystal methamphetamine prior to 2002

4.4. Cocaine

One hundred and three survey participants (69% of the sample) in the IDRS survey reported ever having used cocaine; however, only 25 survey participants (17%) reported recent use, which was similar to the number recorded in 2010. Four participants reported cocaine to be their drug of choice.

As in 2010, despite the low prevalence of current cocaine use amongst the IDRS sample, some KE mentioned that cocaine use appeared to be on the increase in Melbourne, albeit a slow and incremental increase. It was also suggested that whilst cocaine was traditionally used by a higher functioning, wealthier group of people who use drugs, consumption of this drug was now spreading beyond this demographic in some areas to use among PWID, particularly in combination with other drugs.

As in previous years, the most commonly reported route of cocaine administration was via injection, with 20 of the 25 recent cocaine users reporting injecting the drug (80% of recent cocaine users; 13% of the total sample). Thirty-six percent of recent users reported snorting cocaine in the previous six months and 4% smoking the drug.

Cocaine use was reported on a median of just three days (range=1-50 days) in the previous six months, a low figure similar to previous years, suggesting that cocaine use among PWID surveyed in Melbourne continues to be either opportunistic or experimental.

Twenty-four survey participants commented on the forms of cocaine that they had recently used. Of these, 20 (83%) reported using powder and nine (38%) reported using rock. Powder was also the form of cocaine most commonly used by 19 people (83%).

4.5. Cannabis

4.5.1.1. Key points

- **Cannabis remains the most frequently used illicit drug by the IDRS survey sample**
- **Frequency of use decreased significantly compared with 2010**

4.5.1.2. Prevalence of cannabis use

Just over nine percent of Victorians aged 14 years and over reported using cannabis within the 12 months preceding interviews for the 2010 NDSHS (Australian Institute of Health and Welfare 2011), making cannabis the most widely used illicit drug in the state. Cannabis was also one of the most widely used illicit drugs by survey participants in the 2011 IDRS, with 98% of survey participants (n=147) reporting lifetime cannabis use and 85% of survey participants (n=128) reporting recent use, a figure consistent with the 2010 survey where 81% of participants reported recent use.

As in previous IDRS surveys, questions related to cannabis were asked separately for hydroponic cannabis and bush (naturally grown) cannabis, as well as hashish/hashish oil (Jenkinson and O'Keeffe 2005; Jenkinson and O'Keeffe 2006; Jenkinson and Quinn 2007; Quinn 2008; Hornyiak, Dietze et al. 2009; Quinn 2009). One hundred and twenty-five respondents answered the questions on the forms of cannabis they had used, with 119 (95%) reporting use of hydroponically grown cannabis. Recent use of bush cannabis was much less common, reported by 38% of survey participants. Reports of the use of hashish or hashish oil were rare, reported by only 6% and 2% of survey participants respectively. Most respondents reported that hydroponically grown cannabis was the form of cannabis most used recently (94%, n=117). This was consistent with the 2010 finding of 89% of participants mostly using hydroponically grown cannabis.

4.5.2. Current patterns of cannabis use

Cannabis use was reported on a median of 120 days (range=1-180 days) among IDRS respondents who reported recent cannabis use. Of the 128 respondents who reported recent cannabis use, 52% (n=66) reported daily use of the drug.

No KE raised cannabis as being a particularly problematic drug; however, most noted that its use was prevalent among heroin users, which is consistent with the findings from the IDRS survey sample where the percentage using cannabis in addition to heroin remains stable over time at over 80%.

4.6. Other opioids

4.6.1. Methadone

For the purposes of the IDRS study, the category ‘methadone’ includes methadone syrup and methadone in tablet form (known as physeptone). Eighty-five percent of the 2011 IDRS survey participants (n=127) reported having ever used any form of methadone –either licit (prescribed) or illicit – a finding similar to previous years. Fifty-two percent of IDRS respondents (n=78) reported using any methadone during the six months preceding interview.

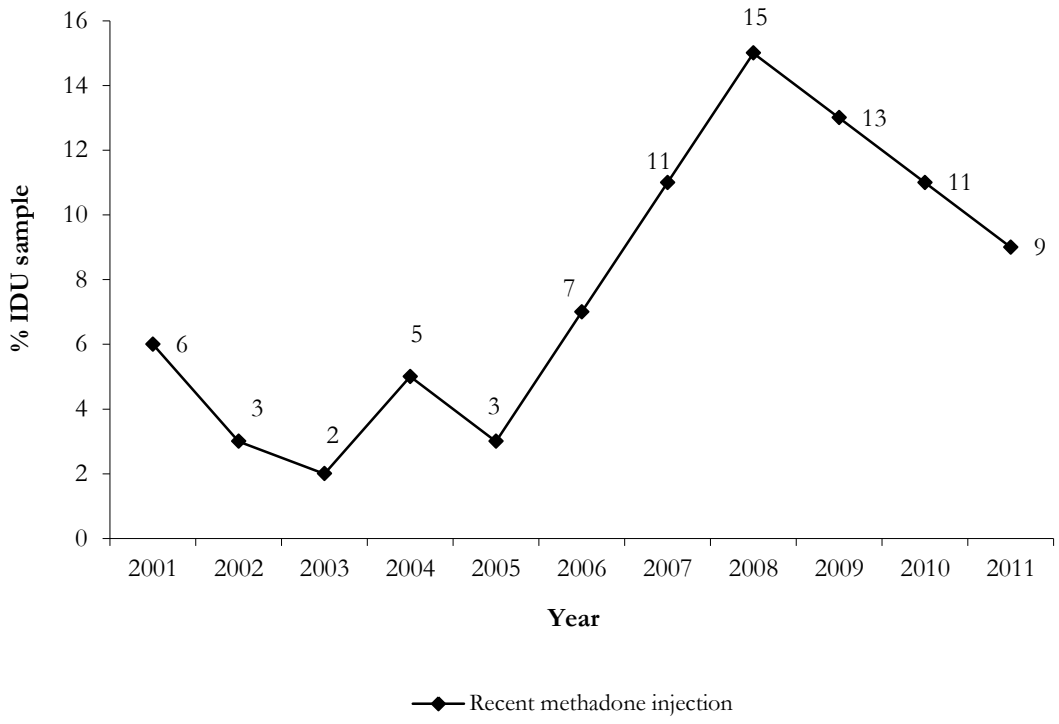
Reports of the lifetime use of illicit methadone were relatively frequent (57%, n=86). However, reports of recent illicit methadone use were less common, reported by 21%

(n=31) of all IDRS survey participants. While the percentage of IDRS respondents reporting recent use of illicit methadone increased since 2010, this increase was not statistically significant. Among survey participants who reported recent use of illicit methadone, use was reported on a median of only three days (range=1-48), a frequency identical to 2010.

Twenty-eight survey participants (19%) reported lifetime use of illicit physeptone and only six (4%) reported recent use. As in 2010, illicit physeptone use appears to be either experimental or opportunistic, with respondents reporting recent use on two days.

Lifetime injection of any methadone or physeptone was reported by just over a third of all IDRS survey participants (31%, n=47), with recent methadone or physeptone injection reported by 9% of all IDRS survey participants (n=14). The percentage of IDRS survey participants reporting recent injection of any methadone increased significantly between 2005-2008 ($p<0.05$), after which time it declined in each successive year. However, the 2011 figure was comparable to 2010 (Figure 4).

Figure 4: Percentage of PWID reporting recent methadone injection, 2001-2011



Source: IDRS PWID interviews

Among those reporting recent injection, illicit methadone syrup was the most common form used (50%), followed by licit methadone syrup (43%) then physeptone tablets (7%). Recent methadone injection was reported on a median of five days (range=1-30 days).

Some KE interviewed in 2011 regarded methadone as a specifically problematic drug; mainly on the grounds of the harms it causes when injected. This will be described in greater detail later in the report where other injecting-related harms are discussed.

4.6.2. Buprenorphine

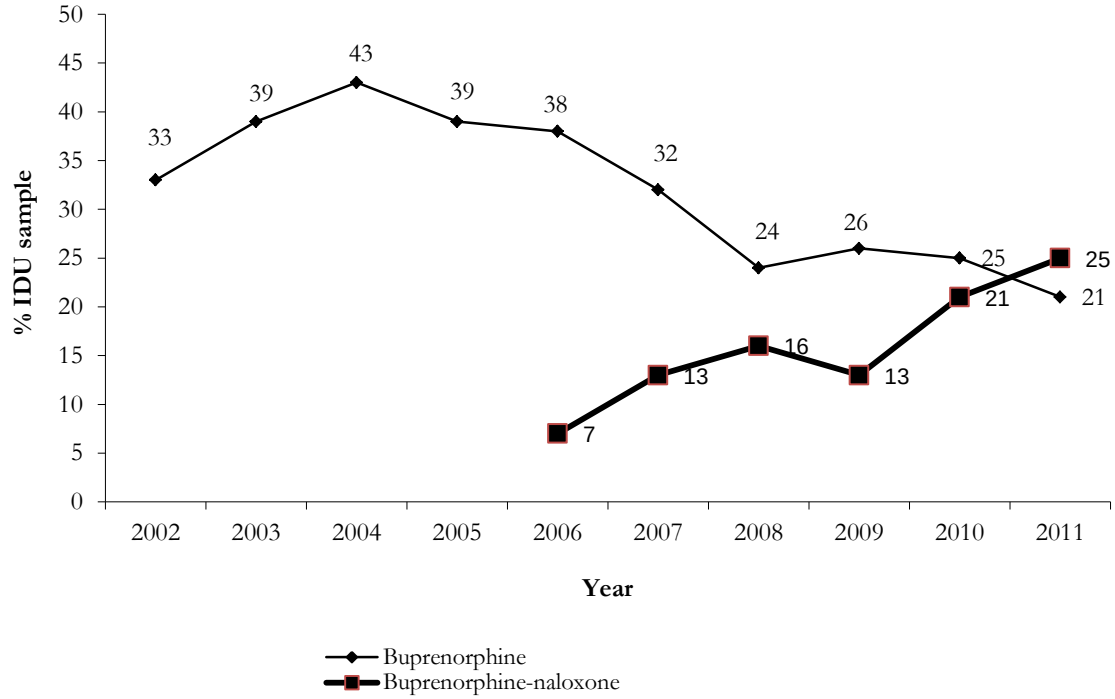
Around two-thirds of IDRS respondents reported lifetime use of buprenorphine (Subutex®) (71%, n=106) and 25% of respondents reported recent buprenorphine use (n=37).

As in previous years, respondents were asked about both prescribed (licit) and non-prescribed (illicit) use of buprenorphine. Fifty-one percent (n=76) of the sample reported ever using illicit buprenorphine and 18% (n=27) reported recent illicit buprenorphine use. The percentage of IDRS survey participants reporting recent illicit buprenorphine use was similar to that reported by the 2010 sample (31%). Frequency of reported illicit buprenorphine use was low at a median of 30 days (range=1-180 days), a figure identical to that found in 2010.

Twenty-two participants reported on why they used illicit buprenorphine with ten (45%) suggesting that this was to substitute for heroin or other opiates, six (27%) reporting that it was for self-treatment and four (18%) reporting that it was for the purposes of intoxication.

Lifetime injection of any buprenorphine (licit or illicit) was reported by 86 survey participants (57%) and recent buprenorphine injection was reported by 31 survey participants (21%). The percentage of IDRS survey participants reporting recent injection remained stable compared with 2010, following a period of significant decline from a peak of 43% in 2004 ($p<0.05$) (Figure 5).

Figure 5: Percentage of PWID reporting recent buprenorphine and buprenorphine-naloxone injection, 2002-2011



Source: IDRS PWID interviews

Reports of recent injection of illicit buprenorphine (15%, n=23) were more common than recent injection of prescribed buprenorphine (7%, n=10). However, recent injection of prescribed buprenorphine, on a median of 93 days (range=3-180 days), occurred more

frequently than recent injection of illicit buprenorphine, with a median of 30 days (range=1-180 days). Frequency of prescribed buprenorphine injection increased slightly from 2010, where injection was reported on a median of 84 days. Recent injection of illicit buprenorphine increased slightly from a median of 24 days in 2010. Neither of these increases reached statistical significance. The median frequency of injection of any form of buprenorphine was reported as 48 of the previous 180 days (range=1-180).

Some KE noted an increase in primary buprenorphine injectors (licit and illicit). These individuals tended to be older and clients of the site surveyed in the inner south of Melbourne.

4.6.3. Buprenorphine-naloxone

Initially, Subutex® was the only buprenorphine preparation available in Australia for the treatment of opioid dependence. A second sublingual preparation, Suboxone®, containing buprenorphine and naloxone, was approved by the Therapeutic Goods Administration (TGA) in July 2005 (Lintzeris et. al. 2006) and became available on the Pharmaceutical Benefits Scheme (PBS) in April 2006 (Australian Government Department of Health and Ageing 2006). Buprenorphine-naloxone was developed to limit the abuse potential of buprenorphine by reducing the potential for injection, especially by opioid-dependent users who are not in treatment (Lintzeris et. al. 2006). The advantage of buprenorphine-naloxone for some consumers is the potential for unsupervised dosing.

Three-quarters of the 2011 IDRS sample reported lifetime use of buprenorphine-naloxone (licit or illicit) (75%, n=112) and just under half reported recent use (43%, n=65). The percentage of survey participants reporting lifetime use of buprenorphine-naloxone was significantly higher ($p<0.05$) than that found in 2010 (62%), consistent with an increasing trend from 2007 (54% in 2009, 45% in 2008 and 33% in 2007). This increase is best attributed to the incrementally increasing number of PWID accessing buprenorphine-naloxone combined with a reduction in buprenorphine (without naloxone) prescribing.

Reports of lifetime use of licit buprenorphine-naloxone were less frequent than reports of illicit buprenorphine-naloxone use (reported by 49% vs. 53% of IDRS survey participants). Recent illicit buprenorphine-naloxone use was also more frequently reported by respondents than licit use (29% vs. 21% of respondents); however, this was not statistically significant. The median reported frequency of illicit buprenorphine-naloxone use was five days in the previous six months comparable to the median of six days found in 2010.

Fifteen survey participants responded to a question about why they most commonly used illicit buprenorphine-naloxone. Of these, seven (47%) suggested that it was to substitute for heroin or other opiates and five (33%) said that it was for self-treatment purposes.

In comparison to 2010, lifetime injection of buprenorphine-naloxone was reported by a significantly larger percentage of the 2011 IDRS sample (51%, n=76) in comparison to 2010 (36%, n=55, $p<0.01$). Recent buprenorphine-naloxone injection was reported by 38 survey participants (25%) (Figure 9). The increasing trend over time of recent buprenorphine-naloxone injection ($p<0.05$) probably reflects the increasing number of people being prescribed this medication, which in turn would influence both licit and illicit availability. Recent injection of illicit buprenorphine-naloxone was more commonly reported than recent injection of prescribed buprenorphine-naloxone (19%, n=29 compared with 8%, n=12). The reported frequency of buprenorphine-naloxone injection was slightly higher at 14 days than the 2010 result of 10 days for either licit or illicit buprenorphine-naloxone; however, this change was not statistically significant.

4.6.4. Morphine

Over four-fifths of IDRS survey participants reported lifetime use of morphine (83%, n=125), consistent with figures for previous years (83% In 2010). The percentage of survey participants reporting recent morphine use in 2011 (34%, n=51) was also similar to 2010.

Both lifetime and recent use of illicit morphine were more commonly reported than licit morphine (77% compared with 33% and 25% compared with 3%, respectively). There has been no significant change in the prevalence of recent illicit morphine use over the past eight years (Figure 6).

The reported frequency of recent illicit morphine use remained low, with use reported on a median of four days (range=1-180 days), slightly down from the 2010 figure of six days.

Thirty-four survey participants responded to questions regarding the reason for their illicit morphine use. Of these, 14 (41%) suggested that it was because they were away from home, 13 (38%) described using illicit morphine for self-treatment and seven (21%) used morphine to substitute for heroin or other opiates.

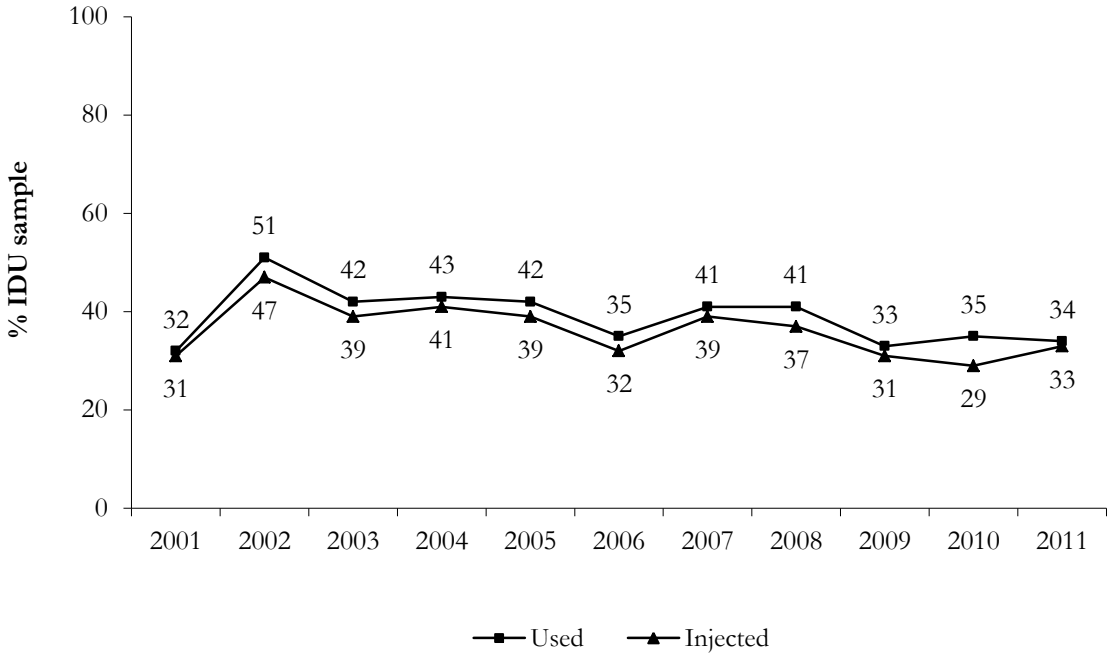
Survey participants in the 2011 IDRS most frequently reported injection as the mode of illicit morphine administration, with 31% of the sample (n=47) reporting recent injection and 74% (n=111) reporting ever injecting illicit morphine. In contrast, recent injection of licit morphine was reported by just 3% of the sample (n=5). Thirty percent of the survey participants (n=45) reported having ever swallowed illicit morphine with 5% (n=7) reporting recently swallowing illicit morphine.

The percentage of IDRS survey participants reporting recent morphine injection has remained stable since 2001 ($p>0.05$) (Figure 6).

Recent morphine injection was reported on a median of five days (range=1-180 days), a similar figure to 2010.

Forty-five survey participants reported the brand of morphine most commonly used recently, with 75% of respondents (n=33) reporting most commonly using MS Contin® and 16% (n=7) most commonly reporting using Kapanol®.

Figure 6: Percentage of PWID reporting recent morphine use and injection, 2001-2011



Source: IDRS PWID interviews

4.6.5. Oxycodone

In 2011, 81% (n=121) of IDRS survey participants reported ever having used a form of oxycodone, which is a significant increase from the 68% (n=102) who reported doing so in 2010 ($p<0.01$). There was an increase in reports of recent oxycodone use with 41% reporting this in 2011 in comparison to 31% in 2010 (n= 61 and 47 respectively), however this did not reach statistical significance.

Patterns of oxycodone use were similar to patterns of morphine use: lifetime illicit oxycodone use was more commonly reported than lifetime licit oxycodone use (75% compared with 19%) and similarly recent illicit oxycodone use (37%) was more commonly reported than recent licit use (8%).

The frequency of illicit oxycodone use remained low, with use reported on a median of only two days (range=1-180 days). While lower than the five days found in 2010, this difference was not statistically significant.

Of the 28 respondents who reported on the reasons that they were likely to use illicit oxycodone, fifteen (54%) reported using it for the purposes of intoxication, ten (36%) suggested that it was a substitute for heroin, seven (47%) that they used it to become intoxicated and eight (29%) that it was for self-treatment.

Participants in the 2011 IDRS most frequently reported injection as the mode of illicit oxycodone administration, with 36% of the sample (n=54) reporting recent injection. Recent oxycodone injection was reported on a median of four days (range=1-180 days), an identical figure to 2010.

Fifty-eight survey participants reported the brand of oxycodone most commonly used recently, with 55 naming Oxycontin and the remaining respondents naming Oxynorm, oxycodone (generic) and Endone.

KE described morphine and oxycodone use as stable but prevalent. Six KE reported opioids like morphine and oxycodone as being particularly problematic. Concerns relating to these drugs centred around the potential for injecting-related injury and disease, particularly skin wounds such as necrotic ulcers and abscesses. This is discussed in greater detail in the section on injecting-related harms.

4.6.6. Over the counter codeine

In 2011, 97% of survey participants reported a lifetime history of using OTC codeine. Fifty-eight respondents (39%) reported recently using OTC codeine, with a median of eleven days in the preceding six months. Only one respondent reported injecting OTC codeine recently. The main brands used were the ibuprofen-codeine combination product Nurofen Plus® (53%) and Panadeine® (21%).

4.6.7. Other opioids

Sixty-nine percent of survey participants (n=103) reported ever using other opiates (not elsewhere classified), with 37% (n=56) reporting recent use. This figure for recent use was significantly higher ($p<0.01$) than that found in 2010 (14%). In the 2011 sample, 44 of the 48 respondents who recently used other opiates reported that the main brand was Panadeine Forte® (92%). The other reported opiates recently used included tramadol, pethidine and codapine, though all in very small numbers. The method of administration of other opiates was also predominantly oral with 52 of the 56 recent users of other opiates reporting taking the drugs via this route (93%). Three participants reporting recently injecting other opiates.

4.7. Other drugs

4.7.1.1. Ecstasy

Just under three-quarters (73%, n=109) of survey participants reported having ever used ecstasy (3,4-methylenedioxymethamphetamine or MDMA) in their lifetime, with 11% (n=17) reporting recent ecstasy use. The prevalence of recent ecstasy use among the IDRS PWID sample has been decreasing significantly over time, from a peak of 39% in 2001 ($p<0.01$) to 5% in 2010. The increase seen in 2011 in comparison to 2010 failed to reach statistical significance.

Among those who reported recent ecstasy use, all reported using ecstasy in pill form (100%, n=16); however, three participants also reported using ecstasy in powder and cap form. Use of ecstasy was infrequent, reported at a median of three days (range=1-21 days) in the six months prior to interview.

Of those who reported recent ecstasy use, all reported taking it orally (n=17) and five reported administering it via injection (3%). One participant also reported recently snorting ecstasy. Overall, the prevalence of reported ecstasy injection was only 3%. This finding was concordant with that noted in 2010, in that there has been a significant decline in the percentage of IDRS survey participants reporting recent injection of MDMA from a peak of 21% in 2001 ($p<0.01$).

Reports of ecstasy injection were infrequent, with five survey participants reporting having injected ecstasy on a median of seven days (range=3-20 days).

While the PWID surveyed in the 2011 IDRS study were able to provide some information on ecstasy trends in Melbourne, a clearer picture of ecstasy use can be gained through

contact with other sentinel groups, such as psycho-stimulant or regular ecstasy users (REU). For the past eight years, the EDRS (formerly the Party Drugs Initiative or PDI), which employs a similar methodology to the IDRS study, has been conducted in every Australian jurisdiction. One component of this study involves the collection of information from REU on patterns of use and market characteristics of 'party drugs', including ecstasy, GHB and ketamine. Results from the 2011 EDRS study will be available in early 2012.

4.7.2. Hallucinogens

Just over three-quarters (76%, n=114) of the 2011 IDRS sample reported lifetime use of hallucinogenic drugs such as magic mushrooms and lysergic acid diethylamide (LSD). However, recent use of these drugs was rare, reported by just 10 survey participants (7%). Among those reporting recent use, 56% (n=5) reported mostly using mushrooms and 44% (n=4) reported using LSD. Six percent of survey participants (n=9) reported ever injecting any type of hallucinogen.

4.7.3. Benzodiazepines

In 2011, participants were asked about alprazolam (trade name Xanax®) separately from other benzodiazepines. This survey change means that lifetime and recent use of alprazolam are now in a separate category, thus reducing reports in the general benzodiazepines category. In this section, other benzodiazepines are reported first and alprazolam is addressed second.

As in previous years, the vast majority of survey participants in the 2011 IDRS survey reported having ever used any benzodiazepines, either licitly or illicitly (92%, n=138). Recent benzodiazepine use was also common, reported by 106 survey participants (71%) (Figure 7). The prevalence of recent benzodiazepine use was stable compared with recent years but remained under the peak that was reached prior to the withdrawal of temazepam gel capsules from the market in 2004.

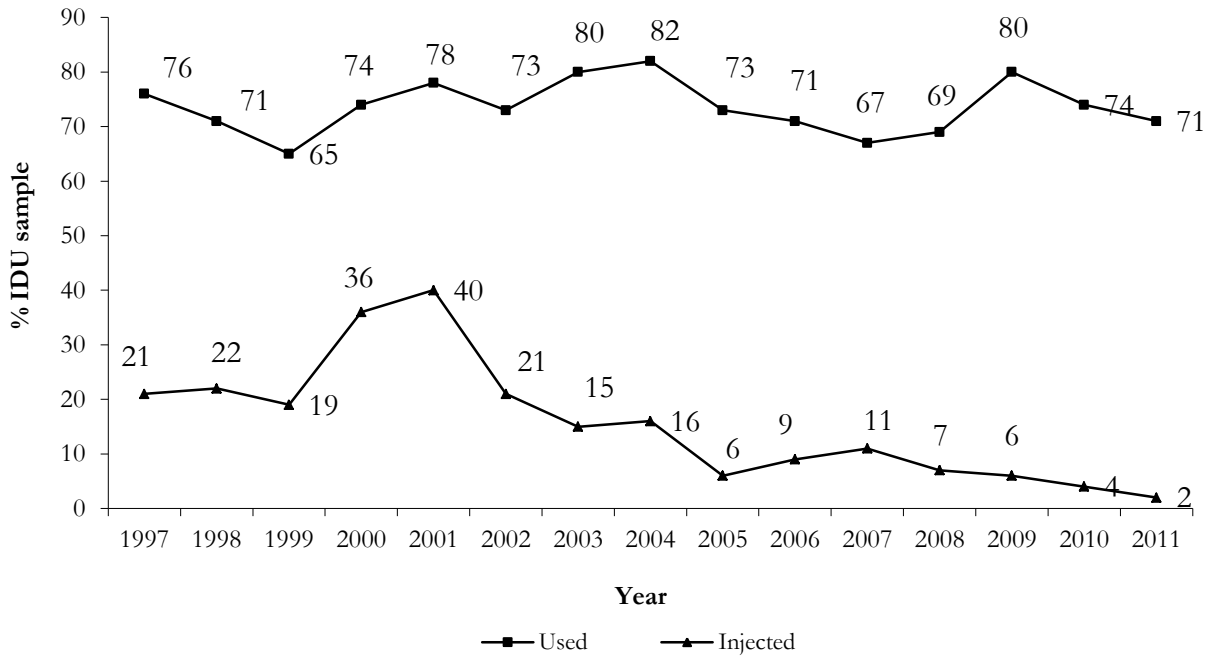
Reports of the recent use of illicitly obtained benzodiazepines (47%, n=71) occurred at the same frequency as those of licitly obtained benzodiazepines (46%, n=69). Of the 104 benzodiazepine users who commented, more than half reported using predominantly prescribed benzodiazepines (58%, n=60).

The reported frequency of benzodiazepine use differed between those who obtained prescribed benzodiazepines (median of 180 days, range=3-180 days), compared to those who predominantly used illicit benzodiazepines (median of 10 days, range=1-180 days). Whilst the median number of days of illicit use was similar to 2010 figures, the reported frequency of licit use rose from 90 days in 2010.

In 2011, 18 (12%) survey participants reported having ever injected any benzodiazepines (Figure 7). The percentage of PWID who reported recent benzodiazepine injection increased significantly between 1999 and 2001 ($p<0.05$), then decreased significantly between 2001 and 2004 ($p<0.05$). The reduction in this route of administration was probably reflective of changes made in May 2002 to the prescribing authority for temazepam on the PBS (Breen, Degenhardt et al. 2004) and also the impact of the Temazepam Injection Prevention Initiative implemented by the VDoH in November 2001 (Dobbin 2002). In March 2004, all temazepam gel-cap formulations were withdrawn from the market (Wilce, 2004). Reported rates of benzodiazepine injection significantly reduced over time since 2004 and in 2011 are at the lowest rates found in the IDRS ($p<0.01$). However, as noted above, any decrease this year may also be attributable to the removal of alprazolam from the general benzodiazepines category.

One hundred survey participants reported on the main brand of benzodiazepine used recently, with the most commonly used brand being Valium® (diazepam) with 85%.

Figure 7: Percentage of PWID reporting recent benzodiazepine use and injection, 1997-2011



Source: IDRS PWID interviews

Reports of lifetime use of alprazolam (88%) were only slightly less common than lifetime use of other benzodiazepines (92%), with a similar pattern evident for recent use (69% vs. 71% for alprazolam and other benzodiazepines respectively). Median reported days of use of alprazolam was 13 days, other benzodiazepines was also 13 days, whereas median days of use of any benzodiazepines including alprazolam was 96.

Compared to previous years, much fewer KE mentioned any form of benzodiazepine as being a particularly problematic drug. Three KE mentioned alprazolam as being a problematic drug; however, a number noted that while alprazolam use hadn't necessarily declined, the associated presenting problems had.

4.7.4. Anti-histamines

In response to ongoing reports on the use of Unisom® capsules (diphenhydramine hydrochloride) by KE in previous Victorian IDRS surveys, participants were prompted to speak about use of Unisom® under the category of 'other drugs'. Of the responding survey participants, sixteen reported ever using Unisom®, compared to 36 in 2010. All of the 2011 participants who had used Unisom® reported ever injecting the drug, as compared to 89% in 2010. Fifteen participants reported any recent use and 13 reported recent injecting. Only one KE in 2011 mentioned Unisom® as a problematic drug, with particular reference to the Vietnamese PWID community in the Richmond area. This KE described the "Vietnamese shuffle"; a reference to difficulty walking due to groin injecting of a combination of Unisom® and heroin.

4.7.5. Anti-psychotics

In 2010, several KE expressed concern about the antipsychotic quetiapine (Seroquel®) in particular, suggesting that there was an emerging street market and that this medication was being used by PWID without psychotic disorders. There was the

suggestion by KE that, although used by still relatively small numbers, the effects of the drug could be severe, especially with users appearing to become oblivious to the world around them. Behavioural change was also noted, not in terms of increased aggressiveness as is noticed with alprazolam, but with users becoming more 'unreasonable' and 'agitated'. As a result, both prescribed and illicit use of quetiapine was included as a separate category in the 2011 IDRS survey. Sixty-four percent (n=96) of the respondents reported ever using quetiapine, with 56% (n=84) of participants reporting having used illicit quetiapine and 24% (n=36) reporting use of prescribed quetiapine. Reports of injecting quetiapine were infrequent. Generally swallowed, 40% (n=60) of participants reported recent use of quetiapine, with 30% reporting recent use of illicit quetiapine and 15% reporting use of prescribed quetiapine, suggesting that illicit use is becoming prevalent amongst this group of PWID. However, use may be described as opportunistic rather than routine, with the median days of use of illicit quetiapine only five in the last six months.

4.7.6. Pharmaceutical stimulants

Thirty-nine percent of 2011 IDRS survey participants (n=59) reported ever having used any form of pharmaceutical stimulant and 25% (n=38) of ever having injected these drugs. A greater number of survey participants reported lifetime use of illicit pharmaceutical stimulants (35%, n=53) as opposed to licit (9%, n=13). Very small numbers of participants reported recent use of prescribed pharmaceutical stimulants. Of the 24 (16%) who reported recent use of illicit pharmaceutical stimulants, 15 (10%) reported injecting these. The median number of days of reported recent use of any form was three (range=1-180) and the median number of days of reported recent injection was two (range=1-180). All of these figures were similar to those reported in 2010.

4.7.7. Inhalants

Thirty-two percent of the 2011 IDRS survey participants (n=48) reported having ever used any inhalants; however, only three reported recent use. Inhalants used by these participants were amyl nitrite, rather than paint or glue.

4.7.8. Steroids

Twelve participants (8%) reported ever having used steroids. No reports of recent injecting of steroids were made. Recent steroid users noted using cortisone and testosterone and taking these orally. The cortisone was reported as having been prescribed. Two KE made reference to steroid users, with one indicating a cluster of steroid users around the Docklands area of Melbourne. Another KE indicated that steroid users collect large amounts of equipment; however, NSP workers are not well equipped to respond to the needs of steroid users, meaning there is a potential to alienate these service users through the application of inappropriate harm reduction messages.

4.7.9. Melanin

One KE reported concern about the use of injected melanin (a substance being used to pigment the skin and produce a fake tan). Similar to users of injected steroids, concerns were raised that users of melanin are unaware of safe injecting practices and do not perceive themselves as PWID, therefore currently targeted harm reduction messages are unlikely to be of benefit.

4.7.10. Alcohol and tobacco

Reported alcohol and tobacco use were both prevalent among this sample of PWID, in accordance with previous years. Ninety-nine percent (n=148) of the sample reported

lifetime alcohol use and 70% (n=105) recent use. Similarly, 98% (n=147) reported lifetime use of tobacco and 95% (n=142) recent use.

A small number of survey participants (n=10, 7%) reported having ever injected alcohol. However, nobody reported recently having injected alcohol.

The median number of days of alcohol use for this group was 24 days (or approximately once a week in the previous six months), the same as in 2010. Twenty survey participants (13%) reported drinking alcohol on a daily basis. Among the 140 survey participants who reported recent use of tobacco, 137 (98%) reported smoking daily, which was 91% of the entire sample.

Alcohol and tobacco use were noted by KE as stable and prevalent in this population.

5. Drug market: Price, purity, availability and purchasing patterns

5.1. Heroin

5.1.1. Key points

Price	**Cap: $50 compared with $50 in 2010** **Gram: $250 compared with $325 in 2010**
Availability	• **Heroin was considered easy or very easy to obtain by most IDRS survey participants, with availability stable over the past six months** • **Heroin was most commonly purchased through known dealers, with purchases generally made at an agreed public location**
Purity	• **IDRS respondents generally reported the purity of heroin over the past six months to be low (50%) or medium (32%), with purity generally remaining stable (39%) or decreasing (26%)** • **Average purity of drug seizures by Victoria Police was 18% (range=13%-28%).**

5.1.2. Price

Information relating to the price, purity and availability of heroin was supplied by 111 survey participants (74%) who felt confident in their knowledge of the heroin market. Median price estimates are based on participant reports of the price paid at last purchase.

In 2011, the quantity of heroin most commonly reported as recently bought was a half-gram, with the median price paid for this quantity at last purchase being $150 (range=$20-$350). Forty-one survey participants reported recently purchasing a 'cap' (~0.1g) of heroin, with the current median price of a cap reported to be $50 (range=$30-$100) (Table 6).

There were no significant changes between 2010 and 2011 in the price of any of the other reported heroin quantities (i.e. other than the price for a gram).

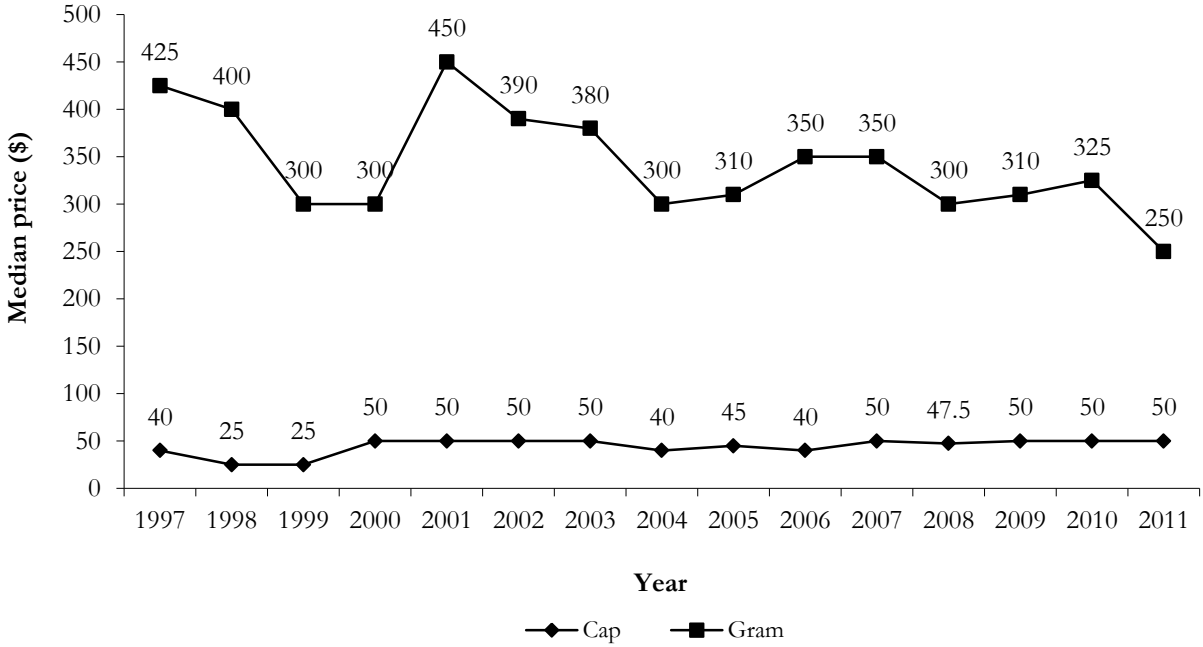
Table 6: Price of most recent heroin purchase, 2010-2011

Amount	Number of purchasers Median price ($) (range)	
	2010	2011
Cap	n=20 50 (20-100)	n=41 50 (30-100)
Quarter-gram	n=10 125 (100-150)	n=6 100 (70-150)
Half-gram	n=49 170 (100-350)	n=33 150 (20-350)
Gram	n=6 325 (200-400)	n=21 250 (150-450)

Source: IDRS PWID interviews

Figure 8 shows the median price of most recent purchase of heroin among survey participants in the Victorian IDRS between 1997 and 2011. The reported price of a cap of heroin has remained stable since 2000, at $40-$50. The reported price per gram of heroin has fluctuated, however, peaking at $450 in 2001, during the 'heroin drought' (Dietze and Fitzgerald 2002). The reported price for a gram of heroin has remained stable over the years 2005-2010 at $300-$350, but has dipped in 2011 to 250, the lowest figure since data collection commenced in 1997. This is a statistically significant change from 2010. This conflicts with the accounts of KE who all described the heroin market as stable, with no reportable change in the last twelve months in terms of price.

Figure 8: Median price of a gram and cap of heroin estimated from PWID purchases, 1997-2011



Source: IDRS PWID interviews

The majority of PWID who commented on the price of heroin reported that it was stable recently (73%, a figure comparable to the 74% who reported as such in 2010). This percentage remained higher than in some previous years (e.g. 41% in 2006). Smaller percentages of PWID reported that the price of heroin had either decreased (9%, n=10) or increased (7%, n=7) recently. Ten survey participants (9%) reported that the price of heroin had been recently fluctuating.

5.1.3. Availability

The majority of PWID respondents who commented on the availability of heroin (n=111) reported it as either very easy (57%) or easy (36%) to obtain at the time of interview. Over three-quarters of these respondents reported that heroin availability had been stable recently (77%). Four percent reported that heroin availability had fluctuated during that time.

About half of the survey participants reported that the last time they purchased heroin it was bought from a known dealer (53%) with smaller percentages reporting recently buying heroin from a friend (24%) or street dealer (17%). The most common venues for heroin purchase were at an agreed public location (30%), on the street (27%) or at a dealer's home (14%).

5.1.4. Purity

One hundred and twenty-three survey participants commented on current heroin purity, with most reporting purity to be low or medium (50% and 32% respectively). Smaller percentages reported that heroin purity was high (7%, n=8) or fluctuating (8%, n=9).

The same number of survey participants commented on whether they felt that heroin purity had recently changed, with around one-third reporting that purity had generally remained stable (39%). Around one-quarter of respondents felt that heroin purity had

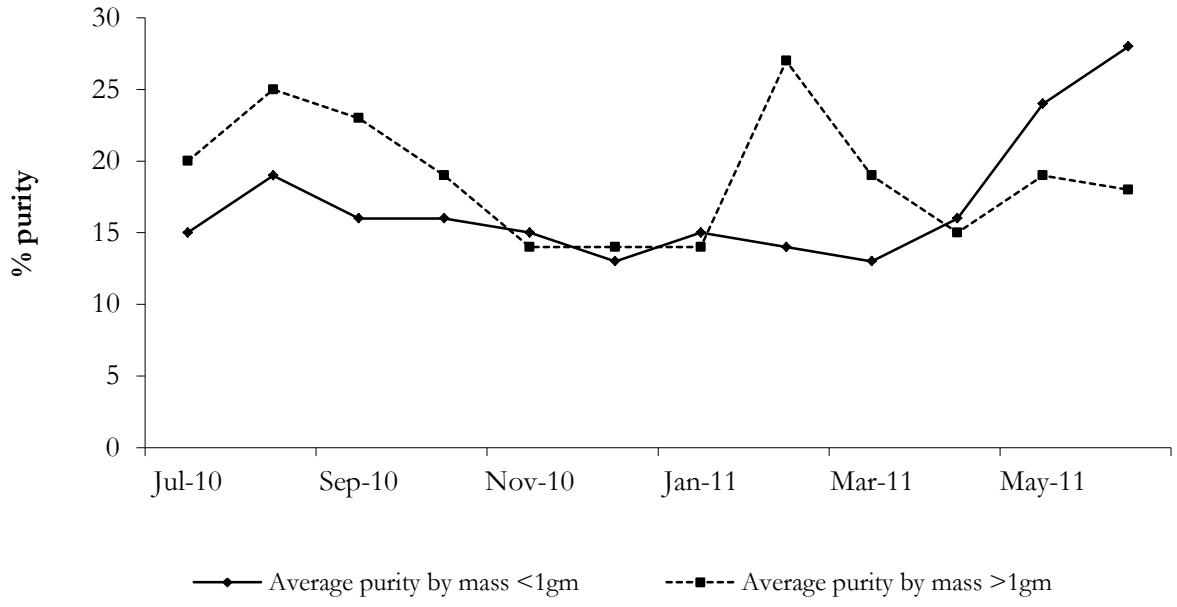
generally recently decreased (26%) and smaller percentages that heroin purity had increased or fluctuated (7% and 22% respectively).

All KE who commented on heroin suggested that it was readily available but that purity generally fluctuated. All KE who discussed heroin described the drug market as stable. Reports of recent overdoses in some areas were not made in the context of increasing purity, rather in relation to polydrug use. Overdose is discussed further in the section on drug-related harms.

The average purity level of heroin seizures (for <1g and >1g amounts) made by law enforcement agencies in Victoria during the 2010-2011 financial year is shown in Figure 9.

The overall average purity level of heroin seizures analysed between July 2010 and June 2011 was 18% (range=13%-28%). The average purity of smaller heroin seizures (<1g) was 17% (range=13%-28%), while the purity of larger seizures (>1g) was slightly higher (average=19%, range=14%-27%). The average purity of heroin seizures made during 2010-2011 was slightly lower compared with 2009-2010 (27%), 2008-2009 (22%), 2007-2008 (22%) and 2006-2007 (23%) and remains much lower than the average purities reported during the height of the heroin supply in Melbourne: 68% in 1998-1999, 60% in 1999-2000, 47% in 2000-2001 (Quinn 2008).

Figure 9: Average purity of heroin seizures by Victorian law enforcement, July 2010-June 2011



Source: Victoria Police Forensic Services Department

5.2. Methamphetamine

5.2.1. Key points

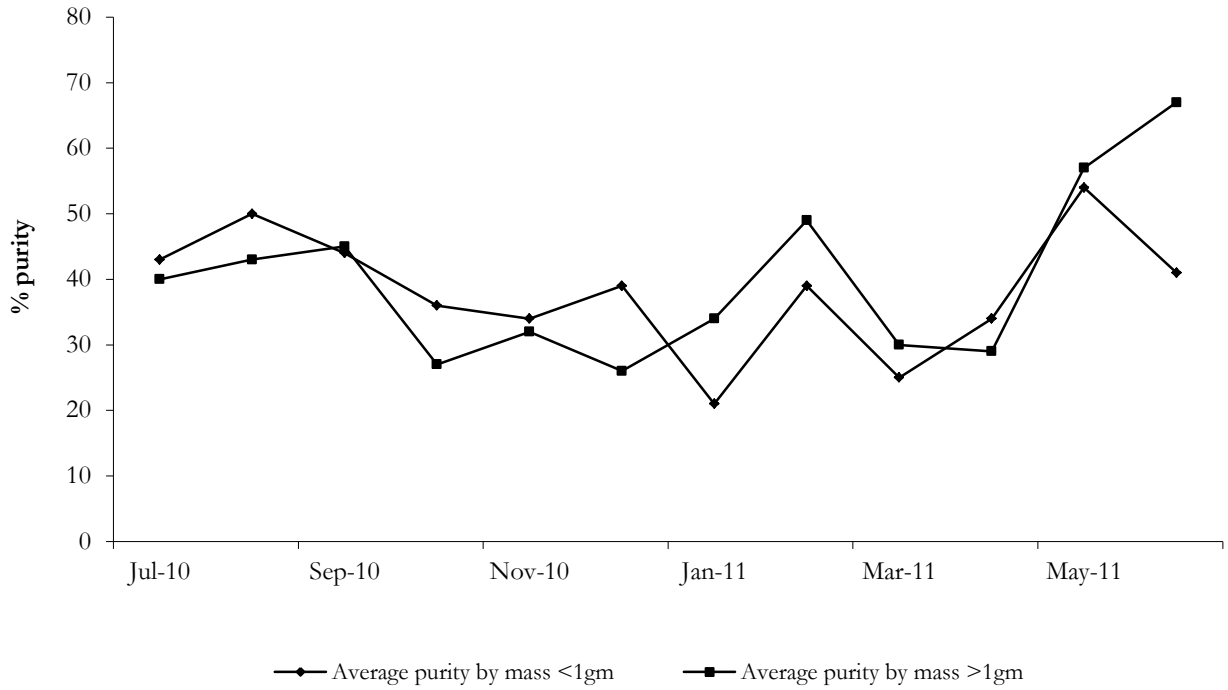
	Speed	Base	Crystal methamphetamine
Price			
Point (median)	**$50**	**-**	**$100**
Half-gram (median)	**$100**	**-**	**-**
Gram (median)	**$200**	**-**	**$800**
	• **Methamphetamine prices stable across forms for which data were available**		
Availability	• **Very easy to easy to obtain** • **Remained stable over past six months**	• **Stable but very small numbers reporting**	• **Very easy to easy to obtain** • **Mostly availability stable**
	• **Generally sourced from known dealers or friends**		
Purity	• **Low to medium** • **Purity stable, decreasing or fluctuating**	• **Medium to high** • **Stable**	• **Purity high to medium** • **Purity stable or fluctuating**
	• **Average purity of drug seizures 39%, higher than in previous years**		

The average purities of <1g and >1g methamphetamine seizures by law enforcement agencies in Victoria during the 2010-2011 financial year are shown in Figure 10. The average purity of small seizures (<1g) was 38% (range=21%-54%), while the average purity of larger seizures was slightly higher, at 40% (range=26%-67%).

The mean purity of all seizures of methamphetamine analysed in Victoria during the 2010-2011 financial year was 39%, which was substantially higher than in 2009-2010 (20%), 2008-2009 (12%) and higher than the few years before that (21% in 2007-2008, 18% in 2006-2007 and 19% in 2005-2006) (Jenkinson and O'Keeffe 2006; Jenkinson and Quinn 2007; Quinn 2008; Quinn 2009; Horyniak, Dietze et al. 2010). As noted by KE, current methamphetamine purity is high and this is reflected in much higher prices than those experienced previously, particularly where larger quantities are concerned.

As in previous years, there were very few amphetamine seizures (as opposed to methamphetamine seizures) made by law enforcement agencies in Victoria during the 2010-2011 financial year. The average purity of the amphetamine seized was also very low (4%, range=1%-12%), which was under half the average purity of the 2008-2009 financial year, but consistent with the 2009-2010 purity of amphetamine seizures.

Figure 10: Average purity of methamphetamine seizures by Victorian law enforcement, July 2010-June 2011



Source: Victoria Police Forensic Services Department

5.2.2. Price

Prices reportedly paid for speed, base and crystal methamphetamine by Melbourne PWID recruited as part of the IDRS in 2011 on the last occasion of purchase are presented in Table 7. The median price, price range and the number of respondents who reported purchasing each quantity recently are also shown.

5.2.2.1. Speed

Fifty-seven survey participants (38%) were able to comment on the current price of speed.

Prices reported for the three most commonly purchased quantities of speed have remained relatively stable since 2003. In 2011, the median reported price of a point of speed was stable at $50, the same price as 2010. Reported prices for a half-gram and gram of speed remained stable and consistent with 2010 prices as well.

Of the 57 survey participants who commented on recent changes to the price of speed, the majority (68%) reported that the price of speed had remained stable. Nine percent of the sample reported that the price of speed had increased and 3% said that it had decreased. Seven percent considered that the price of speed was fluctuating.

5.2.2.2. Crystal methamphetamine

Sixty-one survey participants (41% of all IDRS respondents) were able to comment on the current price of crystal methamphetamine. Points were the most commonly reported purchase amount, reportedly purchased for a median price of $100 (range=$50-$120) (Table 7). The reported price of a point was consistent with 2010.

Sixty-one survey participants also commented on changes to the price of crystal methamphetamine, with 56% (n=34) reporting that the price had remained stable, whilst 28% of respondents (n=17) reported that the price of crystal methamphetamine had been increasing recently.

Table 7: Price of most recent methamphetamine purchase, 2010-2011*

Amount	Speed		Crystal methamphetamine	
	2010	2011	2010	2011
Point	n=13	n=24	n=19	n=53
(0.1 gram)	50	50	100	100
	(20-100)	(20-100)	(40-150)	(50-120)
Half-gram	n=26	n=20	n=8	n=10
	100	100	500	400
	(50-150)	(75-150)	(400-500)	(50-600)
Gram	n=8	n=32	-	n=14
	200	200	-	800
	(100-350)	(100-500)	-	(350-1000)

Source: IDRS PWID interviews

*Base prices are not reported due to only very small numbers of participants being able to report recent purchase of this drug. Similarly, insufficient numbers of respondents were able to quote a price for recent purchase of a gram of crystal methamphetamine in 2010

5.2.2.3. Base

Very few survey participants were able to comment on the base market, meaning that prices have not been reported. The four respondents who were able to comment on the price of base all reported that the price had remained stable recently, which is consistent with findings from 2010.

5.2.3. Availability

5.2.3.1. Speed

Fifty-seven PWID were able to comment on the current availability of speed, with most reporting easy availability (very easy to obtain: 32%, n=18); (easy to obtain: 42%, n=24), but some reporting that speed was difficult to obtain (19%, n=11) or very difficult to obtain (7%, n=4). This was stable compared to 2010. Seventy-five percent (n=43) of survey participants responding to this section suggested that ease of access was stable, with a further 14% (n=8) suggesting that it was more difficult in the preceding six months. KE considered that availability of speed was consistent, as was the uncovering of labs and seizures of the drug.

Of the 57 survey participants who described their most recent speed purchase, the majority reported purchasing speed from a friend (40%, n=23) or known dealer (35%,

n=20). Small numbers of survey participants reported purchasing speed from a street dealer (12%, n=7). The most commonly reported venues for speed acquisition were at a friend's home (28%, n=16), an agreed public location (23%, n=13) and a dealer's house (21%, n=12).

5.2.3.2. Crystal methamphetamine

The majority of those who commented on the current availability of crystal methamphetamine (n=61) reported that it was very easy (41%, n=25) or easy (39%, n=24) to obtain at present. The remaining eleven respondents reported access to be difficult (11%) or very difficult (7%). Of those survey participants who commented on recent changes to crystal methamphetamine availability, over two-thirds reported it to be stable (67%, n=41) and 15% reported that it was becoming increasingly easy to obtain (n=8).

Crystal methamphetamine was reportedly most commonly purchased from friends (52%, n=32) and known dealers (33%, n=20) and most commonly purchased at a friend's home (28%, n=17) or an agreed public location (23%, n=14).

5.2.3.3. Base

Only five survey participants were able to comment on methamphetamine base, with a range of responses recorded that are too small to be reported upon. All respondents suggested that the ease of access had been stable over the preceding six months.

5.2.4. Purity

5.2.4.1. Speed

In 2011, 30% of the survey participants able to comment on speed purity reported the current purity of speed to be low (n=17) with a further 39% suggesting that it was of medium purity (n=22). Thirty percent (n=17) of respondents reported the purity to be stable whilst a further 25% (n=14) suggested that it was decreasing. Twenty-eight percent suggested that the purity of speed fluctuated (n=16).

5.2.4.2. Crystal methamphetamine

Of the 61 survey participants who commented on the current purity of crystal methamphetamine, most reported it to be high (49%, n=30) or medium (30%, n=18). Most respondents also reported that the purity was stable (39%, n=24) or fluctuating (28%, n=17).

5.2.4.3. Base

Of the five respondents able to comment on perceived purity of base methamphetamine, responses that purity was high, medium and low were reported. Four noted that the purity of base had been stable over the preceding six months.

5.3. Cocaine

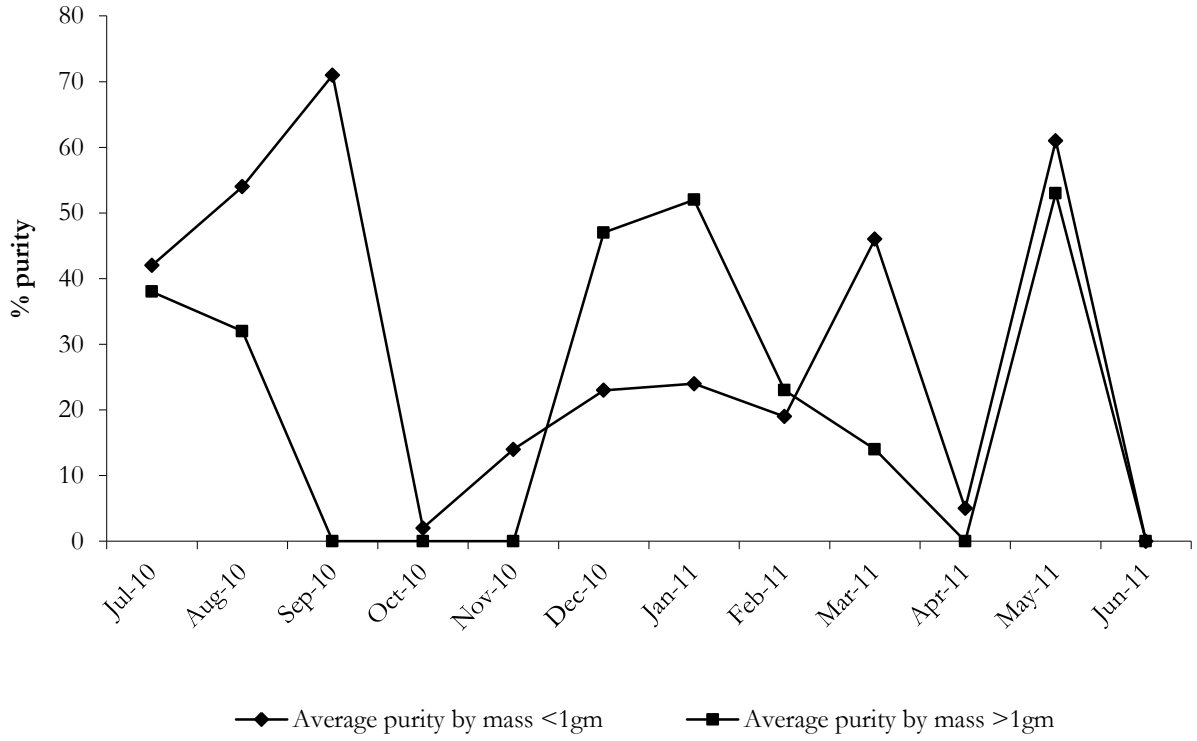
As in 2010, just eight survey participants (5% of the entire IDRS sample) were able to comment on the market characteristics of cocaine. As such, it is difficult to interpret trends from these data. No survey participants reported on the price of a a cap of cocaine (in 2010 this amount was reported to cost $100 and in 2009 it was $50). Seven survey participants had bought a gram of cocaine, with a median price of $400 (range=$150-$500). Five of the respondents thought that the price of cocaine was stable (63%).

Respondents described a range of purity levels. Four of these suggested that the purity was stable (50%).

While two KE talked about a slight increase in use among their client group, one KE described a slight decrease in presentations. One KE noted that Vietnamese organised crime syndicates are now selling cocaine, where they had previously only sold heroin.

The average purity levels of cocaine seizures analysed by law enforcement agencies in Victoria during the 2010-2011 financial year are shown in Figure 11. The average purity of cocaine seizures weighing less than one gram was 30% (range=5%-71%), while the average purity of larger seizures (>1 gm) was slightly lower, at 22% (range=14%-53%). The mean purity of all cocaine seizures overall was 26%. The average purity of cocaine seizures had remained stable at 30%-44% since 2000 (Horyniak, Dietze et al. 2010), but has dipped slightly in 2010-2011.

Figure 11: Average purity of cocaine seizures by Victorian law enforcement, July 2010 to June 2011



Source: Victoria Police Forensic Services Department

Reports about cocaine availability were mixed. Four of the eight respondents suggested that recent access to cocaine is stable (50%). Cocaine seizures were suggested by KE to be changing, with some recent large seizures, which hadn't been experienced previously.

Four responding survey participants purchased cocaine last time from friends (50%, n=4). The source venue of these eight purchases was distributed across friend's homes, street market, an agreed public location or a dealer's home.

5.4. Cannabis

5.4.1. Key points

Price	• **Prices generally remained stable at $20/gram for both hydroponic and bush cannabis** • **Price per ounce remained stable for hydroponic cannabis ($250), but decreased from $220 to $210 for bush cannabis (compared with 2010)**
Availability	• **Both hydroponic and bush cannabis reported to be easy or very easy to obtain** • **Availability mostly stable** • **Both cannabis forms commonly purchased through known dealers or friends; however, study participants were more likely to report purchasing bush cannabis at a street drug market**
Potency	• **Hydroponic: Medium to high and stable** • **Bush: Medium to high and stable**

5.4.2. Price

Information related to the price, purity and availability of hydro cannabis was reported by one hundred and four survey participants and 11 respondents reported on these market characteristics for bush.

In 2011, the most commonly purchased quantity of hydroponic cannabis during the six months preceding interview was a gram, with the median price reportedly paid for this quantity at last purchase being $20 (range=$15-$30). Fifty-nine survey participants reported recently purchasing a quarter ounce of hydroponic cannabis, with the median price paid being $80 (range=$50-$150). The most commonly purchased amount of bush cannabis was a gram, the median price of which was $20, for which all respondents indicated they had paid the same price.

The median reported prices of other commonly purchased hydroponic and bush cannabis amounts are shown in Table 8. There do not appear to be any significant changes between 2010 and 2011 in the reported price of most of the cannabis quantities – with any apparent differences deriving from only small numbers of reports, precluding statistical testing.

Table 8: Price of most recent cannabis purchase, 2010-2011

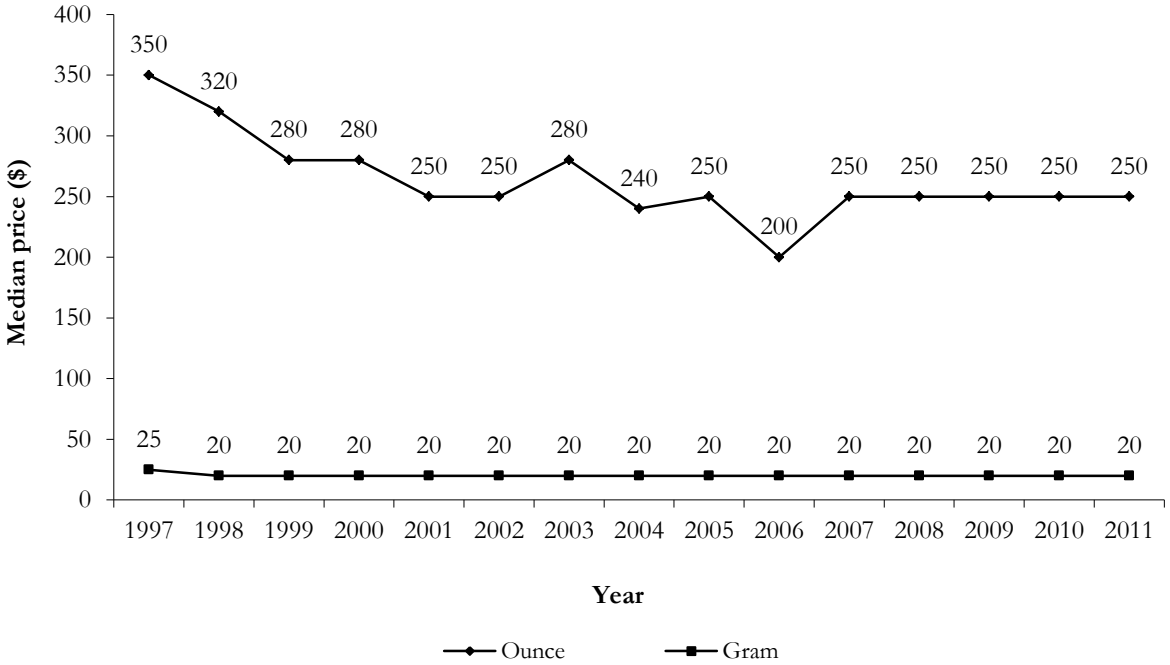
Amount	Number of purchasers Median price ($) (range)			
	Hydroponic		Bush	
	2010	2011	2010	2011
Gram	n=24	n=61	n=5	n=8
	20 (15-25)	20 (15-30)	20	20 (20)
Three grams	n=1	n=20	n=0	NR
	50	50 (50)		
Quarter-ounce	n=25	n=59	n=7	NR
	80 (50-90)	80 (50-150)	70 (70-150)	
Half-ounce	n=9	n=40	n=3	NR
	130 (80-150)	135 (70-200)	150 (120-200)	
Ounce	n=19	n=44	n=1	n=4
	250 (200-400)	250 (160-360)	220	210 (200-250)

NR: numbers too small to be reported (<4)

Source: IDRS PWID interviews

Figure 12 shows the median reported price of a gram and an ounce of cannabis as reported by IDRS survey participants over the past decade. While the reported price of a gram of cannabis has remained stable at $20, the price per ounce has been less consistent. The reported price of an ounce of cannabis has remained stable at $250 since 2007, following a low of $200 in 2006.

Figure 12: Median price of a gram and ounce of cannabis estimated from PWID purchases, 1997-2011*



Source: IDRS PWID interviews

*2003-2011 prices reflect those for hydroponic cannabis only (the form most often used)

The majority of survey participants who commented on the price of cannabis reported that the price of both hydroponic and bush cannabis had remained stable recently: 79% (n=78) and 80% (n=8), respectively.

5.4.3. Availability

Ninety-nine survey participants commented on the availability of hydroponic cannabis, with most reporting that it was either very easy (56%, n=55) or easy (33%, n=33) to obtain. Eighty-three percent of PWID who commented on the availability of hydroponic cannabis reported that availability had remained stable recently. KE consistently reported that cannabis was readily available and generally sold in small amounts at the street level.

The involvement of Vietnamese organised crime syndicates in the production and distribution of cannabis via the use of 'hydro houses' was reported by one KE to be a new element in the profile of this drug.

Eleven survey participants were able to comment on the availability of bush cannabis. Five respondents reported that bush cannabis was difficult to obtain (45%). Most reported that availability had remained stable recently (55%, n=6).

Hydroponically grown cannabis was most frequently sourced the most recent time through friends (45%) or known dealers (42%), whilst naturally grown cannabis was most recently sourced through friends (60%) or acquaintances (20%).

The locations where survey participants reported making their most recent cannabis purchase included a friend's home (27% of hydroponic purchases and 10% of bush purchases), a dealer's home (27% hydroponic and 10% bush), or an agreed public location (19% hydroponic and 10% bush). Recent purchases of hydroponic cannabis

were most frequently reported as being made via a street market 13% (n=13) or via home delivery (11%).

5.4.4. Potency

Eighty survey participants reported on the current potency of hydroponic cannabis, with the majority reporting it to be high (55%, n=54) and a smaller number reporting it to be medium (34%, n=34). When asked to comment on recent changes to the strength of cannabis, the majority of IDRS survey participants reported that it had remained stable (65%, n=64). In contrast, the potency of bush cannabis was more likely to be reported as medium (63%, n=7). However, again, the majority of respondents to this section suggested that the potency of this form of cannabis was stable (55%, n=6).

5.5. Methadone

Only five survey participants were able to comment on the price, purity and availability of illicit methadone syrup and no survey participants were able to comment on physeptone tablets. Not more than one participant gave any one response regarding a particular cost for a particular amount of methadone, meaning that reporting any prices is not appropriate.

Three of the five respondents who commented on the price of methadone reported that the price had remained stable recently and five reported that methadone was easy to obtain. Recent availability of methadone was reported as stable by four survey participants.

5.6. Buprenorphine

Twenty-five survey participants (17%) were able to comment on the market characteristics for illicit buprenorphine. Respondents (n=17) who reported purchasing eight milligrams of buprenorphine reported paying a median price of $20 (range 20-40). This was consistent with the 2010 price for 8mg. Nineteen participants described the price of illicit buprenorphine as being stable. Twenty-five survey participants commented on the availability of illicit buprenorphine, with a wide range of responses. Most commonly, it was described as easy to obtain (40%, n=10). Twenty-four percent (n=6) described it as either very easy or difficult to obtain, respectively. Fifty-six percent of respondents (n=14) described the availability as stable in the past six months.

At last purchase, survey participants reported that illicit buprenorphine was most commonly purchased from friends (42%, n=10) or street dealers (33%, n=8), with purchases made either at a street drug market (46%, n=11) or at an agreed public location (25%, n=6).

5.7. Buprenorphine-naloxone

Nineteen survey participants (13%) were able to answer questions about the price and availability of illicit buprenorphine-naloxone. A price of $5 for 2 mg of buprenorphine-naloxone was reported by four survey participants, while the median of the prices reported by 12 survey participants for 8 mg of buprenorphine-naloxone was $20 (range=$10-$20). Fourteen of the 19 survey participants who commented on the price of illicit buprenorphine-naloxone reported that the price of this drug had remained stable recently. Illicit buprenorphine-naloxone was reported to be very easy or easy to obtain by the majority of those who commented (53%, n=10 and 32%, n=6 respectively), with availability reportedly remaining stable recently (63%, n=12).

Buprenorphine-naloxone was reported as most commonly purchased through friends (47%, n=9) and via street market locations (37%, n=7).

5.8. Morphine

Thirty-five survey participants (23% of the sample) were able to comment on the price and availability of illicit morphine.

Prices paid for the two most commonly purchased brands of morphine, MS Contin® and Kapanol®, on the last occasion of purchase by Melbourne PWID are presented in Table 9. The most commonly purchased amount of morphine reported in 2011 was 100mg of MS Contin®, the same as in 2010. The reported price of 100mg of MS Contin® was stable at $50 compared with 2010. Of the 35 survey participants who commented on the price of illicit morphine, the majority reported that it had remained stable recently (54%, n=19).

Among the 35 survey participants who commented on the availability of illicit morphine, most considered that it was easy to obtain (54%, n=19), however 20% (n=7) described it as difficult to obtain. Most respondent; however, agreed that the availability of illicit morphine had recently remained stable (57%, n=20). A smaller number reported that it had become increasingly difficult to obtain (22%, n=8).

Illicit morphine was reported to be most commonly purchased through friends (51%, n=18) or street dealers (20%, n=7), with transactions generally made at a friend's house (29%, n=10), in the street market (26%, n=9) or at an agreed public location (17%, n=6).

Table 9: Price of most recent morphine purchase, 2010-2011

Amount*	Number of purchasers Median price ($) (range)			
	MS Contin®		Kapanol®	
	2010	2011	2010	2011
10mg tablet	n=5 5	-		-
20mg capsule	-	-	n=10	n=3
			10	25 (15-30)
30mg tablet	n=12	n=4 15 (15-30)	-	-
	15 (10-20)			
50mg capsule	-	-	n=13	n=4
			25 (20-30))	30 (25-30)
60mg tablet	n=16	n=16 30 (10-60)	-	-
	30 (15-60)			
100mg tablet/capsule	n=22	n=26	n=14	n=12
	50 (20-100)	50 (20-100)	50 (30-50)	40 (30-80)

Source: IDRS PWID interviews

* MS Contin® comes in the form of 5mg, 10mg, 30mg, 60mg and 100mg tablets, while Kapanol® is produced in 20mg, 50mg and 100mg capsules. Only one survey participant reported purchasing 5mg tablets of MS Contin® - data not shown

5.9. Oxycodone

Twenty-eight survey participants (19% of the sample) were able to comment on the market characteristics of illicit oxycodone.

As in 2010, the most commonly reported purchase amount of OxyContin® was 80mg. The reported price for this amount of oxycodone was $40, the same as that found in

2010. Most reported that the price of illicit oxycodone had remained stable recently (71%, n=20).

Table 10: Price of most recent oxycodone purchase, 2010-2011

Amount	Number of purchasers Median price ($) (range)	
	2010	**2011**
10mg tablet	n=5 5 (5-10)	n=3 10 (5-30)
20mg tablet	n=5	n=5
	10 (10-15)	10 (10-25)
40mg tablet	n=7	n=11
	20 (20-40)	20 (15-35)
80mg tablet	n=11	n=21
	40 (40-50)	40 (30-80)

Source: IDRS PWID interviews

Perceptions were varied among the 20 survey participants who commented on the availability of illicit oxycodone, twelve reporting that it was easy to obtain (43%) and ten reporting that it was difficult to obtain (36%). However, it was generally agreed that availability had remained stable (75%, n=21).

Illicit oxycodone was most commonly reported as being purchased through friends (46%, n=13) or street dealers (36%, n=10), with transactions generally made in the street market (43%, n=12) or at a friend's home (36%, n=10).

6. Health-related trends associated with drug use

6.1. Overdose and drug-related fatalities

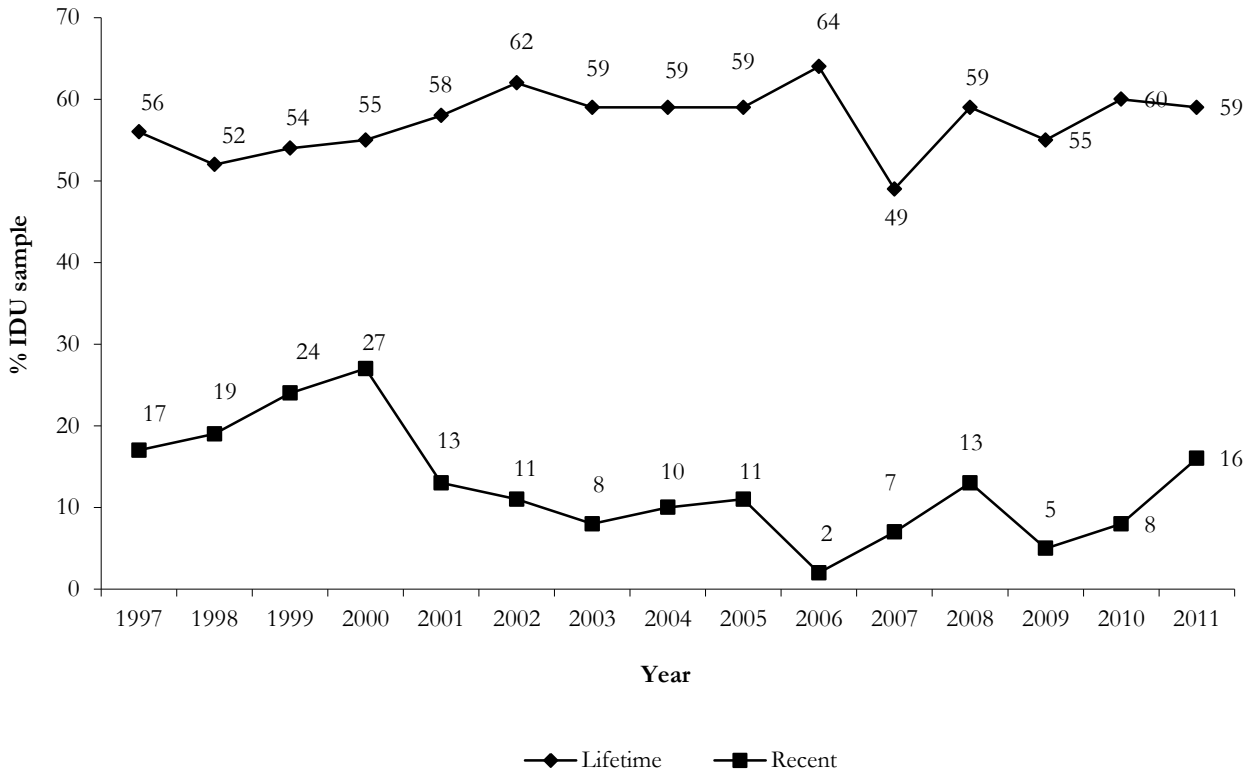
Information about overdose is collected from a number of different sources including IDRS survey participant self-reports, forensic databases and patient care records (PCR) completed by Melbourne paramedics (which are recorded on a database maintained by Turning Point).

6.1.1. Heroin

6.1.1.1. Self-reported overdose

The prevalence of lifetime and recent self-reported heroin overdose among IDRS survey participants from 1997 to 2011 are shown in Figure 13. In 2011, more than half of all survey participants (59%, n=88) reported that they had ever experienced a heroin overdose. These figures were similar to those reported in 2010. However, recent (i.e. in the last 12 months) heroin overdose was reported by significantly more individuals in the 2011 IDRS (16%) compared to 2010 (8%, $p<0.05$).

Figure 13: Self-reported experience of heroin overdose, 1997-2011



Source: IDRS PWID interviews

The median reported length of time since last overdose was four years (range=1 month-22 years), with survey participants reporting having experienced a median of one overdose in their lifetime (range=1-30). Eighty-seven survey participants provided further information about their most recent heroin overdose, with 64% (n=56) reporting having

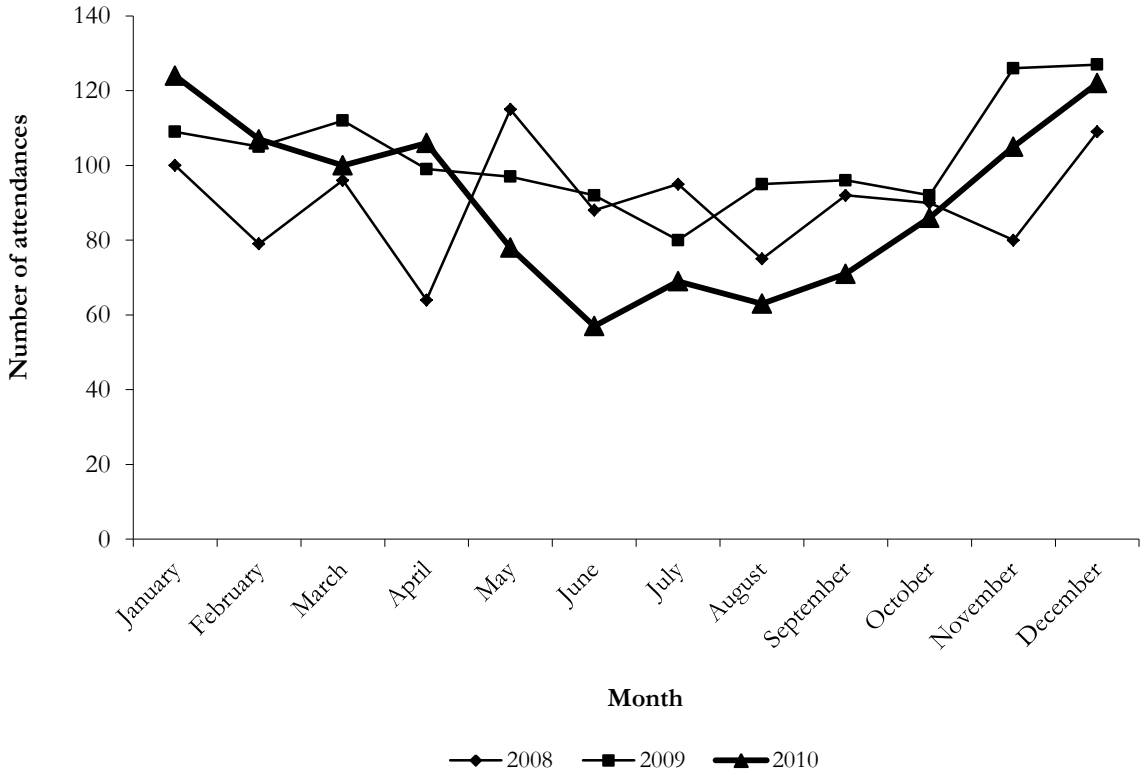
been administered naloxone (the fast-acting opioid antagonist given to reverse the effects of heroin overdose) at their last overdose.

6.1.1.2. Non-fatal heroin overdose attended by ambulance

Figure 14 shows the number of non-fatal heroin[5] overdoses attended by Ambulance Victoria (AV), by month between January 2008 and December 2010 in the greater Melbourne area. The non-fatal heroin overdose case numbers reported are for those patients who respond to the heroin antagonist naloxone. During 2010, there were 1,088 non-fatal heroin overdoses attended by the AV, slightly lower than the previous year's total (1,230). The average number of attendances per month decreased from 103 (range=80-127) in 2009 to 91 (range 57-124) in 2010. Monthly numbers of non-fatal heroin overdoses attended by ambulances in Melbourne continue to remain significantly lower than the peak of 461 recorded in December 1999 (Jenkinson, Miller et al. 2004).

The median age of a non-fatal heroin overdose case in 2010 was 33 (range=16-96). There has been a slow incline in the median age over the decade from a median of 28 years in 2002.

Figure 14: Number of non-fatal heroin overdoses attended by AV, Melbourne, 2008-2010



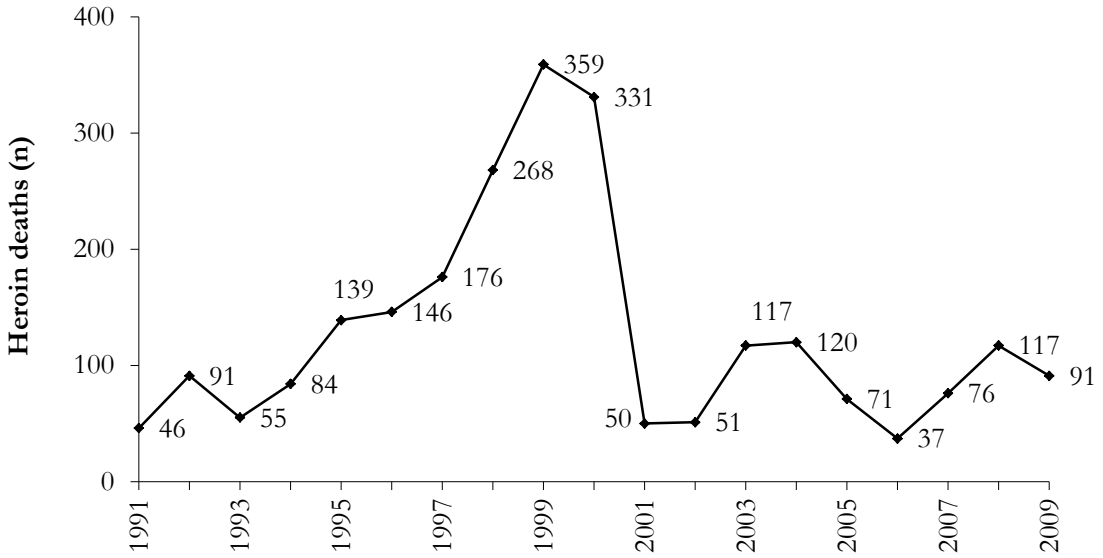
Source: AV; Turning Point Alcohol and Drug Centre

[5] Note that this figure may include non-fatal overdoses for other opiates including heroin, as all of these respond to naloxone.

6.1.1.3. Heroin-related deaths

The data for trends in heroin-related mortality in Victoria are summarised in Figure 15 which shows an increasing trend in the number of heroin-related deaths in Victoria throughout the 1990s, before a dramatic decline in numbers between 2000 (n=331) and 2001 (n=50). The sharp decline in fatalities from 2000 to 2001 is consistent with the timing of what is known as a severe period of reduction in Melbourne's heroin supply (Fry and Miller 2001). During 2001 to 2004, the number of heroin-related deaths in Victoria again increased (to figures similar to those seen in the early to mid-1990s). However, since 2005 the figures have vacillated between 120 and 37, remaining much lower than the peak of 359 reported in 1999. In 2009, there were 91 reported heroin-related fatalities in Victoria (Victorian Department of Health 2011).

Figure 15: Heroin-related deaths in Victoria, 1991-2009



Source: VDoH, 1991-2008; National Coroner's Information System, 2009

6.1.2. Other drugs

6.1.2.1. Self-reported overdose

Thirty-four survey participants (23%) reported ever overdosing on any drugs other than heroin, with the median number of overdoses experienced being two (range=1-40). Participants reported having last overdosed on any other drugs a median of six years prior to interview (range=1 month-20 years).

Seven survey participants reported overdosing on any drugs (excluding heroin) during the year preceding interview.

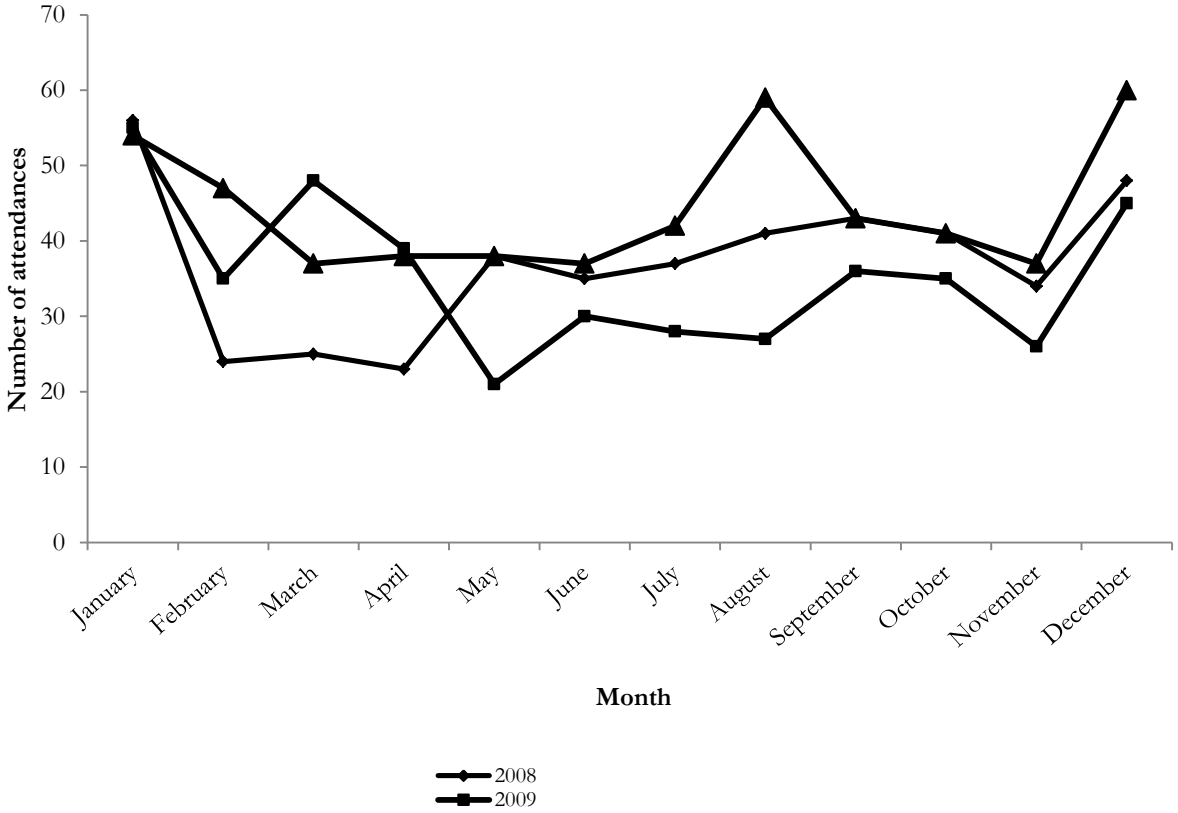
6.1.2.2. Other drug-related events attended by ambulance

In contrast to heroin overdose, where response to naloxone is used at the definitive indicator of heroin overdose in the data above, non-heroin drug-overdose cases are only recorded when the drug names are specifically mentioned by the paramedics on the patient care record (PCR). Therefore, the figures reported here should only be

interpreted as indicators and are likely to significantly under-report the actual number of people who had used these drugs and were subsequently attended by paramedics.

During 2010, paramedics reported attending a total of 533 amphetamine-related events, 108 more than the previous year (425). The number of attendances per month varied between 37 and 60 with an average of 44, compared with 2009 where the average was 35 (range=21-55) (Figure 16). The median age of cases was 26 years (2-60 years), slightly older than 2009's 25 years.

Figure 16: Number of ambulance attendances where amphetamines were mentioned, Melbourne, 2008-2010



Source: AV; Turning Point Alcohol and Drug Centre

In 2010, the number of ambulance attendances for cocaine-related events decreased from the previous year's total of 104 to 54, which was similar to 57 reported in 2008 and 60 in 2007. The number of cocaine-related events attended by ambulance officers has doubled since 2003 (23 attendances). The median age of cases presenting with cocaine-related events remained roughly stable at 30 years (range=15-54 years).

6.2. Drug treatment

6.2.1. Heroin

6.2.1.1. ADIS

During the 2010-2011 financial year, 54,457 courses of treatment were delivered to 28,207 clients[6] in Victorian specialist alcohol and drug services[7]. The total number of courses of treatment increased slightly from 2009-2010 (53,960), but the number of clients reduced by 12%.

Approximately 12% of the courses of treatment delivered to 12% of clients were for heroin-related problems, making heroin the most frequently occurring drug of concern after alcohol (47% of courses of treatment delivered to 45% of clients) and cannabis (23% of courses of treatment delivered to 22% of clients).

6.2.1.2. DirectLine calls

During 2010, DirectLine responded to 40,101 calls; a drug of concern[8] was identified in 20,717 of these calls (52%). Heroin was identified as a drug of concern in 2,440 calls, representing 12% of all drug-identified calls to DirectLine that year. The percentage of drug-related calls where heroin was identified as a drug of concern steadily decreased from 1999 to 2002 and has remained fairly stable since then (Figure 17).

An additional 6,706 calls were made in 2010 where other opioids were identified as a drug of concern (32% of all drug-identified calls). The percentage of drug-identified calls regarding other opioids[9] remained relatively stable in comparison to previous years (Figure 17).

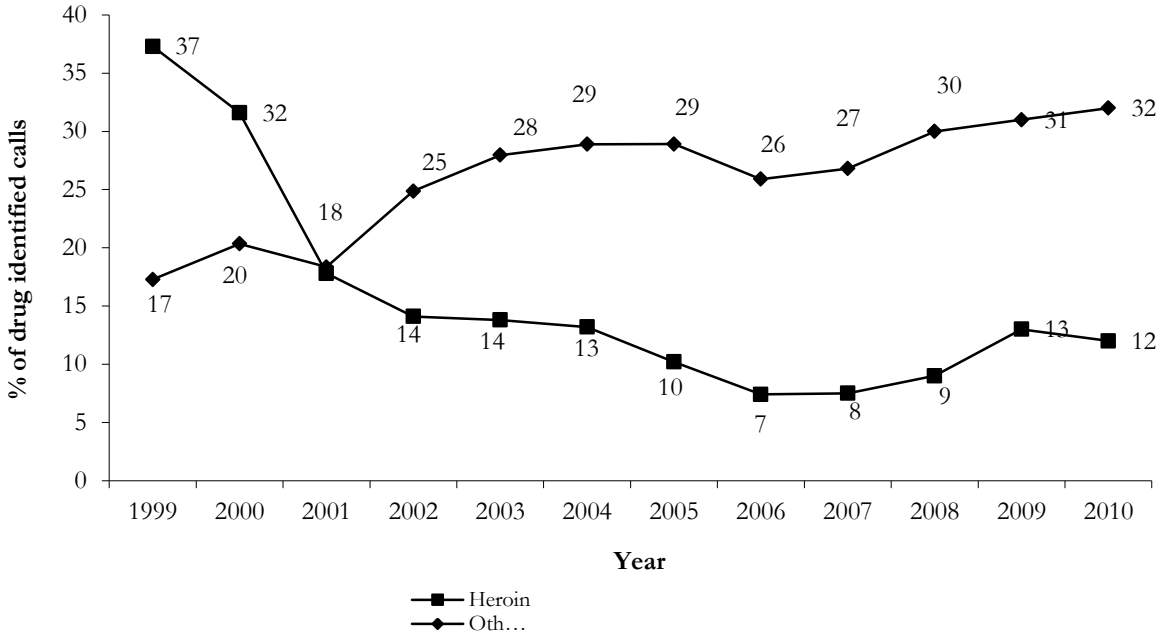
[6] Clients in specialist alcohol and drug services include both drug users and non-users. Non-users may include partners, family or friends.

[7] Federal and state government funded.

[8] A caller or user may have more than one drug of concern and totals have been adjusted for multiple drugs of concern.

[9] Other opioids include: licit and illicit methadone, buprenorphine, buprenorphine-naloxone, morphine and codeine.

Figure 17: DirectLine calls where the drug of concern was identified as heroin or other opioids, 1999-2010



Source: DirectLine; Turning Point Alcohol and Drug Centre

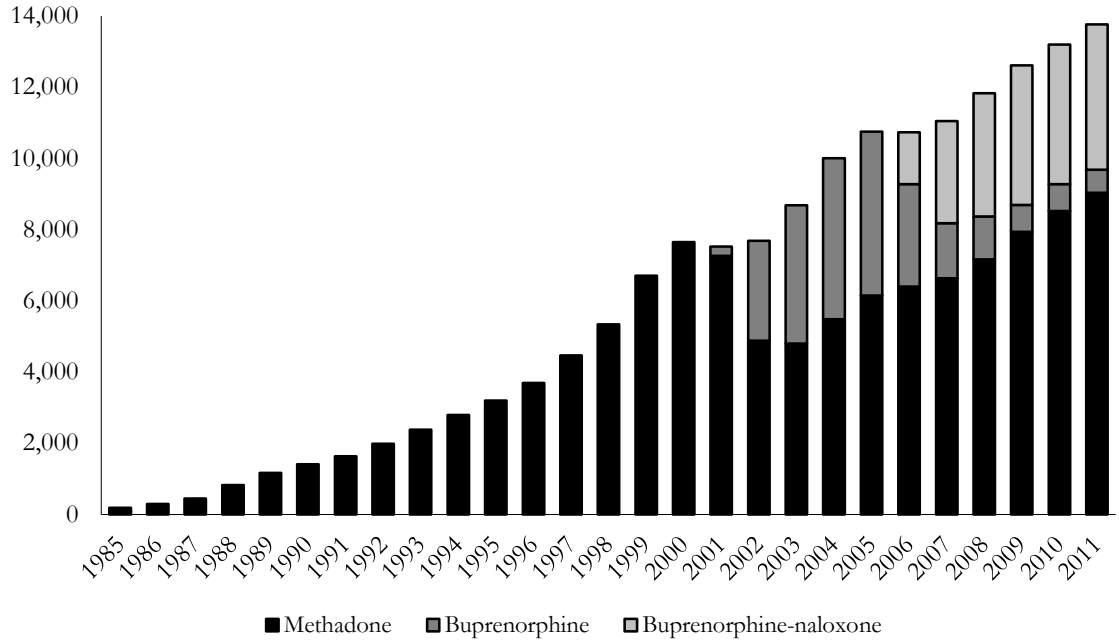
6.2.1.3. Pharmacotherapy consumers

The Drugs and Poisons Regulation Group at the VDoH records the annual number of methadone, buprenorphine and buprenorphine-naloxone clients in Victoria. These numbers are monitored through a phone census of all prescribing pharmacies.

The number of clients prescribed methadone maintenance therapy increased steadily from 181 in 1985 to over 7,500 clients in 2000 (Figure 18). In 2001, buprenorphine first became available on the PBS and was prescribed to 258 clients. Over the next five years, the number of clients prescribed buprenorphine increased dramatically, peaking at 4,605 in 2005, while the number of clients prescribed methadone decreased accordingly, dropping to as low as 4,795 in 2003. Buprenorphine-naloxone became available on the PBS in 2006 and since that time a large number of buprenorphine consumers have been transferred to the combination product.

In 2011, 13,763 clients were recorded as being on pharmacotherapy programs, with the largest percentage prescribed methadone (66%, n=9,030). Around one-third of pharmacotherapy clients were prescribed buprenorphine-naloxone (30%, n=4.078) and the remainder of clients were receiving buprenorphine (5%, n=655).

Figure 18: Victorian pharmacotherapy consumers, by type of opioid substitution therapy, 1985-2011



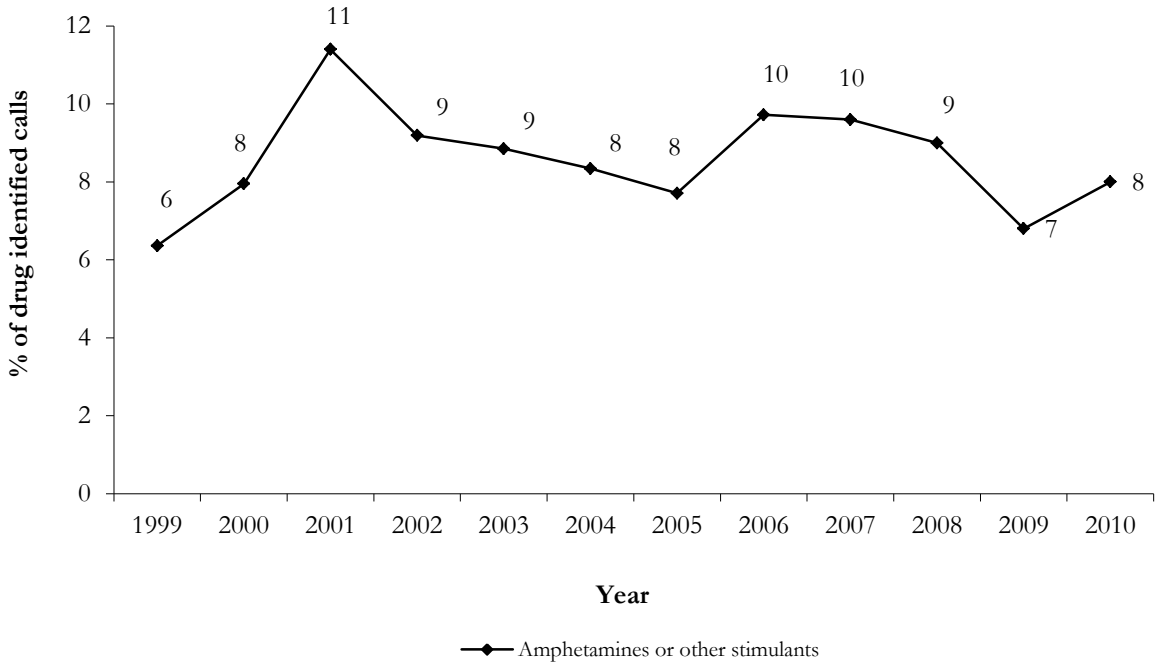
Source: Drugs and Poisons Regulation Group, VDoH

6.2.2. Methamphetamine

6.2.2.1. DirectLine calls

During 2010, DirectLine responded to 1,661 calls where amphetamines or other stimulants were identified as a drug of concern (8% of all drug-identified calls), compared with 1,482 in 2009 (7%) and 2,310 (9%) in 2008 (Figure 19).

Figure 19: DirectLine calls where the drug of concern was identified as amphetamines or other stimulants, 1999-2010



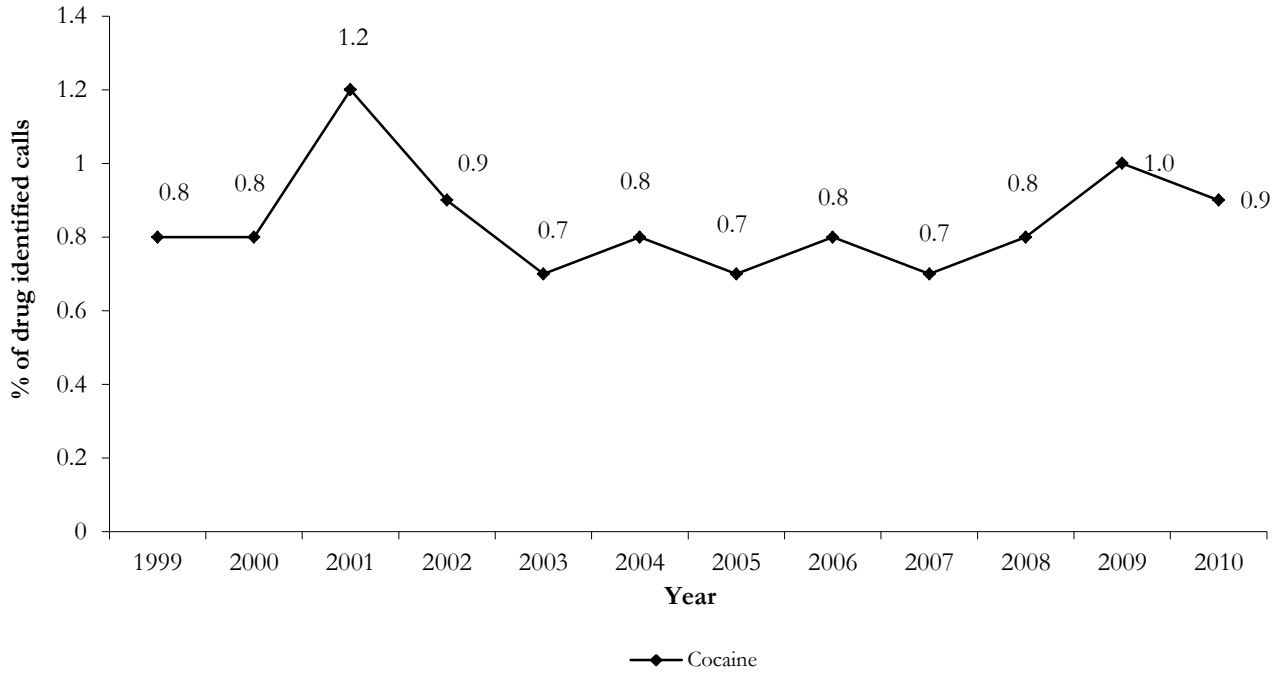
Source: DirectLine; Turning Point Alcohol and Drug Centre

6.2.3. Cocaine

6.2.3.1. DirectLine calls

During 2010, DirectLine responded to 191 calls where cocaine was identified as a drug of concern. This represented 0.9% of all drug-identified calls made to DirectLine, a similar figure to previous years (Figure 20).

Figure 20: DirectLine calls where the drug of concern was identified as cocaine, 1999-2010



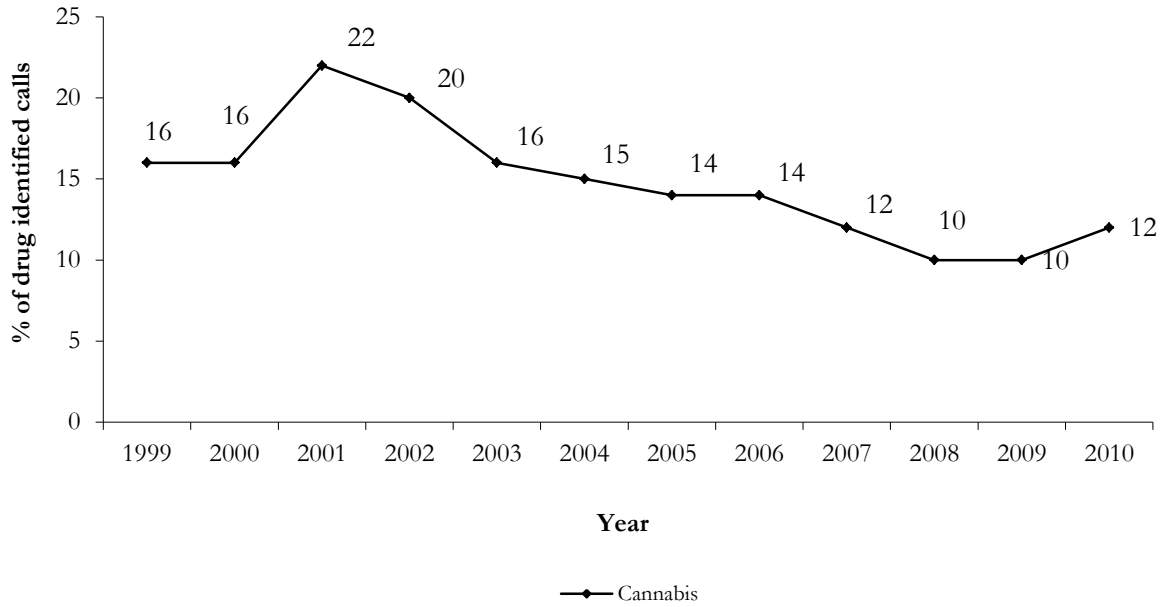
Source: DirectLine; Turning Point Alcohol and Drug Centre

6.2.4. Cannabis

6.2.4.1. DirectLine calls

During 2010, DirectLine responded to 2,409 calls where cannabis was identified as a drug of concern, representing 12% of all drug-identified calls to DirectLine in 2010. This is a similar figure to the DirectLine calls made for cannabis in 2009. However, overall, the percentage of drug-related calls where cannabis was identified has decreased since 2001, when cannabis-related calls peaked at 22% of all calls (Figure 21).

Figure 21: DirectLine calls where the drug of concern was identified as cannabis, 1999-2010



Source: DirectLine; Turning Point Alcohol and Drug Centre

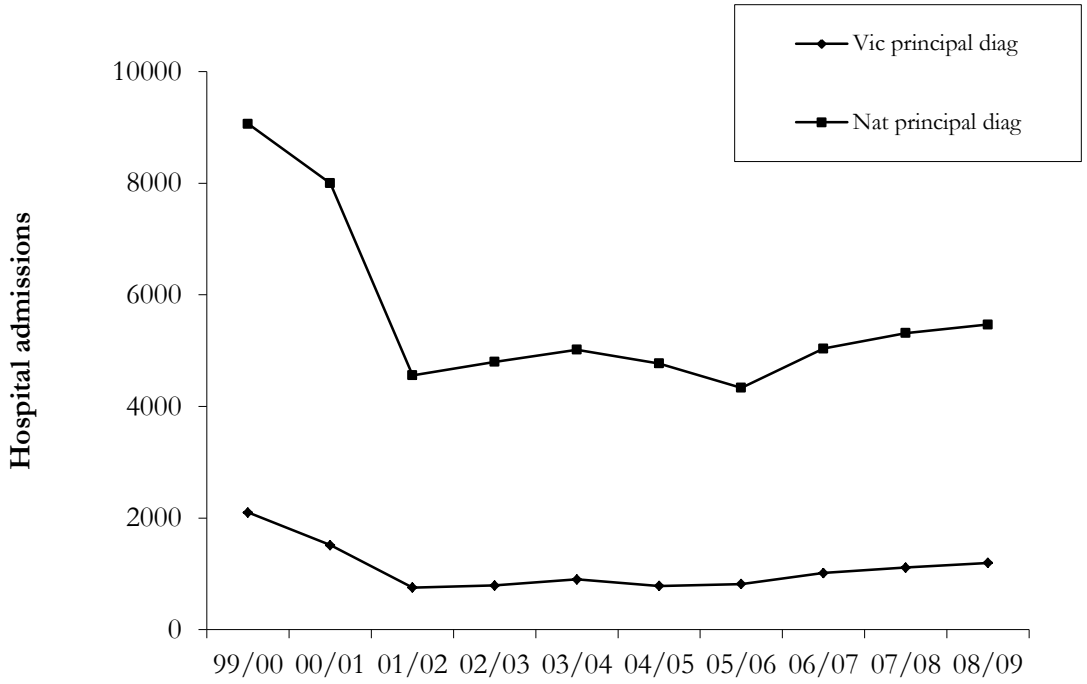
6.3. Hospital admissions

The NHMD is compiled by the AIHW. It is a collection of electronic records for admitted patients in public and private hospitals. Drug-related (opioid, amphetamine, cocaine and cannabis) hospital admissions are reported below for Victoria and Australia, 1999/2000-2008/2009. Principal diagnosis refers to the diagnosis established (after study) to be chiefly responsible for occasioning the patient's episode of care in hospital.

6.3.1. Heroin

Opioid-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 22. The data indicate that the number of opioid-related hospital admissions, both in Victoria and nationally, decreased between 1999 and 2002. This is consistent with both PWID and KE reports of a reduction in Melbourne's heroin supply during that period (Jenkinson, Fry & Miller, 2004). Since that time the number of opioid-related hospital admissions has remained relatively stable, both in Victoria and Australia. Opioid-related hospital admissions account for the highest percentage of drug-related admissions (compared to amphetamine, cocaine and cannabis).

Figure 22: Opioid-related hospital admissions, 1999/2000-2008/2009

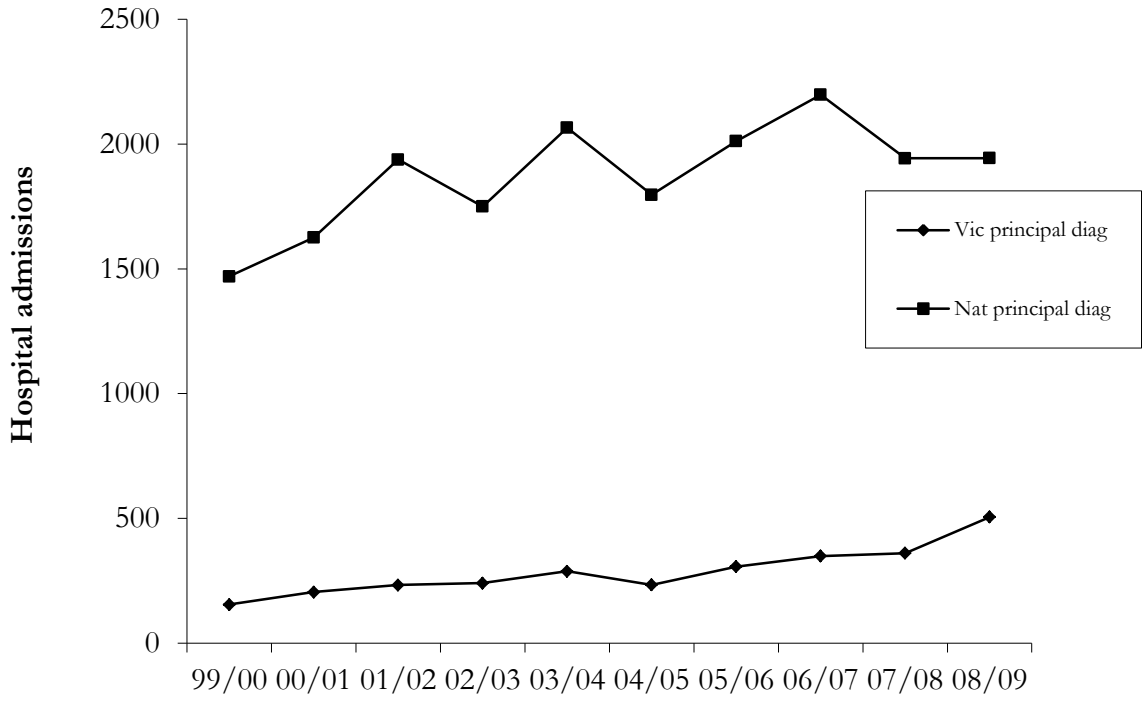


Source: AIHW, NDARC

6.3.2. Methamphetamine

Amphetamine-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 23. It is evident from these data that the number of amphetamine-related hospital admissions has generally been stable over the period of analysis, with the highest number of amphetamine-related hospital admissions (both in Victoria and nationally) recorded during 2008/2009.

Figure 23: Amphetamine-related hospital admissions, 1999/2000-2008/2009

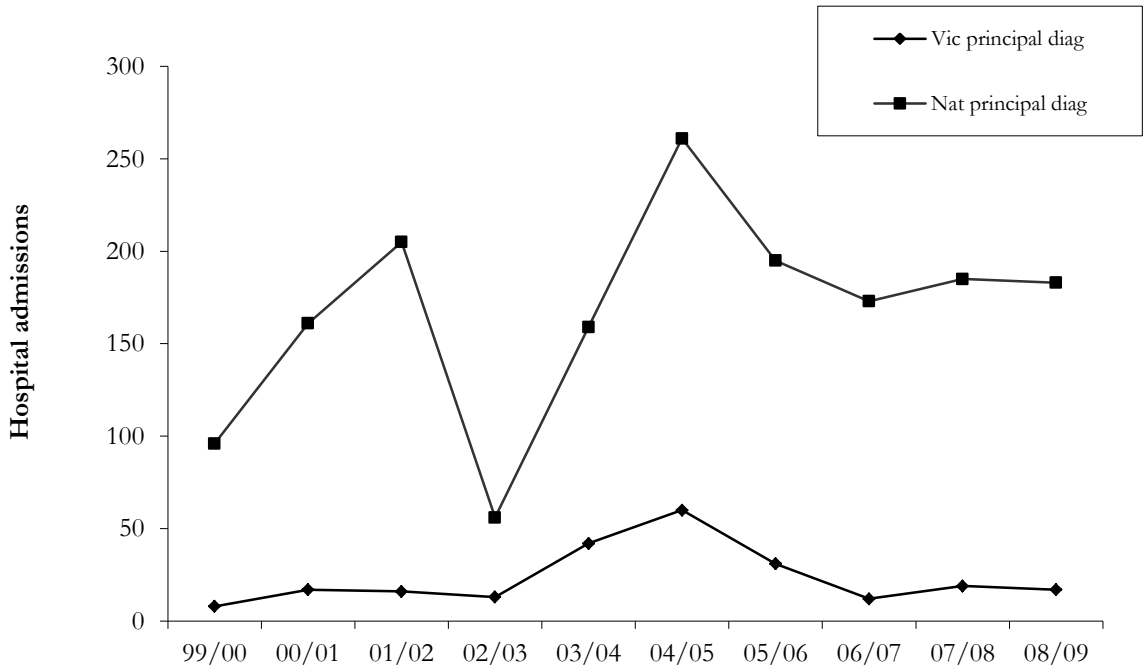


Source: AIHW, NDARC

6.3.3. Cocaine

Cocaine-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 24. The data indicate that the number of cocaine-related hospital admissions in Victoria has been relatively stable apart from a small increase in numbers from 2003 to 2005. Nationally, the number of cocaine-related hospital admissions increased between 1999 and 2002 and then significantly decreased in 2003, before increasing again from 2004 to 2005 and stabilising from there. The number of cocaine-related hospital admissions continues to be much lower than for opioids or amphetamines.

Figure 24: Cocaine-related hospital admissions, 1999/2000-2008/2009

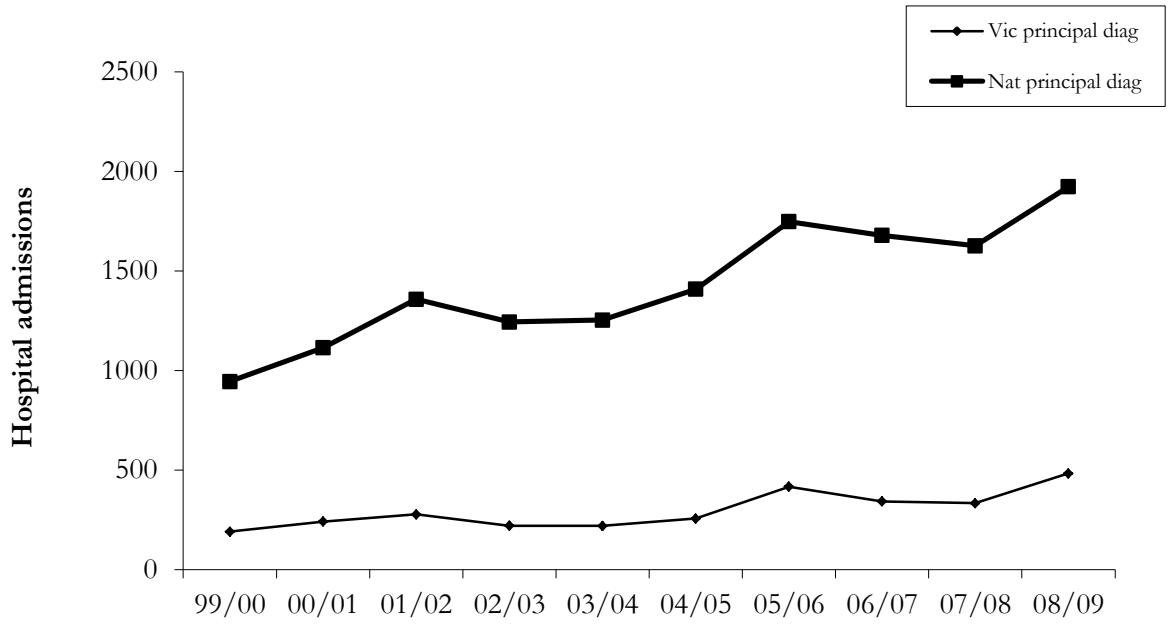


Source: AIHW, NDARC

6.3.4. Cannabis

Cannabis-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 25. It is evident from these data that the number of cannabis-related hospital admissions nationally has gradually increased over the period of analysis, peaking in 2005/2006 with 1,748 admissions, while in Victoria the rates have been more stable during this time.

Figure 25: Cannabis-related hospital admissions, 1999/2000-2008/2009



Source: AIHW, NDARC

6.4. Injecting risk behaviours

6.4.1. Sharing of injecting equipment

The sharing of needles/syringes and other equipment associated with the preparation and injection of drugs carries significant risk of exposure to BBVI such as HIV, HBV and HCV (Crofts, Aitken et al. 1999).

Twenty-two percent of 2011 IDRS survey participants (n=33) reported loaning a used needle to someone else in the month prior to interview. Among these survey participants, most reported lending needles twice (13%, n=20), with fewer reporting lending needles once (5%, n=7) or three to five times (4%, n=6) in the past month.

Eleven percent of respondents (n=16) reported borrowing someone else's used needle during the last month. Needles were generally reported as only being reused after only one other person had used it (94%, n=15), with that person most commonly reported to be a regular sex partner (64%, n=7) or close friend (36%, n=4).

Thirty-five survey participants (24%) reported using other injecting equipment after somebody else in the past month, with the most commonly reused equipment being spoons/mixing containers (21%, n=31), water (7%, n=11) and filters (5%, n=7).

Fifty-five percent of all survey participants (n=83) reported reusing their own used needles at least once in the past month, with significant percentages of these survey participants reporting reusing their own needles multiple times (26% reused their own needles twice, 23% reused their own needles three to five times and 13% reused their own needles six or more times). The most commonly reused piece of injecting equipment was a 1ml needle and syringe (54%, n=80). Fifty-two percent of respondents reported having cleaned a 1ml needle and syringe in the past month prior to reusing it (n=78). The most popular methods of cleaning were flushing with cold water (44%, n=37) and flushing with hot water (33%, n=28). Most participants reported rinsing or flushing the equipment more than once (88%, n=74). Respondents who had reported

reusing mostly reported reusing the piece of equipment once (55%, n=47); however, a number reported reusing equipment two to five times (40%, n=35).

In 2011, reports of both borrowing and loaning used needles were roughly stable compared with the previous year (Table 11). However, reports of sharing any other injecting equipment decreased across all categories. Overall, there was a significant decrease ($p<0.01$) in reports of any use of injecting equipment after someone else.

Table 11: PWID self-reported injecting risk practices (past month), 2004-2011

Risk practice (past month)	2004	2005	2006	2007	2008	2009	2010	2011
Borrowed a used N/S (%)	11	15	12	7	9	12	15	11
Lent a used N/S (%)	21	23	17	10	16	21	21	22
Used spoon/mixing container after someone else (%)	41	46	31	41	31	26	45	21
Used filter after someone else (%)	13	27	9	19	19	7	20	5
Used tourniquet after someone else (%)	13	11	6	7	11	3	9	1
Used water after someone else (%)	32	33	19	29	17	13	20	7
Used any injecting equipment after someone else (%)	46	50	35	45	59	27	48	24

Source: IDRS PWID interviews

One hundred and forty-six survey participants reported the location of their most recent injection, with most reporting having injected in a private home (60%, n=88). Public injecting (in cars, public toilets and other public locations) was reported by the remaining 58 survey participants (40%). The reported locations of last injection were similar to those reported in previous IDRS studies (Breen, Degenhardt et al. 2003; Jenkinson and O'Keeffe 2005; Jenkinson and O'Keeffe 2006; Jenkinson and Quinn 2007; Quinn 2008; Hornyiak, Dietze et al. 2009; Quinn 2009).

Participants were also asked to report on the injection site of their most recent injection, with the vast majority reporting most recently injecting in their arm (81%, n=118) or hand (8%, n=12). Six percent of survey participants (n=9) reported most recently injecting in their neck and a further 3% (n=4) in the leg. Reports of groin, breast and foot injecting were uncommon.

Participants most commonly reported obtaining injecting equipment from a NSP during the six months preceding interview (96%, n=140) or from a pharmacy (7%, n=10). Injecting equipment was also reported as being obtained infrequently from friends (6%, n=8).

Participants reported most commonly using 1ml needles and syringes (90%, n=134), followed by 3ml syringes (13%, n=19), detachable needle tips (10%, n=15) and wheel filters (10%, n=15).

6.4.2. Injection-related health problems

Reports by the survey participants in the PWID survey of injection-related health problems in the previous month are summarised in Table 12. Eighty-five survey participants reported experiencing any injection-related health problems in the previous month (57%), with the median number of injection-related problems experienced being one (range=1-5).

Table 12: Self-reported injection-related health problems (past month), 2006-2011

Type of problem (%)	2006 (N=150)	2007 (N=150)	2008 (N=150)	2009 (N=150)	2010 (N=151)	2011 (N=150)
Prominent scarring/bruising	49	63	47	43	19	41
Difficulty injecting	43	35	39	41	25	33
Dirty hit (made me feel sick)	23	17	15	18	12	10
Thrombosis	8	9	10	7	5	6
Abscesses/infections from injecting	3	10	7	6	6	8
Overdose	3	3	3	5	2	3

Source: IDRS PWID interviews

The most commonly experienced injection-related health problems were prominent scarring or bruising, experienced by 41% and difficulty injecting experienced by 33% of all IDRS survey participants. Reports of prominent scarring/bruising increased significantly from 2010 ($p<0.01$). This concords with KE reports of increases in injection-related skin problems and vein damage, possibly as a result of increased injection of pharmaceutical opiates.

Five of 150 respondents (3%) reported experiencing an overdose in the month preceding interview. Four survey participants reported the main drug used on the last occasion of overdose to be heroin.

Fifteen survey participants (10%) reported experiencing a dirty hit in the month preceding interview, of whom 12 reported on the main drug used. The main drug implicated in dirty hits was heroin (75%, n=9).

A number of KE raised concerns with regards to an increase in the incidence and severity of injecting-related injury and disease, in particular skin problems such as necrotic ulcers, abscesses and infections. These were considered by KE as having been caused by the injection of methadone, morphine and oxycodone. Long wound healing timeframes and the resource contribution, both with staff time for dressing wounds on what is often a daily basis over the course of a number of months and with regards to the cost of dressings, was described as a significant issue by a number of KE. A small number of reports of recent amputations, both of fingers and hands, was described by two KE in relation to methadone injection. These were the most serious issues seen since the removal of temazepam gel caps from the market.

KE reported that many individuals would wait until wounds were at crisis stage before presenting for treatment, resulting in increased costs to the healthcare system that could potentially be prevented through improved education on filtering before injecting, safer injecting techniques and provision of consumables such as wheel filters at no cost to consumers.

6.4.2.1. Blood-borne viral infections (BBVI)

BBVI (HIV, HBV, HCV) represent a major health risk for individuals who inject drugs. An integrated surveillance system has been established in Australia for the purposes of monitoring the spread of these infections.

Table 13 shows new Victorian HIV diagnoses where injecting drug use was identified as the exposure category. In 2010, there were no new HIV diagnoses among people reporting IDU as their only risk category; however, there were five new diagnoses among individuals reporting both IDU and male to male sex. This was the lowest recorded percentage of new HIV diagnoses, where IDU was recorded as the only exposure category, in 10 years (Feigin 2011).

Table 13: New HIV diagnoses in Victoria where injecting drug use has been identified as the likely exposure factor, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number (n)	12	9	4	11	8	10	8	5	7	2	0
% of new HIV diagnoses	6.4	4.5	1.9	5.4	3.9	4.2	3.1	1.9	2.7	0.3	0

Source: Feigin, 2011

The prevalence of HIV infection among PWID is estimated through the National NSP Survey, which found an HIV prevalence of 0.5% among 1,679 PWID who provided blood samples over a period of six years (Table 14) (National Centre in HIV Epidemiology and Clinical Research 2010).

In contrast to HIV, the situation with regard to HCV among PWID in Victoria is of major concern, as there is evidence of a continuing high level of this infection among PWID.

The Communicable Diseases Section of the VDoH collects data on notifications of HCV infection, which are then classified as either newly acquired or unspecified. In 2010, the Communicable Diseases Section reported 178 newly acquired notifications of HCV and 2,449 unspecified notifications (Victorian Department of Health 2011). A generally high but variable percentage of these are related to illicit drug use.

Over a period of six years, 67% of the PWID who provided samples for blood testing as part of the National NSP Survey were HCV antibody positive (Table 14) (Iversen, Topp et al. 2011).

Table 14: Prevalence of IDU-related new diagnoses of HIV and HCV, Victoria, 2005-2010

	2005	2006	2007	2008	2009	2010	Total
HCV (%)	67	71	73	72	55	64	67
HIV (%)	0.6	0.5	0.0	0.7	0.9	0.5	0.5

Source: NCHECR, 2010

KE suggested that whilst HCV infection among PWID remains very high, a relatively small percentage are ever treated for this condition. KE particularly noted that the ageing cohort of PWID meant more were experiencing HCV-related symptoms which was impacting significantly on wound healing and general health.

6.5. Mental health problems and psychological distress

Seventy-nine survey participants (53% of the 2011 PWID sample) reported that they had experienced any mental health problems in the six months preceding interview (including any issues that had not been discussed with a health professional). This was a slightly lower percentage than that found in the 2010 study; however, this was not statistically significant.

As in previous years, respondents most commonly reported experiencing depression (32%, n=48) and generalised anxiety (27%, n=41). These are also the general community's high prevalence mental health disorders. However, normally lower prevalence mental health disorders such as schizophrenia (9%, n=14) and manic depression/bipolar disorder (9%, n=13) were also reported by significant numbers of survey participants. In addition the following mental health disorders were reported by smaller numbers of survey participants: post-traumatic stress disorder (6%, n=9); panic (4%, n=6); and paranoia (4%, n=6).

All 79 survey participants who reported a recent mental health problem reported on their use of health services, with 66 survey participants (84%) reporting having recently seen a health professional regarding their mental health problems.

Of the 66 survey participants who had recently seen a health professional, 56 (86%) reported being prescribed any medication for their mental health problems. The percentage of IDRS survey participants receiving medication for mental health problems was similar to 2010 (82%, n=68). The most commonly prescribed medications were: antidepressants (n=24), most commonly Avanza® (mirtazepine), Efexor® (venlafaxine), Pristiq® (desvenlafaxine) or Endep® (amitriptyline); benzodiazepines (n=29), most commonly Valium® (diazepam), Xanax® (alprazolam), temazepam (generic) or Serepax® (oxazepam); and antipsychotic medications (n=22), most commonly Seroquel® (quetiapine) or Zyprexa® (olanzapine).

The presence of both high and low prevalence mental health disorders amongst PWID was also noted by KE. Some KE reported that depression and anxiety were stable in terms of prevalence but increasing in complexity.

6.5.1. Kessler Psychological Distress Scale (K10)

In 2009, 2010 and 2011, the 10-item Kessler Psychological Distress Scale (K10) (Kessler, Andrews et al. 2002) was also administered to PWID survey participants. This questionnaire is designed to measure the level of distress and severity associated with psychological symptoms in the four weeks prior to completion. Scores in the K10 range

from 10-50, with scores from 10-15 considered indicative of low psychological distress, 16-21 considered moderate, 22-29 considered high and scores over 30 considered very high.

One hundred and forty-seven survey participants fully completed the K10, 98% of all 2011 IDRS survey participants. While the distributions of K10 scores were almost identical in 2009, 2010 and 2011, these represent significantly higher levels of psychological distress than those found in the general Australian population sampled as part of the 2009 National Health Survey ($p<0.05$) (Table 15).

Table 15: Levels of psychological distress among PWID compared with the general population, 2009-2011

Score	Level of psychological distress	PWID 2009 (n=149) (%)	PWID 2010 (n=143) (%)	PWID 2011 (n=147) (%)	General population (n=15,751) (%)
10-15	Low	9	11	14	67
16-21	Moderate	28	22	19	21
22-29	High	32	33	30	9
30-50	Very high	31	34	37	4

Source: IDRS PWID interviews; Australian Bureau of Statistics, 2009

6.6. Driving risk behaviour

For the past six years, PWID survey respondents have been asked about driving risk behaviour. In 2011, 62 survey participants (41%) reported having recently driven a vehicle at least once, similar to the figure of 37% in 2010.

Of those 62 survey participants who had recently driven, 19% (n=12) reported having driven while under the influence of alcohol. Among those who reported having driven under the influence of alcohol, 42% (n=5) reported having driven while they believed themselves to be over the legal blood alcohol limit during that time. Driving over the limit was reported a median of three times (range=1-5).

Among the 62 survey participants who had recently driven a vehicle, 73% (n=45) reported having driven after taking illicit drugs (Table 16). Driving under the influence of illicit drugs was reported a median of six times (range=1-180). Participants most commonly reported driving soon after using heroin (64%), cannabis (51%), amphetamines (40%) and benzodiazepines (16%).

Table 16: Use of illicit drugs prior to driving (past six months), 2005-2011

Illicit drug type (%)	2005 (n=71)	2006 (n=62)	2007 (n=51)	2008 (n=60)	2009 (n=53)	2010 (n=44)	2011 (n=45)
Heroin	80	58	77	68	66	82	64
Cannabis	49	44	53	65	59	48	51
Speed	29	42	29	28	28	16	20
Crystal methamphetamine	4	15	4	7	2	7	18
Buprenorphine	13	16	8	7	4	2	16
Benzodiazepines	10	11	16	12	25	18	16
Ecstasy	6	3	2	2	6	2	2

Source: IDRS PWID interviews

Participants were asked about their most recent experience of driving after taking any illicit drugs, with the most commonly reported illicit drugs being heroin (58%, n=26), cannabis (33%, n=15), speed (16%, n=7) and benzodiazepines (9%, n=4). Participants reported driving a median of ten minutes after taking illicit drugs (range=1-240 minutes).

Forty-five respondents commented on the self-perceived effect of illicit drugs on their driving ability the last time they drove after using illicit drugs, with 71% (n=32) believing that their drug use had no impact or slightly improved their driving ability. Ten survey participants reported that their driving ability was slightly impaired (22%).

Fourteen survey participants reported having ever been roadside drug tested by the police. Participants reported being roadside drug tested a median of six months prior to interview (range=1-30 months). No participants recorded positive test results.

7. Law-enforcement related trends associated with drug use

7.1. Reports of criminal activity

Forty-six percent of survey participants (n=69) reported having been arrested during the 12 months preceding interview, identical to 46% (n=82) reported in 2010. As in 2008, the largest portion of arrests were in relation to property crime (25%, n=37), drug use/possession (13%, n=19) and violent crime (6%, n=9).

Participants were asked about types of crimes engaged in during the month preceding interview and frequency of crimes committed. Forty-seven percent of survey participants (n=70) reported engaging in any crime in the past month, with drug dealing (29%, n=44) and property crimes (27%, n=40) the most commonly reported (Table 17). There were no significant changes in the percentage of PWID reporting recent criminal activity compared with the previous year.

Frequency of criminal activity varied by type of crime with the majority of those reporting property crime reporting engaging in this type of crime once a week or less (48%, n=19). Similar percentages of survey participants who reported dealing drugs in the month preceding interview reported doing so once a week or less (46%, n=20) or more than once a week (55%, n=24). Fraud and violent crimes were generally committed less often than once a week.

Table 17: Criminal activity reported by PWID during the last month, 2004-2011

Type of crime	2004 (N=147)	2005 (N=147)	2006 (N=147)	2007 (N=149)	2008 (N=150)	2009 (N=150)	2010 (N=150)	2011 (N=150)
Property crime (%)	28	26	20	22	21	17	19	27
Dealing (%)	30	25	35	24	35	27	23	29
Fraud (%)	8	4	5	5	5	1	1	5
Violent crime (%)	8	7	2	7	3	7	8	7
Any crime (%)	53	48	48	38	47	39	40	47

Source: IDRS PWID interviews

7.1.1. Dealing and trafficking

Law enforcement KE comments on dealing and trafficking of heroin suggest that, as in previous years, syndicates for this drug were mostly run by people of Vietnamese background. Links between drug trafficking and gambling were noted, with some traffickers being lured into the drug market due to gambling debts. This was particularly occurring with middle-aged women, a new population identified as being involved with the criminal justice system, both in the community and in prison. Profits from drug trafficking were thought to be frequently sent offshore.

Hierarchies within the drug market were noted, with individuals playing a variety of roles such as 'spruiker', 'runner' and 'spotter', with KE considering it less common for dealers to be carrying more than a very small amount of drugs during street market transactions. This was considered to be related to increased police presence within areas where a street drug market operates.

The involvement of large crime syndicates in the production and distribution of cannabis through the use of multiple 'growhouses' was suggested by KE to be an emerging trend.

7.1.2. History of incarceration

One hundred and fifty survey participants reported on their history of incarceration, with nearly two-thirds (63%, n=91) reporting having ever been in prison (convicted of an offence and sentenced to jail). The median number of times in prison was three (range 1-30).

Seventy percent (n=64) of those who had been to prison reported having ever taken syringes into prison, predominantly for personal use (24%, n=22), with some having taken syringes into prison to sell (11%, n=10). Seventy-five percent (n=69) had never rented, bought or sold syringes in prison. A small number of participants reported on the cost of renting and buying syringes in prison. The median cost to rent was $25 and to buy was $90.

A median of two people were involved in the last in-prison injecting episode of twenty-five participants.

7.2. Arrests

The following section details consumer (use/possession) and provider (manufacture/trafficking) arrests related to opioids, methamphetamine, cocaine and cannabis. Data are derived from the ACC's *Illicit Drug Data Report 2009-2010* (Australian Crime Commission 2011). Percentages should be interpreted with caution due to the lack of uniformity across states and territories in the recording and storing of data on illicit drug arrests. Totals included those offenders for whom consumer/provider status was not stated.

7.2.1. Heroin

Table 18 shows consumer and provider arrests for heroin and other opioids during the 2009-2010 financial year. During that financial year, just under half (50%, n=1,379) of the arrests made in Australia for heroin and other opioid offences occurred in Victoria. The number and percentage of provider arrests remained relatively stable compared with 2008-2009.

Table 18: Consumer and provider arrests, heroin and other opioids, 2009-2010

	Victoria (n)	Australia (n)	% of national arrests
Consumer	953	1,884	51
Provider	426	860	50
TOTAL	1,379	2,767	50[10]

Source: ACC

7.2.2. Methamphetamine

Table 19 details consumer and provider arrests for amphetamine-type stimulants (ATS) during 2009-2010. During that financial year, one-quarter (25%) of the arrests made in Australia for ATS offences occurred in Victoria. The number of consumer and provider arrests was slightly lower than in the previous year (3,590 in 2008-09), with decreases recorded in both categories; however, the decline in other states was larger, meaning that these represented small increases in the percentage of all Australian arrests.

Table 19: Consumer and provider arrests, amphetamine-type stimulants, 2009-2010

	Victoria (n)	Australia (n)	% of national arrests
Consumer	2,196	9,993	22
Provider	1,027	3,921	26
TOTAL	3,223	13,092[11]	25

Source: ACC

[10] The total numbers for Australia recorded in the ACC illicit drug report are generally higher as there are some arrests where jurisdiction is not known. For comparison with Victorian data, known jurisdictional arrests only are included here.

[11] See footnote 7.

7.2.3. Cocaine

Table 20 details consumer and provider arrests for cocaine during 2009-2010. During that financial year, 16% of the arrests made in Australia for cocaine offences occurred in Victoria. The number of consumer arrests remained small but increased by around 17% from 92 to 110 and was previously 65 in 2007-2008. Similarly, the numbers of provider arrests also rose in 2009-2010, both in Victoria and at the national level. Victoria accounted for a similar percentage of the national arrests across all categories, as compared to 2008-2009.

Table 20: Consumer and provider arrests, cocaine, 2009-2010

	Victoria (n)	Australia (n)	% of national arrests
Consumer	110	841	13
Provider	86	400	22
TOTAL	196	1,244	16

Source: ACC

7.2.4. Cannabis

Table 21 details consumer and provider arrests for cannabis during 2009-2010. As in the previous financial year, approximately one-tenth (12%) of the arrests made in Australia for cannabis offences occurred in Victoria. In Victoria, the total number of consumer and provider arrests for cannabis were slightly increased compared with 2008-2009.

Table 21: Consumer and provider arrests, cannabis, 2009-2010

	Victoria (n)	Australia (n)	% of national arrests
Consumer	5,338	48,883	11
Provider	1,728	8.123	21
TOTAL	7,066	57,170[12]	12

Source: ACC

7.3. Expenditure on illicit drugs

The median amount reported as being spent on illicit drugs on the day prior to the interview was $20 (range=$0-$400). This was a non-significant decrease from the $28 median expenditure for the 2010 cohort.

[12] See footnote 7.

8. Special topics of interest

8.1. Heavy Smoking Index for nicotine dependence

For the first time in 2011, participants who smoked daily were asked two questions from the Fagerstrom test for nicotine dependence, known as the Heavy Smoking Index (HSI) (n=770). These questions included 'How soon after waking do you smoke your first cigarette?' and 'How many cigarettes a day do you smoke?'. The responses were then scored between zero and six. A score of zero is 'no dependence', 1-2 is 'very low dependence', 3 is 'low to moderate dependence', 4 is 'moderate dependence' and 5 or above is 'high dependence' (Heatherton, Kozlowski et al. 1989).

As seen in Table 22, almost half of those who responded to questions about smoking reported smoking their first cigarette within 5 mins of waking and one-third between 5 to 30 mins of waking. Forty percent of daily smokers reported smoking less than ten cigarettes a day and 36% reported smoking between 11-20 cigarettes a day. The mean HSI score was 3.1. One-fifth of daily smokers scored 4 or above indicating high nicotine dependence.

Table 22: Heavy Smoking Index for nicotine dependence, 2011

	2011
Time till first cigarette	n=135
Within 5 minutes (%)	48
5-30 mins (%)	33
31-60 mins (%)	7
60 mins (%)	12
Number of cigarettes smoked a day	n=135
10 or less cigarettes (%)	40
11-20 cigarettes (%)	36
21-30 cigarettes (%)	18
31 or more cigarettes (%)	7
Nicotine dependence	n=135
No dependence (%)	10
Very low (%)	24
Low to moderate (%)	23
Moderate (%)	23
High (%)	20
Mean score	3.1

Source: IDRS participant interviews

8.2. Alcohol Use Disorders Identification Test

There has been a considerable amount of media attention recently that has focused on young people and alcohol. However, there has been less focus on alcohol use amongst PWID, who are particularly at risk for alcohol-related harms due to a high prevalence of HCV. Half of the survey participants interviewed in the Australian NSP Survey 2009 (n=2,697) were found to have HCV antibodies (National Centre in HIV Epidemiology and Clinical Research 2010). Given that the consumption of alcohol has been found to exacerbate HCV infection and to increase the risk of both non-fatal and fatal opioid overdose and depressant overdose (Darke, Ross et al. 1996; Schiff and Ozden 2004; Coffin, Tracy et al. 2007; Darke, Duflou et al. 2007), it is important to monitor risky drinking among PWID.

The information on alcohol consumption currently available in the IDRS includes the prevalence of lifetime, recent use and number of days of use over the preceding six months. In 2010, survey participants in the IDRS were asked the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) as a valid measure of identifying heavy drinking (Bush, Kivlahan et al. 1998). The AUDIT-C is a three-item measure, derived from the first three consumption questions in the AUDIT. Dawson et al. (2005) reported on the validity of the AUDIT-C, finding that it was a good indicator of alcohol dependence, alcohol use disorder and risky drinking.

Among the Victorian IDRS survey participants, the mean score on the AUDIT-C was 6.1 (median=6, range=1-12). Females scored higher than males on the AUDIT-C (6.78 vs. 5.89, p=0.03). According to Dawson et al. (2005) and the AGDH&A's Guidelines for the Treatment of Alcohol Problems (Haber, Lintzeris et al. 2009), a cut-off score of five or more indicates that further assessment is required.

Sixty percent of the sample scored five or over on the AUDIT-C (n=67) in the range indicating the need for further assessment (Table 23). Males (59%) and females (63%) had similar proportions scoring in this range.

Table 23: AUDIT-C among PWID, Victoria, 2010-2011

	2010 (N=150)	**2011 (n=112)**
Mean AUDIT-C score SD (range)	4.2 3.6 (0-12)	6.1 3.5 (0-12)
Score of 5 or more (%)	42	60
Males (%, n=85)	45	59
Females (%, n=27)	33	63

Source: IDRS PWID interviews

8.3. Pharmaceutical opioids

Since the heroin shortage, the Illicit Drugs Reporting System (IDRS) has noted an increase in the use and injection of morphine and oxycodone. Over the same period the

age of people who inject drugs (PWID) has also increased. The Australian Needle and Syringe Program (NSP) survey noted similar findings over the same period. We know from a number of Australian and international studies that PWID experience excess morbidity and mortality when compared to those in the general population (English, Holman et al. 1995; Hulse, English et al. 1999; Randall, Degenhardt et al. 2001; Vlahov, Wang et al. 2004) and that prescribers are often reluctant to prescribe opioid analgesics to people with a history of injecting drug use (Merrill and Rhodes 2002; Baldacchino, Gilchrist et al. 2010). This section aimed to examine the complex interplay among PWID, pain management and the extra-medical use of pharmaceutical opioids (PO).

In 2011, participants in the IDRS were asked questions about the use of PO and pain. Pharmaceutical opioids included morphine, oxycodone and other PO such as fentanyl, pethidine and tramadol. Excluded were methadone, buprenorphine and buprenorphine-naloxone.

Fifty-three percent had used PO in the last six months (n=79). Only these individuals answered the section on pharmaceutical opioids. The most common reasons for using pharmaceutical opioids were pain relief (34%, n=27), seeking an opiate effect (38%, n=30), cheaper than heroin (16%, n=13), to treat self-dependence (9%, n=7) and couldn't score heroin (8%, n=6). Seventeen percent (n=13) had ever been refused opioid medication by a doctor due to having a history of IDU. Sixty-three percent had never sought opioid pain relief from a doctor (i.e., had only used from illicit sources). Twenty-two participants had been prescribed pharmaceutical opioids for pain in the last six months. Most (n=16) had received the prescription from a GP. Thirteen participants described having trouble obtaining pain relief from a doctor. Of those stating they had sought pain relief, 96% had sought assistance with medical problems such as chronic illness, musculo-skeletal problems, trauma and surgery-related pain. Forty-eight percent told the doctor about their drug use, 26% did not. In 22% of cases, the doctor was already aware of the individual's drug use. Pharmaceutical opioids taken in the week prior to the survey provided a median of 70% relief of pain.

When injecting pharmaceutical opioids, 35% (n=21) obtained information on how to do so from NSPs. Forty-two percent (n=25) didn't obtain any information on how to safely filter pharmaceutical opioids for injection. Thirteen percent (n=8) asked friends for information.

Table 24: Pharmaceutical opioids use, 2011

	VIC
Used pharmaceutical opioids in the last 6 months (%)	53 n=79
Reason for using pharmaceutical opioids*	n=79
Treat self-dependence (%)	9
Seek an opioid effect (%)	38
Pain relief (%)	34
Know what dose to expect (%)	4
Cheaper than heroin (%)	17
Current heroin purity (%)	0
Couldn't score heroin (%)	8
Refused pharmaceutical opioids medications for pain due to injecting history	n=79
Yes (%)	17
Haven't sought pain relief (%)	63
Prescribed pharmaceutical opioids[#]	n=29
For pain last six months (%)	76
Trouble obtaining pain relief from doctor	45
Informed doctor about drug use	n=23
Yes (%)	48
Yes, but not all (%)	4
Doctor already knew (%)	22
Pharmaceutical opioids prescribed by[##]	n=22
Pain specialist (%)	14
Hospital doctor (%)	32
OST specialist (%)	9
GP (%)	73

Source: IDRS participant interviews

*** Among those who recently used. Multiple responses were allowed**

[#] Among those who sought pain relief

[##] Among those who were prescribed PO for pain in the last six months

8.4. Over the counter codeine

In Australia, codeine available over the counter (OTC) is combined with simple analgesics including paracetamol and non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and aspirin. Prolonged use of codeine has the potential to produce tolerance and create a dependence liability, often leading to dose escalation (Sproule, Busto et al. 1999; National Prescribing Service Ltd 2009).

In 2011, participants in the IDRS survey were asked questions about the use of over the counter (OTC) codeine for medical and non-medical purposes. Thirty-seven percent of participants (n=55) reported having used over the counter codeine to relieve pain in the last six months. Most commonly, this was to relieve acute short-term pain (78%, n=43) or chronic non-malignant pain (20%, n=11). Common causes of pain included headaches/migraines (n=16) or dental issues (n=15). Median reported days of use of over the counter codeine was ten in the last six months. A median of 50% pain relief was provided. The most commonly used brand of over the counter codeine was the ibuprofen-codeine combination product Nurofen Plus (55%, n=30), followed by Panadeine (15%, n=8). The median number of tablets or capsules taken at each dose was two.

Table 25: Over the counter codeine use and pain, 2011

	VIC N=150
Ever used OTC codeine (%)	65
Recently used OTC codeine (%)	38
Median days used OTC codeine in the last six months*	12
Use OTC codeine for medical purposes in the last six months (%)	37 (n=55)
Acute/short-term	*78*
Chronic non-malignant	*20*
Chronic malignant	*0*
Used OTC codeine for non-medical purposes (%)	1 (n=2)
To feel numb	*0*
To go to sleep	*33*
Substitute for heroin	*100*
Substitute for pharmacotherapy	*0*
Supplement pharmacotherapy	*0*
Other	*0*

Source: IDRS participant interviews

*** Among those who recently used**

**** Response could be between 0-100%**

[#] Multiple responses allowed

8.5 Injecting equipment use in the last month

In 2011, participants in the IDRS survey were asked questions about the use of injecting equipment, the re-use and cleaning of a range of items used for injecting in the last month. These questions were from the 2008 Australian Needle and Syringe Program Survey (ANSPS) conducted by The Kirby Institute, University of New South Wales (National Centre in HIV Epidemiology and Clinical Research 2009). Outlined in Table 26, Table 27 and Table 28 are the results from the IDRS survey compared to the NSP survey (National Centre in HIV Epidemiology and Clinical Research 2009). The IDRS found similar results to the 2008 ANSPS survey.

In general, Victorians most commonly tended to use, reuse and clean 1ml needle/syringes. The use of 1ml needle/syringes for these activities was stronger than at the national level.

Table 26: Use of injecting equipment in the last month among those who commented, 2011

	Australian NSP Survey*	VIC
	2008	
Injecting equipment used in the last month* (%)		n=149
1ml needle/syringe	76	90
3ml syringe (barrel)	22	13
5ml syringe (barrel)	17	1
10ml syringe (barrel)	9	3
20ml syringe (barrel)	6	1
50ml syringe (barrel)	n.a	0
Detached needle (tip)	19	10
Winged view infusion set (butterfly)	12	3
Wheel filter	11	10

Source: IDRS participant interviews

Table 27: Re-use of injecting equipment in the last month among those who commented, 2011

	Australian NSP Survey*	VIC
	2008	
Injecting equipment reused in the last month* (%)		n=149
1ml needle/syringe	32	54
3ml syringe (barrel)	7	5
5ml syringe (barrel)	6	0
10ml syringe (barrel)	4	1
20ml syringe (barrel)	3	0
50ml syringe (barrel)	n.a.	0
Detached needle (tip)	4	1
Winged view infusion set (butterfly)	5	1
Wheel filter	4	2

Source: IDRS participant interviews

*** More than one item could be selected**

Table 28: Injecting equipment cleaned in the last month among those who commented, 2011

	Australian NSP Survey*	VIC
	2008	
Cleaning of injecting equipment in the last month* (%)		n=149
1ml needle/syringe	30	52
3ml syringe (barrel)	8	5
5ml syringe (barrel)	6	0
10ml syringe (barrel)	4	1
20ml syringe (barrel)	3	0
50ml syringe (barrel)	n.a.	0
Detached needle (tip)	5	1
Winged view infusion set (butterfly)	4	1
Wheel filter	3	1
Last injecting item cleaned (%)**		n=85
1ml needle and syringe (%)	n.a.	88
3ml syringe (barrel) (%)	n.a.	7
5ml syringe (barrel) (%)	n.a.	0
10ml syringe (barrel) (%)	n.a.	1
20ml syringe (barrel) (%)	n.a.	0
Detachable needle (tip) (%)	n.a.	1
Winged vein infusion set (butterfly) (%)	n.a.	1
Wheel filter (%)	n.a.	1

Source: IDRS participant interviews

*** More than one item could be selected**

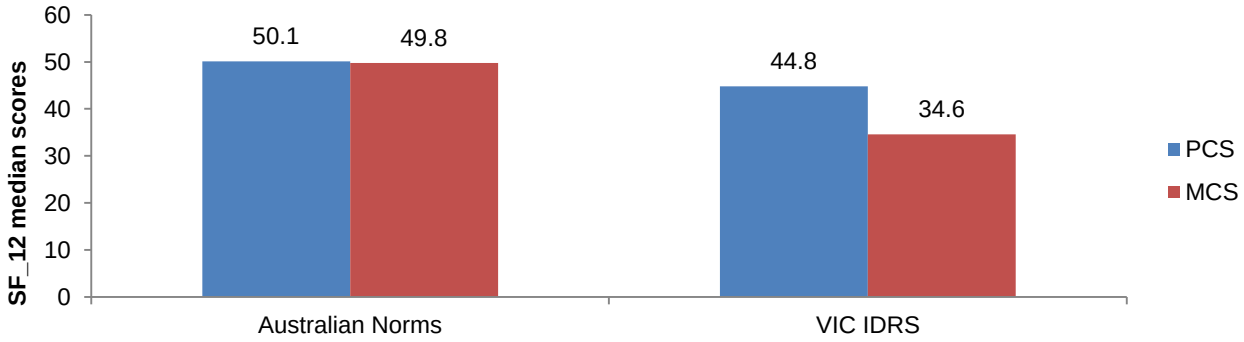
**** Among those who cleaned equipment in the last month**

8.6 Physical and mental health (SF-12)

The Short Form 12-Item Health Survey (SF-12) is a questionnaire designed to provide information on general health and wellbeing and includes 12 questions from the SF-36. The SF-12 was administered for the first time in the IDRS in 2011. The SF-12 includes

twelve questions and measures health states across eight dimensions concerning physical functioning, role limitations due to physical health problems, bodily pain, general health, energy/fatigue, social functioning, role limitations, due to emotional problems and psychological distress, and wellbeing. The scores generated by these eight components are combined to generate two composite scores, the physical component score (PCS) and the mental component score (MCS) (Ware, Kosinski et al. 1995; Ware, Kosinski et al. 1996). A higher score indicates better health.

Figure 26: SF-12 scores for Victorian IDRS participants compared with the general Australian population (ABS), 2011



Source: IDRS participant interviews , Australian Bureau of Statistics 1995

Figure 26 presents the MCS and PCS for participants interviewed in the IDRS compared with those of the general Australian population[13] from the National Health Survey (Australian Bureau of Statistics 1995). It appears that IDRS participants in 2011 had a significantly lower MCS compared with the Australian population average (34.6% versus 49.8%). It was also found that IDRS participants reported a slightly lower PCS score than the Australian population (44.8% versus 50.1%).

Fifty-three percent (n=80) of Victorian participants rated their health as excellent, very good or good. Twenty-nine percent rated their health as fair (n=44) and 17% rated it as poor (n=26). Fifty-eight percent (n=88) rated their mental health as excellent, very good or good. Thirty-one percent rated their mental health as fair (n=47) and 11% rated it as poor (n=16). Fifty-seven participants (38%) considered their health had deteriorated in the last 12 months.

Sixty-six percent of participants (n=99) reported that they have a long-standing physical health condition. Common classifications of conditions included infectious disease (n=70), respiratory problems (n=26), musculosketal problems (n=23), circulatory problems (n=13), neurological problems (n=12), digestive problems (n=8), vision problems (n=6) and skin problems (n=6). The most commonly reported actual conditions or diseases were viral hepatitis (n=42) and asthma (n=17).

8.7 Health service usage

Participants in the 2011 IDRS were asked about access to health services in the previous four weeks. Table 29 shows the median number of occasions a participant

[13] The SF-12 scores were transformed into SF-36 scores using weighted syntax to make them comparable with the general Australian population scores.

visited a particular health service and of those occasions how many were substance use related.

Literature has shown that the regular PWID population is a group that experiences a variety of physical and mental health problems. However, due to the marginalised status and concealed nature of IDU, it can be difficult to ensure that PWID obtain the public health care access they require and that targeted health care strategies reach them. PWID also experience barriers to treatment due to a lack of knowledge regarding available services, long waiting times and limited operating hours (Neale, Sheard et al. 2007). In addition, the nature of IDU means that the time spent obtaining and consuming drugs may cause delays in seeking treatment (McCoy, Metsch et al. 2001; Drumm, McBride et al. 2005) which often leads to over-dependence on acute crisis and emergency interventions (Kerr, Wood et al. 2004).

The IDRS sought to investigate this issue of access further and identify the services which PWID have utilised most often, thereby offering a resource for treatment providers and policy initiatives.

Participants were asked about their use of health services in the last four weeks (Table 30). Within this period, 17% (n=25) reported having visited a hospital emergency department, most having visited only once (80%, n=20). Eighty-one percent (n=121) reported visiting a GP in the last four weeks, a median of one time (range 1-24). Seventy (58%) of these individuals visited a GP for reasons relating to substance use.

Table 29: Health service access in the last four weeks among those who accessed services, 2011

National IDRS	Number of occasions visited			Number of visits due to substance use*		
	Median	1	2 or more	0	1	2 or more
Hospital ED/Casualty (n=25)	1 (1-5)	80	20	72	28	0
Hospital Outpatient (n=7)	2 (1-4)	29	71	86	0	14
Hospital Inpatient (n=50)	1 (1-2)	75	25	88	12	0
GP visit (n=121)	1 (1-24)	55	45	31	47	23
Specialist (n=17)	1 (1-4)	59	41	65	18	18
Dentist (n=17)	1 (1-8)	65	36	94	6	0
Other health professional (n=16)	1 (1-14)	56	44	88	0	12
Ambulance (n=5)	1 (1)	100	0	80	20	0
Psychiatrist (n=13)	1 (1-4)	77	21	92	0	8
Psychologist (n=13)	2 (1-4)	38	62	77	15	8
Social/welfare worker (n=36)	2 (1-30)	50	45	75	19	5
Drug/alcohol counsellor (n=32)	2 (1-30)	41	59	3	41	56
Other (n=5)	2 (1-4)	40	60	60	20	20

Source: IDRS participant interviews

***Among those who reported accessing a health service**

8.8 Online activity and electronic communications

The use of the internet has become part of everyday life. The internet is used to find out information, communicate with others and to undertake commercial transactions. Those who use illicit drugs may undertake these types of activities in respect to their drug use. There is huge potential for the internet and other electronic mediums to be used as a way of relating health and safety messages (Belenko, Dugosh et al. 2009). The success of such messages in the drugs field will rely heavily on an increased understanding of the online environment in which drug market participants operate. In order to examine the way in which PWID engage with the internet, a set of one-off questions about online activity was asked in the 2011 IDRS (Table 30).

Participants in the EDRS were also asked questions about online activity related to drug use. For a comparison, please refer to the National EDRS report 2011 (Sindicich and Burns 2012) available through the NDARC website (www.ndarc.med.unsw.edu.au/).

Fifty-six percent of Victorian IDRS survey participants had not gone online (i.e., used the internet) in the last six months. Of those who had, only 17 reported using the internet to get information about drugs. Most participants who used computers (90%, n=46) stated that they didn't go online for activities like getting information about drugs, posting information about drugs or buying drugs.

With regards to short-message-service or 'text' messaging, 28 participants reported texting being their preferred method of obtaining drugs. Twenty-three participants (16%) reported depending on text messaging either 'completely' or 'quite a lot' for the purposes of obtaining drugs. Eighty-four percent of participants (n=117) stated that they depended on text messaging either 'not very much' or 'very little or not at all'.

Table 30: Proportion of PWID that online activity related to drug use, 2011

	VIC
How often did you go online last month (%)	n=147
Never	56
Daily	16
At least weekly	22
At least fortnightly	3
At least monthly	4
In the last six months did you go on line to (%)	n=65
Get information about drugs	26
Post information about drugs	0
Buy ingredients to make drugs	0
Buy drugs	3
Sell drugs	0
Didn't go online for these activities	n=51 90
Favourite drug site*	n=19
Don't use websites	26
Pill reports	5
Erowid	16
Wikipedia	26
Actions taken due to information found online:	n=19
Tried new drug	0
Altered drug dose	11
Used new drug combination or ROA	11
Stopped using a drug	11
Other	11
Text messaging as preferred medium for obtaining drugs	n=54 52
Bought substances sold as 'legal highs' in last six months	n=8 75

Source: IDRS participant interviews

*websites listed are the three highest proportions reported

8.9 Policy

Public opinion can play an important role in determining social policy and informing political processes (Matthew-Simmons, Love et al. 2008). The vast majority of public opinion data regarding attitudes to drug policy in Australia is collected at the broader population level. In 2011, additional questions in the IDRS were asked to provide data about how PWID themselves perceive Australian drug policy, as a starting point for further investigation as part of the wider Drug Policy Modelling Program (DPMP) project "Public opinion and drug policy: Engaging the 'affected community'".

The policy questions were drawn from the National Drug Strategy Household Survey (Australian Institute of Health and Welfare 2008) to ensure comparability with general population responses. Participants in the 2011 IDRS were asked three policy questions: (1) Thinking about the problems associated with heroin use, to what extent would you support or oppose measures such as...', (2) To what extend would you support or oppose the personal use of the following drugs being made legal?' and (3) To what extent would you support or oppose the increased penalties for sale or supply of the following drugs?'. Table 31 presents the 'support' response findings from participants in the IDRS and from the 2007 National Drug Strategy Household Survey. The majority of IDRS participants commented (n=145), with 99% supporting needle and syringe programs to reduce problems associated with heroin use. The majority of the participants also supported methadone/buprenorphine maintenance programs, treatment with drugs (not including methadone) and regulated injecting rooms.

The majority of the IDRS sample also supported the legalisation of cannabis (87%) for personal use and just over half (56%) supported the legislation of heroin for personal use.

Conversely, 77% supported increased penalties for sale or supply of cannabis. Around half supported increased penalties for sale or supply of heroin, methamphetamine or cocaine (Table 31).

Table 31: Support for measures to reduce problems associated with heroin, for legalisation of illicit drugs and the increase of penalties for illicit drugs, 2011

	NDSHS 2007		VIC
Support measures to reduce problems associated with heroin use:	**Never used**	**Ever used**	n=145
Needle and syringe programs (%)	66.8	80.4	99
Methadone/buprenorphine maintenance program (%)	67.7	68.8	87
Treatment with drugs (not methadone) (%)	68.3	77.9	77
Regulated injecting room (%)	49.6	66.5	82
Trial of prescribed heroin (%)	32.4	59.1	77
Rapid detoxification therapy (%)	79.0	71.7	48
Use of naltrexone (%)	74.8	73.9	55
Support legalisation (personal use) of:	**Males**	**Females**	n=144
Cannabis (%)	23.8	18.5	87
Heroin (%)	5.8	4.6	56
Methamphetamine (%)	5.4	3.9	27
Cocaine (%)	6.3	4.5	25
Ecstasy (%)	7.1	4.8	20
Support for increased penalties for sale or supply of illicit drugs:	**Males**	**Females**	n=144
Cannabis (%)	59.6	66.4	77
Heroin (%)	84.3	85.1	51
Methamphetamine (%)	84.2	85.2	44
Cocaine (%)	82.4	84.2	46
Ecstasy (%)	80.5	83.6	45

Source: IDRS participant interviews; Australian Institute of Health and Welfare 2008

9. Study limitations

The aim of the IDRS study is to monitor emerging trends in illicit drug use and related issues within the community. The study is not designed to provide a definitive or detailed explication of these trends. Rather, the primary purpose of the IDRS findings is to (where appropriate) inform future policy and research responses to the public health and law enforcement challenges presented by illicit drug use in each state and territory within Australia.

The IDRS approach relies on the perceptions of expert individuals involved in and exposed to the illicit drug scene (both individuals who inject drugs and professionals working with these groups). Where possible, these reports are compared against secondary indicators. However, given the hidden nature of illicit drug use, the availability of reliable indicator data is often limited.

Further, the IDRS study principally gathers evidence on emerging trends among people in contact with drug treatment, health and other services (e.g. the PWID interviews are primarily conducted at Melbourne NSP). As this population is not necessarily representative of all illicit drug users (e.g. those who do not routinely access such services and recreational/non-dependent illicit drug users), the generalisability of the present results is limited. Another key limitation of the IDRS methodology is that it only describes drug use issues within metropolitan Melbourne and fails to provide a comprehensive picture of drug use issues across the whole state of Victoria. To provide such a comprehensive picture, the IDRS methodology would need to be expanded to regional areas of Victoria.

10. Implications

The results from the 2011 Victorian IDRS suggest action in the following priority areas:

1. **Continued monitoring of illicit drug markets for trends in price, purity, availability, patterns of drug use and related outcomes**

   In 2011, the IDRS again demonstrated its value as an informative and reliable drug trend monitoring study. It provides comparable data relating to illicit drug use over time and between jurisdictions, in a timely and cost-effective manner. Data from recent years have highlighted the dynamic nature of the illicit drug markets in Melbourne and the need to monitor fluctuations and the way these may impact on patterns of drug use. The continued monitoring of illicit drug markets will add to our understanding of patterns of drug use and our ability to inform strategic policies and limit any associated harms.

2. **Further research on the impact of ageing on the PWID population, with particular attention paid to the types of primary and secondary health services required to effectively service this population**

   A large number of KE noted that they continue to experience increased burdens upon their services due to the ageing of their clientele. This has presented through increasing primary care presentations for wound care and other general health issues. Poor nutrition, problematic alcohol consumption, advanced liver disease and poor housing conditions (along with a long history of poly-drug use) all contribute to a significant burden of disease for these individuals which services are not well equipped to fully service.

3. **Closer monitoring of illicit alprazolam, quetiapine and buprenorphine-naloxone use and potential associated health impacts**

   Illicit alprazolam use is reported by 69% of the sample; the single highest report of illicit use of a prescribed medication in this study. Given KE reports in previous years of behavioural issues associated with the use of alprazolam, data collected in the 2011 IDRS bears out the need to continue monitoring illicit use of this substance.

   After concerns were raised by key informants in the 2010 IDRS, in 2011 participants were asked about their use of both prescribed and non-prescribed quetiapine fumarate, a highly sedating atypical antipsychotic. Participants reported high rates of quetiapine use with 40% of respondents stating that they had used this drug in the preceding six months. Of these 40%, 75% reported using non-prescribed quetiapine and 37.5% prescribed quetiapine (with a small percentage of both). Quetiapine is an expensive medication that has recently been approved by the Therapeutic Goods Association as a second-line treatment for generalised anxiety disorder and major depression in Australia. It is; however, only available on the Pharmaceutical Benefits Scheme for bipolar affective disorder and schizophrenia. Besides sedation, the drug is associated with weight gain, blood dyscrasias and the potential for cardiac rhythm abnormalities, as are several other drugs commonly used by PWID, including methadone. Given this, the significant numbers of respondents reporting non-prescribed quetiapine use in the preceding six months warrants further investigation to determine if there are correlates of use and any potential for further harms with polypharmaceutical use involving this drug.

   Given the recent introduction of a new buprenorphine-naloxone preparation in the form of a soluble film, current illicit buprenorphine-naloxone use

warrants further exploration to determine if the introduction of the film impacts on future illicit use. This is particularly salient given the increase in reported illicit buprenorphine-naloxone use and injecting in the Victorian IDRS seen in 2011. While the increase can be partly explained by lower levels of buprenorphine (single preparation) prescribing over time, the change in prevalence suggests the need for closer examination of the characteristics of those who use buprenorphine-naloxone illicitly in terms of demographic characteristics and health outcomes.

4. **Funding for needle and syringe program consumables which help to prevent injection-related injury and disease (e.g. sterile water, wheel filters)**

   Both KE reports and data on injection-related injury and disease demonstrated an increase in wounds which require sometimes extensive primary care to be effectively managed. This can have a significant cost impact on services, particularly where expensive dressings are required and healing times are elongated due to the poor general health of the individuals concerned. This cost impact could potentially be mitigated through the provision of free items through NSPs which can prevent such wounds. Sterile water and wheel filters are two examples of these items. Further research on the utility of these items is required to ensure that they are provided with the relevant education and information to ensure their correct use.

5. **Research on alcohol consumption patterns amongst PWID and impact on overall health, particularly with regard to the high prevalence of hepatitis C in this population**

   Higher median AUDIT-C scores on the 2011 IDRS, with 60% of the sample falling into a classification that indicates that further assessment is required, indicate the need for further monitoring and research on problem drinking amongst PWID. This is particularly the case where both the high prevalence of hepatitis C and the ageing of the PWID population intersect, causing increasingly compromised general health and liver health.

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