# Victoria

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## VICTORIAN DRUG TRENDS 2012
## Findings from the
## Illicit Drug Reporting System (IDRS)

## Australian Drug Trends Series No. 94

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Please note that as with all statistical reports there is the potential for minor revisions to data in this report over its life. Please refer to the online version at www.ndarc.med.unsw.edu.au.

# VICTORIAN
# DRUG TRENDS
# 2012

**Findings from the**
**Illicit Drug Reporting System**
**(IDRS)**

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# Abbreviations

| | |
|---|---|
| ABS | Australian Bureau of Statistics |
| ACC | Australian Crime Commission |
| ADIS | Alcohol and Drug Information Service |
| AFP | Australian Federal Police |
| AGDHA | Australian Government Department of Health and Ageing |
| AIHW | Australian Institute of Health and Welfare |
| ANSPS | Australian Needle and Syringe Program Survey |
| ATS | Amphetamine-type stimulants |
| AUDIT-C | Alcohol Use Disorders Identification Test—Consumption |
| AV | Ambulance Victoria |
| BBVI | Blood-borne viral infection |
| BPI | Brief Pain Inventory |
| CPH | Centre for Population Health |
| DPMP | Drug Policy Modelling Project |
| ED | Emergency department |
| EDRS | Ecstasy and related Drugs Reporting System |
| FTND | Fagerstrom test for nicotine dependence |
| GHB | Gamma-hydroxybutyrate |
| GP | General medical practitioner |
| HRPS | Harm Reduction and Pharmacotherapy Services |
| HBV | Hepatitis B virus |
| HCV | Hepatitis C virus |
| HIV | Human immunodeficiency virus |
| IDRS | Illicit Drug Reporting System |
| IDU | Injecting drug use |
| IRID | Injection-related injury and disease |
| KE | Key expert |
| K10 | Kessler Psychological Distress Scale |
| LE | Law enforcement |
| 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 |
| NHS | National Health Survey |

| | |
|---|---|
| NSP | Needle and Syringe Program |
| OST | Opioid substitution treatment |
| OTC | Over the counter |
| PBS | Pharmaceutical Benefits Scheme |
| PCR | Patient care record |
| PDI | Party Drugs Initiative |
| PWI | Personal Wellbeing Index |
| PWID | Person/people who inject(s) drugs |
| REU | Regular ecstasy user |
| SD | Standard deviation |
| SEADS | South East Alcohol and Drug Services |
| SF-12 | Short Form 12 Health Survey |
| SHARPS | Southern Hepatitis/HIV/AIDS Resource and Prevention Service |
| STI | Sexually transmitted infection |
| TBI | Traumatic brain injury |
| TGA | Therapeutic Goods Administration |
| UNSW | University of New South Wales |
| VACIS | Victorian Ambulance Clinical Information System |
| VDH | Victorian Department of Health |
| VIFM | Victorian Institute of Forensic Medicine |

# Glossary of Terms

| | |
|---|---|
| Cap | Small amount of heroin, typically enough for one injection. |
| Homebake | Illicit preparation of heroin from pharmaceutical preparations containing codeine or morphine. |
| Illicit/non-prescribed pharmaceuticals | Pharmaceutical drugs (e.g., antidepressants, antipsychotics, benzodiazepines, morphine, oxycodone, methadone, buprenorphine) obtained from a prescription in someone else's name, or through buying them from a dealer or obtaining them from a friend or partner, etc. This definition does not take into account the inappropriate use of prescribed pharmaceuticals such as the injection of buprenorphine or morphine. |
| Licit/prescribed pharmaceuticals | Pharmaceutical drugs obtained by a prescription in the user's name. This definition does not take into account 'doctor shopping' practices; however, it differentiates between prescriptions for self as opposed to pharmaceutical drugs purchased through a dealer or prescribed to a friend or partner, 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 of drug (usually heroin, speed or ice), although may also be used as a term referring to an amount for one injection (similar to 'cap'; see above). |
| Recent injection | Injection (typically intravenous) during the six months preceding interview. |
| Recent use | Use during the six months preceding interview 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

| | |
|---|---|
| 180 days | Daily use/injection* during the preceding six months |
| 90 days | Use/injection* every second day during the preceding six months |
| 24 days | Weekly use/injection* during the preceding six months |
| 12 days | Fortnightly use/injection* during the preceding six months |
| 6 days | Monthly use/injection* during the preceding six months |

*As appropriate

# Executive Summary

## Background

In 1998, the Australian Government Department of Health and Ageing (AGDHA) 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 in the Australian community. 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 related to patterns of illicit drug use and associated morbidity and mortality are *lag indicators,* meaning the most recent data available may be up to 12 months old and therefore insufficient for strategic early warning purposes on their own. 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) from each capital city in Australia. 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 use of the IDRS methodology and/or Victorian data are:

- The development of research into cocaine markets in Victoria and New South Wales (Shearer, Johnston, Kaye, Dillon, & Collins, 2005);
- Stage One of Australia's Drug Policy Modelling Project (DPMP) (Moore, Caulkins, & Dietze, 2005);
- Policy development and review activities and inquiries conducted by the Victorian Government (DCPC, 2004, 2006; DHS, 2006; Di Natale & Ritter, 2003; Victorian Department of Health, 2007);
- The annual *Victorian Drug Statistics Handbook* (Victorian Department of Health, 2009, 2011);
- A national survey examining attitudes, understanding and experiences of drug-driving (Mallick, Johnston, Goren, & Kennedy, 2007);
- Research into the use of amphetamine-type stimulants (ATS) and early intervention of methamphetamine-related harms (Jenkinson & Quinn, 2008); and
- Research into the self-reported wellbeing of PWID (Dietze et al., 2010).

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

## Summary of 2012 Victorian IDRS methodology

The Centre for Population Health (CPH) at the Macfarlane Burnet Institute for Medical Research and Public Health conducted the Victorian arm of the 2012 IDRS study between June and September 2012. The project consisted of:

1. A structured survey of 150 PWID recruited from six sites across metropolitan Melbourne;

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

2. Semi-structured interviews with 15 KE from various professional settings, selected according to their knowledge about illicit drug use and level of contact with PWID during the six months preceding the survey; and
3. Analyses of Victorian and national secondary indicator data related to illicit drug use.

Data collected via these three methods were analysed in order to identify illicit drug-related trends in Melbourne for the 2011/12 financial year. Where appropriate, these data were also compared to IDRS findings from 2000 to 2011.

## Demographics of the sample

In 2012, 150 PWID were interviewed for the Victorian IDRS. The mean age of the sample was 38 years; 70% were male. Eighty-five per cent of participants were Australian-born and 11% identified as Indigenous. At the time of interview, 92% were unemployed and 95% received a government pension, allowance or benefit. Almost one-third reported residing in a boarding house, hostel or shelter, while 15% reported that they were homeless or had no fixed address.

## Consumption patterns

### Current drug use

The mean age of participants' first injection was 18 years, with the first drug injected reported as heroin (47%) or methamphetamine (45%). Three-quarters reported that heroin was their drug of choice. Heroin (72%) was injected most often during the past month; 73% reported that heroin was the last drug they injected. Approximately two-fifths of the sample reported injecting drugs at least once per day.

### Heroin

Heroin is the most widely used injectable illicit drug among Victorian IDRS participants: 84% of the sample reported heroin use in the preceding six months, while 83% reported heroin injection. The proportion of participants who reported heroin as their main drug of choice increased significantly from 60% in 2011 to 74% in 2012 ($p < 0.01$). In 2012, the average frequency of heroin use increased from 63 days in 2011 to 72 days in 2012. Among recent heroin injectors, white/off-white rock (82%) was the form of heroin used most frequently in the six months prior to interview.

As in previous IDRS, KE described an ageing cohort of heroin users in Melbourne, many of whom were living with disability and other chronic health conditions. High levels of involvement in the criminal justice system were noted, with a large minority described as chronically institutionalised due to their frequency of incarceration. The majority of KE recommended expanding heroin users' access to OST programs and recruiting more prescribers to the field with a holistic approach to drug treatment.

### Methamphetamine

The IDRS collects information on the use and market characteristics of three main forms of methamphetamine available in Australia: speed, crystal methamphetamine (or ice), and base. In 2012, 67% of IDRS participants reported recent use of methamphetamine, while 63% reported recent methamphetamine injection. The prevalence of recent crystal methamphetamine use did not change significantly from 2011 (53%) to 2012 (59%), while the prevalence of recent speed use declined somewhat (from 49% to 39%, $p = 0.081$). Between 2011 and 2012 there was a significant increase in the prevalence of recent ice smoking (24% vs. 13%, $p < 0.05$). Overall, participants reported using methamphetamine on a fortnightly basis in the preceding six months.

Several KE reported an increase in the prevalence of crystal methamphetamine use in 2012, particularly among primary heroin users and people on OST treatment. It was reported that PWID had low levels of general knowledge about crystal methamphetamine and that many often referred to and

perceived the drug as speed. KE reported that speed use remained common and that people generally expressed a preference for this type of methamphetamine over ice.

### Cocaine

The prevalence of lifetime cocaine use was 64%. By contrast, 9% of participants reported recent use, a significant decrease compared with 2011 (17%). Seven per cent reported recently injecting cocaine. Most recent users reported use of powder cocaine (79%) in the six months prior to interview. In 2012, no KE commented on the prevalence and patterns of cocaine use among PWID in Melbourne.

### Cannabis

Cannabis use was ubiquitous among the 2012 IDRS sample, with 85% reporting recent use. Hydroponically grown cannabis was used by most recent cannabis users (93%) during the preceding six months. Participants reported using cannabis daily (median=178 days), and smoking an average of six cannabis cones or one cannabis joint on the last occasion of use. KE reported a high and stable prevalence of cannabis use in the community.

### Other opioids

#### *Methadone*

In 2012, 87% reported lifetime use of methadone (prescribed or non-prescribed oral liquid or Physeptone®) and 55% reported recent use. Specifically, 45% of participants reported using prescribed (oral liquid) methadone daily in the preceding six months. By contrast, 20% of participants reported recent non-prescribed use on an average of three days in the past six months. Similar to 2011, 8% reported injecting non-prescribed methadone on a median of four days in the preceding six months. The prevalence of recent prescribed and non-prescribed Physeptone® use was very low (2% and 1%, respectively).

#### *Buprenorphine*

Three per cent reported use of prescribed buprenorphine in the preceding six months, while 19% reported non-prescribed use. Median days of non-prescribed use fell from an average of 30 in 2011 to 10 in 2012. Nineteen per cent reported injecting non-prescribed buprenorphine in the preceding six months (median=8 days), while 1% reported injecting prescribed buprenorphine (median=180 days). Most participants who commented reported recently using non-prescribed buprenorphine to relieve their withdrawal symptoms (60%) or to 'self-treat' their opioid dependence (20%).

#### *Buprenorphine-naloxone tablets*

Seventeen per cent reported recent use of prescribed buprenorphine-naloxone tablets; recent non-prescribed use was reported by 19%. In the six months prior to interview, prescribed users reported use on approximately three days per week (median=72 days), while non-prescribed users reported less than monthly use (median=5 days). Recent buprenorphine-naloxone tablet injection declined slightly in 2012, from 25% to 18%. Half of participants who commented reported recently using non-prescribed buprenorphine-naloxone tablets to alleviate their withdrawal symptoms.

#### *Buprenorphine-naloxone film*

In 2012, for the first time, IDRS participants were asked to respond to separate questions regarding the use of buprenorphine-naloxone film. Ten per cent reported recent use of prescribed buprenorphine-naloxone film; recent non-prescribed use was reported by 12%. In the preceding six months, prescribed users reported use on approximately three days per week (median=72 days), while non-prescribed users reported a median of two days use. Lifetime injection was reported by 8%; 7% reported recent injection on three days (median) in the six months prior to interview.

*Morphine*

Twenty-nine per cent reported recent morphine use; 3% reported recent prescribed use on a median of two days in the preceding six months. By contrast, 27% reported recent use of non-prescribed morphine on a median of four days during the same period. Injection was the most commonly reported route of administration: 25% reported injecting morphine less than monthly in the past six months. Recent injection of non-prescribed morphine was significantly more common than injection of prescribed morphine (27% vs. 3%). The majority of participants who commented reported recently using non-prescribed morphine for the purposes of intoxication (56%) and as a substitute for heroin (38%).

*Oxycodone*

The prevalence of recent (prescribed and non-prescribed) oxycodone use decreased significantly from 41% in 2011 to 29% in 2012. In the preceding six months, 6% reported prescribed use on a median of 20 days, while 26% reported non-prescribed use on a median of five days. Recent oxycodone injection decreased significantly from 36% in 2011 to 24% in 2012. Similar to morphine, recent injection of non-prescribed oxycodone was significantly more common than injection of prescribed oxycodone (23% vs. 4%). Sixty-three per cent of participants who commented reported using non-prescribed oxycodone to 'self-treat' their opioid dependence.

*Over-the-counter (OTC) codeine*

Compared with 2011, in 2012 the prevalence of recent OTC codeine use decreased significantly (22% vs. 39%), with participants reporting less than monthly use (median=5). The majority of participants who commented reported that Nurofen Plus® was the main brand used (80%).

*Other opioids (not elsewhere classified)*

Twenty-one per cent reported recent use of other opioids (meaning other than those listed above) on a median of seven days in the preceding six months. In 2012 the prevalence of recent use of (other) opioids decreased significantly compared with 2011 (21% vs. 37%). Prescribed use was more common than non-prescribed use (84% vs. 16%). The majority of participants who commented reported that Panadeine Forte® was the main brand used (86%).

**Other drugs**

*Ecstasy*

Thirteen per cent of IDRS participants reported ecstasy use on one day (median) in the preceding six months. Three per cent reported recent ecstasy injection.

*Hallucinogens*

Four per cent reported recent use of hallucinogens on two days (median) in the preceding six months. No reports of recent injection were received. LSD was the most commonly used hallucinogen.

*Benzodiazepines (other than alprazolam)*

From 2000 to 2012 the proportions of Victorian IDRS participants reporting recent benzodiazepine use remained reasonably stable. In 2012, 70% reported recent use on a median of 90 days in the preceding six months. Only 1% reported recent injection. The proportions reporting recent use of prescribed and non-prescribed benzodiazepines were not significantly different (47% vs. 48%); however, 62% reported primarily using prescribed forms of these drugs. On average, users of prescribed benzodiazepines reported daily use (median=180) in the preceding six months, while users of non-prescribed forms reported use on a median of seven days.

A few KE reported that diazepam, oxazepam and temazepam use was challenging to manage in the service system context, particularly when large quantities were consumed (e.g., 25-50 mg).

*Alprazolam*

In 2012, the prevalence of recent alprazolam use was not significantly different from that in 2011 (65% vs. 69%). The prevalence of recent prescribed alprazolam use was significantly lower than the prevalence of non-prescribed use (14% vs. 58%). Prescribed users reported daily use of the drug (median=180 days) in the preceding six months, whereas users of non-prescribed forms reported use on a median of 10 days.

In 2012, nine KE reported that they considered alprazolam to be the 'most problematic drug'; concerns were primarily related to the drug's dependence liability and negative behavioural effects. KE reported that alprazolam consumers were primarily injectors who used large quantities in a session when availability of drugs such as heroin was limited. The prevalence of use was described as stable, with prescribed and non-prescribed use reported as equally common. Only small proportions of PWID reportedly injected the drug. KE suggested rescheduling alprazolam and reducing the package size to offset the harms associated with use.

*Quetiapine*

In 2012, the prevalence of recent quetiapine use was 37%, not significantly different from the prevalence in 2011 (30%). Recent users reported use on a median of 10 days in the preceding six months. Recent non-prescribed use was significantly more common than recent prescribed use (10% vs. 29%). However, while prescribed users reported using the drug daily (median=180), non-prescribed use was relatively infrequent (median=6 days). All recent users reported administering the drug orally; only 1% reported quetiapine injection in the past six months.

*Pharmaceutical stimulants*

Thirteen per cent reported recent use of pharmaceutical stimulants on a median of four days in the preceding six months. Recent non-prescribed use was significantly more common than prescribed use (11% vs. 1%). Eight per cent of the sample reported injecting non-prescribed pharmaceutical stimulants; the median number of days of use was two in the past six months; no reports were received regarding the recent injection of prescribed forms of these drugs.

*Inhalants*

The prevalence of lifetime inhalant use significantly declined between 2011 and 2012 (32% vs. 19%). No participants reported recent inhalant use in 2012.

*Steroids*

One per cent of the sample reported injecting steroids, doing so on a median of 13 days in the six months preceding interview. However, KE reported an increase in new NSP clients reporting the use and injection of steroids, peptides and melanotan.

*Alcohol and tobacco*

In 2012 the prevalence of recent alcohol use was 69%; on average, participants reported consuming the drug on a weekly basis (median=24 days). No reports were received regarding recent alcohol injection. By contrast, recent tobacco smoking was ubiquitous, with 95% reporting a median of daily use in the preceding six months.

## Drug market: Price, purity, availability and purchasing patterns

### Heroin

In 2012 the median price paid for a 'cap' of heroin was $50, the same as in 2011, while the reported price of a gram increased to $300. However, participants most commonly reported purchasing 1.7 grams of heroin and paying $350. At the time of interview, most reported that heroin was very easy or easy to obtain and purity was low to medium. Participants reported primarily sourcing the drug from a known dealer at an agreed public location. The average purity of seizures by Victoria Police was 18% during 2011/12.

KE reported increased heroin availability in the preceding 12 months, with the price reported as stable, and purity reported as medium to low. It was also reported that PWID were purchasing the drug in larger quantities than they had previously. Based on observations of rising overdose and ambulance attendance numbers, some KE perceived that heroin purity had increased.

### Methamphetamine

Between 2011 and 2012 the median price of a point of speed increased from $50 to $100. The price of a gram remained stable at $200. The median price of a point of crystal methamphetamine remained stable at $100, while the median price of a gram decreased from $800 to $500. The majority of participants reported that both speed and crystal methamphetamine were very easy or easy to obtain, and that availability remained stable during the past six months. Reports of speed purity varied widely, while reports of crystal methamphetamine purity suggested it was high to medium at the time of interview. The average purity of methamphetamine seizures by Victoria Police was 56% in 2011/12, significantly higher than the purity of seizures in 2010/11 (39%). By contrast, the purity of amphetamine seizures was 14% during the same period.

KE from both the LE and health sectors reported that methamphetamine availability increased during the preceding year.

### Cocaine

Only four participants reported on the price of cocaine in 2012; reports were inconsistent so median prices are not reported. Three of four participants reported that cocaine purity was medium, with three of four reporting that the drug was easy to obtain. The average purity of cocaine seizures by Victoria Police increased to 49% in 2011/12 from 26% in 2010/11.

Law enforcement KE reported increased cocaine importation in Australia and a consequent increase in the number of seizures by LE agencies.

### Cannabis

The median reported prices for grams of hydroponic and bush-grown cannabis remained stable at $20; the median prices of an ounce were reported as $250 for hydroponic cannabis and $240 for bush-grown cannabis. Most participants reported that both forms of cannabis were very easy or easy to obtain, and that the market was stable in the preceding six months. Hydroponic cannabis potency was reported as high or medium, while bush-grown cannabis potency was reported as medium.

### Methadone

Very few participants reported on the price of illicit methadone in 2012 so median prices are not reported. However, participant reports suggested that non-prescribed methadone was easy to obtain. The most common source of non-prescribed methadone was friends, from a friend's home.

### Buprenorphine

Participants most commonly reported purchasing an 8 mg buprenorphine tablet in 2012, for a median price of $20. Most participants reported that illicit buprenorphine was very easy or easy to obtain. The most common source of non-prescribed buprenorphine was friends, from a friend's home or an agreed public location.

### Buprenorphine-naloxone (tablets and film)

Participants most commonly reported purchasing an 8 mg tablet of buprenorphine-naloxone in 2012; median price was $15. Only two participants reported on the price of buprenorphine-naloxone film, so median prices are not reported. The tablets were generally reported as very easy or easy to obtain, as was the film. The most common sources for both the tablet and the film were participants' friends.

### Morphine

In 2012 participants most commonly reported purchasing a 100 mg MS Contin® tablet; median price was $50, unchanged from 2011. Reports regarding the availability of illicit morphine at the time of

interview were very inconsistent. The most common source of non-prescribed morphine was friends, followed by street dealers, via a street market or a friend's home.

### Oxycodone

In 2012 participants most commonly reported purchasing an 80 mg tablet of OxyContin®; for a median price of $45, and a 40 mg tablet for a median price of $23. Reports regarding availability varied. The majority (56%) reported that illicit oxycodone was very easy or easy to obtain, while 44% reported that obtaining the drug was difficult or very difficult. While most reported that availability remained stable, 27% reported it had become more difficult to obtain the drug in the preceding six months. Similar to morphine, the most common source of non-prescribed oxycodone was friends, followed by street dealers, via a street market, friend's home and an agreed public location.

## Health-related trends associated with drug use

### Overdose and drug-related fatalities

In 2012, 55% reported a lifetime accidental heroin overdose; the median number of overdoses was two. Among participants with an overdose history, 16% reported overdosing on heroin in the year preceding interview, not significantly different from 2011 (28%). During 2011, 1,241 non-fatal heroin overdoses were attended by Ambulance Victoria, and 97 deaths were officially defined as heroin-related. In 2012, six participants reported overdosing on drugs other than heroin in the preceding six months.

### Drug treatment

#### *Specialist AOD treatment services*

During 2011/12, 51,742 courses of treatment were delivered to 30,428 clients[2] in Victorian specialist alcohol and drug treatment services[3]. Heroin was the most commonly cited drug of concern after alcohol and cannabis, comprising 11% of all clients and 11% of all courses of treatment. Amphetamine was cited as a drug of concern in 10% of courses of treatment and 11% of clients, while cocaine was cited in less than 1% of courses of treatment and clients.

#### *DirectLine*

In 2011 DirectLine responded to 42,896 alcohol and drug-related calls, with a drug of concern[4] identified in almost half of all calls. Heroin was identified as a drug of concern in 12% of all drug-identified calls, whereas calls in which pharmaceutical opioids were identified comprised 31% of calls. In 2011, amphetamine was identified in 12% of drug-identified calls, an increase from 8% in 2010, while cannabis accounted for 11% of all drug-identified calls.

#### *Pharmacotherapy consumers*

As at July 2012, 14,035 people were dispensed pharmacotherapy treatment in Victoria. Almost two-thirds (66%) were dispensed methadone, while almost one-third (29%) were dispensed buprenorphine-naloxone. Only 4% of pharmacotherapy consumers were dispensed buprenorphine.

### Hospital separations

In 2009/10 there were 1,357 opioid-related hospital admissions in Victoria, comprising 24% of all opioid-related hospital admissions in Australia. By contrast, in Victoria 357 amphetamine-related hospital admissions were recorded; these accounted for 21% of all Australian hospital admissions for the drug. Cocaine-related hospital admissions are relatively rare in Victoria: only 35 cocaine-related

[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.

admissions were recorded, comprising 14% of admissions in Australia. In 2009/10, there were 451 cannabis-related hospital admissions in the state, accounting for 22% of all Australian cannabis-related admissions.

### Injecting risk behaviours and health problems

#### *Injecting equipment*

Consistent with 2011, in 2012 11% of Victorian IDRS participants reported borrowing a used needle in the month prior to interview, most commonly from their regular sex partner. Twenty-five per cent reported lending a used needle to someone else in the preceding month, similar to 2011. While over half (60%) reported reusing their own needle in the previous month, only 15% reported having had trouble obtaining sterile injecting equipment when they needed it. Few participants reported injecting into their hand or wrist (9%), neck (5%), or groin (2%). Almost one-third reported injecting in public locations.

Although several KE reported observing a steady decline in the frequency with which PWID attended NSP, larger quantities of sterile equipment were dispensed at each visit. Other NSP KE recommended extending NSP hours into the night and during the weekend to counter equipment reuse, on-selling, and break-ins to public sharps bins. Implementation of a supervised injecting facility to improve the overall health of PWID was recommended.

#### *BBVI*

In 2011, three new HIV diagnoses were recorded in which IDU was the likely exposure, comprising just over 1% of all new infections for the year. However, hepatitis C continues to be a major public health concern: according to the 2011 ANSPS, the estimated prevalence of hepatitis C was 66% among PWID in Victoria. In 2012, the self-reported prevalence of hepatitis C infection was 53% among the Victorian IDRS sample. The majority (88%) of participants who reported hepatitis B vaccination (n=90) reported completing the three-dose schedule. Almost half each reported testing for HIV, hepatitis B and hepatitis C in the three months preceding interview.

### Alcohol Use Disorders Identification Test—Consumption (AUDIT-C)

The AUDIT-C uses a cut-off score of five or more to indicate the presence of risky to dependent drinking and whether further assessment is required. In 2012 the mean AUDIT-C score was 6.1, the same as in 2011. Sixty-three per cent of participants who reported drinking alcohol in the past year scored five or more on the AUDIT-C. Although men had higher mean scores than women (6.3 vs. 5.7), this difference was not significant.

### Mental health problems and psychological distress

#### *Self-reported mental health problems*

Fifty-one per cent of 2012 Victorian IDRS participants reported experiencing a mental health problem in the preceding six months, similar to 2011. Among these, depression (76%) and anxiety (43%) were widespread; 12% reported having schizophrenia. Two-thirds of participants with a mental health problem reported attending a health professional, most commonly a GP. The majority of those who attended a health professional were prescribed psychotropic medication in the past six months, most commonly benzodiazepines and antipsychotic medications.

#### *The Kessler Psychological Distress Scale (K10)*

According to the K10, the prevalence of psychological distress was extremely high among 2012 Victorian IDRS participants; 74% of the sample was classified as having high or very high psychological distress in the four weeks prior to interview. Although the distributions of participants' K10 scores remained similar to previous years, the prevalence of psychological distress was higher in 2012. By contrast, only 10% of the 2007/08 NHS sample was classified as having high or very high psychological distress in the preceding four weeks.

### Short Form 12 (SF-12)

According to the SF-12, the self-rated physical and mental health of 2012 Victorian IDRS participants was much poorer than that of the Australian general population. On the SF-12, higher mean scores indicate better self-rated physical and mental health. Participants' mean physical component score (PCS) was 45.4, while their mean mental component score (MCS) was 31.5, both significantly lower than the respective general population norms of 50.1 (PCS) and 49.8 (MCS).

### Health service access

In 2012, 86% of participants reported visiting a health service in the four weeks prior to interview, most commonly a GP (n=102) or an OST prescriber (n=80). Participants reported that the majority of these visits were related to substance use (GP, 73%; OST, 99%). By contrast, fewer participants (n=14) reported accessing an emergency department (ED) in the preceding four weeks, with the majority (71%) of these visits reported as not substance-related.

### Driving risk behaviour

Forty-six participants reported driving a vehicle at least once during the preceding six months. Of these, 28% reported driving under the influence of alcohol and 76% reported driving after using illicit drugs. Participants were asked to comment on their driving ability after illicit drug use; while 56% reported that illicit drugs had no impact on their driving ability, 18% each reported that their driving was slightly impaired and quite impaired.

## Law enforcement-related trends associated with drug use

### Criminal involvement

In 2012 almost half of Victorian IDRS participants reported a history of arrest in the preceding 12 months, most commonly in relation to property crime (60%) and use or possession of drugs (19%). In the month prior to interview, 41% of the sample reported that they were involved in crime; 27% reported involvement in property crime and 20% reported selling drugs for cash profit.

### Arrests

In 2010/11, heroin-related consumer (i.e., use/possession) and provider (i.e., manufacture/trafficking) arrests in Victoria changed little from 2009/10. However, between 2009/10 and 2010/11 the number of provider arrests relating to amphetamine-type stimulants declined, and cocaine-related consumer and provider arrests also declined. In Victoria, 78% of all cannabis-related arrests were consumer arrests.

### Expenditure on illicit drugs

Over half of the Victorian IDRS sample reported purchasing illicit drugs on the day prior to interview, with a median spend of $100.

## Special topics of interest

### Fagerstrom test for nicotine dependence (FTND)

In 2012, 127 Victorian IDRS participants who reported they were daily smokers responded to the FTND. According to the FTND 23% of daily smokers were classified as having high nicotine dependence, while 22% were classified as having very high nicotine dependence.

### Pharmaceutical opioids

In 2012, 79% of participants reported use of prescribed and non-prescribed pharmaceutical opioids (including morphine, oxycodone, OST medications such as methadone and buprenorphine-naloxone, and other opioids such as fentanyl, pethidine and tramadol) in the preceding six months. The most commonly reported brands were Methadone Syrup®/Biodone Forte® (35%), Suboxone® (17%) and OxyContin® (15%). The majority (70%) of these participants reported primarily using pharmaceutical opioids to 'self-treat' their opioid dependence. Approximately 13% reported that they were refused pharmaceutical opioids by a prescriber because of their IDU history, while 16% reported that they had

given or sold their prescribed drugs to others. Approximately half of participants who had injected pharmaceutical drugs (n=64) in the past six months reported obtaining no information on filtering.

### Brief Pain Inventory (BPI)

In 2012 the BPI was administered to Victorian IDRS participants. Almost one-third reported experiencing pain other than minor headaches, sprains or toothaches at the time of interview. Among these participants (n=47), the mean pain severity score was 4.4 out of 10, while the mean pain interference score was 5.2. The mean pain relief score was also 5.2; 36% reported that they had trouble obtaining pain relief from a doctor or specialist in the past six months.

### Opioid and stimulant dependence

The Severity of Dependence Scale (SDS) is designed to measure the degree of psychological dependence on a range of substances. A cut-off score of four indicates methamphetamine dependence, while a cut-off score of five indicates dependence on heroin. In 2012 the SDS was administered to 144 recent heroin and other opioid users; for heroin, the mean SDS score was 8.2, with 88% of participants scoring five or more on the scale, indicating opioid dependence. The SDS was also administered to 95 recent methamphetamine and other stimulant users, yielding a mean SDS score of 3.4; 41% scored four or more, indicating methamphetamine dependence. Mean SDS scores did not differ significantly between men and women for either drug.

### OST medication injection

In 2012, 18% of Victorian IDRS participants reported recent injection of buprenorphine, 16% reported recent injection of buprenorphine-naloxone tablets, 6% injection of buprenorphine-naloxone film and 5% injection of methadone.

### Injection-related injury and disease (IRID)

In 2012, Victorian IDRS participants were asked an expanded set of questions about IRID to explore the extent and nature of these harms. In the six months preceding interview, participants most commonly reported experiencing non-serious IRID such as redness near the injection site (31%) and collapsed or blocked veins (24%). Of potentially serious IRID, the most commonly reported were thrombophlebitis (11%), pitting oedema (10%) and cellulitis (10%). Three per cent each reported experiencing serious IRID such as deep vein thrombosis, gangrene and venous ulcers in the preceding six months.

### Neurological history

The 2012 IDRS assessed the prevalence of self-reported neurological conditions. Five per cent reported a history of epilepsy, while 3% each reported a history of stroke and hypoxia. The prevalence of traumatic brain injury (TBI) was determined by asking participants about a history of lost consciousness. Using this measure, the lifetime prevalence of TBI was 47%. Participants reported a median of two TBI in their lifetime, typically occurring at 25 years of age (median), at which the most severe loss of consciousness was 10 minutes (median). One-third reported losing consciousness for at least 30 minutes. At participants' most severe TBI, 33% reported being under the influence of alcohol, while 44% reported being substance-affected.

Fifty-nine per cent reported experiencing sequelae of TBI. Of these (n=41), the most commonly reported complaints were memory loss (76%), poor concentration (63%), problems with finding the right words when speaking (61%) and mood changes (51%).

### Possession laws

In 2012, Victorian IDRS participants were asked to respond to a hypothetical scenario about trafficking threshold quantities. Seventy per cent of participants reported believing that the quantity of drugs in their possession would affect the charge type.

## Conclusions

The results of the 2012 Victorian IDRS indicate that the majority of illicit drug markets in Melbourne have remained stable during the preceding 12 months.

Key findings from the 2012 IDRS included:

— A significant increase in the proportion of participants reporting heroin as their drug of choice, from 60% in 2011 to 74% in 2012 and an increase in the median days of heroin use (from 63 to 72 days).

— 1.7 grams of heroin was the most commonly purchased quantity of heroin. KE reported that participants were purchasing heroin in larger quantities than they had previously.

— A slight decline in the prevalence of recent speed use (39% vs. 49%) and a significant increase in the prevalence of recent crystal methamphetamine smoking (from 13% in 2011 to 24%). KE reported an increase in crystal methamphetamine use among PWID, particularly primary heroin users, low levels of general knowledge about methamphetamine, and an increase in related harm.

— An increase in amphetamine-related events attended by Ambulance Victoria in 2011 compared with previous years.

— The proportions of recent (prescribed) OST pharmacotherapy users in the 2012 Victorian IDRS sample generally reflected the distributions of OST medication types dispensed to Victorian pharmacotherapy consumers as at July 2012.

— Modest proportions of participants reported recent OST medication injection, at relatively low frequencies (e.g., less than once per month). Overall, buprenorphine-naloxone tablet injection declined. The film was only injected by 7% on three days (median) in the preceding six months.

— A significant decrease in the prevalence of recent oxycodone use (from 41% in 2011 to 29%). The prevalence of prescribed morphine and oxycodone use was low and very few reported injection. However, prevalence of the recent injection of non-prescribed pharmaceutical opioids was comparatively high. Only a minority reported seeking information on filtering practices in relation to the injection of pharmaceutical opioids in the preceding six months.

— Recent non-prescribed alprazolam use was reported by the majority (58%) of the sample, although frequency of use was modest (median=10 days). On the other hand, 62% of the sample reported daily use of prescribed benzodiazepines (other than alprazolam). Non-prescribed quetiapine use was reported by 29% on six days in the previous six months. Recent injection of these drugs was very uncommon.

— A declining trend in the frequency with which PWID were attending NSP, with a concurrent increase in the ‘number of needles out’. This may be partially related to increased policy activity around some NSP in Melbourne. Despite this, other KE reported a need to extend NSP hours into the night and over the weekend. On average, participants reported attending NSP once per week in the preceding month and collecting a median of four sterile needle and syringes. Participants commonly reported reuse of their own syringes, although most reported no trouble obtaining sterile equipment in the past month.

— An extremely high prevalence of psychological distress (74%) among the 2012 Victorian IDRS sample.

— A continuing high prevalence of high-risk to dependent alcohol consumption (63%) among participants who drank alcohol in the past year.

— A higher prevalence of hepatitis C among PWID in Victoria than in Australia according to the 2011 ANSPS.

— A low prevalence of ED attendance related to drug use in the past four weeks.

— A high prevalence of self-reported TBI (47%) among 2012 Victorian IDRS participants.

On the basis of these findings, we recommend:

1. Continued monitoring of illicit drug markets for trends in the prevalence and patterns of drug use, and price, purity and availability, and continued monitoring of related poor health and social outcomes.

2. Further research on the impact of ageing among PWID, with particular attention paid to disability and chronic disease and the types of health and welfare services required to effectively service this population now and into the future.

3. Expanding OST programs across Victoria and recruiting more prescribers to the field with a holistic approach to drug treatment. Increasing access to OST programs for dependent heroin users. Recognition that diversion of OST is a complex phenomenon that tends to operate as part of a 'gift economy' between friends that is related to the alleviation of withdrawal symptoms.

4. Continued monitoring of the prevalence and patterns of non-prescribed alprazolam use, given the reported harms associated with use. Further research to tease out the temporal predictors and social determinants of use.

5. Renewal of and reinvestment in safer injecting education programs and consumables targeted to PWID to reduce injecting-related disease and harm, particularly in relation to best practice sterile injecting techniques, correct filtering of pharmaceutical opioids such as morphine and oxycodone, and high-potency crystal methamphetamine. Broader harm reduction campaigns targeting the use of specific drug types (such as alprazolam, pharmaceutical opioids and crystal methamphetamine) that provide PWID with practical and relevant information related to reducing concurrent health and social harms.

6. Increasing education about new hepatitis C treatment options and increasing access to hepatitis C treatment for PWID, including widespread promotion of hepatitis C RNA testing among PWID across Victoria.

7. Increasing mental health resources for PWID given their very high prevalence of psychological distress, which is indicative of a high prevalence of serious mental illness.

# 1. Introduction

In 1998 the Australian Government Department of Health and Ageing (AGDHA) 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 in 1996 and a multi-state trial in 1997 (Hando & Darke, 1998; Hando, Darke, Degenhardt, Cormack, & Rumbold, 1998; Hando, O'Brien, Darke, Maher, & Hall, 1997). The 1998 IDRS study was conducted in New South Wales (NSW), Victoria and South Australia (SA) (McKetin, Darke, Hayes, & Rumbold, 1999), with each jurisdiction undertaking a survey of people who inject drugs (PWID), a key expert (KE) survey and analyses of available secondary indicator data. In 1999 the IDRS study was replicated in NSW, Victoria and SA, 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 study using the same methodology. This is the 15th year that the IDRS has been conducted in Melbourne.

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

The *Victorian Drug Trends 2012* report summarises data collected during the months of June through November 2012 as part of the Melbourne arm of the 2012 IDRS. The findings contained herein pertain to the 2011/12 financial year unless otherwise indicated. The report provides an outline of the methods used to collect data for this period and then presents an overview of the socio-demographic characteristics and drug use history of the participating PWID. The report then presents main findings for recent trends in the use of heroin, methamphetamine, cocaine, cannabis and other drugs, including pharmaceutical opioids. Following this, drug-related harms, general health and other issues of significance are examined.

For details to June 2010 regarding trends in alcohol and other drug use among the broader Victorian population, readers should refer to the annual *Victorian Drug Statistics Handbook* series (Victorian Department of Health, 2011). Readers are also referred to the forthcoming Australian Drug Trends 2012 monograph for national IDRS data and jurisdictional comparisons (see Stafford & Burns, 2013).

## 1.1. Study aims

The primary aims of the 2012 Victorian IDRS were:

— To document patterns of heroin, methamphetamine, cocaine and cannabis use, and illicit drug market characteristics (i.e., price, purity, and availability) among PWID in Victoria;

— To identify drug-related harms and relevant trends among this population; and

— To detect emerging drug trends of national significance that may require further in-depth investigation.

# 2. Method

The 2012 IDRS replicates the methodology used for the study each year since 1997 and incorporates a quantitative survey of PWID (i.e., the participants), semi-structured interviews with KE recruited from a variety of professional settings in Melbourne, and analyses of indicator data related to the use of illicit drugs in Victoria. Information provided through the triangulation of these three data sources is used to identify emerging trends in drug use and illicit drug markets in Melbourne.

## 2.1. Survey of people who regularly inject drugs

Structured face-to-face interviews were conducted with 150 PWID recruited from metropolitan Melbourne in June 2012. To be eligible to participate in the study, participants were required to have injected drugs on an at least monthly basis in the six months preceding interview and to have resided in Melbourne for the duration of the previous 12 months. Convenience sampling was facilitated by advertisements and recruitment notices at Needle and Syringe Programs (NSP), staff at these services advising potential participants of the research, and snowballing (i.e., the recruitment of participants' friends and associates via word-of-mouth).

Six agencies assisted the 2012 IDRS team with recruitment and provided interview sites for the PWID survey component of the research:

— Access Health (Salvation Army), St Kilda;

— InnerSpace (North Yarra Community Health), Collingwood;

— NRCH NSP (North Richmond Community Health), North Richmond;

— South East Alcohol and Drug Services (SEADS, Southern Health), Dandenong;

— Southern Hepatitis/HIV/AIDS Resource and Prevention Service (SHARPS, Peninsula Health), Frankston; and

— 131B (Kids off the Kerb, 20th Man Fund), Footscray.

The structured interview schedule administered to participants in 2012 comprised core questions used in previous IDRS studies conducted in Melbourne, as well as other measures detailed in Chapter 7 (Special Topics of Interest). Survey items included questions covering participants' socio-demographic characteristics, drug use history, perceptions of the market characteristics (including the price, and purity and availability) of the main illicit drugs under investigation, criminal involvement, risk behaviours, health, and other general trends. The average duration of each interview was approximately 50 minutes (range=25-110 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 key experts

Fifteen KE (nine men and six women) participated in face-to-face interviews between July and November 2012. Most were recruited from a pool of KE who had previously taken part in the IDRS and/or the Ecstasy and related Drugs Reporting System (EDRS). Other KE drawn from the same agencies on the basis of referrals received from professionals in the field were recruited as replacements for or alternatives to previous participants or as individuals representing agencies not previously surveyed.

KE involved in the 2012 IDRS consisted of direct health workers (e.g., primary health centre staff, drug and alcohol nurses, paramedics and pharmacists) (n=6), NSP and outreach workers (n=6), law

enforcement personnel (n=2), and policy makers (n=1). Excluding law enforcement personnel, participants were selected on the basis of having had at least weekly contact with illicit drug users during the preceding six months, and/or contact with 10 or more illicit drug users during that same period, and/or expert knowledge in one or more areas relating to the use, possession, manufacture and/or trafficking of illicit substances.

To allow KE to consider whether they would be able to address the research questions, some were screened after they had received the participant information statement and consent form and a copy of the KE interview schedule. Other KE did not wish to receive the materials in advance and were deemed eligible after telephone screening. The KE interview schedule included sections eliciting information on the group characteristics of people currently involved in the illicit drug market, the characteristics of the market itself, and recent observed trends in illicit drug use and related harms.

As per 2011, the 2012 survey focused on the drug or drugs KE perceived to be 'most problematic' at the time of interview and during the previous 12 months. The drugs most commonly named as 'most problematic' by KE in 2012 were alprazolam (i.e., Xanax®, a short-acting benzodiazepine) (n=9), crystal methamphetamine or ice (n=4), and heroin (n=3). Other drugs nominated by KE as 'problematic' included pharmaceutical opioids, benzodiazepines other than alprazolam, alcohol, and gamma hydroxybutyrate (GHB).

KE interviews took an average of 45 minutes to complete (range=25-75 minutes). Detailed notes were made by the interviewer during each interview and the raw data were transcribed and coded soon after their conclusion.

## 2.3. Other indicators

Information collected from both the PWID and KE interviews was supplemented by data obtained from secondary indicator sources. Data relating to trends for the 2010/11 financial year are reported unless otherwise indicated. For secondary indicators, where current data were unavailable, the most recently available data are 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 general community are typically derived from large-scale population surveys. The most recent population survey providing estimates on the prevalence of illicit drug use within the Australian community is the 2010 National Drug Strategy Household Survey (NDSHS) (AIHW, 2011).

#### Drug seizure purity levels

— The Drug Analysis Branch of the Victoria Police Forensic Services Department conducts analyses of purity 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 2010/11 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 2010/11 financial year.

#### Specialist drug treatment presentations

— The Victorian Department of Health (formerly the Department of Human Services) 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 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 2011/12 financial year.

— The Harm Reduction and Pharmacotherapy Services unit at the Victorian Department of Health maintains a database that records all methadone, buprenorphine and buprenorphine-naloxone permits in Victoria. This database is the primary source of information regarding the characteristics of consumers attending Victorian pharmacotherapy programs for the treatment of opioid dependence. Data from the quarterly census showing the number of clients in treatment for the period January 1985 to October 2012 are presented in this report.

— DirectLine is a Victorian 24-hour specialist telephone service operated by Turning Point Alcohol and Drug Centre that provides information on drug use and related issues, referrals to other services, and counselling to callers who are concerned about their own drug use or use by significant others. All calls are logged into an electronic database that provides aggregated information about callers' drug(s) of concern, and whether the call relates to the caller or a significant other. Data for the period 1999 to 2011 are presented in this report.

### Ambulance attendances at non-fatal drug overdoses and other drug-related events

— In collaboration with Ambulance Victoria, Turning Point Alcohol and Drug Centre manages an electronic database of all drug-related ambulance attendances in Victoria, which comprises information obtained from electronic patient care records (PCRs) using the clinical information system VACIS®, as well as information previously extracted and coded from paper-based PCRs (for data prior to October 2006). Reliable data are available from June 1998 (Lloyd, 2012). Data for the period 2007 to 2011 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 examination that is 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, 1999/2000-2009/2010.

### Heroin-related fatalities

— Mortality information from heroin-related deaths was obtained from data collated by the Victorian Department of Health from the National Coronial Information System. This report presents data from 1991 to 2011.

### Blood-borne viral infections surveillance data

— Blood-borne viral infections (BBVI) such as 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 at the Victorian Department of Health records newly diagnosed and unspecified notifications of infectious disease in Victoria. Surveillance data relating to HIV, hepatitis B and hepatitis C are presented in this report from 1999 to 2011.

— The Australian Needle and Syringe Program Survey (ANSPS) has been conducted annually by the Kirby Institute (formerly known as the National Centre in HIV Epidemiology and Clinical Research) since 1995. The survey is designed to supplement sentinel BBVI surveillance data via a short questionnaire on the demographic and behavioural characteristics of voluntary NSP

clients together with serological testing of their finger-prick blood samples. Information from the 2007 to 2012 ANSPS data collections are presented in this report (Iversen & Maher, 2012).

## 2.4. Data analysis

*T*-tests were employed for selected continuous, normally distributed variables, with the mean and standard deviation (SD) reported. Where appropriate, medians and ranges are reported; the rank-sum test was used to compare selected non-parametric continuous variables. Categorical variables were analysed using $\chi^2$ tests for percentages and $\chi^2$ tests for selected trends over time. Analyses of 2012 Victorian IDRS data were conducted using IBM SPSS Statistics 20.0 (IBM Corp, 2011). Stata 11.0 SE was used to conduct one-sided tests of proportions between data from 2012 and 2011 (StataCorp, 2009). *P* levels of less than .05 were taken to denote statistical significance.

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

In 2012, 150 people who regularly inject drugs (PWID) were interviewed for the Victorian IDRS. Twenty-five participants were recruited from each of six sites across Melbourne: Collingwood, Dandenong, Footscray, Frankston, North Richmond and St Kilda. As with previous years, the majority of participants resided in areas near each recruitment site.

The demographic characteristics of the 2012 Victorian IDRS sample were similar to those of participants in 2011, and are summarised in Table 1. The participants had a mean age of 38 years (range=20-62 years) and 70% were men. Over half of the sample reported living in stable accommodation. Similar to 2011, in 2012 almost one-third of participants reported residing in a boarding house, hostel or shelter at the time of interview, while 15% reported that they were homeless or had no fixed address (Table 1). Over half (54%) of the sample was single, while 23% reported having a regular partner and 17% reported being married or in a de facto relationship.

Most participants were born in Australia (85%), but a few reported being born in New Zealand, Vietnam, the United States, Italy, and Turkey, among other countries. Those born outside of Australia reported residing here for a median of 29 years (range=10-44 years). In 2012, 11% of participants identified as Indigenous, which was similar to the proportions in 2011 and 2010 (10% and 9%, respectively).

Consistent with previous years, participants reported completing approximately 10 years of school education (range=2-12 years). Since leaving school, 41% reported completion of a trade or technical qualification and 5% reported completion of a university qualification. The majority of participants (92%) were unemployed at the time of interview, and most (95%) reported that a government pension, allowance or benefit was their main source of income in the preceding month. Participants reported receiving a mean income of $376 per week (SD=182.6, range=$140-$1,346) during the past year.

In 2012, 60% of participants reported being in drug treatment at the time of interview. Of those participants currently receiving drug treatment (n=90), most had been on an opioid substitution treatment (OST) such as methadone (66%) or buprenorphine-naloxone (24%) for a median duration of 24 months (range=0.25-312 months).

In 2012, 60% (n=89) of the 2012 IDRS sample reported a history of imprisonment, which was relatively consistent with the proportion in 2011 ($p$ = 0.593) (Table 1). A history of incarceration was significantly more common among male participants than female participants (68% vs. 42%, $p$ < 0.01).

**Table 1: Demographic characteristics of participants, Victoria, 2011-2012**

| | 2011 (N=150) | 2012 (N=150) |
|---|---|---|
| **Mean age in years (SD)** | 37 (7.6) | 38 (8.1) |
| **Male (%)** | 75 | 70 |
| **Heterosexual (%)** | 91 | 93 |
| **Indigenous (%)** | 10 | 11 |
| **Accommodation (%)** | | |
| Own house/flat (includes renting) | 34 | 41 |
| Parents'/family house | 11 | 11 |
| Boarding house/hostel | 24 | 27 |
| Shelter/refuge | 3 | 4 |
| No fixed address/homeless | 17 | 15 |
| Other | 0 | 3 |
| **Employment (%)** | | |
| Not employed | 87 | 92 |
| Full-time | 1 | 2 |
| Part-time/casual | 7 | 5 |
| Home duties | 2 | 1 |
| Other | 0 | 1 |
| **Mean years of school education** | 10 | 9.6 |
| **Tertiary education (%)** | | |
| None | 39 | 55 |
| Trade/technical | 52 | 41 |
| University/college | 8 | 5 |
| **Government pension, allowance or benefit (%)** | 96 | 95 |
| **Current drug treatment* (%)** | 59 | 60 |
| **Prison history (%)** | 63 | 60 |

Source: IDRS participant interviews

* Includes all types of pharmacotherapy treatment and drug counselling.

# 4. Consumption patterns

The 2012 Victorian IDRS participants' injecting history and current patterns of injecting drug use are presented in Table 2. As in 2011, participants reported that they first injected a drug at 18 years of age, with similar proportions reporting that their first injection was either heroin (47%) or methamphetamine (45%). At the time of interview, three-quarters (74%) of the sample reported that heroin was their drug of choice. Heroin was also most commonly reported by participants as the drug injected most often during the previous month (72%) and the drug injected most recently (73%). In the month prior to interview, 42% of participants reported injecting drugs at least once per day, while 35% reported that they injected drugs more than once per week (Table 2).

**Table 2: Injecting history and injection patterns in the last month, Victoria, 2011-2012**

| | 2011 (N=150) | 2012 (N=150) |
|---|---|---|
| **Mean age in years at first injection (SD)** | 18 (6.1) | 18 (5.1) |
| **First drug injected (%)** | | |
| Heroin | 39 | 47 |
| Methamphetamine | 56 | 45 |
| Other drugs | 5 | 7 |
| **Drug of choice (%)** | | |
| Heroin | 60 | 74 |
| Methamphetamine | 19 | 13 |
| Cannabis | 11 | 4 |
| Morphine | 1 | 2 |
| Cocaine | 3 | 1 |
| Other drugs | 7 | 5 |
| **Drug injected most often in last month (%)** | | |
| Heroin | 60 | 72 |
| Methamphetamine | 22 | 17 |
| Buprenorphine/buprenorphine-naloxone | 14 | 7 |
| Morphine | 1 | 2 |
| Other drugs | 3 | 2 |
| **Last drug injected (%)** | | |
| Heroin | 59 | 73 |
| Methamphetamine | 21 | 15 |
| Morphine | 1 | 1 |
| Cocaine | 0 | 0 |
| Buprenorphine/buprenorphine-naloxone | 14 | 8 |
| Other drugs | 5 | 3 |
| **Frequency of injecting in last month (%)** | | |
| Weekly or less | 28 | 23 |
| More than weekly | 36 | 35 |
| Once a day | 13 | 19 |
| Two to three times per day | 17 | 18 |
| More than three times per day | 3 | 5 |

Source: IDRS participant interviews

## 4.1. Current drug use

The self-reported lifetime and recent[5] patterns of drug use among the 2012 Victorian IDRS sample are summarised in Table 3. As with previous years, almost all participants reported lifetime use of heroin (99%), alcohol (99%), cannabis (99%) and tobacco (99%), as well as various forms of benzodiazepines (99%) and methamphetamine (99%). In the six months preceding interview, participants most commonly reported injecting heroin (83%) and methamphetamine (64%), followed by morphine (25%) and oxycodone (24%). The drugs participants most commonly reported recently smoking were cannabis (84%), methamphetamine (25%) and heroin (11%). Very few participants reported snorting as a route of any drug administration in the preceding six months. Excluding alcohol, the drugs most commonly administered orally by participants in the six months prior to interview were benzodiazepines (81%), methadone (55%) and quetiapine (37%) (Table 3).

[5] In this context, 'recent' refers to use via any route of administration during the preceding six months. See page xi.

**Table 3: Drug use history and patterns of drug use in the preceding six months, Victoria, 2012**

| | Ever used (%) | Ever injected (%) | Injected last 6 months (%) | Median days injected* last 6 months | Ever smoked (%) | Smoked last 6 months (%) | Ever snorted (%) | Snorted last 6 months (%) | Ever swallow+ (%) | Swallow last 6 months + (%) | Used^ last 6 months (%) | Median days in tx* last 6 months | Median days used^ last 6 months* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heroin | 99 | 99 | 83 | 72 | 57 | 11 | 25 | 1 | 21 | 1 | 84 | | 72 |
| Homebake heroin | 23 | 23 | 4 | 5 | 2 | 0 | 1 | 0 | 3 | 1 | 4 | | 5 |
| ***Any form heroin (inc. homebake)*** | 99 | 99 | 83 | 72 | 57 | 11 | 25 | 1 | 21 | 1 | 84 | | 72 |
| Methadone (prescribed) | 75 | 20 | 5 | 5 | | | | | 73 | 45 | 45 | 180 | 180 |
| Methadone (not prescribed) | 51 | 15 | 2 | 2 | | | | | 47 | 19 | 20 | | 3 |
| Physeptone (prescribed) | 5 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 2 | 2 | 180 | 90 |
| Physeptone (not prescribed) | 16 | 10 | 1 | 12 | 0 | 0 | 0 | 0 | 11 | 1 | 1 | | 10 |
| ***Any form methadone/ physeptone*** | 87 | 34 | 8 | 4 | 0 | 0 | 0 | | 84 | 55 | 55 | | 180 |
| Buprenorphine (prescribed) | 46 | 26 | 1 | 180 | 3 | 0 | 2 | 0 | 44 | 3 | 3 | 180 | 150 |
| Buprenorphine (not prescribed) | 53 | 47 | 19 | 8 | 7 | 1 | 3 | 0 | 31 | 5 | 19 | | 10 |
| ***Any form buprenorphine*** | 69 | 53 | 20 | 10 | 7 | 1 | 3 | 0 | 54 | 9 | 22 | | 10 |
| Buprenorphine-naloxone tablets (prescribed) | 44 | 21 | 6 | 28 | 1 | 0 | 1 | 0 | 43 | 15 | 17 | 166 | 72 |
| Buprenorphine-naloxone tablets (not prescribed) | 45 | 29 | 14 | 10 | 6 | 1 | 2 | 1 | 34 | 10 | 19 | | 5 |
| ***Any form buprenorphine-naloxone tablets*** | 66 | 39 | 18 | 10 | 6 | 1 | 2 | 1 | 56 | 23 | 31 | | 38 |

**Table 3: Drug use history and patterns of drug use in the preceding six months, Victoria, 2012 (continued)**

| | Ever used (%) | Ever injected (%) | Injected last 6 months (%) | Median days injected* last 6 months | Ever smoked (%) | Smoked last 6 months (%) | Ever snorted (%) | Snorted last 6 months (%) | Ever swallow+ (%) | Swallow last 6 months + (%) | Used^ last 6 months (%) | Median days in tx* last 6 months | Median days used^ last 6 months* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buprenorphine-naloxone film (prescribed) | 12 | 2 | 2 | 60 | 0 | 0 | 0 | 0 | 12 | 10 | 10 | 145 | 72 |
| Buprenorphine-naloxone film (not prescribed) | 13 | 7 | 6 | 2 | 0 | 0 | 0 | 0 | 7 | 7 | 12 | | 2 |
| ***Any form buprenorphine-naloxone film*** | 21 | 8 | 7 | 3 | 0 | 0 | 0 | 0 | 17 | 15 | 19 | | 6 |
| ***Any form buprenorphine-naloxone*** | 66 | 39 | 19 | | 6 | 1 | 2 | 1 | 57 | 29 | 37 | | |
| Morphine (prescribed) | 22 | 19 | 2 | 1 | 0 | 0 | 0 | 0 | 14 | 2 | 3 | | 2 |
| Morphine (not prescribed) | 77 | 75 | 24 | 4 | 2 | 1 | 0 | 0 | 28 | 6 | 27 | | 4 |
| ***Any form morphine*** | 83 | 79 | 25 | 4 | 2 | 1 | 0 | 0 | 35 | 8 | 29 | | 3 |
| Oxycodone (prescribed) | 16 | 9 | 4 | 11 | 0 | 0 | 0 | 0 | 15 | 5 | 6 | | 20 |
| Oxycodone (not prescribed) | 72 | 63 | 23 | 6 | 1 | 0 | 0 | 0 | 23 | 7 | 26 | | 5 |
| ***Any form oxycodone*** | 77 | 66 | 24 | 7 | 1 | 1 | 0 | 0 | 33 | 11 | 29 | | 7 |
| Over-the-counter codeine | 43 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 43 | 21 | 22 | | 5 |
| Other opioids (not elsewhere classified) | 51 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 48 | 21 | 21 | | 7 |
| Speed powder | 95 | 92 | 38 | 6 | 28 | 3 | 53 | 4 | 43 | 1 | 39 | | 5 |
| Amphetamine liquid | 15 | 11 | 1 | 33 | | | | | 5 | 0 | 1 | | 33 |
| Base/point/wax | 33 | 30 | 10 | 2 | 5 | 1 | 4 | 0 | 5 | 0 | 11 | | 2 |

**Table 3: Drug use history and patterns of drug use in the preceding six months, Victoria, 2012 (continued)**

| | Ever used (%) | Ever injected (%) | Injected last 6 months (%) | Median days injected* last 6 months | Ever smoked (%) | Smoked last 6 months (%) | Ever snorted (%) | Snorted last 6 months (%) | Ever swallow+ (%) | Swallow last 6 months + (%) | Used^ last 6 months (%) | Median days in tx* last 6 months | Median days used^ last 6 months* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ice/shabu/crystal | 87 | 82 | 55 | 10 | 57 | 24 | 9 | 1 | 9 | 2 | 59 | | 6 |
| ***Any form methamphetamine*** | 99 | 96 | 64 | 12 | 62 | 25 | 56 | 5 | 47 | 3 | 67 | | 12 |
| Pharmaceutical stimulants (prescribed) | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 1 | | 180 |
| Pharmaceutical stimulants (not prescribed) | 37 | 25 | 8 | 2 | 0 | 0 | 1 | 0 | 23 | 7 | 11 | | 4 |
| ***Any form pharmaceutical stimulants*** | 42 | 27 | 8 | 2 | 0 | 0 | 1 | 0 | 29 | 8 | 13 | | 4 |
| Cocaine | 64 | 45 | 7 | 3 | 10 | 0 | 35 | 3 | 11 | 0 | 9 | | 4 |
| Hallucinogens | 65 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 65 | 4 | 4 | | 2 |
| Ecstasy | 71 | 27 | 3 | 2 | 1 | 0 | 8 | 1 | 69 | 10 | 13 | | 1 |
| Alprazolam (prescribed) | 30 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 30 | 14 | 14 | | 180 |
| Alprazolam (not prescribed) | 87 | 10 | 3 | 3 | 0 | 0 | 1 | 0 | 85 | 57 | 58 | | 10 |
| ***Any form alprazolam*** | 91 | 11 | 4 | | 0 | 0 | 1 | 0 | 89 | 63 | 65 | | 12 |
| Other benzodiazepines (prescribed) | 81 | 7 | 0 | 0 | 1 | 1 | 1 | 1 | 80 | 47 | 47 | | 180 |
| Other benzodiazepines (not prescribed) | 77 | 9 | 1 | 3 | 0 | 0 | 1 | 0 | 77 | 47 | 48 | | 7 |
| ***Any form other benzodiazepines*** | 96 | 14 | 1 | | 1 | 1 | 2 | 1 | 96 | 69 | 70 | | 90 |
| ***Any form benzodiazepines*** | 99 | 22 | 4 | 3 | 1 | 1 | 3 | 1 | 99 | 81 | 82 | | 120 |
| Quetiapine (prescribed) | 28 | 0 | 0 | 0 | | | | | 28 | 10 | 10 | | 180 |

**Table 3: Drug use history and patterns of drug use in the preceding six months, Victoria, 2012 (continued)**

| | Ever used (%) | Ever injected (%) | Injected last 6 months (%) | Median days injected* last 6 months | Ever smoked (%) | Smoked last 6 months (%) | Ever snorted (%) | Snorted last 6 months (%) | Ever swallow+ (%) | Swallow last 6 months + (%) | Used^ last 6 months (%) | Median days in tx* last 6 months | Median days used^ last 6 months* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quetiapine (not prescribed) | 57 | 1 | 1 | 40 | | | | | 57 | 29 | 29 | | 6 |
| ***Any form quetiapine*** | 70 | 1 | 1 | 40 | | | | | 70 | 37 | 37 | | 10 |
| Alcohol | 99 | 3 | 0 | 0 | | | | | 99 | 69 | 69 | | 24 |
| Cannabis | 99 | | | | 99 | 84 | | | | | 85 | | 178 |
| Inhalants | 19 | | | | | | | | | | 0 | | 0 |
| Tobacco | 99 | | | | | | | | | | 95 | | 180 |
| Steroids | 5 | 5 | 1 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 13 |

Source: IDRS participant interviews

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

* Among participants who reported any use or injection in the preceding six months.

+ Also refers to the sublingual administration of buprenorphine tablets and buprenorphine-naloxone tablets and/or film.

# Refers to treatment. Among participants who reported any prescribed use in the preceding six months.

Table 4 shows the proportion of Victorian IDRS participants who reported using drugs on the day prior to interview, by drug type, from 2006 to 2012. Multiple responses were allowed. In 2012, almost all participants (98%) reported the use of at least one drug on the day before interview, with cannabis (62%), heroin (50%) and benzodiazepines (41%) most commonly used (Table 4).

**Table 4: Drugs used on the day prior to interview, Victoria, 2006-2012**

| | 2006 (N=150) | 2007 (N=149) | 2008 (N=150) | 2009 (N=150) | 2010 (N=151) | 2011 (N=150) | 2012 (N=150) |
|---|---|---|---|---|---|---|---|
| Cannabis (%) | 44 | 42 | 53 | 43 | 51 | 59 | 62 |
| Heroin (%) | 37 | 40 | 45 | 37 | 36 | 33 | 50 |
| Alcohol (%) | 23 | 21 | 24 | 28 | 28 | 32 | 32 |
| Benzodiazepines (%) | 18 | 31 | 30 | 23 | 17 | 37 | 41 |
| Buprenorphine (%) | 17 | 12 | 10 | 16 | 9 | 12 | 6 |
| Speed (%) | 15 | 10 | 13 | 8 | 8 | 3 | 2 |
| Methadone (%) | 11 | 17 | 25 | 26 | 12 | 28 | 27 |
| Morphine (%) | 6 | 9 | 7 | 3 | 5 | 3 | 1 |
| Buprenorphine-naloxone (%) | 3 | 3 | 8 | 5 | 7 | 14 | 12 |
| Other opiates (%) | 1 | 4 | 3 | 0 | 0 | 1 | 2 |
| Antidepressants (%) | 1 | 7 | 4 | 9 | 6 | 8 | 4 |
| Ice/shabu/crystal (%) | 1 | 2 | 2 | 3 | 1 | 8 | 9 |
| Cocaine (%) | 1 | 1 | 3 | 2 | 0 | 0 | 1 |
| Base (%) | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Oxycodone (%) | - | - | - | - | 1 | 1 | 3 |
| Antipsychotics (%) | - | - | - | - | - | - | 10 |

Source: IDRS participant interviews

## 4.2. Heroin

**Key points**

- In 2012, 84% of participants reported recent heroin use and 83% reported recent heroin injection, close to the proportions in 2011 (81%, respectively).
- The median days of recent heroin use increased from 63 days in 2011 to 72 days in 2012.
- 25% of recent heroin users reported using the drug daily.
- White or off-white rock was the form of heroin used most by recent users.
- KE recommended increasing access to OST programs for heroin users across Victoria.

### 4.2.1. Prevalence of heroin use

Consistent with 2011, in 2012 heroin was the most widely used injectable illicit drug by Victorian IDRS participants. Lifetime heroin use was ubiquitous among the sample (99%), with 84% of participants reporting recent heroin use and 83% reporting recent heroin injection. Among recent users (n=126), almost all (99%) reported injecting the drug in the preceding six months.

For the past six years in Victoria the prevalence of heroin use among IDRS participants has remained relatively stable. Nonetheless, in 2012 74% of participants nominated heroin as their main drug of

choice, significantly higher than the proportion of participants who cited heroin as their preferred drug in 2011 (74% vs. 60%, $p < 0.01$).

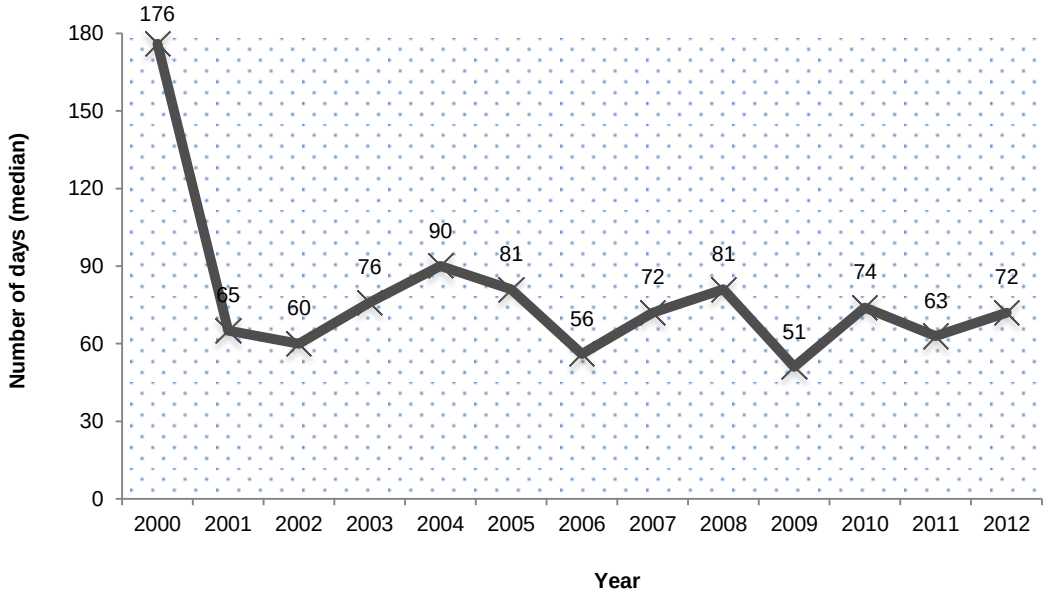
Seventy-three per cent of 2012 Victorian IDRS participants reported that heroin was the last drug they injected prior to interview. Of the 506 Victorian participants surveyed in 2011 for the Australian Needle and Syringe Program Survey (ANSPS), 61% reported that heroin was the last drug they injected prior to interview (Iversen & Maher, 2012).

### 4.2.2. Current patterns of heroin use

Of all Victorian IDRS participants in 2012, 126 (84%) reported heroin use in the preceding six months, with 125 participants reporting recent heroin injection. Eleven per cent of participants reported smoking heroin (i.e., heating the drug and inhaling the vapours) in the six months before interview, with very few reporting that they had snorted or swallowed the drug during this time (1%, respectively). As with previous years, KE reported that most heroin users administered the drug intravenously.

Figure 1 illustrates the median days of heroin use, from 2000 to 2012, by Victorian participants who reported using the drug during the six months prior to interview. In 2012, participants reported using heroin on a median of 72 days (range=3-180 days) in the preceding six months, translating to approximately three times per week. This figure was slightly higher than the median days of use reported by participants in 2011 but comparable with reports in 2010. Excluding 2000, from 2001 to 2012 the reported frequency of recent heroin use by Victorian IDRS participants fluctuated between two and four times per week (Figure 1). In 2012, 25% of recent heroin users reported daily heroin use throughout the preceding six months.

**Figure 1: Median days of heroin use in the past six months, Victoria, 2000-2012**




Source: IDRS participant interviews

In 2012, few KE nominated heroin as the 'most problematic drug'. Several suggested that although the size of the heroin-using population remained relatively stable, use had declined somewhat during the past 12 months. Nonetheless, heroin was still reported as the 'most prevalent' drug used by PWID. Consistent with previous years, in 2012 KE described the population as being mostly male and aged between 27 and 45 years, with low levels of education and high levels of unemployment. KE noted that users in Melbourne were from a range of ethnic backgrounds, most commonly Anglo, European and Vietnamese. Several KE from the NSP sector reported an increase in Indigenous

people accessing services since 2011. One KE from the general health sector reported observing a new population of PWID, broadly described as individuals of African ethnicity, who were initially reluctant to admit to injecting drug use.

Several KE described an ageing cohort of heroin users with long histories of injecting drug use—an ongoing trend first noted during the previous decade. Consequently, a few KE also reported observing an increase in PWID living with disability and other chronic health conditions such as type 2 diabetes and non-cancer pain, as well as PWID with dental health problems and sleep disorders, poor sexual health and injecting-related injury and disease (IRID). KE from the NSP sector reported a stable and high prevalence of mental illness among the population, and an increase in self-medication for mental health issues. Six KE reported that while most users presented with anxiety and affective disorders, personality disorders and psychotic disorders were also common.

Four KE made explicit comments regarding heroin users' high level of criminal justice system involvement in 2012, with one law enforcement (LE) KE noting that prior histories of imprisonment were almost universal among the group. Given the cohort's average age and duration of injecting, it was not surprising that incarceration histories were reported as being very common. One KE from the LE sector reported that the population was comprised of 'high risk recidivists', many of whom were facing terms of imprisonment. KEs believed that a large minority of the group was chronically institutionalised due to their frequency of incarceration, with fear of living in the community cited as a consequence of repeated imprisonment. One NSP KE reported observing at least one or two released prisoners presenting to their service each week. In addition, other KE from the NSP sector reported observing an increase in police activity targeting heroin users, resulting in reduced access to the drug. Ongoing police activity was also reported to have decreased the overall visibility of street-based drug markets within particular suburbs of Melbourne, and the frequency with which PWID attended local NSP.

Consistent with previous years, the majority of KE recommended increasing access to OST programs for heroin users across Victoria. Concern was expressed about the pharmacotherapy system in general, particularly the lack of OST prescribers and the limited access to OST for people wishing to enter treatment. One NSP KE reported turning between two and three people away per day because there were not enough prescribers or treatment places. KE from the general health sector recommended recruiting more OST prescribers to the field, and highlighted a particular need for recruiting practitioners with a holistic approach to drug treatment. Another KE suggested that funded OST might be one method of increasing peoples' access to pharmacotherapy by reducing the cost of pharmacy dispensing fees.

### 4.2.3. Forms of heroin used

In 2012, Victorian IDRS participants who reported recent heroin use were asked to nominate the types of heroin used in the preceding six months, and whether heat or citric acid was used to prepare the drug for their most recent injection. White/off-white heroin (diamorphine hydrochloride) dissolves easily in water and is prepared for injection without heat or acid, while brown/beige heroin (diamorphine base) typically requires heating with citric acid so that the preparation is soluble for injection (Warhaft, 2008).

Table 5 presents the forms of heroin used by Victorian IDRS participants in 2011 and 2012, and the forms of heroin participants used most. Among recent heroin users (n=126) in 2012, 87% reported using white/off-white rock in the preceding six months, similar to the 2011 figure (89%). However, the proportion of recent heroin users reporting the use of white/off-white heroin powder increased significantly from 25% in 2011 to 44% in 2012 ($p < 0.001$), together with the proportion reporting use of brown/beige heroin powder (13% in 2011 vs. 24% in 2012, $p < 0.05$). Prevalence of reported use of brown/beige rock by recent heroin users in 2012 was not significantly different from the 2011 figure (21% vs. 29%, $p = 0.146$) (Table 5).

In recent years, the Victorian IDRS has found that most of the heroin available in Melbourne is reported as being in white/off-white rock form. Consistent with this, in 2012 82% of recent heroin injectors (n=125) reported that white/off-white rock was the form of heroin used most frequently in the preceding six months (Table 5). Three KE also reported that white/off-white powder or rock was the predominant form of heroin available in Melbourne in 2012. Similar to 2011, in 2012 one LE KE noted that the white/off-white heroin recently seized in Melbourne was continuing to arrive in 'block' form (i.e., packages the size and shape of house bricks, weighing approximately 350 grams).

**Table 5: Forms of heroin used in the preceding six months, Victoria, 2011-2012**

| | Forms used* | | Form used most | |
|---|---|---|---|---|
| | 2011 (n=122) | 2012 (n=126) | 2011 (n=121) | 2012 (n=125) |
| **White/off-white heroin (%)** | | | | |
| Powder | 25 | 44 | 8 | 10 |
| Rock | 89 | 87 | 79 | 82 |
| **Brown/beige heroin (%)** | | | | |
| Powder | 13 | 24 | 2 | 3 |
| Rock | 21 | 29 | 7 | 5 |
| **Other colour heroin (%)** | | | | |
| Powder | 0 | 1 | 0 | 0 |
| Rock | 7 | 3 | 3 | 1 |
| **Homebake heroin (%)** | 3 | 1 | -- | -- |

Source: IDRS participant interviews

* Multiple responses allowed.

-- No reports received.

In 2012, 122 participants completed the survey questions pertaining to their most recent episode of heroin injection. Of these, 17 participants (14%) reported using heat to prepare their most recent heroin injection; no reports were received from participants regarding the use of citric acid to dissolve heroin. Fourteen participants provided information on the form of heroin used on their most recent injecting occasion; of these, 10 participants (71%) reported heating white/off-white heroin and four participants (29%) reported heating brown/beige heroin.

## 4.3. Methamphetamine

**Key points**

- The prevalence of recent methamphetamine use was 67%, with 64% reporting recent injection. The prevalence in 2012 was similar to the prevalence in 2011.
- While the prevalence of recent crystal methamphetamine (or ice) use (59%) was not significantly different from 2011 (53%), the prevalence of recent speed use declined somewhat (39% in 2012 vs. 49% in 2011). In 2012 the prevalence of recent base use was consistent with that in 2011 (11%, respectively).
- There was a significant increase in the proportion of participants who reported recently smoking crystal methamphetamine, from 13% in 2011 to 24% in 2012.
- Overall, participants reported fortnightly use and injection of methamphetamine during the preceding six months.
- Several KE reported perceiving an increase in the prevalence of crystal methamphetamine use among PWID in the preceding 12 months, particularly among primary heroin users. KE commented on the low levels of general knowledge about crystal methamphetamine among their clients.

### 4.3.1. Prevalence of methamphetamine use

Several forms of methamphetamine are available in Australia. The IDRS collects information on the prevalence of methamphetamine use among PWID, as well as information on the price, purity and availability of the three main forms of methamphetamine: speed powder, base methamphetamine and crystal methamphetamine, or ice (see Chapter 5). Information is also collected on the use of amphetamine liquid and pharmaceutical stimulants such as dexamphetamine and methylphenidate.

According to the 2010 National Drug Strategy Household Survey (NDSHS), the estimated prevalence of methamphetamine use among the Victorian population aged 14 years and over was approximately 2% in the preceding 12 months (AIHW, 2011). By contrast, almost all 2012 Victorian IDRS participants (99%) reported lifetime use of any methamphetamine (i.e., speed powder, amphetamine liquid, base methamphetamine or crystal methamphetamine/ice), with 67% reporting recent methamphetamine use, and 64% reporting recent methamphetamine injection. The prevalence in 2012 was similar to the prevalence reported in 2011, when 65% of participants reported recent use and injection, respectively. However, in 2012 13% of participants nominated methamphetamine as their primary drug of choice compared with 19% in 2011 ($p = 0.156$).

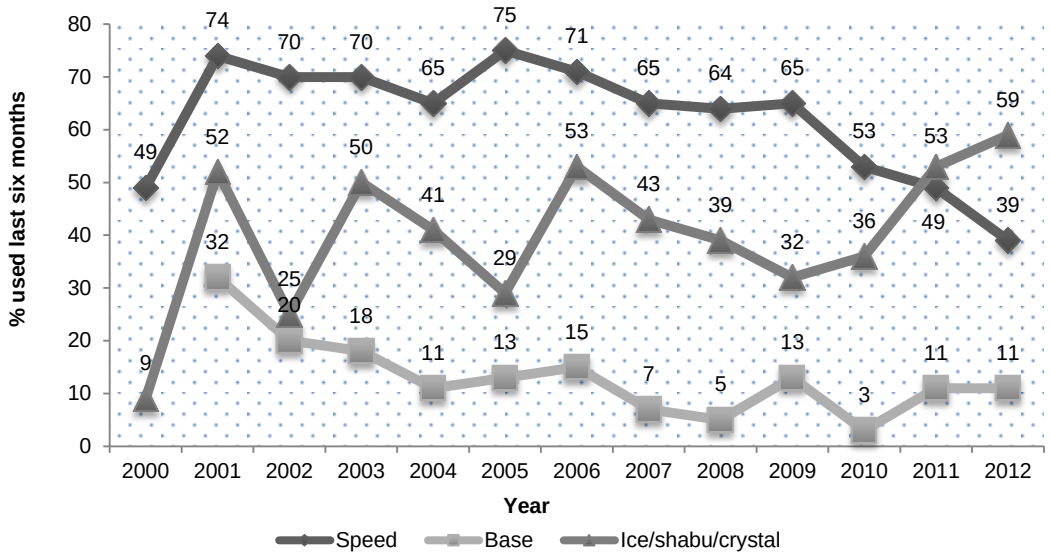
In 2012, the lifetime injection of specific methamphetamine types was also common, with 92% of the sample reporting lifetime injection of speed powder and 82% reporting lifetime injection of crystal methamphetamine, or ice. By comparison, smaller proportions reported lifetime injection of base methamphetamine (30%) and amphetamine liquid (11%).

The proportion of 2012 Victorian IDRS participants who reported injecting methamphetamine most often in the month before interview was 17%, compared with 22% in 2011 ($p = 0.274$). Similarly, 15% reported that methamphetamine was the last drug they injected prior to interview, compared with 21% in 2011 ($p = 0.176$). Of the 506 Victorian respondents surveyed in 2011 for the ANSPS, 18% reported that methamphetamine was the last drug they injected prior to interview (Iversen & Maher, 2012).

### 4.3.2. Current patterns of methamphetamine use

Figure 2 illustrates the proportion of Victorian IDRS participants reporting methamphetamine use in the preceding six months, by methamphetamine type, from 2000 to 2012. In 2012 participants most commonly reported recently using crystal methamphetamine or ice (59%), not significantly different from 2011 (59% vs. 53%, $p = 0.295$). There was a decline in the proportion of participants who reported using speed powder in the preceding six months, from 49% in 2011 to 39% in 2012; however, this difference was not significant ($p = 0.081$). Prevalence of recent use of base methamphetamine remained stable at 11% in 2011 and 2012 (Figure 2).

**Figure 2: Proportion of participants reporting methamphetamine use in the past six months, Victoria, 2000-2012**

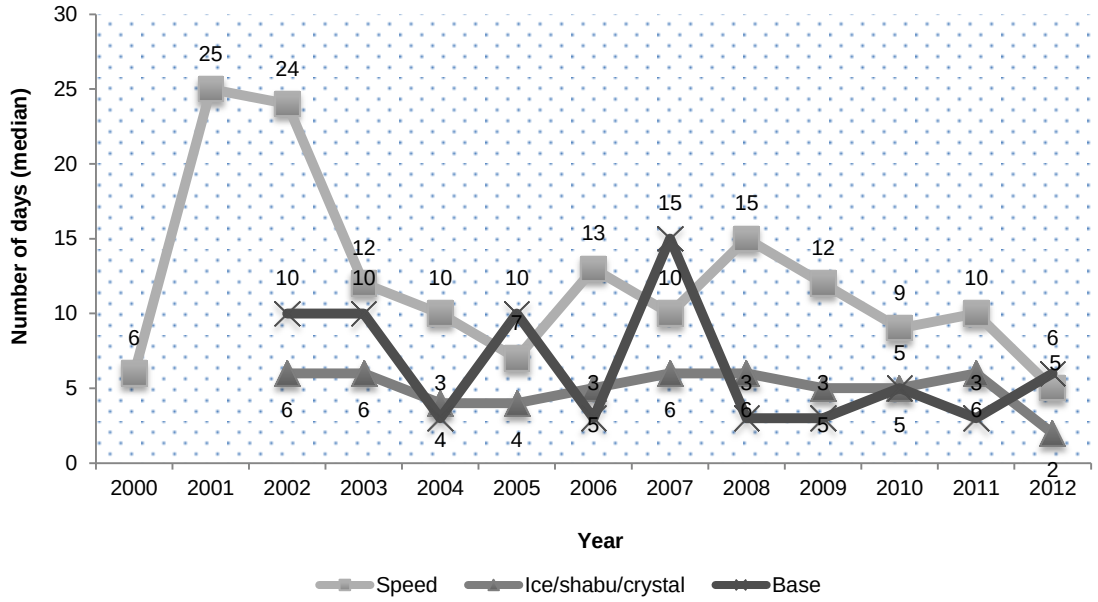



Source: IDRS participant interviews

As in 2011, in 2012 the most common route of methamphetamine administration reported by Victorian IDRS participants in the six months preceding interview was injection: 55% reported recently injecting crystal methamphetamine or ice, while 38% reported recently injecting speed powder. By contrast, few participants reported recently injecting base methamphetamine (10%), non-prescribed pharmaceutical stimulants (8%) or amphetamine liquid (1%). Between 2011 and 2012 there was a significant increase in the proportion of participants who reported recently smoking crystal methamphetamine or ice (24% vs. 13%, $p < 0.05$). Very few participants provided reports regarding other routes of methamphetamine administration in the six months prior to interview across all distinct methamphetamine forms.

Figure 3 illustrates the median days of methamphetamine use, from 2000 to 2012, among Victorian IDRS participants who reported use of the drug in the preceding six months according to methamphetamine type. Recent users of speed powder (n=59) reported use of the drug on a median of five days (range=1-100 days) in the preceding six months, translating to less than monthly use. Base methamphetamine use was relatively infrequent, with recent users (n=17) reporting use on a median of two days (range=1-50 days) in the six months prior to interview. Recent crystal methamphetamine or ice users (n=89) reported use on an at least monthly basis; a median of six days (range=1-180 days) use was reported in the six months prior to interview (Figure 3). Overall, in 2012 Victorian IDRS participants who reported the recent use of any methamphetamine (n=101) typically did so on a fortnightly basis throughout the preceding six months (median=12, range=1-180 days).

**Figure 3: Median days of methamphetamine use in the past six months, Victoria, 2000-2012***




Source: IDRS participant interviews

* Data were not available for base and crystal methamphetamine or ice prior to 2002.

In 2012, several KE from the LE and NSP sectors referred to a perceived increase in the prevalence of crystal methamphetamine use among PWID in the preceding 12 months—among some groups of primary heroin users and/or OST consumers in particular. NSP KE speculated whether the increase in use among heroin users was related to greater social acceptance of crystal methamphetamine in contrast to heroin, and its opportunistic availability, potency and relative price stability. KE from both the LE and NSP sectors commented on the low levels of general knowledge about crystal methamphetamine among their clients, and that many often perceived and referred to the drug as speed. Misjudging the drug's potency was reported to have led to an increase in IRID and acute mental health issues among people who had recently commenced use. Bingeing was reported as common and related to other harms such as extreme weight loss, ongoing depression and anxiety, methamphetamine-induced psychosis, hostility, homelessness and riskier injecting practices. Smaller proportions of injectors were reported to smoke the drug. NSP KE noted that concurrent opioid and benzodiazepine use was a common polydrug use strategy designed to ameliorate the methamphetamine 'comedown'. Nonetheless, NSP KE also reported that speed use remained common, with people generally expressing a preference for the lower purity drug over crystal methamphetamine or ice.

In 2012, four of 15 KE specifically nominated crystal methamphetamine or ice as the 'most problematic drug' at the time of interview. For LE KE, crystal methamphetamine was reported as particularly problematic due to limited police resources in relation to reducing supply of the drug, and the volumes of related crime and violence they reported observing during the preceding 12 months. The negative impact of the drug on the general community's perceptions of safety was also noted, particularly in the context of methamphetamine-induced psychosis and intoxicated driving. LE KE reported perceiving that current use and possession laws seemed to have limited effectiveness in deterring people from use. Concerns among KE from the general health sector tended to focus on methamphetamine-related presentations to emergency departments (ED). NSP KE pointed out that mental illness among methamphetamine users was not always related to use of the drug; however, because of a perception among general health workers that psychosis was often related to methamphetamine use, this cohort faces significant barriers to mental health inpatient services and emergency treatment.

## 4.4. Cocaine

### 4.4.1. Prevalence of cocaine use

In 2012, almost two-thirds (64%, n=96) of Victorian IDRS participants reported lifetime use of cocaine. By contrast, less than one-tenth (9%, n=14) of participants reported using cocaine in the preceding six months, a significant decrease compared with the proportion in 2011 (17%, $p < 0.05$). Nearly half of the 2012 sample (45%, n=68) reported lifetime cocaine injection; however, only 10 participants (7%) reported injecting cocaine during the preceding six months. One participant reported that cocaine was their primary drug of choice in 2012.

Consistent with previous years, in 2012 injection was the most common route of cocaine administration reported by Victorian IDRS participants. The majority of recent cocaine users (71%, n=10) reported cocaine injection during the preceding six months, with the remainder (29%, n=4) reporting that they had snorted the drug during this time. The average frequency of cocaine use and injection among Victorian IDRS participants remained relatively low in 2012, with use reported on a median of four days (range=1-30 days) and injection reported on a median of three days (range=1-20 days) in the previous six months.

Fourteen participants provided reports on the forms of cocaine they had used most during the preceding six months of 2012. Of these 14 participants, 79% reported that they had used powder cocaine most, 14% reported that they had used crack cocaine most and 7% reported that they had used rock cocaine most.

In 2012, the Victorian IDRS received no KE reports in relation to the prevalence of cocaine use in Melbourne. However, one KE from the general health sector reported that among cocaine-related hospital presentations, polydrug use was typically mentioned, and that there were approximately 10 presentations per year involving chest pain related to use of the drug. The most recent data available showing cocaine-related hospital admissions for Victoria from 1999/00 to 2009/10 are presented in section 6.3.3.

## 4.5. Cannabis

**Key points**

- Recent cannabis use was reported by 85% of the 2012 IDRS sample, with 50% reporting daily use of the drug.
- Participants typically reported smoking six cones or one joint during their last session of use.
- In 2012, 93% of recent users reported mostly smoking hydroponically grown cannabis.
- KE reported a high and stable prevalence of use in the general community.

### 4.5.1. Prevalence of cannabis use

According to the 2010 National Drug Strategy Household Survey (NDSHS), cannabis remains the most widely used illicit drug in Victoria, with prevalence of use estimated at approximately 9% among Victorians aged 14 years and over in the past 12 months (AIHW, 2011). Cannabis use was ubiquitous among 2012 Victorian IDRS participants, with the prevalence of lifetime and recent use remaining consistent with the prevalence in 2011. In 2012, 99% (n=148) of the sample reported lifetime cannabis use, while 85% (n=128) reported using the drug in the preceding six months.

As with previous IDRS, in 2012 separate questions relating to distinct cannabis forms were asked for hydroponically grown cannabis, bush-grown cannabis, and hashish/hashish oil (Horyniak, Dietze, & McElwee, 2010; Kirwan, Dietze, & Lloyd, 2012; Quinn, 2009; Reddel, Horyniak, Dietze, & McElwee, 2011). In 2012, 128 Victorian IDRS participants provided responses regarding the distinct types of cannabis used during the previous six months. Of these, 95% (n=122) reported recently using

hydroponically grown cannabis, while 20% (n=26) reported recently using bush-grown cannabis. By contrast, few participants reported the use of hashish (5%) and hashish oil (3%) in the six months prior to interview. One hundred and twenty-seven participants provided information regarding the form of cannabis they had used most during the preceding six months. Similar to 2011, in 2012 93% of recent users reported mostly using hydroponically grown cannabis, with few recent users reporting that they mostly used bush-grown cannabis or hashish (5% and 2%, respectively).

### 4.5.2. Current patterns of cannabis use

In 2012, Victorian IDRS participants who reported recent cannabis use (n=128) reported using the drug on a median of 178 days (range=1-180 days) in the preceding six months, which translates to an average of almost daily use across the sample. For instance, in 2012 50% of recent cannabis users reported using daily throughout the preceding six months, close to the proportion in 2011 (52%, $p$ = 0.749).

One hundred and fourteen participants provided information on the amount of cannabis used during their most recent session of use. Of these 114, 77% (n=88) reported that they smoked a median of six cones (range=1-196 cones) on the last occasion of use, while 10% (n=11) reported that they smoked a median of one joint (range=1-5 joints). The pattern of use among daily cannabis users (n=68) was similar, with 70% reporting that they had smoked a median of six cones (range=1-196 cones) during their most recent session of use.

As in 2011, no KE nominated cannabis as the 'most problematic drug' at the time of interview in 2012. KE from the NSP and general health sectors reported a high and stable prevalence of use in the community, and that availability had remained consistent. One KE from the general health sector specifically commented that although there was a high prevalence of cannabis use among PWID, the drug had comparatively 'low impact' on health. By contrast, KE from the drug treatment sector reported that cannabis was the second most common drug for which people sought treatment.

## 4.6. Other opioids

### 4.6.1. Methadone

For the purposes of the IDRS, the classification 'any methadone' includes the oral liquid preparations Methadone Syrup® and Biodone Forte® and the tablet preparation Physeptone®, as well as prescription and non-prescription use. As in previous years, in 2012 IDRS participants were asked to respond to separate questions pertaining to prescription and non-prescription use of both the oral liquid preparations and the tablet preparation.

Among 2012 Victorian IDRS participants, 87% (n=130) reported lifetime use of any methadone, very similar to the proportion in 2011 (85%, $p$ = 0.618). Fifty-five per cent (n=83) of participants in 2012 reported use of any methadone in the six months preceding interview, also very close to the proportion in 2011 (52%, $p$ = 0.602). Recent users of any methadone reported using the drug on a median of 180 days (range=1-180 days) throughout the previous six months.

In 2012, 75% (n=112) of Victorian IDRS participants reported lifetime use of prescription methadone, with 45% (n=68) of the sample reporting that they were prescribed methadone daily (median=180 days, range=1-180 days) in the six months prior to interview. Similar to 2011, reports of lifetime use of illicitly sourced methadone (i.e., methadone not prescribed to the participant) were less frequent; 51% (n=77) reported lifetime use and 20% (n=30) reported recent use. Consistent with 2010 and 2011, in 2012 participants who reported the recent use of non-prescribed methadone (n=30) reported using the drug on a median of three days (range=1-60 days) during the preceding six months.

Compared with the oral liquid methadone preparations, use of both prescription and non-prescription Physeptone® was uncommon among the 2012 Victorian IDRS sample. Only 5% (n=8) of participants reported lifetime prescription of Physeptone®, with 2% (n=3) reporting prescribed use on a median of

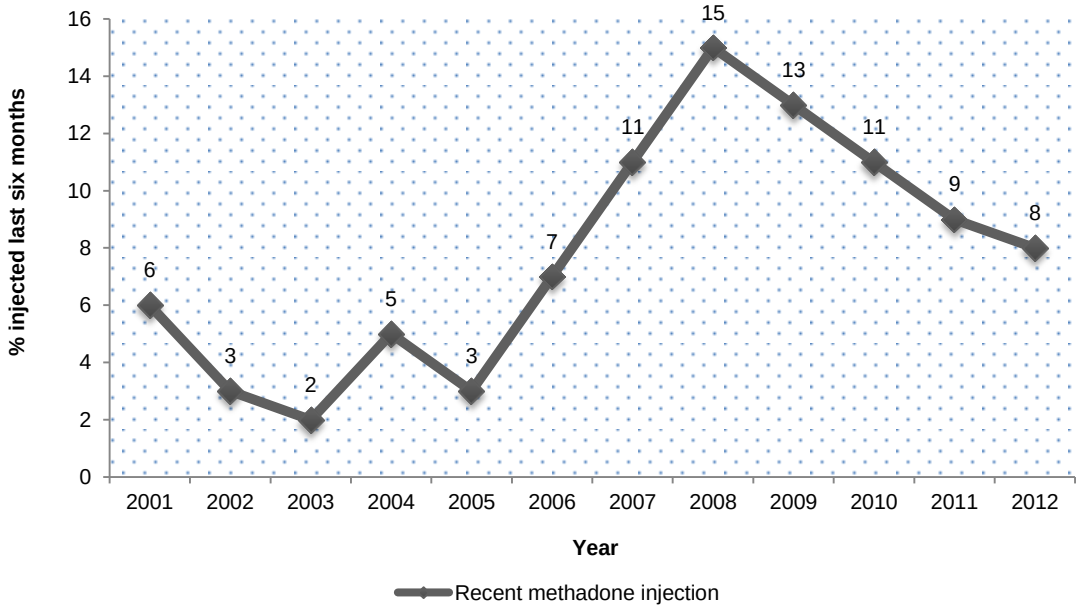
90 days (range=10-180) in the preceding six months. Lifetime use of non-prescribed Physeptone® was reported by 16% (n=24); only 1% reported recent non-prescribed use on a median of 10 days (range=1-18 days) in the previous six months.

In 2012, lifetime injection of any methadone was reported by approximately one-third of Victorian IDRS participants (34%, n=51), which remained stable with the proportion in 2011 (31%, $p$ = 0.579). The proportion of Victorian IDRS participants who reported the recent injection of any methadone from 2001 to 2012 is shown in Figure 4. In 2012, 8% of participants reported injecting any methadone on a median of 4 days (range=1-96 days) in the preceding six months, with the proportion of participants reporting recent methadone injection remaining consistent with the proportion in 2011 (9%, $p$ = 0.859). While the proportion of participants reporting recent injection of any methadone peaked at 15% in 2008, it has declined gradually in each successive year (Figure 4).

Among participants who reported recently injecting methadone (n=12), the prescribed oral liquid preparation was the most common form used (58%), followed by illicitly sourced oral liquid (25%), and prescribed (8%) and non-prescribed (8%) Physeptone® tablets, respectively.

In 2012, the 30 participants who reported the use of non-prescribed methadone (both the oral liquid preparation and Physeptone® tablets) were asked to nominate the main reason for their last occasion of illicit use. Only four participants provided comments: 50% reported using non-prescribed methadone to alleviate their withdrawal symptoms, 25% because their own prescribed methadone dose was not high enough and 25% because it was cheaper than heroin and other opioids.

**Figure 4: Proportion of participants reporting any methadone injection in the past six months, Victoria, 2001-2012**




Source: IDRS participant interviews

In 2012, two KE nominated prescription opioids as the 'most problematic drug'. In relation to methadone, one KE was specifically concerned that OST pharmacotherapies such as methadone were not allowing people to become abstinent from drugs. Rather, among some populations of PWID, methadone was reported as being used as an adjunct to polydrug use, as opposed to treatment for opioid dependence. Although no KE reports were received in relation to methadone injection, one KE from the NSP sector reported observing constant demand for wheel filters and winged infusion sets (i.e., butterflies) during the preceding 12 months, which may be related to injection of the drug. An increase in methadone dispensing was reported by a KE pharmacist, who also reported observing an

increase in older presentations with underdiagnosed mental health problems. One KE commented on reports from the Coroner's Court attributing methadone-related deaths to unsupervised dosing in the community. As reported in section 4.2.2, in 2012 the majority of KE recommended increasing OST access for people who use heroin and other opioids across the state of Victoria.

### 4.6.2. Buprenorphine

Consistent with 2011, in 2012 just over two-thirds (69%, n=104) of Victorian IDRS participants reported lifetime use of any buprenorphine (Subutex®, prescribed and non-prescribed), with 22% (n=33) of the sample reporting use of the drug on a median of 10 days (range=1-180 days) in the preceding six months. As in previous years, in 2012 participants were asked to provide responses to separate questions to distinguish between the use of prescription and non-prescription forms of buprenorphine.

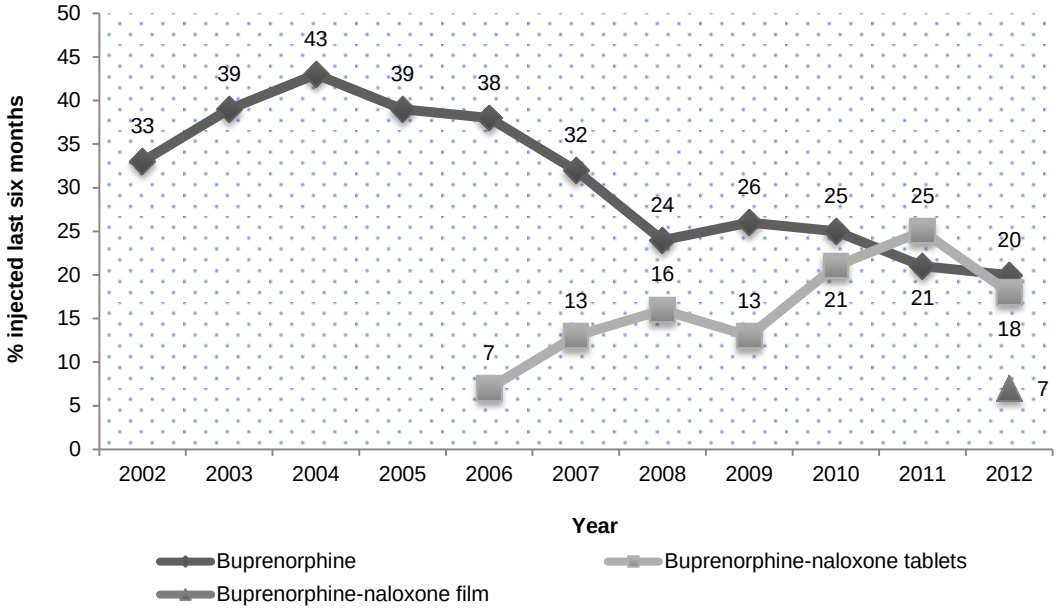
In 2012, lifetime use of prescribed buprenorphine was reported by 46% of participants; however, only 3% reported recent use of the drug, a significant decline from 9% in 2011 ($p < 0.05$). Participants who reported recently using prescribed buprenorphine (n=5) reported use on a median of 150 days (range=2-180 days) during the preceding six months. The decrease over time in recent prescription buprenorphine use among IDRS participants most likely reflects the introduction of the combination product buprenorphine-naloxone (i.e., Suboxone®) in 2005 and the concomitant gradual decline in the availability of buprenorphine to pharmacotherapy consumers (King, Ritter, & Berends, 2011; Lintzeris et al., 2006).

Over half (53%, n=79) of 2012 Victorian IDRS participants reported lifetime use of non-prescribed buprenorphine and almost one-fifth (19%, n=29) reported use in the preceding six months. The proportions of participants reporting lifetime and recent non-prescribed buprenorphine use did not change from 2011 (51% and 18%, respectively). Nonetheless, in 2012 the frequency of non-prescribed use declined among recent users to a median of 10 days (range=1-180 days), compared with a reported median of 30 days (range=1-180 days) in both 2011 and 2010.

In 2012, participants who reported the use of non-prescribed buprenorphine were asked to nominate the main reason for their last occasion of illicit use. Ten participants provided responses: six reported using non-prescribed buprenorphine to alleviate their withdrawal symptoms, two reported using to 'self-treat' their opioid dependence, one because they wanted to inject, and one because they were seeking an opioid effect.

Lifetime injection of any buprenorphine (i.e., prescribed or non-prescribed) was reported by over half (53%, n=80) of participants in 2012, with 20% (n=30) reporting injecting the drug in the preceding six months. Figure 5 shows the proportion of Victorian IDRS participants reporting both recent buprenorphine and buprenorphine-naloxone tablet and film injection (see section 4.6.3) from 2002 to 2012. Following a period of significant decline between 2004 and 2009 ($p < 0.05$), the proportion of participants reporting recent injection of any buprenorphine in 2012 was similar to the proportions in 2011 and 2010 (Figure 5).

**Figure 5: Proportion of participants reporting any buprenorphine and buprenorphine-naloxone tablet and film injection in the past six months, Victoria, 2002-2012**




Source: IDRS participant interviews

Note: Data refer to prescribed and non-prescribed injection of all preparations.

Consistent with 2011, in 2012 reports by participants of recent non-prescribed buprenorphine injection were significantly more common than reports of recent prescribed buprenorphine injection (19% vs. 1%, $p < 0.001$). However, injection of non-prescribed buprenorphine in the preceding six months was less frequent than injection of prescribed buprenorphine during the same period. For instance, recent injectors of prescribed buprenorphine (n=2) reported injecting the drug daily, whereas recent injectors of non-prescribed buprenorphine (n=28) reported injecting on a median of 8 days (range=1-180 days) during the previous six months.

In 2012, several KE from the NSP and general health sectors provided comments relating to buprenorphine and/or buprenorphine-naloxone (see section 4.6.3). Conflicting reports were received in relation to illicit markets for and diversion of these drugs. Two KE reported observing a high prevalence of buprenorphine and buprenorphine-naloxone injection, despite one of these reporting that the market for the drug was small. By contrast, one NSP KE reported that a large illicit market for the drug existed, although buprenorphine-naloxone injecting had declined somewhat with the recent introduction of Suboxone® film (see section 4.6.3.2). Another NSP KE commented that some PWID were being sold buprenorphine passed off as heroin. NSP KE also reported that although many pharmacotherapy consumers had switched from methadone to buprenorphine-naloxone treatment, limited Suboxone® injection had been observed.

### 4.6.3. Buprenorphine-naloxone

Prior to July 2005, the mono product Subutex® was the only buprenorphine preparation available in Australia for the treatment of opioid dependence. In July 2005 a second sublingual combination product, buprenorphine-naloxone (Suboxone®), was approved by the Therapeutic Goods Administration (TGA) and by April 2006 was available on the Pharmaceutical Benefits Scheme (PBS) (Lintzeris et al., 2006; Minister for Health and Ageing, 2006). The combination product buprenorphine-naloxone was developed to limit the abuse potential of the mono buprenorphine product by reducing the potential for injection, particularly by opioid-dependent users who were not in treatment (Lintzeris et al., 2006). In 2011, a new formulation of buprenorphine-naloxone, the Suboxone® sublingual film preparation, was approved by the TGA and released on the PBS in September 2011 to improve

consumers' dosing experience (Dunlop & Jordens, 2011). The greatest advantage of buprenorphine-naloxone for some pharmacotherapy consumers is the potential for unsupervised dosing. In 2012, for the first time, Victorian IDRS participants were asked to respond to separate questions regarding their use of prescription and non-prescription buprenorphine-naloxone tablets and buprenorphine-naloxone film.

#### 4.6.3.1. Buprenorphine-naloxone tablets

In 2012, almost two-thirds (66%, n=99) of the Victorian IDRS sample reported lifetime use of any buprenorphine-naloxone tablets (prescribed and non-prescribed), with almost one-third (31%, n=47) reporting use on a median of 38 days (range=1-180 days) during the preceding six months. The proportion of participants reporting both lifetime and recent use in 2012 declined from 75% ($p = 0.087$) and 43% ($p < 0.05$) in 2011, respectively. This decrease may possibly be related to the incremental increase in the number of PWID accessing the buprenorphine-naloxone film pharmacotherapy during this time, although further monitoring in future IDRS is required to test this hypothesis.

The proportion of 2012 Victorian IDRS participants reporting lifetime use of prescribed buprenorphine-naloxone tablets (44%) was consistent with the proportion reporting lifetime use of non-prescribed tablets (45%). Recent use of prescription (17%) and non-prescription (19%) buprenorphine-naloxone tablets was also at similar prevalence; however, recent users of prescribed buprenorphine-naloxone tablets reported use on a median of 72 days (range=1-180 days) in the preceding six months, while recent users of non-prescribed tablets reported using the drug on a median of five days (range=1-145 days) during this time.

In 2012, the lifetime injection of any buprenorphine-naloxone tablets was reported by 39% (n=58) of the sample, with 18% reporting injecting the drug on a median of 10 days (range=1-180 days) in the preceding six months (Figure 5). Prevalence of lifetime buprenorphine-naloxone tablet injection was significantly lower in 2012 compared with 2011 (39% vs. 51%, $p < 0.05$). The prevalence of recent injection also declined, although this difference was not significant (18% vs. 25%, $p = 0.140$) (Figure 5).

Participants who reported recent use of non-prescribed buprenorphine-naloxone tablets were asked to nominate the main reason for their last occasion of illicit use. Six participants provided responses: three reported using non-prescribed buprenorphine-naloxone tablets to alleviate their withdrawal symptoms, one reported using them to alleviate pain, one because their prescribed dose wasn't high enough, and another one was seeking an opioid effect.

#### 4.6.3.2. Buprenorphine-naloxone film

In 2012, 21% of the sample reported lifetime use of any buprenorphine-naloxone film (prescribed and non-prescribed), with 19% reporting use on a median of 6 days (range=1-180 days) during the preceding six months. The proportions of participants reporting lifetime and recent prescribed and non-prescribed use were similar. For instance, 12% reported lifetime use of prescribed buprenorphine-naloxone film, while 13% reported lifetime use of non-prescribed film. Ten per cent of the sample reported prescribed use in the preceding six months and 12% reported non-prescribed use. Recent users of prescribed film reported using the drug on a median of 72 days (range=4-180 days) in the preceding six months, translating to approximately three days use per week. Recent users of non-prescribed film reported use on a median of two days (range=1-10 days) during the same period.

The lifetime injection of any buprenorphine-naloxone film was reported by 8% (n=12) of the 2012 Victorian IDRS sample. Seven per cent (n=11) reported injection on a median of three days (range=1-90 days) in the preceding six months (Figure 5).

Only two participants who reported recently using non-prescribed buprenorphine-naloxone film nominated their main reason for their last occasion of illicit use: both reported using the drug to alleviate their withdrawal symptoms.

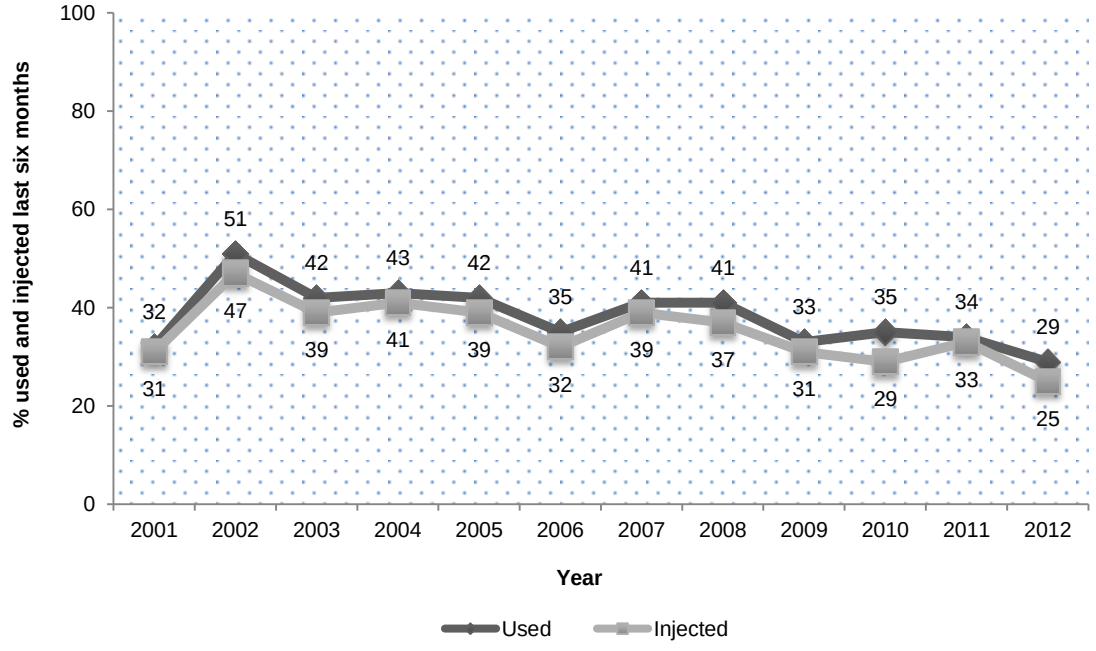
### 4.6.4. Morphine

Consistent with previous years, lifetime use of any morphine (prescribed and non-prescribed) was reported by the majority of the 2012 Victorian IDRS sample (83%, n=124). The proportion of Victorian IDRS participants who reported recent morphine use from 2001 to 2012 is shown in Figure 6. In 2012, 29% of participants reported using morphine in the preceding six months, not significantly different from 2011 (34%, $p$ = 0.351) (Figure 6). There has been no significant change in the prevalence of recent morphine use among Victorian IDRS participants over the past nine years (Horyniak et al., 2010; Kirwan et al., 2012; Quinn, 2009; Reddel et al., 2011).

As with other pharmaceutical opioids, in 2012 participants were asked separate questions to distinguish between prescribed and non-prescribed pharmaceutical morphine use (e.g., MS Contin® and Kapanol®). In relation to prescription morphine use, in 2012 just over one-fifth (22%, n=33) reported lifetime use, with 3% reporting use on a median of two days (range=1-36 days) in the preceding six months. By comparison, lifetime use of non-prescription morphine was reported by 77% (n=115) of the 2012 sample, with 27% (n=40) reporting non-prescribed use on a median of four days (range=1-125 days) in the preceding six months.

Seventy-nine per cent (n=119) of the sample reported lifetime morphine injection. Figure 6 also shows the proportion of the Victorian IDRS sample who reported recent morphine injection from 2001 to 2012. As in previous years, injection was the most commonly reported route of recent morphine administration among 2012 Victorian IDRS participants, with 25% (n=37) of the sample indicating that they had injected the drug less than monthly (median=4 days, range=1-125) during the preceding six months (Figure 6).

**Figure 6: Proportion of participants reporting any morphine use and injection in the past six months, Victoria, 2001-2012**




Source: IDRS participant interviews

In 2012, reports of lifetime non-prescribed morphine injection were significantly more common than reports of lifetime prescribed morphine injection (75% vs. 19%, $p < 0.001$). Consistent with this, recent injection of non-prescribed morphine was also significantly more common than recent injection of prescribed morphine (27% vs. 3%, $p < 0.001$). Participants who reported injection of non-prescribed morphine reported doing so on a median of four days (range=1-125 days) in the six months preceding interview, while participants who reported injection of prescribed morphine reported doing so on a median of one day (range=1-30 days).

Participants who reported recent use of non-prescribed morphine were also asked to nominate the reasons for their last occasion of illicit use. Multiple responses were allowed. In 2012, 16 participants provided comments: 56% reported using non-prescribed morphine for the purposes of intoxication, 38% reported using the drug as a substitute for heroin, and 19% reported use to 'self-treat' their opioid dependence.

Seventy-nine per cent (n=34) of participants who reported the recent use (n=43) of morphine provided information on the brand they had used most often in the preceding six months. Of these, 88% reported most commonly using MS Contin®, and 6% each reported using Kapanol® and Ordine®.

### 4.6.5. Oxycodone

In 2012, the proportion of Victorian IDRS participants who reported lifetime oxycodone use was 77% (n=116), similar to the proportion in 2011 ($p = 0.395$). Twenty-nine per cent (n=44) of participants reported recently using any oxycodone (prescribed and non-prescribed), a significant decrease from 2011 (29% vs. 41%, $p < 0.05$). Again, participants were asked separate questions about use of prescribed and non-prescribed oxycodone (e.g., Oxy Contin® and Endone®).

In 2012, patterns of oxycodone use were similar to patterns of morphine use. Sixteen per cent (n=24) of Victorian IDRS participants reported lifetime use of prescribed oxycodone, with 6% (n=9) reporting prescribed use on a median of 20 days (range=2-180 days) in the preceding six months. By comparison, lifetime use of non-prescription oxycodone was reported by 72% (n=108). Twenty-six per cent (n=39) reported non-prescribed use on a median of five days (range=1-125 days) during the past six months.

Almost two-thirds (66%, n=99) of the Victorian IDRS sample reported lifetime injection of oxycodone. Injection was the most commonly reported recent mode of oxycodone administration by Victorian IDRS participants; however, compared with 2011 there was a significant decrease in the proportion of recent oxycodone injectors in 2012 (24% vs. 36%, $p < 0.05$). Participants who reported recent injection reported doing so on a median of seven days (range=1-180 days) in the six months prior to interview.

As with morphine, in 2012 reports of lifetime non-prescribed oxycodone injection were significantly more common than reports of lifetime prescribed injection (63% vs. 9%, $p < 0.001$). Patterns of recent injection were similar, with a significantly higher proportion of participants reporting recent non-prescribed injection than recent prescribed injection (23% vs. 4%, $p < 0.001$). In the preceding six months, participants who reported non-prescribed injection (n=34) reported doing so on a median of six days (range=1-100 days), while participants who reported injection of prescribed oxycodone reported doing so on a median of 11 days (range=1-30 days).

Participants who reported recent non-prescribed oxycodone use were asked to provide reasons for their most recent occasion of illicit use. Multiple responses were allowed. Sixteen participants provided comments: 63% reported using non-prescribed oxycodone to 'self-treat' their opioid dependence, 31% reported using the drug as a substitute for heroin, and 25% reported use for the purposes of intoxication.

Thirty-nine participants provided information on the brand of oxycodone they had used most in the preceding six months: 95% reporting primarily using Oxy Contin® and 5% reported primarily using Endone®.

In 2012, two KE reported that pharmaceutical opioids were the 'most problematic drugs' at the time of interview. One policy KE considered that misuse, diversion and death related to prescription opioids such as oxycodone were the issues of most concern. In particular, it was reported that pain clinics and addiction medicine specialists in Victoria were becoming overloaded with referrals for people on high doses of opioids due to the complex bio-psychosocial phenomena associated with pain in society today. In support, a KE from the general health sector reported observing an increase in the prevalence of prescription opioid use, noting the increasing complexity of opioid-related presentations due to 'poly pharmacy' and the longer-lasting effects of extended-release preparations compared with street drugs such as heroin. Another pharmacy KE reported observing a shift to pharmaceutical opioid use among PWID in the preceding 12 months, which had led to wider distribution of these drugs in the general community. Increased monitoring of schedule 8 permits for high-dose prescription opioids was suggested by a few KE, particularly given the increase in oxycodone-related deaths in rural settings, as well as among low-socioeconomic populations and people with histories of injecting drug use.

### 4.6.6. Over the counter (OTC) codeine

In 2012, 43% (n=65) of the Victorian IDRS sample reported lifetime use of OTC codeine, a significant decrease from the proportion in 2011 (97%, $p < 0.001$). Similarly, recent OTC codeine use was reported by 22% (n=33) of participants in 2012, compared with 39% (n=58) in 2011 ($p < 0.01$). Participants who reported recent use of OTC codeine used the drug on a median of five days (range=1-180 days) in the preceding six months. As in 2011, very few participants reported OTC codeine injection; 2% (n=3) reported lifetime injection while one participant reported injection on two days in the past six months. Twenty-five participants provided information on the main brand of OTC codeine they had used recently: 80% reported primarily using Nurofen Plus® and 8% reported primarily using Mersyndol®, while 4% each reported using Dolased®, Panadeine® and Chemist's Own Pain® tablets/capsules.

### 4.6.7. Other opioids (not elsewhere classified)

Fifty-one per cent (n=76) of 2012 Victorian IDRS participants reported lifetime use of opioids other than those listed above, with 21% (n=32) reporting use of these drugs on a median of seven days (range=1-180 days) in the previous six months. Compared with 2011, in 2012 there was a significant decrease in both the proportions of participants reporting lifetime use (51% vs. 69%, $p < 0.01$) and recent use (21% vs. 37%, $p < 0.01$). Recent users (n=31) more commonly reported prescribed use than non-prescribed use (84% vs. 16%). These drugs were most commonly administered orally, with all recent users (n=32) reporting swallowing other opioids in the past six months. Only 5% (n=7) of the sample reported lifetime injection of these drugs, and 1% reported recent injection. Twenty-eight participants provided information on the main type of (other) opioids used in the preceding six months: 86% reported primarily using Panadeine Forte®, 7% reported primarily using a generic brand of tramadol, and 4% each reported using a generic brand of fentanyl, and Tramal®.

## 4.7. Other drugs

### 4.7.1. Ecstasy

Similar to 2011, in 2012 71% (n=106) of the Victorian IDRS sample reported lifetime ecstasy (3,4-methylenedioxymethamphetamine or MDMA) use, with 13% (n=19) reporting use on one day (median, range=1-15 days) in the preceding six months. The prevalence of recent ecstasy use among Victorian IDRS participants has decreased significantly over time from a peak of 39% in 2001 to a low

of 5% in 2010 ($p < 0.01$). The increase observed between 2010 and 2011 (11%) just failed to reach statistical significance ($p = 0.056$), while the prevalence in 2012 (13%) was very close to that in 2011 ($p = 0.594$). While 27% of participants reported lifetime ecstasy injection, 3% (n=5) reported injecting the drug on a median of two days (range=1-15 days) in the preceding six months. The majority of participants reported administering the drug orally in 2012: 69% reported lifetime use and 10% reported recent use via this route of administration.

While PWID are able to provide some information on trends in ecstasy use in Melbourne, a more comprehensive picture is provided by other sentinel groups of drug users, such as regular ecstasy users (REU) or primary psychostimulant users. Formerly the Party Drugs Initiative (PDI), the Ecstasy and related Drugs Reporting System (EDRS) employs a similar methodology to the IDRS and has been conducted in each Australian jurisdiction for the past nine years. One component of the EDRS involves the collection of data from REU on the prevalence and patterns of use and market characteristics of illicit 'party' drugs, including ecstasy, GHB (gamma-hydroxybutyrate) and ketamine. Results from the 2012 Victorian EDRS will be available in early 2013 (Nguyen, Dietze, & Lloyd, 2013).

### 4.7.2. Hallucinogens

In 2012, almost two-thirds (65%, n=98) of the Victorian IDRS sample reported lifetime use of hallucinogenic drugs such as LSD (lysergic acid diethylamide) and 'magic mushrooms' (psilocybin mushrooms). However, relatively few participants reported recent use, with only 4% (n=6) using these drug types on a median of two days (range=1-3 days) in the preceding six months. Eight per cent of the sample reported lifetime injection of hallucinogens; no reports of recent injection were received. Among participants reporting recent use (n=6), 67% reported primarily using LSD, while 33% reported primarily using 'magic mushrooms'.

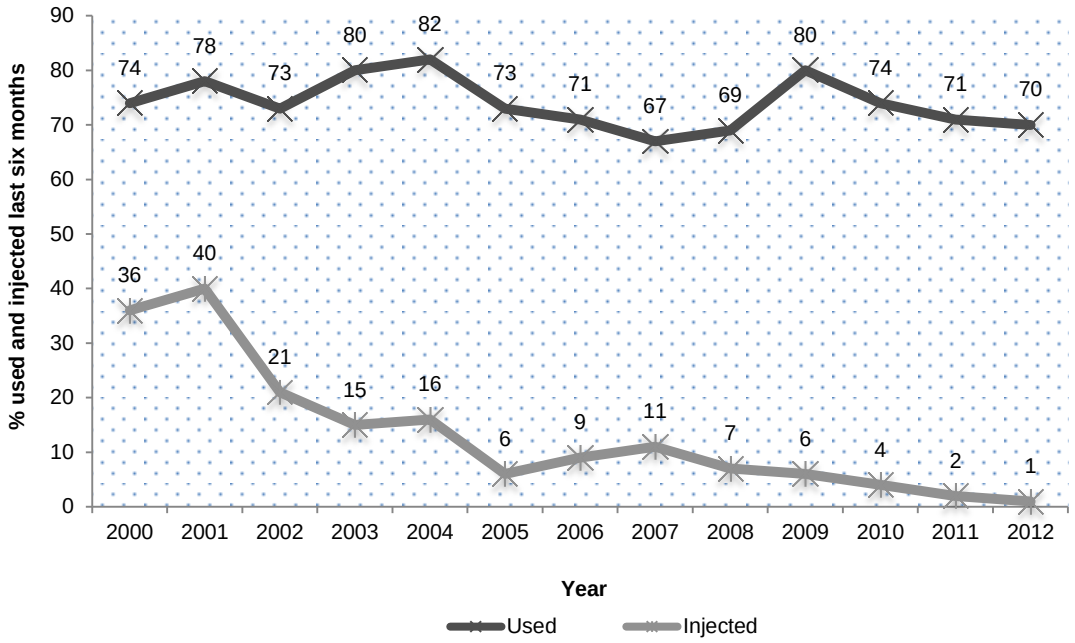
### 4.7.3. Benzodiazepines

Consistent with 2011, in 2012 Victorian IDRS participants were asked to respond to separate questions distinguishing between the use of prescribed and non-prescribed alprazolam (Xanax®) and the use of other benzodiazepines such as diazepam. This change to the IDRS participant survey may have reduced the prevalence of reports relating to the use of benzodiazepines other than alprazolam. In section 4.7.3, patterns of general benzodiazepine use are addressed first, followed by patterns of alprazolam use.

#### 4.7.3.1. Benzodiazepines other than alprazolam

As in previous years, the lifetime use of benzodiazepines (prescribed or non-prescribed) other than alprazolam was ubiquitous among the 2012 sample (96%, n=144), with recent use reported by 70% (n=105) on a median of 90 days (range=1-180 days) in the preceding six months. Figure 7 shows that the proportions of Victorian IDRS participants reporting recent use of benzodiazepines from 2000 to 2012 have remained reasonably stable. In 2012, 14% of the sample reported lifetime injection of other benzodiazepines, similar to the proportion in 2011 (12%, $p = 0.607$). One per cent of participants reported the recent injection of any other benzodiazepines in 2012, as shown in Figure 7. The reduction over time in the prevalence of recent benzodiazepine injection reflects changes in temazepam scheduling on the PBS from May 2002, as well as the implementation of the Temezepam Injection Prevention Initiative by the Victorian Department of Health in November 2001 (Breen, Degenhardt, Bruno, Roxburgh, & Jenkinson, 2004; Dobbin, 2002). In March 2004, temazepam gel capsule preparations were withdrawn from the market (Wilce, 2004). Participant reports of benzodiazepine injection declined significantly from 2004 and in 2012 only 1% of the sample reported this practice (Figure 7).

**Figure 7: Proportion of participants reporting any benzodiazepine* use and injection in the past six months, Victoria, 2000-2012**




Source: IDRS participant interviews

* In 2011 and 2012, participants were asked separate questions distinguishing between use of alprazolam and use of other benzodiazepines.

The proportions of participants reporting lifetime use of prescribed and non-prescribed other benzodiazepines in 2011 and 2012 were not significantly different (81% vs. 77%, $p = 0.395$), nor were the proportions reporting recent prescribed and non-prescribed use (47% vs. 48%, $p = 0.862$). Among recent users (n=105), 62% reported predominantly using prescribed forms of these drugs, while 38% reported predominantly using non-prescribed forms. On average, users of prescribed other benzodiazepines reported daily use (median=180 days, range=1-180 days) in the preceding six months, while users of non-prescribed forms reported using them at a lower frequency, on a median of seven days (range=1-180 days) during this time. Eighty-six participants reported on the main brands of other benzodiazepines used in the six months prior to interview, with 93% (n=80) reporting primarily using Valium®, 4% primarily using Serapax®, and 1% each primarily using Temaze®, generic oxazepam and generic temazepam.

Few KE reported other benzodiazepines as the 'most problematic drug' in the preceding 12 months of 2012. However, of these, the use of diazepam, oxazepam and temazepam was mentioned as most challenging to manage in the service setting context, particularly when large quantities were consumed (e.g., 25-50 mg). KE from the drug treatment sector reported perceiving an increase in young males presenting with benzodiazepines as a drug of concern, symptoms of psychosis and underlying anxiety disorders. Reports from the general health sector tended to support this observation, although these KE reported that young people typically used other benzodiazepines to ameliorate the 'comedown' from amphetamine-type stimulant drugs, not as their drug of choice per se.

#### 4.7.3.2. Alprazolam

Prevalence of lifetime use of alprazolam remained stable between 2011 and 2012; 91% of the Victorian IDRS sample reported lifetime use of the drug in 2012 compared with 88% in 2011 ($p = 0.397$). Recent use of alprazolam was reported by 65% of participants in 2012, on a median of 12 days (range=1-180 days) in the six months preceding interview, compared with 69% in 2011 ($p = 0.461$).

The proportion of participants reporting lifetime use of prescribed alprazolam in 2012 was significantly lower than the proportion reporting lifetime use of non-prescribed alprazolam (30% vs. 87%, $p < 0.001$). Similarly, the proportion reporting recent use of prescribed alprazolam was significantly lower than the proportion reporting non-prescribed use (14% vs. 58%, $p < 0.001$). On average, users of prescribed alprazolam (n=21) reported using the drug daily (median=180, range=1-180 days) in the preceding six months, whereas users of non-prescribed forms of the drug (n=87) reported use on a median of 10 days (range=1-180 days) during this period. In 2012, participants reported mostly using non-prescribed alprazolam rather than prescribed alprazolam (79% vs. 21%).

In 2012, nine of 15 KE reported that they considered alprazolam to be the 'most problematic drug' at the time of interview. Overall, KE reported that alprazolam consumers were primarily injectors who tended to use large quantities in a session when availability of drugs such as heroin was limited. Demand for and use of alprazolam was described as stable, with prescribed and non-prescribed use reported by KE as equally common. Although alprazolam was typically administered orally, small proportions injected the drug. The most common concerns among KE regarding the use of alprazolam related to the drug's dependence liability and negative behavioural effects. For instance, one LE KE reported that some of the factors associated with use such as temporary amnesia, disinhibition, aggression and criminal involvement led some individuals to breach related drug court orders, often resulting in imprisonment. One KE from the general health sector reported that alprazolam was particularly problematic in overdose settings, especially given the ineffectiveness of the opioid antagonist naloxone against the drug. Another KE reported that NSP opening hours had been shortened during the preceding 12 months to reduce the behavioural problems associated with presentations involving concurrent use of alprazolam and alcohol.

Given that alprazolam is not considered first-line treatment for anxiety and panic disorders, two KE suggested that rescheduling alprazolam from a schedule 4 to a schedule 8 drug for prescriptions greater than eight weeks in duration might offset the drug's abuse and/or dependence liability. KE also suggested reducing the package size from 50 tablets to 25 tablets as there was evidence of harm associated with long-term use of the drug. General health KE reported that a centralised system of prescription monitoring may also assist with ameliorating the negative outcomes associated with alprazolam use.

### 4.7.4. Quetiapine

Consistent with 2011, the antipsychotic medication quetiapine (Seroquel®) was included as a distinct category in the 2012 IDRS participant survey due to several KE reports in 2010 describing an emerging street market for this drug among PWID in Melbourne. As with other pharmaceutical drug preparations, in 2012 participants responded to questions distinguishing between prescribed and non-prescribed use.

In 2012, 70% (n=105) of Victorian IDRS participants reported lifetime use of quetiapine, with 37% (n=56) reporting use of the drug on a median of 10 days (range=1-180 days) in the preceding six months. Reports of lifetime quetiapine injection were received from 1% of the sample, with 1% reporting that they had recently injected the drug. Oral administration of quetiapine was most common, with all recent users (n=56) reporting that they had swallowed the drug in the six months prior to interview.

As with alprazolam, the proportion of participants reporting lifetime use of prescribed quetiapine was significantly lower than the proportion reporting non-prescribed use (28% vs. 57%, $p < 0.001$). Similarly, the proportion reporting recent prescribed use was significantly lower than the proportion reporting recent non-prescribed use (10% vs. 29%, $p < 0.001$). Among prescribed users, on average quetiapine was used daily (median=180, range=2-180 days) in the preceding six months. Use of non-prescribed quetiapine appeared more opportunistic, with recent users reporting use on a median of six days (range=1-90 days) during the same period.

In 2012, only one KE report was received in relation to quetiapine. As with previous years, a KE from the NSP sector reported observing a burgeoning street market for the antipsychotic medication during the preceding 12 months and multiple overdoses related to use of the drug among PWID.

### 4.7.5. Pharmaceutical stimulants

Similar to 2011, in 2012 42% (n=63) of Victorian IDRS participants reported lifetime use of pharmaceutical stimulants (such as dexamphetamine and methylphenidate), while 27% (n=41) reported lifetime injection. Thirteen per cent (n=19) reported use of these drugs on a median of four days (range=1-180 days) in the six months prior to interview. In 2012, the proportion of participants reporting lifetime use of non-prescribed pharmaceutical stimulants was significantly higher than the proportion reporting prescribed use (37% vs. 10%, $p < 0.001$). Likewise, the proportion of participants reporting recent use of non-prescribed pharmaceutical stimulants was significantly higher than the proportion reporting recent prescribed use (11% vs. 1%, $p < 0.001$). Eight per cent (n=12) of participants reported injecting non-prescribed pharmaceutical stimulants on a median of two days (range=1-40 days) in the six months preceding interview. No reports were received from participants regarding the recent injection of prescribed pharmaceutical stimulants.

### 4.7.6. Inhalants

In 2012, 19% (n=29) of 2012 Victorian IDRS participants reported lifetime inhalant use, a significant decline from the proportion in 2011 (32%, $p < 0.01$). No participants reported the use of inhalants in the six months preceding interview.

### 4.7.7. Steroids

Five per cent of participants reported lifetime steroid use, with 1% reporting use of these drugs on a median of 13 days (range=6-20 days) in the preceding six months. Consistent with this, 5% reported lifetime steroid injection and 1% reported injecting steroids on a median of 13 days (range=6-20 days) in the six months before interview.

In 2012, only two KE made comments relating to steroid use in the preceding 12 months. One NSP KE reported that this population consistently collected large quantities of sterile injecting equipment. An increase in new NSP clients reporting the use and injection of steroids, peptides and melanotan (an injectable skin-tanning peptide) was also reportedly observed.

### 4.7.8. Alcohol and tobacco

Lifetime alcohol use was reported by 99% (n=149) of the 2012 Victorian IDRS sample, with 69% (n=103) reporting consuming alcohol in the preceding six months on a median of 24 days (range=1-180 days), translating to an average of weekly use. All recent alcohol users reported consuming the drug orally during this time. While 3% (n=4) of participants reported lifetime injection of alcohol, no reports were received regarding recent alcohol injection. Alcohol use was reported as prevalent and stable by KE in 2012, which was consistent with KE reports in 2011. No further detail regarding patterns of alcohol consumption among PWID was provided. Lifetime tobacco use was also reported by 99% (n=149) of participants in 2012, with 95% (n=143) of the sample reporting an average of daily smoking (median=180 days, range=1-180 days) in the six months preceding interview.

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

## 5.1. Heroin

**Key points**

*Price*

— The median price paid for a cap remained stable in 2012: $50 vs. $50 in 2011.

— According to participant reports, the median price paid for a gram increased to $300 in 2012 from $250 in 2011.

— In 2012, participants most commonly reported recently purchasing 1.7 grams of heroin and paying a median price of $350.

— KE reported that PWID were purchasing heroin in larger quantities than they had previously.

*Availability*

— Almost all (97%) reported that heroin was very easy or easy to obtain, with 79% reporting that availability remained stable in the preceding six months.

— Heroin was primarily sourced from known dealers, friends or street dealers, from an agreed public location, dealer's home, or friend's home.

*Purity*

— Participants reported that heroin was typically of low (49%) to medium (31%) purity.

— In 2011/12, the average purity of heroin seizures was 18% (range=11%-81%).

### 5.1.1. Price

In 2012, 81% (n=122) of Victorian IDRS participants who reported confidence in their knowledge of the heroin market in Melbourne provided information pertaining to the price, purity and availability of heroin in the preceding six months.

Table 6 presents Victorian IDRS participant reports of the median price paid for their most recent heroin purchase, according to weight, from 2011 to 2012. Median heroin prices were estimated from participant reports of the price they paid for their most recent heroin purchase. In 2012, participants (n=41) most commonly reported recently purchasing 1.7 grams of heroin, a standard amount of heroin sold on the streets of Melbourne. The median price paid for this quantity on the last occasion of purchase was $350 (range=$250-$500). Thirty-nine participants reported most recently purchasing a heroin 'cap' (i.e., ~0.1 gram); fewer participants (n=17) reported recently purchasing a gram of heroin.

**Table 6: Median prices paid for most recent heroin purchase, according to weight, Victoria, 2011-2012**

| | 2011 | 2012 |
|---|---|---|
| Cap (range) | 50 (30-100) | 50 (30-100) |
| Quarter-gram (range) | 100 (70-150)^ | 110 (70-150) |
| Half-gram (range) | 150 (20-350) | 150 (120-300) |
| Gram (range) | 250 (150-450) | 300 (200-350) |
| 1.7 gram (range) | -- | 350 (250-500) |

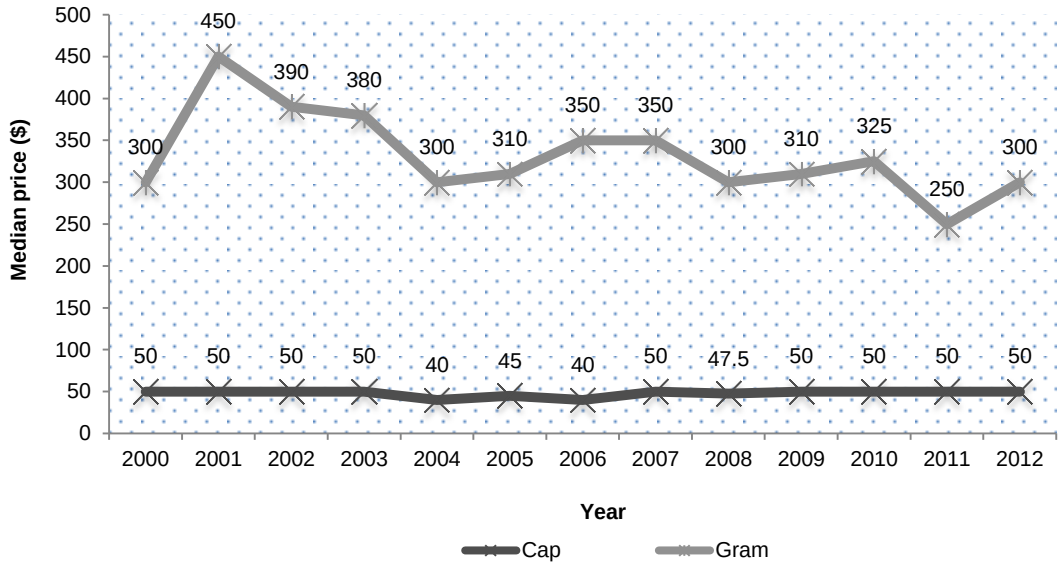
Source: IDRS participant interviews

^ Small numbers reporting (<10) – please interpret with caution.

-- Not reported.

Figure 8 shows the median prices of a heroin 'cap' and a heroin gram, estimated from Victorian IDRS participants' most recent purchases, from 2000 to 2012. The reported price of a cap of heroin has remained stable at between $40 and $50 since 2000. The median price per gram of heroin has fluctuated over the years, peaking at $450 in 2001 after the end of the heroin 'glut' (Dietze & Fitzgerald, 2002). However, from 2004 to 2010 the median price of a gram of heroin remained relatively stable at between $300 and $350. In 2011, the reported median price of a gram fell to $250, the lowest median price across all years shown. Nonetheless, in 2012, the median reported price of a gram was $300 (Figure 8).

**Figure 8: Median prices of a cap and a gram of heroin estimated from participants' purchases, Victoria, 2000-2012**




Source: IDRS participant interviews

In 2012, 119 Victorian IDRS participants provided information on changes in the price of heroin in the preceding six months. Almost two-thirds (64%, n=76) of participants reported that the price of heroin remained stable in the six months prior to interview. Thirteen per cent (n=16) reported that the price of heroin decreased in the previous six months, while another 13% (n=15) reported that the price increased. Ten per cent (n=12) of participants in this group reported that the price of heroin fluctuated during this time.

### 5.1.2. Availability

One hundred and twenty-one Victorian IDRS participants commented on their perceptions of heroin availability at the time of interview in 2012, with the vast majority reporting that heroin was either very easy (73%, n=88) or easy (24%, n=29) to obtain. Very few participants reported that obtaining heroin was difficult (3%, n=4). In relation to participants' perceptions of changes to heroin availability in the preceding six months, most (79%, n=96) reported that the market remained stable. Nine per cent (n=11) reported that heroin had become more difficult to obtain, 7% (n=8) reported that availability had fluctuated, while 5% (n=6) reported that obtaining the drug had become easier during the previous six months.

As in previous years, participants were also asked to nominate the source for their most recent heroin purchase; in 2012, 122 participants provided comment. On their last occasion of purchase, approximately half (51%, n=62) reported sourcing heroin from a known dealer and around one-fifth reported sourcing the drug from friends (21%, n=25) or a street dealer (20%, n=24). Few participants reported sourcing heroin from acquaintances (5%, n=6) or mobile dealers (4%, n=5). In 2012,

participants most commonly reported sourcing their last heroin purchase from an agreed public location (30%, n=37), a dealer's home (28%, n=34) or a street-market (24%, n=29).

### 5.1.3. Purity

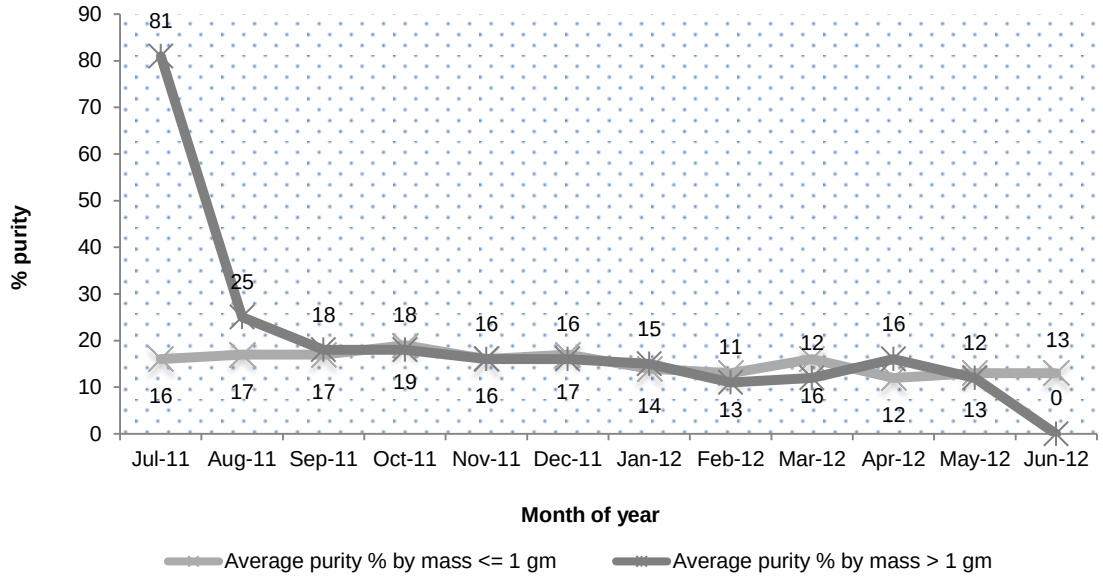
In 2012, 118 participants provided information on their perceptions of heroin purity at the time of interview. Almost half (49%, n=58) reported that current heroin purity was low, with about one-third (31%, n=36) reporting that heroin purity was medium; only 7% (n=8) reported that current heroin purity was high. Fourteen per cent (n=16) of participants reported fluctuating heroin purity at the time of interview.

One hundred and seventeen participants commented on their perceptions of changes to heroin purity in the six months prior to interview. Of these, 37% (n=43) reported that heroin purity had remained stable during the preceding six months, 27% (n=32) reported that it had fluctuated, 22% (n=26) reported that it had decreased, and 14% (n=16) reported that it had increased.

In 2012, KE who commented on the market characteristics of heroin reported increased availability of the drug in the previous six to 12 months. While the price was reported as remaining stable, purity was typically reported as medium in the inner suburbs and lower in the outer suburbs. KE reported that PWID were purchasing the drug in larger quantities than they had previously. Several KE also reported perceiving that heroin purity had increased; these conclusions were drawn via observation of increasing numbers of heroin-related overdose and ambulance attendances during the period.

Figure 9 shows the average purity of heroin seizures made by Victorian law enforcement agencies from July 2011 to June 2012. The average purity of heroin seizures analysed between July 2011 and June 2012 was 18% (range=11%-81%). The average purity of smaller heroin seizures weighing less than one gram was 15% (range=12%-19%). The average purity of larger seizures weighing more than one gram was higher at 22% (range=11%-81%). The average purity of all heroin seizures made during the 2011/12 financial year was consistent with the purity of seizures made during the 2010/11 financial year (18%); however, compared with previous years, overall purity in 2011/12 was low (e.g., 2009/10, 27%; 2008/09, 22%; 2007/08, 22%; 2006/07, 23%), remaining significantly lower than the average purity of seizures during the height of heroin supply in Melbourne (e.g., 2000/01, 47%; 1999/00, 60%; 1998/99, 68%) (Horyniak et al., 2010; Quinn, 2008, 2009; Reddel et al., 2011).

**Figure 9: Average purity of heroin seizures by Victorian law enforcement, July 2011 to June 2012***




Source: Victoria Police Forensic Services Department

* At the time of data collation, no heroin seizures weighing more than one gram had been recorded by Victoria Police in June 2012.

## 5.2. Methamphetamine

**Key points**

*Price*

— The median price of a point of speed increased from $50 in 2011 to $100 in 2012. The price of a gram remained stable at $200.

— In 2012, the median price of a point of crystal methamphetamine or ice remained stable at $100, while the median price of a gram decreased ($800 in 2011 vs. $500 in 2012).

*Availability*

— Approximately 87% reported that speed was either very easy or easy to obtain, with availability remaining stable (73%) in the preceding six months.

— Crystal methamphetamine was also reported as very easy or easy to obtain (92%); 74% reported that availability remained stable in the previous six months.

— KE reported that availability of crystal methamphetamine and speed increased during the past year.

*Purity*

— In 2012, reports regarding the purity of speed were inconsistent: 46% reported it was low, while 25% reported it was high.

— Crystal methamphetamine purity was typically reported as high (54%); 20% reported it as medium.

— In 2011/12, the average overall purity of methamphetamine seizures was 56% (range=5%-76%).

### 5.2.1. Price

#### 5.2.1.1. Speed

In 2012, 31 Victorian IDRS participants reported confidence in their knowledge of the speed market in Melbourne and provided information relating to the price of the drug during the preceding six months.

Median speed prices were estimated from participant reports of the price they paid for their most recent purchase, as detailed in Table 7, from 2011 to 2012. In 2012, participants (n=17) most commonly reported recently purchasing 0.5 gram of speed. Fourteen participants reported most recently purchasing a gram of speed, while 11 participants reported recently purchasing a point of speed. The reported median price of a point of speed increased in 2012 (Table 7).

Thirty-one participants provided information on changes to the price of speed in the preceding six months. Of these, approximately two-thirds (68%, n=21) reported that the price of speed remained stable in the six months prior to interview. Over one-quarter (26%, n=8) reported that the price of speed increased in the previous six months; fewer (7%, n=2) reported that the price fluctuated during this time.

**Table 7: Median prices paid for most recent methamphetamine* purchase, according to weight, Victoria, 2011-2012**

| | Speed | | Crystal/ice | |
|---|---|---|---|---|
| | 2011 | 2012 | 2011 | 2012 |
| Point (range) | 50 (20-100) | 100 (20-150) | 100 (50-120) | 100 (50-100) |
| Half-gram (range) | 100 (75-150) | 100 (70-500) | 400 (50-600) | 300 (200-450) |
| Gram (range) | 200 (100-500) | 200 (100-500) | 800 (350-1000) | 500 (220-996) |

Source: IDRS participant interviews

* Base methamphetamine prices are not shown due to very few participants reporting recent purchases in 2011 and 2012.

#### 5.2.1.2. Crystal methamphetamine

Table 7 also shows the median price participants' paid for their most recent crystal methamphetamine purchase, from 2011 to 2012. As with speed, median prices were estimated from participant reports of the price they paid for their most recent purchase. In 2012, participants (n=41) most commonly reported recently purchasing a point of crystal methamphetamine (i.e., 0.1 gram). Eighteen participants reported most recently purchasing a gram of crystal methamphetamine. Fewer participants (n=18) reported recently purchasing 0.5 gram of crystal methamphetamine (Table 7).

Forty-eight participants provided information on changes in the price of crystal methamphetamine in the six months prior to interview, with 71% (n=34) reporting that the price remained stable during this time. Twenty-one per cent (n=10) reported that the price of crystal methamphetamine increased during the preceding six months, while 6% (n=3) reported that the price decreased and 2% reported that the price fluctuated.

#### 5.2.1.3. Base

Only two participants provided information about the price of base methamphetamine in 2012 so median prices are not reported.

### 5.2.2. Availability

#### 5.2.2.1. Speed

Thirty-one 2012 Victorian IDRS participants commented on their perceptions of speed availability at the time of interview, with most reporting that speed was either very easy (48%, n=15) or easy (39%, n=12) to obtain. Very few reported that obtaining speed was difficult (10%, n=3) or very difficult (3%, n=1) at the time of interview. In relation to participants' perceptions of changes to the availability of speed during the preceding six months, most (73%, n=22) reported that the market remained stable. Seventeen per cent (n=5) reported that speed had become easier to obtain, while 10% (n=3) reported that obtaining the drug had become more difficult during this time.

Participants were asked to nominate the source of their most recent speed purchase and 29 did so in 2012. On their last occasion of purchase, most participants reported sourcing the drug from known dealers (62%, n=18) or through friends (35%, n=10). The most commonly reported locations for participants' (n=28) most recent purchase were a dealer's home (43%, n=12) and home delivery (21%, n=6), followed each by a friend's home (18%, n=5) and an agreed public location (18%, n=5).

#### 5.2.2.2. Crystal methamphetamine

Forty-nine Victorian IDRS participants commented on crystal methamphetamine availability in 2012. As for speed, most participants reported that crystal methamphetamine was either very easy (61%, n=30) or easy (31%, n=15) to obtain at the time of interview; only 8% (n=4) reported that crystal methamphetamine was difficult to obtain. Regarding participants' perceptions of changes to the availability of crystal methamphetamine in the previous six months, most (74%, n=37) reported that the market remained stable. Eighteen per cent (n=9) reported that crystal methamphetamine had become easier to obtain during the preceding six months, while 6% (n=3) reported that obtaining the drug had become more difficult during this time.

Participants (n=48) were asked to nominate the source of their most recent crystal methamphetamine purchase. In 2012, 48% (n=23) reported sourcing the drug from known dealers on their last occasion of purchase, with 35% (n=17) obtaining the drug through friends, and 8% (n=4) obtaining the drug through acquaintances. Very few participants reported sourcing crystal methamphetamine from street dealers (6%, n=3). In 2012, participants most commonly reported purchasing crystal methamphetamine from a dealer's home (27%, n=13), an agreed public location (23%, n=11) or via home delivery (21%, n=10).

#### 5.2.2.3. Base

Only two Victorian IDRS participants were able to comment on the availability of base methamphetamine in 2012. Reports from these participants suggested that this form of methamphetamine was difficult to obtain at the time of interview as well as during the preceding six months.

### 5.2.3. Purity

#### 5.2.3.1. Speed

In 2012, 28 Victorian IDRS participants provided information on their perceptions of speed purity at the time of interview. Reports of current purity varied widely: 46% (n=13) reported that current speed purity was low, 25% (n=7) reported that purity was high and 21% (n=6) reported that it was medium. Seven per cent (n=2) reported fluctuating speed purity.

Twenty-nine participants commented on their perceptions of changes in speed purity in the six months prior to interview. Of these, 45% (n=13) reported that speed purity remained stable during the preceding six months, while 28% (n=8) reported that purity had decreased. Fourteen per cent each reported that speed purity had increased (n=4) and fluctuated (n=4) during the past six months.

#### 5.2.3.2. Crystal methamphetamine

In 2012, 50 Victorian IDRS participants provided information on their perceptions of crystal methamphetamine purity at the time of interview. Of these, 54% (n=27) reported that current crystal methamphetamine purity was high, 20% (n=10) reported that purity was medium and 12% (n=6) reported that it was low. Fourteen per cent (n=7) reported fluctuating crystal methamphetamine purity.

Forty-eight participants commented on their perceptions of changes in crystal methamphetamine purity in the six months prior to interview. Of these, 56% (n=27) reported that crystal methamphetamine purity remained stable during the preceding six months, while 21% (n=10)

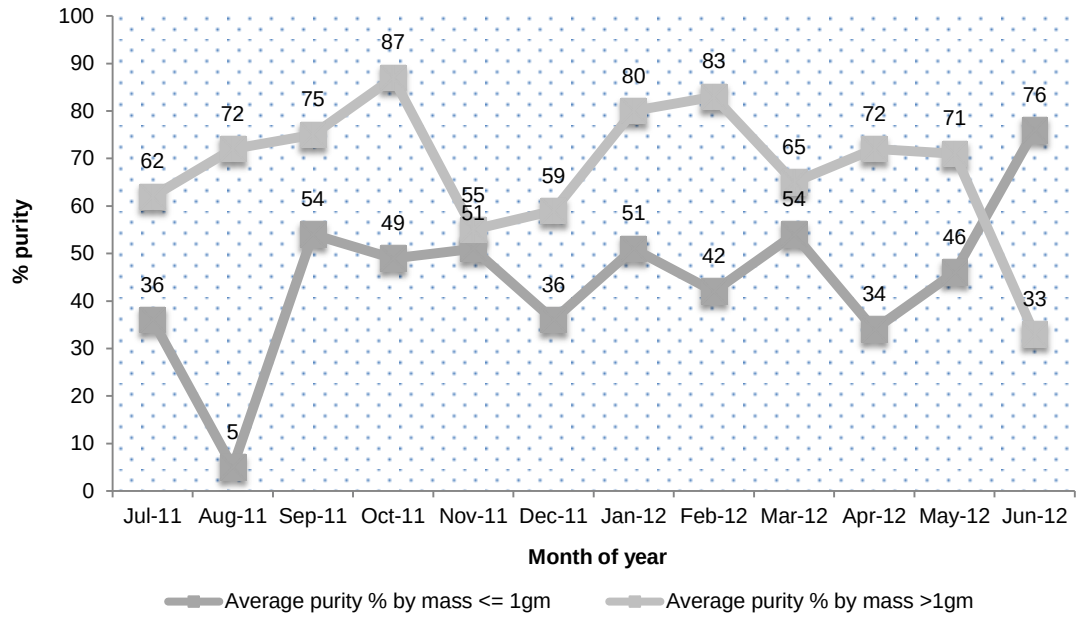
reported that purity had increased. Thirteen per cent (n=6) reported that crystal methamphetamine purity had decreased during this time, while 10% reported that it had fluctuated.

#### 5.2.3.3. Base

Only two participants commented on the purity of base methamphetamine in 2012, suggesting that purity was medium to high at the time of interview and during the preceding six months.

Figure 10 shows the average purity of methamphetamine seizures made by Victorian law enforcement agencies from July 2011 to June 2012. The average purity of methamphetamine seizures analysed between July 2011 and June 2012 was 56% (range=5%-87%). The average purity of smaller methamphetamine seizures weighing less than one gram was 45% (range=5%-76%), while the average purity of larger seizures weighing more than one gram was higher at 68% (range=33%-87%). The average purity of all methamphetamine seizures made during the 2011/12 financial year was significantly higher than the purity of seizures made during the 2010/11 financial year (56% vs. 39%, $p < 0.05$), as well as seizures from previous years (e.g., 2009/10, 20%; 2008/09, 12%; 2007/08, 21%; 2006/07, 18%; 2005/06, 19%) (Horyniak et al., 2010; Jenkinson & Quinn, 2007; Kirwan et al., 2012; Quinn, 2008, 2009; Reddel et al., 2011) (Figure 10).

**Figure 10: Average purity of methamphetamine seizures by Victorian law enforcement, July 2011 to June 2012**




Source: Victoria Police Forensic Services Department

As per previous years, very few amphetamine (as opposed to methamphetamine) seizures were made by Victorian law enforcement agencies during the 2011/12 financial year. The purity of amphetamine seizures was low; overall average purity was 14% (range=1%-72%).

In 2012, KE from both the LE and health sectors reported that while the purity of speed and crystal methamphetamine was low, availability had increased during the preceding year. Despite this, LE KE reported no real changes to the market for speed. However, an increase in the size of methamphetamine seizures in the previous 12 months suggested that while methamphetamine continued to be manufactured locally, the drug was increasingly imported. Moreover, LE KE reported observing a shift to methamphetamine use as a consequence of the recent decline in ecstasy availability in Melbourne.

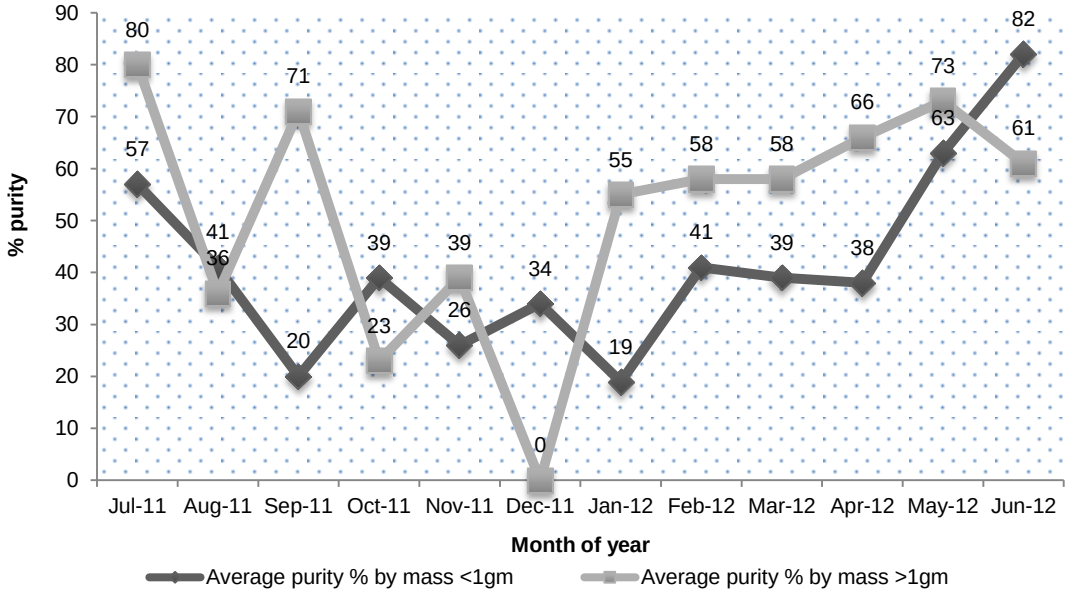
## 5.3. Cocaine

In 2012, only four participants provided the prices of their most recent cocaine purchases. These reports were inconsistent, so median prices for cocaine and changes in price during the preceding six months are not reported.

Four participants commented on the purity of cocaine in 2012, with three participants reporting that purity was medium. Reports on changes to cocaine purity in the preceding six months were also relatively inconsistent; however, two of four participants reported that cocaine purity had increased.

Figure 11 shows the average purity of cocaine seizures made by Victorian law enforcement agencies from July 2011 to June 2012. The average purity of cocaine seizures analysed during this period was 49% (range=19%-82%). Smaller cocaine seizures weighing less than one gram had an average purity of 42% (range=19%-82%), while the average purity of larger seizures weighing more than one gram was 56% (range=23%-80%). The average purity of cocaine seizures was higher during 2011/12 than in 2010/11 (49% vs. 26%, $p < 0.001$) and higher than the average purity of seizures (30% to 40%) since 2000 (Horyniak et al., 2010; Kirwan et al., 2012; Reddel et al., 2011).

**Figure 11: Average purity of cocaine seizures by Victorian law enforcement, July 2011 to June 2012**




Source: Victoria Police Forensic Services Department

As with cocaine price and purity, only four participants commented on cocaine availability at the time of interview in 2012 and during the preceding six months. Three of four participants reported that obtaining cocaine was easy at the time of interview, while two reported that cocaine had become easier to obtain during the previous six months. All four participants reported obtaining their most recent cocaine purchase from known dealers, from either dealer's homes or agreed public locations.

In 2012, few comments were received from LE KE pertaining to the cocaine market in the preceding six to months. However, as with methamphetamine, LE KE reported increased importation of cocaine to Australia and a subsequent increase in the number of cocaine seizures by law enforcement agencies. In the past year, LE KE reported that trafficking intelligence related to cocaine also increased, although, given individuals' previous lack of involvement in the criminal justice system, the data were described as unreliable. Even so, it was reported that Australia was being targeted by a larger number of international cocaine exporters during the period of observation.

## 5.4. Cannabis

**Key points**

*Price*

— In 2012, the median prices of hydroponically grown cannabis remained stable at $20 per gram and $250 per ounce.

— While the median price of a gram of bush-grown cannabis remained stable at $20, the median price of an ounce increased from $210 in 2011 to $240 in 2012.

*Availability*

— Hydroponic and bush-grown cannabis were both reportedly very easy and easy to obtain (approximately 95% and 100% among participants who commented, respectively).

— Availability in the preceding six months remained stable for both cannabis forms.

— Both types of cannabis were most commonly purchased from known dealers or friends, at both dealer's and friend's homes. Few reported purchasing hydroponically grown cannabis from street dealers.

*Potency*

— In 2012, hydroponic cannabis potency was reported as high (58%) and medium (36%), while bush-grown cannabis potency was reported as medium (71%).

— Approximately two-thirds each reported that potency of both cannabis forms remained stable in the previous six months.

### 5.4.1. Price

In 2012, 53% (n=79) of Victorian IDRS participants who were confident in their knowledge of the cannabis market in Melbourne reported that they were able to distinguish between hydroponically grown cannabis and bush-grown cannabis. Seventy-three participants reported on the market characteristics of hydroponically grown cannabis, while only seven participants were able to comment on the price, purity and availability of bush-grown cannabis.

Table 8 presents Victorian IDRS participant reports of the median price paid for their most recent cannabis purchase in 2011 and 2012, for hydroponic and bush-grown cannabis. In 2012, participants (n=50) most commonly reported recently purchasing one gram of hydroponic cannabis. Thirty-seven participants reported most recently purchasing one-quarter of an ounce, while 22 participants reported recently purchasing an ounce of cannabis. In relation to bush-grown cannabis, participants (n=6) most commonly reported purchasing one gram; the median price was $20 (Table 8).

**Table 8: Median prices paid for most recent cannabis purchase, according to weight, Victoria, 2011-2012**

| | Hydroponic | | Bush | |
|---|---|---|---|---|
| | 2011 | 2012 | 2011 | 2012 |
| Gram (range) | 20 (15-30) | 20 (10-20) | 20 (20-20)^ | 20 (10-20)^ |
| Quarter-ounce (range) | 80 (50-150) | 80 (50-180) | -- | 70 (0-80)^ |
| Ounce (range) | 250 (160-360) | 250 (150-280) | 210 (200-250)^ | 240 (200-250)^ |

Source: IDRS participant interviews

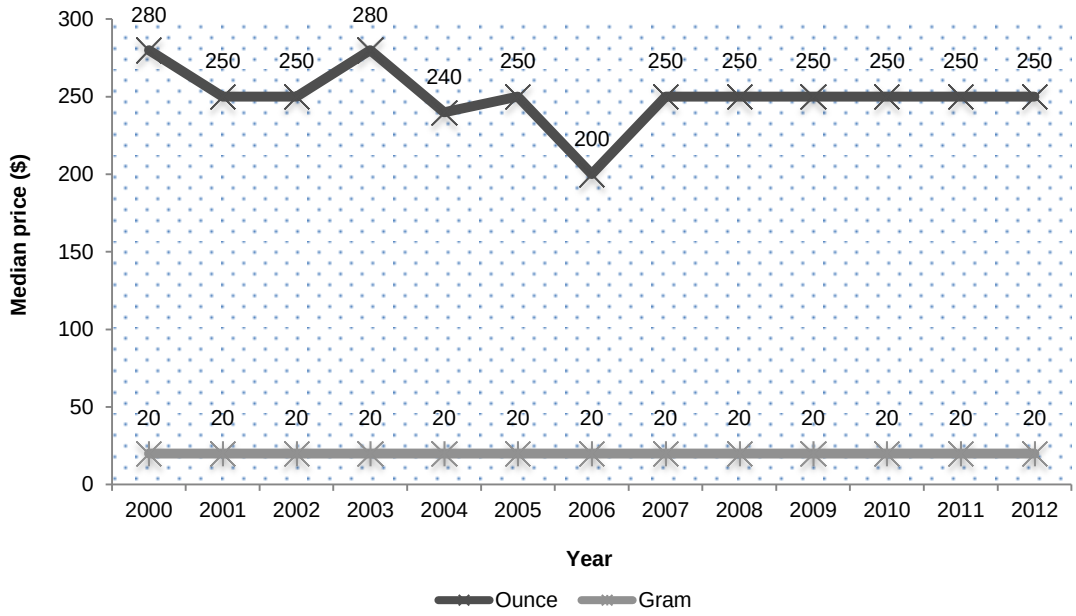
^ Small numbers reporting (<10) – interpret with caution.

-- No reports received.

Figure 8 shows the median prices of one gram and one ounce of cannabis, estimated from Victorian IDRS participants' most recent purchases, from 2000 to 2012. The median price of a gram of cannabis remained consistent at $20. By contrast, the reported median price of an ounce fluctuated

somewhat between 2000 and 2006. Since 2007, however, the median price of an ounce has remained stable at $250 (Figure 12).

**Figure 12: Median prices of a gram and an ounce of cannabis estimated from participants' purchases, Victoria, 2000-2012***




Source: IDRS participant interviews

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

Of the 73 participants who provided information on changes to the price of hydroponically grown cannabis during the six months preceding interview in 2012, most (85%, n=62) reported that the price remained stable. Four of the seven (57%) participants who reported on changes to the price of bush-grown cannabis in the six months prior to interview reported that the price remained stable.

### 5.4.2. Availability

Seventy-three Victorian IDRS participants commented on hydroponic cannabis availability in 2012. The majority reported that this form of cannabis was very easy (74%, n=54) to obtain at the time of interview, and a further 21% (n=15) reported it was easy to obtain. Only 6% (n=4) reported that obtaining hydroponic cannabis was difficult. In relation to participants' perceptions of changes to the availability of hydroponic cannabis in the preceding six months, 90% (n=66) reported that the market remained stable.

Participants were asked to nominate the source of their most recent hydroponic cannabis purchase. In 2012, the most common source of hydroponic cannabis on the last occasion of purchase was known dealers (47%, n=34), with a further 34% (n=25) obtaining the drug through friends, and 7% (n=5) obtaining the drug through street dealers. Six per cent (n=4) obtained their most recent purchase from an acquaintance. The most commonly reported locations for participants' most recent purchases was a dealer's home (32%, n=23), friend's home (26%, n=19) or an agreed public location (18%, n=13).

In 2012, only seven participants provided information on their perceptions of the availability of bush-grown cannabis. All participants reported that bush-grown cannabis was very easy (n=6) or easy (n=1) to obtain and that the market remained stable (n=7) during the preceding six months. Of six participants, the most commonly reported source of bush-grown cannabis was friends (n=3), or known dealers (n=2), with a friend's home (n=2) the most commonly reported purchase location.

In 2012, few KE reports were received regarding cannabis market characteristics. While LE KE reported that they were aware of cannabis 'grow-houses' and distribution networks, this was not the particular focus of the professionals interviewed as part of the 2012 Victorian IDRS. However, LE KE reported that individuals apprehended in relation to cannabis cultivation in the preceding 12 months typically had no prior involvement in crime, possibly reflecting an increasing sense of social acceptability of drug cultivation.

### 5.4.3. Potency

In 2012, 73 Victorian IDRS participants gave their perceptions of the current potency of hydroponic cannabis, with 58% (n=42) reporting it was high and 36% (n=26) reporting it was medium. Seventy-two participants commented on their perceptions of changes to cannabis potency in the six months preceding interview. Of these, 67% (n=48) reported that potency remained stable, while 21% (n=15) reported that potency fluctuated in the six months prior to interview. By contrast, of seven participants, five reported that the current potency of bush-grown cannabis was medium at the time of interview, with potency reported as remaining stable (n=4) throughout the preceding six months.

## 5.5. Methadone

In 2012, four participants commented on the price and availability of non-prescribed methadone (Methadone Syrup® and Biodone Forte®). No reports were received about the price and availability of Physeptone® tablets. Only two of four participants reported on the price of non-prescribed methadone, so median prices are not reported for 2012. However, three participants reported that the price of methadone remained stable in the six months preceding interview. Three of four participants reported that non-prescribed methadone was easy to obtain at the time of interview, with two of four participants reporting that availability remained stable during the previous six months. On the last occasion of purchase, the most common source of non-prescribed methadone was through participants' friends (n=3); the most commonly reported location for participants' most recent purchase was a friend's home (n=2).

## 5.6. Buprenorphine

In 2012, 10 participants provided comment on the market characteristics for non-prescribed buprenorphine (i.e., Subutex®). Participants (n=8) most commonly reported recently purchasing an 8 mg buprenorphine tablet at a median price of $20 (range=$15-$40), consistent with 2011. Five participants reported purchasing a 2 mg tablet on their last occasion of purchase, with the median price reported as $10 (range=$5-$10). Of these 10 participants, 70% reported that the price of non-prescribed buprenorphine remained stable in the preceding six months. Participants most commonly reported that non-prescribed buprenorphine was either very easy (n=5) or easy (n=1) to obtain, and that availability remained stable (n=7) during the past six months. The most commonly reported source for participants' most recent purchase was friends (n=6), with the most common locations reported as either a friend's home (n=3) or an agreed public location (n=3).

## 5.7. Buprenorphine-naloxone

Seven participants provided information on the price and availability of non-prescribed buprenorphine-naloxone tablets (Suboxone® tablets) in 2012, while three provided information on the market characteristics for the non-prescribed film preparation (Suboxone® film). Participants (n=5) most commonly reported recently purchasing an 8 mg buprenorphine-naloxone tablet for a median price of $15 (range=$10-$20). Of seven participants, most (n=5) reported that the price of illicit buprenorphine-naloxone remained stable in the preceding six months. Participants reported that buprenorphine-naloxone tablets were very easy (n=5) or easy (n=1) to obtain, and that availability

remained stable (n=6) during the preceding six months. Six participants commented on the source and location for their most recent non-prescribed Suboxone® tablet purchase; the most common sources were friends (n=2) and street dealers (n=2), while the most common locations were a street market (n=2) and an agreed public location (n=2).

Of the three participants who provided information on the market characteristics of illicit buprenorphine-naloxone film, only two reported recently purchasing the 8 mg film preparation, hence median prices are not reported. Two of three participants reported that the price remained stable during the preceding six months. Two participants reported that obtaining the film preparation was very easy at the time of interview, and three that obtaining the drug had become easier during the preceding six months. The most common source for participants' most recent film purchase was friends (n=2), from a friend's home (n=1) or street market (n=1).

## 5.8. Morphine

In 2012, 16 participants provided information on the price and availability of non-prescribed morphine (i.e., MS Contin® tablets and Kapanol® capsules). Table 9 presents median prices of non-prescribed morphine, estimated from Victorian IDRS participants' most recent purchases, for 2011 and 2012. In 2012, participants most commonly reported recently purchasing a 100 mg MS Contin® tablet (n=10). Six participants reported recently purchasing a 60 mg tablet of MS Contin®, while three participants reported purchasing a 100 mg Kapanol® capsule (Table 9). Fifteen of 16 participants provided information on changes to the price of non-prescribed morphine during the preceding six months; of these, most (73%, n=11) reported that the price was stable during this time.

**Table 9: Median prices paid for most recent morphine purchase, according to tablet weight, Victoria, 2011-2012**

| | MS Contin®* | | Kapanol®* | |
|---|---|---|---|---|
| | 2011 | 2012 | 2011 | 2012 |
| 60 mg tablet* (range) | 30 (10-60) | 20 (10-60)^ | -- | -- |
| 100 mg tablet/capsule* (range) | 50 (20-100) | 50 (40-100) | 40 (30-80) | 45 (40-100)^ |

Source: IDRS participant interviews

* MS Contin® is formulated in 5 mg, 10 mg, 30 mg, 60 mg and 100 mg tablets. Kapanol® is formulated in 20 mg, 50 mg and 100 mg capsules. In 2012, there were no participant reports of recent 5 mg, 10 mg or 30 mg MS Contin® tablet purchases or recent 20 mg or 50 mg Kapanol® capsule purchases.

^ Small numbers reporting (<10) – please interpret with caution.

-- No reports received.

Sixteen participants provided information on their perceptions of the availability of non-prescribed morphine in 2012; reports were very inconsistent. Fifty per cent reported that non-prescribed morphine was either very easy (n=6) or easy (n=2) to obtain at the time of interview; while 50% reported that the drug was either difficult (n=6) or very difficult (n=2) to obtain. Of the 14 participants who commented on changes in illicit morphine availability during the preceding six months, most (79%, n=11) reported it remained stable.

Participants were asked to nominate the source of their most recent non-prescribed morphine purchase. In 2012, the most common source of illicit morphine on the last occasion of purchase was friends (63%, n=10), followed by street dealers (19%, n=3). The most commonly reported locations for participants' most recent purchase was a street market (38%, n=6) or friend's home (31%, n=5).

## 5.9. Oxycodone

Sixteen participants provided reports on the market characteristics of non-prescribed oxycodone (i.e., OxyContin®) in 2012. Table 10 shows the median prices Victorian IDRS participants paid for their most recent oxycodone purchases in 2011 and 2012. In 2012, participants most commonly reported recently purchasing an 80 mg OxyContin® tablet (n=10) and a 40 mg OxyContin® tablet (n=10), respectively. Four participants reported most recently purchasing a 20 mg OxyContin® tablet, while one participant reported purchasing a 10 mg tablet (Table 10). In 2012, 15 of 16 participants provided information on changes to the price of non-prescribed oxycodone in the preceding six months, with two-thirds (67%, n=10) reporting that the price remained stable and 20% (n=3) reporting that the price had decreased.

**Table 10: Median prices paid for most recent oxycodone purchase, according to tablet weight, Victoria, 2011-2012**

| | 2011 | 2012 |
|---|---|---|
| 10 mg tablet (range) | 10 (5-30)^ | 5 (5-5)^ |
| 20 mg tablet (range) | 10 (10-25)^ | 14 (10-20)^ |
| 40 mg tablet (range) | 20 (15-35) | 22.50 (20-40) |
| 80 mg tablet (range) | 40 (30-80) | 45 (30-80) |

Source: IDRS participant interviews

^ Small numbers reporting (<10) – please interpret with caution.

-- No reports received.

In 2012, 16 participants commented on the availability of non-prescribed oxycodone at the time of interview. Similar to 2011, reports were varied. Of these participants, 56% reported that the drug was very easy (n=6) or easy (n=3) to obtain, while 44% reported that it was either difficult (n=5) or very difficult (n=2). In relation to participants' perceptions of changes to availability during the preceding six months, 60% (n=9) reported that availability remained stable, while 27% (n=4) reported that obtaining the drug had become more difficult during this time.

As with morphine, participants were asked to nominate the source of their most recent non-prescribed oxycodone purchase. In 2012, the most common source of participants' most recent purchase was friends (53%, n=8) and street dealers (27%, n=4). The most common locations of participants' most recent purchases were street markets (33%, n=5), followed by friend's homes (27%, n=4) and agreed public locations (27%, n=4).

In 2012, several KE from the health sector provided comments in relation to pharmaceutical opioids. They reported that among primary heroin users, drugs such as oxycodone were typically used on an opportunistic basis as an adjunct to heroin, depending on availability. This was reported as particularly true for older groups of PWID. A pharmacy KE reported that because oxycodone was relatively cheap in comparison to heroin, a large increase in demand for the drug had been observed, with large numbers of oxycodone prescriptions filled during the preceding 12 months. It was also reported that the quantity of tablets available on one oxycodone prescription increased from 20 pills to 28 pills. This KE reported that the use of schedule 8 drugs in minor injury and trauma had led to increased use and dependence in the general population overall. KE from the general health sector reported observing an increase in the use of prescription opioids in patch form, with oral administration and injection both reported as common. 'Doctor shopping' was also reported as prevalent, and that some individuals with no history of illicit drug use were commencing use of non-prescribed forms of these drugs.

# 6. Health-related trends associated with drug use

## 6.1. Overdose and drug-related fatalities

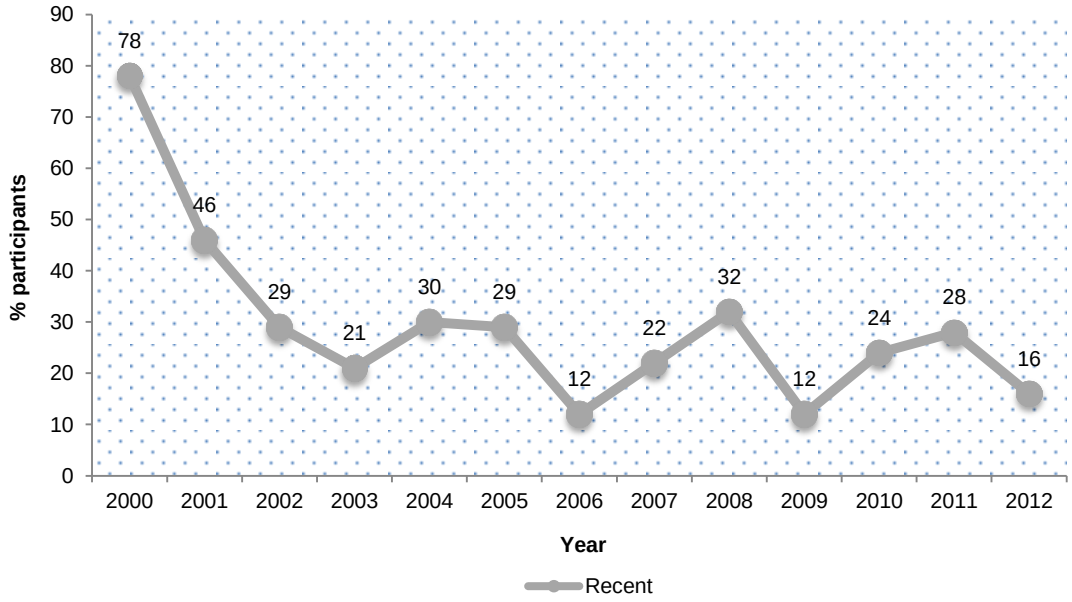
Information about drug-related overdose contained in the 2012 Victorian IDRS report is collected from several sources. These include self-report data from the 2012 Victorian IDRS participant sample, data on the number of Victorian drug-related fatalities (sourced from the National Coroner's Information System via the Victorian Department of Health), and a database of all drug-related ambulance attendances in the community (maintained by Turning Point Alcohol and Drug Centre).

### 6.1.1. Heroin

#### 6.1.1.1. Self-reported overdose

In 2012, over half (55%, n=83) reported a lifetime accidental heroin overdose, not statistically different from the proportion in 2011 (55% vs. 59%, $p$ = 0.484). The median number of lifetime accidental overdoses experienced by participants (n=83) was two (range=2-40 overdoses). Figure 13 shows the prevalence of self-reported recent heroin overdose among Victorian IDRS participants, from 2000 to 2012. Of participants with an overdose history (n=82), 16% (n=13) reported overdosing on heroin in the preceding 12 months, compared with 28% (n=24) in 2011. Although there was a decline in the prevalence of recent heroin overdose between 2011 and 2012, this difference was not significant ($p$ = 0.061) (Figure 13). Four per cent (n=3) of participants with an overdose history (n=82) reported accidentally overdosing on heroin in the month prior to interview.

**Figure 13: Self-reported recent* heroin overdose among participants with a history of heroin overdose, Victoria, 2000-2012**




Source: IDRS participant interviews

* In this context, recent refers to any heroin overdose in the preceding 12 months.

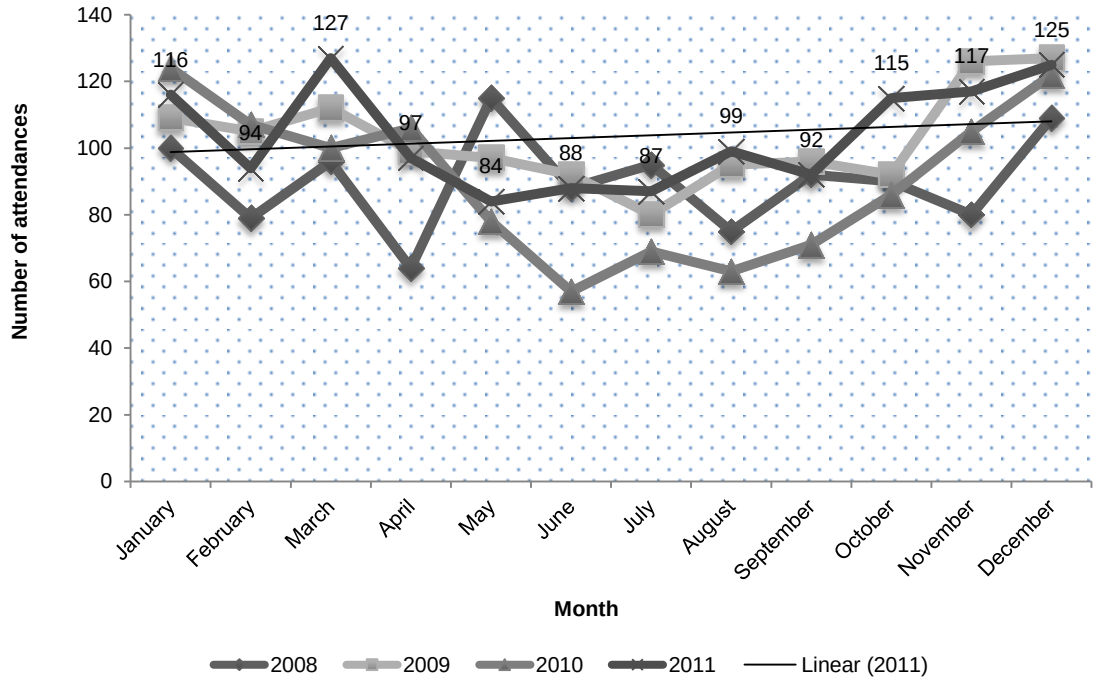
In 2012, participants who reported overdosing on heroin in the 12 months prior to interview (n=13) were asked to provide information on the immediate treatment that they received. Multiple responses were allowed. Of these 13, 77% (n=10) reported that an ambulance attended and 69% (n=9) reported receiving naloxone. Three reported receiving treatment from a hospital ED and three received CPR from a friend, partner or peer. A further three reported receiving no treatment following their accidental heroin overdose in the past year. Participants were also asked whether they sought treatment and/or

information from health services as a result of their overdose in the preceding 12 months. Multiple responses were allowed. Of these (n=13), one reported seeking information from a drug health service. The majority of participants (92%, n=12) reported that they did not seek any treatment or information as a result of their accidental overdose in the past year.

#### 6.1.1.2. Non-fatal heroin overdose attended by ambulance

Figure 14 shows the number of non-fatal heroin[6] overdoses attended by Ambulance Victoria (AV) in the greater Melbourne region, by month, from January 2008 to December 2011. Non-fatal heroin overdose case numbers are reported for those patients who responded positively to the heroin antagonist naloxone, and do not include heroin-related cases in which naloxone was not administered. During 2011, 1,241 non-fatal heroin overdoses were attended by AV in Melbourne, more than in 2010 (n=1,088) and in 2009 (n=1,230). In 2011, the median age of non-fatal heroin overdose cases was 33 years (range=<1-69 years). The average number of attendances per month rose from 91 (range=57-124 attendances) in 2010 to 103 (range=84-127 attendances) in 2011, the same as the monthly average in 2009 (n=103, range=80-127 attendances). Monthly numbers of non-fatal heroin overdose cases attended by AV have remained significantly lower than the peak of 461 cases recorded at the height of heroin supply in Melbourne during December 1999 (Jenkinson et al., 2004).

**Figure 14: Number of non-fatal heroin overdoses attended by Ambulance Victoria, Melbourne, 2008-2011**




Source: Turning Point Alcohol and Drug Centre

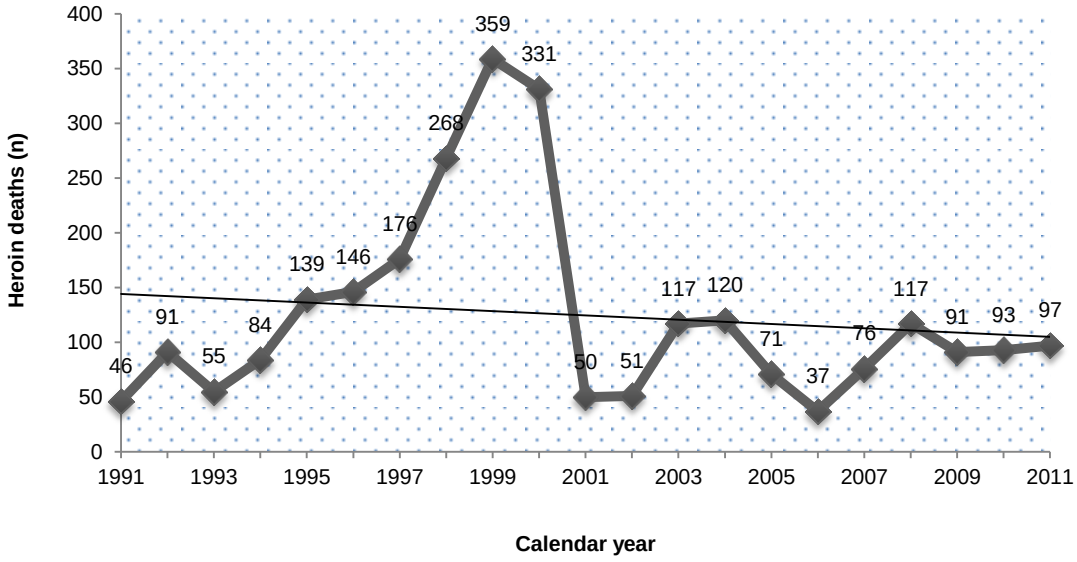
#### 6.1.1.3. Heroin-related deaths

Figure 15 summarises the data for trends in heroin-related mortality in Victoria from 1991 to 2011. A total of 2,615 heroin-related deaths were recorded for the period shown in the figure, with the number of fatalities per year averaging 125 (range=37-359 deaths). Throughout the 1990s, an increasing

[6] Note that this figure may include non-fatal overdoses for other opioids as well as heroin, given that naloxone is an antagonist for all opioids.

trend in the number of Victorian heroin-related deaths was observed, prior to a dramatic decline between the years 2000 (n=331) and 2001 (n=50). The sharp decline in fatalities observed in Victoria from 2000 to 2001 was consistent with the timing of the end of the heroin 'glut' in Melbourne (Fry & Miller, 2001). Between 2003 and 2004, the annual number of heroin-related deaths in Victoria returned to the level observed during the mid-1990s. However, since 2004 the annual number of deaths has varied between 37 and 117, remaining much lower than the peak of 359 deaths reported in 1999. In 2011, 97 deaths were officially defined as heroin-related in Victoria.

**Figure 15: Heroin-related deaths, Victoria, 1991-2011**




Source: Victorian Department of Health, 1991-2008; National Coroner's Information System, 2012

Note: Approximately one-third of all 2011 NCIS Victorian deaths and just over one-fifth of all 2010 NCIS Victorian deaths remained 'open' at the time of publication in 2013. Figures for 2010 and 2011 are therefore an underestimate of the true number of heroin-related fatalities in Victoria during this period and are subject to change in the future as cases are resolved.

## 6.1.2. Other drugs

### 6.1.2.1. Self-reported overdose

In 2012, 21% (n=31) of Victorian IDRS participants reported a lifetime accidental overdose on drugs other than heroin, which was consistent with the proportion in 2011 (21% vs. 23%, $p = 0.676$). In their lifetime, participants (n=31) reported a median of one accidental overdose on other drugs (range=1-20 overdoses). Among participants in this group (n=30), 20% (n=6) reported accidentally overdosing on drugs other than heroin in the preceding 12 months, while 7% (n=2) reported an accidental overdose in the preceding month. Participants who reported an accidental overdose in the past year were asked to comment on the drugs they had used prior to their most recent overdose. Of these participants (n=6), prior to their last overdose two reported that they used methadone (33%) and two reported that they used benzodiazepines (33%), while one reported using crystal methamphetamine or ice (17%) and another reported using cocaine (17%).

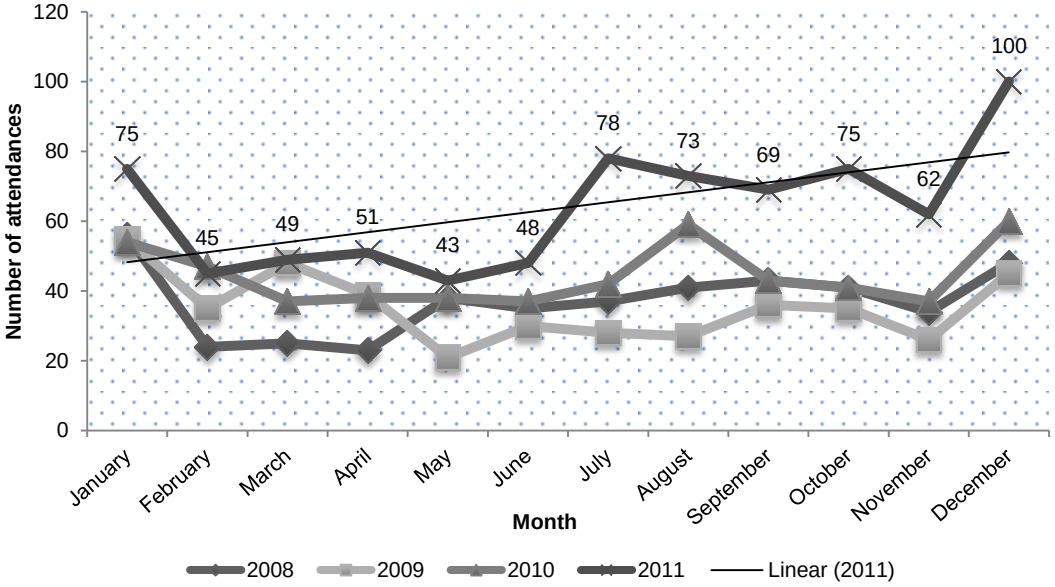
In 2012, participants who reported overdosing on drugs other than heroin in the 12 months prior to interview (n=6) were asked to provide information on the immediate treatment that they received. Multiple responses were allowed. One participant reported that an ambulance attended, another received oxygen, and a third received naloxone. A fourth reported receiving unspecified 'other' treatment. Among these six participants, four (67%) reported receiving no immediate treatment. Participants were also asked whether they sought further treatment and/or information from health services as a result of their overdose in the preceding 12 months. Multiple responses were allowed.

All participants (100%, n=6) who reported overdosing on drugs other than heroin in the past year reported seeking no further treatment and/or information related to their overdose or drug use at the time.

#### 6.1.2.2. Other drug-related events attended by ambulance

Figure 16 shows the number of amphetamine-related events attended by AV in the greater Melbourne region, by month, from January 2008 to December 2011. During 2011, 768 amphetamine-related events were attended by AV in Melbourne, more than in 2010 (n=533) and 2009 (n=428). In 2011, the median age of cases in which amphetamines were involved was 26 years (range=<1-57 years), which was consistent with the median age in 2010. In 2011, the average number of attendances per month was 64 (range=43-100 attendances), increasing from an average of 44 (range=37-60 attendances) in 2010 and 35 (range=21-55 attendances) in 2009 (Figure 16).

**Figure 16: Number of amphetamine-related events attended by Ambulance Victoria, Melbourne, 2008-2011**




Source: Turning Point Alcohol and Drug Centre

During 2011, approximately 72 cocaine-related events were attended in the greater Melbourne region, more than in 2010 (n=54), but fewer than in 2009 (n=104). The median age of cases in which cocaine was involved was 28 years (range=<1-67 years) in 2011, which was lower than the median age in 2010 (30 years, range=15-54 years). In 2011, the average number of attendances per month involving cocaine was seven (range=<5-10 attendances).

## 6.2. Drug treatment

### 6.2.1. Heroin

#### 6.2.1.1. Alcohol and Drug Information System

During 2011/12, 51,742 courses of treatment[7] were delivered to 30,428 clients[8] in Victorian specialist alcohol and drug treatment services[9]. In 2011/12, the number of courses of treatment delivered to

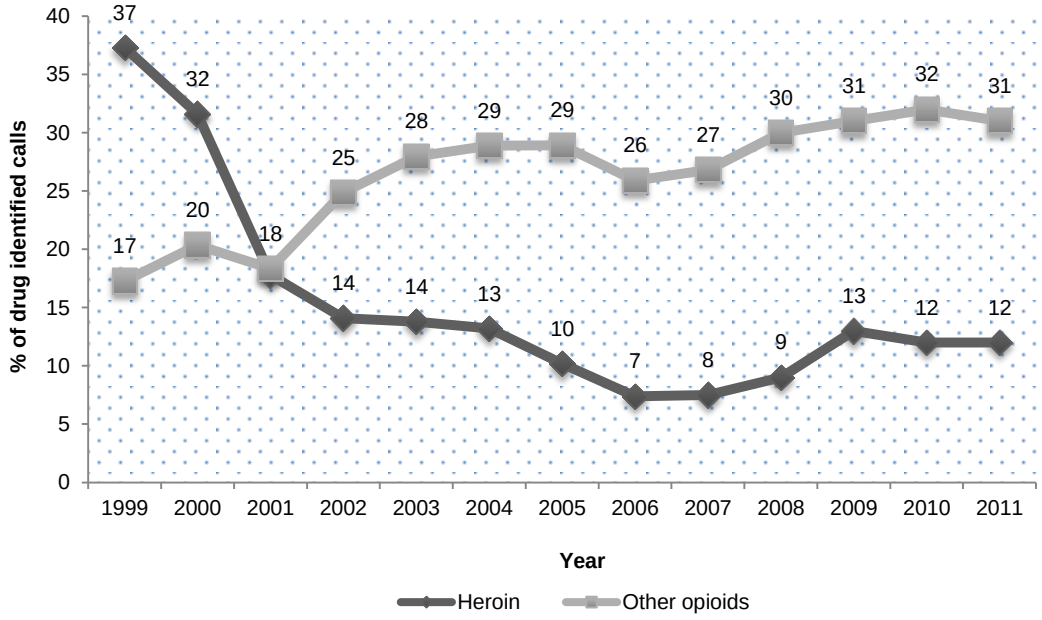
[7] 2011/12 data are subject to revision due to late agency data returns. As such, these data are likely to underestimate the total numbers of courses of treatment and clients for this period.

clients in Victoria decreased by 6% from that in 2010/11 (N=55,048), while the total number of clients decreased by 5% (N=32,050) during the same period. After alcohol and cannabis, heroin was the most commonly cited drug of concern, comprising 11% of all clients and 11% of all courses of treatment delivered during 2011/12.

#### 6.2.1.2. DirectLine calls

The DirectLine telephone service provides 24-hour counselling, information and referral services to people in Victoria wishing to discuss drug-related issues or concerns (Victorian Department of Health, 2011). In 2011, DirectLine responded to 42,896 alcohol and drug-related telephone calls, with a specific drug of concern[10] identified in almost half (49%, n=20,856) of all enquiries to the service. Figure 17 shows the proportion of calls to DirectLine in which heroin or other opioids were identified, from 1999 to 2011. In 2011, heroin was identified as a drug of concern in 2,392 telephone calls, representing 12% of all calls to DirectLine where a drug of concern was identified. While the proportion of heroin-related calls decreased steadily between 1999 and 2001, from 2002 to 2011 the proportion of calls identifying heroin as a drug of concern to the service remained relatively stable. In 2011, an additional 6,504 calls identifying other opioids as the drug of concern were received by DirectLine, comprising almost one-third (31%) of all drug-identified calls received during the period. The proportion of calls identifying other opioids as a concern in 2011 remained similar to the proportions in previous years (Figure 17).

**Figure 17: Proportion of calls to DirectLine in which heroin or other opioids were identified as drugs of concern, Victoria, 1999-2011**




Source: Turning Point Alcohol and Drug Centre

#### 6.2.1.3. Pharmacotherapy consumers

A quarterly census of pharmacies is conducted by the Harm Reduction and Pharmacotherapy Services (HRPS) unit at the Victorian Department of Health to determine how many clients in Victoria

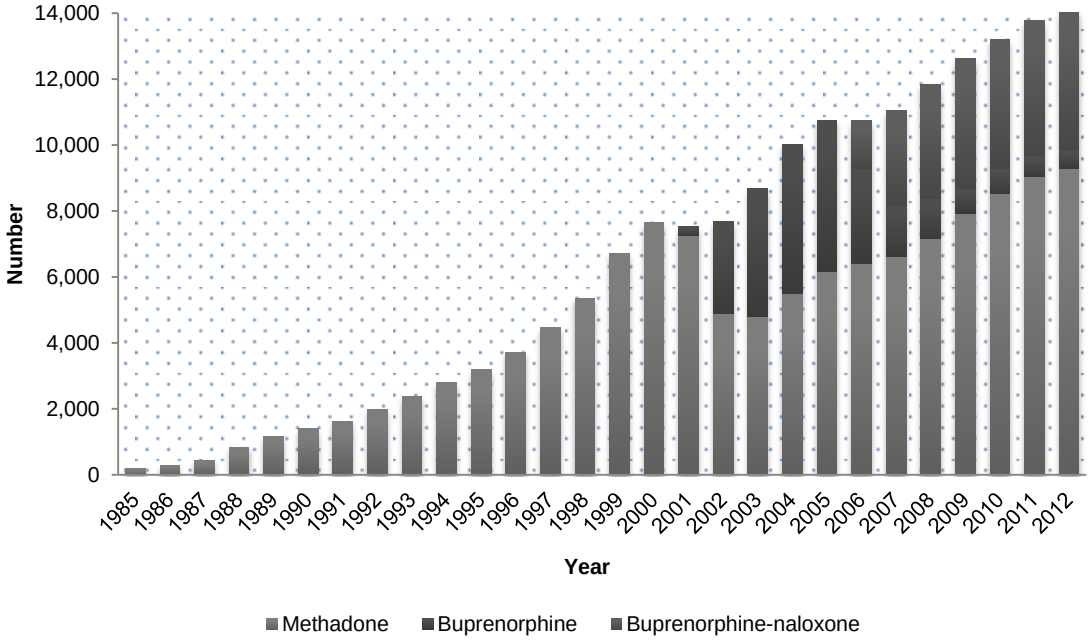
[8] Clients in specialist alcohol and drug services include both drug users and non-users. Non-users may include partners, family or friends.

[9] Federal and state government funded.

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

are dispensed pharmacotherapy treatment (methadone, buprenorphine, and buprenorphine-naloxone). Census data are collected on the first day of July each year. Figure 18 shows the number of Victorian pharmacotherapy consumers dispensed OST by treatment type, from 1985 to 2012. As detailed in the figure, the number of consumers who were dispensed methadone increased steadily from 181 in 1985 to over 7,500 in the year 2000. In 2001, buprenorphine (Subutex®) became available on the PBS and was prescribed to 258 people during that year. Over the next five years, the number of pharmacotherapy consumers dispensed buprenorphine increased substantially, peaking at 4,605 during 2005; concurrently, the number of consumers dispensed methadone decreased, falling to a low of 4,795 during 2003. In 2006, buprenorphine-naloxone (Suboxone®) was made available on the PBS and, since then, many consumers have been transferred to the buprenorphine-naloxone combination product. As at July 2012, 14,035 people were dispensed pharmacotherapy treatment in Victoria. Almost two-thirds (66%, n=9,330) of pharmacotherapy consumers were dispensed methadone, while almost one-third (29%, n=4,121) were dispensed buprenorphine-naloxone. Only 584 consumers were dispensed buprenorphine, comprising 4% of all pharmacotherapy consumers in Victoria (Figure 18).

**Figure 18: Number of pharmacotherapy consumers dispensed opioid substitution treatment in Victoria, by treatment type, 1985-2012**




Source: Harm Reduction and Pharmacotherapy Services, Victorian Department of Health
Note: Census data are collected on the first day of July each year.

## 6.2.2. Methamphetamine

### 6.2.2.1. Alcohol and Drug Information System

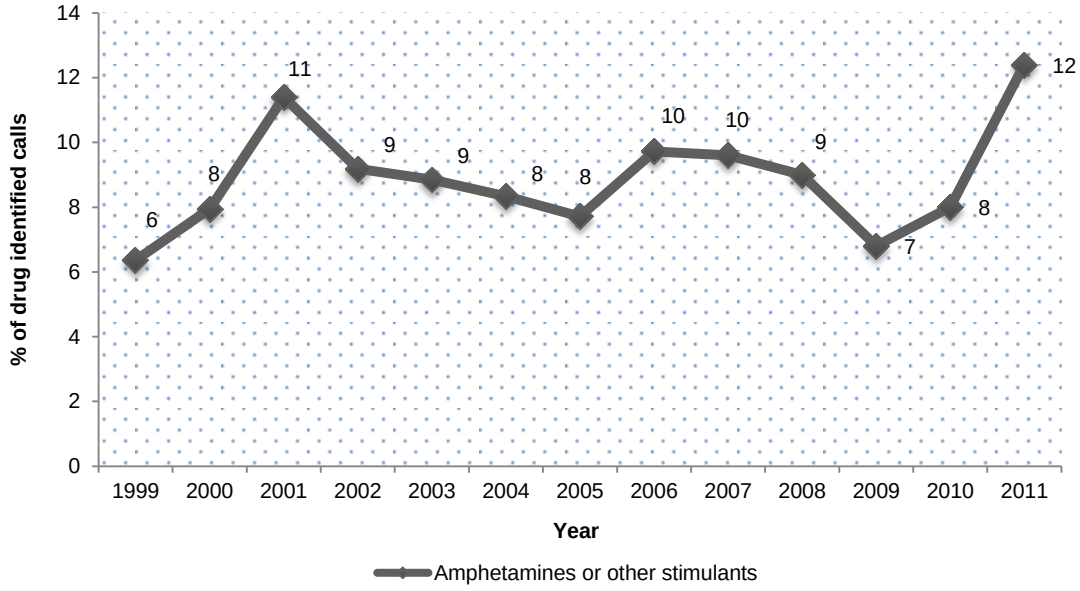
During 2011/12, amphetamine was cited as a drug of concern in 5,145 courses of treatment delivered to 3,389 clients in Victorian specialist alcohol and drug treatment. Amphetamine was cited as a drug of concern in 10% of all courses of treatment and 11% of clients, respectively.

### 6.2.2.2. DirectLine calls

Figure 19 shows the proportion of calls made to DirectLine in which amphetamines or other stimulants were identified, from 1999 to 2011. In 2011, amphetamines or other stimulants were identified as drugs of concern in 2,580 calls, representing 12% of all calls to DirectLine in which a drug of concern

was identified. The proportion of calls relating to amphetamines or other stimulants remained stable from 2002 to 2010 prior to increasing in 2011 (Figure 19).

**Figure 19: Proportion of calls to DirectLine in which amphetamines or other stimulants were identified as drugs of concern, Victoria, 1999-2011**




Source: Turning Point Alcohol and Drug Centre

## 6.2.3. Cocaine

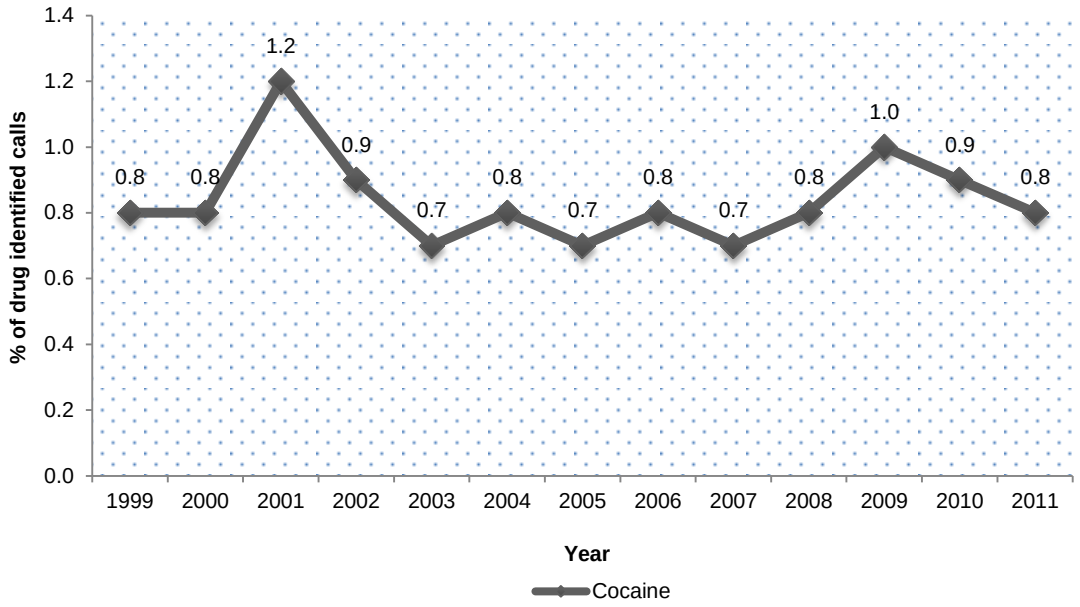
### 6.2.3.1. Alcohol and Drug Information System

During 2011/12, cocaine was cited as a drug of concern in 85 courses of treatment delivered to 75 clients in Victorian specialist alcohol and drug treatment services. Cocaine was cited as a drug of concern in less than 1% of all courses of treatment and clients for the period.

### 6.2.3.2. DirectLine calls

Figure 20 shows the proportion of calls made to DirectLine in which cocaine was identified as the drug of concern, from 1999 to 2011. In 2011, cocaine was identified as a drug of concern in 162 calls, representing less than 1% of all calls to the service. The proportion of calls relating to cocaine has remained low and stable (Figure 20).

**Figure 20: Proportion of calls to DirectLine in which cocaine was identified as a drug of concern, Victoria, 1999-2011**




Source: Turning Point Alcohol and Drug Centre

## 6.2.4. Cannabis

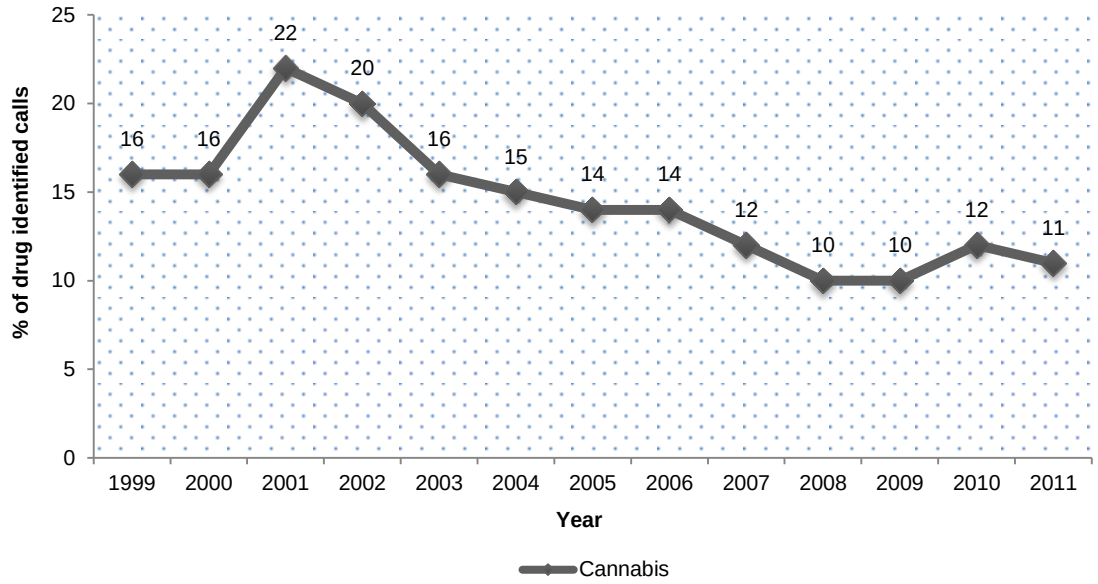
### 6.2.4.1. Alcohol and Drug Information System

Consistent with previous years, cannabis was the most commonly cited illicit drug of concern in the Victorian Alcohol and Drug Information System in 2011/12, with 11,513 courses of treatment delivered to 6,618 clients. Cannabis was identified as a drug of concern in 22% of all courses of treatment and clients during the period.

### 6.2.4.2. DirectLine calls

Figure 21 shows the proportion of calls made to DirectLine where cannabis was identified as a drug of concern, from 1999 to 2011. In 2011, DirectLine responded to 2,283 calls where cannabis was cited as a drug of concern, which represented 11% of all drug-identified calls to the service during the period. Since 2001, when 22% of callers to DirectLine cited cannabis as a drug of concern, the proportion of cannabis-related calls to the telephone service has declined substantially (Figure 21).

**Figure 21: Proportion of calls to DirectLine in which cannabis was identified as a drug of concern, Victoria, 1999-2011**




Source: Turning Point Alcohol and Drug Centre.

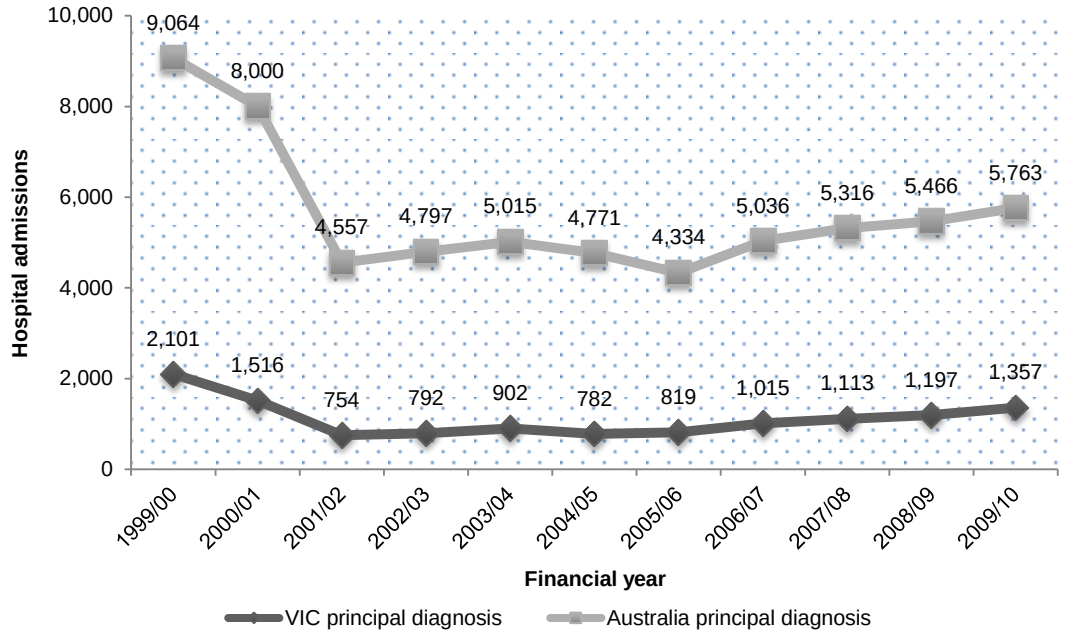
## 6.3. Hospital admissions

The National Hospital Morbidity Database is a collection of electronic records for hospital admissions in public and private hospitals compiled by the Australian Institute of Health and Welfare. Drug-related hospital admissions for opioids, amphetamine, cocaine and cannabis are reported below for Victoria and Australia, from 1999/00 to 2009/10. Following examination, the principal diagnosis refers to the established diagnosis that is primarily responsible for occasioning the patient's episode of care in hospital.

### 6.3.1. Heroin

Figure 22 shows the number of opioid-related hospital admissions among persons aged 15 to 54 years in Victoria and Australia, from 1999/00 to 2009/10. Compared with cannabis, amphetamine and cocaine, opioid-related hospital admissions account for the highest proportion of drug-related admissions in Victoria and Australia. Between 1999/00 and 2001/02, the number of opioid-related hospital admissions declined significantly both in Victoria and nationally, consistent with reports of the end of the heroin 'glut' (Jenkinson, Fry & Miller, 2004). Since 2001/02, the number of opioid-related hospital admissions has remained reasonably stable, although there is evidence of a slow increase over time. In 2009/10 there were 1,357 opioid-related hospital admissions in Victoria, comprising almost one-quarter (24%) of opioid-related admissions in Australia (Figure 22).

**Figure 22: Number of opioid-related hospital admissions, Victoria and Australia, 1999/00-2009/10**

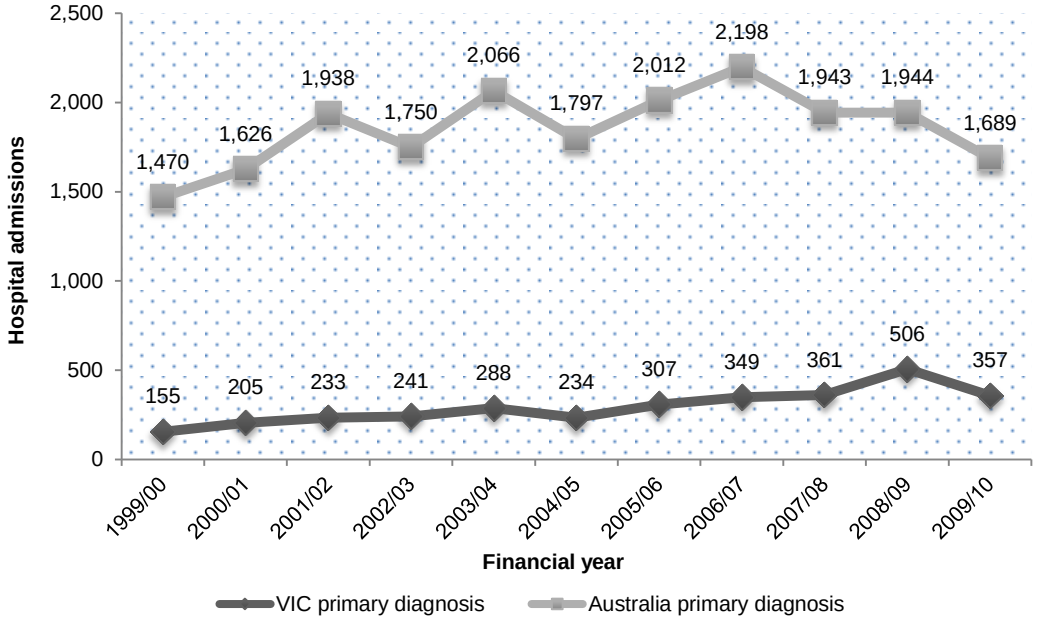



Source: Roxburgh and Burns (in press).

### 6.3.2. Methamphetamine

Amphetamine-related hospital admissions in Victoria and Australia among persons aged 15 to 54 years are presented in Figure 23. Nationally, the annual number of amphetamine-related hospital admissions has fluctuated, peaking at 2,198 admissions during the 2006/07 financial year. In Victoria, however, admissions gradually increased to a peak of 506 in 2008/09, then declined to 357 in 2009/10. In 2009/10, Victorian amphetamine-related hospital admissions comprised approximately one-fifth (21%) of all Australian hospital admissions for the drug (Figure 23).

**Figure 23: Number of amphetamine-related hospital admissions, Victoria and Australia, 1999/00-2009/10**

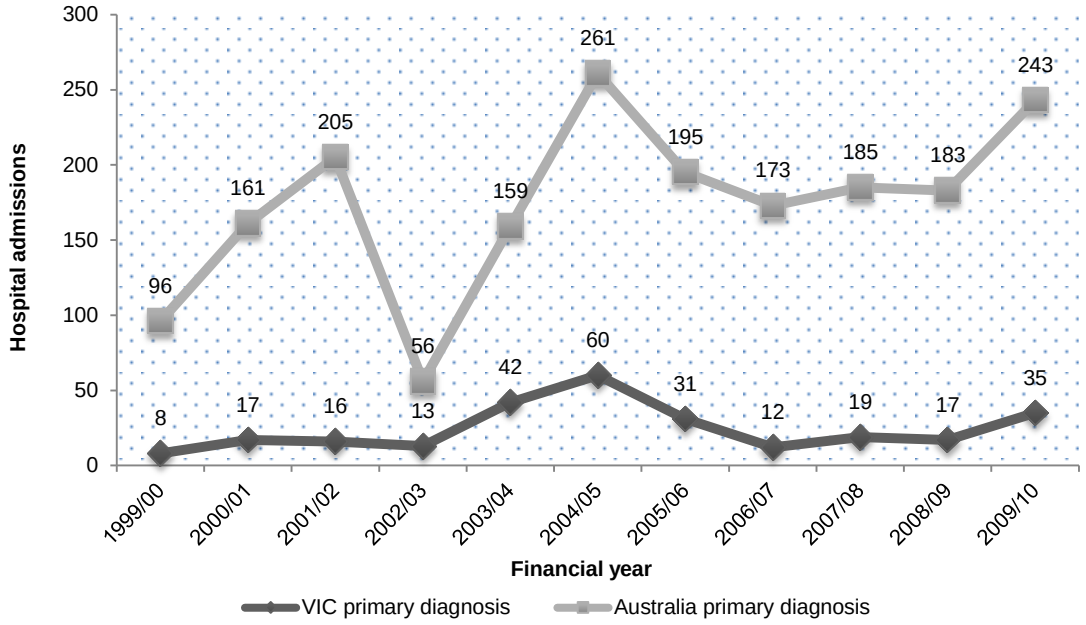



Source: Roxburgh and Burns (in press).

### 6.3.3. Cocaine

Figure 24 shows the number of cocaine-related hospital admissions among persons aged 15 to 54 years in Victoria and Australia, from 1999/00 to 2009/10. Nationally, the number of cocaine-related admissions increased between 1999/00 and 2001/02, significantly decreasing in 2002/03, before increasing again during 2004/05. Between 2005/06 and 2008/09, the number of cocaine-related hospital admissions remained relatively stable, but increased in 2009/10. In Victoria, cocaine-related hospital admissions are relatively rare; in 2009/10, there were 35 cocaine-related hospital admissions in Victoria, comprising only 14% of cocaine-related admissions in Australia (Figure 24).

**Figure 24: Number of cocaine-related hospital admissions, Victoria and Australia, 1999/00-2009/10**

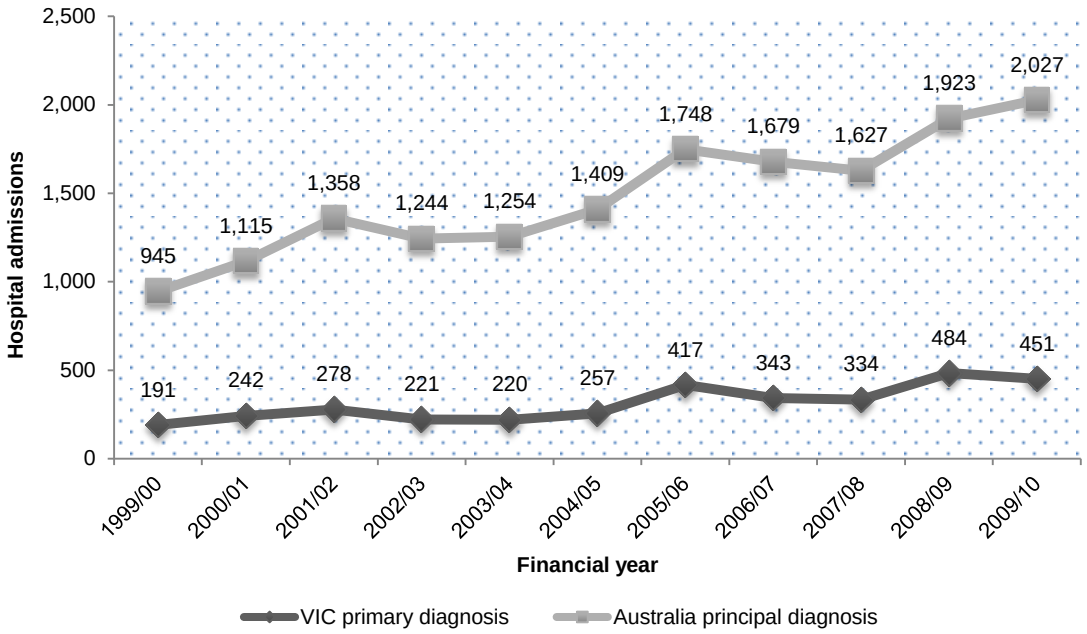



Source: Roxburgh and Burns (in press).

### 6.3.4. Cannabis

Cannabis-related hospital admissions among persons aged 15 to 54 years are shown in Figure 25 for Victoria and Australia, from 1999/00 to 2009/10. Nationally, the number of cannabis-related hospital admissions has increased, peaking at 2,027 admissions during the 2009/10 financial year. The number has remained relatively stable in Victoria. In 2009/10, there were 451 cannabis-related hospital admissions, similar to the number in the previous period. In 2009/10, cannabis-related hospital admissions in Victoria comprised 22% of all cannabis-related admissions in Australia (Figure 25).

**Figure 25: Number of cannabis-related hospital admissions, Victoria and Australia, 1999/00-2009/10**




Source: Roxburgh and Burns (in press).

# 6.4. Injecting risk behaviours

## 6.4.1. Sharing of injecting equipment

The sharing of needles and syringes and other injecting equipment used in the preparation of drugs for injection is a significant risk factor for exposure to BBVI such as HIV, hepatitis B and hepatitis C (Crofts, Aitken, & Kaldor, 1999). As with previous years, in 2012 Victorian IDRS participants were asked to answer questions relating to their injection practices and access to equipment during the month preceding interview.

Participants were asked to nominate the site on their body where they had last injected prior to interview. The majority (81%, n=122) of participants reported that their most recent injection site was their arm. Smaller proportions of participants reported most recently injecting into their hand or wrist (9%, n=13), their neck (5%, n=7) or their groin (2%, n=3).

Table 11 presents the self-reported injecting risk practices of Victorian IDRS participants, from 2006 to 2012. Eleven per cent (n=17) of 2012 Victorian IDRS participants reported borrowing a used needle in the month prior to interview, which was consistent with the proportion in 2011 (Table 11). During the past month, participants in this group (n=17) reported reusing another person's needle once (29%, n=5), twice (29%, n=5) and three to five times (29%, n=5). Participants (n=16) were asked to nominate the people who had used the needle before them: 56% (n=9) reported using a needle after their regular sex partner, 31% (n=5) after their close friends and 6% (n=1) after an acquaintance.

Twenty-five per cent (n=38) of the 2012 sample reported lending a used needle to someone else in the preceding month, which was similar to the proportion in 2011 (22%, $p$ = 0.540), as shown in Table 11. A further 25% indicated that they had used other injecting equipment after someone else during the past month. The types of other injecting equipment used are also detailed in Table 11.

**Table 11: Self-reported injecting risk practices in the past month, Victoria, 2006-2012**

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|
| **Borrowed a used N/S^ (%)** | 12 | 7 | 9 | 12 | 15 | 11 | 11 |
| **Loaned a used N/S^ (%)** | 17 | 10 | 16 | 21 | 21 | 22 | 25 |
| Used spoon after someone else (%) | 31 | 41 | 31 | 26 | 45 | 21 | 92* |
| Used filter after someone else (%) | 9 | 19 | 19 | 7 | 20 | 5 | 21* |
| Used tourniquet after someone else (%) | 6 | 7 | 11 | 3 | 9 | 1 | 16* |
| Used water after someone else (%) | 19 | 29 | 17 | 13 | 20 | 7 | 13* |
| Used any equipment after someone else (%) | 35 | 45 | 59 | 27 | 48 | 24 | 8* |

Source: IDRS participant interviews

* In 2012, 38 participants reported sharing any injecting equipment in the past month. The data for 2012 denoted by an asterisk refer to sharing of injecting equipment among this group.

^ N/S refers to needle and/or syringe.

Participants were asked to nominate the specific types of injecting equipment that they had used in the past month; multiple responses were allowed. Almost all (99%, n=148) reported using a 1 ml needle and syringe, while 11% (n=17) reported using a 3 ml syringe barrel. Three per cent (n=4) reported using a 5 ml syringe barrel and 3% (n=4) a 10 ml syringe barrel. Seven per cent (n=11) reported using a detachable needle tip, while 3% (n=4) reported using a winged infusion set (a butterfly). Seven per cent (n=10) reported using a wheel filter during the past month. In the month preceding interview, participants reported injecting on a median of 20 occasions (range=0-150 occasions).

In 2012, over half (60%, n=90) of the Victorian IDRS sample reported reusing their own needle. Specifically, 57% (n=85) reported reusing their own 1 ml needle and syringe. Three per cent (n=5) of participants reported reusing their own 3 ml syringe barrel, while 1% (n=2) each reported reusing their own 5 ml and 10 ml syringe barrels. Three per cent (n=5) reported reusing their own wheel filter during the month prior to interview, and 2% (n=3) reported reusing their own winged infusion set. Participants who reported reusing their own injecting equipment (64%, n=96) were asked to nominate the items of equipment that they had reused in the past month. Almost all (96%, n=92) reported reusing their own spoons or mixing containers, while 23% (n=22) reported reusing their own tourniquets and 15% (n=14) reported reusing their own filters. Thirteen per cent (n=12) reported reusing their own water and 7% (n=7) reported reusing their own swabs.

Participants were asked to indicate the number of times that they obtained needles and syringes from an NSP or other outlet in the month before interview. One hundred and forty participants reported collecting sterile injecting equipment on a median of four occasions (range=0-92 occasions) during the preceding month. The median number of sterile needles and syringes collected by participants (n=136) was 60 (median=0-800 needles and syringes). During this time, participants (n=142) reported giving away or selling a median of four syringes (range=0-400 syringes) to others. Fifteen per cent (n=22) reported that they had trouble obtaining sterile injecting equipment in the previous month when they needed it.

Several NSP KE reported observing a steady decline in the frequency with which PWID were attending NSP. One KE reported that their service had become increasingly quiet during the past two years, with a steady decline in client numbers. However, although people attended less frequently, larger quantities of equipment were dispensed. Another NSP KE reported that people were travelling further to attend NSP and were subsequently requesting more supplies. A significant increasing trend in the number of 'needles out' was reported by a third NSP KE, with a concurrent decline observed in NSP visits. By contrast, other NSP KE recommended extending NSP hours into the night and during the weekend to counter problems such as equipment reuse, 'on-selling' of sterile equipment, and to reduce the number of break-ins of public sharps bins. KE also recommended implementing a supervised injecting facility to improve the overall health of PWID in Melbourne as well as public amenity near street-based drug markets.

As in previous years, in 2012 participants were asked to nominate the location of their most recent injection: almost two-thirds (64%, n=96) of the Victorian IDRS sample reported that they had last injected in a private home. Fifteen per cent (n=23) reported most recently injecting on a street or in a park, while 10% (n=15) reported injecting in a public toilet and 4% (n=6) reported injecting in a car. In 2012, the proportion of participants reporting injecting in private versus public spaces was similar to the proportions in previous years (Horyniak et al., 2010; Kirwan et al., 2012; Quinn, 2009; Reddel et al., 2011).

### 6.4.2. Injection-related health problems

Self-reported health problems related to injecting among Victorian IDRS participants, from 2006 to 2012, are shown in Table 12. In 2012, 51% (n=77) of the sample reported having experienced at least one injection-related health problem in the month prior to interview, similar to the proportion in 2011 (57%, $p$ = 0.297). Participants in this group (n=77) were asked to nominate the types of problems experienced, as detailed in Table 12.

**Table 12: Self-reported injection-related health problems in the past month, Victoria, 2006-2012**

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|
| Prominent scars/bruising (%) | 49 | 63 | 47 | 43 | 19 | 41 | 75* |
| Difficulty injecting (%) | 43 | 35 | 39 | 41 | 25 | 33 | 51* |
| Dirty hit (%) | 23 | 17 | 15 | 18 | 12 | 10 | 26* |
| Thrombosis (%) | 8 | 9 | 10 | 7 | 5 | 6 | 9* |
| Abscesses/infections (%) | 3 | 10 | 7 | 6 | 6 | 8 | 20* |
| Overdose (%) | 3 | 3 | 3 | 5 | 2 | 3 | 9* |

Source: IDRS participant interviews

* In 2012, 77 participants reported experiencing any injecting-related health problem in the past month. The data for 2012 denoted by an asterisk refer to the proportions of participants in this group who experienced specific types of injection-related health problems during the past month.

Participants who reported experiencing an injection-related health problem in the month prior to interview were asked to nominate the main drug they used prior to the event, as well as other drugs they had used at the same time. Of participants who reported an overdose in the preceding month (n=7), all reported primarily using heroin, while three also reported using benzodiazepines, and two also reported consuming alcohol. Among participants who reported experiencing a dirty hit (n=19), the primary drugs involved were heroin (74%, n=14), buprenorphine-naloxone (21%, n=4) and

methadone (5%, n=1); participants who experienced a dirty hit also reported the use of methamphetamine (11%, n=2) and morphine (5%, n=1) prior to the event.

## 6.5. Blood-borne viral infections (BBVI)

An integrated surveillance system monitors the incidence and prevalence of HIV, hepatitis B and hepatitis C among Australian PWID. Table 13 shows the number and proportion of new HIV diagnoses in Victoria in which injecting drug use was reported as the likely exposure factor. In 2012, three new cases of HIV infection were notified to the Victorian Department of Health in which injecting drug use was the likely exposure, comprising just over 1% of all new HIV infections for the 2011 calendar year (Table 13). An additional four new HIV notifications occurred with both male-to-male sexual activity and injecting drug use as the likely exposure factors.

**Table 13: New HIV diagnoses where injecting drug use was reported as the likely exposure factor, Victoria, 2000-2011**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number (n) | 12 | 9 | 4 | 11 | 8 | 10 | 8 | 5 | 7 | 2 | 0 | 3 |
| % of new diagnoses | 6.4 | 4.5 | 1.9 | 5.4 | 3.9 | 4.2 | 3.1 | 1.9 | 2.7 | 0.8 | 0 | 1.1 |

Source: Victorian Department of Health

National prevalence estimates of HIV infection among PWID are derived from data collected for the ANSPS. The ANSPS is conducted each year in every Australian jurisdiction and is designed to serve as a strategic early warning system to monitor the prevalence of BBVI among PWID. Finger-prick blood samples are collected from all consenting participants recruited from participating NSP. Between 2007 and 2011, the estimated prevalence of HIV infection among PWID in Australia remained stable at 1.5% or less. In 2011 the prevalence of HIV infection among the 2,337 ANSPS participants who provided blood samples was 1.2% (Iversen & Maher, 2012).

Hepatitis C infection among PWID in Australia continues to be a major public health concern due to its ongoing high prevalence. Table 14 presents prevalence estimates of new Victorian HIV and hepatitis C infections that were attributed to injecting drug use between 2007 and 2011, derived from data collected for the ANSPS (Iversen & Maher, 2012). In 2011, the estimated prevalence of HIV among ANSPS participants in Victoria was 0.8%. By contrast, the estimated prevalence of hepatitis C antibodies among ANSPS participants in Victoria was 66% (Table 14). Compared with the national ANSPS sample, in 2011 hepatitis C antibody prevalence was significantly higher among the Victorian ANSPS sample (66% vs. 53%, $p < 0.001$).

**Table 14: Estimated prevalence of HIV and HCV infection among ANSPS participants, Victoria, 2007-2011**

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| HCV (%) | 73 | 72 | 55 | 64 | 66 |
| HIV (%) | 0.0 | 0.7 | 0.9 | 0.5 | 0.8 |

Source: Iverson & Maher, 2011

### 6.5.1. Self-reported BBVI testing and treatment

In 2012, almost all Victorian IDRS participants reported a history of testing for HIV, hepatitis B and hepatitis C. All reported a history of hepatitis C testing, 99% reported a history of HIV testing and 98%

reported a history of hepatitis B testing. Of those who reported a testing history, in the preceding 12 months 81% reported having an HIV test, 78% reported having a hepatitis C test and 73% reported having a hepatitis B test. Almost half of the sample was tested for BBVI in the three months prior to interview, with 47% reporting a recent test for HIV, 46% for hepatitis C and 44% for hepatitis B. While very few reported that their most recent test results for HIV and hepatitis B were positive (1% and 3%, respectively), over half (53%, n=80) of participants reported receiving a positive result for hepatitis C[11] in the preceding six months. In 2012, the self-reported prevalence of hepatitis C infection among the Victorian IDRS sample was consistent with the national prevalence among the national 2011 ANSPS sample (Iversen & Maher, 2012).

In 2012, 60% (n=90) of participants reported that they had been vaccinated against hepatitis B. Of these participants, 88% (n=79) reported completing the three-dose vaccination schedule. The most commonly reported main reasons for hepatitis B vaccination among this group (n=81) were injecting drug use as a risk factor (42%), childhood vaccination (15%) and overseas travel (7%). Nine per cent specified that they had been vaccinated in custody. In relation to BBVI treatment, in 2012 only 1% reported having received antiviral treatment for hepatitis B and only 8% reported having received antiviral treatment for hepatitis C.

## 6.6. Alcohol Use Disorders Identification Test—Consumption (AUDIT-C)

Recently, considerable media attention has focused on young people's alcohol consumption in Australia (e.g., Davey, 2012; Wright, 2013). However, there has been less focus on alcohol use among PWID, despite this population being particularly at risk of alcohol-related harm given their high prevalence of hepatitis C. As mentioned in section 6.5, over half (53%) of all participants who provided a finger-prick blood sample in the 2011 ANSPS (n=2,290) were found to have hepatitis C antibodies (Iversen & Maher, 2012). Given that alcohol consumption is hepatotoxic, known to exacerbate hepatitis C infection and associated with increased risk of non-fatal and fatal opioid-related and depressant overdose, it is important to monitor the prevalence of risky alcohol consumption among PWID (Coffin et al., 2007; Darke, Duflou, & Kaye, 2007; Darke, Ross, & Hall, 1996; Schiff & Ozden, 2004).

The IDRS currently includes self-report data on the prevalence of lifetime and recent use, as well as the median number of days alcohol was used in the preceding six months. In 2012, the Alcohol Use Disorders Identification Test—Consumption (AUDIT-C) was administered to Victorian IDRS participants. Derived from the first three consumption questions in the AUDIT, the AUDIT-C is a three-item validated measure that identifies heavy and high-risk drinking among respondents during the past year (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). Previous research has found that the AUDIT-C is a reliable measure of alcohol dependence, alcohol use disorder and risky alcohol consumption, with a cut-off score of five or more indicating a need for further assessment (Dawson, Grant, Stinson, & Zhou, 2005; Haber, Lintzeris, Proude, & Lopatko, 2009).

Table 15 presents AUDIT-C scores among Victorian IDRS participants for 2011 and 2012. Among participants who reported consuming alcohol in the past year (n=107), the mean AUDIT-C score was 6.1 (median=6). Almost two-thirds of participants who reported drinking alcohol in the past year scored five or more on the AUDIT-C, indicating a need for further assessment (Table 15). Although men had higher mean AUDIT-C scores than women, this difference was not significant (6.3 vs. 5.7, $p = 0.413$).

[11] Testing for hepatitis C included receiving any lifetime, past 12 months, or past three months HCV antibody or PCR (RNA) test. Current HCV infection is only determined by a HCV PCR test. Some participants may have only had antibody testing, which cannot determine current HCV infection, only lifetime infection. These data may therefore slightly conflate the proportion of participants who reported recently testing positive for HCV.

**Table 15: AUDIT-C scores among participants who drank alcohol in the past year, Victoria, 2011-2012**

| | 2011 (n=112) | 2012 (n=107) |
|---|---|---|
| **Mean AUDIT-C score** | 6.1 | 6.1 |
| SD | 3.5 | 3.6 |
| (range) | (1-12) | (1-12) |
| **Score of > = 5 (%)** | 60 | 63 |
| Men (%) | 59 | 65 |
| Women (%) | 63 | 59 |

Source: IDRS participant interviews

## 6.7. Mental health problems and psychological distress

In 2012, Victorian IDRS participants were asked to indicate whether they had experienced any mental health problems in the preceding six months, including issues they had not discussed with a health professional. Fifty-one per cent (n=76) of the 2012 sample reported experiencing a mental health problem in the six months prior to interview, which was consistent with the proportion in 2011 (53%, *p* = 0.729). Participants (n=76) were asked to specify their mental health problem. In 2012, the most common mental health problems experienced in the past six months were depression (76%, n=58) and anxiety (43%, n=33), which is not surprising given their high prevalence in the general community. Smaller proportions of participants reported experiencing schizophrenia (12%, n=9), bipolar disorder (8%, n=6) and a drug-induced psychosis (8%, n=6) in the preceding six months.

Of the 76 participants who reported experiencing a recent mental health problem, 65% (n=49) reported attending a health professional in the past six months. For their mental health problem, participants (n=49) most commonly reported attending a general practitioner (59%, n=29), a psychiatrist (35%, n=17), or a psychologist (27%, n=13). Few participants reported seeing a social worker (8%, n=4) or a counsellor (6%, n=3) during this time.

Of those participants who reported attending a health professional in the preceding six months (n=49), 84% (n=41) reported that they were prescribed psychotropic medication. Among these participants, 21 reported that they were prescribed benzodiazepines for their mental health problem, namely diazepam (n=17) and alprazolam (n=5). Nineteen participants reported that they were prescribed antipsychotic medications: quetiapine (n=10), olanzapine (n=4) and risperidone (n=2) were most common. Fourteen participants reported that they were prescribed antidepressant medications. The most common medications were mirtazapine (n=7) and venlafaxine (n=2). Two participants reported being prescribed mood stabilisers, namely sodium valproate (n=2).

### 6.7.1. Kessler Psychological Distress Scale (K10)

Given the high prevalence of mental illness in the community, it is useful to distinguish more serious cases by symptom severity. The Kessler Psychological Distress Scale (K10) was designed to measure non-specific psychological distress in the general population (Kessler et al., 2002). The K10 discriminates between people with and without serious mental illness by yielding a global score of psychological distress in the four weeks prior to interview. Scores are calculated from five responses to a 10-item scale, with a maximum score of 50 indicating severe distress and a minimum score of 10 indicating no distress (Andrews & Slade, 2001). Cut-off scores are categorised into levels representing low (10-15), moderate (16-21), high (22-29) and very high (30-50) psychological

distress, with high and very high scores indicating a need for further mental health assessment (ABS, 2010).

In 2012 the complete K10 was administered to 144 Victorian IDRS participants. Table 16 shows the levels of psychological distress among Victorian IDRS participants from 2009 to 2012 and those from the 2007/08 National Health Survey general population sample. In 2012, according to the K10, the majority of IDRS participants were classified as having high or very high psychological distress in the four weeks preceding interview. Although the distributions of K10 scores have remained similar, a higher proportion of IDRS participants had very high psychological distress in 2012 compared with participants in 2011, 2010 and 2009. Compared with the NHS general population sample, the prevalence of high and very high psychological distress was extremely high among 2012 IDRS participants ($p < 0.001$) (Table 16).

**Table 16: Levels of psychological distress among Victorian IDRS participants, 2009-2012, compared with the 2007/08 NHS general population sample**

| | IDRS | | | | NHS |
|---|---|---|---|---|---|
| | 2009 (n=149) | 2010 (n=143) | 2011 (n=147) | 2012 (n=144) | 2007/08 (n=15,362) |
| **Psychological distress (%)** | | | | | |
| Low (10-15) | 9 | 11 | 14 | 8 | 71 |
| Moderate (16-21) | 28 | 22 | 19 | 17 | 20 |
| High (22-29) | 32 | 33 | 30 | 33 | 7 |
| Very high (30-50) | 31 | 34 | 37 | 41 | 3 |

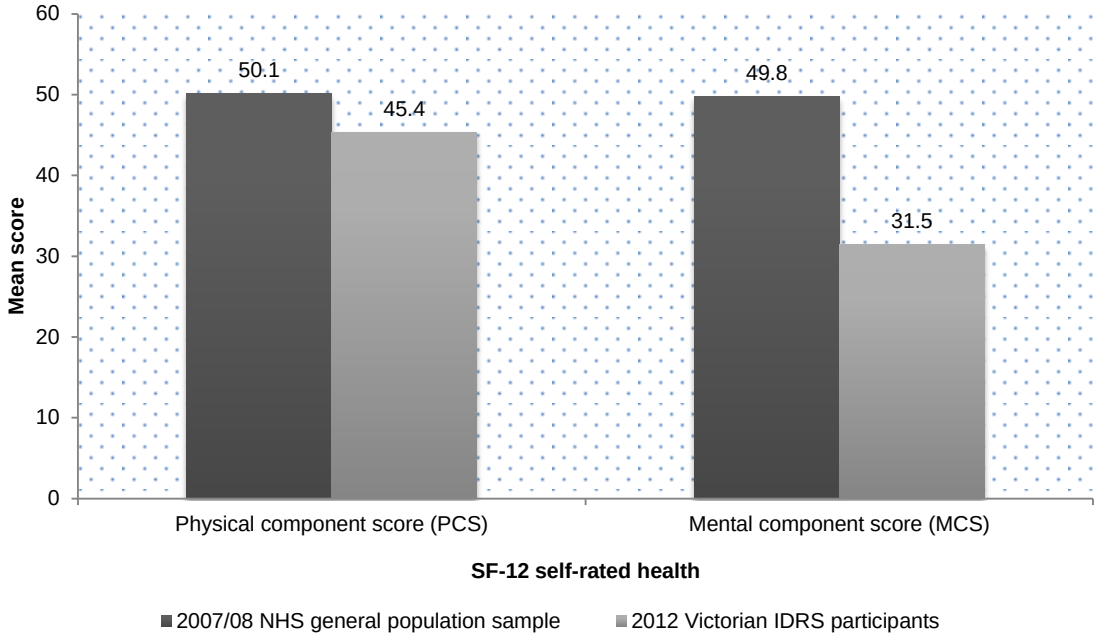
Source: IDRS participant interviews; ABS, 2010

## 6.8. Short Form 12 (SF-12)

The Short Form 12 (SF-12) is a 12-item health survey derived from the SF-36 that is designed to provide information on health and wellbeing by measuring participants' health states across eight self-rated domains: physical functioning, role limitations due to physical health problems, bodily pain, general health, energy and fatigue, social functioning, role limitations due to emotional problems and psychological distress, and wellbeing. The scores generated by these eight summary scales are weighted and computed to generate two standardised composite scores—the physical component score (PCS) and the mental component score (MCS) (Ware, Kosinski, & Keller, 1995; Ware, Kosinski, & Keller, 1996). Higher mean scores indicate better self-rated health.

Figure 26 shows the mean PCS and MCS according to the SF-12 among 2012 Victorian IDRS participants, compared with Australian general population norms derived from respondents to the National Health Survey (ABS, 1995, 2009). In 2012, Victorian IDRS participants' (n=122) self-rated physical and mental health was significantly lower than that of the general population. For instance, participants scored a mean PCS of 45.4 (SD=12.1) compared with the Australian general population mean of 50.1 ($p < 0.001$), indicating significantly poorer self-rated physical health among IDRS participants. The mean MCS among IDRS participants was also significantly lower than Australian population norms; participants scored a mean MCS of 31.5 (SD=10.7) compared with the general population mean of 49.8 ($p < 0.001$) (Figure 26).

**Figure 26: SF-12 scores among 2012 Victorian IDRS participants, compared with the Australian general population**




Source: ABS, 1995, 2009; IDRS participant interviews.

## 6.9. Health service access

Previous research has shown that PWID experience higher rates of a range of physical and mental health problems than the general population. However, given the marginalisation and stigmatisation associated with injecting drug use, ensuring that PWID have access to appropriate primary health care services and targeted health care strategies remains difficult. Barriers to health service utilisation include a lack of knowledge regarding available services, long waiting times, and limited opening hours (Neale, Sheard, & Tompkins, 2007). Further, the nature of IDU often means that the time people spend obtaining and consuming substances causes delays in treatment-seeking, which often leads to an over-dependence on acute crisis and emergency interventions (Drumm, McBride, Metsch, Neufeld, & Sawatsky, 2005; Kerr et al., 2004; McCoy, Metsch, Chitwood, & Miles, 2001).

In 2012, Victorian IDRS participants were asked to give information about their health service utilisation in the four weeks preceding interview. Table 17 shows the median number of visits to a range of specific health service types, and the proportion of participants who reported visiting a health service on one, two, three and four or more occasions during the past four weeks. Also shown in the table is the number of visits related to participants' substance use in the past four weeks. In 2012 86% (n=129) of participants reported visiting any health service in the four weeks prior to interview. Of these, 102 participants reported visiting a GP once during this time. Of those who reported visiting a general practitioner, 52% reported visiting once. Forty-three per cent (n=44) of participants who reported visiting a general practitioner related one visit to substance use (Table 17).

**Table 17: Health service access in the past four weeks, Victoria, 2012**

| | Number of visits (n=129) | | | | | Visits related to substance use* | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Median | 1 (%) | 2 (%) | 3 (%) | 4+ (%) | 0 (%) | 1 (%) | 2 (%) | 3+ (%) |
| ED (n=14) | 1 (1-10) | 86 | 7 | 0 | 7 | 71 | 29 | 0 | 0 |
| Hospital inpatient (n=9) | 1 (1-1) | 100 | 0 | 0 | 0 | 67 | 33 | 0 | 0 |
| Hospital outpatient (n=5) | 1 (1-8) | 60 | 0 | 0 | 40 | 40 | 40 | 0 | 20 |
| GP (n=102) | 1 (1-21) | 52 | 24 | 7 | 18 | 27 | 43 | 17 | 14 |
| Specialist (n=8) | 1 (1-22) | 63 | 25 | 0 | 13 | 63 | 25 | 13 | 0 |
| OST prescriber (n=80) | 1 (1-6) | 66 | 20 | 6 | 8 | 1 | 66 | 21 | 11 |
| Dentist (n=24) | 2 (1-12) | 50 | 25 | 8 | 17 | 75 | 17 | 0 | 8 |
| Health professional (n=15) | 2 (1-8) | 47 | 40 | 0 | 13 | 67 | 27 | 7 | 0 |
| Ambulance (n=9) | 1 (1-2) | 89 | 11 | 0 | 0 | 44 | 56 | 0 | 0 |
| Psychiatrist (n=10) | 1 (1-3) | 70 | 20 | 10 | 0 | 60 | 20 | 20 | 0 |
| Psychologist (n=17) | 1 (1-4) | 65 | 18 | 6 | 12 | 47 | 35 | 6 | 12 |
| Social/welfare worker (n=25) | 2 (1-14) | 48 | 16 | 4 | 32 | 56 | 16 | 12 | 16 |
| AOD counsellor (n=29) | 2 (1-12) | 41 | 24 | 7 | 27 | 3 | 41 | 17 | 38 |
| Other doctors (n=3) | 1 (1-1) | 100 | 0 | 0 | 0 | 67 | 33 | 0 | 0 |

Source: IDRS participant interviews

* Among participants who reported accessing a health service.

## 6.10. Driving risk behaviour

As in previous years, in 2012 Victorian IDRS participants were asked to provide information about their driving risk behaviour. In 2012, almost one-third (31%, n=46) of participants reported driving a vehicle at least once during the preceding six months, decreasing slightly compared with the proportion in 2011 (41%, $p$ = 0.071). Of these participants (n=46), 28% (n=13) reported recently driving under the influence of alcohol. Among participants who reported recently driving under the influence of alcohol (n=13), almost half (46%, n=6) reported driving twice (median=2, range=1-5 occasions) with a blood alcohol concentration over the legal limit during the past six months.

Table 18 shows the proportion of Victorian IDRS participants who reported illicit drug use prior to driving a vehicle in the preceding six months, from 2006 to 2012, by drug type. Of those participants who reported recently driving a vehicle in 2012, three-quarters reported driving 10 times (median=10, range=1-180 occasions) after consuming illicit drugs in the preceding six months. In 2012, participants (n=35) who 'drug-drove' most commonly reported driving a vehicle after taking heroin, cannabis and benzodiazepines (Table 18).

**Table 18: Proportion of participants who used illicit drugs prior to driving in the past six months, Victoria, 2006-2012**

| | 2006 (n=62) | 2007 (n=51) | 2008 (n=60) | 2009 (n=53) | 2010 (n=44) | 2011 (n=45) | 2012 (n=35) |
|---|---|---|---|---|---|---|---|
| Heroin (%) | 58 | 77 | 68 | 66 | 82 | 64 | 69 |
| Cannabis (%) | 44 | 53 | 65 | 59 | 48 | 51 | 49 |
| Speed (%) | 42 | 29 | 28 | 28 | 16 | 20 | 9 |
| Crystal/ice (%) | 15 | 4 | 7 | 2 | 7 | 18 | 11 |
| Benzodiazepines (%) | 11 | 16 | 12 | 25 | 18 | 16 | 20 |
| Ecstasy (%) | 3 | 2 | 2 | 6 | 2 | 2 | 0 |

Source: IDRS participant interviews

In 2012, participants (n=35) were also asked to provide information regarding their most recent driving occasion following the use of illicit drugs. On their most recent driving occasion, 32 participants reported waiting a median of 10 minutes (range=1-1,440 minutes) before they drove. Thirty-four participants commented on their perceptions of driving ability on the most recent occasion; 56% (n=19) reported that illicit drugs had no impact. Eighteen per cent each reported that their driving was slightly impaired (n=6) and quite impaired (n=6). Nine per cent (n=3) reported that they believed their driving improved following illicit drug use.

Participants who reported driving were also asked whether they had ever been tested for drugs by roadside police. While the majority of participants had never been tested (71%, n=25), 14% each reported that they had been tested once (n=5) in their lifetime and more than once (n=5). Of those who had been tested (n=14), the majority (71%) reported returning a negative result on the most recent occasion. Seven per cent reported returning a positive result for opioids.

# 7. Law-enforcement related trends associated with drug use

## 7.1. Criminal involvement

Consistent with previous years, in 2012 almost half (47%, n=71) of the Victorian IDRS sample reported being arrested during the preceding 12 months. The largest proportion of arrests was related to property crime (60%, n=42), followed by the use and/or possession of drugs (19%, n=13), violence (11%, n=8) and the dealing or trafficking of drugs (7%, n=5).

As per previous IDRS, the 2012 sample was asked to provide information about involvement in crime in the month preceding interview. Table 19 presents the proportion of Victorian IDRS participants who reported criminal involvement in the past month, from 2006 to 2012. In 2012, 41% (n=61) of the sample reported that they were involved in crime during the past month (Table 19).

**Table 19: Proportion of participants reporting criminal involvement during the past month, Victoria, 2006-2012**

| | 2006 (N=147) | 2007 (N=149) | 2008 (N=150) | 2009 (N=150) | 2010 (N=150) | 2011 (N=150) | 2012 (N=150) |
|---|---|---|---|---|---|---|---|
| Property crime (%) | 20 | 22 | 21 | 17 | 19 | 27 | 27 |
| Drug dealing (%) | 35 | 24 | 35 | 27 | 23 | 29 | 20 |
| Fraud (%) | 5 | 5 | 5 | 1 | 1 | 5 | 3 |
| Violent crime (%) | 2 | 7 | 3 | 7 | 8 | 7 | 3 |
| **Any crime (%)** | 48 | 38 | 47 | 39 | 40 | 47 | 41 |

Source: IDRS participant interviews

### 7.1.1. Dealing and trafficking

In 2012, LE KE provided few comments in relation to the dealing and trafficking of illicit drugs. Reports suggested that the characteristics of people currently engaged in the supply, manufacture and/or trafficking of illicit drugs reflected those of the general population, although the 'intertwining' of relationships between outlaw motorcycle gangs (i.e., bikies), Middle Eastern and Vietnamese gangs was observed. LE KE reported no changes to the methods of supply, manufacture and/or trafficking of illicit drugs during the preceding six to 12 months.

## 7.2. Consumer and provider arrests

The following section details consumer (i.e., use/possession) and provider (i.e., manufacture/ trafficking) arrests in the 2010/11 financial year relating to opioids, methamphetamine, cocaine and cannabis. Data are derived from the Australian Crime Commission's *Illicit Drug Data Report 2010-2011* (ACC, 2012). Interpreting these data should be approached with caution due to the lack of uniformity between jurisdictions in relation to the recording and storage of arrest data related to illicit drugs. The total numbers of arrests may include offenders for whom consumer/provider status was not stated.

### 7.2.1. Heroin and other opioids

The number and proportion of consumer and provider arrests relating to heroin and other opioids in Victoria and Australia for the financial year 2010/11 are shown in Table 20. During this period, over half (n=1,345) of all heroin and other opioid-related arrests in Australia occurred in Victoria (Table 20). Compared with the previous year, the number and proportion of Victorian consumer and provider arrests relating to heroin and other opioids remained relatively stable in 2010/11.

**Table 20: Consumer and provider arrests relating to heroin and other opioids, Victoria, 2010/11**

| | Victoria (n) | Australia (n) | Proportion of national arrests (%) |
|---|---|---|---|
| **Consumer arrests** | 897 | 1,706 | 53 |
| **Provider arrests** | 448 | 838 | 54 |
| **Total arrests** | 1,345 | 2,551 | 53 |

Source: ACC

### 7.2.2. Methamphetamine

The number and proportion of consumer and provider arrests relating to amphetamine-type stimulants for the 2010/11 financial year are detailed in Table 21. During the period, approximately one-quarter of all Australian consumer and provider arrests for amphetamine-type stimulants occurred in Victoria (23% and 27%, respectively) (Table 21). In 2010/11 there were 898 provider arrests in Victoria, a decrease from 1,027 in 2009/10.

**Table 21: Consumer and provider arrests relating to amphetamine-type stimulants, Victoria, 2010/11**

| | Victoria (n) | Australia (n) | Proportion of national arrests (%) |
|---|---|---|---|
| **Consumer arrests** | 2,213 | 9,501 | 23 |
| **Provider arrests** | 898 | 3,334 | 27 |
| **Total arrests** | 3,111 | 12,897 | 24 |

Source: ACC

### 7.2.3. Cocaine

Table 22 shows the number and proportion of cocaine-related consumer and provider arrests in Victoria and Australia for the 2010/11 financial year. During the period, 14% of all Australian arrests relating to cocaine occurred in Victoria (Table 22). The number of cocaine-related arrests declined in Victoria and Australia between the 2009/10 and the 2010/11 financial years.

**Table 22: Consumer and provider arrests relating to cocaine, Victoria, 2010/11**

| | Victoria (n) | Australia (n) | Proportion of national arrests (%) |
|---|---|---|---|
| **Consumer arrests** | 76 | 575 | 13 |
| **Provider arrests** | 40 | 264 | 15 |
| **Total arrests** | 116 | 839 | 14 |

Source: ACC

### 7.2.4. Cannabis

The number and proportion of cannabis-related consumer and provider arrests in Victoria and Australia for the 2010/11 financial year are shown in Table 23. As shown in the table, consumer arrests for cannabis comprised the overwhelming majority of cannabis-related arrests (87%) across Australia, and 78% of all cannabis-related arrests in Victoria (Table 23).

**Table 23: Consumer and provider arrests relating to cannabis, Victoria, 2010/11**

| | Victoria (n) | Australia (n) | Proportion of national arrests (%) |
|---|---|---|---|
| **Consumer arrests** | 5,570 | 50,845 | 11 |
| **Provider arrests** | 1,574 | 7,694 | 21 |
| **Total arrests** | 7,144 | 58,760 | 12 |

Source: ACC

## 7.3. Expenditure on illicit drugs

In 2012, over half (58%, n=86) of 2012 Victorian IDRS participants reported purchasing illicit drugs on the day prior to interview. Participants' median reported spending on illicit drugs was $100 (range=$5-$900).

# 8. Special topics of interest

## 8.1. Fagerstrom test for nicotine dependence

In 2012, Victorian IDRS participants who reported that they were daily cigarette smokers were administered the Fagerstrom test for nicotine dependence (FTND). The FTND includes the following questions: (1) How soon after waking do you smoke your first cigarette? (2) Do you find it difficult to refrain from smoking in places where it is forbidden? (3) Which cigarette would you hate to give up? (4) How many cigarettes a day do you smoke? (5) Do you smoke more frequently in the morning? (6) Do you smoke even when you are sick in bed?

Responses to the six-item scale yield a total score between zero and 10. Responses are then scored into four categories (i.e., 0, 1, 2, 3) for both time in minutes to the first cigarette of the day (<=5, 6-30, 31-60 and >60 minutes) and the average daily number of cigarettes smoked (1-10, 11-20, 21-30 and 31+). All remaining questions are scored 0 or 1. The sum of these scores is computed and a cut-off score of 6 to 8 is used to indicate high nicotine dependence, while a score of 8 or more is used to indicate very high nicotine dependence (Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991; NSW Health, 2007)

In 2012, 127 Victorian IDRS participants who reported that they were daily smokers responded to the FTND, as shown in Table 24. Of these, over half reported smoking their first cigarette of the day within five minutes of waking. Thirty-nine per cent of daily smokers reported smoking 10 cigarettes per day or less, and 11 to 20 cigarettes per day. In 2012, the mean FTND score was 5.1. Twenty-three per cent of daily smokers scored between 6 and 8 on the scale, indicating high nicotine dependence, and 22% scored 8 or more, indicating very high nicotine dependence (Table 24).

**Table 24: Fagerstrom test for nicotine dependence, Victoria, 2012**

| | 2012 (n=127) |
|---|---|
| **Time till first cigarette (%)** | |
| Within 5 minutes | 57 |
| 5-30 minutes | 22 |
| 31-60 minutes | 9 |
| 60 minutes | 12 |
| **Number of cigarettes smoked a day (%)** | |
| 10 cigarettes or less | 39 |
| 11-20 cigarettes | 39 |
| 21-30 cigarettes | 19 |
| 31 cigarettes or more | 3 |
| Difficulty refraining from smoking in forbidden places (%) | 43 |
| Would hate to give up first cigarette in the morning (%) | 63 |
| Smoke when sick in bed (%) | 54 |
| Smoke more often in the morning (%) | 44 |
| **Nicotine dependence* (%)** | |
| High | 23 |
| Very high | 22 |
| **Mean score (SD)** | 5.1 (2.6) |

Source: IDRS participant interviews

* Scored 6 or above

## 8.2. Pharmaceutical opioids

The supply of heroin to Australia returned to historical levels in the early 2000s (e.g., Dietze & Fitzgerald, 2002; Miller, Fry, & Dietze, 2001). Since then, the IDRS has observed an increase in the use and injection of pharmaceutical opioids such as morphine and oxycodone. Over the same period, an increase in the age of PWID has also been noted, with these trends observed in the annual ANSPS as well (Iversen & Maher, 2012; Iversen, Topp, & Maher, 2011). From previous Australian and international work, it is known that PWID have excess morbidity and mortality compared with the general population, and that medical practitioners are often reluctant to prescribe opioid analgesics to people with a history of IDU (Baldacchino, Gilchrist, Fleming, & Bannister, 2010; English et al., 1995; Hulse, English, Milne, & Holman, 1999; Merrill & Rhodes, 2002; Randall et al., 2011; Vlahov et al., 2004). This section aims to explore the complex interplay between IDU, pain management, and the extra-medical use of pharmaceutical opioids among Victorian IDRS participants in 2012.

Table 25 describes the characteristics of pharmaceutical opioid use among the 2012 Victorian IDRS sample. In this context, pharmaceutical opioids include medications such as morphine and oxycodone, OST medications such as methadone, buprenorphine and buprenorphine-naloxone, as well as other prescription opioids such as fentanyl, pethidine, tramadol and dextropropoxyphene. In 2012, over three-quarters (79%, n=118) of participants reported the use of prescribed and/or non-prescribed pharmaceutical opioids in the six months preceding interview. Participants who reported recent use of these drugs were asked to nominate their pharmaceutical opioid of choice; 113

participants provided a response. Among these participants, the most commonly preferred pharmaceutical opioid brands were Methadone Syrup®/Biodone Forte® (35%, n=40), Suboxone® (17%, n=19), OxyContin® (15%, n=17), MS Contin® (11%, n=12) and Subutex® (10%, n=11). Very few participants in Victoria reported preferring Kapanol®, Physeptone®, Fentanyl®, and Palladone® (n=3 participants or less, respectively).

Participants (n=118) were asked to provide information on the main reasons they had used pharmaceutical opioids during the preceding six months; multiple responses were allowed, which are shown in Table 25. As shown in Table 25, the majority (70%, n=83) reported primarily using pharmaceutical opioids to 'self-treat' their opioid dependence.

One hundred and sixteen participants responded to an item asking them whether a doctor or specialist had refused to prescribe pharmaceutical opioids for pain due to their IDU history. Thirteen per cent (n=15) reported that they were refused pharmaceutical opioids because of their IDU history.

Of those participants who reported seeking pain relief during the past six months (n=49), 35% reported receiving a prescription for pharmaceutical opioids. Eighteen participants indicated how much pain relief these medications provided in the past week; the mean pain relief score out of 10 was 5.3 (SD=4.1).

Participants who reported the use of any pharmaceutical opioids in the preceding six months (n=118) were asked whether they had sold, traded or given away any of their prescription opioids during this time. One hundred and fifteen participants provided responses, with 16% (n=18) reporting that they had passed their drugs on to others. In detail, the most common drugs passed on to others were: buprenorphine-naloxone (6%, n=7), methadone (5%, n=6) and oxycodone (4%, n=4).

Participants who reported the injection of any pharmaceutical opioids in the preceding six months (n=64) were asked to comment on where they had sourced information on filtering (Table 25). Almost half (47%, n=30) of participants who had injected pharmaceutical opioids in the past six months reported obtaining no information (Table 25).

**Table 25: Characteristics of pharmaceutical opioid use in the past six months, Victoria, 2012**

| | 2012 |
|---|---|
| **Used pharmaceutical opioids in past 6 months (%)** | 79 |
| **Reason for using pharmaceutical opioids* (%)** | (n=118) |
| Self-treat dependence | 70 |
| Seek an opioid effect | 13 |
| Pain relief | 12 |
| Know what dose to expect | 1 |
| Cheaper than heroin | 12 |
| Current heroin purity | 4 |
| Couldn't score heroin | 6 |
| **Refused pharmaceutical opioids medications for pain due to injecting history (%)** | n=116 |
| Yes | 13 |
| No | 27 |
| No, because I concealed my injecting history | 1 |
| Haven't sought pain relief | 60 |
| **Prescription pharmaceutical opioid use[#] (%)** | n=49 |
| Prescribed any pharmaceutical opioids for pain in past 6 months | 35 |
| Pain relief received[##] (mean, SD) | 5.3 (4.1) |
| **Sourced information about filtering^ (%)** | n=64 |
| Haven't obtained any information | 47 |
| NSP | 23 |
| Friends | 22 |
| Other | 5 |

Source: IDRS participant interviews

* Among those who reported recent use. Multiple responses were allowed.

[#] Among those who reported seeking pain relief.

[##] Participants were asked to rate the percentage of pain relief received on a 10-item scale (e.g., from 0%=no relief, to 100%=complete relief).

^ Among those who injected a pharmaceutical opioid in the past 6 months.

## 8.3. Brief Pain Inventory

The Brief Pain Inventory (BPI) is a multidimensional assessment of pain used in both clinical and research settings. The tool allows respondents to rate the severity of their pain and the degree to which it interferes with their daily functioning by assessing pain at its 'worst', 'least', 'average' and 'now' (Cleeland, 2009). The BPI uses rating scales from 0 to 10. For items 3 to 6, respondents rate their pain from 0 (no pain) to 10 (pain as bad as you can imagine), from which a mean 'pain severity score' is calculated. For items 9a to 9g, respondents rate their pain from 0 (does not interfere) to 10 (completely interferes), from which a mean 'pain interference score' is calculated. The pain interference score is designed to examine the degree to which pain interferes with the respondent's daily activities, in particular their general activity, mood, walking, normal work, relationships, sleep and enjoyment of life (Cleeland, 2009). In 2012, the BPI was administered to Victorian IDRS participants

to explore the association between injecting drug use, chronic non-malignant pain and pain management.

Table 26 presents 2012 Victorian IDRS participants' responses to the BPI. In 2012, almost one-third (31%, n=47) of participants reported experiencing pain other than everyday types of pain (e.g., minor headaches, sprains, toothaches etc.) at the time of interview. Of these, 70% (n=33) reported experiencing chronic non-cancer pain, 19% (n=9) reported experiencing acute/short-term pain, and 11% (n=5) reported experiencing chronic cancer/malignant pain. Among these participants (n=47), the mean pain severity score was 4.4 (SD=1.8, range=1.5-8.8 pain severity) and the mean pain interference score was 5.2 (SD=2.5, range=0-10 pain interference). On a scale of 0 to 10 (with 0 indicating no relief, and 10 indicating complete relief), participants were asked how much relief they experienced from any treatments or medications received. Of those who received treatments or medications for pain (n=31), the mean relief score was 5.2 (SD=3.3, range=0-10 pain relief) (Table 26).

Participants were also asked whether they had trouble obtaining sufficient pain relief from a doctor or specialist in the preceding six months: over one-third (36%, n=16) reported having had trouble obtaining pain relief during this time (Table 26).

**Table 26: Brief Pain Inventory, Victoria, 2012**

| | **2012 (N=150)** |
|---|---|
| **Experienced pain (other than everyday pain) today (%)** | 31 |
| **Nature of pain (%)** | n=47 |
| Acute/short-term pain[a] | 19 |
| Chronic non-cancer pain[b] | 70 |
| Chronic cancer/malignant pain[c] | 11 |
| **Mean Pain Severity score (SD)** | 4.4 (1.8) |
| **Mean relief experienced from medications (SD)*** | 5.2 (3.3) |
| **Mean Pain Interference score (SD)** | 5.2 (2.5) |
| **Trouble obtaining pain relief from doctor in past 6 months (%)** | 36 |
| **Told doctor about drug use when requesting pain relief (%)** | n=35 |
| No | 23 |
| Yes | 51 |
| Yes, but not all drug use | 11 |
| Doctor already knew | 14 |

Source: IDRS participant interviews

[a] Refers to pain typically caused by injury to tissue that resolves when the tissue heals.

[b] Refers to continuous pain that persists for more than three months, and beyond the normal time for healing. May also refer to pain associated with progressive, debilitating diseases such as arthritis.

[c] Refers to advanced, progressive disease-related pain such as cancer, multiple sclerosis, late stage HIV/AIDS, and terminal kidney disease.

* Among those who received treatment/medication for pain and commented.

## 8.4. Opioid and stimulant dependence

Substance dependence is an important predictor of other drug-related harm and typically demonstrates stronger relationships with other health and social outcomes compared with simple measures of frequency of use. In 2012, Victorian IDRS participants were administered the Severity of

Dependence Scale (SDS) in relation to their use of heroin and other opioids as well as methamphetamine and other stimulants during the preceding six months.

The SDS is a five-item scale designed to measure the degree of dependence on a range of substances. It focuses on the psychological aspects of dependence, including impaired control over use and preoccupation with and anxiety about use. The scale is a reliable measure of dependence, with good psychometric properties demonstrated in five samples of heroin, cocaine, amphetamine and methadone users/patients in both Sydney and London (Dawe, Loxton, Hides, Kavanagh, & Mattick, 2002). Previous research suggests that a cut-off of four is indicative of dependence among methamphetamine users, while a cut-off of three is indicative of dependence among cocaine users (Kaye & Darke, 2002; Topp & Mattick, 1997). No validated cut-off for heroin and other opioid dependence exists; however, researchers typically use a cut-off of five to indicate the presence of dependence.

The SDS was administered to 144 Victorian IDRS participants who reported the recent use of heroin and/or other opioids in 2012. Among these participants, the median SDS score was eight (mean=8.2, SD=3.5, range=0-15). Eighty-eight per cent (n=126) of participants scored five or more on the scale, indicating dependence. The mean SDS score for women was 8.9 (SD=3.6), while the mean SDS score for men was 7.8 (SD=3.4); however, this difference was not significant ($p$ = 0.093). Participants who scored five or more on the SDS were asked to nominate the opioid that they had related their responses to: 112 participants provided responses. Of these, 80% (n=90) attributed their responses to heroin, 16% (n=18) attributed their responses to methadone and 13% (n=14) attributed their responses to buprenorphine.

The SDS was also administered to 95 Victorian IDRS participants who reported the recent use of methamphetamine or other stimulants (i.e., cocaine or pharmaceutical stimulants) in 2012. Among these participants, the median SDS score was two (mean=3.4, SD=3.6, range=0-13). Forty-one per cent (n=39) of participants scored four or more on the scale, indicating dependence. The mean SDS score for females was 3.0 (SD=2.9), while the mean SDS score for males was 3.5 (SD=3.7); this difference was not significant ($p$ = 0.557). Participants who scored four or more on the SDS were asked to nominate the type of stimulant to which their responses related; 34 participants provided responses. Of these, 91% (n=31) nominated methamphetamine, 6% (n=2) cocaine and 3% (n=1) pharmaceutical stimulants.

## 8.5. OST medication injection

Due to the introduction of the buprenorphine-naloxone film preparation (Suboxone® film) in 2011, questions were included in the 2012 IDRS survey regarding the injection of OST medications (methadone, buprenorphine, and buprenorphine-naloxone tablets and film) in the preceding six months.

Among the 2012 Victorian IDRS sample, the prevalence of recent OST medication injection was reasonably low: 18% reported the recent injection of buprenorphine, 16% reported the recent injection of buprenorphine-naloxone tablets and 6% reported the recent injection of buprenorphine-naloxone film. Five per cent of participants reported injecting methadone in the preceding six months. For further information on OST medication injection among PWID in Australia, please refer to the recent report by Larance and colleagues (Larance et al., in preparation).

## 8.6. Injection-related injury and disease (IRID)

PWID can experience a broad range of harms from various drug injection practices. These include bacterial infections, soft tissue damage and vascular injury. Previous research conducted with samples of PWID in Victoria, New South Wales and Queensland identified a high prevalence of injection-related injury and disease (IRID) (Dwyer et al., 2007).

In previous years, IDRS surveys have asked participants a limited set of questions pertaining to the harms associated with injecting. By contrast, in 2012 participants were asked to respond to an expanded set of questions to provide more information on the extent and nature of these harms among PWID, and to identify individual risk factors for injection-related injury and disease. Questions regarding IRID related to participants' experiences of IRID during their lifetime and in the past six months. Results from the 2012 Victorian IDRS report can be compared with findings from the IRID project (Dwyer et al., 2007). Comparisons with data from the IRID project are available in the *Australian Drug Trends 2012* report (Stafford & Burns, 2013).

Table 27 shows the prevalence of self-reported lifetime and recent IRID among the 2012 Victorian IDRS sample. In their lifetime, participants (N=150) most commonly reported experiencing non-serious IRID such as a dirty hit (57%, n=86). Of potentially serious IRID, skin abscesses were most common (23%, n=34). Ten per cent (n=15) reported experiencing a serious infection requiring a hospital stay (such as septicaemia). In the six months preceding interview, the most commonly reported non-serious IRID was redness near the injection site (31%, n=47), while the most commonly reported potentially serious IRID was thrombophlebitis (11%, n=17). As shown in the table, the prevalence of serious IRID was relatively low in the six months prior to interview (Table 27).

**Table 27: Self-reported lifetime and recent injecting-related injury and disease, Victoria, 2012**

| | 2012 (N=150) | |
|---|---|---|
| | **Lifetime IRID** | **Recent IRID*** |
| **Non-serious IRID (%)** | | |
| Redness near injection site | 54 | 31 |
| Swelling near injecting site | 37 | 21 |
| Raised red area (hives) | 32 | 20 |
| Dirty hit | 57 | 11 |
| Hit an artery when injecting | 19 | 7 |
| Numbness/pins and needles | 33 | 21 |
| Collapsed/blocked veins | 43 | 24 |
| **Potentially serious IRID (%)** | | |
| Pus-filled lump (skin abscess) | 23 | 9 |
| Internal/inside body abscess | 8 | 2 |
| Red, hot, swollen, tender skin (cellulitis) | 22 | 10 |
| Inflamed veins (thrombophlebitis) | 18 | 11 |
| Swelling leaves a dent (pitting oedema) | 15 | 10 |
| Puffy Hands Syndrome (lymph oedema) | 12 | 6 |
| Fistula (permanent hole) | 8 | 7 |
| **Serious IRID (%)** | | |
| Heart infection (endocarditis) | 4 | 2 |
| Other serious infection needing stay in hospital and intravenous antibiotics (septic arthritis, osteomyelitis, septicaemia) | 10 | 3 |
| Deep vein thrombosis (blood clot) | 6 | 3 |
| Gangrene | 3 | 3 |
| Amputation | 1 | 1 |
| Venous ulcer | 6 | 3 |
| Other problem | 1 | 1 |

Source: IDRS participant interviews

* Recent refers the prevalence of IRID in the preceding six months.

## 8.7. Neurological history

In developed countries, traumatic brain injury (TBI) is a major cause of morbidity and mortality that can result in long-term physical and cognitive impairment, as well as impacting negatively upon a person's psychological wellbeing and their social and occupational outcomes (Bruns Jr & Hauser, 2003; Tait, Anstey, & Butterworth, 2010). People with a neurological illness or injury may also be at greater risk of experiencing adverse effects from drug use. Recent research identified an association between TBI and substance use disorders, possibly related to increased exposure to violence, a high prevalence of mental illness, drug overdose, poor nutrition and poor sleep, among other risk factors (Corrigan, Bogner, & Holloman, 2012). The cognitive, emotional and functional impairments associated with substance use may also compound those impairments already associated with TBI

(Kelly, Johnson, Knoller, Drubach, & Winslow, 1997). In 2012, the IDRS aimed to identify the prevalence of four self-reported neurological conditions among participants.

Table 28 shows the prevalence of self-reported neurological conditions among the 2012 Victorian IDRS sample. Participants were asked whether they had ever been told by a doctor that they had epilepsy, stroke or hypoxic brain damage (lack of oxygen to the brain); multiple responses were allowed. The lifetime prevalence of TBI was determined by asking participants whether they had ever knocked their head so hard that they lost consciousness or 'blacked out' (e.g., as a result of a fall, accident or assault) (Table 28).

**Table 28: Self-reported lifetime diagnosis of neurological conditions, Victoria, 2012**

| | 2012 (N=150) |
|---|---|
| **Epilepsy[12] (%)** | 5 |
| **Stroke (%)** | 3 |
| **Hypoxia (%)** | 3 |
| **Traumatic brain injury[13] (%)** | 47 |

Source: IDRS participant interviews

The prevalence of epilepsy was higher among the 2012 Victorian IDRS sample (5%) than the general Australian population; among respondents to the 2007/08 NHS the estimated lifetime prevalence was 0.7% (ABS, 2009). The proportion of Victorian IDRS participants reporting a lifetime stroke was also higher than the proportion of 2007/08 NHS respondents with a history of cerebrovascular disease including stroke (3% vs. 1.2%) (ABS, 2009). Estimating the prevalence of hypoxia is more difficult however, given that onset may be caused by a range of factors such as drowning, carbon monoxide poisoning, drug overdose, and heart attack or cardiac arrest. Nonetheless, among the 2012 Victorian IDRS sample, the prevalence of self-reported hypoxia was relatively low (Table 28).

By contrast, almost half (47%, n=70) of Victorian IDRS participants reported a lifetime history of TBI using the measure described above, higher than the estimated prevalence in other samples. For instance, in a community sample of Australian males, the estimated lifetime prevalence of TBI with loss of consciousness was 35% (Perkes, Schofield, Butler, & Hollis, 2011). Similarly, in a New Zealand cohort, approximately 32% of the sample reported having experienced at least one mild TBI by the age of 25 years (McKinlay et al., 2008). Although a higher prevalence was reported by Victorian IDRS participants, caution is required when directly comparing these data due to differences in study design, sampling and data collection techniques.

Table 29 presents the characteristics of TBI among the 2012 Victorian IDRS sample. In 2012, participants (n=69) reported experiencing a median of two TBI (range=1-30 TBI) during their lifetime. Participants (n=70) were asked to provide further detail in relation to their most severe loss of consciousness episode. Participants reported losing consciousness for a median of 10 minutes (range=0 minutes to 224 days). Less than one-third (30%, n=21) of those with a history of TBI reported losing consciousness for a few minutes, consistent with a mild injury. However, one-third (33%, n=27) of participants with a TBI history reported losing consciousness for 30 minutes or longer. The most severe loss of consciousness typically occurred during the participants' mid-20s. At the time of the most severe occasion, 33% (n=23) reported that they were under the influence of alcohol, while 44% (n=31) reported that they were substance-affected (Table 29).

[12] National prevalence was approximately 6.4 per 1,000 people (i.e., 0.6%) in 2001 (ABS, 2001).

[13] Population prevalence rates are usually between about 0.1% and 0.4% (Bruns Jr & Hauser, 2003).

**Table 29: Traumatic brain injury (TBI) among participants, Victoria, 2012**

| | 2012 (n=70) |
|---|---|
| **Median number of TBI (range)** | 2 (1-30) |
| **Median time of LOC[a] in minutes** | 10 |
| **Median age in years at most severe LOC (range)** | 25 (1-47) |
| **For most severe TBI (%)** | |
| Under the influence of alcohol | 33 |
| Under the influence of drugs | 44 |
| **Main drug (%)** | (n=24) |
| Heroin | 46 |
| Benzodiazepines | 13 |
| Speed | 13 |
| Ice/crystal methamphetamine | 8 |
| Other (e.g., cannabis, dexamphetamine tablets) | 21 |

Source: IDRS participant interviews

[a] LOC = Loss of consciousness.

Note: There were no Victorian IDRS participants who attributed their most severe TBI to pharmaceutical opioids such as methadone, morphine or oxycodone.

Following TBI, some people experience neuropsychological sequelae such as cognitive, motor and behavioural changes that may complicate their recovery. In 2012, Victorian IDRS participants with a history of TBI (n=70) were asked whether they had experienced any neuropsychological sequelae following the event and whether these symptoms were ongoing. Multiple responses for a range of complaints were allowed, which are shown in Table 30. The most commonly reported complaints were memory loss, poor concentration, problems with finding the right words when speaking and mood changes (Table 30).

**Table 30: Neuropsychological sequelae of TBI, Victoria, 2012**

| | 2012 (n=70) |
|---|---|
| **Experienced sequelae[a] following TBI (%)** | 59 |
| **Sequelae experienced at the time of TBI (%)** | (n=41) |
| Memory loss | 76 |
| Poor concentration | 63 |
| Difficulty finding the right words | 61 |
| Mood changes/anxiety | 51 |
| Poor coordination/balance | 49 |
| Personality change | 37 |
| Functional weakness | 37 |

Source: IDRS participant interviews

[a] Neurological, cognitive, behavioural or psychiatric sequelae.

Forty per cent (n=28) reported experiencing ongoing complaints related to their most serious TBI. Among this group, the most commonly reported enduring complaints were ongoing memory loss

(71%, n=20), ongoing problems with finding the right words when speaking (64%, n=18), and ongoing mood changes and poor concentration (57%, n=16), respectively.

## 8.8. Possession laws

In Australia, drug legislation is passed by federal, state and territory jurisdictions, with each developing their own legislation related to offences such as drug manufacture, trafficking, possession and use (Hughes, 2010). As such, distinct illicit drug trafficking thresholds regarding the possession of drugs exist in each Australian state and territory. The onus of proof regarding these thresholds is often reversed, so that people apprehended with drugs exceeding the nominated threshold quantity must prove they are not in possession for trafficking purposes (Fitzroy Legal Service Inc., 2013). In Victoria, the thresholds for trafficable quantities are based on pure drug rather than inert materials and are 3 grams for heroin, methamphetamine, MDMA and cocaine, respectively. For cannabis, the thresholds are 250 grams for cannabis leaf and 10 for cannabis plants (Hughes, 2010). In 2012, for the first time Victorian IDRS participants were asked a set of questions relating to their perceptions and knowledge of trafficking thresholds and possession laws.

All 150 Victorian IDRS participants were asked to respond to a hypothetical scenario. The first question was 'Imagine you are caught by police and have drugs on you; do you think the *quantity* of drugs will affect the type of charge you will get?' Participants who reported 'yes' were subsequently asked '*What quantity* would you need to possess to be charged with *sell or supply* as opposed to possession for personal use for heroin, methamphetamine, MDMA, cocaine and cannabis?' Participants' estimates of threshold quantities are reported as medians by drug and are shown in Table 32.

In 2012, almost three-quarters (70%, n=105) of Victorian IDRS participants perceived that the quantity of drugs in their possession would affect the type of charged incurred if they were apprehended by police. Participants underestimated trafficking thresholds for all drug types except MDMA pills (where determining weight is more complex). For instance, 60 participants reported that a charge of sell or supply would result from possessing a median of 2 grams of heroin (mean=3.0, SD=3.1, range=0-14 gram). Forty-four participants reported that possessing a median of 2.5 grams of methamphetamine (mean=3.2, SD=2.9, range=0-14 gram) would result in a charge (Table 31).

**Table 31: Median trafficking threshold quantities estimated by participants, Victoria, 2012**

| | Points* | Grams* | Pills | Ounces* | Victorian trafficking thresholds (g) |
|---|---|---|---|---|---|
| Heroin (range) | 2 (0-70) | 2 (0-14) | -- | -- | 3 |
| Methamphetamine (range) | 2 (1-6) | 2.5 (0-14) | -- | -- | 3 |
| MDMA (range) | -- | 1.7 | 10 | -- | 3 |
| Cocaine (range) | -- | 1.7 | -- | -- | 3 |
| Cannabis (range) | -- | 3.5 | -- | 1 | 250 |

Source: IDRS participant interviews; Hughes, 2010.

Note: The numbers of participants estimating trafficking threshold quantities by drug were: heroin – points (n=22), grams (n=60); methamphetamine – points (n=16), grams (n=44); MDMA – pills (n=21), grams (n=11); cocaine – grams (n=29); cannabis – grams (n=18), ounces (n=32).

* 10 points = 1 gram, 7 grams = ¼ ounce, 14 grams = ½ ounce, 21 grams = ¾ ounce, 28 grams = 1 ounce.

# 9. Study limitations

The primary aim of the Victorian IDRS is to monitor emerging trends in illicit drug use and related harms and issues in Melbourne. The project is not designed to provide definitive or detailed explanations of these trends. Rather, where appropriate, the main purpose of the IDRS is to inform future research and policy responses to the public health and law enforcement challenges presented by illicit drug use in each state and territory of Australia.

The Victorian IDRS relies on the perceptions of expert individuals who are involved in and exposed to the illicit drug scene in Melbourne. These individuals include both PWID and professionals working with people who use drugs. Where possible, reports from these individuals are compared with secondary indicators. However, given the stigmatisation and marginalisation of illicit drug use, and the hidden nature of populations of PWID, reliable indicator data are often limited.

In addition, the IDRS principally gathers evidence on emerging trends from PWID who are in contact with NSP, drug treatment, primary health care and other services. This population is not representative of all PWID. For instance, PWID who do not routinely access these services and recreational populations of illicit drug users are often not reached via IDRS recruitment methods. Subsequently, the generalisability of findings contained herein is limited. Another key limitation of the IDRS methodology is that the focus on drug-related issues within metropolitan Melbourne excludes exploration of illicit drug trends in rural and regional Victoria. To provide a more comprehensive picture of emerging trends in Victoria, the IDRS methodology requires expansion to include PWID in rural and regional settings.

# 10. Implications

The results from the 2012 Victorian IDRS suggest action in the following priority areas:

1. **Continued monitoring of illicit drug markets for trends in the prevalence and patterns of drug use and drug price, purity, and availability, and continued monitoring of related poor health and social outcomes. Expanding the IDRS methodology to include monitoring of illicit drug markets in rural and regional Australia will improve policy and program responses for these populations.**

   In 2012, the IDRS again demonstrated its value as an informative and reliable drug trend monitoring system. 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 illicit drug markets in Melbourne and the need to monitor market fluctuations and the way these impact on prevalence, patterns of drug use and related outcomes. Continued monitoring of illicit drug markets will broaden our understanding of them and strengthen our ability to inform strategic policies and programs that aim to limit associated harms. Expanding the IDRS to include monitoring of rural and regional illicit drug markets will improve our understanding of the issues affecting populations who reside outside of metropolitan areas and provide evidence that strengthens policy and program responses.

2. **Further research on the impact of ageing among PWID, particularly in relation to disability, chronic disease and the types of health and welfare services required to effectively service this population.**

   As in 2011, KE in 2012 reported an increasing burden upon their services due to the ageing of PWID. This year, KE noted increasing primary care presentations by PWID living with disability and chronic health conditions. Type 2 diabetes, non-cancer pain, poor dental and sexual health, traumatic brain injury, sleep disorders, hepatitis C and IRID are prevalent among this population. Poor nutrition, high rates of risky and dependent alcohol consumption among those who drink, limited exercise and unstable housing contribute to a significant burden of disease. Most services are not well equipped to deal with the range of complex health, social and housing issues presented by these individuals.

3. **Expanding OST programs across Victoria.**

   In 2012, KE recommended expanding OST programs across the state of Victoria and recruiting new prescribers to the field with a holistic approach to general practice and drug treatment. Increasing access to OST programs for dependent heroin users was again recommended. The recent introduction of Suboxone® film could increase access to unsupervised dosing for a significant minority of pharmacotherapy consumers. The 2012 Victorian IDRS again found that diversion of OST is a complex phenomenon that tends to operate as part of a 'gift economy' between friends that is for the most part related to the alleviation of withdrawal symptoms and 'self' treatment. Note that in 2012 a very small proportion of participants reported infrequent injection of Suboxone® film.

4. **Continued monitoring of the prevalence and patterns of non-prescribed alprazolam use, given the reported harms associated with use. Further research is required to tease out the temporal predictors and social determinants of harmful use.**

   In 2012 the prevalence of recent alprazolam use was 65%, similar to the prevalence in 2011. Participants who reported recent prescribed use reported daily use, while non-prescribed use was relatively infrequent. The majority of KE nominated alprazolam as the most 'problematic drug' given the drug's dependence liability and reported negative behavioural effects. Continued monitoring of the prevalence and patterns of alprazolam use in future years should assist with evaluating strategic policy changes associated with reducing harmful use.

5. **Renewal of and reinvestment in safer injecting education programs and consumables targeted to PWID.**

   IDRS participant data, KE reports and relevant indicator sources all point to a need to renew and reinvest in safer injecting education programs and consumables broadly targeted to PWID to reduce injecting-related harm. In particular, programs that focus on best practice injecting techniques, prevention of BBVI transmission, and correct filtering of pharmaceutical opioids and high potency crystal methamphetamine are warranted. Broader harm reduction campaigns targeting the use of specific drug types such as alprazolam, pharmaceutical opioids and crystal methamphetamine that provide PWID with practical and relevant information should aim to reduce concurrent health and social harms, as well as increasing the knowledge-base among diverse populations of injectors. Research that examines the factors associated with the decline in NSP presentations may also assist with improving the injecting-related health of PWID.

6. **Promotion of hepatitis C testing among PWID and increasing access to and education about new hepatitis C treatment options.**

   Less than half of the 2012 Victorian IDRS sample reported testing for hepatitis C in the preceding three months; increasing hepatitis C testing rates among PWID in Victoria is important for increasing our understanding of true hepatitis C incidence and prevalence. The prevalence of hepatitis C was higher among 2011 Victorian ANSPS participants than the 2011 ANSPS national sample. Rolling out hepatitis C related health promotion and expanding education initiatives regarding new treatment options should aim to reduce prevalence among people living with chronic infection and increase the numbers presenting to specialists for monitoring and treatment.

7. **Increasing mental health resources for PWID.**

   The mental health of PWID is notoriously poor. In 2012, 74% of Victorian IDRS participants were identified as psychologically distressed in the four weeks prior to interview, indicative of serious mental illness. Reducing the barriers to effective mental health treatment for this population and addressing underlying mental health issues is a priority. Increasing social support for PWID in the community may assist with reducing the burden of mental illness in this population.

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