tasmania

A. Peacock, B. de Graaff & R. Bruno

TASMANIAN DRUG TRENDS 2014
Findings from the Illicit Drug Reporting System (IDRS)

Australian Drug Trends Series No. 131

TASMANIAN DRUG TRENDS 2014

Findings from the Illicit Drug Reporting System (IDRS)

Amy Peacock, Barbara de Graaff & Raimondo Bruno

School of Psychology, University of Tasmania

Australian Drug Trends Series No. 131

ISBN 978-0-7334-3539-3

Suggested citation: Peacock, A., de Graaff, B. & Bruno, R. (2015). Tasmanian Drug Trends 2014. Findings from the Illicit Drug Reporting System (IDRS). *Australian Drug Trends Series No. 131.* Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

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

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENTS

In 2014, the Illicit Drug Reporting System Project was supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund**.** The National Drug and Alcohol Research Centre (NDARC), UNSW Australia, coordinated the IDRS. The IDRS team would like to thank the Australian Government Department of Health for their continued assistance and support throughout the year. The authors also wish to thank the following people: Natasha Sindicich, Jennifer Stafford, Lucy Burns and Amanda Roxburgh from NDARC for their assistance throughout the project.

Thanks also to the members of the 2014 Tasmanian IDRS/EDRS Steering Committee: Jann Smith and David Gardiner (Alcohol, Tobacco and Other Drugs Council of Tasmania), James Galloway and Peter Boyles (Pharmaceutical Services, Department of Health and Human Services), Michael Voumard (Anglicare), Francine Smith (Needle and Syringe Program), Sylvia Engels and Adrian Reynolds (Alcohol and Drugs Service, Department of Health and Human Services), Glenn Lathey, Troy Hodge, Debra Salter and Jonathon Rogers (Tasmania Police), Tania Joughin (The Link, Hobart), Allison Matthews (EDRS, UTAS); Raimondo Bruno (Chair, UTAS), Barbara de Graaff (IDRS, UTAS), Amy Peacock (IDRS, UTAS). In particular, thanks go to Emeritus Professor Stuart McLean (Tasmanian School of Pharmacy, University of Tasmania) for his stewardship and guidance of the IDRS/EDRS project in Tasmania over the years of the project.

Thanks also to the key experts who willingly provided their time, effort, and experience to contribute to the project, as well as the following local organisations and persons who generously provided indicator data: Tasmania Police (Sergeant Stephen Herbert), Tasmanian Department of Health and Human Services divisions of Pharmaceutical Services (Jim Galloway), Population Health (Francine Smith), Alcohol and Drug Services (Sylvia Engels and James Fisher), and Justice Department of Tasmania divisions of Magistrates Court (Dave van't Veld), and Prisons (Jackie Campbell).

Alison Hardinge, Amy MacGregor, Bethany Lusk, Jackie Hallam, Jane Hyde and Kate Gray conducted the interviews with individuals who inject drugs and provided assistance throughout the project.

We are most grateful to the staff of services who very generously provided the researchers with space and support for interviewing participants: Anglicare (Hobart site); the Link Youth Health Service; Eastern Shore Needle and Syringe Program and Clarence GP Superclinic, as well as the community pharmacies and needle and syringe programs who distributed information about the research to their clients.

The authors also wish to thank the many key experts who willingly provided their time, effort and experience to contribute to the IDRS process.

Finally, and most importantly, the authors wish to thank the people who participated in the PWID survey.

ABBREVIATIONS

4MMC	4-methylmethcathinone
2CI	2,5-dimethoxy-4-iodophenethylamine
ABCI	Australian Bureau of Criminal Intelligence
ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AGDH	Australian Government Department of Health
AIDS	Auto-immune Deficiency Syndrome
AIHW	Australian Institute of Health and Welfare
AOD	Alcohol and other Drugs
ATSI	Aboriginal and/or Torres Strait Islander
AUDIT	Alcohol Use Disorders Identification Test
BBVI	Blood-borne viral infection(s)
BPI	Brief Pain Inventory
CNS	Central nervous system
CPR	Cardio-pulmonary resuscitation
DDC	Drunk Driving Courts
DHHS	Department of Health and Human Services
DSM-III-R	Diagnostic & Statistical Manual of Mental Disorders, 3rd Edition, Revised
EDRS	Ecstasy & related Drug Reporting System
FTND	Fagerstrom Test for Nicotine Dependence
GP	General Practitioner
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HILDA	Household, Income and Labour Dynamics in Australia
HIV	Human immunodeficiency virus
HSI	Heavy Smoking Index
ICD	International Classification of Diseases
IDDI	Illicit Drug Diversion Initiative
IDDR	Illicit Drug Data Report
IDRS	Illicit Drug Reporting System
IRID	Injecting-related injuries and diseases
K10	Kessler 10 Psychological Distress Scale
KE	Key expert(s) (previously referred to as key informant)
LSD	lysergic acid diethylamide
MCS	Mental Component Score
MDA	3,4-methylenedioxyamphetamine
MDEA	3,4-methylenedioxyethamphetamine
MDMA	3,4-methylenedioxymethamphetamine
MDPV	methylenedioxypyrovalerone
MMT	Methadone Maintenance Therapy

MSM	Methylsulfonylmethane
N	Number of participants
NCIS	National Coronial Information System
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NDSHS	National Drug Strategy Household Survey
NGO	Non-government organisations
NHS	National Health Survey
NMDS	National Minimum Data Set (for Alcohol and Drug Treatment Services)
NSP	Needle and Syringe Program(s)
OHIP-14	Oral Health Impact Profile short form 14
OFT	Oral fluid test
OHRQL	Oral Health Related Quality of Life
OST	Oral Substitution Therapy
OTC	Over-the-counter
OTI	Opiate Treatment Index
PASW	Predictive Analysis Software
PBS	Pharmaceutical Benefits Scheme
PCS	Physical Component Score
PCR	Polymerase Chain Reaction
PWI	Personal Wellbeing Index
PWID	People who inject drugs
REU	Regular ecstasy user
S8	Schedule 8
SD	Standard deviation
SDS	Severity of Dependence Scale
SF-8	Short Form-8 Health Survey
SF-12	Short Form-12 Health Survey
SIS	State Intelligence Services, Tasmania Police
SPSS	Statistical Package for the Social Sciences
SSRI	Specific Serotonin Reuptake Inhibitor
STI	Sexually Transmitted Infection
TAS	Tasmania
TasCAHRD	Tasmanian Council on AIDS, Hepatitis and Related Diseases
TASPOL	Tasmania Police
TBI	Traumatic brain injury
TCA	Tricyclic anti-depressant
UNODC	United Nations Office of Drugs and Crime

EXECUTIVE SUMMARY

In 1998, the National Drug and Alcohol Research Centre (NDARC) was commissioned by the Commonwealth Department of Health and Family Services (now the Australian Government Department of Health) to begin a national trial of the Illicit Drug Reporting System (IDRS), following previous employment of the methodology in New South Wales, South Australia and Victoria. The intention of the IDRS was to provide a coordinated approach to the monitoring of data associated with the use of heroin, cocaine, methamphetamine and cannabis, in order that this information could act as an early warning indicator of the availability and use of drugs in these categories.

In 1999, the Tasmanian component of the national IDRS gathered information on drug trends using two methods: key expert (KE) interviews with professionals working in drug-related fields; and an examination of existing indicators. For the 2000-2005 IDRS, funding was provided by the National Drug Law Enforcement Research Fund (NDLERF) to expand this methodology and include a survey of people who regularly inject illicit drugs, in addition to the methods employed previously. Since this time, funding for this methodology has been provided by the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund

Injecting drug user survey

One hundred and one people who regularly injected illicit drugs (PWID) were interviewed using a standardised interview schedule which contained sections on demographics, drug use, price, purity and availability of drugs, crime, risk-taking, health and general drug trends.

Key expert survey

Twenty-three professionals working with substance-using populations provided information about a range of illicit drug use patterns in clients they had direct contact with. These 'key experts' (KE) included drug treatment workers, Needle and Syringe Program staff, general health workers, youth and outreach workers, advocacy workers, representatives from the peak alcohol and other drug non-government organisation, community development workers, addiction medicine specialists, and staff from police and justice-related fields.

Other indicators

In order to complement and validate the KE interview data, a range of drug use indicator data was sought from both health and law enforcement sectors. Guidelines for the acceptability of these sources aimed to ensure national comparability, and required that the sources were available annually, included 50 or more cases, were collected in the main study site, and included details on the main illicit drug types under study.

Included in this analysis were telephone advisory data, drug offence data, hepatitis B and C incidence data, data from the National Drug Strategy Household Survey, and data from clients of the state's Needle and Syringe and Pharmacotherapy programs, as well as drug and alcohol treatment services.

Demographic characteristics of people who inject drugs participants

Demographic characteristics of the regular injecting drug user participants interviewed were generally consistent with those interviewed in previous Hobart IDRS studies. Participants were predominantly male (65%), and had an average age of 38 years. Participants had completed 10 years of education on average, three-quarters (75%) were unemployed at the time of the interview, and one-fifth of the sample reported a previous prison history (41%).

Half of the participants (47%) were injecting multiple times per week (but not every day), with 36% injecting at least once daily. Opioids were the predominant drug of choice among the cohort (66%), and were the class of drug most injected in the preceding month amongst three-quarters of the sample (75%). Almost half were involved in some sort of drug treatment at the time of interview (45%).

Patterns of drug use among the PWID sample

The major trends identified in the 2014 Tasmanian IDRS report relate to indications of emerging changes in patterns of methamphetamine and pharmaceutical opioid use amongst local PWID. Summaries of major trends for each drug class are reported below by drug type, and are also summarised in Table A.

Table A: Price, purity, availability and use of heroin, methamphetamine, cannabis and morphine, 2014

	Heroin	Methamphetamine			Cannabis		Morphine
		Powder	Paste	Crystal	Bush	Hydro	
Prevalence of use	Low	Stable level of use: used in last 6 months by 50% of the sample; predominant form used	Stable level of use: used in last 6 months by 35% of the sample; least commonly used form	Small increase in use: used by 54% of the sample in the last 6 months	Gradual decline in the proportion of daily users; remains the most frequently used illicit drug; hydro the predominant form used		Over two-thirds of sample using stable level of use; MS Contin main form
Price							
1 mg	-	-	-	$100, increasing	-	-	-
0.1 gram	$50	$50, stable	$50, stable	$150, stable	-	-	$100, stable
0.5gram	-	$150, stable	$150, stable	$300, stable	-	-	-
gram	$450	$300, stable	$300, stable	-	$25 (1.5g), stable	$25, stable	-
ounce	-	-	-		$200, stable	$250, stable	-
Purity/ Potency*	Low/medium; over last 6 months: fluctuating over last 6 months	Mixed reports for current purity and changes over last 6 months	Mixed reports for current purity and changes over last 6 months	High/medium; mixed reports regarding changes over last 6 months	Medium; stable in last 6 months	High and stable in last 6 months	*Pharmaceutical*
Availability	Mixed reports for current availability and over the last 6 months	Easy/very easy; stable over preceding 6 months	Easy/very easy; stable over preceding 6 months	Easy/very easy; stable over preceding 6 months	Very easy/easy; stable over preceding 6 months	Very easy/easy; stable over preceding 6 months	Easy/very easy; stable over preceding 6 months

Source: IDRS PWID and KE interviews and drug use indicator data

* Based on PWID and KE estimates of purity/potency

Heroin

Just 13% of the sample reported use of heroin in the six months preceding the interview, at a median frequency of three days. The rate of recent heroin use among Tasmanian PWID cohorts has decreased dramatically from 38% in 2000.

Few of the PWID participants interviewed in 2014 could report on local trends in price, purity or availability of heroin. The median price that participants reported last paying for heroin was $50 for a 'cap' (0.1g) and $450 for one gram. The majority of participants who commented noted that heroin was difficult to access in Tasmania. Subjective reports of heroin purity suggest this to be low to medium.

The clear majority of indicators – such as the continuing low prevalence of heroin use among clients of the state's Needle and Syringe Program (NSP), the low median rate of use of heroin (three days in the last six months among those who had used the drug) and that, of the 15% of the PWID sample that reported heroin as their drug of choice, less than half had recently used heroin – indicated that the low availability of heroin in the state, identified in earlier IDRS studies, continued in 2014.

Methamphetamine

Seventy percent of PWID participants in 2014 reported use of any form of methamphetamine (powder, base/paste, crystal/ice or liquid) in the six months preceding the interview, at a median frequency of 18 days (out of a maximum of 180 days), equating to use on average once per ten days. This level of use has been stable since 2010 (70-77%), but lower than reported between 2000 and 2007 (83-95%).

Powder methamphetamine was used by 50% of participants, at a median frequency of 11 days in the last six months. Just over half of the sample reported recent use of crystal methamphetamine (54%), however, median frequency of use was low (6 days). Use of base/paste methamphetamine was reported by just 19%, consistent with reports in 2013 but markedly lower than preceding years.

Market prices locally for powder and base/paste presentations of methamphetamine appear to have remained relatively stable since 2005, particularly in relation to 'point' amounts (approximately 0.1g) of the drug, at $50 for either form. Modal purchase prices for larger amounts of powder and 'base/paste' have also remained stable since 2004 at $300 per gram. 'Point' purchases of crystal methamphetamine have increased over the preceding two years. Between 2004 and 2011, the modal price for 0.1gram purchases was consistently reported to be $50. In 2012, this increased to $60, $100 in 2013 and 2014. The median purchase price for one gram was $325. Participants predominantly regarded the prices of each presentation of the drug as remaining 'stable' in recent months.

PWID participants reporting on subjective purity of powder methamphetamine reported it to be 'low' or 'medium'. Participants were divided with regard to reports on purity of 'base/paste': half of participants reported this to be 'low', and one-quarter 'high'. Participants considered ice/crystal methamphetamine used locally as 'high' or 'medium' in subjective purity.

Participants interviewed in 2014 regarded powder as 'easy' or 'very easy' to access, with availability 'stable in recent months. Whilst participants reporting on base/paste also noted this to be 'easy' or 'very easy' to access, only a small number of participants were able to comment on the trends for this form. Participants also noted that availability of crystal methamphetamine was 'easy' or 'very easy', and that this had remained stable over the preceding six months.

Trends in 2014 represent subtle changes both for the methamphetamine market overall (for the PWID demographic) and within it; in contrast to trends in previous years, indicators suggest that overall use of methamphetamine has been lower since 2007 (both in IDRS and NSP data). Use of

crystal methamphetamine appears to have increased since 2012, after several years of decreasing use. In contrast, use of base/paste methamphetamine has been markedly lower in 2013 and 2014 than in previous years.

Cocaine

It appears that the availability and use of cocaine in Hobart continues to be very low, at least within the populations surveyed in the current study or accessing government services, with use of the drug among clients of the state's NSP virtually non-existent (0.2% of non-pharmacy equipment transactions). Only a small proportion of the Tasmanian IDRS PWID participants reported recent use of the drug (8%), and the median frequency of this use was very low (two days of the last 180).

Reflecting the very low level of cocaine use amongst IDRS participants, few participants were able to comment on trends related to price, purity and availability. Two participants noted a half-gram cost a median price of $200. Amongst a small number of participants, availability was considered to be 'difficult', and this had remained relatively unchanged in the preceding six months. In keeping with this low level of use, Tasmania Police have made very limited numbers of cocaine seizures in the last decade.

These patterns of low levels of availability and use in these cohorts appear to have remained reasonably stable over the past few years. In contrast to this, there had been a gradual increase in the level of recent use of the drug in different local consumer populations such as frequent ecstasy consumers, however, this trend has reversed since 2011 (Matthews, Bruno & Nicholls 2014). This may provide indications of emerging changes in local markets for the drug.

Cannabis

The majority of participants in the 2014 Tasmanian sample reported cannabis use in the preceding six months (82%). The median frequency of this use was daily, which has been consistent in the Tasmanian PWID cohorts since 2000; however, the proportion of PWID participants reporting daily use decreased from 59% in 2004 to 44% in 2014. Those PWID participants who used cannabis predominantly reported use of hydroponically-cultivated cannabis. While cannabis remains the most commonly used illicit drug, both in the PWID sample and in the state, there are indications of decreasing levels of use more generally, with the National Drug Strategy Household Survey (NDSHS) suggesting that past-year use of cannabis in Tasmania declined from 12.9% in 2001 to 10.2% of those aged 14 years and over in 2013.

Participants reported the median price of a quarter-ounce of outdoor cannabis was $70, and $200 for one ounce. The majority of participants who commented reported stable price trends over the preceding six months. Hydroponically-cultivated cannabis cost a modal price of $100 for a quarter-ounce and $250 for an ounce. The majority of participants who commented reported that prices remained stable over the preceding six months.

Most participants reporting on subjective potency of bush/outdoor cannabis noted this to be 'medium'. The majority of participants reported that this had not changed over the preceding six months. Potency of hydroponically-cultivated cannabis was considered to be 'high', and this had not changed over the preceding six months. Participants commenting on cannabis reported that hydroponic cannabis was more easily accessible than outdoor forms: however, both forms were considered 'easy' to obtain.

Other opioids

Morphine

More than two-thirds (71%) of the Tasmanian sample had used morphine that was not prescribed to them in recent months. MS Contin remained the predominant preparation used by this group, used by 93% (of recent morphine users), with Kapanol (57%) and MS Mono (49%) the next most commonly used.

Tasmanian IDRS studies had shown a decreasing proportion of participants reporting recent use of morphine between 2003 and 2005, as well as a declining frequency of use amongst consumers. This occurred despite a relatively stable proportion of the PWID samples receiving maintenance pharmacotherapies (approximately 50%) and reporting an opioid as their drug of choice (approximately 60%). In 2007 and 2008, use of morphine peaked, with four-fifths of each sample reporting recent use. Since this time, use has remained relatively stable, ranging between 66% and 75%.

The modal price reported by PWID for all commonly-used morphine formulations was $1 per mg. Prices have remained relatively stable since 2012, following an increase from previous reports. Morphine was considered 'easy' to 'very easy' to obtain by those who commented, and this situation was reported as remaining stable in recent months by a majority of participants. The overall stable, high level of use and price of morphine indicates a strong local market.

Oxycodone

A new tamper resistant formulation of controlled release oxycodone hydrochloride tablets (Reformulated OxyContin®) was released onto the Australian market in April 2014. In 2014, there was a decrease in the number of participants reporting past six month use of oxycodone which was not directly prescribed (2013: 61% versus 2014: 47%), with decreased median frequency of use (2013: 15 days versus 2014: 6 days).

Despite their higher relative potency than morphine tablets, preparations of oxycodone tablets had been sold locally at lower comparative prices in 2005 and 2006. However, between the 2007 and 2008 surveys, consumer reports suggested the cost of these drugs increased (the modal price estimate for 80mg OxyContin tablets doubled from $40 to $80 between 2007 and 2008); subsequently stabilising since this time, and are now price-equivalent with morphine ($1/mg). The new formulation of OxyContin was reported to cost around half the price of the original formulation.

Participants were mixed with regard to availability the original and more popular form of oxycodone. Just over half noted it to be 'difficult' or 'very difficult' to access, whilst two-fifths noted this to be 'easy' or 'very easy'. These reports differ from 2013 (72% 'easy/very easy'), and likely reflect market changes in response to the introduction of the new formulation. In keeping with this, almost half of the participants noted decreased availability over the preceding six months

It is important to note also that the opioids used by this group are not coming from direct doctor-shopping, as the vast majority report obtaining them 'illicitly', i.e. not on a prescription in their name.

Methadone syrup

Illicit methadone syrup was used by 35% in the past six months, at a median frequency of 12 days, equating to use approximately once per fortnight. Half of the respondents reporting recent use of illicit syrup were themselves enrolled in methadone maintenance treatment during this period.

It is important to recall that the individuals participating in the IDRS are selected on the basis of their regular injection of drugs and, as such, are not representative of all those enrolled in maintenance pharmacotherapy programs. There may be a spectrum of reasons for the use of illicit syrup by those themselves enrolled in the program, but it is important also to consider the role of incomplete

stabilisation and of problems in the systems around dose dispensing in these situations. For a recent, detailed investigation of these types of issues, see Fraser et al. (2007).

Illicit methadone syrup was reported to cost a median of approximately $1 per mg in 2014, consistent with the majority of reports since 2004. Participants reported prices to be stable in recent months. Methadone syrup was most frequently purchased from friends. Participants were mixed in their reports concerning availability: approximately half stated that it was 'easy' or 'very easy', while the other half reported access as 'difficult' or 'very difficult'.

There have been reports of participants injecting combinations of alprazolam and methadone syrup in the past ten local IDRS studies, a practice that carries an increased risk of overdose, injection-related harms, and adverse social or legal consequences because of the particular disinhibitive effects of this combination, which both PWID participants and KE noted as concerns in regard to this trend. This practice has decreased from 40% of the sample in 2005 to no reports of this 2014.

Physeptone
Since 2004, the rate of recent use of Physeptone has remained relatively stable, ranging between 34% and 52% of each sample. Similarly, the median frequency of use has ranged between three and nine days over this period. The median price of illicit Physeptone tablets doubled between 2010 and 2011 from $10 to $20, and has remained stable since this time. Participants were divided with regard to ease of access: half noted that it was either 'easy/very easy' or 'difficult/very difficult'. Three-fifths noted that availability had remained stable over the preceding six months, while one-fifth reported decreased availability.

Benzodiazepines
The majority of participants reported recent use of prescribed or non-prescribed benzodiazepines (74%). The median frequency of use of illicitly sourced benzodiazepines (excluding alprazolam), was 20 days (which equates to use almost weekly). One-third of the sample reported recent use of illicit alprazolam, at a median frequency of 4 days.

Participants generally considered availability of illicit benzodiazepines to be 'easy' or 'very easy', and that this situation had remained stable in the preceding six months. Illicit benzodiazepines were most commonly sourced from friends, rather than through theft, forgery.

Between 2005 and 2008, the rate of alprazolam injection amongst Tasmanian IDRS cohorts and NSP clients increased. As a consequence of this, numerous anecdotal reports told of increased health problems such as gangrene. Regulatory changes were implemented in September 2007 by the Tasmanian Pharmaceutical Services Branch regarding prescribing of alprazolam, with an aim to decrease misuse of this drug. In response to these changes, questions on alprazolam use were incorporated in the IDRS survey. Two-fifths of participants reported having used any alprazolam (39%) in the preceding six months (39%). Non-prescribed alprazolam was used by 36% of the sample, at a median frequency of 4 days in the preceding six months. Injecting use of any alprazolam tablets in the preceding six months decreased from 21% in 2013 to 8% in 2014.

Health-related trends

Non-fatal overdose

Opioids
Amongst lifetime opioid users, one-third reported ever having experienced an opioid overdose (30%), and 5% reported this occurring in the preceding 12 months related to use of heroin, morphine and oxycodone.

Fatal overdose

Opioids

The number of accidental deaths in Tasmania attributable to opioid use in 2010 was 9, which equates to a rate of 33.8 per million persons. Nationally, 613 deaths were attributable to accidental opioid deaths, which equates to a rate of 49.5 per million persons. Projected national estimates suggest an increase in deaths; however these data should be interpreted with caution (Roxburgh & Burns, 2014a).

Naloxone

In Australia, naloxone has largely only been available for use by medical doctors (or those auspiced by medical doctors such as nurses and paramedics) for the reversal of opioid effects. In 2012, a take-home naloxone program commenced in the ACT through which naloxone was made available to peers and family members of people who inject drugs for the reversal of opioid overdose as part of a comprehensive overdose response package. Shortly after, a similar program started in NSW and some other states have followed suit.

Amongst the Tasmanian sample, three-quarters of participants reported being familiar with naloxone, and a similar proportion reported they would support the expansion of the naloxone distribution program into Tasmania.

Injecting risk behaviours

Since 2003/04, self-reported rates of sharing of needles or syringes among clients of non-pharmacy NSP outlets have remained stable, remaining less than 1%, with the exception of 2006/07, when this increased to 1.1%. The Tasmanian IDRS study identified a similar pattern with rates of sharing amongst PWID participants increasing sharply in 2007 from 4% to 16%. Since this time, between two and eight percent of each sample has reported sharing injecting equipment.

Two-fifths of the consumers interviewed (41%) reported re-using their own injection equipment in the month prior to interview, a slightly lower rate than reported in 2013 (48%). The main forms of equipment that consumers reported re-using were winged-infusion sets (‘butterflies’), 1ml syringes and 20ml barrels. Requiring equipment after-hours (nights or weekends) and excessive distance from an NSP were the main reasons participants provided for sharing equipment.

These are harmful injection practices, as repeated use of needles leaves them blunt, which could cause damage to the venous system, and use of non-sterile equipment can lead to the introduction of bacteria into the bloodstream, which can lead to infections, septicaemia or endocarditis. Sharing of injecting equipment greatly increases the chance of transmission of blood-borne viruses such as hepatitis C (HCV) or the human immunodeficiency virus (HIV).

Self-reported mental health

Almost half of the sample reported experiencing a mental health problem in the preceding six months (44%). Depression and anxiety-related disorders were the most commonly cited. Psychological distress, as measured by the Kessler 10 (K10), and mental health component of health, as measured by the Short Form-12 Health Survey (SF-12), demonstrate substantially higher rates of psychological distress in the IDRS sample in comparison to the Australian national average. Specifically, almost three-fifths of participants scored in either the ‘very high’ or ‘high’ categories of psychological distress (39% and 19% respectively).

Self-reported general health

Self-reported general health amongst PWID participants was generally poorer than was reported for general population samples. IDRS participants scored lower on the Physical Component of the SF-

12 than was reported for the general Australian population in the National Health Survey (NHS) (Australian Bureau of Statistics (ABS), 1995).

Driving risk behaviour

Four-fifths of the consumers interviewed, who had driven a car in the past six months, had done so after consuming illicit or non-prescribed drugs on at least one occasion. Illicit morphine was the drug most commonly involved, followed by cannabis. Overall, the extent of self-reported driving under the influence of drugs has remained stable in the past eight local IDRS studies.

Law enforcement trends among PWID

Self-reported criminal activity

One-third of participants reported they had been arrested in the preceding 12 months, most commonly for property crimes. Half of the sample self-reported involvement in some type of criminal activity in the preceding month (49%). The crimes most commonly reported were dealing drugs and property crime.

Arrests

Since 2002/03, the number of arrests relating to opioids (including heroin and other narcotics[1]) has remained relatively small and stable. With the exception of 2009/10 (30 such arrests), the number of arrests fluctuated at around 13 cases per annum (range 9-18).

Reports of arrests for methamphetamine-related offences increased from 39 in 2003/04 to 179 in 2006/07. This trend has since reversed somewhat, with 63 such arrests being reported by Tasmania Police in 2013/14[2].

The number of arrests related to cannabis remained relatively stable between 2003/04 and 2012/13, ranging between 1,337 and 1,954 (with the exception of 2005/06, when data was not provided for the full financial year). In 2012/13, this number has decreased to 918 such arrests[3].

Drug-related charges in Tasmanian Courts

From 2012/13 to 2013/14, the number of individuals before the Hobart Magistrates Court for alleged dealing and trafficking, and possession charges decreased. Conversely, the number of individuals incarcerated at Hobart Prison in relation to drug offences, and the number of offences amongst these individuals, increased between 2012/13 and 2013/14.

Special topics

Homelessness

Of the 57 participants who commented, 72% had experienced homelessness, requiring them to couch surf (i.e. stay temporarily in a series of other people's homes), sleep rough, and staying in boarding rooms/hostels. Participants reported that their first episode of homelessness typically occurred when 22-25 years old. Among the participants with an episode of homelessness, two-fifths (42%) reported being homeless for more than three years of their lives.

[1] For recording purposes, Tasmania Police class any Schedule 8 drug as 'Narcotic'. Schedule 8 drugs are 'Drugs of Addiction'.
[2] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.
[3] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

Oxycodone Use

As aforementioned, a new tamper resistant formulation of controlled release oxycodone hydrochloride tablets (Reformulated OxyContin®) was released onto the Australian market in April 2014. Data indicated lower rates of Reformulated Oxycontin® use relative to the original formulation post-release amongst participants: 59% of those who reported lifetime use of oxycodone had used Original OxyContin® in the past six months compared to 14% who had used Reformulated OxyContin®.

Chronic Conditions

Of the 68 participants who commented, two-fifths reported lifetime liver disease (37%), one-third (34%) reported a lifetime diagnosis of asthma, and one-fifth (19%) had experienced gout, rheumatism or arthritis.

Participants reported a high rate of health service utilisation: 83% had seen a general practitioner in the past 12 months, 31% had been admitted to hospital the past 12 months, and 23% had been attended by an ambulance the past 12 months. Only 38% had seen an opioid substitution treatment doctor in the past 12 months, 20% had seeing a drug and alcohol counsellor, and 17% had seen a psychologist.

1 INTRODUCTION

In 1998, the National Drug and Alcohol Research Centre (NDARC) was commissioned by the Commonwealth Department of Health and Family Services (now the Australian Government Department of Health) (AGDH) to begin a national trial of the Illicit Drug Reporting System (IDRS), following a successful pilot study of the project's methods in New South Wales in 1996 (Hando et al., 1997) and in the following year a multi-state trial in New South Wales (Hando & Darke, 1998), South Australia (Cormack et al., 1998) and Victoria (Rumbold & Fry, 1998).

The intention of the IDRS is to provide a coordinated approach to the monitoring of trends associated with the use of methamphetamine, opioids, cannabis and cocaine, in order that this information can act as an early indicator of emerging trends in illicit drug use. Additionally, the IDRS aims to be timely and sensitive enough to signal the existence of emerging problems of national importance rather than to describe phenomena in detail; instead, providing direction for issues that may require more detailed data collection, or are important from a policy perspective.

The full IDRS methodology involves a triangulated approach to data collection on drug trends, involving standardised surveys of people who regularly inject illicit drugs, a qualitative survey of key experts (KE) – individuals who have regular first-hand contact with groups of people who use illicit drugs, and an examination of existing available data sources or indicators relevant to drug use in each state. Following a replication of the IDRS process in 1998 in New South Wales, Victoria and South Australia, the IDRS was expanded nationally for 1999, with these states continuing to follow the full methodology, while Western Australia, Northern Territory, the Australian Capital Territory, Queensland and Tasmania examined drug use trends using an abbreviated design, utilising KE interviews and examination of secondary data sources only. The National Drug Law Enforcement Research Fund (NDLERF) subsequently provided these states with additional funding to expand data collection to the full IDRS methodology for 2000 through to 2005. The full methodology of the IDRS nationally has been funded by the Australian Government Department of Health since 2006. The current IDRS Project is supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund.

The 2014 Tasmanian Drug Trends Report summarizes the information gathered in the Tasmanian component of the national IDRS using the three methods outlined above: a survey of people who regularly inject illicit drugs; 'key expert' interviews with professionals working with individuals who use illicit drugs; and an examination of existing indicators relating to drugs and drug use in the state. The methods are intended to complement and supplement each other, with each having its various strengths and limitations. Results are summarized by drug type to provide the reader with an abbreviated picture of illicit drug usage in Hobart and recent trends. Reports detailing Tasmanian drug trends from 1999 through to 2013 (Bruno & McLean 2000, 2001, 2002, 2003, 2004a; Bruno, 2005, 2006; de Graaff & Bruno, 2007a, 2008, 2009, 2010, 2011, 2012, 2013; de Graaff, Peacock & Bruno, 2014) and state comparisons (McKetin et al., 2000; Topp et al., 2001, 2002; Breen et al., 2003, 2004; Stafford et al., 2005 and 2006; O'Brien et al. 2007; Black et al., 2008; Stafford et al., 2009; Stafford & Burns; 2009, 2010, 2011, 2012, 2013, 2014) are available as technical reports from the National Drug and Alcohol Research Centre, University of New South Wales[4].

1.1 Study aims

The specific aim of the Tasmanian component of the IDRS was to provide information on trends in illicit drug use in Tasmania that require further investigation.

[4] IDRS reports from all jurisdictions, as well as national reports, are available for free download in pdf format on the National Drug and Alcohol Research Centre website: http://ndarc.med.unsw.edu.au

2 METHOD

The IDRS is essentially a convergent validity study, where information from three main sources, each with its own inherent advantages and limitations, is compiled and compared to determine drug trends. The three components of the IDRS are a survey of people who regularly inject illicit drugs (PWID, or alternatively referred to as 'consumers'), a qualitative study of professionals ('key experts', KE) working in drug (or related) fields that have regular direct contact with individuals who use illicit drugs, and an examination of existing indicator data on drug-related issues. Details of each dataset are provided below. Previous work with the IDRS methodology has found that people who regularly inject drugs are an informative sentinel group for detecting illicit drug trends due to their high exposure to many types of illicit drugs. This group also has first-hand knowledge of the price, purity and availability of illicit drugs. KE interviews provide contextual information about drug use patterns and health-related issues, such as treatment presentations. The collection and analysis of existing drug use indicator data provides quantitative contextual support for the drug trends detected by the PWID and KE surveys (McKetin et al., 2000).

Data sources complemented each other in the nature of the information they provided, with information from the three sources used to determine whether there was convergent validity for detected trends, and the most reliable or 'best' indicator of a particular trend used when summarising such trends. Findings from the 2014 Tasmanian IDRS are also compared with findings from the previous Tasmanian studies (Bruno & McLean, 2000, 2001, 2002, 2003, 2004a, 2005; Bruno, 2006; de Graaff & Bruno 2007a, 2008, 2009, 2010, 2011, 2012, 2013; de Graaff, Peacock & Bruno, 2014) to determine any changes in drug trends over time.

2.1 Survey of people who inject drugs (PWID)

The PWID survey was conducted during June 2014, and consisted of face-to-face interviews with 101 people who regularly injected illicit drugs. Inclusion criteria for participation in the study were that the individual must have injected at least once monthly in the six months prior to interview, and have resided in Hobart for the past twelve months or more. Participants were recruited using a variety of methods, including advertisements distributed through Needle and Syringe Program (NSP) outlets, pharmacies (through flyers included with injection equipment) or health services, and snowball methods (recruitment of friends and associates through word of mouth). Participants were interviewed at places convenient to them, such as health services and NSP outlets. Three agencies – Anglicare (Hobart site), Department of Health and Human Services Eastern Shore NSP and the Link Youth Health Service assisted the researchers by providing support as recruitment and interview sites for IDRS participants. The major locations for recruitment and subsequent interview were Hobart city and the Eastern Shore (Rosny).

A standardised interview schedule used in previous IDRS research (Hando & Darke, 1998; McKetin, Darke & Godycka-Cwirko, 1999; Topp et al., 2001) was administered to participants. The interview schedule contained sections on demographics, drug use, price, purity and availability of drugs, crime, risk-taking, health and general changes in drug use. Participants were screened for eligibility both by referring staff members of the recruitment sites and the interviewers, the latter through a series of questions designed to elicit participants' knowledge of injecting drug use practice. Both the University of New South Wales and the Tasmanian Social Sciences Human Research Ethics Committee granted ethical approval for the survey (approval H0007853 for the Tasmanian Committee). Participants were provided with an information sheet describing the interview content prior to commencement (subsequent to screening), allowing them to make an informed decision about their involvement. Information provided was entirely confidential, and participants were informed they were free to withdraw from participation without prejudice or to decline to answer any questions if they so wished. Interviews generally lasted between 50 and 60 minutes, and participants were reimbursed $40 for their time and out-of-pocket expenses.

Data analysis was conducted using IBM SPSS for windows, release 22.0.0.0 (IBM SPSS Inc., 2013).

2.2 Survey of key experts (KE)

Twenty-three KE, who were working with people who use drugs in the greater Hobart area, participated in face-to-face interviews between July and September 2014. Fifteen KE (65%) were recruited from the pool of KE that had taken part in the 2013 IDRS (11 had also taken part in 2012; nine were also interviewed in the 2011 IDRS; seven in 2010; eight in 2009, six interviewed in 2008, five in 2007; and two in the 2000 to 2006 studies). All other participants in the current study were identified and recruited either as replacements for the 2013 IDRS participants drawn from the same agencies, or on the basis of referrals from the Tasmanian IDRS steering committee, or professionals in the field.

KE included a youth worker (n=1), members of the Department of Justice (law enforcement professionals n=2, policy n=1), consumer advocates (n=2), community development workers (n=2), and a KE working in emergency medicine. The remainder worked specifically in the drug and alcohol field, comprising counsellors and outreach workers (n=3), needle and syringe outlet workers (n=6), an Addiction Medicine specialist (n=1) and representatives from the peak alcohol and other drug (AOD) non-government organisation (NGO) sector (n=3).

Several KE were interviewed for their expert opinions on specific issues or on other particular areas (such as advocacy or dealing and production of illicit drugs). The remaining KE were interviewed in regard to their direct work with drug consumers, with entry criteria for inclusion in this aspect of the study being at least weekly contact with illicit drug users in the past six months and/or contact with ten or more illicit drug users in the last six months. Although several KE came from generic services, many worked specifically with special populations, including young people and injecting drug users.

KE were asked to specify the main illicit drug used by the drug users they had most contact with in the past six months. Five KE reported on groups that predominantly used pharmaceutical opioids (methadone, morphine, oxycodone and codeine), six on groups primarily using methamphetamine, two commented on groups that predominantly used cannabis, and the remaining KE commented on multiple drugs.

The qualitative interview schedule was a structured instrument that included sections on drug use patterns, drug availability, criminal behaviour and health issues. Interviews took between 20 and 60 minutes to administer. Notes were taken during the interview and were subsequently transcribed. Open-ended responses were analysed using word processor and spreadsheet software, sorting for recurring themes across respondents. Single reports from KE have been presented where they were deemed reliable by the interviewer, and where the information provided contributed to the explanation of particular trends. Closed-ended questions were analysed using IBM SPSS for windows, release 22.0.0.0 (IBM SPSS Inc., 2013).

2.3 Other indicators

To complement and validate data collected from the KE study and PWID survey, a range of secondary data sources was examined, including health, and law enforcement data. The pilot study for the IDRS (Hando et al., 1997) recommended that such data should be available at least annually, include 50 or more cases, provide brief details of illicit drug use, be collected in the main study site (Hobart or Tasmania for the current study), and include details on the four main illicit drugs under investigation (heroin, cannabis, cocaine and methamphetamine). However, due to the relatively small size of the illicit drug-using population in Tasmania (in comparison to other jurisdictions involved in the IDRS), and a paucity of available data, the above recommendations have been used as a guide only. Indicators not meeting the above criteria should be interpreted with due caution and attention is drawn to relevant data limitations in the text.

Data sources that fulfil the majority of these criteria and have been included in this report are outlined below.

2.3.1 Needle and Syringe Program data

The Needle and Syringe Program (NSP) has been operating in Tasmania since the introduction of the *HIV/AIDS Preventive Measures Act* in 1993. Staff record the number of needle/syringes ordered from all outlets participating in the program (around 90 outlets) and, for participating non-pharmacy outlets, data are collected regarding age, sex, equipment shared since last visit, last drug used, and disposal methods for each client transaction. The data provided represent responses from 23,426 occasions of service in the 2013/14 financial year.

There has also been some inconsistency between outlets in the wording of questions asked of clients, most notably in the question regarding substance used (the majority of services ask 'what is the drug you most often inject?' while some find that asking 'what is the drug you are about to inject?' more useful for health intervention purposes), which may impede clear comparisons of trends across years for this dataset.

2.3.2 Prevalence of last drug injected by PWID in Tasmania, provided by the Australian Needle and Syringe Program (NSP), on behalf of the collaboration of Australian Needle and Syringe Programs

The Australian NSP survey has been carried out over one week each year since 1995. During a designated survey week, NSP staff ask all clients who attend to complete a brief, self-administered questionnaire and provide a finger-prick blood sample for testing the presence of blood-borne viral infections (BBVI) such as hepatitis B (HBV) and C (HCV). The data provided here represent the reported last drug injected by survey respondents in Tasmania each year from 1995 to 2013. Between 1995 and 2010, the number of participants in the study steadily climbed from six to 106, however, since this time, the numbers of participants have been notably lower (N=68 in 2011, N=75 in 2012 and N=70 in 2013) (Iversen & Maher, 2014)[5].

2.3.3 The 1998, 2001, 2004, 2007, 2010 and 2013 National Drug Strategy Household Surveys

The National Drug Strategy Household Survey (NDSHS), run by the Australian Institute of Health and Welfare (AIHW), represents a prevalence study of drug use amongst the general community, surveying 1,031 individuals in Tasmania in the 1998 study, 1,349 individuals in 2001, 1,208 in 2004, 1,143 in 2007, 1,060 in 2010 and 1,134 in 2013 who were over 14 years of age, could speak English, and who lived in private dwellings (Australian Institute of Health and Welfare, 1999, 2002b, 2005b, 2008b, 2011, 2014). The survey investigated use of the following illicit drugs relevant to this report: cannabis; methamphetamine; hallucinogens; cocaine; ecstasy/designer drugs; and heroin. Respondents were asked whether they had ever used these drugs and whether they had used them within the past twelve months.

2.3.4 Police and Justice Department data

Tasmania Police State Intelligence Services, the Australian Crime Commission (ACC, previously the Australian Bureau of Criminal Intelligence or ABCI), and the state Justice Department have provided information on drug seizures, charges and prices. Data on the purity of drugs seized are also provided through the ACC; however, not all drug seizures are analysed for purity. Data from the

[5] The numbers of participants in each survey: 1995 n=6; 1996 n=18; 1997 n=23; 1998 n=51; 1999 n=25; 2000 n=27; 2001 n=28; 2002 n=151; 2003 n=118; 2004 n=107; 2005 n=137; 2006 n=150; 2007 n=168; 2008 n=57; 2009 n=122; 2010 n=106:2011 n=68: Iversen & Maher, 2014)

ACC for the 2013/14 financial year were not available at the time of publication. Where available, data from Tasmania Police have been used to examine changes in key law enforcement-related variables. It should be noted that these data are preliminary and subject to revision (totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules), and this issue is noted in the text as is relevant.

2.3.5 Urine screens of prisoners

The Tasmanian Justice Department has conducted random urine screens of prisoners since 1993, aiming to test approximately 10% of the state's prison population monthly. Since 1995, these screens have been increasingly based on suspicion of drug use, rather than on a purely random basis, and sample sizes have increased since this time (1995/96 n=111; 1996/97 n=283; 1997/98 n=253; 1998/99 n=267; 1999/00 n=359; 2000/01 n=541; 2001/02 n=561; 2002/03 n=467; 2003/04 n=261; 2004/05 n=416; 2005/06 n=376; 2006/07 n=337; 2007/08 n=788; 2008/09 n=734; 2009/10 n=754; 2010/11 n=862; 2012/13 n=574; 2013/14=490). In the 2013/14 financial year, the Justice Department utilised only standard urine screen tests for the presence of drugs.

2.3.6 Blood-borne viral infections surveillance data

Blood-borne viral infections (BBVI), in particular HIV/AIDS and HBV and HCV, are a major health risk for individuals who inject drugs. An integrated surveillance system has been established in Australia for the purposes of monitoring the spread of these diseases. The Department of Health and Human Services, Public Health Division, records notifications of diagnoses of HIV, HBV and HCV in Tasmania, and, where possible, records the relevant risk factors for infection that the person may have been exposed to. There are limitations to the interpretation of this dataset in terms of monitoring trends in the spread of these viruses. For example, many injecting drug users who have been exposed to HCV may not undergo testing. Further, it is difficult to confidently determine whether notifications represent new cases or those that have been established for some time.

2.3.7 Tasmanian Pharmacotherapy Program data

Pharmaceutical Services Branch (Tasmanian Department of Health and Human Services) maintains a database that records all maintenance pharmacotherapy program registrations (methadone, buprenorphine, and buprenorphine-naloxone) in Tasmania, along with applications to prescribe a combination of an opioid and alprazolam. The number of annual new admissions to the pharmacotherapy program, the number of active daily clients and applications to prescribe both an opioid and alprazolam, are presented.

2.3.8 Coronial findings on illicit drug-related fatalities

In previous IDRS reports, overdose-related fatalities data from 1998 to the present (provided by the Australian Bureau of Statistics, ABS) have been presented. The ABS has changed the way they collate deaths data, making comparisons to earlier overdose bulletins published by the National Drug and Alcohol Research Centre difficult (Degenhardt & Roxburgh, 2007a; Degenhardt & Roxburgh, 2007b). Since 2003, the ABS has progressively ceased visiting jurisdictional coronial offices to manually update causes of death that had not been loaded onto the computerised National Coronial Information System (NCIS), and in 2006 the ABS began to rely solely on data contained on NCIS at the time of closing the deaths data file. This data is subject to a revision process: preliminary data is released and then two successive revisions are published at 12 month intervals. The 2006 data were not subject to this revision process. With the aim of offsetting potential incorrect figures from 2006 data, Roxburgh and Burns (2013) analysed changes between the 2007 and 2008 preliminary and revised data, averaged these out and applied these to the 2006 figures (the 2006 figures should be interpreted with caution).

2.3.9 Hospital morbidity data

Hospital morbidity data in relation to use of drugs have been provided by the Australian Institute of Health and Welfare (AIHW) for the 1999/00 to 2012/13 financial year periods (data for 2013/14 was not available at the time of publication). These data relate to public hospital admissions for individuals aged between 15 and 54 years, where drug use was recorded as the 'principal diagnosis'; namely, where the effect of a drug was established, after study, to be chiefly responsible for occasioning the patient's episode of care in hospital (with the exception of admissions for psychosis and withdrawal). These figures were based on diagnoses coded according to the International Classification of Diseases (ICD) 10, second edition. It is also important to note that data from the state's single public specialist detoxification centre are only included in this dataset from June 2002.

2.3.10 Tasmanian alkaloid poppy crop data

Tasmania has had a commercial opiate alkaloid industry for many years, where farmers are licensed to grow the poppy (*Papaver somniferum*) for production of codeine and related products by pharmaceutical companies. The Tasmanian Government has international obligations under the United Nations Convention on Narcotic Drugs to ensure licensing of crops, and that there is limited diversion, as some of the poppy strains grown can be converted into opium. Data on diversion rates of Tasmanian poppy crops have been provided by the Poppy Advisory and Control Board of the Tasmanian Justice Department, as they are a useful indicator of potential illicit use of opium or poppy tar.

2.3.11 Telephone advisory services data

Tasmania has two 24-hour alcohol and drug-related telephone information services. In mid-May 2000, Turning Point Alcohol and Drug Centre in Victoria took over responsibility for administration of the Tasmanian Alcohol and Drug Information Service (ADIS), a confidential drug and alcohol counselling, information and referral service. Turning Point systematically records data for each call received, which comprised 2,208 calls to ADIS during the 2000/01 financial year; 2,129 calls in 2001/02; 1,984 in 2002/03; 1,554 during 2003/04; 1,332 calls during 2004/05; 1,469 calls in 2005/06; 1,474 calls in 2006/07; 1,525 in 2007/08; 1,556 in the 2008/09 financial year, 1,416 in 2009/10, 1,414 in 2010/11; 977 in 2011/12; 1,042 in 2012/13 and 1,223 in 2013/14.

3 DEMOGRAPHICS

Key Points:

- A total of 101 participants were interviewed for the IDRS in 2014;
- Mean age was 38 years (range 19-64 years);
- 65% were male;
- Three-quarters were unemployed at the time of the interview;
- Almost half were engaged in a form of drug treatment at the time of the interview, predominantly methadone maintenance treatment; and
- Two-fifths had a prison history.

3.1 Overview of the PWID sample

A total of 101 consumers were interviewed. The demographic characteristics of the PWID sample are presented in Table 1. The mean age of participants in the 2014 study was 38 years (SD =8.5, range 19-64 years). The average age of the cohort has increased from 26 years in 2000. Two-thirds of the 2014 cohort was male, and 10% were of an Aboriginal and/or Torres Strait Island background. Almost all participants described themselves as heterosexual (97%), and half reported not being in a relationship (58%).

Among those interviewed in 2014, there was a mean of 10 years of school education (SD=1.4, range 6-12 years), similar to that of cohorts in previous years. Half of the participants interviewed had attained a trade or technical qualification and 11% had completed tertiary studies at a university. At the time if the interview, three-quarters of the sample were unemployed, and almost all had received a form of government benefit in the preceding six months (92%).

Almost half were engaged in a form of drug treatment (45%), most commonly methadone (71% of those in treatment). Two-fifths had been in prison at some stage of their lifetime.

Table 1: Demographic characteristics of the PWID sample, 2013-2014

Characteristic	2013 N=107	2014 N=101
Age (mean years, range)	37 (19-63)	38 (19-64)
Sex (% male)	57	65
Aboriginal and/or Torres Strait Islander (%)	19	10
Sexual orientation (%):		
Heterosexual	90	97
Bisexual	6	2
Gay or lesbian	4	1
Other	1	1
Relationship status (%):		
Married/de facto	24	16
Partner	26	19
Single	45	58
Separated	1	4
Divorced	2	2
School education (mean no. years, range)	10 (7-12)	10 (6-12)
Tertiary education (%):		
None	73	41
Trade/technical	20	49
University/college	8	11
Employment (%):		
Not employed/on a pension	77	75
Full-time	0	6
Part-time/casual	9	8
Home duties	13	6
Student	1	1
Currently in drug treatment^ (%)	47	45
Prison history (%)	37	41

Source: IDRS PWID interviews

^ Refers to any form of drug treatment, including pharmacotherapies, counselling, detoxification, etc.

The average fortnightly income in the preceding fortnight was $499 (median $400, SD=$462, range $175-4,000). Amongst the 98 participants reporting having received any government benefit in the preceding six months, 6% (n=6) reported these payments had been stopped during this period.

Participants were also asked questions about financial stress. These questions were taken from the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Wilkins et al., 2010). This study, which is conducted by the Melbourne Institute of Applied Economic and Social Research, University of Melbourne, reports representative national longitudinal data of residents of Australian households occupying private dwellings on four broad life domains: household and family life; incomes and economic wellbeing; labour market outcomes; and life satisfaction, health and wellbeing. The questions taken from the HILDA survey focus on measures of financial stress as defined by the content items in Table 2.

The Tasmanian IDRS participants scored significantly higher on all measures of financial stress than the general community sample (Table 2): four-fifths of the IDRS sample reported asking for financial help from family or friends; 62% had pawned or sold something; and half had either gone without meals or were unable to pay a power, phone or gas bill on time (51% and 48% respectively).

Table 2: Financial stress among IDRS (2014) and HILDA (2007) participants

	2007 HILDA sample N=12,789 %	2014Tasmanian IDRS sample N=99 %	p value[#]
In the last six months:			
Could not pay power, phone or gas bill on time	11	48	p<0.001
Could not pay rent or mortgage on time	6	27	p<0.001
Pawned or sold something	4	62	p<0.001
Went without meals	3	51	p<0.001
Unable to heat home	2	33	p<0.001
Asked for financial help from family or friends	12	79	p<0.001
Asked for financial help from welfare organisation	3	34	p<0.001

Source: IDRS PWID interviews, Wilkins et al., 2010

[#]Using χ^2 tests with 1 degree of freedom

The sample was drawn from suburbs within the northern, eastern, southern, and inner city areas of Hobart. Based on local council areas, participants were from Clarence (49%), Hobart City (30%), Glenorchy City (16%); and small proportions form Kingborough, Brighton and the Huon Valley. The majority of participants lived in their own (rented or owned) house or flat (81%) and 11% in their parent's or family home.

Two-fifths (41%) had been imprisoned at some stage in their lives: similar to rates in previous IDRS surveys (between 37% and 47% from 2008-2013). There was a greater proportion of males reporting a prison history (50%, n=32) than females (26%, n=9) (χ^2 ($1_{n=99}$)=5.50, p=0.016).

Notably, almost half the sample (45%) was in some form of drug treatment at the time of interview, similar to the rate reported in 2013 (47%). Since 2006, this rate has varied between 40% and 56%.

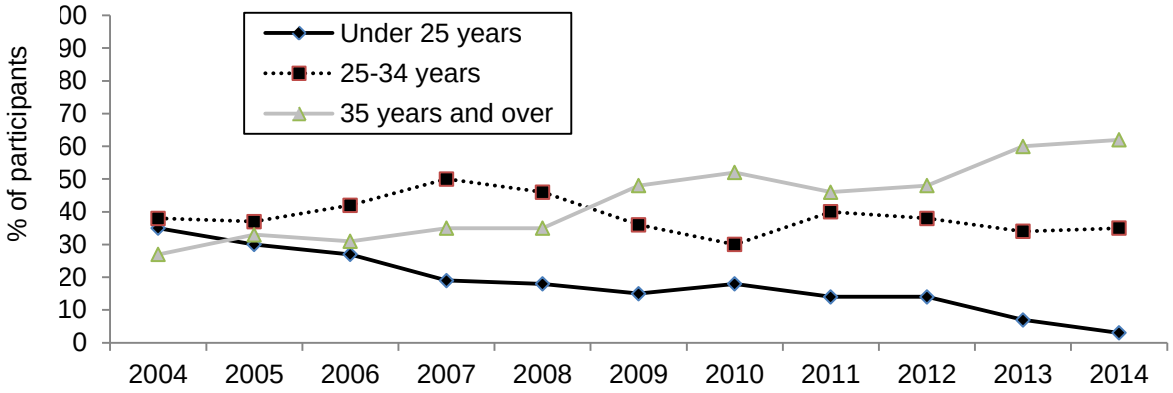
The demographic characteristics of the Tasmanian 2013 PWID sample are largely similar to previous Tasmanian PWID samples (Bruno & McLean 2001, 2002, 2003, 2004a; Bruno 2005, 2006; de Graaff & Bruno 2007a, 2008, 2009, 2010, 2011, 2012, 2013, de Graaff, Peacock & Bruno, 2014). There have been substantial overlaps in those participating in the IDRS studies over time: of the participants in the 2014 study who commented (n=44), almost three-quarters (70%) had previously participated in another IDRS study. Of this group, 20 participated in the 2013 study, 21 in the 2012 study, 11 participated in the 2011 study, nine participated in the 2010 study, six in 2009 and five in 2008 and 2007. This is consistent with patterns in previous IDRS studies.

Given that the sampling procedure for the IDRS studies is largely convenience-based in nature, there is the possibility for notable shifts in demographics to occur which may impact on the interpretation of differences in the patterns of drug use identified in the annual consumer cohorts. Between the 2013 and 2014 local PWID cohorts, of the demographics examined in Table 1, just one notable difference was observed. The proportion of participants reporting no tertiary education, including both TAFE and university courses, decreased significantly from 73% in 2013 to 41% in 2014 (χ^2 ($1_{n=208}$)=20.8, p>0.001). This variation may have an impact on the patterns of substance use reported amongst the PWID participants, and reference to this, along with other notable discrepancies between the 2014 PWID and previous PWID samples, will be discussed in subsequent sections of this report.

3.1.1 Age and sex of the PWID sample over time

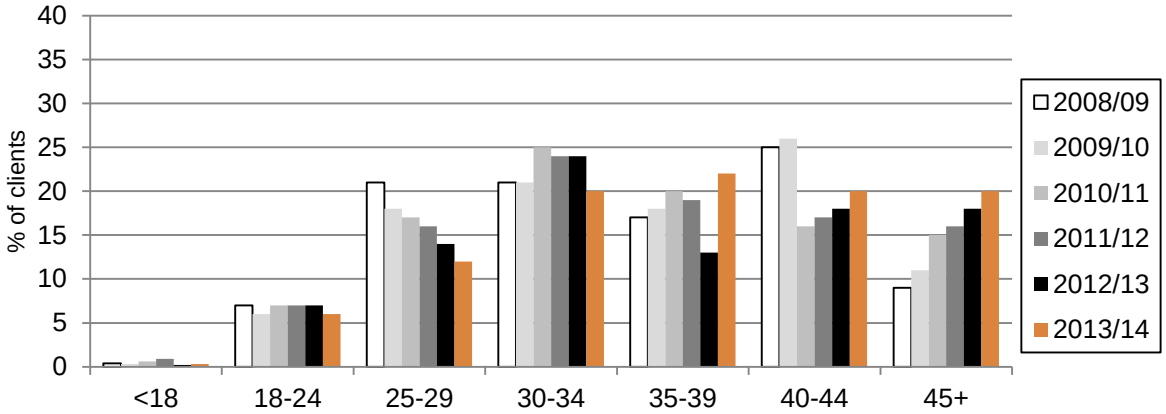
As could be expected, with a noteworthy overlap in participants across these annual samples, the mean participant age in the Tasmanian PWID cohorts steadily increased between 2004 and 2014, from 28 years to 38 years. The rate of participants aged 35 years or older steadily increased from 27% in 2004 to 62% in 2014 (χ^2 ($1_{n=201}$)=24.0, p<0.01) (Figure 1). According to the Tasmanian NSP data, there has been a marked increase in the proportion of clients older than 35 accessing NSP outlets in recent years (Figure 2). In 2013/14, three-fifths (62%) of non-pharmacy NSP transactions involved clients aged 35 or over. Interestingly, an increasing age of PWID has also been seen in other jurisdictions conducting the IDRS where there is minimal participant overlap between samples (Degenhardt et al., 2008), and has also been noted in independent studies of NSP attendees nationally (Iversen & Maher, 2014).

Figure 1: Age distribution of PWID in the Tasmania (Hobart) IDRS samples, 2004-2014



Source: IDRS PWID interviews

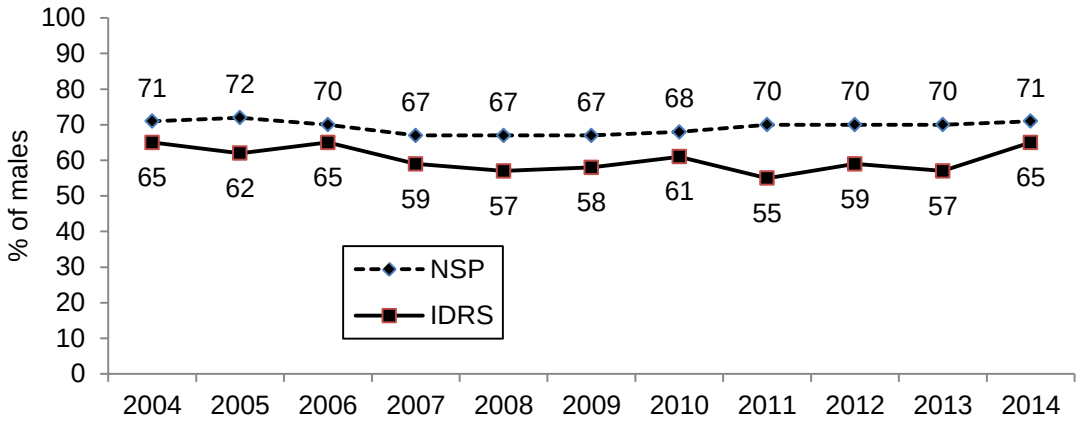
Figure 2: Age of clients of non-pharmacy Needle and Syringe Program outlets in Tasmania, 2008/09-2013/14



Source: Tasmanian Needle and Syringe Program
Note: In 2008/09, changes were made to the way in which these data were collected (i.e. age categories), rendering comparisons with previous years not possible

Within the IDRS PWID cohorts, the proportion of male participants has remained relatively unchanged since 2004, ranging between 55% and 65% (Figure 3). Data from the Tasmanian NSP program also shows relatively stable proportions of male clients, ranging between 67% and 72% of all client transactions from 2004 to 2014 (NSP: Figure 3).

Figure 3: Proportion of males amongst Tasmanian IDRS PWID cohorts and Tasmanian non-pharmacy Needle and Syringe Program clients, 2004-2014



Source: IDRS PWID interviews and Tasmanian Needle and Syringe Program

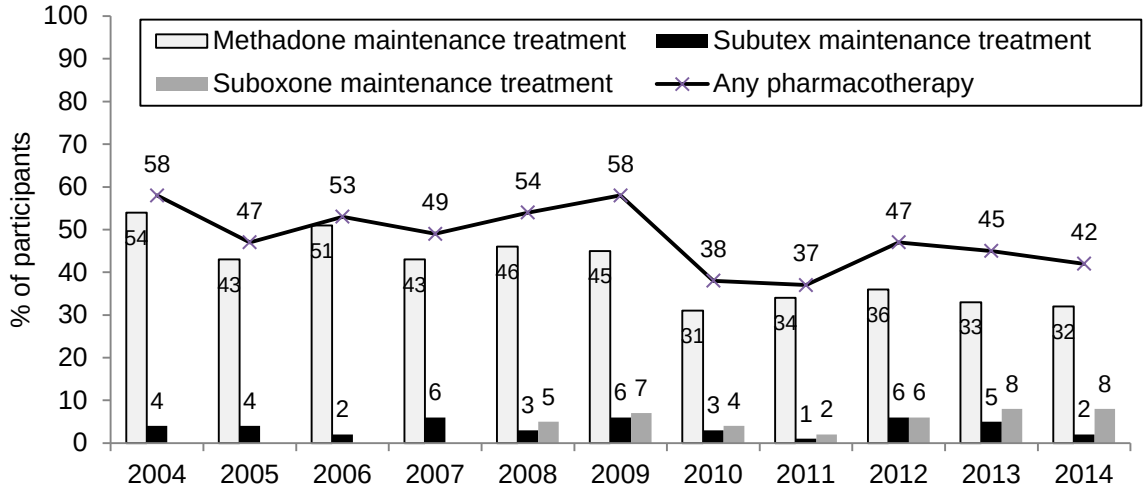
3.2 Current and previous drug treatment

Almost half of the participants (45%) reported being engaged in some form of drug treatment at the time of interview: similar to rates reported since 2010 (ranging between 40% and 49%). Most participants who were engaged in treatment reported accessing methadone maintenance treatment (32%), Suboxone (8%) or Subutex treatments (2%). The mean duration of time in methadone maintenance treatment was 87 months (SD=76, range 2-240 months); for Suboxone 20 months (SD=29, range 1-84 months); and for Subutex 42 months (SD=8, range 36-48 months).

Figure 4 shows a trend of decreasing engagement in opioid substitution therapy (OST) among IDRS participants, from 58% of the sample in 2004 down to 42% in 2014 (χ^2 ($1_{n=201}$)=4.8, p=0.03). Methadone has consistently remained the predominant form of OST reported by IDRS participants.

Engagement in other forms of drug treatment over the preceding six months is shown in Table 3. Since 2004, the proportion of participants reporting access to AOD counselling has decreased from 25% to 3% (χ^2 ($1_{n=201}$)=18.5, p<0.001). Rates of engagement in other forms of non-pharmaceutical-based treatment have remained consistently low.

Figure 4: Proportion of the PWID sample accessing methadone or buprenorphine maintenance treatments at the time of interview, 2004-2014



Source: IDRS PWID interviews

Table 3: Proportion of participants reporting treatments other than opioid replacement pharmacotherapy in past six months, 2004-2014

Treatment type	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
AOD Counselling	25	17	20	17	11	10	3	4	9	8	3
Detoxification	3	0	0	4	5	0	1	1	3	3	1
Therapeutic community or rehabilitation	1	0	0	1	2	0	1	2	3	1	2
Narcotics Anonymous	0	0	0	0	0	0	1	1	2	1	0
Other	2	2	2	2	1	1	0	0	2	1	1

Source: IDRS PWID interviews
Note: Multiple responses could be selected

4 CONSUMPTION PATTERNS

Key Points:

- The mean age of first injection was 20 years (range 11-60 years);
- Three-fifths (59%) reported a form of methamphetamine as the first drug they injected;
- One-quarter respectively reported methadone (24%), morphine (24%), and methamphetamine (23%) as their drug of choice;
- Three-quarters (75%) reported an opioid as the drug most frequently injected in the preceding month; and
- Polydrug use was common across the sample.

4.1 Drug use history and current drug use

The mean age reported at first injection was 20.2 years (SD=6.9, range 11-60) (Table 4). This was similar to the age reported in 2013 (20.0 years, SD=6.5, range 12-60). There were no significant sex differences in the age of first injection (21.2 years for females and 19.7 years for males).

The mean injecting drug-using career for the 2014 cohort was 18.2 years (SD=8.3, range 1-42 years). Males reported a significantly longer mean injecting career compared to female participants (19.4 years versus 15.9 years; t(72)=71.27, p=0.043). Three-fifths reported methamphetamine as the first drug injected (59%), 24% reported morphine and 8% reported heroin (Table 4).

One-quarter of the 2014 IDRS PWID cohort reported methadone, morphine, and methamphetamine (24%, 24%, and 23% respectively) as their drug of choice. Overall preference for any form of opioid (including heroin, methadone, morphine and oxycodone) was reported by 66% of the sample, similar to the rate reported in 2013 (62%).

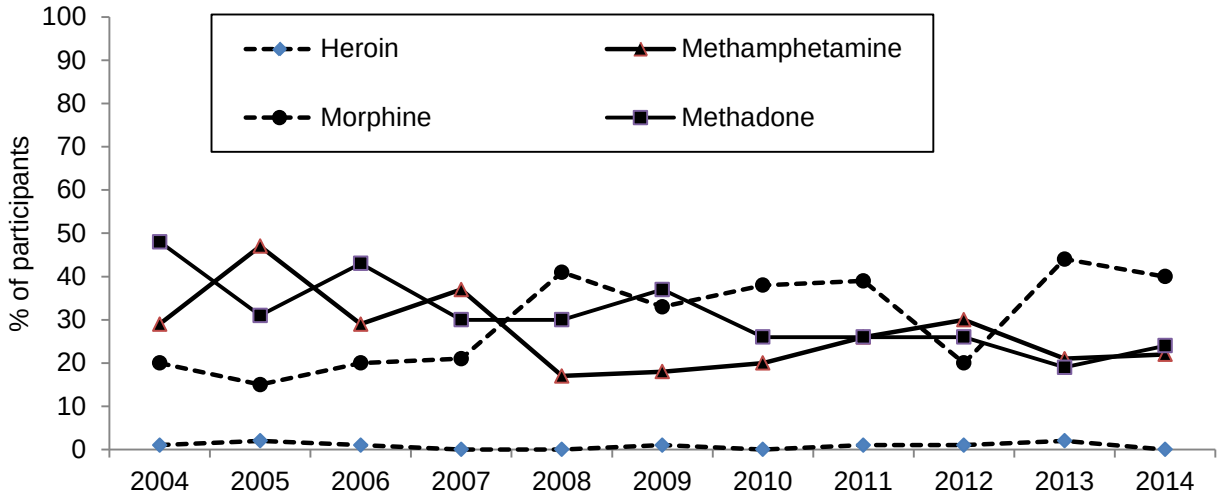
Consistent with the high preference for opioids among the current participants, 75% reported an opioid as the drug they had most often injected in the preceding month. In accordance with drug preferences, the most commonly injected opioid drugs were morphine (40%), methadone (24%) and methamphetamine (22%). No participants reported heroin as the drug most injected in the last month. Whilst reports of methamphetamine as the most recent drug injected increased from 2013 to 2014 (16% versus 29%: $\chi^2(1_{n=208})=4.25$, p=0.039), reports of methamphetamine as the *most frequent* drug injected in the past month were similar in 2013 (21%) and 2014 (22%) (Figure 5).

Table 4: Injection history, drug preferences and polydrug use of participants, 2013-2014

Variable	2013 N=107	2014 N=101
Age first injection (years)	20.0 (range 12-60)	20.2 (range 11-60)
First drug injected (%)		
Heroin	10	8
Methamphetamine	59	59
Methadone	1	3
Morphine	24	24
Oxycodone	1	0
Cocaine	1	0
Drug of choice (%)		
Heroin	24	15
Cocaine	1	0
Methamphetamine (any form)	23	23
Speed	*16*	*9*
Base	*1*	*0*
Crystal (ice)	*6*	*14*
Methadone	8	24
Morphine	26	24
Oxycodone	6	3
Benzodiazepines	2	0
Cannabis	5	3
Drug injected most often in last month (%)		
Heroin	2	0
Cocaine	0	0
Methamphetamine (any form)	21	22
Speed	*13*	*14*
Base	*0*	*0*
Crystal (ice)	*8*	*8*
Methadone	19	24
Morphine	44	40
Benzodiazepines	1	0
Buprenorphine	2	7
Oxycodone	9	4
Most recent drug injected (%)		
Heroin	2	0
Cocaine	0	1
Methamphetamine (any form)	16	29
Speed	*12*	*19*
Base	*0*	*0*
Crystal (ice)	*4*	*10*
Methadone	27	23
Buprenorphine (all forms)	3	5
Morphine	31	34
Oxycodone	12	3
Frequency of injecting in last month (%)		
Weekly or less	9	17
More than weekly, but less than daily	63	47
Once per day	12	20
2-3 times a day	15	16
>3 times a day	1	0
Polydrug use		
Mean number of drug classes ever used* (range)	6.5 (3-7)	6.2 (2-7)
Mean number of drug classes used* in last 6 months (range)	4.6 (1-7)	4.8 (1-7)
Mean number of drug classes ever injected^ (range)	2.6 (1-4)	2.3 (1-4)
Mean number of drug classes injected^ in last 6 months (range)	1.9 (1-3)	1.8 (1-3)

Source: IDRS PWID interviews. ***** 'used' refers to any of the following routes of administration: smoke/inhale, snort, swallow/ingest and inject. The seven categories refer to: stimulants, opioids, hallucinogens, benzodiazepines, cannabis, alcohol and tobacco. ^ Refers to 5 categories only (omitted tobacco and cannabis)

Figure 5: Drug injected most last month, 2004-2014



Source: IDRS PWID interviews

Participants were asked about the frequency of injection in the month preceding the interview (Table 4): almost half (47%) injected more than weekly but not daily, with one-third (36%) daily or more frequently.

Almost all participants reported using a drug on the previous day (99%) (Table 5), in contrast to just 63% reporting having spent money on drugs on that day. Cannabis was the most commonly used drug on the day prior to interview, reported by 57%. Two-fifths of the sample reported use of a benzodiazepine (39%), and one-third reported use of methadone (32%: although only three of these respondents were not currently enrolled in opioid substitution treatment) and/or morphine (29%) on the day prior to the interview. One-fifth (21%) had used alcohol and one-tenth (11%) had used methamphetamine powder, with 7% using methamphetamine crystal

Table 5: Drugs taken on the day prior to interview among the PWID sample, 2008-2014

Drug*	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Cannabis	71	57	60	64	59	54	57
Methadone^	41	41	32	34	35	32	32
Benzodiazepines	33	39	32	38	30	48	39
Morphine	31	28	28	24	16	30	29
Methamphetamine: powder	4	9	10	8	17	5	11
Methamphetamine: base/paste	0	2	3	3	3	1	1
Methamphetamine: crystal	1	2	0	1	2	2	7
Heroin	0	0	0	1	0	0	0
Cocaine	0	0	1	0	1	0	0
Alcohol	13	22	27	29	31	15	21
Antidepressant	1	4	5	17	11	21	8
Buprenorphine	3	5	2	3	4	8	2
Buprenorphine-naloxone	3	4	1	2	8	8	10
Oxycodone	2	2	9	6	11	10	4
Other opiates	1	4	2	8	4	4	2
Did not use any drugs	*3*	*5*	*1*	*0*	*0*	4	1

Source: IDRS PWID interviews

* Could list more than one drug

^ Includes prescribed methadone

Participants were also asked about the location in which they last injected (Table 6). A small minority injected in public spaces (15%). The proportion of the cohort reporting injecting in public places has remained consistently between 10% and 18% from 2008 to 2014.

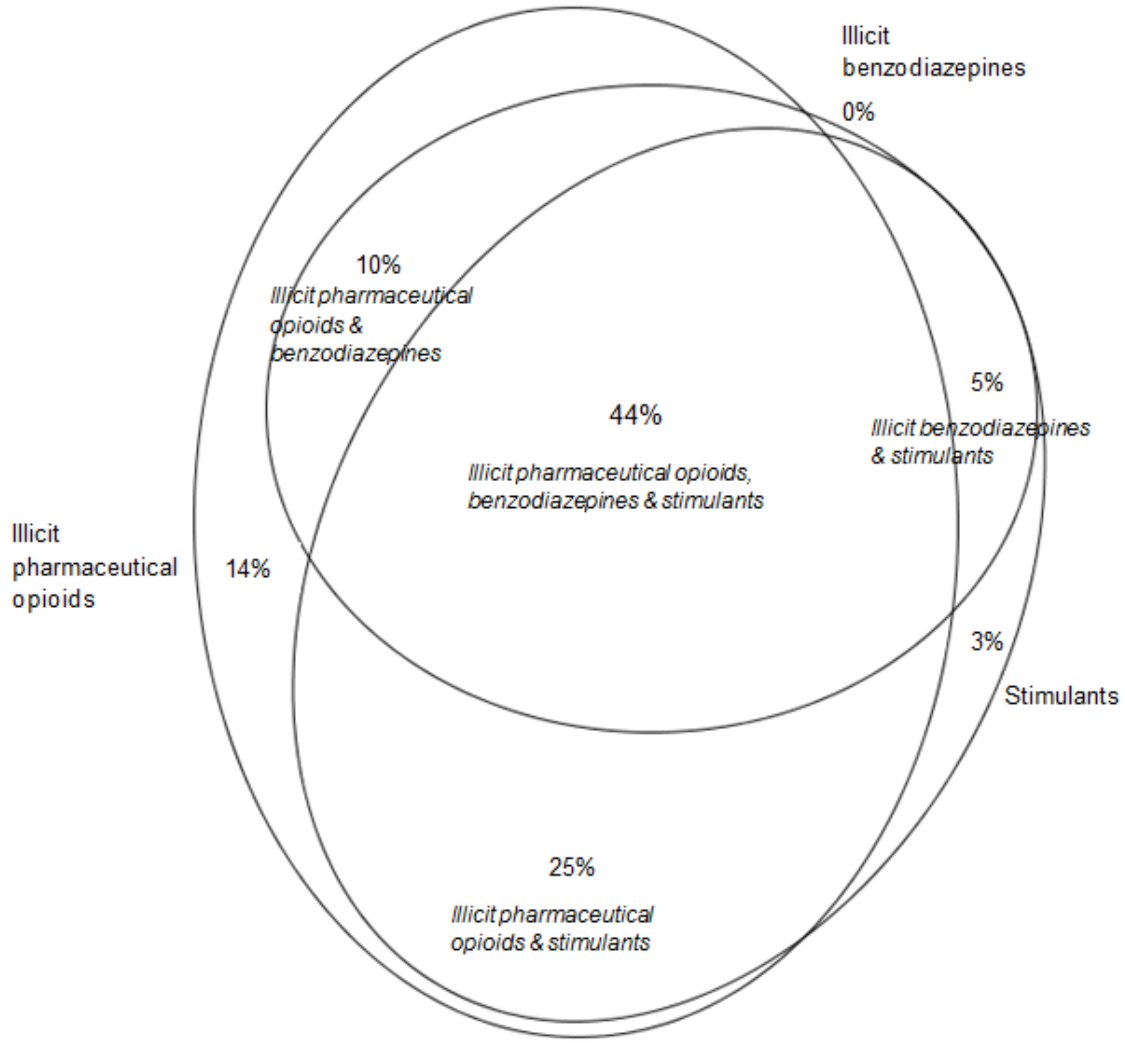
Table 6: Location in which respondents last injected, 2008-2014

	2008 N=100 %	2009 N=100 %	2010 N=100 %	2011 N=100 %	2012 N=106 %	2013 N=105 %	2014 N=101 %
Private home	87	86	86	79	87	91	85
Public toilet	6	6	7	4	4	3	7
Car	7	6	4	12	9	7	8
Street/park or beach	0	2	2	2	1	0	0

Source: IDRS PWID interviews

Drug use histories of the 2014 IDRS PWID respondents are summarised in Table 7. There was a substantial level of polydrug use among this group, as almost all individuals had used methamphetamine, morphine, methadone, oxycodone, benzodiazepines, alcohol, cannabis and tobacco at some stage in their lives. Of the 7 possible drug classes examined (opioids, stimulants, hallucinogens, cannabis, benzodiazepines, tobacco and alcohol), participants had used a median of 6 (mean = 6.2, SD = 1.0, range 2-7) in their lives, and 5 (mean = 4.8, SD = 1.2, range 1-7) in the preceding six months. Participants reported injecting a median of 2 drug classes over their lifetime (mean = 2.3, SD = 0.7, range 1-4), and 2 (mean = 1.8, SD = 0.6, range 1-3) in the preceding six months. These rates are consistent with those interviewed in 2013 (Table 4). Figure 6 illustrates polydrug use over the preceding six months, specifically for illicit benzodiazepines, stimulants and illicit pharmaceutical opioids. Over two-fifths of the participants (44%) had used stimulants, illicit pharmaceutical opioids and illicit benzodiazepines in the preceding six months, with a further one-quarter of the sample (25%) using both stimulants and illicit pharmaceutical opioids in this time. Given that only 14% of the current cohort reported solely using illicit pharmaceutical opioids and 3% solely using stimulant drugs, it is clear that the current cohort could predominantly be considered as polydrug consumers. This is an important consideration, as descriptions of 'primary methamphetamine consumers' or 'primary opioid consumers' in subsequent sections of the report will likely also be consumers of drugs of the opposing class.

Figure 6: Polydrug use in the preceding six months amongst the PWID cohort, 2014



Source: IDRS PWID interviews

Table 7: Polydrug use history of the PWID sample, 2014

Drug Class	Ever used %	Ever Injected %	Injected last 6 mths %	Days injected in last 6 mths*	Ever Smoked %	Smoked last 6 mths %	Ever snorted %	Snorted last 6 mths %	Ever Swallowed %	Swallowed last 6 mths+ %	Used^ last 6 mths %	Days in treatment* last 6 mths	Days used^ in last 6 mths*
Heroin	60	60	13	3	13	0	4	0	2	0	13		3
Homebake heroin	27	25	1	90	1	0	0	0	2	1	2		47
Any heroin (inc. homebake)	*63*	*63*	*14*	*3*	*13*	*0*	*4*	*0*	*4*	*1*	*14*		*3*
Methadone (prescribed)	56	41	23	48					49	26	32	180~	98
Methadone (not prescribed)	69	67	34	12					17	4	35		12
Physeptone (prescribed)	15	10	2	91	0	0	0	0	8	2	3	~	4
Physeptone (not prescribed)	66	64	36	6	0	0	1	0	13	5	38		6
Any methadone (inc. Physeptone)	*83*	*80*	*52*	*48*					*56*	*28*	*55*		*90*
Buprenorphine (prescribed)	26	12	1	180	1	1	0	0	22	4	4	48	30
Buprenorphine (not prescribed)	22	16	7	22	0	0	0	0	12	6	11		4
Any Buprenorphine (excl. buprenorphine-naloxone)	*41*	*25*	*7*	*30*	*1*	*1*	*0*	*0*	28	*10*	*15*		*12*
Buprenorphine-naloxone tablets (prescribed)	16	6	0	-	0	0	0	0	14	3	3	2	2
Buprenorphine-naloxone tablets (not prescribed)	13	8	4	13	0	0	1	0	5	2	6		9
Any Buprenorphine-naloxone tablets	*24*	*13*	*4*	*13*	*0*	*0*	*1*	*0*	*17*	*6*	*9*		*6*
Buprenorphine-naloxone film (prescribed)	15	4	1	10	0	0	0	0	15	6	10		89
Buprenorphine-naloxone film (not prescribed)	16	9	6	69	1	0	0	0	8	6	11		3
Any Buprenorphine-naloxone film	*28*	*13*	*7*	*48*	*1*	*0*	*0*	*0*	*22*	*15*	*19*		*48*
Morphine (prescribed)	29	22	3	24	0	0	0	0	12	2	4		15
Morphine (not prescribed)	92	92	71	40	1	0	2	0	20	7	71		44
Any Morphine	*94*	*94*	*71*	*44*	*1*	*0*	*2*	*0*	*29*	*8*	*71*		*48*

Table 7: Polydrug use history of the PWID sample, 2014 (continued)

Drug Class	Ever used %	Ever Injected %	Injected last 6 mths %	Days injected in last 6 mths*	Ever Smoked %	Smoked last 6 mths %	Ever snorted %	Snorted last 6 mths %	Ever Swallowed %	Swallowed last 6 mths+ %	Used^ last 6 mths %	Days in treatment* last 6 mths	Days used^ in last 6 mths*
Oxycodone (prescribed)	21	17	5	53	0	0	0	0	11	3	7	180	30
Oxycodone (not prescribed)	82	79	46	6	1	0	1	0	12	3	47		6
Any Oxycodone	82	*79*	*47*	*6*	*1*	*0*	*1*	*0*	*19*	*6*	*49*		*6*
Fentanyl (any)	10	2	0	-	0	0	0	0	0	0	2		46
Over-the-counter codeine	26	1	1	1	0	0	0	0	26	13	13		24
Other opioids (not elsewhere classified)	36	1	0	-	0	0	0	0	36	24	24		20
Speed powder	90	87	49	10	11	3	24	3	21	3	50		11
Base/point/wax	44	44	18	12	1	0	0	0	4	1	19		12
Ice/shabu/crystal	79	74	50	6	20	9	5	2	4	1	54		6
Amphetamine liquid	13	12	4	12					1	0	4		12
Any form methamphetamine	*94*	*92*	*68*	*15*	*24*	*10*	*25*	*4*	*23*	*4*	*70*		*18*
Pharmaceutical stimulants (prescribed)	8	5	2	100	1	0	2	0	7	0	2		100
Pharmaceutical stimulants (not prescribed)	58	55	33	6	2	0	4	1	13	5	34		10
Any form pharmaceutical stimulants	*60*	*55*	*34*	*6*	*3*	*0*	*5*	*1*	*16*	*5*	*35*		*10*
Cocaine	51	18	0	-	2	0	42	8	6	1	8		2
Hallucinogens	65	10	3	2	3	1	3	0	61	10	13		2
Ecstasy	67	21	6	2	3	0	8	1	63	18	20		2
Alprazolam (prescribed)	23	7	0	-	0	0	0	0	22	4	4		126
Alprazolam (not prescribed)	64	28	8	4	0	0	3	1	53	29	36		4
Any alprazolam	*69*	*29*	*8*	*4*	*0*	*0*	*3*	*1*	*57*	*32*	*39*		*na*

Table 7: Polydrug use history of the PWID sample, 2014 (continued)

Drug Class	Ever used %	Ever Injected %	Injected last 6 mths %	Days injected in last 6 mths*	Ever Smoked %	Smoked last 6 mths %	Ever snorted %	Snorted last 6 mths %	Ever Swallowed %	Swallowed last 6 mths+ %	Used^ last 6 mths %	Days in treatment* last 6 mths	Days used^ in last 6 mths*
Benzodiazepines (prescribed) (excl. alprazolam)	53	5	0	-	0	0	0	0	53	46	46	na	180
Benzodiazepines (not prescribed)(excl. alprazolam)	58	3	1	2	0	0	0	0	57	46	48		20
Any benzodiazepines (excl. alprazolam)	*80*	*7*	*1*	*2*	*0*	*0*	*0*	*0*	*79*	*72*	*74*		*na*
Seroquel (prescribed)	17	1	0	-	1	1			17	10	11	na	180
Seroquel(not prescribed)	31	0	0	-	*2*	*2*			29	13	15		5
Any Seroquel	*43*	*1*	*0*	-	2	2			*42*	*22*	*24*		*11*
Steroids	4	4	1	n/r					1	0	1		n/r
Alcohol#	83	5	0	-					83	51	51		6
Cannabis	96				95	81			29	4	82		180
Inhalants	20										5		12
Tobacco	95										89		180

Source: IDRS PWID interviews

^ Refers to any route of administration, i.e. includes use via injection, smoking, swallowing, and snorting

+ Refers to/includes sublingual administration of buprenorphine

***** Among those who had used/injected

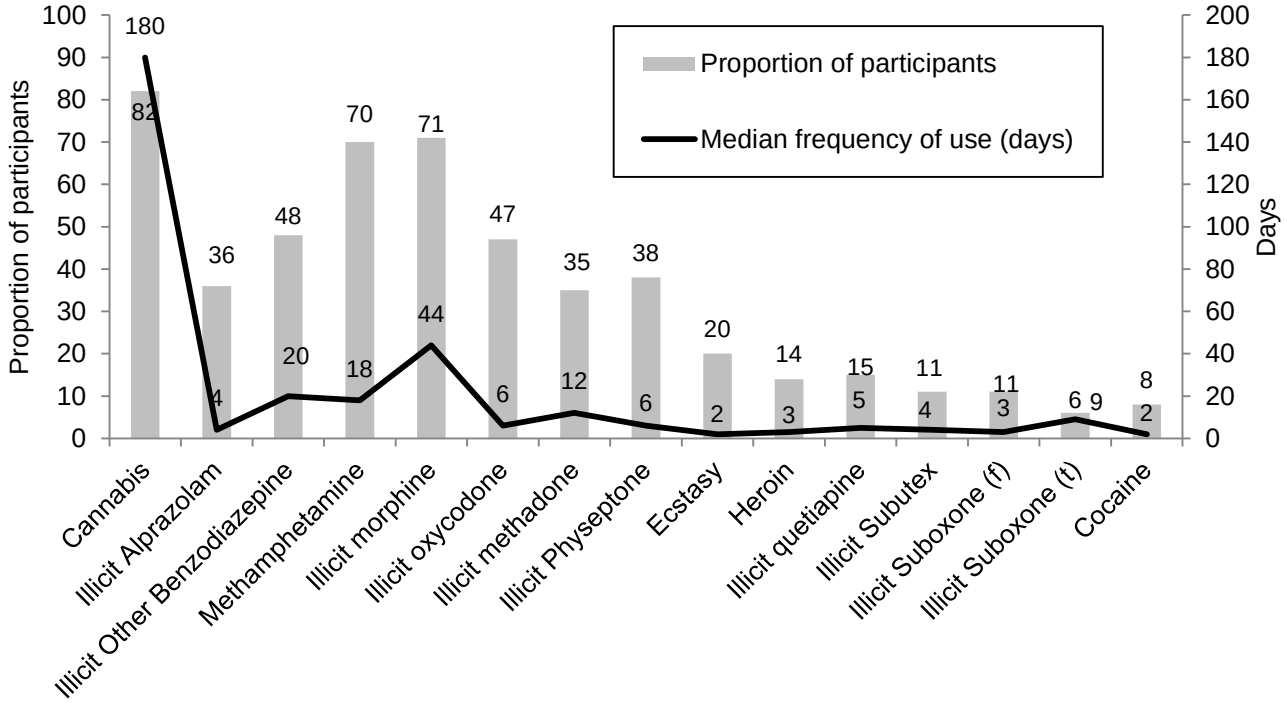
n/r this data was not reported

Note that only 93 participants provided information regarding lifetime use of this drug, with only 84 of these participants commenting on recent use

na Not assessed

Overall, the most commonly used illicit drugs in the six months preceding interview were cannabis and morphine, used by 82% and 71% of participants, at a median frequency of 180 days (daily use) and 44 days (approximately twice a week) respectively (Figure 7). Over two-thirds reported recent use of methamphetamine (70%; median frequency of 18 days); 48% and 36% reported use of illicit benzodiazepines and alprazolam (at a median frequency of 20 days and 4 days respectively); and 47% reported illicit oxycodone use (median frequency of 6 days, approximately once per month). Illicit methadone and Physeptone were used by 35% and 38% of the sample respectively, at a median frequency of around once per fortnight (12 days) for methadone and once per month (6 days) for Physeptone (Figure 7).

Figure 7: Patterns of drug use among the 2014 IDRS sample



Source: IDRS PWID interviews
f: film
t: tablet

4.2 Heroin

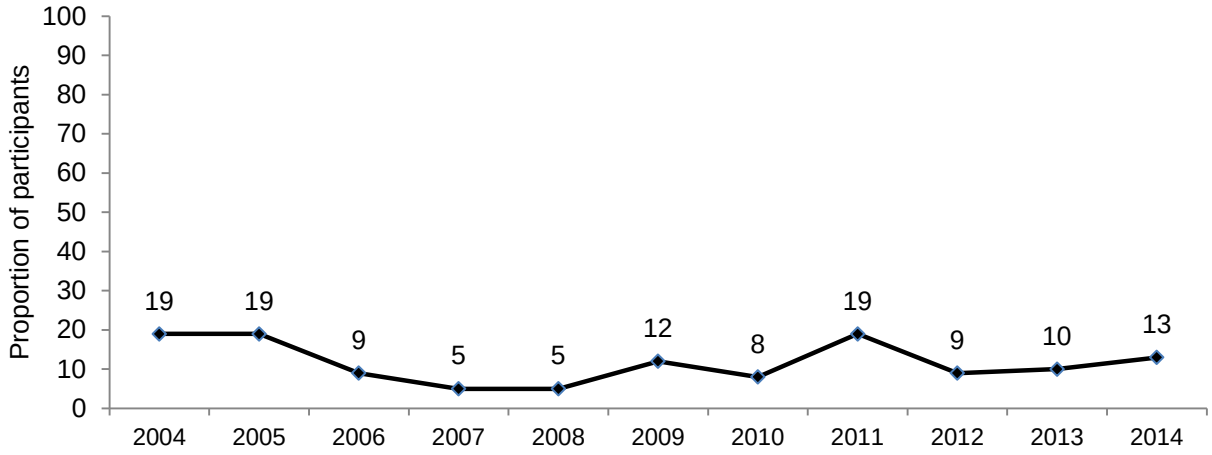
Key Points

- Just 13% of participants in the current study reported use of heroin in the preceding six months, at a median frequency of three days; and
- Overall, heroin use in Tasmania remains low amongst IDRS participants and NSP clients.

4.2.1 Current patterns of heroin use

Among the 2014 PWID sample, 60% had tried heroin at some stage of their lives, and 13% (n=13) reported use in the preceding six months (Figure 8). Of these 13 recent consumers, all had injected it, at a median frequency of three days (range 1-180 days). Recent use of heroin amongst IDRS cohorts has declined from 38% in 2000 to 13% in 2014. A similar number of participants reported heroin as their drug of choice (15%). The relatively low level of heroin use in a regularly injecting group indicates heroin supply in Tasmania has been limited (refer to Section 5.1).

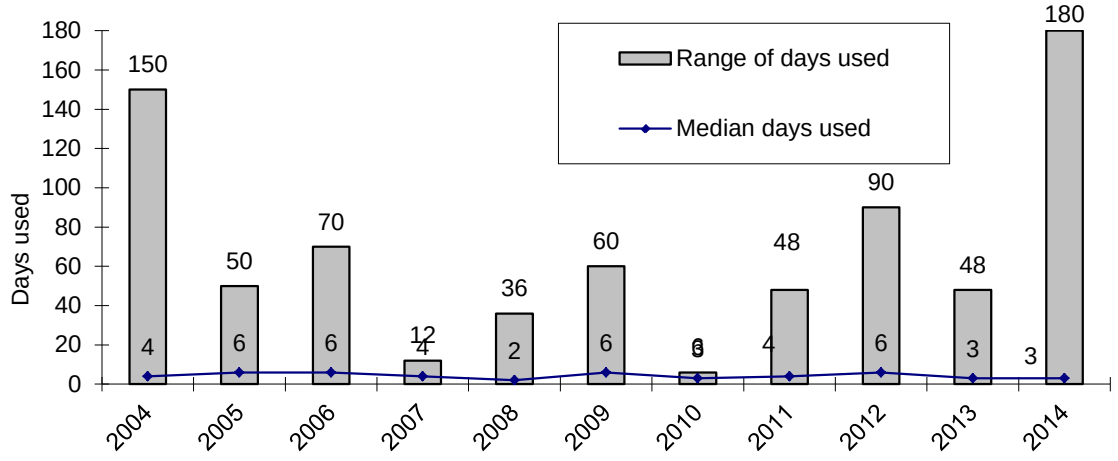
Figure 8: Proportion of PWID participants reporting recent use of heroin, 2004-2014



Source: IDRS PWID interviews

The median frequency of heroin use has remained relatively low and unchanged between 2004 and 2014, ranging between three and six days (Figure 10); only one participant reported daily use of heroin in the past six months. In contrast, there has been a wide range in regards to frequency of use (Figure 9). In support of these findings, seven KE employed in legal/law enforcement fields and drug treatment fields noted heroin use was rare to non-existent amongst the client groups they were familiar with. Three KE commented on very low but slightly increased rates of heroin use in the preceding six months.

Figure 9: Median days and range of heroin use in past six months, 2004-14



Source: IDRS PWID interviews

There was a high level of polydrug use amongst those who had used heroin in the past six months (Table 8), predominantly of illicit forms of morphine, oxycodone, powder methamphetamine, and other benzodiazepines. This is in keeping with KE reports in previous studies that, because of fluctuating availability, primary users of opioids have to be flexible in their patterns of use, turning to other opioids, methamphetamine or benzodiazepines if their opioid drug of choice is unavailable.

Table 8: Patterns of drug use reported by those PWID who had used heroin in the past six months, 2014

	% of those who had used heroin in last 6 months reporting use (n=13)	Median days use for those using the drug
Methadone syrup (illicit)	31 (n=4)	2 (range 1-3)
Physeptone (illicit)	23 (n=3)	6 (range 1-10)
Morphine (illicit)	100 (n=13)	75 (range 4-180)
Oxycodone (illicit)	92 (n=12)	8 (range 1-100)
Alprazolam (illicit)	31 (n=4)	2 (range 1-10)
Other benzodiazepines (illicit)	46 (n=6)	26 (range 3-120)
Methamphetamine:		
Powder	54 (n=7)	7 (range 1-30)
Base/paste	15 (n=2)	4 (range 4)
Ice/crystal	46 (n=6)	5 (range 1-30)
Alcohol^	40 (n=4)	1 (range 1-90)

Source: IDRS PWID interviews
^ 3 participants had missing data for alcohol use

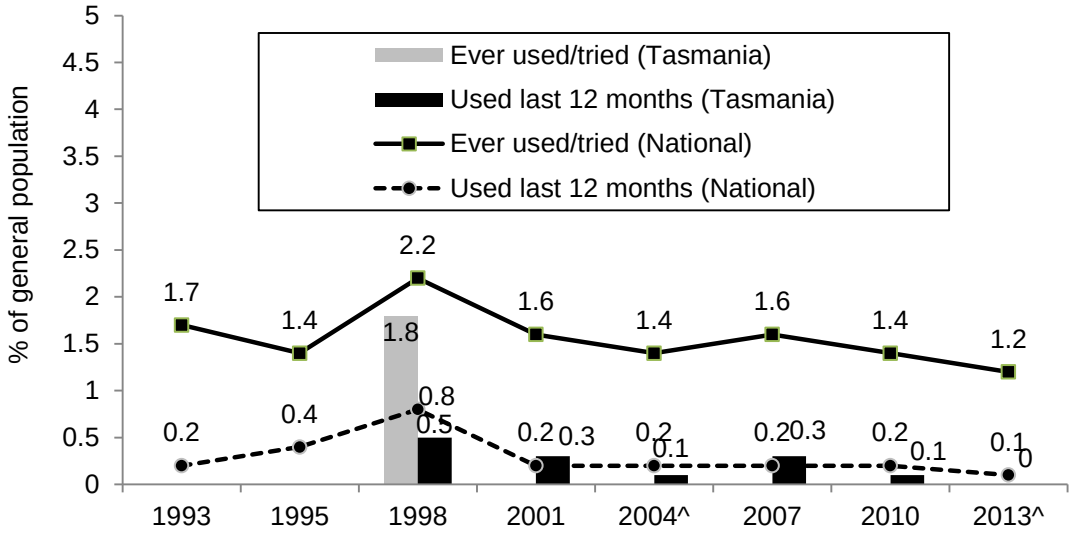
Of those PWID who had used heroin in the preceding six months (n=13), half regarded heroin as their drug of choice (54%, n=7) and 27% (n=3) reported morphine. Despite this, no participants reported that heroin was the drug they had injected most often in the past month. Participants were asked to clarify the discrepancy between their drug of choice and the drug most used. Of the group reporting heroin as their drug of choice (n=15), 87% (n=13) reported lack of availability as the primary reason that heroin was not the main drug they had used.

Participants were asked to describe the form/s of heroin they had used in the preceding six months. Of these 13 participants, eight reported use of white or off-white heroin and five reported predominant use of brown powder or rock.

4.2.2 Prevalence of heroin use

The 1998 National Drug Strategy Household Survey (Australian Institute of Health and Welfare (AIHW), 1999) reported that 1.8% of Tasmanians sampled had ever used heroin, while 0.5% had used it in the year prior to interview (Figure 10). While the small numbers involved mean that meaningful inferences are difficult to draw, rates of past year use in all subsequent surveys are similar (AIHW, 2002a; 2005b; 2008b, 2011). In the 2013 survey, past year use was 0.1% in the national sample and less than 0.1% in the Tasmanian sample.

Figure 10: Prevalence of heroin use in Australia and Tasmania among those aged 14 years and over, 1993-2013

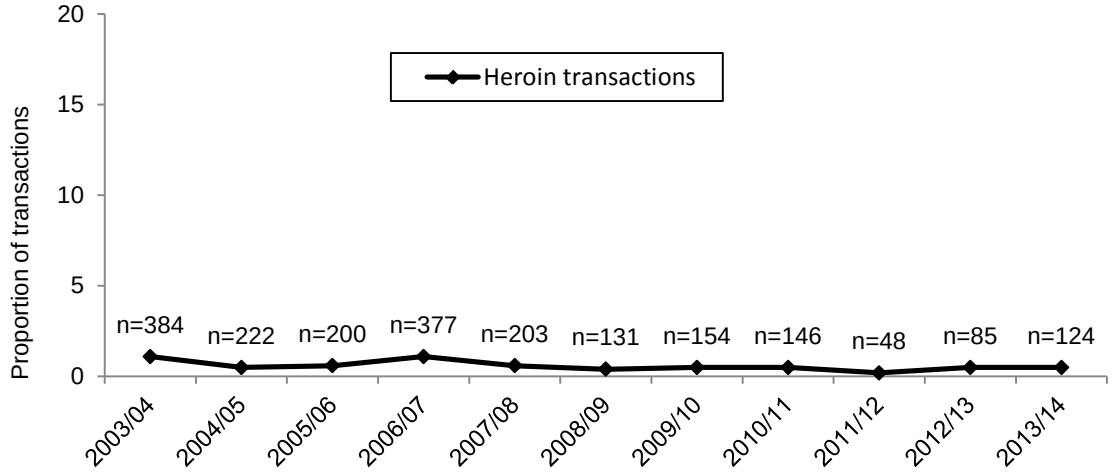


Source: National Drug Strategy Household Survey 1993-2014
^ In 2004, less than 0.1% of the Tasmanian sample reported recent use of heroin. In 2013, the rate of the Tasmania sample reporting recent use of heroin was nil or rounded to zero.

4.2.3 Heroin use among NSP clients

Reported use of heroin as the main drug injected by non-pharmacy NSP outlet clients has remained low (2% or less of all transactions since 2003/04) (Figure 11). It should be noted that data from the NSP reported here includes some imputation of missing data, thus these figures should best be regarded as estimates. It is important to note that NSP data may underestimate the extent of heroin use, as different NSP outlets ask slightly differing questions in regard to drug use – with some asking 'what is the drug you most often inject?', while others prefer 'what is the drug you are about to inject?', with the different questions having different biases against identification of use of drugs accessed in low frequency. For example, in the current cohort, although 13% of the PWID sample had used heroin in the past six months, no participant reported heroin as the drug they most often injected.

Figure 11: Proportion of heroin reported as 'drug most often injected' in transactions at Tasmanian non-pharmacy Needle and Syringe Program outlets, 2003/04-2013/14



Source: Population Health, Department of Health and Human Services

The Australian Needle and Syringe Program Survey (Iversen & Maher, 2014) has reported heroin as the last drug injected by 3% or less of participants between 2004 and 2013, with the exception of 2008 (Table 9). In 2008, 7% of the sample reported heroin as the last drug injected, however, the sample size was notably lower than previous years (57 in 2008 compared with 107-168 in 2003-2007), and so this finding should be interpreted with caution. Overall, these figures estimate the level of use of heroin as higher than that seen in the NSP client data, although they underscore the point that heroin use is not common amongst Tasmanian PWID.

Table 9: Australian Needle and Syringe Program (NSP) Survey: Prevalence of heroin as the 'last drug injected', Tasmania, 2004-2013

	2004 (N=107)	2005 (N=137)	2006 (N=150)	2007 (N=168)	2008 (N=57)	2009 (N=122)	2010 (N=106)	2011 (N=68)	2012 (N=75)	2013 (N=70)
Heroin	0	1% (n=2)	2% (n=3)	2% (n=3)	7% (n=4)	3% (n=4)	1% (n=1)	1% (n=1)	1% (n=1)	3% (n=2)

Source: Iversen & Maher, 2014

4.3 Methamphetamine

Key Points

- Over two-thirds (70%) of the Tasmanian sample reported use of a form of methamphetamine in the preceding six months, at a median frequency of 18 days;
- Powder and crystal were the main forms used, followed by base/paste methamphetamine, and powder was by far the most frequently used form;
- Amongst IDRS participants, the rate of recent use of any form of methamphetamine has remained stable between 2012 and 2014, and was lower than reported prior to 2008; and
- Similarly, indicator data point to overall stable rates of use of methamphetamine in the preceding four years, notably lower than was reported between 2003 and 2006.

In the initial years of the IDRS studies, reports used the overarching term 'amphetamine' to refer to both amphetamine and methylamphetamine (methamphetamine[6]). Throughout the 1980s, the form of illicit amphetamine most available in Australia was amphetamine sulphate (Chesher, 1993). Following the legislative controls introduced in the early 1990s on the distribution of the main precursor chemicals for the production of amphetamine sulphate (Wardlaw, 1993), illicit manufacturers were forced to rely on different procedures for the preparation of amphetamine. During the 1990s, the proportion of amphetamine-type substance seizures that were methamphetamine (rather than amphetamine) steadily increased until methamphetamine clearly dominated the market (Australian Bureau of Criminal Intelligence (ABCI), 1999, 2000, 2001). Across Australia today, the powder traditionally known as 'speed' is almost exclusively methamphetamine rather than amphetamine. For example, in the 2006/07 financial year, of the 4,396 seizures of amphetamine-type (non-phenethylamine) seizures analysed for purity in Australia, 97.9% (by number) were methamphetamine rather than amphetamine (Australian Crime Commission (ACC), 2008).

As methamphetamine markets across the country have expanded in recent years, it has become apparent that there is a diversity of forms of methamphetamine sold in the Australian illicit drug market. These more potent forms may be known by terms such as ice, shabu, base, paste and crystal meth, but they are all methamphetamine in basis. While there is some disagreement among consumers and researchers as to the nature of these forms, it is clear that these are marketed differently to consumers and often sold on differing price scales. As such, trends in regard to each of these forms will be discussed separately, and the term methamphetamine will be used for the drugs available in this class.

With the exception of methamphetamine-based tablets marketed as 'ecstasy', and pharmaceutical stimulants such as dexamphetamine and methylphenidate, it appears that there are three dominant preparations of methamphetamine used within the Australian PWID market – each falling along a continuum of form, but, all of which are the same substance.

Powder form methamphetamine[7] is the presentation of the drug which has traditionally been available in Australia. This is commonly a powder that can range from fine to more crystalline or coarse, and may take different colours (commonly white, brown or pink), depending on the chemical process used in its production and the quality of that process. It is produced within Australia, most commonly in small, portable 'laboratories', and is usually based on pharmaceutical pseudoephedrine. Because of its powder form, it is fairly easy to 'cut' (dilute) and is commonly sold at fairly low purity/potency, although this can vary substantially. Consumers interviewed for the 2012

[6] Methamphetamine is an abbreviation of the name methylamphetamine, and, as such, both terms are interchangeable.
[7] Powder form methamphetamine is also referred to in national and other jurisdiction IDRS reports as 'speed'.

IDRS survey reported that methamphetamine powder was either a dry powder or slightly wet, and sometimes contained small crystals. Colour varied, but was generally described as appearing white to off-white in colour, or alternatively yellow or beige/brown. The presence of crystals in powder methamphetamine may represent higher purity methamphetamine, or alternatively it may be explained by the use of an adulterant (methylsulfonylmethane, MSM) in the late stages of production. The introduction of MSM forms crystals, giving the powder methamphetamine a crystalline appearance (Fetherston & Lenton, 2006).

The two other 'forms' of methamphetamine are traditionally higher in potency (partially due to being more difficult to 'cut') (Topp et al., 2002). The first, referred to in some jurisdictions as 'base' or 'paste', is commonly a gluggy, waxy, oily, 'wet' powder. It is usually sold in units of 'points' (0.1 grams). This form of the drug appears oily because the conversion process from pseudoephedrine to methamphetamine produces the alkaline (base) form of methamphetamine, which is 'oily'. To convert this to a more easily injectable form (methamphetamine hydrochloride crystals, which may take the appearance of powder, or, when no impurities are present, and carefully crystallised, may take the form of the 'ice' crystals discussed below) requires a high level of skill, and when not completed correctly, the result of this process is an oily powder that often has a yellow or brownish tinge due to the presence of iodine and other impurities (Topp & Churchill, 2002). In the 2012 IDRS study, participants who had recently purchased this form locally commonly described it as wet, damp or sticky, and reported the colour as ranging from yellow/orange, to white, beige or brown, and described it as looking like 'ear wax'.

The final form of methamphetamine examined in the current study is often referred to as 'ice' or 'crystal meth(amphetamine)'. This is the product of a careful production process, and is believed to be chiefly imported into Australia from Asian countries (Topp & Churchill, 2002), although there are also indications of local production in recent years (ACC, 2009). It commonly appears as clear, ice-like crystals, and, as such, is difficult to 'cut' (dilute), resulting in a relatively high-purity/potency product. However, as previously noted, MSM is an adulterant that can be used to give lower purity powder methamphetamine the appearance of higher purity crystal methamphetamine (although it should be noted that there is currently no forensic validation that this has been present in drugs used in Tasmania). Consumers in the 2012 and previous IDRS studies have generally described this form as white/clear crystals or rocks, looking like crushed glass or rock salt (with crystals commonly larger than sugar crystals).

4.3.1 Current patterns of methamphetamine use

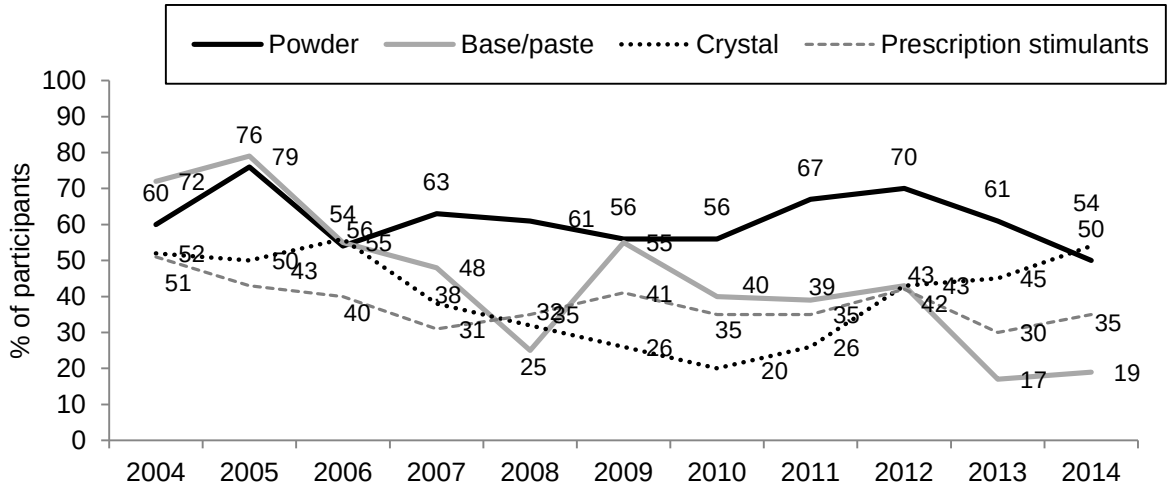
Over two-thirds (70%, n=70) of the 2014 PWID cohort reported use of any form of methamphetamine in the six months preceding the interview, at a median frequency of 18 days (range 1-180 days), equating to use approximately weekly to fortnightly. This level of use is consistent with the rate reported in the 2013 Tasmanian IDRS (74%, at a median frequency of 18 days).

Demographic characteristics of those who had recently used methamphetamine (n=70) were similar to the rest of the cohort (see Section 3.1) in terms of sex, age, accommodation, sexual identity, educational background, employment prison history, injection frequency, age of first injection, current engagement in treatment and duration of injecting career. This matches with comments from KE working in NSP and in drug treatment, who noted that methamphetamine use is spread across age demographics. Participants who reported recent use of methamphetamine were more likely to be single than those who had not recently use methamphetamine (65% versus 43%: $\chi^2(1_{n=101})=4.00$, p=0.046).

PWID reports of the forms of methamphetamine they had used in the previous six months showed that a wide range of forms and potencies of the drug were available to local consumers (Figure 13). Across the entire cohort, 54% had recently used crystal, 50% reported recent use of powder form,

and 19% had recently used base/paste form (Figure 12). There was no significant change from 2013 to 2014 in the number of participants reporting recent speed (61% to 50%; p=0.16) and crystal (45% to 54%; p=0.27) use.

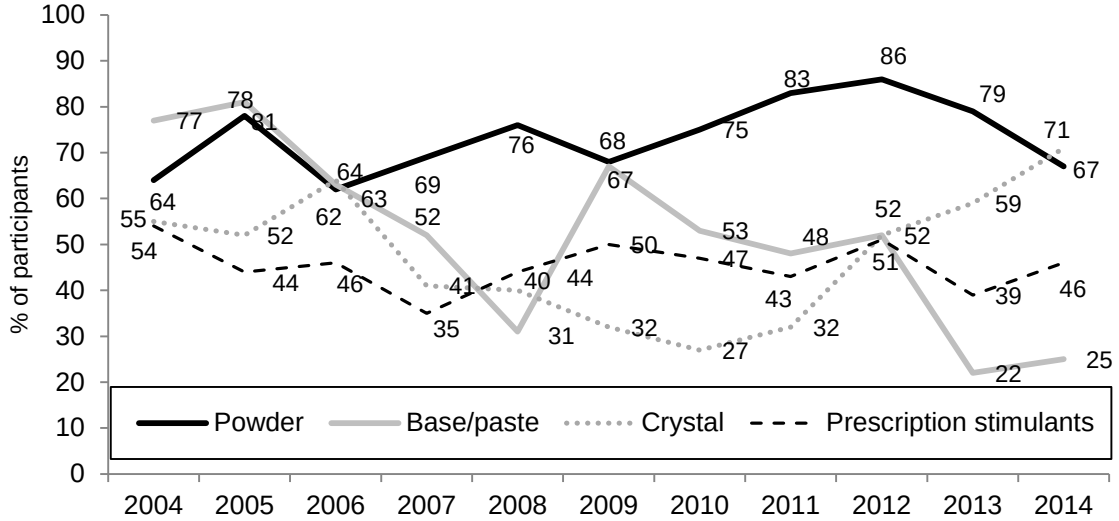
Figure 12: Proportion of PWID reporting methamphetamine and pharmaceutical stimulant use in the past six months, 2004-2014



Source: IDRS PWID interviews
Note: Pharmaceutical stimulants include use of licit and illicit prescription amphetamines

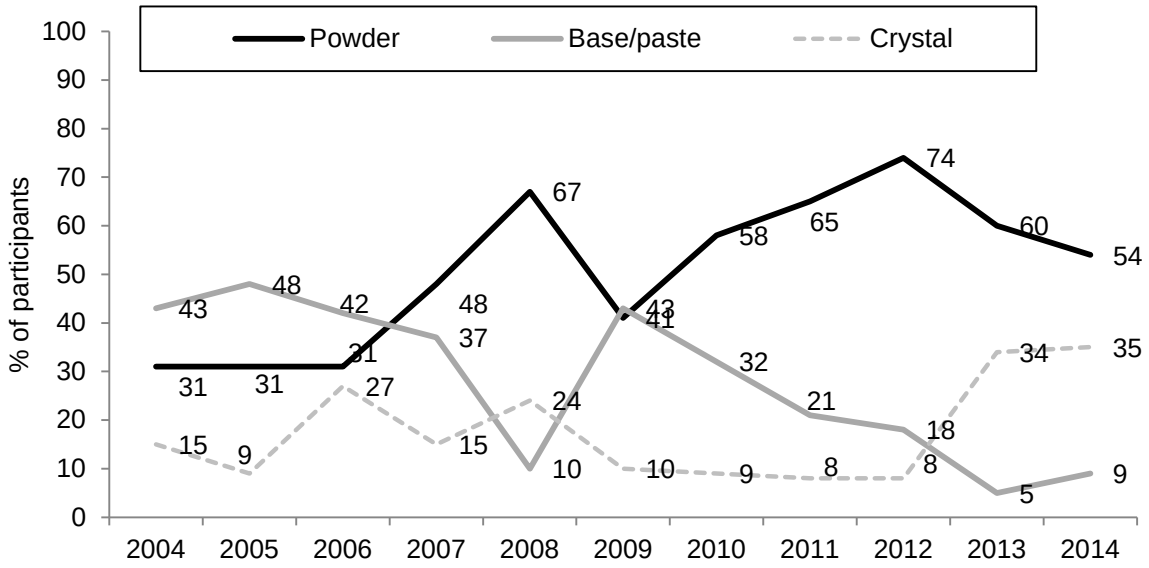
Amongst participants reporting recent use of any form of amphetamine (including prescription stimulants: n=75), crystal (71%) and powder (67%) were the predominant forms used. Almost half of those who reported recent use of any form of amphetamine had recently used prescription stimulants (46%, both licit and illicit forms), and one-quarter reported recent use of base/paste (25%) (Figure 13).

Figure 13: Use of various forms of methamphetamine and prescription stimulants among IDRS PWID participants who reported recent use of a form of an amphetamine, 2004-2014



Source: IDRS PWID interviews
Note: Pharmaceutical stimulants include use of licit and illicit prescription amphetamines

Figure 14: Forms of methamphetamine most often used among IDRS PWID participants that had recently used a form of methamphetamine or prescription stimulant, 2004-2014



Source: IDRS PWID interviews

The patterns of use of the differing 'forms' of methamphetamine and pharmaceutical stimulants in the preceding six months by IDRS PWID participants across the 2004 to 2014 studies (Figures 12-14) display the changing face of the local methamphetamine market in this time. There are three major changes apparent in these data.

As evident in Figure 14 and 15, overall use of crystal methamphetamine declined from 2004 (55%) up to 2010 (27%), with the exception of a slight increase in use in 2006 (64%). Since 2010, the proportion of recent use of crystal amongst recent amphetamine users increased from 27% to 71% in 2014 (Figure 13). In the 2014 IDRS, rates of crystal use were similar to that of powder form used for the first time since 2006, although consumers still reported that powder was the form which they used most frequently (Figure 14). In line with these findings, nine KE noted increasing reports of methamphetamine use, as well as increased frequency of use, with these trends highlighted in relation to crystal use.

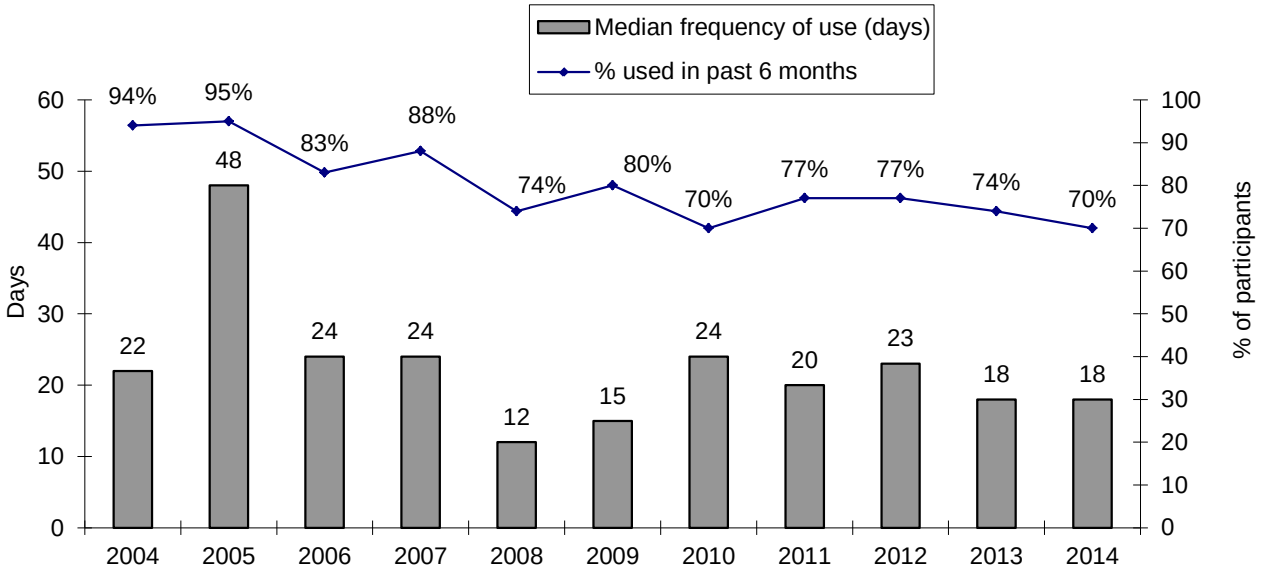
Trends in the use of the base/paste form of methamphetamine have generally been the opposite of that for the use of crystal: in 2004 and 2005, base was the form used by the majority of the PWID cohort (77% and 71% of those recently using amphetamine respectively). Use declined significantly from 2006 and 2008 (from 63% to 31%; $\chi^2(1_{n=167})=15.8$, $p<0.001$), and then increased significantly to 67% in 2009 ($\chi^2(1_{n=162})=19.4$, $p<0.001$), when crystal use decreased. Between 2009 and 2012, the proportion of participants with recent amphetamine experience reporting recent use of base remained relatively stable, however, in 2013, this rate decreased (52% in 2012 versus 22% in 2013: $\chi^2(1_{n=168})=15.3$, $p<0.001$), and has stabilised in 2014, with 25% of PWID with recent amphetamine experience reporting recent base use.

As use of both crystal and base/paste forms of methamphetamine decreased, use of powder form increased. Since 2010, use of powder form has been predominant with between 67% and 86% of amphetamine users reporting recent use from 2010 to 2014. Of note, several KE in drug treatment and law enforcement employment commented that the greater availability of crystal had impacted on use of powder, with consumers reporting a shift to crystal use.

While prescription stimulants such as methylphenidate and dexamphetamine are not themselves methamphetamine, given that almost without exception those that had used diverted prescription stimulants had also used methamphetamine (only five participants that had recently used pharmaceutical stimulants had not used some form of methamphetamine in 2014), these pharmaceuticals form an important part of the overall picture of stimulant use amongst these PWID cohorts. The use of these prescription stimulants has remained relatively stable across the 2004 to 2014 IDRS studies, with 30% to 51% of PWID reporting recent use (35% in 2014) (Figure 12).

Examining the frequency of use of methamphetamine in more detail, 70% of the current cohort had used methamphetamine at a median frequency of 18 days, which is approximately once per ten days (Figure 15). Between 2008 and 2014, 70-80% of each sample reported recent use of methamphetamine, and the median frequency of this use ranged from 12 to 24 days. *These results indicate lower levels of use of methamphetamine between 2008 and 2014 than were reported in previous local IDRS studies.* Prior to 2008, between 83% and 95% of each cohort reported recent use of methamphetamine, at a median frequency of between 22 and 48 days. The consistently high proportions of the PWID cohorts reporting recent use of methamphetamine have occurred despite similar proportions of the PWID cohorts in each study reporting an opioid as their drug of choice (two-thirds or more in each sample, except in 2005, 2007, 2009 and 2012: ranging between 53% and 59%).

Figure 15: Prevalence and frequency of use of methamphetamine in the preceding six months, 2004-2014



Source: IDRS PWID interviews

In the preceding month, the majority of participants reporting recent use of methamphetamine had done so weekly or less (57%), and two-fifths had used methamphetamine more than weekly but less than daily (39%). Just 4% of recent methamphetamine users had used on a daily basis in the preceding six months (Table 10).

Table 10: Patterns of methamphetamine use in the preceding month, by type, 2014

	Among the entire sample	Among those who had used		
Form used	% who had used	% used weekly or less	% used more than weekly, but less than daily	% used daily
Powder	50	72 *(n=36)*	24 *(n=12)*	4 *(n=2)*
Base	19	79 *(n=15)*	21 *(n=4)*	0
Ice	54	72 *(n=39)*	24 *(n=13)*	4 *(n=2)*
Any form methamphetamine*	70	57 *(n=40)*	39 *(n=27)*	4 *(n=3)*

Source: IDRS PWID interviews
* Also includes liquid methamphetamine

Almost all participants interviewed (94%) had used some form of methamphetamine at some stage in their lives. Interestingly, only one-fifth of the sample (23%) indicated that a form of methamphetamine was their drug of choice. Of these consumers, the majority (65%, n=15) reported a form of methamphetamine as the drug they had injected most often in the month prior to interview. Of the remaining PWID that had not used their drug of choice most often in the previous months, five had predominantly used pharmaceutical opioids (morphine and oxycodone), and three participants cited pharmaceutical stimulants (one of these specifying buprenorphine with pharmaceutical stimulants). Regarding the discrepancy between drug of choice and the drug most often injected, most participants noted that this was due to either a lack of availability or the price, with only one participant citing purity concerns, and no participants reporting that their primary concern was regarding health effects associated with methamphetamine use. For those participants that had reported methamphetamine as the drug they had most often injected in the preceding month (n=22), the drug class was used for a median of 66 days in the preceding six months (SD=55.6, range 1-180).

Six KE reported on groups of consumers that primarily used methamphetamine. KE included people employed in NSP outlets (n=3), drug and alcohol treatment (n=1), and advocacy positions (n=2). The consumers described by KE were predominantly male who were often unemployed and report lower educational attainment. Two KE noted expansion in the age range for those using methamphetamine, stating that methamphetamine use is occurring across most age groups but predominantly amongst those in early adulthood. Of greatest import, all KE who commented reported an increase in the number of new methamphetamine consumers presenting to their services, particularly amongst this younger age group.

While some KE were unfamiliar with the range of drugs used by the primary methamphetamine-consuming groups they were working with, some general usage patterns were noted. Primary methamphetamine consumers described by KE were generally noted to also use cannabis and alcohol, often to assist with 'comedown' effects such as anxiety and insomnia.

4.3.2 Self-reported symptoms of stimulant dependence

IDRS participants that had used stimulants (methamphetamine, pharmaceutical stimulants, cocaine), during the preceding six months were asked about how they felt about their use of this drug in the last year using the Severity of Dependence Scale (SDS) (n=71). The SDS consists of 5 multiple choice questions each rated on a scale of 0-3, resulting in a range of possible scores from

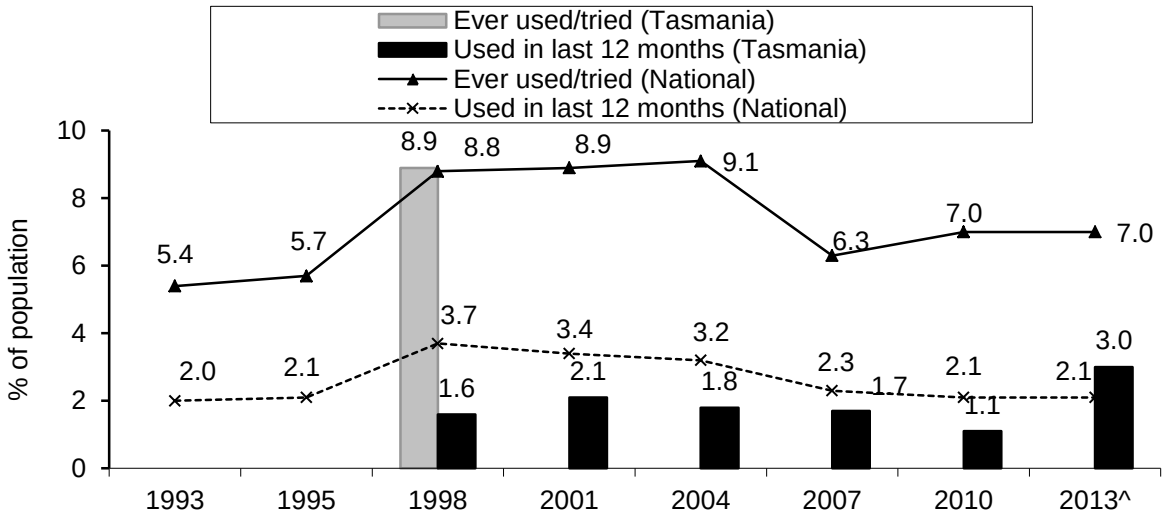
0-15, where higher scores suggest greater psychological dependence. Participants were asked if they thought that their use of the specific drug was out of control, if the prospect of missing a dose had made them feel anxious, if they had worried about their use of the drug, if they had wished they could have stopped, and if they would find it difficult to stop, or go without, the drug.

The median SDS score for stimulants was 3 (range 0-14). Twenty-one percent of this group (n=15) received a score of zero, indicating no symptoms of dependence. A score of four on the SDS in relation to methamphetamine use has been validated as a cut-off for predicting Diagnostic and Statistical Manual of Mental Disorders (3rd edition revised; DSM-III-R) diagnosis of amphetamine dependence (Topp & Mattick, 1997). Less than half of those participants who completed the stimulant SDS (45%, n=32) had a score of 4 or greater; it is reasonable to assume that some proportion of these people had experienced significant psychological symptoms of dependence. Of this group, just two-fifths (38%, n=12) had accessed some form of drug treatment in the preceding six months.

4.3.3 Prevalence of methamphetamine use

The most recent survey of methamphetamine use within the general community of Tasmania was undertaken within the 2013 National Drug Strategy Household Survey (AIHW, 2014), which sampled 1,134 Tasmanian residents aged 14 years and over. These results indicated that 3.0% had used the drug in the 12 months prior to interview (Figure 16), compared with the 1.1% observed in the 2010 survey. However, these figures should be treated with caution, as the estimate has a large standard error and it is not possible to reliably infer that there has been any change in use rates. Prior to 2010, there was little substantial change in the level of methamphetamine use in the Tasmanian community (2.1% of those aged 14 years and above in 2001, 1.8% in 2004, 1.7% in 2007 and 1.1% in 2010). Rates of past 12 month methamphetamine use nationally remained consistent from 2010 to 2013 (2.1% and 2.1%).

Figure 16: Prevalence of methamphetamine use in Australia and Tasmania among those aged 14 years and over, 1993-2013



Source: National Drug Strategy Household Survey 1993-2013
^ The 2013 Tasmanian estimate of past 12 month use has a very large standard error and is considered too unreliable for general use

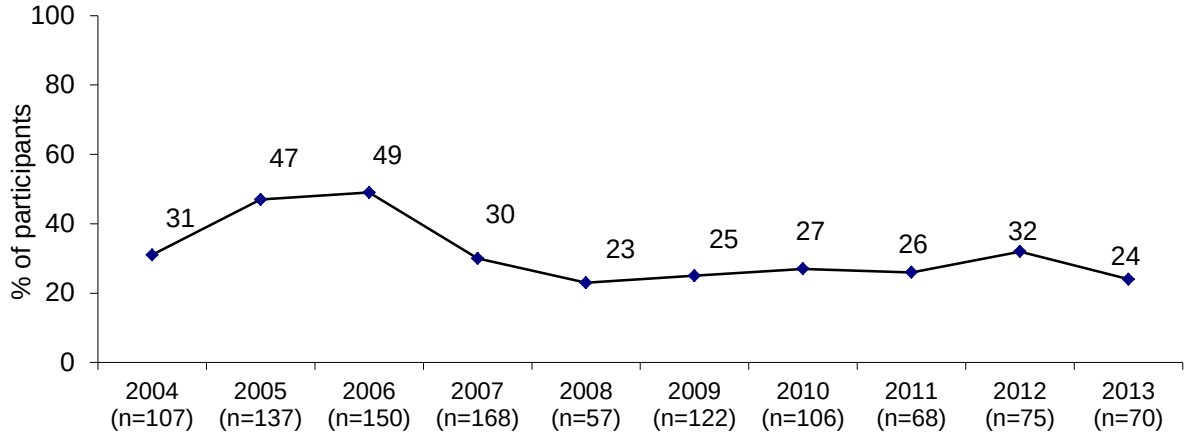
4.3.4 Methamphetamine use in particular populations

Data from urine screens of Tasmanian prisoners revealed a very low rate of sympathomimetic amines among positive tests, accounting for 4% or less of all positive tests between 1995/96 and 2013/14. In 2013/14, just one positive urine drug screen for sympathomimetic amines/amphetamines (1% of all positive urine screens) was reported.

4.3.5 Methamphetamine use among PWID

The Australian Needle and Syringe Program Survey (Iversen & Maher, 2014) takes an annual survey of individuals presenting to NSP outlets. Those that participate in the survey are asked, among other things, the last drug they injected. In 2004, methamphetamine was the last drug injected of 31% of the Tasmanian participants (Figure 17). In 2005, consistent with trends seen in the IDRS PWID cohort and among clients of the state's NSP, the proportion of survey participants reporting methamphetamine as the last drug injected increased to 47%, and this remained stable in 2006 (49%). Since 2007, rates have been lower, fluctuating around 25% of participants (24% in 2013).

Figure 17: Australian Needle and Syringe Program Survey: Prevalence of methamphetamine as 'last drug injected' amongst Tasmanian PWID, 2004-2013



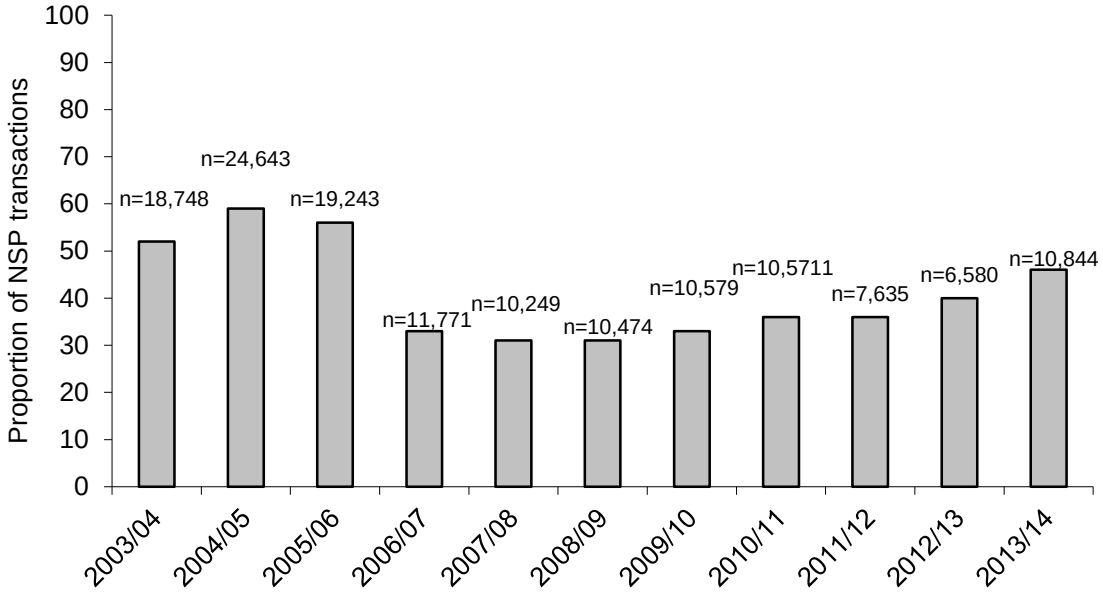
Source: Iversen & Maher, 2014

Since 1997, clients of non-pharmacy NSP outlets have been asked which drug they mostly inject. While methamphetamine has been the most commonly reported single drug used across the years of data collection, the proportion of NSP clients reporting methamphetamine as the drug they most commonly used declined from 59% in 2004/05 to 31% in 2007/08 and 2008/09 (Figure 18). In the past three financial years, rates have slightly increased, although they have not returned to the extent seen during 2004-06 (Figure 18).

While this appears to represent a substantial change in the market over time and is consistent with use patterns among the IDRS samples, these data should be interpreted with caution: firstly, it has been estimated that approximately 15% of all injection equipment distributed on a monthly basis is distributed through pharmacy-based outlets (Bruno, 2004a), where no client data are collected. Given that the clear bulk of injection equipment distributed through pharmacy outlets (1ml barrels) is appropriate for methamphetamine injection (and not for pharmaceutical opioids, the other type of drugs most commonly injected in Tasmania); it is likely that the majority of this equipment is used for

injection of methamphetamine. As such, the non-pharmacy NSP outlet data presented in Figure 18 is likely to be an underestimation of the true proportion of methamphetamine injection amongst Tasmanian PWID.

Figure 18: Proportion of Tasmanian non-pharmacy Needle and Syringe Program clients reporting methamphetamine as 'drug most often injected', 2003/04-2013/14



Source: Population Health, Department of Health and Human Services
Note: These figures include some estimated data for a number of services, based on average monthly client transactions, where data were missing

4.4 Cocaine

Key Points:

- In 2014, 8% of participants had used cocaine in the preceding six months, at a median frequency of two days;
- Amongst local IDRS cohorts, cocaine use has been consistently low, ranging between 2% and 12%; and
- Indicator data shows lower rates of cocaine use in Tasmania in comparison with national rates.

4.4.1 Current patterns of cocaine use

Just 8% of participants (n=8) had used cocaine in the six months preceding interview, at a median frequency of two days (range 1-6 days) in this time (Table 11). Seven participants reported exclusive intranasal use, and one reported intravenous and intranasal use.

Despite this very low level of recent use of cocaine, 51% had tried cocaine at some stage in their lives. Two KE staff employed in NSP outlets stated there were no reports of cocaine use in the preceding six months, with one KE in a similar position reporting very low rates of use, and one KE in drug treatment reporting low but increased rates of use.

Amongst Tasmanian IDRS participants, low levels of recent use of cocaine have been reported since 2004, ranging between 2% and 12% of each sample. Similarly, the median frequency of use has also remained very low: between one and five days, which equates to use less than once per month. Despite these low levels of use, between 39% and 61% of each sample since 2004 has reported lifetime use of cocaine (Table 11). No participants in the 2014 sample reported that cocaine was their drug of choice or as the drug most injected in the month preceding the interview. Due to the extremely small number of respondents who were able to provide information on cocaine, the data provided in this section should be interpreted with caution.

Table 11: Patterns of cocaine use among Tasmanian IDRS PWID participants, 2004-2014

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Proportion using cocaine in last 6 months (%)	4	8	12	5	4	2	5	7	11	5	8
Median days used (range)	2 (1-3)	5 (1-24)	3 (1-11)	2 (1-3)	5 (1-48)	3 (2-3)	3 (2-8)	2 (1-7)	1 (1-20)	2 (2-16)	2 (1-6)
Proportion ever using cocaine (%)	48	46	61	46	47	51	39	42	61	46	51

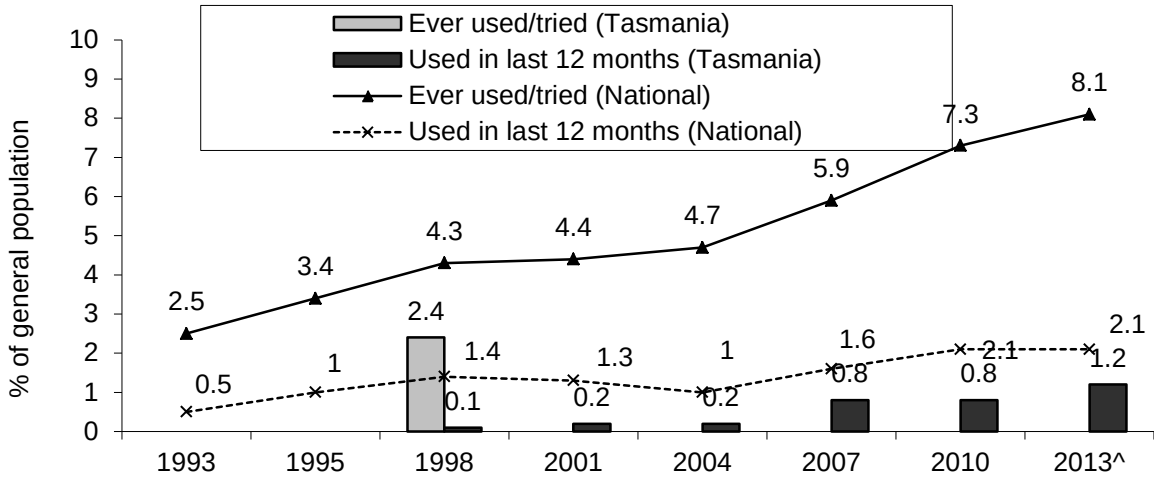
Source: IDRS PWID interviews

4.4.2 Prevalence of use

According to the findings of the 2013 National Drug Strategy Household Survey (Figure 19; Australian Institute of Health and Welfare, 2014), 1.2% of surveyed Tasmanians aged 14 years and older reported using cocaine in the preceding year. This rate is lower than that reported for the national sample, with 2.1% of respondents reporting use of cocaine in the preceding 12 months. Rates of past 12 month cocaine use nationally and in the Tasmanian sample of the National Drug Strategy Household Survey have remained consistently low from 1993 to 2013 (National: 0.5% to

2.1%; Tasmania: 0.1% to 1.2%). However, there are indications of a steady increase in rates of lifetime cocaine use amongst the national sample, from 2.5% in 1993, 4.7% in 2004, to 8.1% in 2013.

Figure 19: Prevalence of cocaine use in Australia and Tasmania among those aged 14 years and over, 1993-2013



Source: National Drug Strategy Household Survey 1993-2013.
^ The 2013 Tasmanian estimate of past 12 month use has a very large standard error and is considered unreliable.

4.4.3 Cocaine use among PWID

There were only 47 transactions in which clients of non-pharmacy NSP outlets in 2013/14 indicated that cocaine was the drug they most often injected. This figure has been consistently low over the past ten financial years (Table 12), relating to around 15-47 transactions each year. However, it is important to note that, despite there being some discrepancy between NSP outlets in the question asked (some asking 'what is the drug you most often inject?', while others prefer 'what is the drug you are about to inject?'), it is likely that the question 'what is the drug you most often inject?' will tend to underestimate the extent of use of cocaine, as none of the PWID sampled in the IDRS survey reported it as the drug they most often used in the preceding month (despite 8% recently using the drug).

Table 12: Percentage of Tasmanian non-pharmacy Needle and Syringe Program clients reporting cocaine as the 'drug most often injected', 2003/04-2013/14

Year	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Number of transactions reporting cocaine	29	16	15	40	17	16	36	19	18	33	47
% of total transactions reporting cocaine	0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.2

Source: Population Health, Department of Health and Human Services

With the exception of the 2006 survey, cocaine has not been reported as the last drug injected in any of the 1995-2012 Australian Needle and Syringe Program Surveys (Iversen, Topp & Maher, 2011; Iversen & Maher, 2014). In 2006, just one participant reported this.

4.5 Cannabis

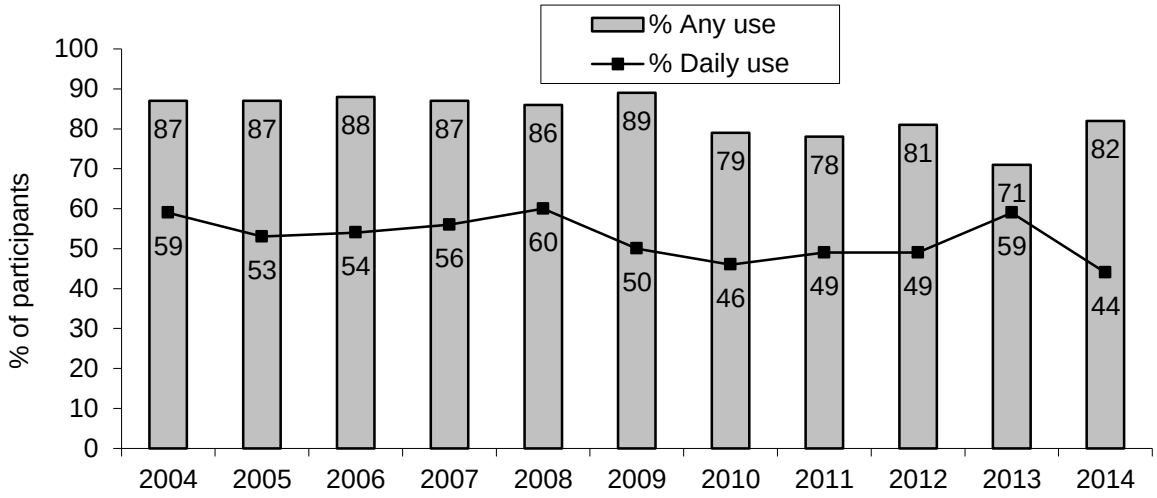
Key Points:

- Cannabis remains the most commonly used illicit drug amongst Tasmanian IDRS samples: four-fifths (82%) of the 2014 sample reported use in the preceding six months, at a median frequency of 180 days (daily use);
- Since 2004, a small decrease in daily use of cannabis has been observed amongst Tasmanian IDRS participants;
- Hydroponic/indoor-cultivated cannabis is the predominant form used; and
- Synthetic forms of cannabis were used by a very small minority of participants on an infrequent basis.

4.5.1 Cannabis use among PWID participants

Among the IDRS PWID respondents in 2014, cannabis was the most commonly used illicit drug, with 96% of participants using it at some time in their lives, and 82% used it in the six months prior to interview. Among those that had recently used cannabis, median frequency of use was 180 days (range 1-180), which equates to daily use. Examining recent cannabis use amongst IDRS cohorts from 2004 to 2014 (Figure 20), there has been little change in the proportions reporting use of the drug across these samples, although there was a trend towards increased use in 2014 relatively to 2013 (82% versus 71%: χ^2 ($1_{n=208}$)=2.30, p=0.084.

Figure 20: Proportion of Tasmanian IDRS PWID cohorts reporting use of cannabis in the six months prior to interview, 2004-2014



Source: IDRS PWID interviews

Participants who reported recent use of cannabis were asked to comment on the last occasion they consumed cannabis. Of the 71 consumers who commented, 76% (n=54) reported smoking a 'cone' on the last occasion of use. A cone is used with either a standard pipe or a water-pipe ('bong') into which cannabis is placed. The exact amount of cannabis per 'cone' will vary between individuals depending on preference for strength and whether other components, such as tobacco, are added. Among this group of participants, the median number of cones smoked on the last occasion was five (range 1-40 cones, SD=7.5). Eleven percent of cannabis consumers (n=8) reported smoking a cannabis-cigarette ('joint') on the last occasion; the median number of 'joints' was one (range 1-3 'joints', SD=1.0).

4.5.2 Forms used

IDRS PWID participants were asked to comment on all forms of cannabis they had used in the last six months. Of this group, 87% (n=71) reported use of indoor-cultivated/hydroponic cannabis, 73% (n=60) reported use of outdoor-cultivated/bush cannabis, 16% (n=13) reported use of hashish and 9% (n=7) reported use of hashish oil.

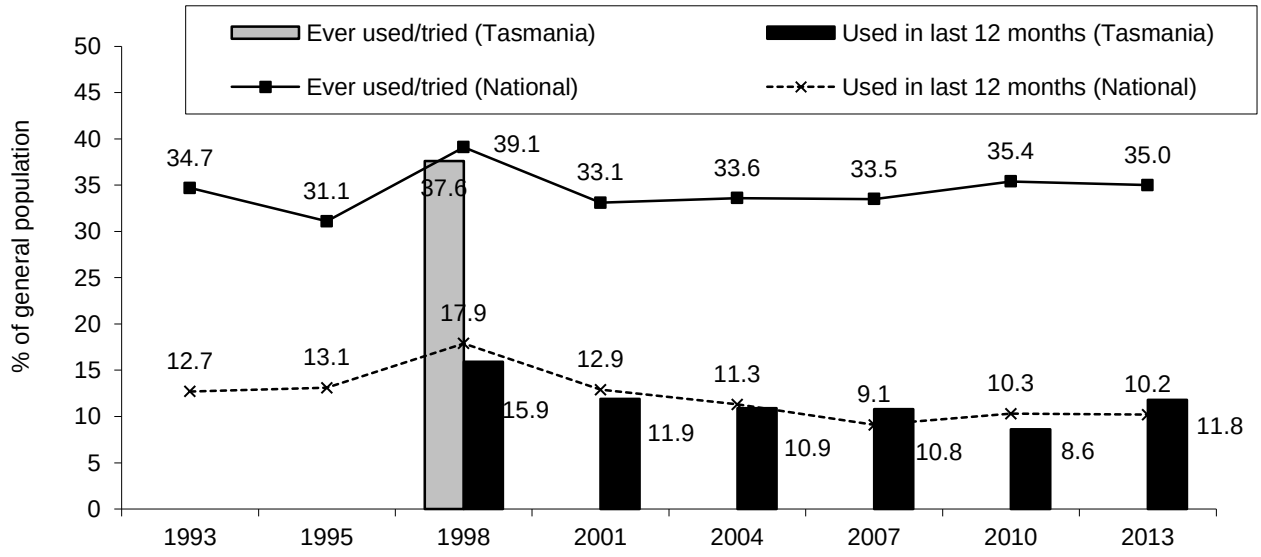
The cannabis used in the past six months by those participating in the PWID survey was cannabis head (the flowering top sections of the female plant), with most cannabis-using PWID reporting some use of both hydroponically/indoor-cultivated and outdoor crops (60% of those participants who commented, n=49). One-quarter of this group reported exclusive use of indoor-cultivated cannabis (27%, n=22), and 13% outdoor-cultivated cannabis (n=11). Participants were also asked to comment on the main form they had used in preceding six months: 77% (n=60) reported indoor-cultivated cannabis and 23% (n=18) reported outdoor-cultivated cannabis.

In response to local anecdotal reports of use of synthetic forms of cannabis, questions relating to this were included in the 2012, 2013, and 2014 surveys. In 2012 and 2013, 6% and 3% of the samples respectively reported ever having used a form of synthetic cannabis, all doing so in the preceding six months. In 2014, 7% reported lifetime use, however, only 3% had used synthetic cannabis in the last six months. Participants were typically unable to specify the brand used. Frequency of use was very low: median use over the preceding six months was one day (two participants reported one day of use; one participant reported 48 days of use).

4.5.3 Prevalence of cannabis use

In the 2013 National Drug Strategy Household Survey (AIHW, 2014), the estimated prevalence of cannabis use in the preceding 12 months in Tasmania increased from 8.6% in 2010 to 11.8% in 2013 ($\chi^2(1_{n=2194})=5.87$, p=0.02) (Figure 21). The rate of past year cannabis use amongst the national sample has similarly remained stable over this time (9.1%, 10.3%, and 10.2% in 2007, 2010, and 2013 respectively).

Figure 21: Prevalence of cannabis use in Australia and Tasmania among those aged 14 years and over, 1993-2013



Source: National Drug Strategy Household Survey 1993-2013

4.5.4 Cannabis use in particular populations

Cannabis has made up the vast majority of positive urine-screen tests amongst Tasmanian prison inmates since the inception of such screens in 1993. The proportion of all positive urine screens indicating cannabis use remained at around 70-80% between 1997/98 and 2003/04, despite the number of positive tests varying substantially during this period. In 2004/05, the proportion of positive tests for cannabis fell to around half of all urine drug screens, rebounding and remaining stable between 2005/06 and 2009/10 (between 58% and 76% of positive tests). In the 2010/11 to 2012/13 period this rate again decreased to 48% and 50% respectively, returning to previous levels in 2013/14, with 77% of positive urine screens indicating cannabis use.

4.6 Opioids

Key Points:

Morphine

- Over two-thirds (71%) of the Tasmanian IDRS sample had used non-prescribed morphine in the preceding six months, similar to rates among the 2013 cohort (66%);
- The median frequency of illicit use was similar for the 2014 and 2013 cohorts (44 days versus 48 days, respectively);
- Morphine was the drug of choice for one-quarter (24%) of the sample in 2014;
- MS Contin was the main preparation used, followed by Kapanol and MS Mono; and
- Two-thirds (61%) of the participants that had recently used illicit morphine reported this use was for self-treatment purposes.

Oxycodone

- There was a trend towards a decrease in the rate of participants that had recently used non-prescribed oxycodone in 2014 (47%) compared to 2013 (61%);
- Median frequency of use also decreased from 15 days amongst the 2013 cohort to 6 days amongst the 2014 cohort;
- OxyContin was the predominant preparation used; and
- Three-fifths (60%) of participants that had recently used illicit oxycodone reported use was for self-treatment purposes.

Methadone syrup

- One-third (35%) reported recent use of non-prescribed methadone syrup at a median frequency of 12 days, similar to rates in 2013 (38% at a median frequency of 15 days); and
- Almost half (46%) of those who had recently used non-prescribed methadone syrup reported doing so for self-treatment purposes.

Physeptone

- Nearly two-fifths (38%) had recently used non-prescribed Physeptone tablets, at a median frequency of six days.

Buprenorphine

- All three preparations of buprenorphine (Subutex and Suboxone tablets and film) were recently illicitly used by small proportions of the sample (11%, 6% and 11% respectively); however, the frequency of this use decreased compared to 2013 (2013: 11, 22, and 12 days respectively versus 2014: 4, 9, and 3 days).

The IDRS investigates patterns of use, harms and the 'black market' characteristics of a number of pharmaceutical products, including opioids, benzodiazepines and stimulants, amongst people that inject drugs. The aim of the IDRS system in relation to these drugs is to document these patterns of use and associated harms in order to provide an evidence base for drug services and policymakers.

When considering such issues in relation to pharmaceutical products, it is necessary to consider the fact that some individuals may be receiving these drugs as part of a medical treatment program; some may be accessing and using these drugs without medical oversight; and that some may access these drugs from a combination of these two sources. The combination of all of these sources is important when considering issues such as health outcomes (e.g. overdose).

In the IDRS reports, the distinction is made between 'licit' use: that is, use of a pharmaceutical drug that has been directly prescribed to the person using the drug; and 'illicit' (or non-prescribed) use:

use of a pharmaceutical drug that has not been prescribed to the person using the drug (see Black et al., 2008, for a more detailed discussion of this distinction and related issues).

It is important to note that in making such a distinction, the authors are not expressing any particular stance in relation to the use of these drugs. Indeed, previous research in the IDRS and other contexts (e.g. Bruno, 2007; Winstock, Lea & Sheridan, 2008; Treloar, Fraser & Valentine, 2007) have clearly identified that within each of these broad categories there exists a spectrum of methods and reasons for use. Among those using 'licit' pharmaceuticals, many of the IDRS participants may be using these in strict adherence with their prescriber's regime; others may be administering these drugs in a different manner (e.g. intravenously), on a different dosing schedule, or at a different dose than prescribed. Similarly, among those accessing 'illicit' pharmaceuticals, there may be a spectrum of reasons and motivations underlying such use, including intoxication, self-medication for physical or psychological complaints, to self-manage a detoxification process, to self-medicate when drug treatment is undesirable or unavailable (e.g. in the case of long waiting times or physically distant treatment services, or where shame or fear of discrimination at being identified as a 'drug user' prevent the seeking of formal treatment), or to replace doses of licit prescribed medications (e.g. where doses have been missed due to theft, the experience of external threat or pressure to provide their medication to others, or due to practical issues such as transport, dosing times, employment or lack of childcare interfering with a person's ability to pick up maintenance pharmaceuticals dispensed on a daily basis).

The use of pharmaceutical products such as opioids outside of medical supervision, or in ways other than prescribed, is currently an area of considerable debate, and the reader is encouraged to acquaint themselves with this literature before drawing conclusions or making policy decisions with regard to the prescription of these drugs. For example, specific research has examined the complexities of not-as-prescribed methadone use and methadone dispensing policy (Ritter & di Natale, 2005; Fraser et al., 2007; Treloar, Fraser & Valentine, 2007), barriers to accessing drug treatment (Treloar et al., 2004), and the importance of the availability of appropriate treatment for the management of pain (Brennan, Carr & Cousins, 2007).

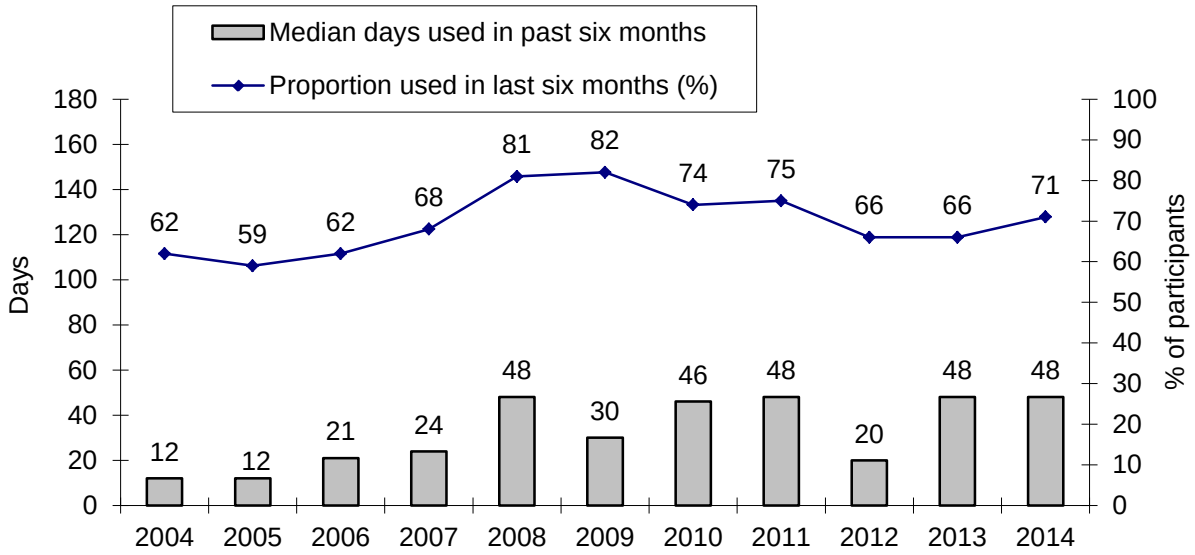
4.6.1 Use of morphine

Morphine was reported as the drug of choice by 24% of the sample in 2014, and over two-thirds (71%) reported use of licit or illicit morphine in the six months preceding the interview. Of those who had recently used illicit morphine (71%, n=72), the median frequency of use in the past six months was 44 days (range 1-180), equating to use approximately twice per week. The median dose participants reported normally consuming was 80mg (range 20-300mg, SD=43, n=68). Just 4% (n=4) of the sample reported recent use of morphine that was prescribed to them, three of whom reported injecting the licit form of this drug. Morphine was reported as the last drug injected prior to interview by 34% of the PWID sample, and the drug most injected in the past month by 40% of the sample.

As displayed in Figure 22, between 2005 and 2008 there was a trend toward increasing morphine use (59% to 81%), with notable increases in the frequency of this use (from 12 to 48 days). In 2009, 82% of the sample reported recent use; however, the frequency of this use decreased to 30 days. This trend stabilised between 2010 and 2014, with around three-quarters of each sample (66% to 75%) reporting recent use of morphine at a median frequency of 46 to 48 days (equating to approximately twice a week), although it should be noted that there was a dip in frequency of use in 2012 (median of 20 days of use).

KE commenting on morphine use (n=5) generally reported that rates of use were steady, although two KE working in alcohol and drug counselling reported recent increased rates of use, with those working in NSP outlets noting that the majority of equipment was picked up for injection of this drug.

Figure 22: Proportion of Tasmanian IDRS PWID cohorts reporting use of morphine, and the median frequency of this use, in the six months prior to interview, 2004-2014



Source: IDRS PWID interviews

Of the PWID sample, 92% reported they had tried illicit morphine at some stage in their lives, with all having injected the drug. Seventy-one percent (n=72) of participants reported use of illicit morphine in the preceding six months; all of these participants reported injecting the drug, at a median frequency of 40 days (range 1-180), or approximately two days per week.

The demographics of the group that had used illicit morphine (n=72) in the past six months were similar to that of other PWID (see Section 3.1) in terms of age, sex, cultural background, treatment and employment status, education, accommodation, prison history, relationship status, age first injected, frequency of injection and duration of injecting career.

Forms used

Consumer respondents were asked to nominate the preparations of morphine that they had used in the preceding six months. Use of MS Contin was the most common (93%, n=67), followed by Kapanol (57%, n=41), and MS Mono (49%, n=35). Smaller proportions reported recent use of Anamorph (19%, n=14), liquid morphine (e.g. Ordine[8]) (13%, n=9), hydromorphone (3%, n=2) and Sevredol (3%, n=2).

Of the 69 participants who commented on the form they had used most often in the preceding six months, three-quarters reported illicit MS Contin (78%, n=54), 15% (n=10) reported illicit MS Mono, and 7% reported illicit Kapanol (n=5).

All but four of the participants reporting use of morphine in the last six months (licit and illicit, n=71) had accessed morphine from sources other than a medical practitioner. *It is clear from these figures that the majority of morphine used by participants in the current study did not come directly from medical practitioners.*

[8] Ordine is morphine hydrochloride in aqueous (water) solution, and contains sugar as a preservative.

Reasons for use

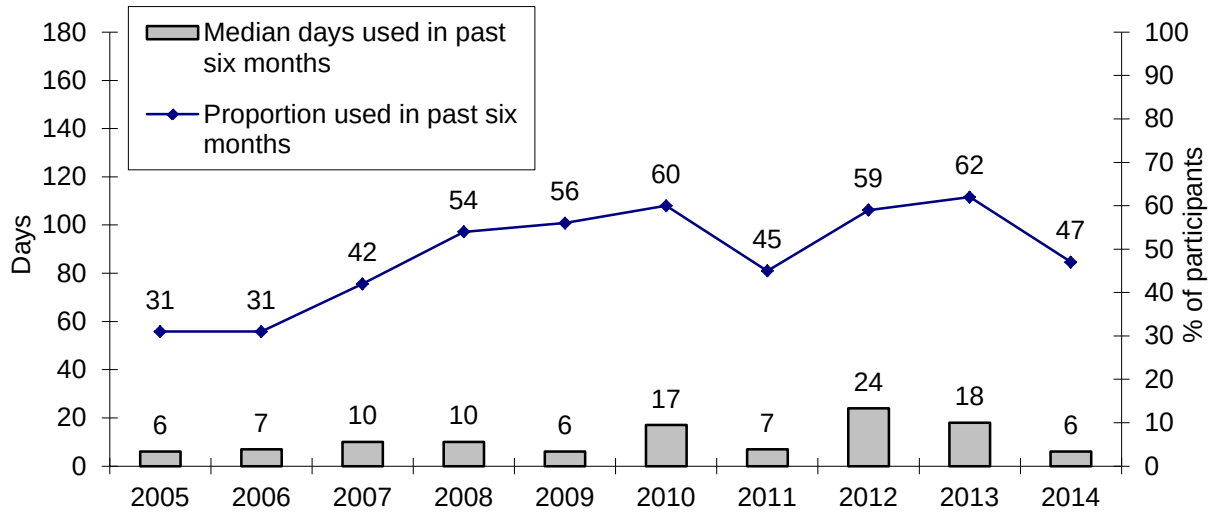
Two-thirds of the 71 participants who commented on reasons for recent use of illicit morphine reported 'self-treatment' as a reason (61%, n=43). 'Self-treatment' includes participants using this drug to self-treat dependence on an opioid, a mental health problem such as depression or anxiety, or insomnia. Similarly, over two-fifths also reported intoxication as a reason for use (44%, n=31).

4.6.2 Use of oxycodone

While almost half of the participants interviewed in the current study reported using illicit oxycodone in the six months prior to interview (47%, n=47), just 3% reported this as their drug of choice, and 4% reported oxycodone as the drug they had most injected in the month preceding the interview. Frequency of illicit use in the preceding six months decreased from 2013 (18 days) to 2014 (6 days); the latter equates to use once per month. The median dose participants reported normally taking was 80mg (range 5-300mg, n=43). Use of oxycodone among the Tasmanian IDRS PWID cohorts increased from 31% in 2006 to 62% in 2013, with the exception of a brief decrease in use to 45% of the sample in 2011 (Figure 23). Again, there is a trend towards decreased use in the 2014 cohort, with 49% of the sample reporting illicit oxycodone use in the preceding six months ($\chi^2(1_{n=208})=3.13$, p=0.077). This decrease in use is most likely linked to changes in the oxycodone market in the two months prior to the interview due to introduction of a 'tamper-resistant' controlled-release oxycodone formulation (see Section 8.2).

Nine KE in the current study commented on use of oxycodone, all of whom noted a decrease in use in the preceding few months (although all reported that some clients were still using oxycodone), as well as decreased rates of injection. Whilst several KE noted that a number of consumers had switched from oxycodone to morphine, the rates of recent morphine use amongst the 2013 and 2014 IDRS cohorts are similar (66% versus 71%, respectively), as is the median frequency of use (48 days for both cohorts).

Figure 23: Proportion of Tasmanian IDRS PWID cohorts reporting use of oxycodone, and the median frequency of this use, in the six months prior to interview, 2005-2014



Source: IDRS PWID interviews

Three-quarters of the participants (82%, n=82) had ever used illicit oxycodone tablets and 79% had ever injected oxycodone. Half of the current cohort (47%) reported using illicit oxycodone in the preceding six months: of this group, all but one reported injecting this drug. In addition, small

proportions of the cohort reported oral (3%) use in the preceding six months. Recent use of prescribed oxycodone was reported by 7% (n=7) of the sample, at a median frequency of 30 days in the preceding six months, and injecting use of prescribed oxycodone was reported by 5% (n=5) of the sample, at a median frequency of 53 days (range 1 to 180).

The demographics of the group that had used illicit oxycodone (n=47) in the past six months were similar to that of other PWID (see Section 3.1) in terms of age, sex, cultural and educational background, relationship status, employment status, income source, accommodation, prison history, age of first injection and duration of injection career. However, participants reporting recent use of illicit oxycodone were more likely to report engagement in a form of AOD treatment in the preceding six months than participants reporting no recent use of illicit oxycodone ($\chi^2(1_{n=101})=4.55$, p=0.033).

Over half of the current PWID sample (47%, n=47) reported use of some preparation of non-prescribed oxycodone in the six months prior to interview. Of the 38 participants who commented, 87% (n=33) reported that OxyContin was the form they most used, with 8% (n=3) reporting Endone, 3% (n=1) Oxynorm, and 3% (n=1) Targin.

Almost all participants reporting recent use of oxycodone (licit and illicit, n=49) had accessed oxycodone from sources other than a medical practitioner. Seven participants reported use of oxycodone that was prescribed to them. As noted for morphine, the majority of oxycodone used by participants in the current study did not come directly from medical practitioners.

Reasons for use

Of the 40 participants who commented, three-fifths (60%, n=24) reported 'self-treatment' for opiate dependence and mental health as the primary reason for recent use of illicit oxycodone, and two-fifths (40%, n=16) reported 'intoxication'.

4.6.3 Use of methadone

Methadone was reported as the drug of choice of 24% of the PWID sample, with 55% (n=55) of the entire sample reporting some use of methadone (syrup and tablet forms) in the preceding six months. Methadone was injected in the preceding six months by 72% (n=52) of the consumers reporting recent use of the drug who responded to this question.

In regard to methadone syrup, 32% (n=32) of the sample had been prescribed this drug in the preceding six months, using it at a median frequency of 98 days in this time (range 20-180 days). Across IDRS PWID cohorts, the proportion of participants reporting recent use of licit methadone syrup has declined from 64% in 2004 to 32% in 2014.

One-third of the sample reported recent use of illicit methadone syrup (35%, n=35), at a median frequency of 12 days (which equates to use once per fortnight). The median frequency of illicit methadone syrup use tended to be higher for participants who had been enrolled in a methadone program (30 days, n=18) compared with those not in treatment (16 days, n=17) (p=0.11). The median dose of illicit methadone syrup normally consumed was 50mg (range 5-160mg, n=32). There may be a spectrum of reasons for use of illicit syrup by those enrolled in the program (as discussed in Section 4.6), including a desire for intoxication, but it is important to also consider the role of incomplete stabilisation, unmet pain management requirements and of problems in the systems around flexibility of dose dispensing in these situations. For a detailed investigation of these types of issues see, for example, Fraser et al. (2007).

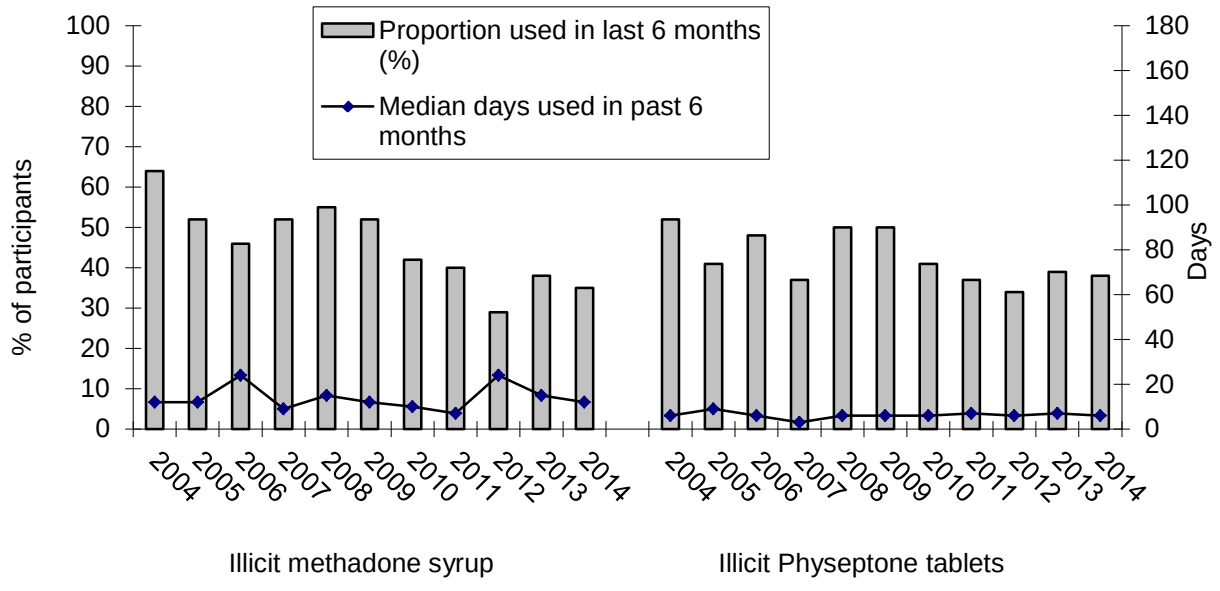
The proportion of the cohort reporting recent use of illicit methadone syrup has remained relatively stable (between 35% and 55%) from 2005 and 2013 with the exception of decreased use in 2012 (29%): the proportion reporting recent use in the current sample (35%) reflects that the typical rate observed in previous years. Over this period, the median frequency of use has remained relatively

infrequent, ranging between 7 and 24 days of the preceding six months. Amongst those participants reporting recent use of illicit syrup who commented (n=34), all except one reported having recently injected this drug, and four participants had also swallowed it in this time. It is noteworthy that half of those recently using illicit syrup (51%, n=18) were themselves receiving methadone maintenance treatment.

The demographics of those that had used illicit methadone syrup in the past six months (n=35) were similar to that of other PWID (see Section 3.1) in terms of age, sex, cultural background, relationship status, education, accommodation, employment status, prison history, frequency of injection, age of first injection and duration of injecting career.

Lifetime use of illicit Physeptone (methadone tablets) was reported by two-thirds of IDRS participants (66%, n=67) and recent use by one-third of the sample (38%, n=38). Between 2004 and 2009, reports of use of illicit Physeptone varied between 37% and 52%, with no clear trend discernible. However, between 2009 and 2012, the rate of recent use declined from 50% to 34% ($\chi^2(1_{n=106})=4.80$, p=0.03), and has remained relatively stable since this time (38% in 2014). Median frequency of use of illicit Physeptone amongst the 2014 IDRS cohort was generally infrequent, with participants reporting a median frequency of use of six days in the last six months (range 1-180 days), which equates to use once per month. The median dose participants reported normally taking was 50mg (range 10-150mg, n=34). Of the participants reporting recent use, all except two reported recent injection of Physeptone, at a median frequency of six days (range 1-180 days). Five participants additionally reported oral use of Physeptone. The frequency of use of illicit Physeptone has remained at relatively stable low levels over recent years: ranging between three and 12 days between 2003 and 2013 (Figure 24).

Figure 24: Proportion of Tasmanian IDRS PWID cohorts reporting use of methadone, and the median frequency of this use, in the six months prior to interview, 2004-2014



Source: IDRS PWID interviews

The demographics of those that had used illicit Physeptone tablets in the past six months (n=38) were similar to that of other PWID (see Section 3.1) in terms of age, sex, accommodation, educational and cultural background, relationship status, sources of income, employment status, sexual preference, injection career, and age of first injection. However, participants reporting recent

use of illicit Physeptone were more likely to report a prison history (56% versus 33%: $\chi^2(1_{n=101})=4.66$, p=0.031) and engagement in AOD treatment in the preceding six months (68% versus 35%: $\chi^2(1_{n=101})=10.67$, p=0.001) than participants reporting no recent use of Physeptone.

Almost all participants reporting use of Physeptone in the last six months (licit and illicit) had accessed it from a source other than a medical practitioner. Three participants reported use of Physeptone that was prescribed to them. As noted for most other pharmaceutical opioids, the majority of Physeptone used by participants in the current study did not come directly from medical practitioners.

Forms used

When asked to describe the form of methadone they had predominantly used in the preceding six months (n=53), over half reported licit methadone syrup (55%, n=29), one-quarter (23%, n=12) reported illicit Physeptone tablets, and one-fifth (21%, n=11) reported illicit syrup.

Reasons for use

Participants who commented (n=24) provided a range of reasons for use of illicit methadone syrup (not in reference to tablets). Over half (54%, n=13) used illicit methadone syrup primarily for 'intoxication' purposes, and just under half (46%, n=11) used illicit methadone syrup for self-treatment of dependence or pain.

4.6.4 Use of buprenorphine

Subutex (buprenorphine)

In the current cohort, 41% (n=41) reported ever using Subutex with 26% ever receiving the drug prescribed, and 22% ever using illicit Subutex. Just 4% (n=4) of the current PWID participants reported recent use of licit buprenorphine in the six months prior to interview, at a median frequency of 30 days (range 1-180 days). Only one participant had recently injected the licit form, at a frequency of 180 days (daily). Six of the 11 participants who had recently used the illicit form had injected it. Only one of the 11 participants reporting recent use of illicit buprenorphine had accessed Subutex treatment in the preceding six months.

Suboxone (Buprenorphine-naloxone)

Participants were also asked if they had used Suboxone, which is a combination of buprenorphine and naloxone. Suboxone is also an opioid substitution therapy (OST) for opioid dependence. In 2012, the oral film formulation of Suboxone was introduced into treatment settings in Tasmania. In response to this, questions regarding both preparations were included in the survey in the last three years.

One-quarter of the sample (24%, n=24) reported lifetime use of Suboxone tablets; 16% (n=16) had used licit tablets and 13% (n=13) had used illicit tablets. Six participants had used illicit Suboxone tablets in the six months preceding the interview at a median frequency of 9 days (range 1-180 days). Of these six participants, four reported injecting the drug on a median of 13 days (range 5-180 days) and two participants reported swallowing the drug. None of the participants reporting recent use of illicit use had accessed Suboxone treatment in the preceding six months.

Fifteen percent (n=16) of the 2013 cohort reported recent use of Suboxone film; 19% (n=19) of the 2014 cohort reported such use. Of the participants in the latter cohort, 10% (n=10) reported recent licit use, and 11% (n=11) reported recent illicit use. Participants reported typically using illicit Suboxone film at a median frequency of 3 days (range 1-180 days), equivalent to use approximately once per two months. Six of the 11 participants reporting recent illicit use had injected the drug in the six months preceding the interview, and 6 participants had swallowed the drug. None of the

participants reporting recent illicit use had accessed Suboxone treatment in the preceding six months.

4.6.5 Self-reported symptoms of opioid dependence

IDRS participants that had recently used opioids (n=95) were asked how they felt about their use of this drug in the last 12 months using the Severity of Dependence Scale (SDS). This consists of 5 multiple choice questions rated on a scale of 0-3, resulting in a range of possible scores from 0-15, where higher scores suggest greater psychological dependence. Participants were asked if they thought that their use of opioids was out of control, if the prospect of missing a dose had made them feel anxious, if they had worried about their use of the drug, if they had wished they could have stopped, and if they would find it difficult to stop or go without opioids.

The median SDS score for those who had used opioids (i.e. heroin, morphine, oxycodone, methadone) was 7 (range 0-14, n=95). Just five participants of those who completed the opioid SDS received a score of zero, indicating no symptoms of dependence.

A score of five on the SDS in relation to opioid use has been validated as a cut-off for predicting DSM-III-R diagnosis of opioid dependence (Gossop et al., 1995; Iraurgi et al., 2010; Topp & Mattick, 1997). Seventy-two percent (n=68) of participants completing the SDS scored five or above, indicating a high level of opioid dependence and/or problematic use amongst the sample. Less than half of this group (46%; n=31) were engaged in OST treatment at the time of interview.

4.6.6 Other pharmaceutical opioids and related substances

Due to recent developments of new opioid-based, or strong analgesic pharmaceuticals, and the known interest/preference among the Tasmanian illicit drug market for pharmaceutical drugs, PWID were also asked about use of other pharmaceutical opioids and related substances in the preceding six months. Fourteen percent of participants reported using illicit/diverted Tramadol in the six months prior to interview, two participants reported use of illicit Fentanyl, and no participants reported use of illicit pethidine. One KE working in an NSP outlet reported increased rates of reporting tramadol use, with some reports of injecting this drug. Two KE working in NSP outlets noted single cases of recent use of Fentanyl in the preceding six months.

4.6.7 Use of different forms of pharmaceutical opioids across IDRS studies

Use of the different types of pharmaceutical opioids across the IDRS PWID samples is presented in Figures 25 and 26 below. It should be noted that these figures report on the proportion of the PWID participants reporting accessing these drugs illicitly (rather than directly from a doctor's prescription for them) in the six months prior to interview; and as such these results differ slightly from the total proportion of the PWID samples in each study reporting any use of these products. Moreover, to allow for more consistent comparisons, Figure 25 presents illicit use of each pharmaceutical opioid type as a proportion of the number of pharmaceutical opioid consumers in each cohort, while Figure 26 presents illicit use as a proportion of the entire IDRS sample each year.

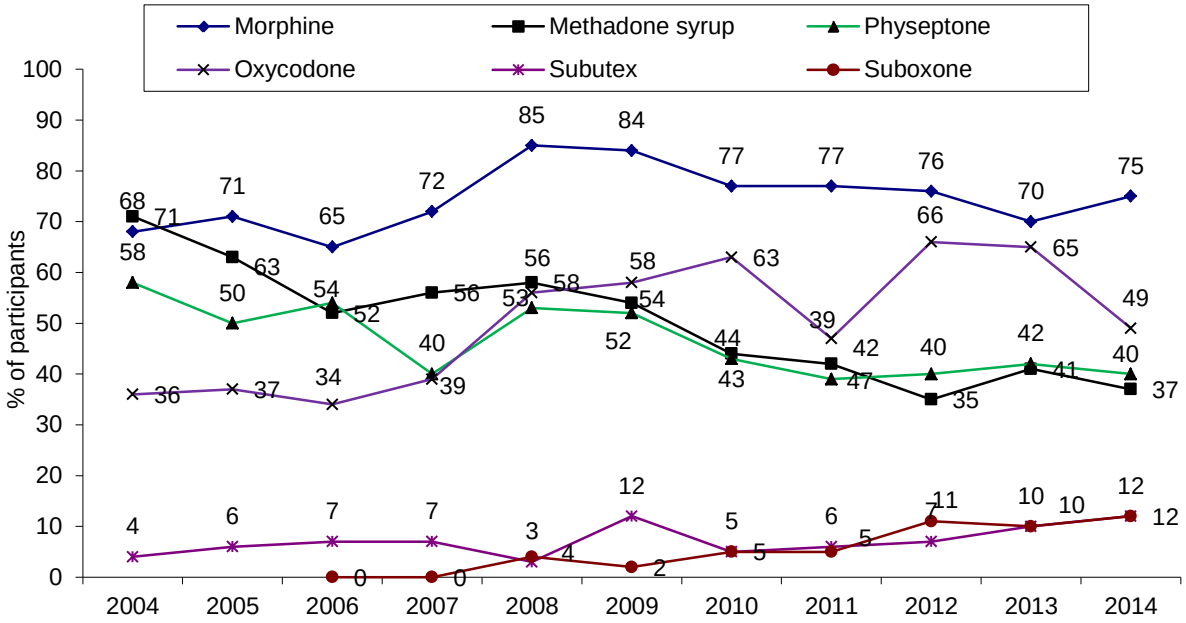
Figure 25 indicates that the proportion of the sample reporting recent use of illicit morphine – which was the predominant non-prescription pharmaceutical opioid used by IDRS PWID participants in all years with the exception of 2004 – had been in decline from 2004 to 2006. Between 2006 and 2008 this trend was reversed, with statistically significant increases in both the proportions of the entire cohort (58% in 2006, 81% in 2009: $\chi^2(1_{n=200})=11.4$, $p<0.001$) (Figure 25) and of opioid consumers (65% in 2006; and 84% in 2009; $\chi^2(1_{n=185})=8.12$, $p=0.004$) (Figure 26) reporting recent use of illicit morphine. In the 2010-2014 studies, the rate of use of illicit morphine stabilised (ranging between 64% and 73% of the total sample) (Figure 27).

In contrast, use of illicit oxycodone across samples has increased from 32% in 2004 to 61% in 2013 ($\chi^2(1_{n=107})=32.01$, $p<0.001$) (Figure 26). In 2014, there was a trend towards a significant decrease in illicit oxycodone use, from 61% in 2013 to 47% in 2014 ($\chi^2(1_{n=208})=3.67$, $p=0.055$) (see Section 8.2 for discussion of this finding).

Between 2005 and 2009, the rate of recent use of methadone ranged between 46% and 55%. Since this time, recent use of illicit syrup across the samples has decreased (52% in 2009 versus 29% in 2012, and has stabilised in this time (35% in 2014) (Figure 26). It is important to note that amongst most cohorts (with the exception of 2008 and 2010-2012), at least half of those reporting illicit purchases of methadone syrup were individuals who themselves were also receiving methadone maintenance treatment (51%, n=18 in 2014). The rate of use of Physeptone has varied between 34% and 50% since 2005, with 38% of the current sample reporting use in the preceding six months (Figure 26).

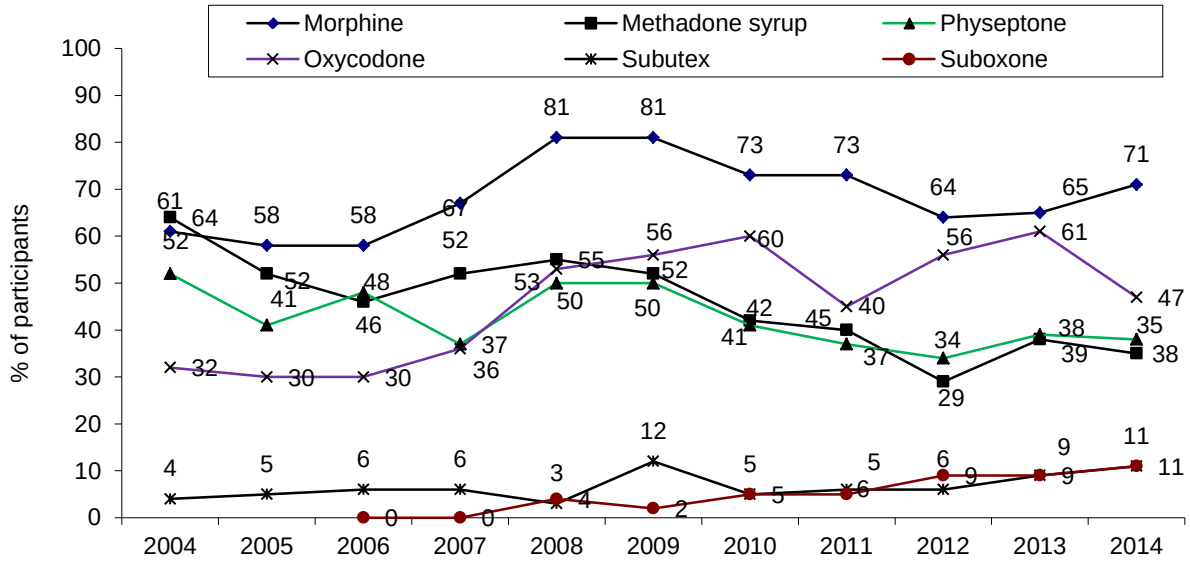
Use of illicit buprenorphine (Subutex) has remained very low across the ten years where the drug has been available for pharmacotherapy. In 2002, just one participant reported illicit use of this drug, and in 2014 this had increased to 11% (Figure 26). Similarly, use of illicit buprenorphine-naloxone tablets (Suboxone) has remained very low across the six years where the drug has been available for pharmacotherapy. In 2006 and 2007, no participants reported use of illicit Suboxone; since this time the rate of recent use has remained very low (between 2% and 11%).

Figure 25: Proportion of opioid consumers within the Tasmanian IDRS PWID cohorts reporting non-prescription use of pharmaceutical opioids in the six months prior to interview, 2004-2014



Source: IDRS PWID interviews

Figure 26: **Proportion of Tasmanian IDRS PWID cohorts reporting use of different types of diverted pharmaceutical opioids or related products in the six months prior to interview, 2004-2014**

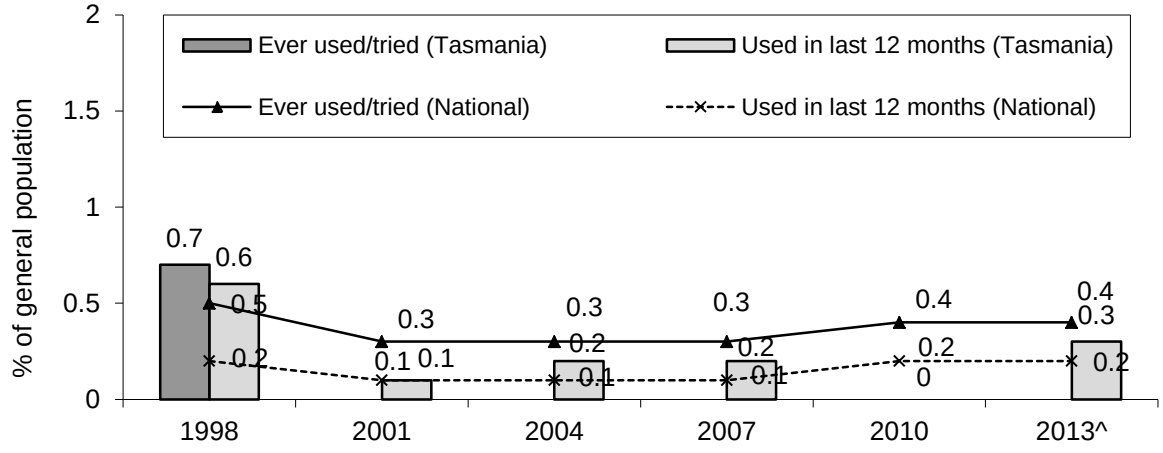


Source: IDRS PWID interviews

4.6.8 Prevalence of opioid use

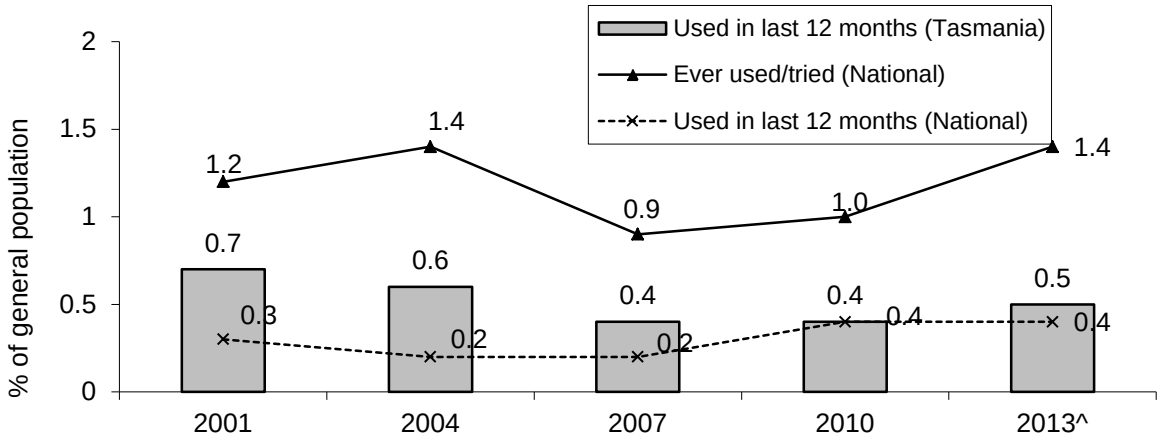
The 2013 National Drug Strategy Household Survey (NDSHS) interviewed 1,134 Tasmanians aged 14 years or above about their drug use. Consistent across 2010 and 2013 surveys, 0.4% and 0.2% of the national sample reported lifetime and recent use of methadone and/or buprenorphine (AIHW 2014). Rates of past 12 month use amongst the Tasmanian sample also remained relatively stable (0.0% in 2010; 0.3% in 2013). The 2013 NDSHS indicated that 1.4% of those sampled nationally reported lifetime use of other opioids for non-medical purposes, a significant increase relative to 1.0% in 2014 ($p<0.005$). Rates of past 12-month use were similar between 2010 and 2013, with 0.4% of the national sample in both studies reporting such use, and 0.4% and 0.5% of Tasmania sample reporting such use respectively(AIHW, 2013) (Figure 27; Figure 28).

Figure 27: Prevalence of methadone or buprenorphine* use in Australia and Tasmania among those aged 14 years and over, 1998-2013



Source: National Drug Strategy Household Survey 1998-2013
* Use of buprenorphine was only included in the 2007-2013 surveys
^ A large standard error means this data should be interpreted with caution

Figure 28: Prevalence of other opioid use (excluding heroin, methadone and buprenorphine) in Australia and Tasmania among those aged 14 years and over, 2001-2013



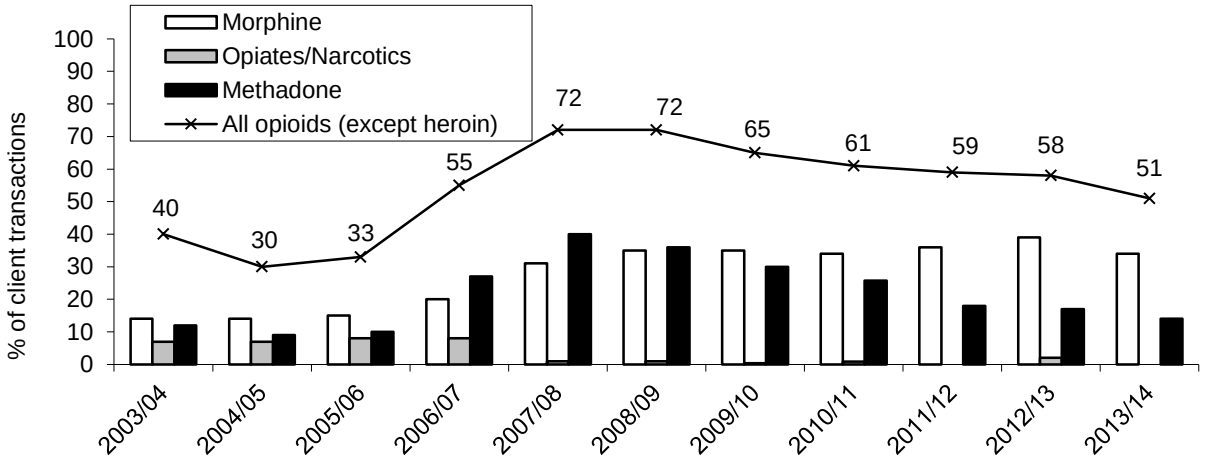
Source: National Drug Strategy Household Survey 2001-2013
^ The 2013 Tasmanian estimate of past 12 month use has a very large standard error and is considered too unreliable for general use

4.6.9 Pharmaceutical opioid use among PWID and other groups

Data from clients of non-pharmacy NSP outlets reporting an opioid as the drug they most often inject have been highly variable over the past eleven years (Figure 29), due primarily to clients nominating the catch-all 'opiates-narcotics' category rather than indicating a specific single drug[9]. When these data are collapsed, a trend becomes clearer, with the percentage of clients reporting opioids (excluding heroin) as the drug they most often injected steadily increasing from 33% in 2005/06 to 72% in 2008/09. However, since 2009/10, this has reversed, with the proportion of client transactions for an opioid (excluding heroin) declining from 65% in 2009/10 to 51% in 2013/14. This trend of increasing use of opioids in the mid 2000s and the small decline since this time has been the inverse of the trend noted for methamphetamine use among non-pharmacy NSP clients (see Section 4.3.5). While this appears to represent a substantial change in the market over time, these findings should be interpreted with caution, as there are several caveats to this data. These are discussed in detail in Section 4.3.3.

[9] In 2009/10, the 'opiates-narcotics' category was not included in the NSP dataset, instead specific opioids were reported. These have been collapsed into an opiates-narcotic group, to allow for comparisons with previous years.

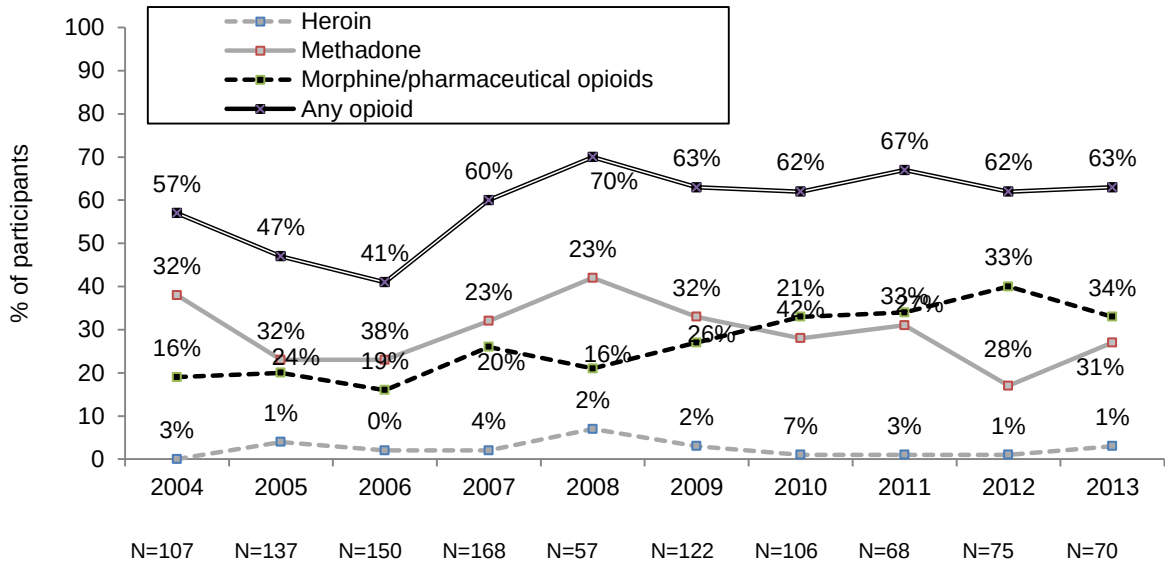
Figure 29: Percentages of Tasmanian non-pharmacy Needle and Syringe Program clients reporting opioids as their 'drug most often injected', 2003/04-2013/14



Source: Population Health, Department of Health and Human Services

The Australian Needle and Syringe Program Survey (Iversen, Topp & Maher, 2007) identified opioids as the last drug injected by 57% of the Tasmanian participants for the 2004 survey. This dipped during 2005 and 2006 (to 41% in 2006). Since 2007, however, rates reporting their last drug injected as an opioid have remained around 60% (Figure 30).

Figure 30: Australian Needle and Syringe Program (NSP) Survey: Prevalence of opioids within 'last drug injected', 2004-2013



Source: Iversen & Maher, 2014

4.7 Benzodiazepines

Key Points:

- Three-fifths (57%) reported recent non-prescribed use of benzodiazepines, and one-tenth (9%) reported injecting a benzodiazepine in the six months preceding the interview;
- Most consumed benzodiazepines orally (96%), whilst almost one-third (31%) had ever injected a benzodiazepine;
- Diazepam was the most commonly swallowed benzodiazepine; and
- Concomitant injection of benzodiazepines and opioids has decreased since 2005.

4.7.1 Benzodiazepine use

The majority of IDRS participants had used benzodiazepines at some stage in their lives (87%, n=88) and, of this group, 96% (n=84) had ever swallowed benzodiazepines. Four-fifths reported using benzodiazepines in the six months preceding the interview (78%, n=79).

Lifetime benzodiazepine injection was reported by almost one-third (31%, n=31) of the 2014 PWID cohort, with 9% (n=9) of the whole sample reporting injecting the drug in the six months prior to the interview. Rates of overall recent use have remained fairly stable (72% to 87% across the 2004 to 2014 cohorts), while recent injection rates in the IDRS cohorts have been more variable, with the highest rates evident in 2008 (36%) and the lowest rates of recent injection evident in 2014 (9%), a significant decrease based on the 2013 rate of use (22%: $\chi^2(1_{n=208})=6.92$, p=0.009) (Figure 31).

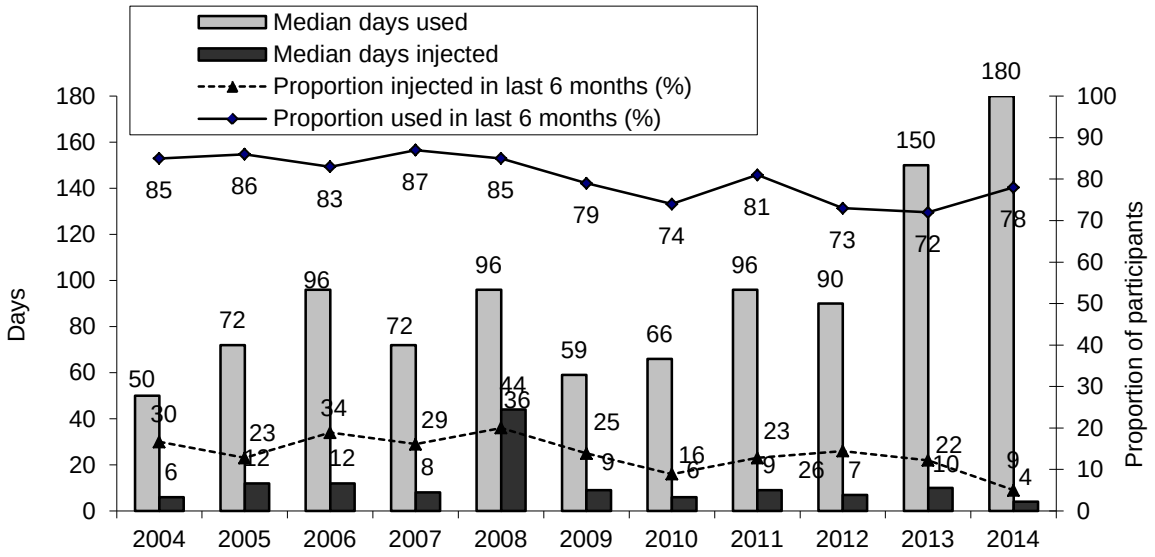
Use of licit benzodiazepines (those prescribed directly to the individual using the drug) and illicit benzodiazepines (use of benzodiazepines that had not been prescribed to the individual) was also examined. Over half of the cohort reported ever having been prescribed a benzodiazepine (56%, n=57), with all having used the drug orally, and 12% (n=12) of the total 2014 PWID sample reporting ever having injected licit benzodiazepines. While 47% (n=47) reported recent licit use of benzodiazepines, none of these participants had recently injected the licit form.

Lifetime use of illicit benzodiazepines was reported by 76% (n=76) of participants; of this group, all but four reported oral use, and one-third (37%, n=28) reported ever having injected this type of drug. In the preceding six months, 57% (n=58) of participants reported use of illicit benzodiazepines and 9% (n=9) reported recent injection. There was a large amount of overlap in the use of licit and illicit benzodiazepines: in the current cohort, 41% (n=32) of those who had recently used benzodiazepines reported exclusively illicit use; 27% (n=21) reported exclusively licit use; and 32% (n=25) had used licit and illicit benzodiazepines.

The median frequency of use of any form of benzodiazepine was 180 days in the preceding six months (SD=73.8, range 1-180). Since 2009, median frequency of benzodiazepine use has been increasing (59 days in 2009; 150 in 2013). Among the 9 participants that had recently injected any form of benzodiazepines, the median frequency of injection was 4 days in the preceding six months (SD=29.5, range 1-93 days).

The demographic characteristics of those that had used illicit benzodiazepines in the past six months were similar to those of other PWID (see Section 3.1) in terms of age, sex, educational and cultural background, employment, relationship status, sexual preference, prison history, accommodation, age of first injection, and duration of injecting career. However, participants reporting recent use of illicit benzodiazepines were more likely to report being engaged in a form of AOD treatment in the preceding six months (59% versus 33%: $\chi^2(1_{n=101})=6.73$, p=0.010) and less to report daily injection in the preceding month (26% versus 49%: $\chi^2(1_{n=101})=5.68$, p=0.017) than participants who reported no recent use of these drugs.

Figure 31: Proportion of participants reporting recent use of benzodiazepines and median frequency of this use, 2004-2014



Source: IDRS PWID interviews

Examination of Table 13 clearly indicates that, as per trends in previous IDRS cohorts, diazepam is the most commonly used benzodiazepine among those swallowing the drug (used by 96% of those swallowing a benzodiazepine in the preceding six months, n=71). Oral use of alprazolam (Xanax, Kalma, Aplrax) in the preceding six months remained relatively stable between 2006 and 2010 (between 46% and 63%). In 2011, this rate decreased to 35% (54% in 2010: $\chi^2(1_{n=150})=4.25$, p=0.04), however, rates rose and stabilised between 2012 and 2014 (between 40% and 58%). Oral use of temazepam tablets (Temtabs, Normison, Temaze) increased between 2009 and 2010, from 19% (n=14) to 34% (n=34: $\chi^2(1_{n=100})=5.0$, p=0.02). Since 2012 the rate of use has remained stable between 21% and 26%. Use of oxazepam (Serepax, Murelax, Alepam) was reported by between 37% and 49% of recent oral benzodiazepine users between 2006 and 2010. In 2011 this decreased to 29% ($\chi^2(1_{n=150})=5.6$, p=0.02), and has remained relatively stable since this time (27% to 35%).

Table 13: Benzodiazepine and related formulations used by PWID orally in the six months prior to interview, 2005-2014

	2005 (n=86) %	**2006** (n=83) %	**2007** (n=87) %	**2008** (n=75) %	**2009** (n=75) %	**2010** (n=71) %	**2011** (n=79) %	**2012** (n=77) %	**2013** (n=81) %	**2014** (n=74) %
Alprazolam	44	63	46	55	49	54	35	43	40	58
Clonazepam	5	6	5	7	17	17	1	13	9	16
Diazepam	85	80	82	97	96	100	89	95	91	96
Flunitrazepam	7	10	6	9	7	6	5	3	5	3
Nitrazepam	10	25	11	9	21	21	9	13	19	12
Oxazepam	37	43	44	37	49	49	29	35	27	33
Temazepam										
Capsules	3	1	5	1	3	-	-	-	-	-
Tablets	10	20	23	24	19	34	32	26	21	23
Doxylamine	-	-	3	1	-	3	1	3	4	-
Zolpidem	-	-	2	1	1	4	-	3	-	1

Source: IDRS PWID interviews

In contrast to trends reported for oral use of benzodiazepines, use of alprazolam tablets was far more common amongst those injecting benzodiazepines than was diazepam (Table 14). Comparing

the injection of the main types of benzodiazepines used for injection across IDRS PWID cohorts over time, it is clear that use of gel capsule formulations of temazepam decreased (36% of the sample in 2001, falling to 4% in 2005 and no reports of this since 2008), reflecting their restriction and eventual removal from the market. As aforementioned, rates of benzodiazepine injection decreased significantly from 2013 to 2014, reflected here in the low rates of diazepam injection compared to previous cohorts (1% of 2014 cohort compared to 4% to 12% of 2006 to 2013 cohorts) and alprazolam injection compared to previous cohorts (8% of 2014 cohort compared to 14% to 30% of 2006 to 2013 cohorts) (Table 14).

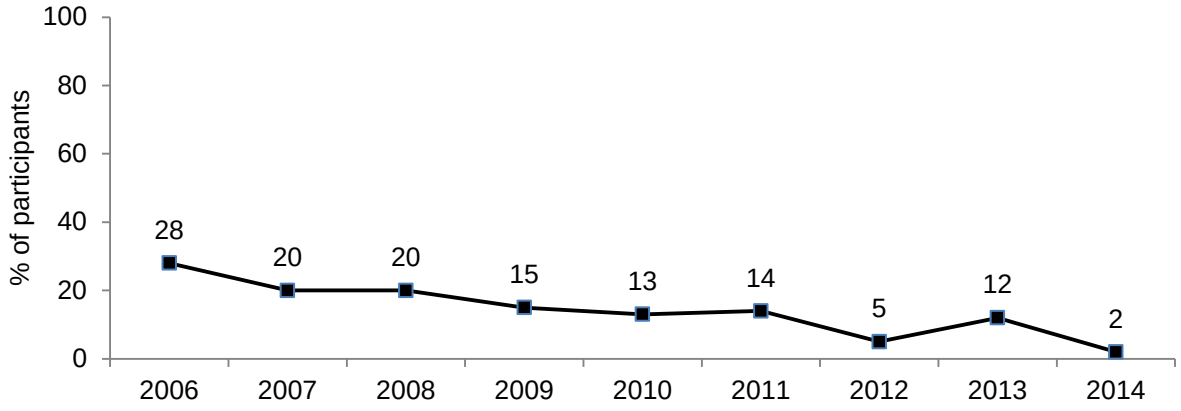
Table 14: Types of benzodiazepines commonly injected by PWID, 2005-2014

Injected in last 6 months:	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Temazepam gel capsules	4	-	1	-	-	-	-	-	-	-
Alprazolam	19	27	25	30	20	14	22	24	21	8
Diazepam	8	10	6	12	11	6	5	4	5	1
Oxazepam	5	4	2	3	1	4	-	1	-	0
Clonazepam	2	2	2	3	4	2	-	2	-	0
Flunitrazepam	2	2	2	4	2	-	-	1	1	0

Source: IDRS PWID interviews
Note: N=100 2005-2011; N=106 in 2012; N=107 in 2013; N=101 in 2014

Participants were also asked if they had injected a benzodiazepine concomitantly with an opioid. This combination of use is of considerable concern, not solely due to the deleterious effects of injection of benzodiazepines (see Fry & Bruno, 2002), but also due to the increased risk of overdose following use of multiple central nervous system (CNS) depressant drugs, and, moreover, the extremely disinhibited behaviour that can occur following such combined use. Since 2009, this rate has remained relatively stable, ranging between 12% and 15% with the exception of 2012 (5%) (Figure 32). In 2014, only 2% (n=2) of the sample reported concomitant injection of a pharmaceutical opioid and a benzodiazepine; both participants injected morphine (with alprazolam and diazepam) and one participant also injected oxycodone (with alprazolam).

Figure 32: Proportion of participants reporting recent concomitant injection of a pharmaceutical opioid and a benzodiazepine, 2006-2014



Source: IDRS PWID interviews

4.7.1 Alprazolam

As discussed in Section 4.7.2, injecting use of alprazolam increased to 30% of the sample in 2008, as did concomitant injecting use of alprazolam and opioids. Both KE and PWID participants provided anecdotal reports of harms associated with this use, such as vascular damage, gangrene, amputations of limbs and overdose. Partly as a result of this, on 1 September 2007, Pharmaceutical Services Branch (of the Tasmanian Department of Health and Human Services) implemented regulatory changes regarding the prescribing and dispensing of alprazolam. These changes included restricting alprazolam prescribing amongst patients receiving opioid medication: prescribers for patients enrolled in methadone maintenance or buprenorphine treatments were required to obtain approval from the Clinical Director of Alcohol and Drug Services in order to prescribe alprazolam; and prescribers for patients receiving other types of opioid medications required authority from Pharmaceutical Services in order to continue prescribing alprazolam for longer than four weeks.

In response to these changes, questions on alprazolam use were incorporated in the IDRS survey in 2013 and 2014. Over two-thirds (69%, n=70) of the 2014 IDRS cohort reported ever using any alprazolam, with 39% (n=39) having used this drug in the preceding six months; these rates are similar to those recorded for the 2013 cohort (75% and 40%, respectively). Non-prescribed alprazolam was used by 36% (n=36) of the sample, at a median frequency of 4 days (range 1-150 days), in the preceding six months. Prescribed alprazolam was used by just 4% (n=4) of the sample, at a median frequency of 126 days (range 6-180 days). Reflecting the general trend of decreased benzodiazepine injection, the rate of injecting use of any alprazolam tablets in the preceding six months was lower in the 2014 cohort compared to the 2013 cohort (8% versus 21%: $\chi^2(1_{n=208})=1.96$, p=0.017)

Twenty-three percent (n=23) of the sample reported ever having been prescribed alprazolam, with all except one participant reporting oral use, and 7% (n=7) reporting injecting alprazolam at some stage. Lifetime use of illicit alprazolam was reported by nearly two-thirds of the sample (64%, n=65), and one-quarter reported ever having injected the drug (28%, n=28). Recent injecting use of illicit alprazolam was reported by 8% (n=8), at a median frequency of 4 days (range 1-12).

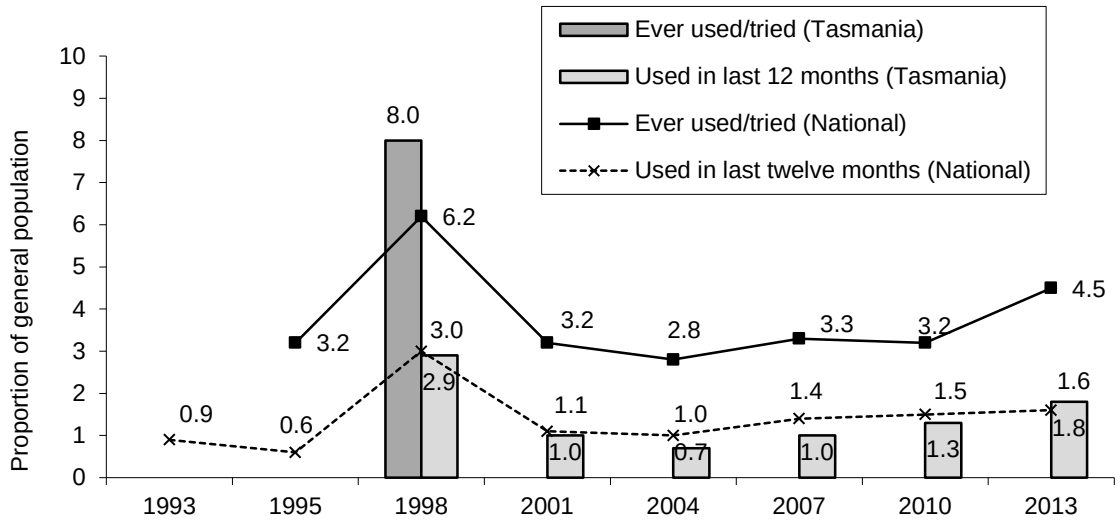
Participants who reported recent use of alprazolam were asked to comment on the predominant source of these drugs in the preceding six months (n=38), with almost all participants reporting illicit alprazolam (90%, n=34). These participants were also asked to report on the quantity of alprazolam they consumed on the last occasion: participants who responded to this question (n=34) reported a median amount of 4mg (1mg-12mg, SD=2.7).

In previous Tasmanian IDRS studies, participants reported markedly higher rates of injection of benzodiazepines that were reported for the national sample. Between the 2005 and 2008 studies, the proportion of the PWID samples reporting recent injection of alprazolam increased from 19% to 30%. In 2010, this rate of injection decreased to 14% ($\chi^2(1_{n=100})=6.56$, p=0.01). Whilst between 2011 and 2013, this rate remained stable at a slightly higher rate (ranging between 21%-24%), in 2014 this rate decreased to 8% $\chi^2(1_{n=210})=6.81$, p=0.009) (Table 15).

4.7.3 Prevalence of benzodiazepine use

In the 2013 National Drug Strategy Household Survey (AIHW, 2014) (n=1,134), 1.8% of Tasmanian respondents reported using benzodiazepines in the preceding year, a slight increase relative to 2010 (1.3%). The rates reported for Tasmania are similar to those reported nationally in 2013 (1.6%) and 2010 (1.5%) (AIHW, 2014) (Figure 33).

Figure 33: Prevalence of benzodiazepine use in Australia and Tasmania among those aged 14 years and over, 1993-2013



Source: National Drug Strategy Household Survey 1993-2013

4.7.4 Use in particular populations

Despite higher rates of positive illicit drug urine screens showing benzodiazepines in 2004/05 (20%) and 2005/06 (16%), rates have since been quite low (7% in 2007/08; 9% in 2008/09; 6% in 2009/10; 5% in 2010/11, 4% in 2011/12 and 2012/13 respectively). This trend continued in 2013/24, with only 1% of positive urine screens indicating use of benzodiazepines.

4.7.5 Benzodiazepine use among PWID

Reported use of benzodiazepines as the main drug injected by non-pharmacy NSP outlet clients has remained stable over the preceding ten years (Table 15), ranging between <0.1% and 1.2%. It should be noted, however, that there are limitations with this dataset (see Section 2.3.1) and that data from the NSP are likely to underestimate the true level of injection of benzodiazepines (as the question usually asked is 'what is the drug you usually inject?', and data from the IDRS indicates that benzodiazepine-injecting PWID will often report another drug as the drug they most often injected).

Table 15: Proportion of transactions in which benzodiazepines were reported as 'drug most often injected' by Tasmanian non-pharmacy Needle and Syringe Program clients, 2003/04-2013/14

Year	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Number of transactions reporting benzodiazepines	139	36	52	304	399	147	201	215	125	63	108
Percent of total transactions reporting benzodiazepines	0.4%	>0.1 %	0.2%	0.9%	1.2%	0.4%	0.6%	0.7%	0.6%	0.4%	0.5%

Source: Population Health, Department of Health and Human Services

4.8 Other drugs

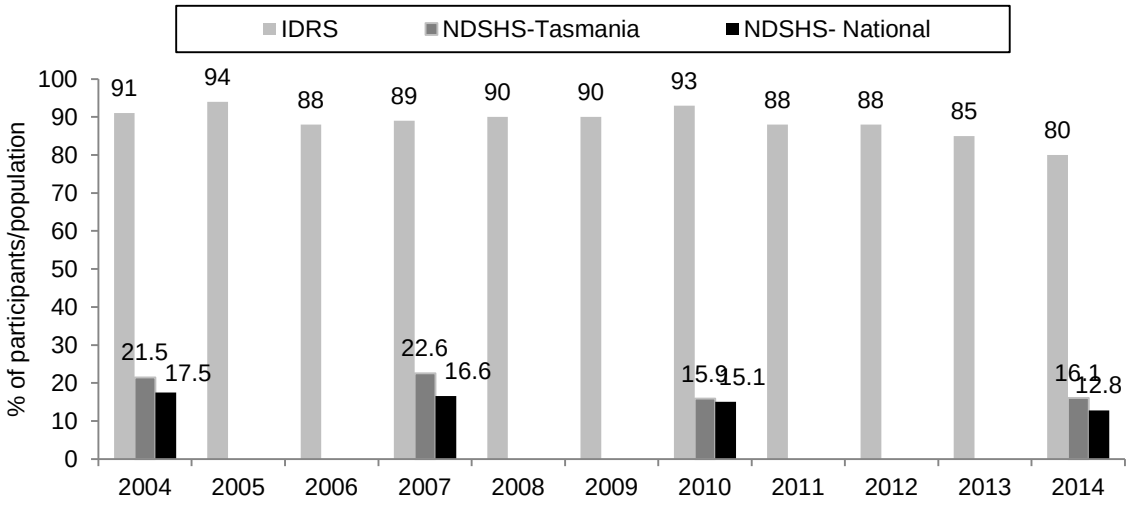
Key Points:

- Most of the sample (89%) reported use of tobacco in the preceding six months, with the majority smoking on a daily basis (180 days);
- Half (51%) reported use of alcohol in the preceding six months, at a median frequency of 6 days;
- One-fifth (20%)had recently used ecstasy, at a median frequency of 2 days;
- One-third (34%) reported recent illicit use of prescription stimulants, with methylphenidate more commonly used than dexamphetamine. These are generally used as second-line drugs; and
- Over one-tenth (15%) had used illicit quetiapine in the preceding six months, at a median frequency of five days.

4.8.1 Tobacco

Almost all participants in the current study reported lifetime use of tobacco (95%, n=96), with a similarly high proportion reporting use in the preceding six months (89%, n=90). The median frequency of this use was 180 days (range 60-180 days), equating to daily use. Eighty percent (n=80) of the sample reported daily use of tobacco, a notably higher rate than was reported in the 2013 National Drug Strategy Household Surveys (NDSHS) (AIHW, 2014) both nationally and for Tasmania (12.8% and 16.1% respectively), and for an age-matched sub-sample (aged 30-39) from the national 2010 NDSHS (15.1%) (Figure 34). Nationally, the NDSHS has estimated prevalence of daily tobacco use as decreasing from 19.4% in 2001 to 12.8% in 2013; in Tasmania this rate also decreased, from 22.6% in 2007 to 16.1%% in 2013.

Figure 34: Rates of tobacco use amongst Australian and Tasmanian populations and Tasmanian IDRS samples, 2004-2014



Source: IDRS PWID interviews, National Drug Strategy Household Surveys, 2004-2013 (AIHW, 2005a&b, 2008a&b, 2011, 2014)

Heavy Smoking Index nicotine dependence

Participants who smoked daily were asked questions from the Fagerstrom Test for Nicotine Dependence (FTND). These questions included 'how soon after waking do you smoke your first cigarette?', do you find it difficult to refrain from smoking in places where it is forbidden?, 'which cigarette would you hate to give up', 'how many cigarettes a day do you smoke?', do you smoke more frequently in the morning' and 'do you smoke even when you are sick in bed?'.

The FTND gives a score between zero and 10. The sum of these scores was computed and a cut-off score between 6 and 8 was used to indicate 'high' nicotine dependence. A score of 8 or more was used to indicate 'very high' nicotine dependence (Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991).

Eighty participants who smoked daily completed the FTND. As seen in Table 16, three-quarters of the participants reported smoking their first cigarette within five minutes of waking (33%) or between five to 30 minutes of waking (42%). Two-fifths of daily smokers reported smoking between 11-20 cigarettes a day (44%) and two-fifths reported smoking 10 or less cigarettes a day (42%).

Nearly half (46%) of daily smokers reported that they find it difficult to refrain from smoking in forbidden places such as a library; 61% reported that they would hate to give up the first cigarette in the morning compared to other times of the day. Three-fifths (59%) reported smoking when sick in bed. The mean FTND score was 4.1 (SD=2.8). One-third of the sample (33%) scored 6 or greater, indicating high or very high nicotine dependence.

Table 16: Heavy Smoking Index for nicotine dependence, 2014

Time till first cigarette (after waking)	**n=77**
Within 5 minutes (%)	33
5-30 mins (%)	42
31-60 mins (%)	12
60+ mins (%)	14
Number of cigarettes smoked a day	**n=80**
10 or less cigarettes (%)	42
11-20 cigarettes (%)	44
21-30 cigarettes (%)	13
31 or more cigarettes (%)	1
Difficult to refrain from smoking	46
Which cigarette would you hate to give up:	
first in the morning	61
any other	39
Smoke when sick in bed	59
High or very high dependence* (%)	33
Mean score	4.1

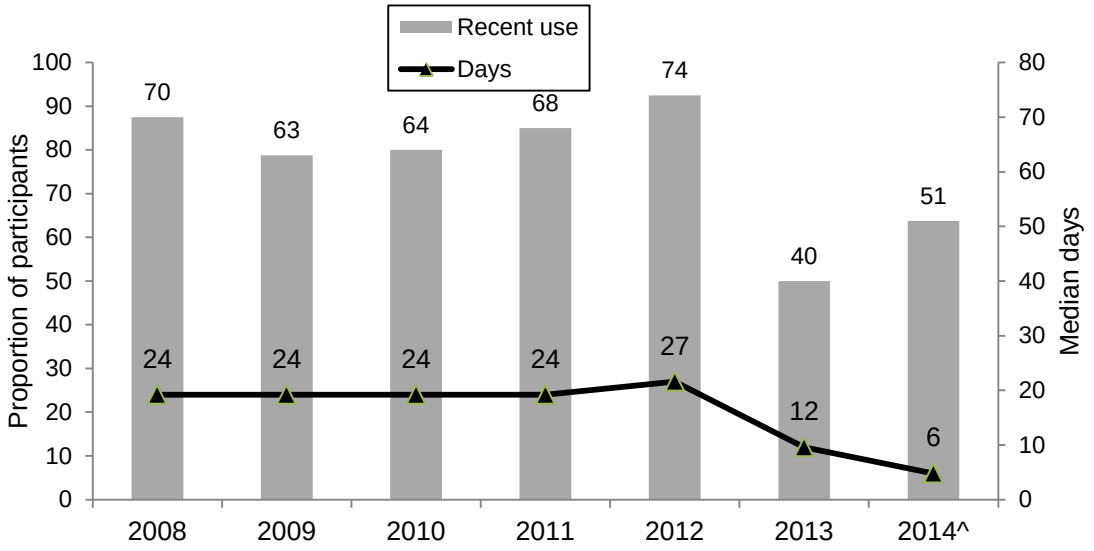
Source: IDRS participant interviews
* Scored 6 or above

4.8.2 Alcohol

Ninety-three participants in the 2014 IDRS commented on their use of alcohol. The majority of these participants reported lifetime use of alcohol (83%, n=77). Of the 84 participants who commented on past six month alcohol use, 51% (n=43) had used alcohol in this period. The median frequency of use amongst those who had recently consumed alcohol was 6 days (range 1-180), which equates to

use once per month. Five participants reported daily alcohol use in the preceding six months preceding the interview (Figure 35).

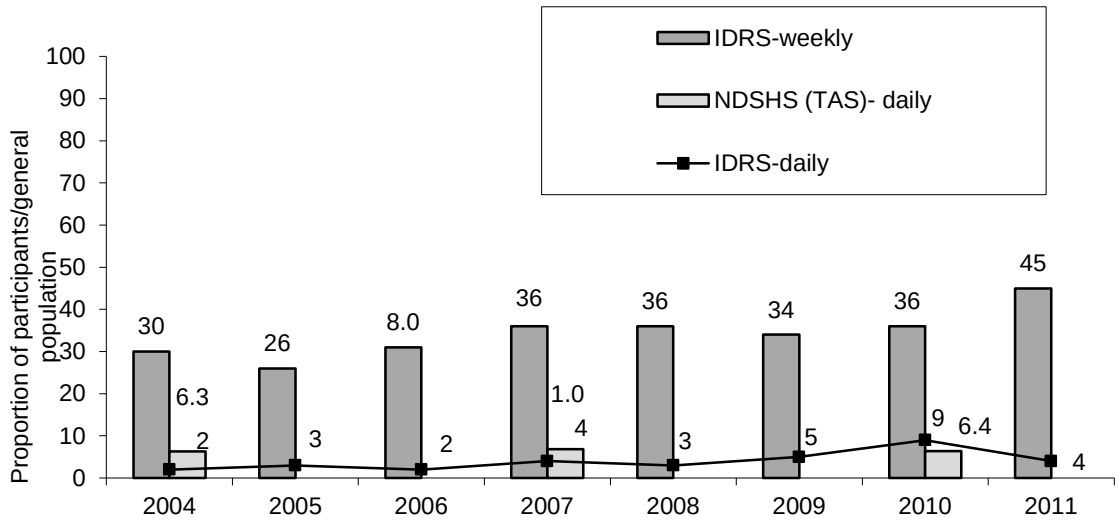
Figure 35: Rates of alcohol use and median frequency of use amongst Tasmanian IDRS samples, 2008-2014



Source: IDRS participant interviews
^ Note that there was substantial missing data for 2014 and thus these figures should be treated with caution

Based on data from the 2013 National Drug Strategy Household Survey, it was estimated (from the sample of 1,134 participants) that approximately 38.9% of Tasmanians had used alcohol on a weekly basis in the year prior to interview (Figure 36), compared with 37.3% Australians nationally (AIHW, 2013). The proportion of the Tasmanian NDSHS sample that had used alcohol daily in the year prior to interview was similar to the national estimate (5.9% versus 6.5%).

Figure 36: Rates of alcohol use amongst Tasmanian NDSHS participants aged 14 years and older and IDRS samples, 2004-2014



Source: IDRS PWID interviews, National Drug Strategy Household Surveys, 2004-2013 (AIHW, 2005b, 2008b, 2011, 2014).
^ Rates of alcohol use for the 2014 IDRS sample were not displayed due to unreliable estimates of use based on missing data

IDRS participants were also asked to complete the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al. 1993) which is a brief screening scale to identify individuals with alcohol problems, including those in early stages. It is a 10-item scale, which assesses three conceptual domains: alcohol intake; dependence; and adverse consequences (Reinert & Allen, 2002). Total scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence (Babor et al., 2001). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor et al., 2001). Amongst participants who reported use of alcohol in the preceding six months and completed the section (n=39), the overall mean AUDIT score was 13.2 (median 10.0; range 1-38, SD=10.0).

The total AUDIT score places respondents into one of four 'zones', or risk levels. Amongst participants reporting consumption of alcohol in the preceding six months and who completed the section (n=39), 31% (n=12) of participants scored in zone 1, a level reflecting low risk drinking or abstinence; 31% (n=12) scored in zone 2, indicative of alcohol use in excess of low-risk guidelines; 21% (n=8) scored in zone 3, harmful or hazardous drinking; and 18% (n=7) scored in zone 4, indicating that those in this zone may benefit from referral to assessment and possible treatment for alcohol dependence.

4.8.3 Ecstasy and related drugs

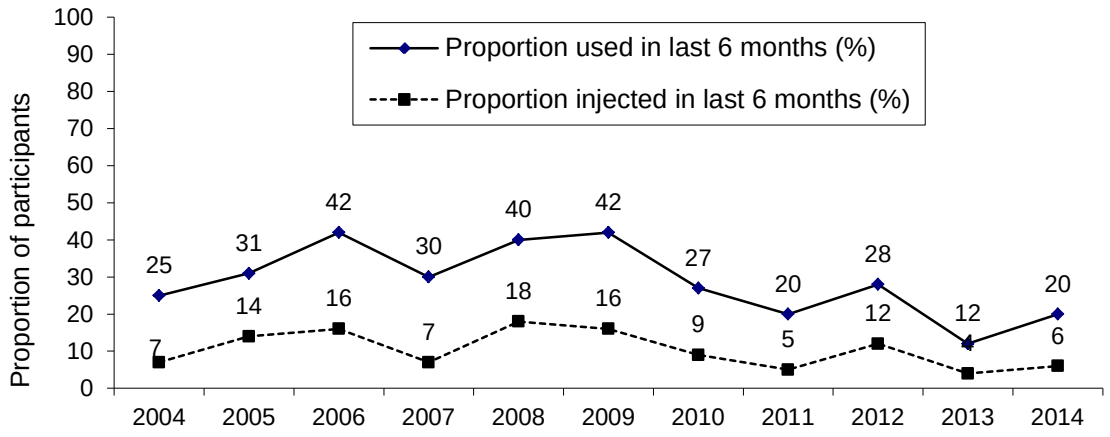
There have been multiple indicators pointing to a tightening of the ecstasy market over the past few years. KE who commented (n=7) who worked in drug treatment services, advocacy services, and NSP outlets, stated that there had been no reports of 'ecstasy'[10] use among users of other illicit drugs, although KE employed in law enforcement reported increased availability of this drug.

In the PWID sample, 67% (n=68) had used ecstasy at some stage in their lives: swallowing of the drug was most common, reported by 63% of the sample; and 21% of the sample reported injecting at some point in their lifetime. Use of ecstasy in the previous six months was reported by 20% (n=20) at a median frequency of two days (range 1-30 days), which equates to use approximately once every three months (Figure 37). Use of ecstasy has been declining amongst local IDRS cohorts: in 2008 and 2009, approximately 40% of each sample reported recent use. From 2010 to 2012 the rate of recent use decreased and relatively stabilised between 20% and 28% of the cohort. A significant decline in recent use was seen from 2012 (28%) to 2013 (12%): $\chi^2(1_{n=213})=7.65$, p=0.006), with a partial resurgence in rate of use amongst the cohort from 2013 to 2014 (20%) (p=0.18). This is reflected in comments from KEs working in alcohol and drug treatment services and NSP outlets, noting no reports of recent use. Recent oral use of ecstasy was reported by 18% of the sample, and 6% reported injecting in this period, at a median frequency of two days (range 1-30 days).

The demographics of those that had used ecstasy in the past six months (n=20) did not differ greatly from those of the larger PWID sample (see Section 3.1) in terms of sex, cultural background, sexual preference, relationship status, accommodation, employment status, current engagement in AOD treatment, prison history, and duration of injecting career. However, participants reporting recent ecstasy use were more likely to be younger (33.7 years versus 39.6: t(27)=2.66, p=0.013) and report having completed trade/tertiary qualifications (80% versus 55%: $\chi^2(1_{n=100})=4.17$, p=0.041) compared to those participants who had not recently used ecstasy.

[10] Intelligence reports from police in previous years suggest that many of the tablets sold as 'ecstasy' may not necessarily contain 3,4 methylenedioxymethamphetamine (MDMA) as the primary active ingredient, although in recent years local seizures have increasingly identified the presence of tablets containing MDMA. As such, in this section, the term 'ecstasy' will be used to refer to tablets or powder sold under that name, rather than necessarily referring to MDMA.

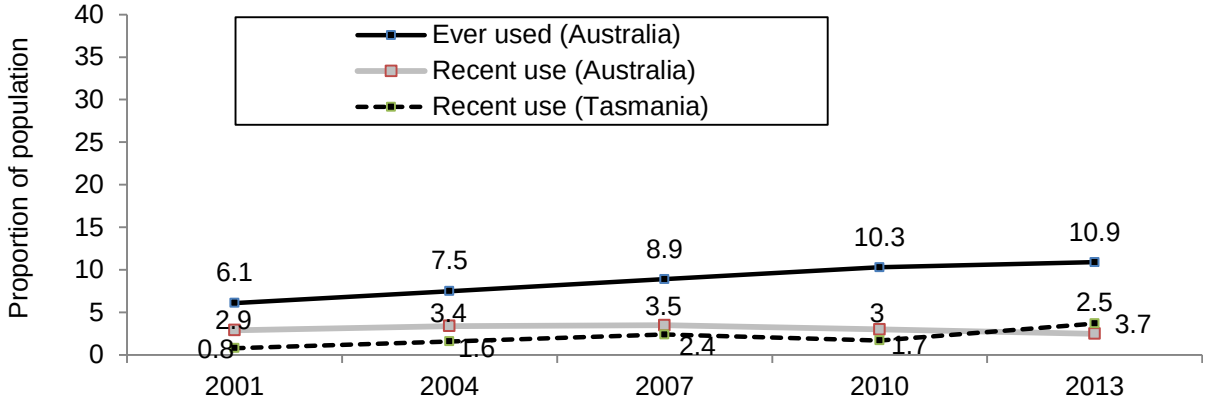
Figure 37: Proportion of PWID reporting ecstasy use and injection in the preceding six months, 2004-2014



Source: IDRS PWID interviews

Between the 2010 and 2013 National Drug Strategy Household Surveys (AIHW, 2011, 2014), a decrease in past yearly use of ecstasy for the national sample was reported (3.0% in 2010 versus 2.5% in 2013; p<0.050). In Tasmania, the estimated prevalence of use increased from 1.7% in 2010 to 3.7% in 2013 ($\chi^2(1_{n=2194})=7.55$, p=0.006) (Figure 38).

Figure 38: Rates of ecstasy use amongst Tasmanian NDSHS and IDRS samples, 2001-2013



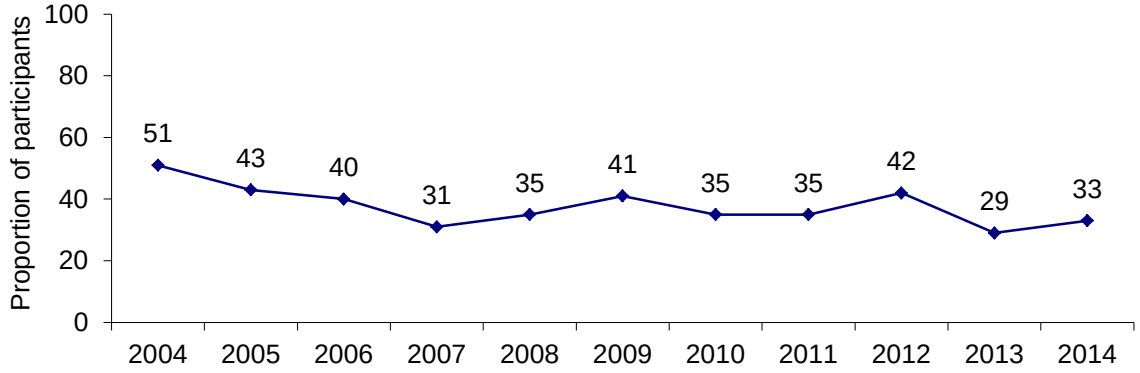
Source: National Drug Strategy Household Surveys, 2001-2013 (AIHW, 2002a&b, 2005a&b, 2008a&b, 2011, 2014)

4.8.4 Prescription stimulants (dexamphetamine, methylphenidate)

In the 2013 PWID sample, 58% (n=59) had used illicit prescription stimulants at some stage in their lives, with one-third (34%) using it in the last six months. Injection of the illicit form of these drugs was most common, reported by 55% of the sample at some stage of their lives, and 33% in the preceding six months, at a median frequency of six days in this period (range 1-180 days, SD=45.5). Swallowing of illicit prescription stimulants was reported by 13% of the sample at some stage in their lives, while 5% had swallowed these drugs in the past six months. Of those who commented on the main type of pharmaceutical stimulant used (n=31), methylphenidate was cited more commonly (58%) than dexamphetamine (39%).

While use of these drugs was relatively common among the PWID cohort, it appeared that they were predominantly used as a second-line drug, as no participants reported prescription stimulants as the drug they had most commonly used in the preceding month. Looking at use of pharmaceutical stimulants over time, one notable trend was evident: the proportion of participants reporting recent use decreased from 51% in 2004 to 31% in 2007 ($\chi^2(1_{n=100})=7.5$, p=0.006), and has remained relatively stable since this time (Figure 39).

Figure 39: Recent use of illicit pharmaceutical stimulants amongst IDRS participants, 2004-2014



Source: IDRS PWID interviews

The demographic characteristics of those who had used illicit prescription stimulants in the past six months did not differ from those of the larger PWID sample (see Section 3.1) in terms of age, sex, cultural background, sexual preference, education, employment status, relationship status, stable accommodation, engagement in drug treatment, duration of injecting career. However, participants reporting recent use of illicit prescription stimulants were less likely to report a prison history (25% versus 49%: $\chi^2(1_{n=99})=5.25$, p=0.022) compared to those who had not recently used illicit pharmaceutical stimulants. KE had suggested that such prescription stimulant use is more common among by younger people. This was not supported in the current cohort, with no significant differences in age identified between those that had recently used pharmaceutical stimulants (37 years) and those that had not (39 years, p=0.23).

4.8.5 Quetiapine

In response to increasing anecdotal reports of extra-medical use of quetiapine, new questions regarding use of this drug were introduced from the 2011 survey onwards. Quetiapine is an antipsychotic medication, marketed as Seroquel. Two-fifths of the sample (42%) reported lifetime use of quetiapine in 2014, a similar proportion to that reporting use in the 2013 sample (45%). In the preceding six months, 11% of the sample reported licit use and 15% illicit use (just one participant had used both forms). The median frequency of use of illicit quetiapine was just five days (range 2-90 days, SD=22.0, n=15). Thirteen participants had exclusively swallowed the illicit form, and two participants had exclusively smoked illicit quetiapine.

4.8.6 Inhalants

While 20% of the PWID respondents reported ever using inhalants, five participants (5%) had used inhalants (nitrous oxide) on a median of 12 occasions in the six months prior to interview.

4.8.7 Hallucinogens

Thirteen percent (n=13) of the PWID respondents in the current study reported use of hallucinogens in the six months prior to interview, although two-thirds (65%) had used this class of drugs at some

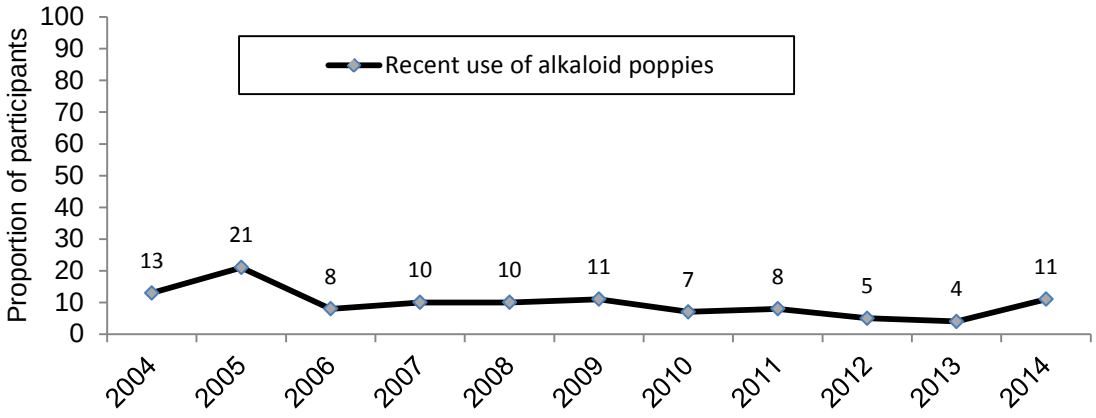
stage in their lives. The current frequency of use was low, at a median of two days in the past six months (range 1-40 days, SD=10.5). The types of hallucinogens most commonly used amongst this group were lysergic acid diethylamide (LSD) (69%, n=9) and psychedelic mushrooms (23%, n=3). These indications of use are similar to those reported in previous Tasmanian IDRS samples, with recent use remaining generally stable at around 20% of each cohort over this time, with a slight increase in frequency of use (typically one or two days in previous cohorts versus a median of 5 days of use amongst consumers in the 2014 cohort).

In support of this, the Ecstasy and related Drugs Reporting System – using similar methods to the IDRS but a primary ecstasy-using group as its consumer sample and conducted in Hobart (Matthews & Bruno, 2005, 2006, 2007, 2008, 2009, 2010, 2011; Matthews & Bruno, 2012; Matthews, Bruno & Peacock 2013; Matthews Bruno & Nicholls, 2014) – found higher levels of hallucinogen use relative to the IDRS PWID cohort (albeit also at a low frequency) among frequent ecstasy users (35% of the 100 ecstasy users interviewed reported using LSD in the six months prior to interview in 2014; and 21% reported using mushrooms). More details in regard to patterns of hallucinogen use in such demographic groups can be found in Matthews, Bruno and Nicholls (2014).

4.8.8 Alkaloid poppies

Eleven percent (n=11) of the current cohort reported use of alkaloid poppies at some stage in the preceding six months (described by the PWID as opium or poppy tar or poppy wash). This rate of recent use of alkaloid poppies has declined slightly from around 13% in 2004 to 4% in 2013 (p=0.06) (Figure 40). In 2014, a small increase was reported to 11% (p=0.08).

Figure 40: IDRS participant use of alkaloid poppies, 2004-2014



Source: IDRS PWID interviews

5 DRUG MARKET: PRICE, PURITY, AVAILABILITY AND PURCHASING PATTERNS

5.1 Heroin

Key Points:

- Participants last paid a median of $50 for a cap and $450 for one gram of heroin;
- For heroin purchased locally, participants were divided in their responses regarding availability: three-fifths reported this to be 'difficult' and two-fifths to be 'easy';
- Subjective reports of heroin purity were also mixed: two-fifths noted this to be 'low' or 'medium' respectively, and one fifth noted 'high' purity; and
- It should be noted that very few participants were able to comment on heroin prices, purity or availability.

5.1.1 Price

In previous years, PWID who could comment on the price of heroin generally referred to purchasing it in units of 'points' (referring to 0.1g), 'packets', 'caps' or 'tastes', the latter two appearing to be a generic descriptor for a varying amount of the drug, generally between 0.05-0.15g. In the current study, just two participants commented on the price of one 'point' of heroin, reporting this to cost a median price of $50 (mean $50, range $50). Two participants commented on the price of a gram purchase: a median of $450 was reported (mean $450, range $300-600). In previous years when IDRS PWID cohorts reported higher levels of heroin use, information regarding price was more common (see Table 17). None of the KE could confidently comment on purchase prices of heroin.

Table 17: Modal price of heroin purchased by PWID, 2004-2014

Descriptor	2004		2005		2006		2007		2008	
	$	*n*	$	*n*	$	*n*	$	*n*	$	*n*
Cap,taste, point (~0.05-0.15g)	$50	*6*	$100	*4*	-	*0*	$50	*1*	$50	*1*
'Points'/'2 tastes'(~0.2g)	$50	*1*	-	*0*	$200[#]	*1*	-	*0*	-	*0*
1/4 gram (0.25g)	$100	*1*	-	*0*	-	*0*	-	*0*	-	*0*
Half-weight (0.5g)	$370*	*2*	-	*0*	-	*0*	-	*0*	$500	*0*
Gram (1.0g)	$350	*4*	$360*	*3*	-	*0*	-	*0*	-	*0*

Source: IDRS PWID interviews

[*] Where multiple modes existed, median price was substituted

[#] Refers to 2-3 points

~ Approximately

Table 17: Modal price of heroin purchased by PWID, 2004-2014 (continued)

Descriptor	2009		2010		2011		2012		2013		2014	
	$	*n*	$	*n*	$	*n*	$	*n*	$	*n*	$	*n*
Cap,taste, point (~0.05-0.15g)	-	*0*	-	*0*	$75	*2*	$50	*4*	$50	*2*	$50	*2*
'Points'/'2 tastes'(~0.2g)	-	*0*	-	*0*	-	*0*	-	*0*	-	*0*	-	*0*
1/4 gram (0.25g)	-	*0*	-	*0*	-	*0*	-	-	$250	*1*	-	*0*
Half-weight (0.5g)	$150	*1*	-	*0*	$400	*1*	$225	*2*	$200	*1*	-	*0*
Gram (1.0g)	$450	*1*	-	*0*	$400	*2*	-	-	-	-	450[*]	*2*

Source: IDRS PWID interviews

[*] Where multiple modes existed, median price was substituted

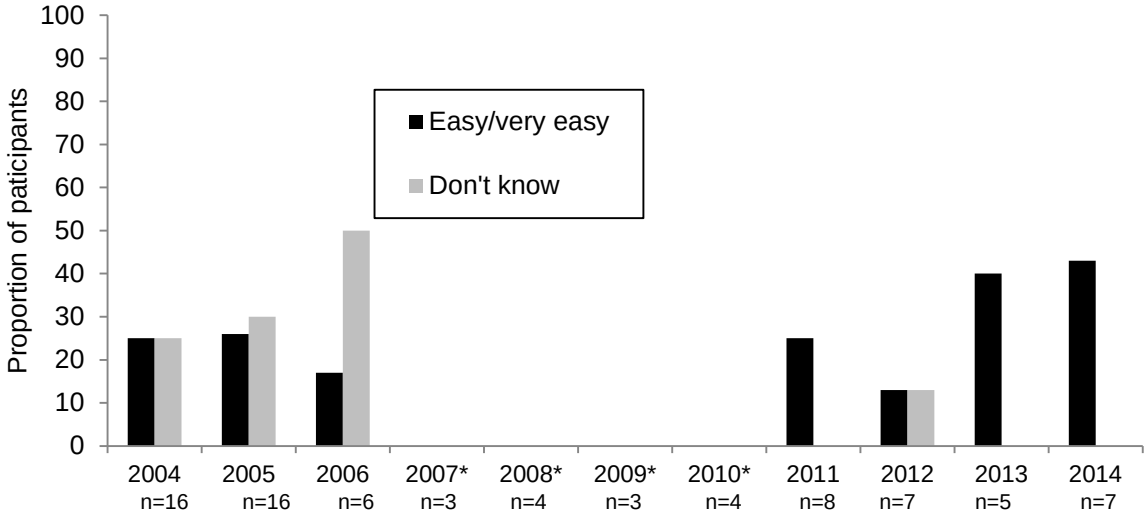
~ Approximately

5.1.2 Availability

The seven PWID participants that were able to comment on the availability of heroin were divided in their responses: four (57%) reported heroin to be 'difficult' to access, and three (43%) noted it to be 'easy'. It is important to note that these responses refer only to heroin purchased in Tasmania; purchases made in other jurisdictions were not included in this.

Participants were also asked to comment on changes in availability over the six months preceding the interview. Again, participants were divided in their responses (n=5): two noted either no change or increasing availability, and one participant noted availability had decreased.

Figure 41: Participant reports of current heroin availability, of those who commented, 2004-2014



Source: IDRS PWID interviews

* The estimates in 2007-2010 were not included as they were based on an extremely small number of reports (i.e. <5 per annum)

Note: These estimates are based on an extremely small number of reports and should be interpreted with caution

Tasmania Police reported two heroin seizures in 2011/12. Between 2006/07 and 2010/11, and from 2012/13-2013/14, no heroin seizures were reported.

When reviewing this information, it appears that the historical pattern of limited availability of heroin locally has continued. While some better-connected PWID may have reasonably stable access to the drug, the availability of heroin in the state remained low, as indicated by the low level of recent use of the drug by the PWID sample.

5.1.3 Purity

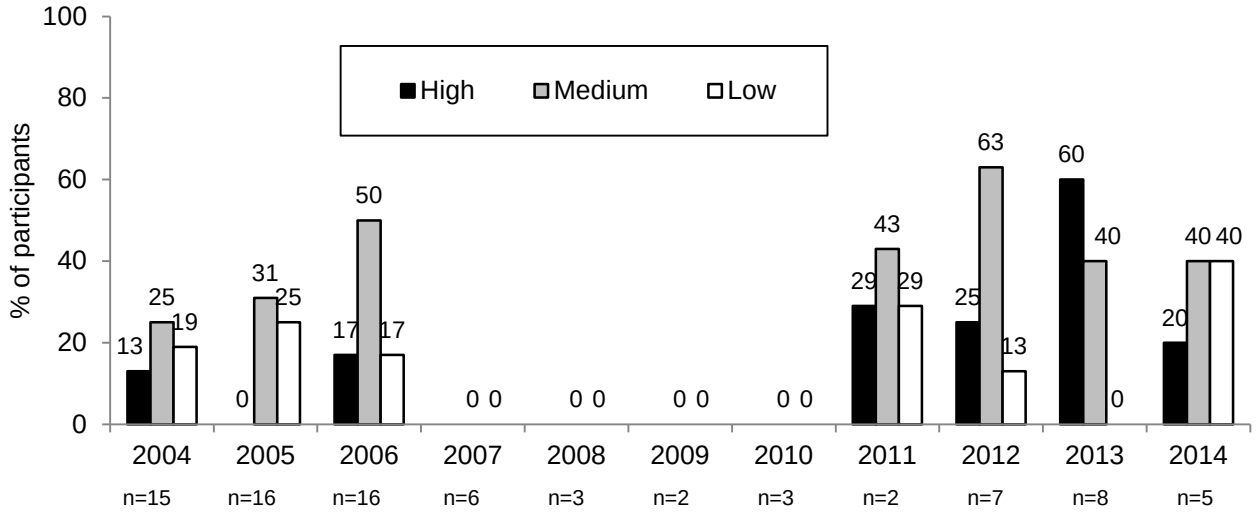
Participants were asked to comment on the subjective purity of heroin they had recently used. Of the small number of participants reporting on this (n=5), two noted purity to be 'medium' and 'low' respectively, and one participant reported it to be 'high'. No KE in 2014 could comment on the purity of heroin used by the groups that they were familiar with.

Participants were also asked to comment on any perceived changes in heroin purity in the preceding six months. Just three participants commented: two noted 'fluctuating' purity and a single participant noted 'stable' levels of purity.

Examining subjective reports of heroin purity in the Tasmanian PWID cohorts over time, it is clear that, while these reports have fluctuated somewhat over the samples, since 2004 the majority of those able to comment on purity have considered the heroin available to them as 'medium' in purity (Figure 42).

Overall, the number of heroin seizures and analyses of these in Tasmania are infrequent, resulting in limited objective purity data available for comparison to these subjective reports. The seizures made in 2011/12 were not analysed for purity.

Figure 42: Proportion of IDRS participants reporting on current heroin purity, 2004-2014



Source: IDRS PWID interviews
* The estimates in 2007-2010 were not included as they were based on an extremely small number of reports (i.e. <4 per annum)

5.1.4 Trends in heroin use

The proportion of local IDRS participants reporting recent use of heroin has remained low over several years, as has the median frequency of this use (three days in the preceding six months). Similarly, transactions related to heroin use noted in the Tasmanian NSP dataset have also remained very low. Amongst the small number of participants able to comment, availability of heroin in Tasmania remains limited, and participant reports on subjective purity were mixed. In addition, Tasmania Police reported no seizures related to heroin in the 2013/14 period. These indicators suggest that the low levels of heroin availability – and consequently use – that have been reported in previous Tasmanian IDRS studies, have continued into 2014.

The Australian Crime Commission (ACC) *2012/13 Australian Illicit Drug Data Report* (2014) noted that global use of heroin remained stable in 2012; however, region-specific changes were observed. European indicators suggested a decrease in heroin use and availability in 2012, with a corresponding increase in use of pharmaceutical opioids. In contrast, the US Drug Enforcement Agency reported increased availability of heroin in 2012. As a result of heroin being relatively inexpensive and readily available in the US, many users of pharmaceutical opioids moved to heroin (ACC, 2014).

Afghanistan remains the world's largest producer of opium, accounting for 74% of global cultivation (ACC, 2014). Burma is the second most successful opium cultivation country, however, in 2013, this totalled to just one-third of the production in Afghanistan. In Australia in 2012/13, there were 25 countries identified as heroin embarkation points. This marks a small increase from 2011/12, with 19 countries identified. The Netherlands, Vietnam and Thailand were the embarkation points from which the greatest number of heroin detections at the Australian border were made, and Thailand, Vietnam, Taiwan and Malaysia were the primary embarkation points in terms of weight of heroin detected (ACC, 2014). Most heroin that was detected at the Australian border was imported via parcel post.

With the high use of opioids and stable strong preference for heroin amongst the PWID sampled by the IDRS, both locally and nationally (Stafford & Burns, 2015), future trends in use of the drug continue to merit close attention, particularly as heroin markets nationally regain momentum.

5.2 Methamphetamine

Key Points:

Powder form

- The median price for 1 'point' (0.1g) of powder form methamphetamine was $50, and $300 for 1 gram. Participants considered that these prices had remained stable over the preceding six months;
- Availability of this form was considered to be either 'easy' or 'very easy', and it was perceived that this had remained unchanged over the preceding six months;
- Most purchases occurred from a friend or known dealer, with these most commonly occurring in a dealer's or friend's home; and
- Most participants who commented stated purity was low to medium and purity had fluctuated over the preceding six months.

Base/paste form

- Few participants were able to comment on trends related to base/paste;
- The median price for 1 'point' (0.1g) of base/paste methamphetamine was $50, and $300 for 1 gram. Participants considered that these prices had remained stable over the preceding six months;
- Availability of this form was considered to be either 'easy' or 'very easy', and that this situation had remained unchanged over the preceding six months;
- Most purchases occurred from a known dealer or friend, with these most commonly occurring in a dealer's home or an agreed public location; and
- Most participants who commented reported purity as 'low', with no clear trends regarding changes in purity over the preceding six months.

Crystal/ice

- The median price for 1 'point' (0.1g) of crystal methamphetamine was $100, in keeping with the price in 2013, but higher than reported in previous local IDRS surveys ($50-60). The majority of participants who commented considered that the price for this form had remained stable over the preceding six months;
- Participants noted availability of this form to be 'easy' or 'very easy', and that this had remained unchanged over the preceding six months;
- Most purchases occurred from a friend or known dealer, with these most commonly occurring in a dealer's or friend's home or in an agreed public location; and
- Purity was generally considered to be 'high', however no clear trends regarding changes in purity over the preceding six months were reported.

5.2.1 Price

As discussed in Section 4.3, it is clear that there are three main 'forms' of non-pharmaceutical methamphetamine available in Hobart, each with separate pricing schedules, which will be discussed separately. However, across all forms of the drug, the majority (71%) of PWID that were able to comment on price considered that it had remained stable in the preceding six months.

Table 18: Participants' reports of price trends of methamphetamine in the past six months, 2014

	2014 IDRS N=101		
	Powder	**Base/Paste**	**Crystal**
Price Trend			
Able to respond (n)	44	16	37
Of those who responded:			
Increasing (%)	11	6	19
Stable (%)	75	69	68
Decreasing (%)	9	13	3
Fluctuating (%)	5	13	11

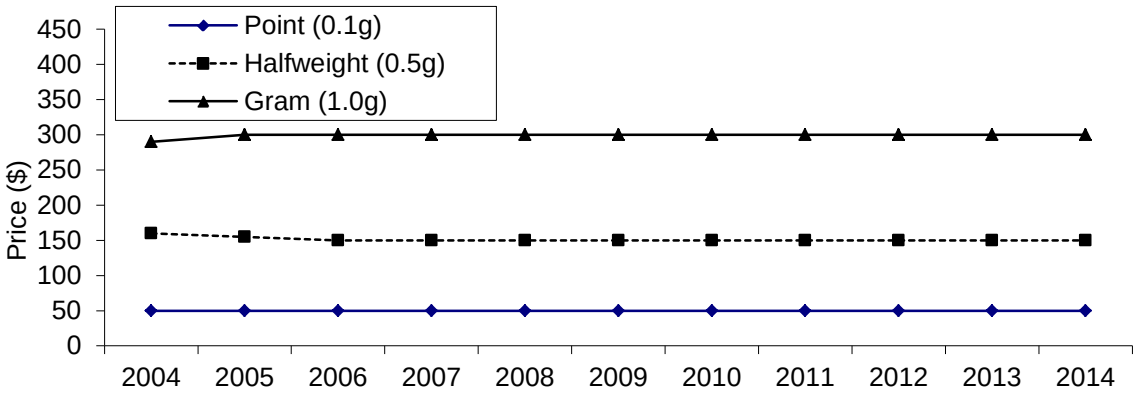
Source: IDRS PWID interviews

Methamphetamine Powder

PWID reported the median last purchase price of powder methamphetamine as $50 per 0.1g (modal price $50, range $50-100, n=24); $150 for 0.5g purchases (modal price $150, range $100-400, n=23); and $300 per gram (modal price $300, range $200-350, n=9). These prices were consistent with the prices reported in surveys since 2005 (Table 19, Figure 43). Comments from two KE (community development workers) were similar, with both noting a point cost $60. The clear majority (75%, n=33) of those consumers that were able to comment[11] reported stable prices for methamphetamine powder in the preceding six months, with only small minorities of PWID participants reporting either perceived recent increased (11%, n=5) or decreased prices (9%, n=4) (Table 18).

Between 2013 and 2014, the lower price range for 'points' increased slightly (from $40 in 2013 to $50 in 2014) (Table 19). The price range of prices paid for half-gram purchases widened from $150-200 in 2013 to $100-400 in 2014. For gram purchases, the lower price range doubled from $100 to $200, whilst the upper range increased slightly from $300 to $350 over this period (Table 19).

Figure 43: Median prices of powder methamphetamine estimated from PWID purchases, 2004-2014



Source: IDRS PWID interviews

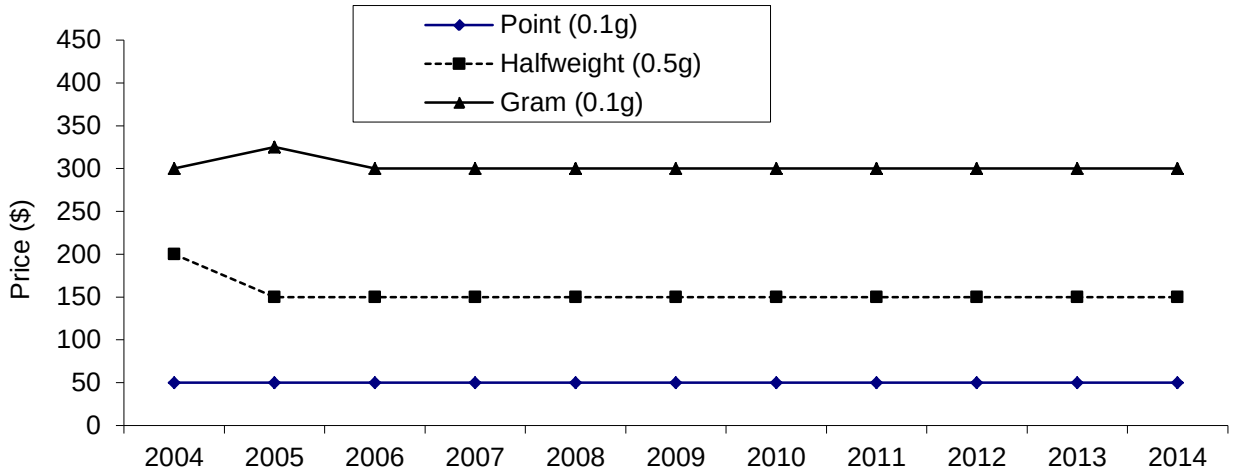
[11] Note that these figures do not include those that reported 'don't know' in response to this question, for consistency with national IDRS data.

Base/paste methamphetamine

PWID reported the median purchase price of 'base/paste' methamphetamine as $50 per 'point' (0.1g: modal price $50, range $50-100, n=5), $150 per 0.5g (modal price $150, range $150, n=5), and $300 per gram (modal price $300, range $50-300, n=5) (Table 19). These prices have remained stable since the 2006 IDRS survey (Figure 44). Similar to trends for powder methamphetamine, 69% of consumers (n=11) able to comment felt that prices for 'base/paste' methamphetamine had remained stable in the preceding six months (Table 18). KE interviewed in 2014 did not comment on the price of 'base/paste' methamphetamine.

Between 2013 and 2014, the lower range of prices paid for 'points' increased from $30 to $50. In 2013 and 2014, small numbers of participants were able to comment on price trends relating to base/paste methamphetamine, suggesting a tightening of the market (Table 19; Figure 44).

Figure 44: Median prices of base/paste methamphetamine estimated from PWID purchases, 2004-2014



Source: IDRS PWID interviews

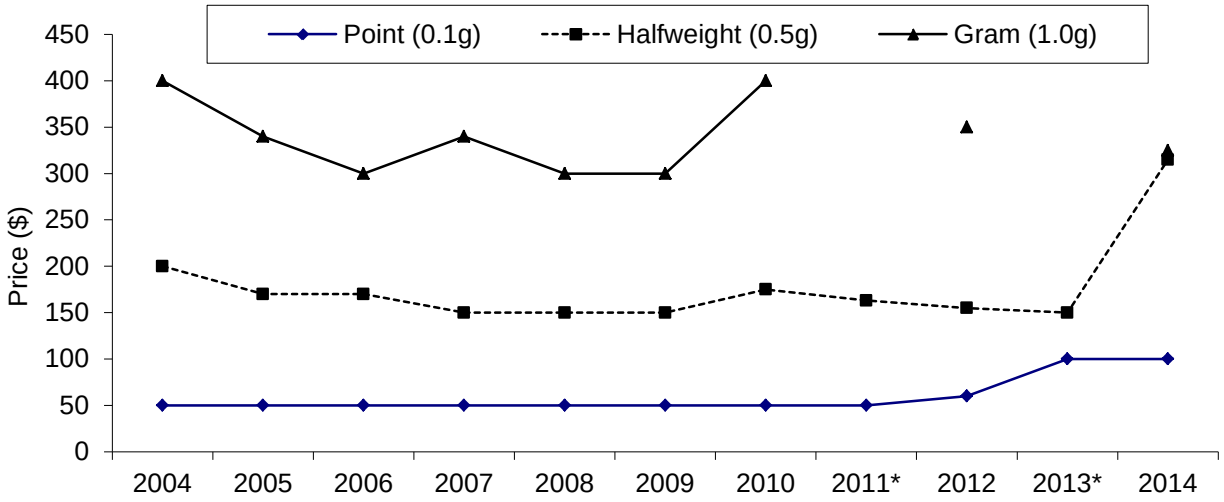
Crystal Methamphetamine

The median purchase price consumers reported last paying for the higher-purity crystal methamphetamine was $100 per 0.1g (modal price $100, range $40-150, n=29). Up until 2012, the modal and market price estimates for 'point' purchases were $50. In 2012, the median price increased to $60, and in 2013 and 2014, this has again increased to $100.

The median price estimate in 2014 for 0.5g was $315 (no single mode, range $150-500, n=6), and for one gram purchases a median price of $325 (modal price $300, range $150-1,000) (Table 19). Despite these increases, the majority of participants who commented reported prices had remained stable in the preceding six months (68%, n=25) (Table 19; Figure 45). Five KE commented on the price of crystal methamphetamine. 'Points' were reported to cost between $80 and $100, and one KE noted that this form of methamphetamine is commonly double the price of other forms, such as speed.

Examining overall trends in reported purchase prices for crystal methamphetamine, there have been shifts in the range of prices that participants reported paying. The price range for 'point' purchases has widened from $50-100 in 2013 to $40-140 in 2014 and the upper range for half-gram purchases increased from $300 in 2013 to $500. Whilst no reports for gram purchases were provided in 2013, the upper range has increased to $1,000 (Table 19).

Figure 45: Median prices of crystal methamphetamine/ ice estimated from PWID purchases, 2004-2014



Source: IDRS PWID interviews

* In 2011 and 2013, no participants reported on price for 1gram purchases of crystal methamphetamine

Pharmaceutical Stimulants

Eighteen participants could confidently comment on the last purchase price for 5mg dexamphetamine tablets, reporting a median price of $5 (modal price $5, range $3-10). Twenty-one participants commented on last purchase price for methylphenidate, reporting a median price of $8 for a 10mg tablet (modal price $10, range $3-20) (Table 19). The modal price for 10mg methylphenidate has been around $5 in all local IDRS surveys, with the exception of 2009 and 2010 ($10) and 2013 ($8). Half of those consumers able to report on price changes for pharmaceutical stimulants perceived no changes in the preceding six months (50%, n=13), whilst 38% (n=10) noted an increase in price over this period.

General Price Trends

Tasmania Police district Drug Investigation Services gather regular information regarding current prices of illicit drugs. Since July 1999, this has been provided to the authors through the Tasmanian Police State Intelligence Services and, prior to this, such information had been attained through the Australian Bureau of Criminal Intelligence (ABCI, now the ACC). During the 2012/13 financial year, Tasmania Police reported methamphetamine (non-crystal) prices as $50-80 per 'point' (0.1 g) (Table 20). The price for crystal methamphetamine was reported to be $80-100 for a point. Data for the 2013/14 reporting period was unavailable at the time of publication.

Table 19: Most common amounts and prices of methamphetamine purchased by PWID, 2004-2014

Descriptor*	2004 Survey Modal Price *(range in parentheses)*	*n*	2005 Survey Modal Price *(range in parentheses)*	*n*	2006 Survey Modal Price *(range in parentheses)*	*n*	2007 Survey Modal Price *(range in parentheses)*	*n*	2008 Survey Modal Price *(range in parentheses)*	*n*
Crystal methamphetamine										
'point' or packet (0.1 g)	$50 *($30-80)*	*34*	$50 *($50-80)*	*24*	$50 *($40-80)*	*13*	$50*($20-80)*	*17*	$50 *($40-50)*	*14*
half-gram (0.5 g)	$200 *($180-250)*	*6*	$150 *($120-275)*	*13*	$150 *($120-300)*	*25*	$150† *($120-225)*	*12*	$150 *($150-250)*	*10*
gram (1.0 g)	$400† *($280-500)*	*7*	$340† *($250-400)*	*6*	$300 *($300-480)*	*7*	$340†*($300-380)*	*2*	$300 *($190-450)*	*5*
Methamphetamine base/paste										
'point' or packet (0.1 g)	$50 *($35-80)*	*45*	$50 *($30-80)*	*56*	$50 *($20-70)*	*23*	$50*($30-50)*	*30*	$50 *($20-100)*	*16*
half-gram (0.5 g)	$200 *($100-250)*	*21*	$150 *($150-400)*	*38*	$150 *($140-200)*	*25*	$150*($120-200)*	*23*	$150 *($150)*	*4*
gram (1.0 g)	$300 *($200-350)*	*7*	$300 *($150-400)*	*18*	$300 *($250-300)*	*11*	$300*($250-300)*	*3*	$300 *($300)*	*3*
Methamphetamine powder										
'point' or packet (0.1 g)	$50 *($40-50)*	*34*	$50 *($30-50)*	*54*	$50 *($30-50)*	*20*	$50 *($40-50)*	*34*	$50 *($50)*	*34*
half-gram (0.5 g)	$160† *($30-250)*	*16*	$150 *($100-200)*	*36*	$150 *($80-200)*	*26*	$150*($150-200)*	*29*	$150 *($75-200)*	*28*
gram (0.8 g)	$300 *($50-350)*	*10*	$300† *($250-350)*	*15*	$300 *($250-300)*	*8*	$300*($270-300)*	*3*	$300 *($250-300)*	*9*
Pharmaceutical stimulants										
dexamphetamine (5 mg)	$5 *($0-15)*	*52*	$4† *($0.6-9)*	*28*	$5 *($2-10)*	*17*	$5 *($0.5-45)*	*20*	$5 *($1.5-10)*	*21*
methylphenidate (10 mg)	$5 *($0-10)*	*12*	$5 *($2-15)*	*16*	$5 *($2-30)*	*12*	$5 *($2.5-13)*	*10*	$5 *($5-15)*	*13*

Source: IDRS PWID interviews

* Common quantities and weight range for each purchase unit in parentheses

† Median price was substituted where no single mode was reported

Table 19: Most common amounts and prices of methamphetamine purchased by PWID, 2004-2014 *(continued)*

Descriptor*	2009 Survey Modal Price *(range in parentheses)*	*n*	2010 Survey Modal Price *(range in parentheses)*	*n*	2011 Survey Modal Price *(range in parentheses)*	*n*	2012 Survey Modal Price *(range in parentheses)*	*n*	2013 Survey Modal Price *(range in parentheses)*	*n*	2014 Survey Modal Price *(range in parentheses)*	*n*
Crystal methamphetamine												
'point' or packet (0.1 g)	$50*($35-100)*	*20*	$50*($50-80)*	*5*	$50*($50-100)*	*15*	$50*($40-100)*	*21*	$100*($50-100)*	*30*	*$100($40-150)*	*29*
half-gram (0.5 g)	$150*($150-200)*	*7*	$175†*($100-250)*	*7*	$150*($150-250)*	*4*	$150*($150-200)*	*8*	$150*($150-300)*	*8*	*$150*†($150-500)	*6*
gram (1.0 g)	$300*($250-500)*	*4*	$400†*($250-500)*	*3*	-	*0*	$400*($190-800)*	*12*	-	*0*	$300($150-1000)	*8*
Methamphetamine base/paste												
'point' or packet (0.1 g)	$50*($40-80)*	*42*	$50*($40-50)*	*21*	$50*($40-70)*	*11*	$50*($40-70)*	*16*	$50*($30-100)*	*9*	*$50($50-100)*	*5*
half-gram (0.5 g)	$150*($100-180)*	*26*	$150*($100-250)*	*15*	$150*($130-200)*	*16*	$150*($120-200)*	*24*	$150*($120-150)*	*5*	*$150($150)*	*5*
gram (1.0 g)	$300*($250-350)*	*5*	$300*($250-400)*	*6*	$300*($180-400)*	*7*	$300*($250-350)*	*18*	$300*($300)*	*1*	*$300($50-300)*	*5*
Methamphetamine powder												
'point' or packet (0.1 g)	$50*($40-50)*	*38*	$50*($30-70)*	*31*	$50*($30-70)*	*21*	$50*($30-50)*	*31*	$50*($40-100)*	*35*	*$50($50-100)*	*24*
half-gram (0.5 g)	$150*($100-300)*	*37*	$150*($100-200)*	*35*	$150*($150-200)*	*23*	$150*($100-300)*	*48*	$150*($150-200)*	*22*	*$150($100-400)*	*23*
gram (0.8 g)	$300*($250-320)*	*7*	$300*($180-350)*	*18*	$300*($200-300)*	*12*	$300*($180-400)*	*25*	$300*($100-300)*	*10*	*$300($200-350)*	*9*
Pharmaceutical stimulants												
dexamphetamine (5mg)	$5*($4-10)*	*25*	$5*($4-7)*	*21*	$5*($2-10)*	*19*	$10*($2.5-15)*	*23*	$5 *($3-10)*	*12*	$5 *($3-10)*	*18*
methylphenidate(10mg)	$10*($5-10)*	*31*	$10*($3-10)*	*8*	$10*($2.5-10)*	*16*	$5.50†*($2.5-10)*	*8*	$8 *($5-15)*	*11*	$10 *($3-20)*	*21*

Source: IDRS PWID interviews

* Common quantities and weight range for each purchase unit in parentheses

† Median price was substituted where no single mode was reported

Table 20: Methamphetamine prices in Tasmania reported by Tasmania Police Drug Investigation Services, 2006/07–2012/13

Non-crystal form	Point (~0.1g)	Full gram (1.0g)	Ounce (28.0g)
2006/07	$50	$270-380	$4,000-5,000
2007/08	$30-50	$200-300	$5,000-8,000
2008/09	$50	$300	-
2009/10	-	-	-
2010/11	$50-80	$300-400	$4,000-5,000
2011/12	$50-70	$300	$4,000-5,000
2012/13	**$50-80**	**-**	**$4,000-5,000**
Crystal form	**Point (~0.1g)**	**Full gram (1.0g)**	**Ounce (28.0g)**
2006/07	-	-	-
2007/08	-	-	-
2008/09	$50	$300	-
2009/10	-	-	-
2010/11	$50	$400	-
2011/12	$50-100	-	-
2012/13	**$80-100**	**-**	**$10,000-12,000**

Source: Australian Crime Commission (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014)
Note: Data for 2013/14 financial year were not available at the time of publication

5.2.2 Availability

Across all methamphetamine 'forms', most PWID reporting on availability considered that the drug was 'easy' (55%) or 'very easy' (32%) to obtain, and that availability had remained stable (73%) in the previous six months. Trends for each form of the drug are discussed separately below.

Methamphetamine Powder

Most PWID who could comment on the availability of powder form methamphetamine, thought that it was 'easy' or 'very easy' to obtain (89%, n=43: 'easy' 48%; 'very easy' 41%) (Figure 48) (Table 21). The clear majority of PWID participants also perceived the availability of powder methamphetamine to have remained stable in the preceding six months (76%, n=31).

Base/Paste Methamphetamine

In regards to 'base/paste' methamphetamine, the majority of participants (94%) who commented reported it was either 'easy' (67%, n=10) or 'very easy' (27%, n=4) for them to obtain in the preceding six months. Four-fifths of this group perceived this level of availability to have remained stable in the six months prior to interview (81%, n=13). No KE commented on availability of this form of methamphetamine.

Crystalline Methamphetamine

In regards to crystal methamphetamine, the majority of participants (83%) who commented reported it was either 'easy' (58%, n=23) or 'very easy' (25%, n=10) for them to obtain in the preceding six months; although one-fifth (18%) did state that it was difficult to access. The majority of participants able to comment (68%, n=27) perceived availability to have remained stable in the six months prior to interview. Four KE reported increased availability of crystalline methamphetamine. Whilst higher rates for 'easy' and 'very easy' availability of crystal were reported for 2014 in comparison to 2013, these differences were not statistically significant.

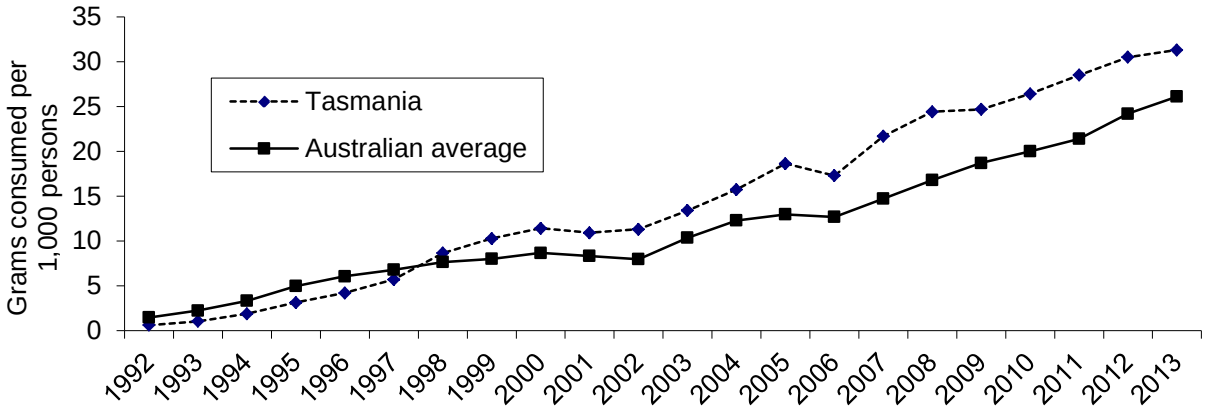
Pharmaceutical Stimulants

Two-thirds of participants who commented on availability of pharmaceutical stimulants reported these to be 'easy' or 'very easy' (66%: 'easy' 45%; 'very easy' 21%). Whilst three-fifths noted that this situation had remained unchanged in the preceding six months (58%), one-third noted access had become 'more difficult' over this period (34%).

Tasmanian prescription rates of methylphenidate and dexamphetamine (Figure 46; Figure 47) provide some context for these reports. Over the past decade, prescriptions of these stimulants have steadily grown nationally, most markedly for methylphenidate. Tasmanian consumption rates of methylphenidate were consistently below that of the Australian average until 1998, and rose to 128% of the national average in 1999, maintaining this level over time (being 120% of the national level in 2013), even in the context of an increasing national prescription rate.

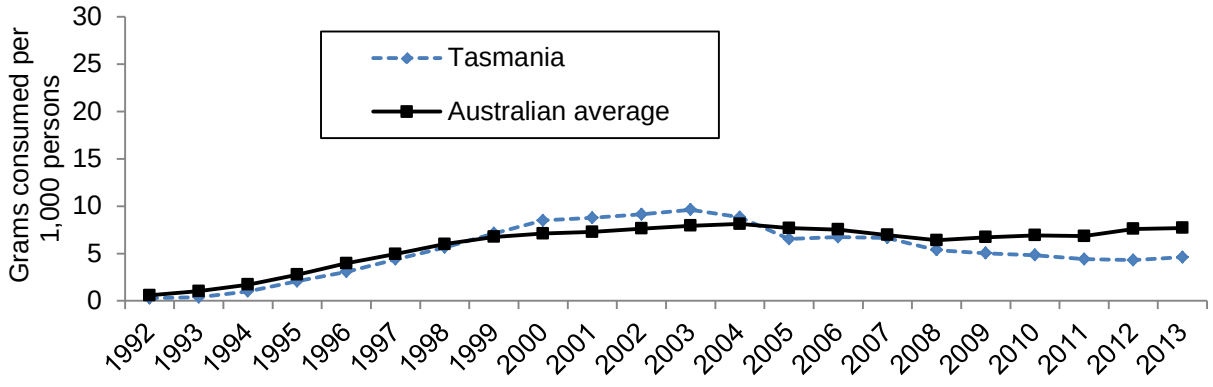
Tasmanian consumption rates of dexamphetamine were comparable to that of the national level between 1997 and 1999, rising to 120% of that of the steadily increasing Australian average between 2000 and 2003. However, in the first decline in prescription rates seen in these data, rates of dexamphetamine prescription fell to a level comparable to the national rate in 2004. In 2005, this decline in the Tasmanian consumption rates of dexamphetamine continued, falling to 85% of the Australian average. Since 2009 – in the face of small increases in the national rate of prescription and small decreases in the Tasmanian rate – the Tasmanian rate has decreased further to 60% of the national rate.

Figure 46: Consumption of methylphenidate (Ritalin) per 1,000 persons, 1992-2013



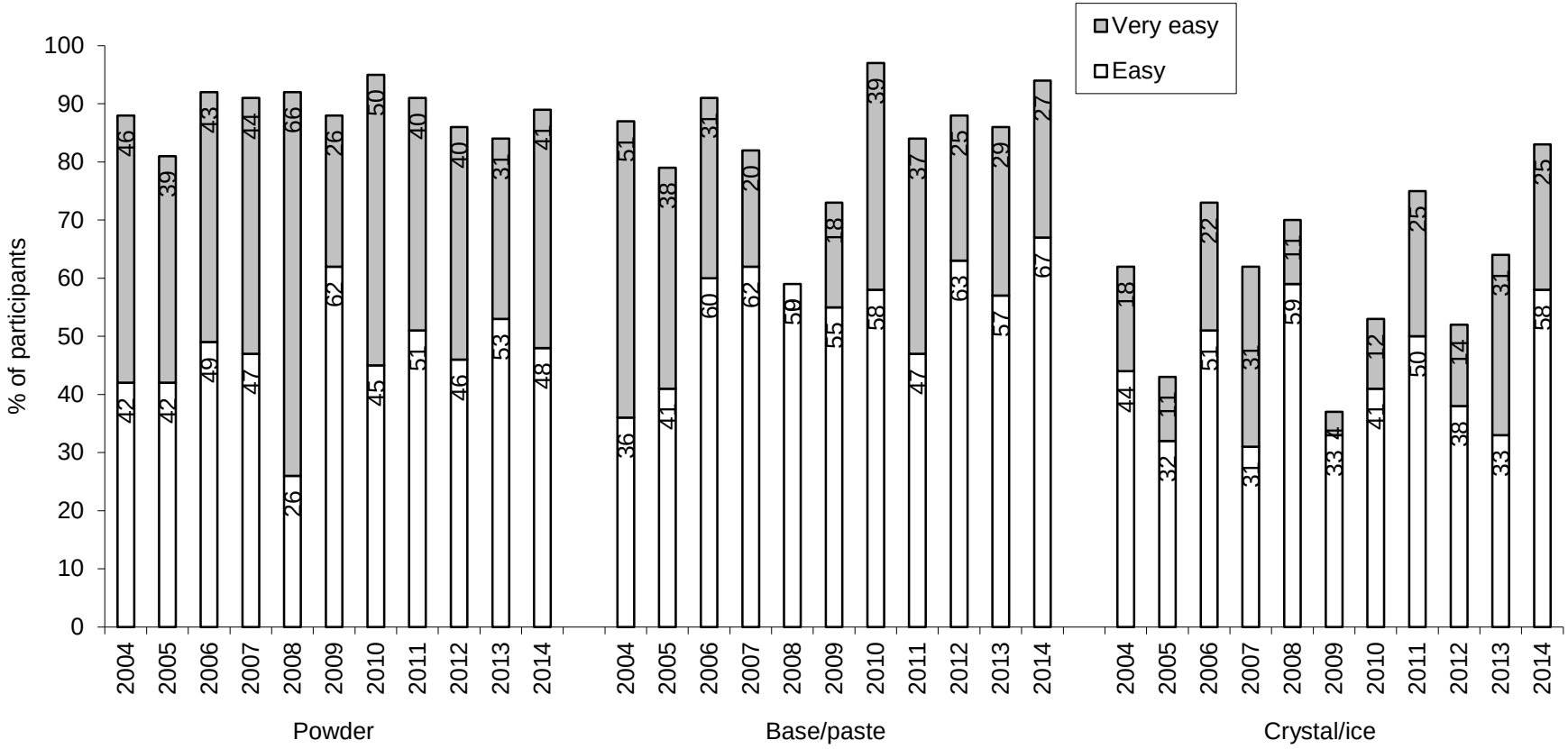
Source: National Drug System, Pharmaceutical Services, Department of Health and Human Services

Figure 47: Consumption of dexamphetamine per 1,000 persons, 1992-2013



Source: National Drug System, Pharmaceutical Services, Department of Health and Human Service

Figure 48: PWID reports of ease of availability of different methamphetamine forms, amongst those who commented, 2004-2014



Source: IDRS PWID interviews

Table 21: Participants' reports of methamphetamine availability in the past six months, 2013-2014

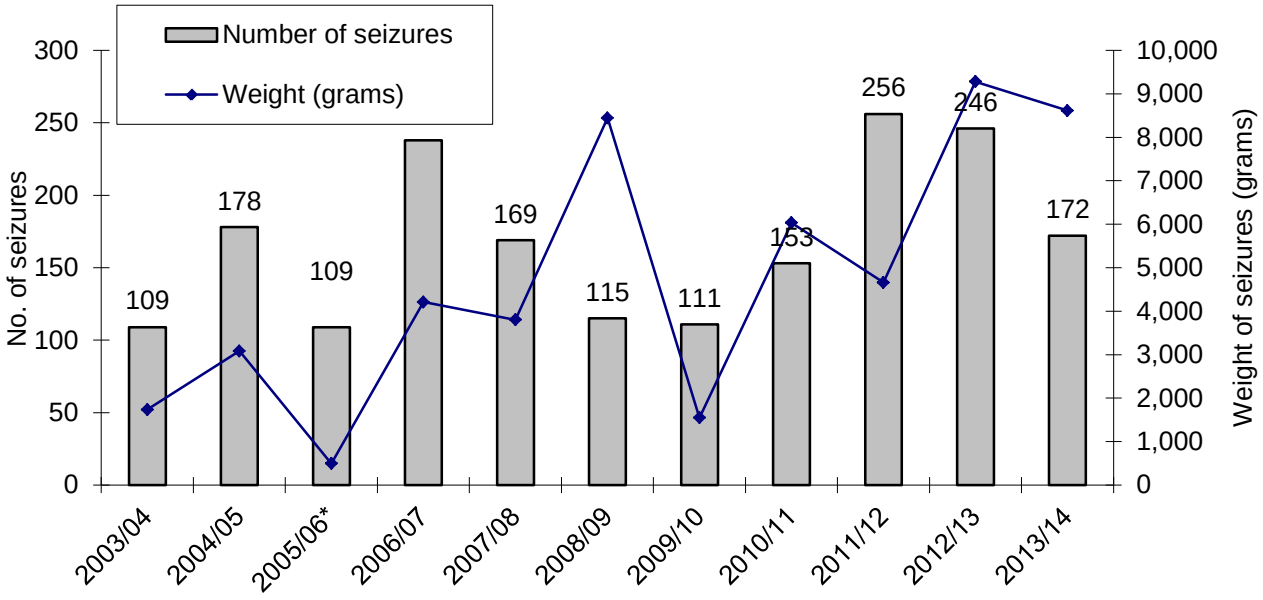
	Powder		Base		Crystal/Ice	
	2013 (N=107)	2014 (n=101)	2013 (N=107)	2014 (n=101)	2013 (N=107)	2014 (n=101)
Current availability						
Able to respond (%)	59	44	14	15	39	40
Of those who responded:						
Very easy (%)	31	41	29	27	31	25
Easy (%)	53	48	57	67	33	58
Difficult (%)	17	11	7	7	36	18
Very difficult (%)	0	0	7	0	0	0
Availability change over the last six months						
Able to respond (%)	58	41	13	16	36	40
Of those who responded:						
More difficult (%)	12	7	8	6	17	8
Stable (%)	83	76	85	81	72	68
Easier (%)	5	15	8	13	11	20
Fluctuates (%)	0	2	0	0	3	5

Source: IDRS PWID interviews

Tasmania Police seizures (Figure 49) of drugs suspected to be methamphetamine have varied in recent years. There were notable increases in both the weight and number of seizures between 2003/04 and 2006/07 (seizures for 2005/06 were only reported to ACC for part of the financial year). The number of methamphetamine seizures decreased between 2006/07 and 2009/10 with a large peak in the weight of seizures observed in 2008/09. Between 2009/10 and 2012/13, the number of seizures increased from 111 to 246, and the weight of these seizures increased also[12]. In 2013/14, the number of seizures had decreased, with 172 reported for the financial year; however, the weight of these seizures had remained relatively stable (8,611.55 grams[13]) (Figure 49).

[12] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.
[13] Note: 2012/13 data include 240 seizures by Tasmania Police, with a combined weight of 5,197gms, in addition to six seizures made by the AFP, totalling 4,082gms.

Figure 49: Seizures of methamphetamine by Tasmania Police, 2003/04-2013/14



Source: Australian Crime Commission, State Intelligence Service, Tasmania Police
* Only part-year data were reported in 2005/06
Note: 2013/14 data were provided by Tasmania Police State Intelligence Service, include only seizures weighed in grams, and are preliminary and subject to revision. In 2013/14 there were an additional 4 seizures coded in units other than grams. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

5.2.3 Sources of methamphetamine purchases

Powder methamphetamine

Participants reported that they last purchased powder in the preceding six months through friends (44%) and known dealers (28%) (Table 22). The venues most commonly reported to be used for the last purchase of methamphetamine powder were a dealer's home (35%) or a friend's home (30%).

Base methamphetamine

'Base/paste' methamphetamine was most commonly purchased from a known dealer (47%) or a friend (40%). Participants reported the last purchase venue to be a dealer's home (43%) or an agreed public location (21%) (Table 22).

Crystal methamphetamine

Crystal methamphetamine was most commonly purchased through friends (51%) and less commonly through known dealers (21%) (Table 22). The most commonly cited venues used for purchases were an agreed public location (33%) and a friend's home (30%).

Table 22: Source of last purchase of methamphetamine in the preceding six months, 2014

	Powder n=43 %	Base/Paste n=15 %	Crystal n=43 %
Source person			
Known dealers	28	47	21
Friends	44	40	51
Acquaintances	12	7	7
Street dealer	14	7	14
Source venue			
Dealer's home	35	43	23
Agreed public location	21	21	33
Home delivery	7	14	12
Friend's home	30	14	30
Street market	0	0	0

Source: IDRS PWID interviews

5.2.4 Purity

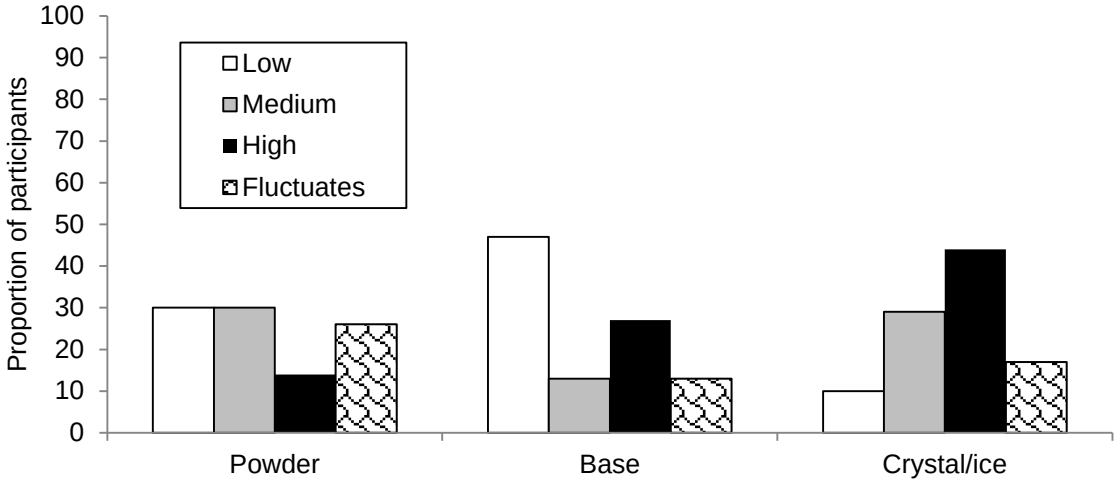
PWID participants that had recently used the various methamphetamine 'forms' were asked to rate their subjective purity. When asked to describe the purity of powder methamphetamine, 30% of the participants that were able to comment considered this as either 'low' or 'medium' in subjective purity (n=13 respectively) and 14% considered this to be 'high' (Figure 50). Participants were divided with regard to perceived changes in subjective purity over the preceding six months: two-fifths noted purity to have 'fluctuated' (41%) and 29% noted no change. Four KE commented on reports of the purity of speed: one reported that purity had 'decreased' over the preceding 12 months, whilst three KE noted 'increasing' purity. One KE, employed in a NSP, noted clients reporting very high potency, some of whom had requested their dealer 'cut it'. In addition, this KE provided an anecdotal report of "*daily meth users only need half a point*".

Over the last three surveys, several PWID noted the presence of crystals in powder methamphetamine. The presence of crystals in powder may represent higher purity methamphetamine, or alternatively it may be explained by the use of an adulterant (methylsulfonylmethane, MSM) in the late stages of production. This introduction of MSM forms crystals, giving the powder a crystalline appearance (Fetherston & Lenton, 2006).

Regarding subjective purity of base/paste methamphetamine, almost half of the small number of participants who were able to comment (n=15) noted purity to be 'low' (47%, n=7), and one-quarter noted it to be 'high' (27%, n=4). Participants were divided with regard to changes in purity over the preceding six months: one-third noted no change (31%), one-quarter noted either 'increasing' or 'fluctuating' purity (25% respectively) and 19% stated purity had 'decreased' over this period. One KE, employed in law enforcement, noted variable purity of base, with a recent seizure returning 13% purity.

Two-fifths of the participants who commented on purity of crystal methamphetamine reported this to be 'high' (44%, n=18), and 29% reported it to be 'medium' (n=12). Again, participants were divided with regard to changes in subjective purity over the preceding six months: one-third noted purity to have not changed (35%), whilst one-fifth noted purity had either 'increased', 'decreased' or 'fluctuated' (22% respectively). Five KE across law enforcement, NSP and community sectors reported high quality of crystalline methamphetamine at present, with one reporting the fluctuating purity.

Figure 50: Participant perceptions of methamphetamine purity, among those who commented, 2014



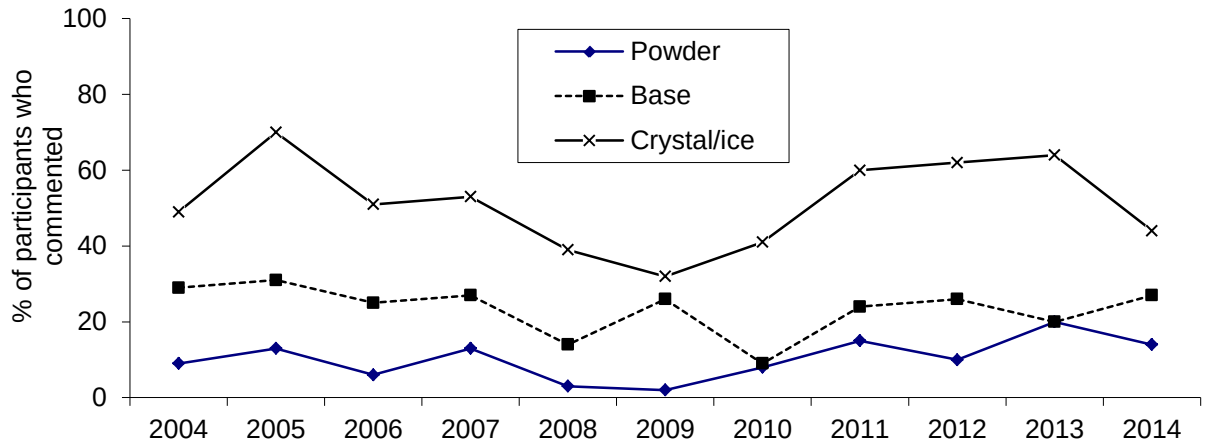
Source: IDRS PWID interviews

Figure 51 displays the proportion of those reporting on purity levels of the different 'forms' of methamphetamine in the past eleven years of the Tasmanian IDRS studies. This figure suggests that there have been small changes in overall reports of subjective purity of powder form methamphetamine in this time. Between 2004 and 2007, 9-13% of each sample reported purity to be 'high', with the exception of 2006 (6%). In the subsequent two surveys, reports of 'high' purity of powder form decreased to 3% in 2008 and 2% in 2009. According to several participants and KE, this low purity was due to one of the more skilled Tasmanian methamphetamine *"cooks"* being incarcerated during this period. Since 2010, subjective reports of 'high' purity have increased (ranging between 8% and 20%).

The reported purity of base/paste methamphetamine declined between 2004 and 2010, from 29% reporting 'high' purity to 9%. In subsequent years, reports of 'high' purity have increased slightly, ranging between 20% and 27%.

Consumer reports on subjective purity of crystal methamphetamine have varied in recent surveys. The majority of participants considered this form as 'high' in purity in 2005 (70%), however, in the subsequent four years, reports of 'high' purity decreased dramatically to 32%. Between 2010 and 2013, this rate increased to 63%, however this trend was reversed in 2014, with the rate decreasing slightly to 44% (p=0.11).

Figure 51: Proportion of participants reporting speed powder, base and crystal/ice purity as 'high', amongst those who commented, 2004-2014



Source: IDRS PWID interviews

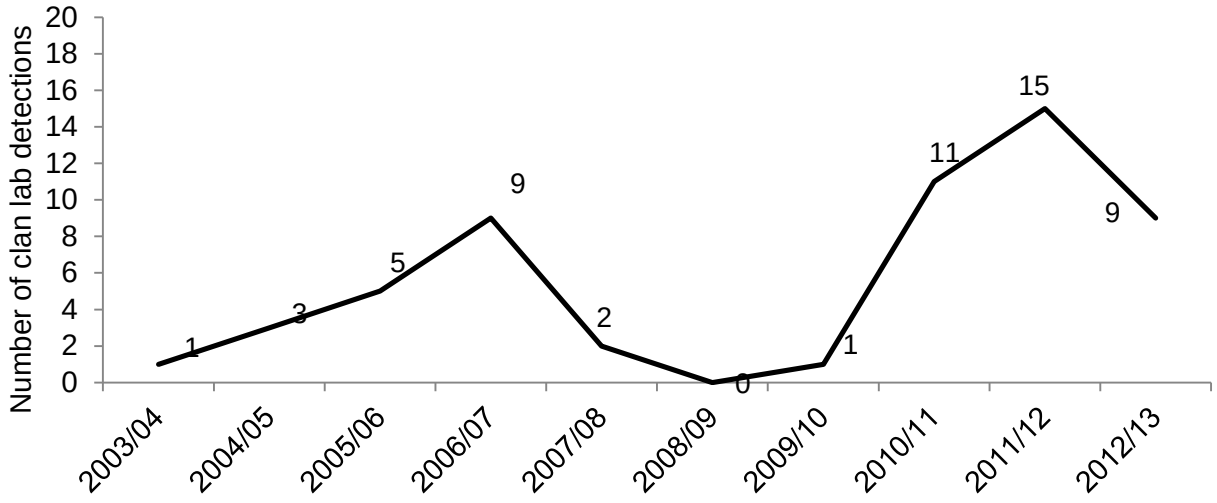
Data for purity of methamphetamine received at police analytical laboratories are presented for the 2003/04 to 2012/13 financial years (Tables 23 and 24; data for 2013/14 were not available at the time of publication). All amphetamine-type stimulants seized in Tasmania and tested for purity between 2003/04 and 2012/13 were methamphetamine rather than amphetamine. Drugs seized by Tasmania Police are not routinely tested for composition and purity, hence, purity data for drug seizures in the state are minimal. This very restricted sample size renders it difficult to make clear inferences about trends in purity of methamphetamine. Notably, during 2004/05, purity was reported to be 32%, and this coincided with increased use of methamphetamine in the IDRS PWID cohort, and was in line with PWID reports of 'medium' purity levels overall for the two most commonly used forms of the drug in the 2005 IDRS study. This is tempered, however, by the analysis of a very small number of seizures in 2004/05 (n=10), and the fact that they were all of small seizures of the drug (two grams or less), which have, in previous years, been higher in purity than seizures of larger amounts (purity range of 2-81% for seizures of two grams or less, and 4-22% for larger seizures analysed in 2003/04). In 2012/13, 5 seizures of methamphetamine were analysed – all except one of which were greater than 2 grams – returning an overall median purity of 64.1%. Whilst this purity is greater than reported since 2003/04 (ranging between 4.4% and 32.3%), it is in keeping with higher median purity levels nationally. In addition, the Tasmanian seizures analysed for purity may reflect the selection of particularly unusual seizures of the drug for analysis by police, therefore may not reflect increased purity for users. In support of this, the Tasmanian IDRS participants in 2013 did not report a significant increase in purity of methamphetamine (de Graaff, Peacock & Bruno, 2014).

A law enforcement KE in the 2008 study noted Tasmania Police targeted amphetamines and amphetamine-related offences in early 2007, resulting in a peak in seizures and arrests for serious offences. Overall, however, the number of seizures over recent years has remained relatively stable. In the current study and in previous years, Tasmania Police have reported that the majority of methamphetamine in the Tasmanian illicit drug market is imported into the state, most commonly by members of particular criminal groups, via post, or domestic sea or air terminals. In previous studies, law enforcement officials have noted cases of *"smaller scale meth cooking"* in Tasmania. Law enforcement KE in the current study noted that on average nationally, large increases in availability of crystal methamphetamine have been reported, which has resulted in an increased focus from police and health services.

These reports were supported by data regarding interceptions of illegal methamphetamine production laboratories (also called 'clan' (clandestine) or 'box' labs) (Figure 52). Between 2003/04

and 2006/07, the number of clandestine laboratory detections increased from one to nine. In the subsequent three financial years, the number of detections declined to between zero and two. In the last three reporting periods, this has increased, ranging between nine and 15 laboratories detected (data for 2013/14 were not available at the time of publication). From a national perspective, detection of clandestine labs increased from 252 in 2001/02 to 757 in 2012/13 (ACC, 2014). In 2011/12, the Australian Crime Commission Illicit Drug Data Report included data on the size of these clandestine laboratories for the first time. Whilst data specific to Tasmania is not available, the report states that nationally, 82% of these detected labs were small-scale.

Figure 52: Number of clandestine laboratory detections in Tasmania, 2003/04-2012/13



Source: Australian Bureau of Criminal Intelligence; Australian Crime Commission.

These multiple pathways of access and production sources may underlie the fluctuating nature of the forms and potency of methamphetamine in the local illicit drug market. In previous IDRS studies, consumers have reported that the presentation (colour and consistency as well as potency) of the form of methamphetamine available from their regular provider would fluctuate regularly, with some providers having two or more different presentations of the drug available for sale at one time.

Table 23: Purity of seizures of methamphetamine made by Tasmania Police received for laboratory testing, 2003/04-2012/13

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
≤2g										
n	*9*	*10*	*6*	*15*	*7*	*11*	*-*	*3*	*2*	*1*
Median % purity	25.6%	32.3%	15%	24.6%	7.6%	12.6%		33.6%	5.2%	64.0%
>2g										
n	*14*	*-*	*3*	*23*	*32*	*9*	*5*	*50*	*21*	*4*
Median % purity	9.8%	-	6.9%	6.5%	8.5%	7.8%	4.4%	9.3%	7.9%	65.1%
Total										
n	*23*	*10*	*9*	*38*	*39*	*20*	*5*	*53*	*23*	*5*
Median % purity	**16.9%**	**32.3%**	**13.1%**	**12.4%**	**8.5%**	**9.2%**	**4.4%**	**9.3%**	**7.9%**	**64.1%**
Range in % purity	*(2-81%)*	*(19-36%)*	*(2-59%)*	*(2-28%)*	*(2-40%)*	*(3-14%)*	*(1-7%)*	*(1.8-36.6%)*	*(8.7-71.9%)*	*(60.3-77.6%)*

Source: Australian Bureau of Criminal Intelligence; Australian Crime Commission; Tasmania Police State Intelligence Services
Note: No seizures made by the Australian Federal Police in the state were analysed between 1997/98 and 2012/13. All analysed seizures of amphetamines in this period revealed methamphetamine rather than amphetamine
Data for 2013/14 were not available at the time of publication

Table 24: Purity of seizures of methamphetamine made by Tasmania Police received for laboratory testing, by quarter, July 2004–June 2013

	Jul-Sep 2004	Oct-Dec 2004	Jan-Mar 2005	Apr-Jun 2005	Jul-Sep 2005	Oct-Dec 2005	Jan-Mar 2006	Apr-Jun 2006	Jul-Sep 2006	Oct-Dec 2006	Jan-Mar 2007	Apr-Jun 2007	Jul-Sep 2007	Oct-Dec 2007	Jan-Mar 2008	Apr-Jun 2008	Jul-Sep 2008	Oct-Dec 2008
≤2g																		
n	*10*	*-*	*-*	*-*	*1*	*-*	*5*	*-*	*-*	*14*	*-*	*1*	*2*	*1*	*1*	*3*	*-*	*1*
Median % purity	32.3	-	-	-	25.6	-	13.1	-	-	24.6	-	7.3	12.0	9.7	7.6	6.6	-	12.1
>2g																		
n	*-*	*-*	*-*	*-*	*1*	*-*	*-*	*2*	*3*	*8*	*1*	*12*	*6*	*6*	*13*	*7*	*5*	*1*
Median % purity	-	-	-	-	38.7	-	-	5.5	9.9	2.4	8.4	7.0	9.6	8.0	9.1	7.1	8.3	11.8
Total																		
n	*10*	*-*	*-*	*-*	*2*	*-*	*5*	*2*	*3*	*21*	*1*	*13*	*8*	*7*	*14*	*10*	*5*	*2*
Avg % purity	32.3	-	-	-	32.2	-	13.1	5.5	9.9	24.6	8.4	7.3	10.1	8.5	9.1	6.9	8.3	12.0

Source: Australian Bureau of Criminal Intelligence; Australian Crime Commission; Tasmania Police State Intelligence Services

- No seizures in this period

Note: No seizures made by the Australian Federal Police in Tasmania were submitted from Oct/Dec 2004-April/June 2005 for purity testing. All analysed seizures of amphetamines in this period revealed methamphetamine rather than amphetamine. Figures represent the purity of seizures received at the laboratory within the relevant quarter, and the interval between the date of seizure by police and the date of receipt at the laboratory may vary between one day and several months

Table 24: Purity of seizures of methamphetamine made by Tasmania Police received for laboratory testing, by quarter, July 2004-June 2013 (continued)

	Jan-Mar 2009	Apr-Jun 2009	Jul-Sep 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep 2010	Oct-Dec 2010	Jan-Mar 2011	Apr-Jun 2011	Jul-Sep 2011	Oct-Dec 2011	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Jan-Mar 2013	Apr-Jun 2013
≤2g																		
n	*3*	*7*	-	-	-	-	-	-	*2*	*1*	*1*	*1*	-	-	-	-	*1*	-
Median % purity	6.1	12.9	-	-	-	-	-	-	21.2	36.6	8.7	1.7	-	-	-	-	64.0	-
>2g																		
n	*3*	-	-	-	*3*	*2*	*2*	*5*	*22*	*21*	*3*	*4*	*9*	*5*	-	-	*4*	-
Median % purity	6.1	-	-	-	6.2	1.3	1.9	11.0	8.9	9.4	7.9	6.7	8.8	8.8	-	-	65.1	-
Total																		
n	*6*	*7*	-	-	*3*	*2*	*2*	*5*	*24*	*22*	*4*	*5*	*9*	*5*	-	-	*5*	-
Avg % purity	6.3	12.9	-	-	6.2	1.3	1.9	11.0	8.9	9.4	8.3	6.3	8.8	8.8	-	-	64.1	

Source: Australian Bureau of Criminal Intelligence; Australian Crime Commission; Tasmania Police State Intelligence Services

- No seizures in this period.

Note: No seizures made by the Australian Federal Police in Tasmania were submitted from Oct/Dec 2004-April/June 2005 for purity testing. All analysed seizures of amphetamines in this period revealed methamphetamine rather than amphetamine. Figures represent the purity of seizures received at the laboratory within the relevant quarter, and the interval between the date of seizure by police and the date of receipt at the laboratory may vary between one day and several months

Data for 2013/14 was not available at the time of publication

5.3 Cocaine

Key Points:

- Just two participants commented on the price of cocaine in Tasmania, noting a half-gram cost a median of $200;
- Of the small number of participants able to comment, availability was generally considered 'difficult';
- Tasmania Police reported making two seizures of cocaine for 2013/2014; and
- Very small numbers of participants were able to comment on trends relating to cocaine. It appears that the use of this drug in Hobart is very low, at least within the populations surveyed in the current study.

5.3.1 Price

Participants were asked to comment on the price of cocaine in Tasmania. Just two participants were able to comment, reporting a median price for a half-gram of $200 (range $150-250). No KE in the current study commented on the current price of cocaine.

The ACC and Tasmania Police provide price data for cocaine. In 2011/12, one gram was reported to cost $350 and one ounce between $7,000 and $10,000. Similarly, in 2012/13, a gram was reported to cost $350 and an ounce ranged between $7,000 and $9,500 (data from 2013/14 were not available at the time of publication). These very limited reports of cocaine prices reflect the weakness of the local market of the drug.

5.3.2 Availability

Reflecting the very low level of use of cocaine amongst the current sample, just two participants were able to comment on the local availability of cocaine in the preceding six months, both noting this was difficult to access, and that this had remained unchanged in the preceding six months.

Tasmania Police reported no seizures of cocaine between 1995/96 and 2004/05, with the exception of a single 1g seizure in 2000/01. In 2005/06, the ACC reported one seizure of a drug believed to be cocaine (1g), and in 2006/07, two seizures were reported, amounting to 7g. In 2007/08, no seizures of cocaine were reported, and in 2008/09 two seizures were made, amounting to 7g. In 2009/10, the ACC reported that Tasmania Police made three seizures of cocaine, totalling 46g, and the AFP made one seizure in Tasmania, weighing 750g. In 2010/11, three seizures were made, totalling 28g, and similarly in 2011/12 seven seizures were made, totalling 64g. No seizures were reported for 2012/13. In 2013/14, Tasmania Police reported one seizure of cocaine, totalling 20.8g[14].

The combination of few PWID reporting recent cocaine use (n=8 at a median frequency of use of two days), along with few participants being able to comment on trends relating to price, purity or availability, and no KE being able to reliably comment on these outcomes, together suggest that there is very low availability of cocaine in Tasmania, at least among the demographic sampled in this survey.

[14] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

5.3.3 Purity

Just two participants were able to comment on subjective purity of cocaine: one reporting this to be high and the second reporting 'low' purity. The ACC reported on the purity of a single seizure of cocaine in 2011/12, noting this to be 29.8% (no seizures were made in 2012/13, and data for 2013/14 was not available at the time of publication). In 2009/10, the ACC reported on the purity of a single seizure of cocaine in 2009/10 (AFP seizure of 750g), reporting this to be 71.7%. Data for the 2013/14 period were not available at the time of publication.

5.3.4 Summary of cocaine trends

In summary, it appears that the use of cocaine in Hobart is very low, at least within the populations surveyed in the current study or accessing government services. These patterns seem to have remained reasonably stable over the past few years. However, it is noteworthy that between 39% and 61% of the cohorts between 2004 and 2014 have reported lifetime use of cocaine, an increase from patterns seen in the 2000 and 2001 surveys. There are also indications of an increasing prevalence level of use in the general population (AIHW, 2014). As such, trends in cocaine markets in the state merit continued examination.

5.4 Cannabis

Key Points:

Bush/outdoor-cultivated cannabis

- The median price for a quarter ounce was $70, and $200 for an ounce. The majority of participants who commented reported stable price trends over the preceding six months;
- The majority of participants reported availability to be either 'very easy' or 'easy', and that this had not changed in the preceding six months. It was most commonly purchased from friends or known dealers; and
- Most participants reporting on subjective potency noted this to be 'medium'. The majority of participants reported that potency had not changed over the preceding six months.

Indoor/hydroponically-cultivated cannabis

- A quarter-ounce cost a modal price of $100 and an ounce $250. The majority of participants who commented reported that prices remained stable over the preceding six months;
- All participants reporting on availability noted indoor cultivated cannabis to be either 'very easy' or 'easy' to access, and that this had not changed in the preceding six months;
- It was most commonly purchased from friends or known dealers; and
- Potency generally was considered to be 'high'; this has not changed over the preceding six months.

5.4.1 Price

Bush/outdoor-cultivated cannabis

Participants were asked to comment on their last purchase of bush/outdoor-cultivated cannabis (Table 25). A $25 deal contained a modal amount of 1.5g (median 1.5g, range 1.0-4.0g, n=17) and a $50 deal contained a median amount of 3.75g (no single mode, range 2.5g-7.0g, n=4). The median last purchase price for a quarter-ounce of outdoor cannabis was $70 (no single mode, range $20-100, n=11), and the modal last purchase price for an ounce was $200 (median $200, range $150-250, n=8). The most common amounts of outdoor cannabis purchased by the PWID interviewed were $25 deals (n=17) and ounces (n=11) (Table 25). One KE commented on the price for one ounce purchases of outdoor-cultivated cannabis, reporting this to be $200-250.

Between 2013 and 2014, the modal price for one ounce of outdoor cultivated cannabis decreased from $250 to $200; however, the price for this amount has ranged between $200 and $250 since 2008. Similarly, the price for quarter ounce purchases has ranged between $60 and $70 since 2010.

Indoor/hydroponically-cultivated cannabis

'Deals' costing $25 contained a modal amount of 1.0g (median 1.5g, range 1.0-2.5g, n=23) of indoor-cultivated cannabis, with $50 'deals' containing a modal amount of 3.0g (median 3.0g, range 2.0-3.0g, n=10). Quarter-ounce amounts of hydroponically-cultivated cannabis were reported to cost a modal price of $100 (median $90, range $50-100, n=20) and the modal last purchase price for an ounce was $250 (median $260, range $250-300, n=8). Between 2013 and 2014, the modal price for one ounce purchases decreased from $300 to $250. The modal price for quarter ounce purchases was stable at $90 between 2005 and 2009. In 2010 and 2011 the price increased to

$100, however for the subsequent two reporting periods this decreased to $80 – the lowest modal price since 2004. In 2014, the modal price had returned to $100 (Table 26). Three KE commented on prices for indoor-cultivated cannabis: 1.2g to1.7g purchases cost between $20 and $25; a quarter ounce $100; and an ounce ranged between $200 and $300.

The majority of PWID (79% overall, 78%, n=38 in relation to outdoor cannabis and 80%, n=49 in relation to hydroponic cannabis) reported that the price of cannabis had not changed in the last six months.

Table 25: Modal prices and quantities of 'bush'/outdoor-cultivated cannabis purchased by PWID, 2005-2014

Unit	2005 IDRS			2006 IDRS			2007 IDRS			2008 IDRS			2009 IDRS		
	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n
$10 deal	1.0 g* *(1.0 g)*	$10	2	1.0g	$10	2	1.0g	$10	3	-	-	-	1.0g* (*0.7-1.3g)*	$10	2
$25 deal	1.0 g *(1.0-28.0 g)*	$25	11	1.7g* *(1.5-2.0g)*	$25	8	1.0g *(1.0-2.0g)*	$25	14	2.0g *(1.0-3.0g)*	$25	18	1.0g *(1.0-3.0g)*	$25	18
$50 deal	7.0 g* *(2.0-7.0 g)*	$50	9	7.0g	$50	8	7.0g *(1.0-7.0g)*	$50	9	7.0g	$50	4	7.0g *(3.0-14.0g)*	$50	13
Quarter ounce	7.0 g	$50 *($50-90)*	24	7.0g	$50 *($25-100)*	28	7.0g	$60 *($50-90)*	29	7.0g	$70 *($50-90)*	17	7.0g	$50 *($50-90)*	22
Half ounce	14.0 g	$120 *($100-200)*	5	14.0g	$130* *($120-140)*	3	14.0g	$113* *($100-125)*	2	14.0g	$100 *($75-100)*	4	14.0g	$150 *($50-160)*	14
Ounce	28.0 g	$200 *($25-350)*	24	28.0g	$170* *($90-250)*	19	28.0g	$150 *($150-300)*	9	28.0g	$200 *($75-300)*	20	28.0g	$250 *($100-300)*	20

Source: IDRS PWID interviews
* Median substituted, as no single mode exists
Note: Range in parentheses

Table 25: Modal prices and quantities of 'bush'/outdoor-cultivated cannabis purchased by PWID, 2005-2014 (continued)

Unit	2010 IDRS			2011 IDRS			2012 IDRS			2013 IDRS			2014 IDRS		
	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n
$10 deal	1.0g	$10	1	1.0g	$10	1	1.0g *(0.5-1.0g)*	$10	3	1.0g *(1.0-4.0g)*	$10	4	n/r	$10	0
$25 deal	2.0g *(1.0-7.0g)*	$25	24	1.0g *(1.0-3.0g)*	$25	16	1.0g *(1.0-3.0g)*	$25	13	1.0g *(1.0-3.0g)*	$25	9	1.5g *(1.0-4.0g)*	$25	17
$50 deal	7.0g *(3.0-7.0g)*	$50	9	7.0g *(7.0-14.0g)*	$50	4	7.0g *(2.0-7.0g)*	$50	5	-	-	-	3.75g *(2.5-7.0g)*	$50	4
Quarter ounce	7.0g	$60* *($25-90)*	23	7.0g	$70* *($50-80)*	11	7.0g	$70 *($50-80)*	14	7.0g	$60 *($60)*	4	7.0g	$70* *($20-100)*	11
Half ounce	14.0g	$100 *($75-150)*	5	14.0g	$90* *($50-100)*	3	14.0g	$120 *($100-120)*	3	14.0g	$60 *($60)*	1	14.0g	$90* *($80-100)*	2
Ounce	28.0g	$200 *($100-300)*	24	28.0g	$200* *($150-250)*	14	28.0g	$200 *($150-200)*	9	28.0g	$250 *($150-250)*	8	28.0g	$200 *($150-250)*	8

Source: IDRS PWID interviews
* Median substituted, as no single mode exists
Note: Range in parentheses
n/r Not reported

Table 26: Modal prices and quantities of hydroponic/indoor-cultivated cannabis purchased by PWID, 2005-2014

Unit	2005 IDRS			2006 IDRS			2007 IDRS			2008 IDRS			2009 IDRS		
	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n
$10 deal	0.9g* *(0.7-1.0 g)*	$10	2	1.0g *(1.0-2.0g)*	$10	4	0.8g *(0.5-0.8g)*	$10	4	-	-	-	0.5g *(0.5-0.7g)*	$10	3
$25 deal	1.0g *(1.0-2.0 g)*	$25	22	1.0g *(1.0-2.0g)*	$25	12	1.0g *(1.0-2.0g)*	$25	24	1.0 g *(1.0-2.0 g)*	$25	16	1.0g *(0.8-3.0g)*	$25	38
$50 deal	3.0g *(2.0-3.5g)*	$50	4	3.0g	$50	2	3.0g *(1.0-7.0g)*	$50	8	3.0 g* *(2.0-7.0 g)*	$50	3	3.0g *(2.0-7.0g)*	$50	9
Quarter ounce	7.0g	$90 *($70-100)*	37	7.0g	$90 *($60-120)*	43	7.0g	$90 *($20-120)*	29	7.0g	$90 *($50-100)*	31	7.0g	$90 *($50-100)*	29
Half ounce	14.0g	$150 *($100-200)*	9	14.0g	$160 *($120-200*)	6	14.0g	$160* *($125-200*)	4	14.0g	$150 *($100-160)*	7	14.0g	$150 *($120-180)*	15
Ounce	28.0g	$300 *($220-350)*	26	28.0g	$250 *($200-450)*	21	28.0g	$250* *($140-350)*	14	28.0g	$300 *($200-340)*	25	28.0g	$300 *($200-350)*	22

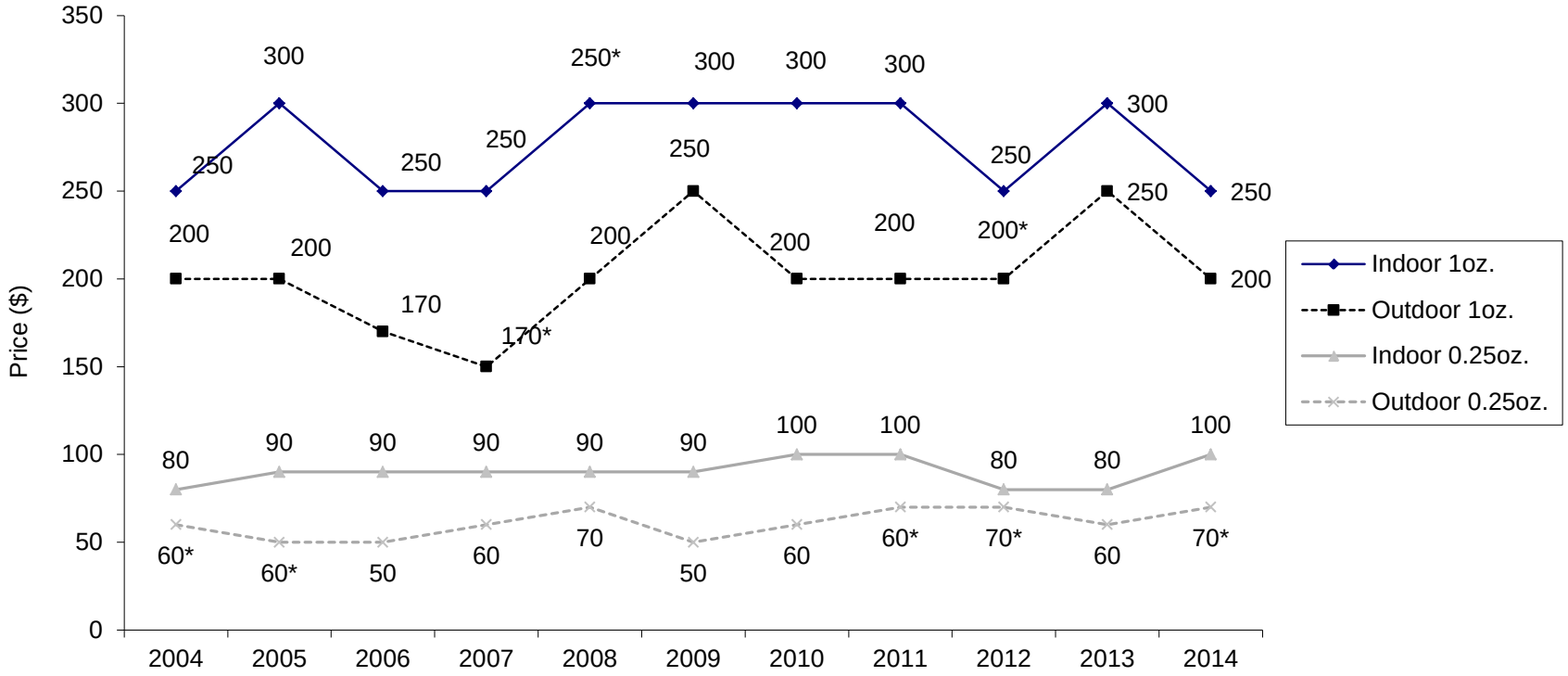
Source: IDRS PWID interviews
* Median substituted, as no single mode exists
Note: Range in parentheses

Table 26: Modal prices and quantities of hydroponic/indoor-cultivated cannabis purchased by PWID, 2005-2014 (continued)

Unit	2010 IDRS			2011 IDRS			2012 IDRS			2013 IDRS			2014 IDRS		
	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n	Modal amount (grams)	Modal price	n
$10 deal	0.5g	$10	1	0.5g *(0.5-1.0g)*	$10	3	1.0g	$10	1	0.75*g *(0.5-1.0g)*	$10	2	n/r	$10	0
$25 deal	1.2g *(2.0-7.0g)*	$25	15	1.0g *(1.0-2.5g)*	$25	30	1.0g *(1.0-2.0g)*	$25	36	1.0g *(1.0-2.0g)*	$25	20	1.0g *(1.0-2.5g)*	$25	23
$50 deal	3.0g *(2.0-7.0g)*	$50	18	3.0g *(2.0-6.0g)*	$50	6	3.0g *(2.0-7.0g)*	$50	9	3.0g *(3.0-7.0g)*	$50	5	3.0g *(2.0-3.0g)*	$50	10
Quarter ounce	7.0g	$100 *($50-100)*	33	7.0g	$100 *($60-100)*	18	7.0g	$80 *($50-100)*	34	7.0g	$80* *($50-180)*	7	7.0g	$100 *($50-100)*	20
Half ounce	14.0g	$160* *($100-250)*	11	14.0g	$150 *($140-250)*	4	14.0g	$150* *($90-170)*	8	14.0g	$150	1	14.0g	$150 *($85-160)*	6
Ounce	28.0g	$300 *($200-400)*	23	28.0g	$300 *($200-350)*	19	28.0g	$250 *($150-330)*	24	28.0g	$300 *($150-350)*	15	28.0g	$250 *($250-300)*	8

Source: IDRS PWID interviews
* Median substituted, as no single mode exists
Note: Range in parentheses
n/r Not reported

Figure 53: Modal prices of quarter and one ounce purchases of indoor and outdoor cultivated cannabis, 2004-2014



Source: IDRS PWID interviews
* Median substituted as no single mode

Table 27: Cannabis prices in Tasmania reported to the Australian Crime Commission, 2003/04-2012/13

	Deal (1g approx)		1/4 Bag (7g)		1/2 Bag (14g)		1 Ounce (28g)	
	Head	Hydro	Head	Hydro	Head	Hydro	Head	Hydro
2003/04	$25	$25	$65-90	$85-100	$125-150	$150-180	$250-300	$300
2004/05	$20-25	$25	$70-100	$80-100	$100	$150-200	$150-300	$300-350
2005/06	$25	$25	$75	$75	$120	$120	$250-350	$250-350
2006/07	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
2007/08	$25	$25	$80-100	n/r	$120-150	$150-200	$250-300	$300-350
2008/09	$10-25	$25	$70	n/r	$125	$150	$200-300	$300
2009/10	$25	$25	$75	n/r	n/r	$150-200	$250	$300-350
2010/11	$25	$25	$100-150	n/r	$200-250	$200-250	$300-350	$300-350
2011/12	$25	$25	$80	-	$150	$150	$200-300	$300
2012/13	$25	$25	$80	-	$150	$150	$200-300	$300

Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence), Tasmania Police State Intelligence Services
n/r Not reported
Note: Data for 2013/14 not available at time of publication

Tasmania Police and the ACC provide annual reports on the price of illicit drugs (Table 27). Since 2003/04, the price of quarter-ounce purchases of cannabis head has fluctuated between $65 and $100 in all years with the exception of 2010/11, when this was reported as ranging between $100-150. The price for one ounce has also fluctuated over this period, with the price ranging between $150 and $350 ($300 in 2011/12). And similarly, the price for a half-ounce had ranged between $100 and $150 between 2003/04 and 2012/13, with the exception of 2011/12, when the range increased to $200-250. The price for an ounce of hydro has remained relatively unchanged since 2003/04, costing between $300 and $350. Overall, these findings are similar to the 2012 IDRS, which reported on cannabis prices for the same period.

Tasmania Police reported the price of 1g of cannabis hash/resin as $30-50 in the 2001/02 financial year, $20-25 during the 2002/03 and 2003/04 financial years, and $25 in 2004/05. No data were reported in 2005/06 or 2006/07, however, in 2007/08 this price estimate had increased to $50-100. No price estimate has been reported since 2008/09. In the current IDRS study, no participants commented on the price of hashish. In 2013, two participants commented on the last purchase price paid for one gram of hashish: the median price was $45 (range $40-50), and just one participant commented on the price of a cap of hashish oil, reporting this to cost $100.

5.4.2 Availability

For indoor-cultivated cannabis, the majority of the PWID sample who reported recent use perceived that cannabis was ‘very easy’ (51%) or ‘easy’ (39%) to obtain. The availability of cannabis remained stable (79% of reports across both cannabis forms). Trends in availability and routes of access will be discussed separately for each type of cannabis.

All participants who commented reported that hydroponic/indoor-cultivated cannabis had been either ‘very easy’ or ‘easy’ (61%, n=38 and 39%, n=24 respectively) for them to access in the preceding six months (Table 28). Most of these participants believed that the availability of this type of cannabis had remained stable in the preceding six months (79%, n=49).

Hydroponically-cultivated cannabis was more commonly purchased from friends (45%, n=27) and known dealers (28%, n=17) (Table 29). Participants also commented on the last venue in which they purchased hydroponic cannabis, of which the majority purchased at either a dealer’s home (32%, n=19), friend’s home (28%, n=17) or via home delivery (22%, n=13).

In regard to outdoor or ‘bush’ cannabis, the majority of the PWID commenting believed this to be ‘very easy’ or ‘easy’ to access in the preceding six months (40%, n=21 respectively). The majority of participants in the current study reported that availability had remained stable in this time (79%, n=41) (Table 28). One KE, employed in law enforcement, noted a decrease in availability of ‘bush’ cannabis, and that this was more than seasonal variation. In addition, no seizures from outdoor settings of cultivation have occurred for some months. Most PWID reported last purchasing this type of cannabis from friends (52%, n=27) or known dealers (21%, n=11). Venues in which these purchases were last made were primarily reported to be a friend’s home (33%, n=17) or a dealer’s home (23%, n=12) (Table 29).

Table 28: Participants' reports of cannabis availability in the past six months, 2013-2014

Current availability	Hydro		Bush	
	2013 (N=107)	2014 (N=101)	2013 (N=107)	2014 (N=101)
Able to respond (%)	61	62	45	53
Of those who responded:				
Very easy (%)	61	61	42	40
Easy (%)	39	39	53	40
Difficult (%)	0	0	4	21
Very difficult (%)	0	0	0	0
Availability change over the last six months				
Able to respond (%)	61	62	45	52
Of those who responded:				
More difficult (%)	0	3	2	6
Stable (%)	97	79	87	79
Easier (%)	2	15	4	12
Fluctuates (%)	2	3	7	4

Source: IDRS PWID interviews

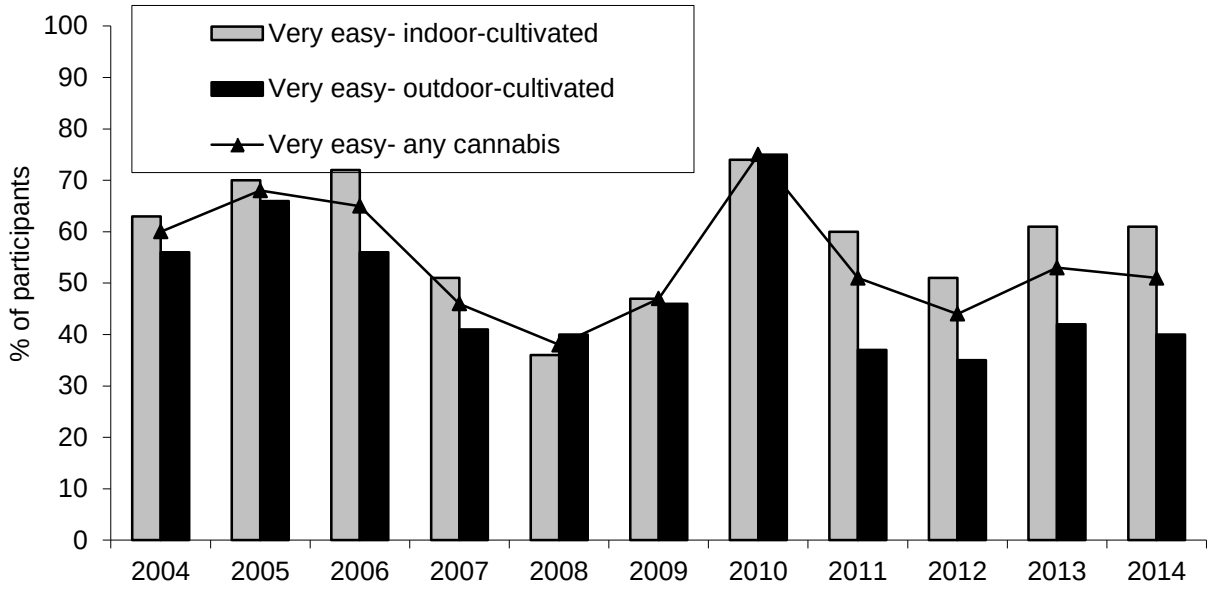
Table 29: People and venues from which cannabis was last purchased in the preceding six months, 2014

	Hydroponic cannabis n=60	Bush/outdoor cannabis n=52
Friends	45% (n=27)	52% (n=27)
Known dealers	28% (n=17)	21% (n=11)
Acquaintance	12% (n=7)	17% (n=9)
Street dealer	10% (n=6)	4% (n=2)
	Hydroponic cannabis n=60	**Bush/outdoor cannabis n=52**
Friend's home	28% (n=17)	33% (n=17)
Dealer's home	32% (n=19)	23% (n=12)
Home delivery	22% (n=13)	15% (n=8)
Agreed public location	13% (n=8)	17% (n=9)
Acquaintance's home	3% (n=2)	8% (n=4)
Street market	0	2% (n=1)

Source: IDRS PWID interviews
Note: Multiple responses allowed

As depicted in Figure 54, between 2005 and 2008 there was a gradual decline in the proportion of PWID respondents who considered cannabis (any form) as 'very easy' to access (68% in 2005 v. 38% in 2008: $\chi^2(1_{n=286})=24.9$, $p<0.001$). In 2009 and 2010, this trend was temporarily reversed, with the proportion reporting 'very easy' access increasing to 75% in 2010 ($\chi^2(1_{n=284})=37.8$, $p<0.001$). Since this time, this rate has been slightly lower and stable, ranging between 44% and 53% of each sample reporting 'very easy' access.

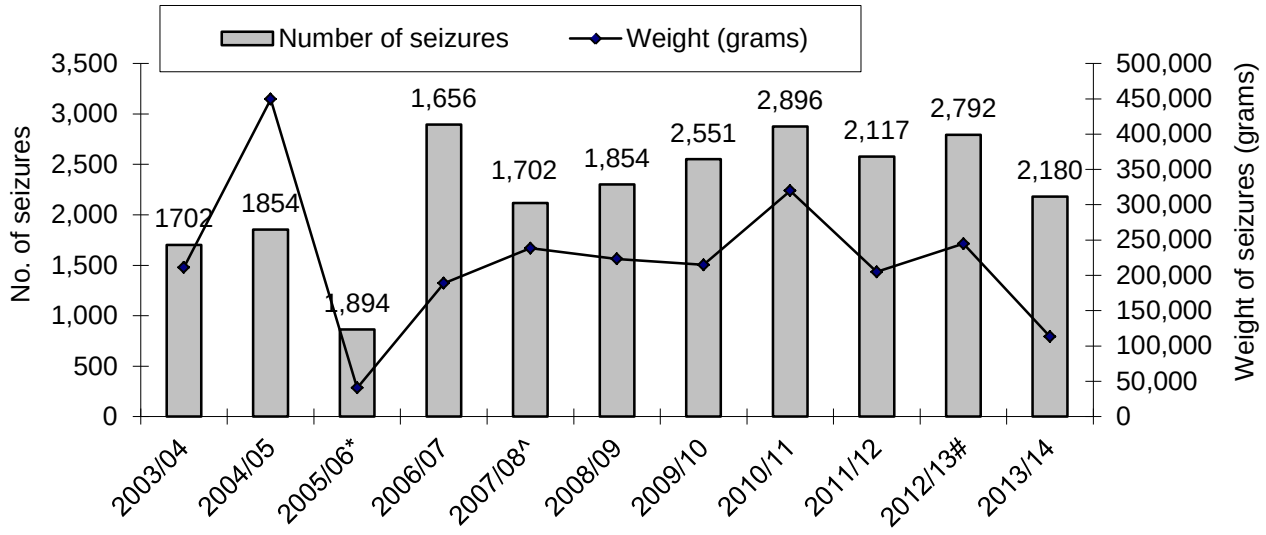
Figure 54: Participant reports of current cannabis availability, among those who recently used cannabis, 2004-2014



Source: IDRS PWID interviews

Figure 55 shows cannabis seizures made by Tasmania Police, between 2003/04 and 2013/14. The volume of cannabis seized has remained relatively stable over time, with notable peaks observed in 2004/05 and 2010/11. There was a gradual increase in the number of seizures between 2007/08 and 2010/11, and a slight decline in 2011/12. In 2012/13 there was a small increase in both the weight and number of seizures relative to 2011/12. However, in 2013/14, a notable decrease was observed the weight of seizures, from 244,683g in 2012/13 to 113,092g. Similarly, the number of cannabis seizures also decreased over this period, from 2,792 to 2,180.

Figure 55: Seizures of cannabis by Tasmania Police, 2003/04-2013/14



Source: Australian Crime Commission, State Intelligence Service, Tasmania Police
* Seizures for 2005/06 were only reported to the ACC for part of the financial year
^ In 2007/08, the AFP made 3 seizures of cannabis, amounting to 21g
# In 2012/13, the AFP made 4 seizures amounting to 19g
Note: Data in 2013/14 were provided by Tasmania Police State Intelligence Service. These data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

5.4.3 Potency

The potency of cannabis across both modes of cultivation was generally rated as 'high' (41%) or 'medium' (37%) by the PWID sample, with most respondents indicating that this potency had remained stable (64%) in the preceding six month period. These reports are similar to those provided in recent IDRS studies.

Most participants reporting on subjective potency of outdoor or 'bush' cultivated cannabis noted this to be 'medium' (60%, n=31). Small minorities noted potency to by 'high' (11%, n=6), 'low' (13%, n=7) or fluctuating (15%, n=8). Overall potency was regarded as having remained stable in the preceding six months (67%, n=33).

Hydroponically-cultivated cannabis, however, was generally reported by PWID as being 'high' in potency (65%, n=41) or 'medium' (19%, n=12). Potency was predominantly regarded as remaining stable in the preceding six months (67%, n=33). Seizures of cannabis by Tasmania Police are not analysed for potency, and, as such, no empirical data are available to examine trends.

5.5 Opioids

Key Points:

Morphine

- The median price was $1/mg for all quantities of morphine, and in general, participants noted no change to price over the preceding six months;
- Availability was considered to be 'easy/very easy'; the majority of participants noted that availability of morphine had remained stable over the preceding six months; and
- Illicit morphine was most commonly sourced from a friend or known dealer.

Oxycodone

- For the original formulation of OxyContin, the median price was $1/mg for all quantities of oxycodone; the majority of participants noted that prices had remained stable over the preceding six months;
- Prices for the new formulation were around half the price of the original formulation;
- Participants were mixed with regard to availability: 56% noted it to be 'difficult/very difficult' to access, 44% noted this to be 'easy/very easy'. These reports differ from 2013 (72% 'easy/very easy'), and likely reflect market changes in response to the introduction of the new formulation. In keeping with this, almost half of the participants noted decreased availability over the preceding six months; and
- Illicit oxycodone was most commonly sourced from friends and known dealers.

Methadone syrup

- The median price was $1/mg for all quantities of methadone syrup; the majority of participants noted that prices had remained stable over the preceding six months;
- Perception of availability was divided, with half of participants stating that it was either 'easy/very easy' or 'difficult/very difficult'; despite this, the majority of participants noted that availability had remained stable over the preceding six months; and
- Illicit methadone was most commonly sourced from friends, generally in the context of a standing arrangement.

Physeptone

- The modal price of Physeptone tablets was $2/mg. Participants were divided regarding price changes over the preceding six months, noting that prices had either remained stable or increased;
- Perception of availability was divided, with half of participants stating that it was either 'easy/very easy' or 'difficult/very difficult'; three-fifths of participants noted that availability had remained stable over the preceding six months, while one-fifth reported decreased availability; and
- Illicit Physeptone was most commonly sourced from friends and known dealers.

5.5.1 Price

Morphine

Participants reported the modal price paid for their most recent purchase of morphine was $1 per mg. Modal prices for MS Contin were $30 for a 30mg tablet (range $25-30, n=24), $60 per 60mg tablet (range $40-60, n=38), and $100 for a 100mg tablet (range $40-120, n=40) (Table 30). Purchase prices for Kapanol were similar: 50mg capsules cost a modal price of $50 (range $35-50, n=28), and 100mg Kapanol capsules cost a modal price of $100 (range $60-100, n=20). Three KE commented on the purchase price of morphine, with all reporting this to be $1/mg. The majority of

consumers reporting on morphine prices (82%, n=59 of those able to comment) stated that these prices had remained stable in the preceding six months.

These modal purchase prices are consistent with prices reported in the 2009 to 2013 IDRS studies, however, they are higher than reported in previous local IDRS surveys: 60mg MS Contin tablets cost a modal purchase price of $50 between 2005 and 2008, increasing to $60 in 2009; similarly, the modal purchase price for 100mg MS Contin tablets increased from $70 in 2005 to $80 between 2006 to 2008, and in 2009 the price again increased to $100. The modal purchase price for Kapanol also increased: 50mg capsules cost a modal price of $35 in 2005; this increased to $50 in 2008, and has remained stable since then. Similarly, the modal price for 100mg capsules increased from $70 between 2005 and 2007 to $100 in 2009.

Oxycodone

A new formulation of OxyContin was introduced into Australia on April 1 2014 (see Section 8.2) Price data was collected for both formulations. For the original formulation, participants reported a modal purchase price of $1 per mg: modal price for a 20mg OxyContin tablet was $20 (range $10-25, n=13); $40 per 40mg tablet (range $25-50, n=14), and $80 per 80mg tablet (range $65-80, n=14) (Table 30). In contrast, prices reported for the new formulation OxyContin were notably lower for the same strengths, with a modal price of $10 for 20mg (range $10-20, n=3), and a median price for 40mg of $23 (no single mode, range $20-25, n=2). These lower prices and the small number of reports most likely reflect participants' preference for pharmaceutical opioids that are easier to inject.

When examining reported prices for OxyContin (original formulation) over time, it is clear that modal price estimates have increased, particularly regarding 80mg tablets, which increased from $50 in 2006 to $80 in 2008. An increase in the modal price for 40mg tablets was also observed: increasing from $25 in 2006 to $40 in 2007 (Table 30).

Participants were asked to comment on perceived changes in price over the preceding six months. Amongst those participants who were able to comment on price trends for oxycodone, almost three-quarters reported the price to have remained stable (71%, n=25). Comparison of the modal prices for most recent purchases of the drug amongst the 2013 and 2014 survey respondents provides support for reports of stable prices (Table 30).

Methadone

Consistent with reports in previous local IDRS studies, consumers reported the modal purchase price of methadone was $1 per mg. Since the nature of access to methadone syrup does not easily allow for standard purchase amounts to be made, PWID were asked to report the amounts and costs of their most recent purchase of methadone. Purchases, irrespective of quantity, cost a modal amount of $1 per mg (Table 30). The majority of participants who commented on price trends for methadone syrup in the preceding six months indicated that the purchase price had remained stable (84%, n=27). When purchase prices for illicit syrup are compared over time, a stable trend can be clearly seen, which shows a purchase price for $1.00 per mg, except for 2005, when the cohort reported $0.80 per mg of syrup (Table 30).

The modal purchase price for illicit 10mg Physeptone tablets of methadone was $20 (median=$20; range $10-20, n=30). This is consistent with reports between 2011 and 2013, however, it marks a doubling from modal price reports between 2005 and 2010, with the exception of 2007 (modal price $15) and 2009 (median price $12.50). This trend toward stable to increasing prices was supported by participant comments, with 69% (n=20) of those able to comment reporting the price to have remained stable, and 24% (n=7) noting it had increased in the preceding six months.

Table 30: Modal last purchase price for most recent purchase of pharmaceutical opioids, 2005-2014

Preparation	2005 IDRS		2006 IDRS		2007 IDRS		2008 IDRS		2009 IDRS	
	Price	***n***	**Price**	***n***	**Price**	***n***	**Price**	***n***	**Price**	***n***
MS Contin										
10 mg tablet	$10 ($10)	*2*	$5 ($5-10)	*3*	$5	*1*	$5	*2*	$10($10-20)	*4*
30 mg tablet	$25 ($15-35)	*21*	$25 ($15-30)	*25*	$20($15-50)	*20*	$25 ($15-35)	*28*	$30 ($15-30)	*30*
60 mg tablet	$50 ($25-60)	*42*	$50 ($20-60)	*14*	$50($30-80)	*53*	$50 ($20-70)	*69*	$60 ($40-60)	*69*
100 mg tablet	$70 ($50-90)	*47*	$80 ($50-120)	*16*	$80($30-90)	*40*	$80 ($60-100)	*40*	$100 ($60-100)	*46*
Kapanol										
20 mg capsule	$13* ($5-20)	*6*	$10 ($5-20)	*11*	$10($8-20)	*7*	$20 ($15-30)	*7*	$20($10-25)	*9*
50 mg capsule	$35 ($15-50)	*29*	$35 ($10-80)	*31*	$40($20-50)	*24*	$50 ($30-55)	*49*	$50($30-80)	*46*
100 mg capsule	$70 ($30-90)	*25*	$70 ($20-120)	*34*	$70($50-95)	*22*	$80 ($50-100)	*23*	$100($60-100)	*23*
Anamorph										
30 mg tablet	$25*($22-45)	*3*	-	*-*	-	*-*	$30	*1*	$30($20-30)	*5*
OxyContin										
10 mg tablet	$7.50*($5-10)	*2*	$5	*1*	$10($10-20)	*3*	$10 ($5-10)	*4*	$10($7-10)	*3*
20 mg tablet	$15($10-20)	*5*	$15*($10-20)	*5*	$20($20)	*4*	$20 ($10-20)	*20*	$20($5-20)	*12*
40 mg tablet	$20($15-30)	*11*	$25 ($5-40)	*14*	$40*($15-50)	*9*	$40 ($20-50)	*26*	$40($15-40)	*28*
80 mg tablet	$40*($30-80)	*9*	$50 ($40-50)	*7*	$40($30-100)	*11*	$80 ($50-80)	*13*	$80($40-80)	*26*
Methadone syrup (price per mg)	$0.8 ($0.4-1.0)	*38*	$1.0($0.3-2.0)	*43*	$1.0($0.5-2.0)	*52*	$1.0 ($0.5-2.0)	*53*	$1.0($0.4-1.0)	*46*
Physeptone										
5 mg tablet	$5	*1*	$4.25*($3.5-5.0)	*2*	$5	*1*	$5	*1*	-	*0*
10 mg tablet	$10 ($5-15)	*33*	$10 ($7-150)	*36*	$15($5-20)	*17*	$10 ($5-20)	*35*	$12.5*($5-25)	*44*

Source: IDRS PWID interviews

*Median substituted for mode, as no single mode existed

Note: Reported price range in parentheses

Table 30: Modal last purchase price for most recent purchase of pharmaceutical opioids, 2005-2014 (continued)

Preparation	2010 IDRS		2011 IDRS		2012 IDRS		2013 IDRS		2014 IDRS	
	Price	*n*	Price	*n*	Price	*n*	Price	*n*	Price	*n*
MS Contin										
10 mg tablet	$10	*14*	$10	*1*	$10 ($10-30)	*4*	$10 ($10-15)	*3*	$10 ($10)	*8*
30 mg tablet	$30($20-30)	*40*	$30($25-40)	*13*	$30 ($20-50)	*28*	$30 ($15-35)	*18*	$30 ($25-30)	*24*
60 mg tablet	$60($40-80)	*64*	$60($40-80)	*45*	$60 ($30-70)	*51*	$60 ($40-80)	*43*	$60 ($40-60)	*38*
100 mg tablet	$100($60-100)	*48*	$100($70-120)	*7*	$100($50-110)	*28*	$100 (80-100)	*20*	$100 (40-120)	*40*
Kapanol										
20 mg capsule	$20($10-20)	*16*	$20($40-60)	*5*	$20 ($10-25)	*15*	$20	*5*	$20 (20)	*11*
50 mg capsule	$50($25-50)	*44*	$50($40-60)	*18*	$50 ($25-50)	*25*	$50 ($50-60)	*20*	$50 ($35-50)	*28*
100 mg capsule	$100($50-100)	*30*	$100($80-100)	*14*	$100($50-100)	*9*	$100	*5*	$100($60-100)	*20*
Anamorph										
30 mg tablet	$30	*10*	$30	*5*	$30	*11*	-	-	$30 ($30-40)	*14*
OxyContin (original)										
10 mg tablet	$10($5-20)	*17*	$9.5*($9-10)	*2*	$10	*8*	$10 ($5-20)	*13*	$10 ($10-20)	*4*
20 mg tablet	$20($10-25)	*27*	$20($20-25)	*7*	$20 ($6-30)	*22*	$20 ($20-30)	*21*	$20 ($10-25)	*13*
40 mg tablet	$40($10-50)	*43*	$40($20-60)	*15*	$40 ($20-50)	*42*	$40 ($20-60)	*26*	$40 ($25-50)	*14*
80 mg tablet	$80($40-80)	*35*	$80($50-100)	*22*	$80 ($40-100)	*42*	$80 ($40-120)	*28*	$80 ($65-80)	*14*
OxyContin (reformulated)										
20 mg tablet									$10 ($10-20)	*3*
40 mg tablet									$23*($20-25)	*2*
80 mg tablet									-	*0*
Methadone syrup (price per mg)	$1.0($0.5-1.0)	*30*	$1.0($0.7-2.0)	*25*	$1.0($0.8-1.33)	*34*	$1 ($0.63-2)	*26*	$1 ($0.8-1)	*28*
Physeptone										
5 mg tablet	$5($5-12.5)	*9*	$5	*2*	-	*0*	$5	*1*	$5	*1*
10 mg tablet	$10($10-20)	*28*	$20($5-20)	*23*	$20 ($6-20)	*23*	$20 ($10-20)	*28*	$20 ($10-20)	*30*

Source: IDRS PWID interviews
*Median substituted for mode, as no single mode existed
Note: Reported price range in parentheses

5.5.2 Availability

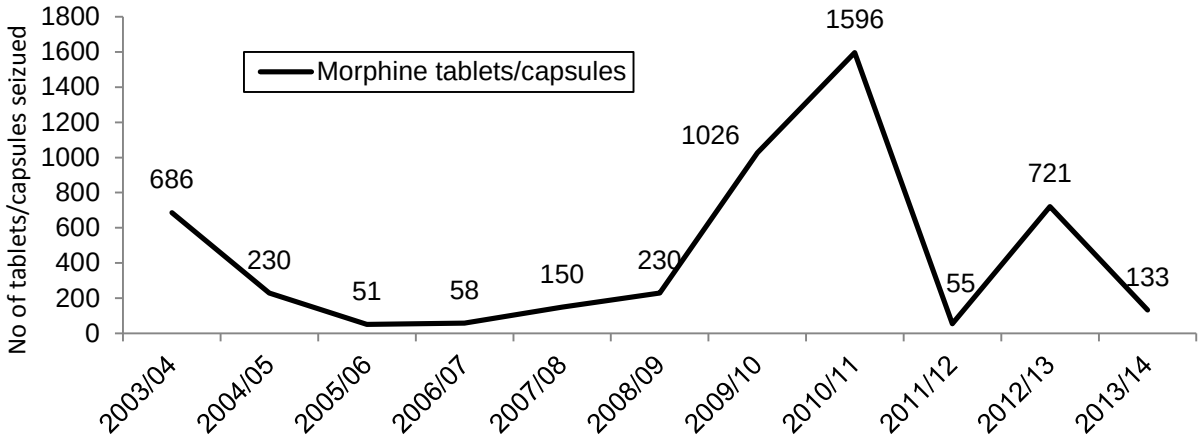
Morphine

The majority of the consumers interviewed who could comment on availability trends for morphine reported that morphine was 'easy' or 'very easy' for them to obtain (86%: 44% 'easy'; 42% 'very easy'), and that the availability of morphine had remained stable (72%, n=48) in the six months prior to interview. In keeping with these reports, one KE noted that morphine was still consistently easy to access according to anecdotal reports.

Among the IDRS consumer sample, participants reported last purchasing morphine from a friend (42%, n=30) or a known dealer (28%, n=20). Participants were also asked to comment on the last venue in which these recent purchases occurred: 38% (n=27) reported purchasing at a dealer's home, 25% (n=18) from a friend's home and 24% from an agreed public location (n=17).

Seizures of morphine and other narcotic pills are reported by Tasmania Police (Figure 56). Between 2003/04 and 2006/07, the number of tablets/capsules of morphine seized decreased from 686 to 58. Subsequent to this, the number of such seizures increased dramatically, with 1,596 tablets/capsules seized in 2010/11. This increase was accounted for by two large seizures, totalling 1,076 tablets. Since this time, the number of morphine seizures has been considerably lower.

Figure 56: Number of morphine tablets and capsules seized by Tasmania Police, 2003/04-2013/14



Source: State Intelligence Services, Tasmania Police
* 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

Oxycodone

Two-fifths of participants who were able to comment noted oxycodone to be 'easy' or 'very easy' to access (44%: 31% 'easy' and 14% 'very easy'). This marks a decrease from 2013: three-quarters of participants stated access was 'easy' or 'very easy' (72%: 45% 'easy' and 28% 'very easy') ($\chi^2(1_{n=94})=6.22$, p=0.01). Participants were divided with regard to changes in availability over the preceding six months: 51% (n=19) noted no change and 46% noted decreased access (n=17). This overall tightening of the oxycodone market is likely due to the replacement of the old, readily injectable OxyContin with a new formulation that is more challenging to inject. This change occurred on April 1 2014, two months prior to participant interviews (see Section 8.2 for further discussion of this).

Participants had most commonly last purchased oxycodone from either friends or a known dealer (35% and 33% respectively). Oxycodone was most commonly purchased in an agreed public location (33%) or from a dealer's home (28%, n=11).

Methadone

Participants were mixed with regard to their responses concerning availability of methadone syrup: 52% noted that it was either 'difficult' or 'very difficult' to access (36% 'difficult, 15% 'very difficult'), whilst 48% noted it to be either 'easy' or 'very easy' to access (33% and 15% respectively). As noted by PWID in previous years, the degree of availability is highly dependent on standing arrangements, with one participant from a previous study describing the situation as such: "*it is very easy to access if you have a pre-existing arrangement, but very difficult if you try to find it on a whim".* Four-fifths of those participants reporting on trends in availability of illicit syrup perceived it as remaining stable in the preceding six months (79%, n=26).

The majority of participants that had used illicit methadone syrup reported last purchasing the drug from a friend (59%, n=20), with small minorities purchasing from a known dealer (18%, n=6) or an acquaintance (15%, n=5). There were several venues in which these purchases occurred, including an agreed public location (27%, n=9), a friend's home or dealer's home (21%, n=7 respectively) (Table 31).

Participants were divided with regard to availability of illicit Physeptone, with around half of those participants who commented noting this to be either 'difficult' or 'very difficult' (52%: 34% 'difficult'; 17% 'very difficult') or 'easy'/'very easy' to access (31% and 17% respectively). Three-fifths of participants reported stable availability of Physeptone over the preceding six months (62%, n=18), whilst 21% (n=6) noted decreasing availability. Participants most commonly purchased Physeptone through a friend (37%, n=11) or known dealer (33%, n=10). Venues which were most commonly cited for these transactions included a dealer's home (40%, n=12) and an agreed public location (20%, n=6) (Table 31).

Table 31: Pathways to illicit methadone access, 2014

	Illicit methadone syrup (n=34)	Illicit Physeptone tablets (n=30)
Last source person of illicit purchase*		
Friend	59%	37%
Known dealers	18%	33%
Acquaintances	15%	20%
Last source venue for illicit purchase*		
Agreed public location	27%	20%
Friend's home	21%	17%
Dealer's home	21%	40%
Home delivery	18%	10%
Acquaintance's home	6%	13%

Source: IDRS PWID interviews

* For those reporting source

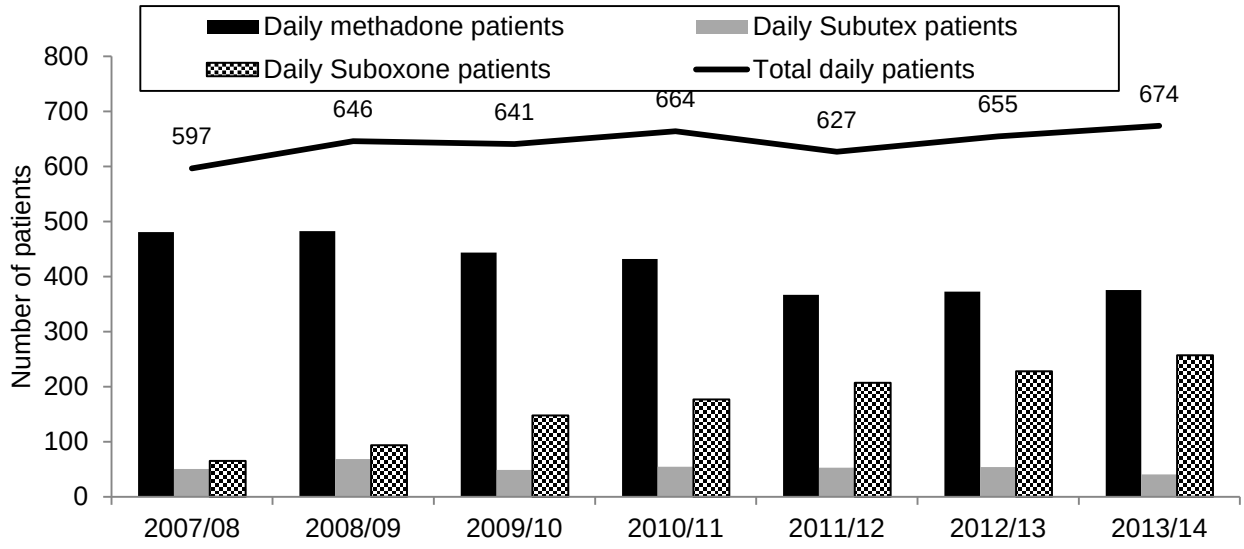
5.5.3 Prescription rates of opioid pharmaceuticals in Tasmania

There has been little change in the overall number of clients on Tasmania's pharmacotherapy program in recent years (Figure 57). In 2013/14, there were 674 patients, most of who were receiving methadone syrup. The number of patients receiving methadone has declined from 481 in

2007/08 to 376 in 2013/14. Conversely, the number of patients receiving Suboxone has increased from 65 in 2007/08 to 257 in 2013/14.

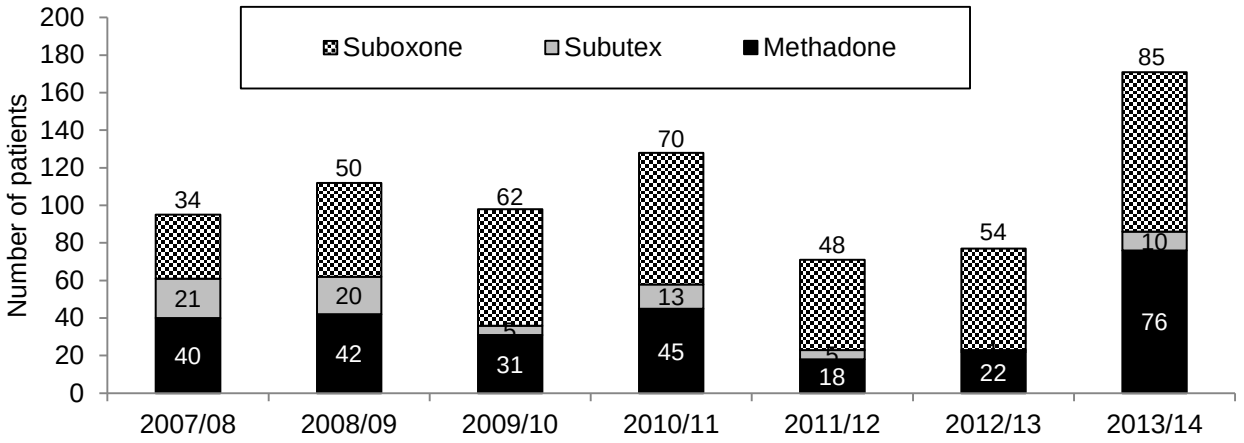
Overall, the number of new admissions to pharmacotherapy treatments was relatively stable between 2007/08 and 2012/13, with between 95 and 128 new admissions per financial year. In 2012/13, this number increased to 171 new admissions, with Suboxone admissions accounting for 50% of these, and methadone 44% (Figure 58).

Figure 57: Clients of the Tasmanian pharmacotherapy programs, 2007/08-2013/14



Source: Pharmaceutical Services, Department of Health and Human Services, Tasmania

Figure 58: New admissions to pharmacotherapy treatments in Tasmania, 2007/08-2013/14



Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services, Tasmania

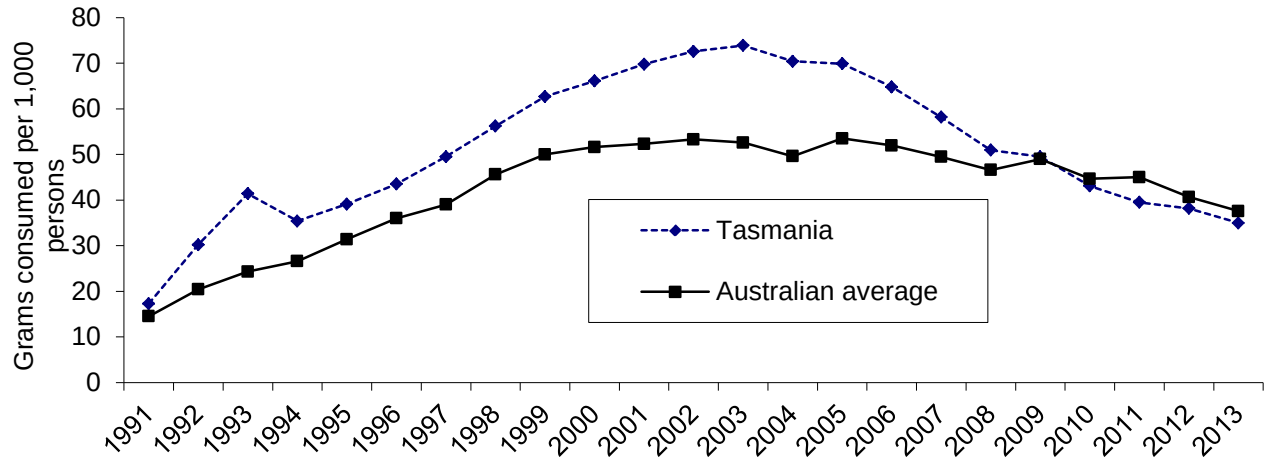
Tasmanian prescription rates for Schedule 8 (S8) pharmaceuticals[15] since 1991 were also provided by Pharmaceutical Services (Tasmanian Department of Health and Human Services). Between 1991 and 2007, the rate of Tasmanian consumption of morphine was consistently 110% or more of the national average. Since 2008, this rate has decreased, with consumption of morphine in

[15] Pharmaceuticals classed under Schedule 8 (termed Section 59 from 2009) are variously classed as narcotic substances or drugs of addiction/dependence in differing jurisdictions.

Tasmania in 2010 less than the national rate for the first time (96%). This trend toward decreasing consumption has continued: in 2013, the Tasmanian rate was 93.1% of the national rate (Figure 59).

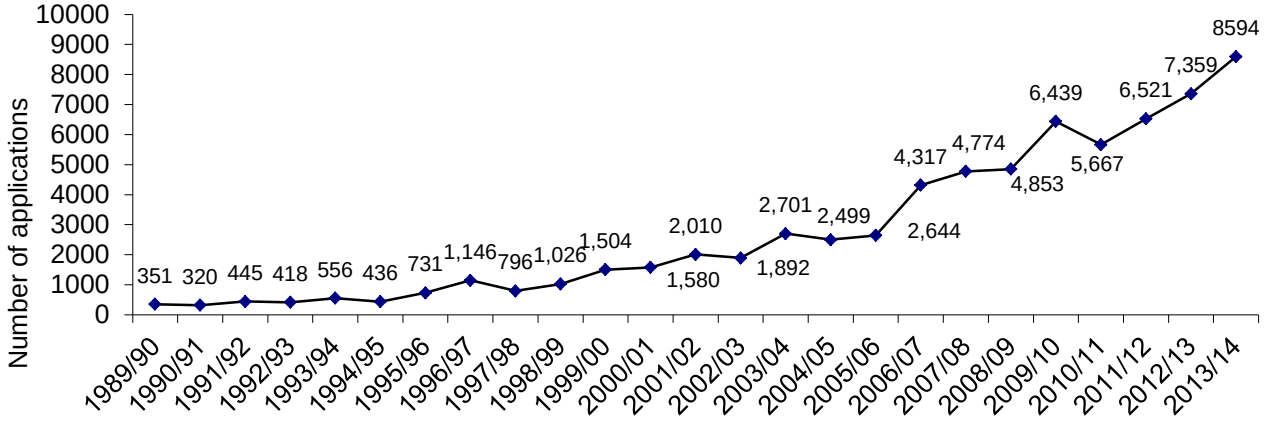
Despite consumption of morphine per 1,000 persons in Tasmania decreasing from 73.9g in 2003 to 34.9g in 2013, the number of applications received by Tasmanian Pharmaceutical Services for approval to prescribe narcotics[16] steadily increased, almost exponentially in recent years, from 351 in 1989/90 to 2,644 applications[17] in 2005/06, with a particularly marked increase in applications in 2006/07 to 4,317, and again in 2009/10, with 6,439 applications. In 2011/12, 6,521 applications were received, however, in 2012/13 and 2013/14, further increases were reported, with 7,359 and 8,594 applications respectively (Figure 60).

Figure 59: Consumption of morphine per 1,000 persons, 1991-2013



Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services

Figure 60: S22/Section 59 applications received by Pharmaceutical Services, Tasmania, 1989/90-2013/14



Source: Pharmaceutical Services, Department of Health and Human Services.
Note: Applications are for approval to prescribe narcotics to a patient for more than two months or for a person who is drug dependent

[16] The *Alcohol and Drug Dependency Act 1968* requires medical practitioners to seek the approval of the Secretary of Pharmaceutical Services when narcotics are prescribed for a patient for more than two months, or for a person who is drug dependent.

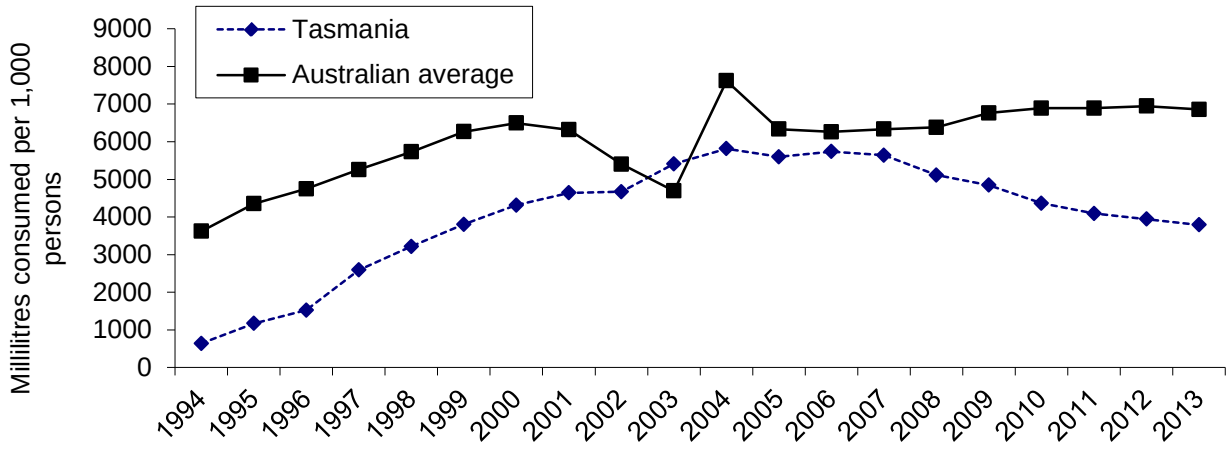
[17] It is worth noting that the level of compliance in regard to submission of applications is significantly dependent on reminders being sent to doctors, and as such these figures are unlikely to reflect the absolute number of cases requiring such a submission.

Despite the use of methadone syrup amongst a large proportion of the PWID sample in Tasmanian IDRS studies, local population rates of consumption of methadone syrup were continuously below that of the national average until 2003 (Figure 61). This partially reflected a sharp decline in consumption of methadone syrup nationally, beginning in 2001 with the wide introduction of Subutex (buprenorphine) maintenance treatment. Following some fluctuations in the extent of use of methadone syrup nationally, consumption has stabilised, whilst consumption rates in Tasmania have decreased over the preceding six years (55% of the national average in 2013).

Tasmanian consumption of methadone 10mg tablets (Physeptone), in contrast to the level of use of methadone syrup, was consistently above 200% that of the national average up until 2012 (196%) (Figure 62). Rapid increases in use were observed in to 2000 (where local prescription rates were 260% of the national average), and again from 2003 to 2006 (from 253% of the national average to 278%) (Figure 62). However, since 2006, the rate of consumption in Tasmania has been decreasing, whilst the national rate has remained stable. Despite this, the consumption rate for Tasmania was 190% of the national rate in 2013.

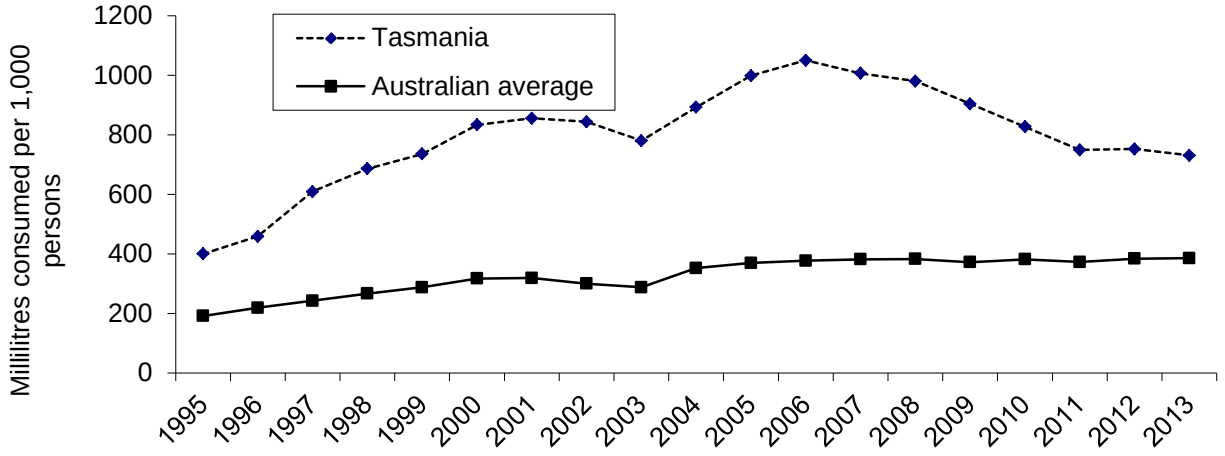
When trends across both preparations of methadone are combined, overall consumption of methadone in Tasmania remained below that of the Australian average until 2002, and in 2003 grew to 130% of the national average, due to a sharp decrease in the national rate of consumption (Figure 63). Between 2004 and 2007, the national and local rates of consumption stabilised, with Tasmanian rates approximately 110% of the national average (Figure 63). In 2008, however, the rate of use in Tasmania was comparable with the national average. In 2009, following a small increase in the national rate of consumption and a decrease in the local rate, the Tasmanian rate was below the national rate, and this trend continued into 2013 (69% of the national rate).

Figure 61: Consumption of methadone syrup per 1,000 persons, 1994-2013



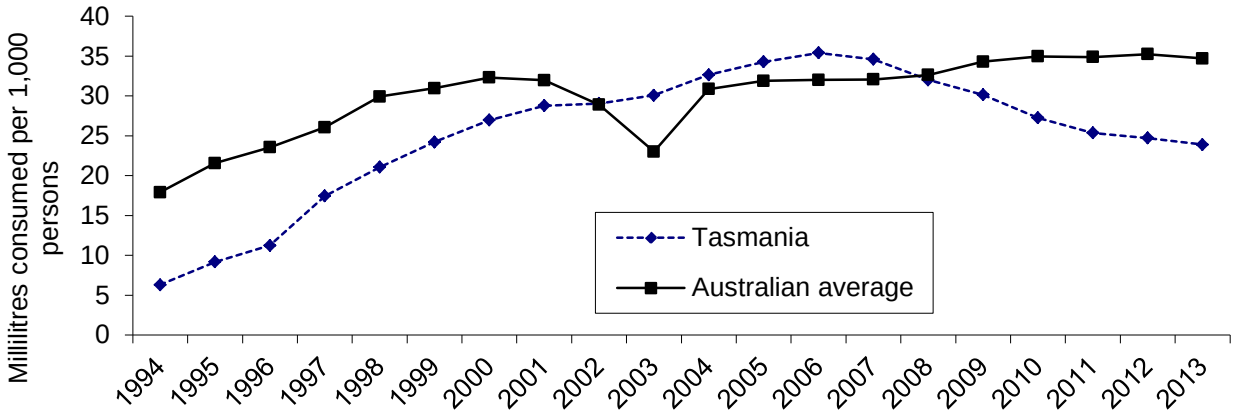
Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services

Figure 62: Consumption of methadone 10mg tablets per 1,000 persons, 1995-2013



Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services

Figure 63: Consumption of methadone per 1,000 persons, 1994-2013

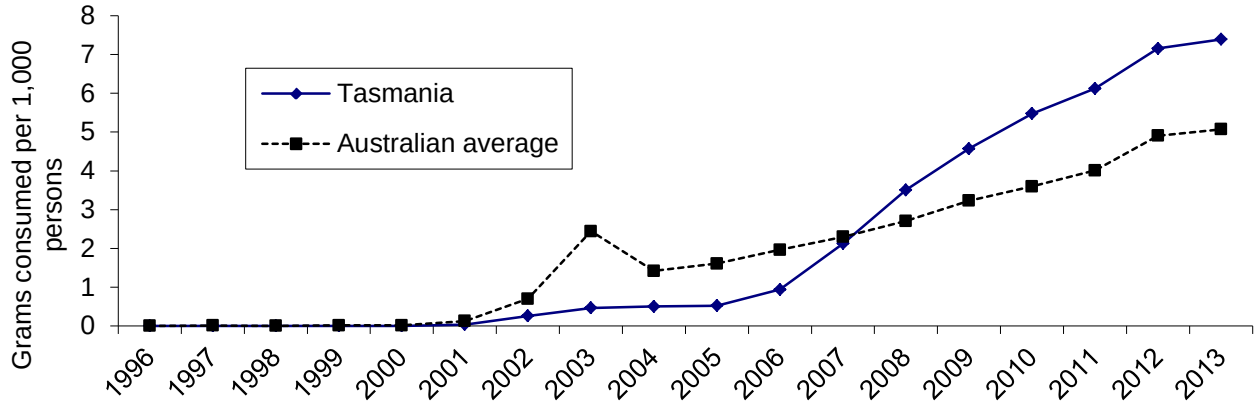


Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services

Tasmanian prescription rates for buprenorphine are detailed below in Figure 64. Following the trends in buprenorphine maintenance admissions, the rate of prescription of all forms of the drug[18] in the state increased tenfold between 2001 and 2003 from 0.04g to 0.46g per 1,000 persons, and again between 2005 and 2013, increasing fourteen-fold from 0.5g to 7.4g per 1,000 persons. National prescription rates for all forms of buprenorphine have also increased remarkably rapidly since 2001, largely due to the enthusiastic uptake of buprenorphine treatment in Victoria. Despite this, the Tasmanian population rate of prescriptions is greater than the national rate (146%).

[18] This data includes both buprenorphine (Subutex, Norspan) and buprenorphine-naloxone (Suboxone) preparations.

Figure 64: Consumption of all forms of buprenorphine per 1,000 persons, 1996-2013



Source: National Drug System (formerly DRUMS), Pharmaceutical Services, Department of Health and Human Services

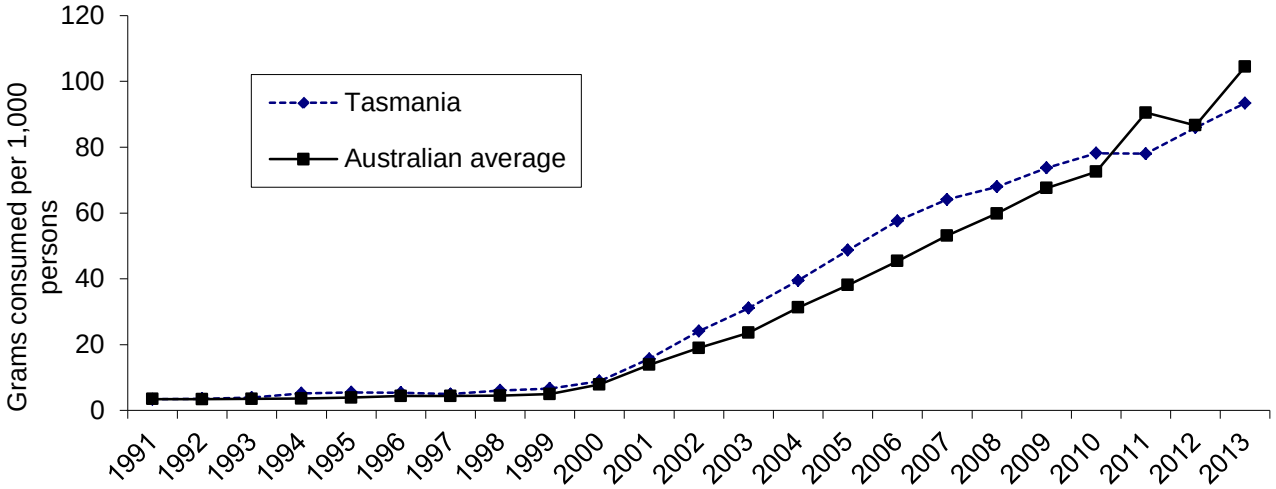
Finally, prescriptions of oxycodone are detailed in Figure 65. Nationally, there has been a rapid uptake in the use of this drug since 1999, with uptake in Tasmania increasing ten-fold in the fourteen years between 2000 and 2013. Tasmanian consumption rates were consistently greater than national rates until 2011, when a dramatic increase in the national rate was observed (from 73g per 1,000 persons in 2010 to 91g in 2011), resulting in the Tasmanian consumption rate falling to 86% of the national rate. In 2013, the national rate increased more dramatically that the Tasmanian rate, resulting in Tasmanian consumption being 89% of the national rate.

To some degree, the traditionally higher rates of consumption of oxycodone in Tasmania can be accounted for by idiosyncrasies in prescription practices and the aging nature of the Tasmanian population. It is important to note that higher-than-average levels of prescription of opioid products certainly do not necessarily imply inappropriate patterns of clinical practice – indeed, there are many indications that, internationally, chronic pain (for which opioids are appropriately prescribed) is often under-recognised and unrelieved (see Brennan, Carr & Cousins, 2007 for a review on this issue).

Similarly, higher-than-average levels of opioid prescription do not indicate that PWID are directly responsible for these elevated rates. Indeed, a near-negligible proportion of PWID reported accessing opioids via licit means[19] in the six months prior to interview: with the exception of methadone as part of a maintenance program, only eight of the current PWID cohort reported accessing morphine, oxycodone or methadone tablets via licit means in this time. More detailed examination of the issue of 'doctor shopping' and local PWID experience with access to analgesia from medical practitioners (Bruno, 2007) concur with the fact that PWID are generally not accessing opioids from medical practitioners directly via 'doctor shopping'.

[19] During interviewing, 'licit means' was defined as having the drug prescribed directly to the individual. By this definition, doctor-shopping would be considered as 'licit means', which suggests that there is a stable illicit source of these drugs to IDU.

Figure 65: Consumption of oxycodone per 1,000 persons, 1991-2013



Source: National Drug System and Pharmaceutical Services, Department of Health and Human Services

5.5.4 Trends in availability of different forms of pharmaceutical opioids across IDRS studies

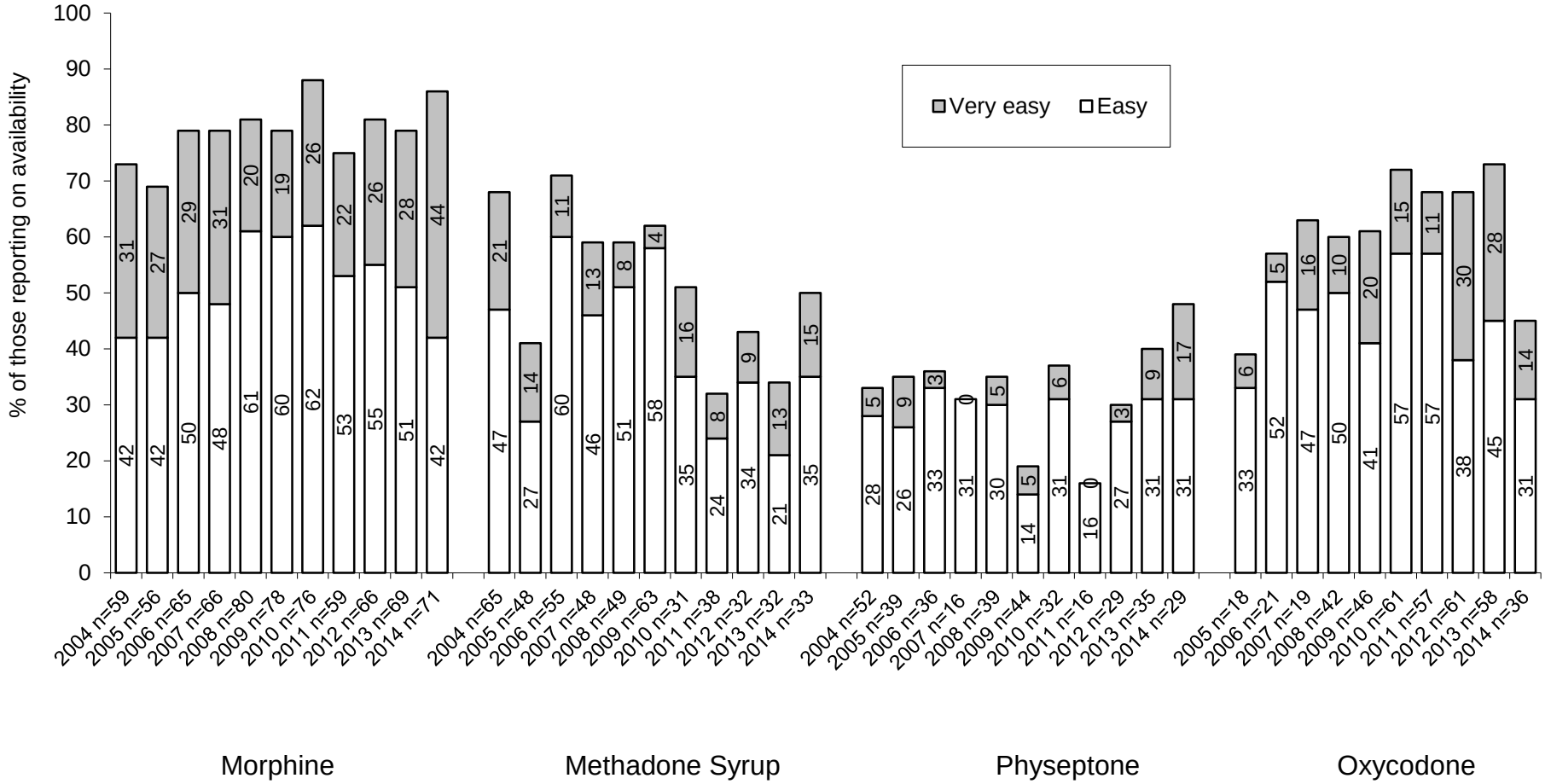
When PWID reports of the availability of illicit pharmaceutical opioids are compared across the 2004 and 2014 IDRS studies (Figure 66), several changes are notable. Firstly, in regard to morphine availability, between 2004 and 2014 there has been only slight variation in the overall proportion reporting that availability was 'easy' or 'very easy'. In 2014, the overall proportion of participants reporting 'easy' or 'very easy' access remained stable (86% in 2014; 78% in 2013).

Availability of illicit methadone syrup has been more variable. Between 2004 and 2005, a steady decline in the proportion of consumers considering the drug as 'easily' or 'very easily' available was observed; however, this trend was reversed temporarily in 2006. Between 2007 and 2010, availability of methadone syrup was relatively stable: between 51% and 62% of each sample reported access to be either 'easy' or 'very easy'. Since 2011, this rate has been slightly lower, ranging between 32% and 50%.

Almost half of the participants able to comment in 2014 noted that Physeptone was 'easy' or 'very easy' to access. This was a slightly higher rate than reported for most previous years, which ranged between 30-40%, with the exception of 2009 and 2011, when 'easy' and 'very easy' access decreased to 19% and 16% respectively.

Finally, while data on availability of oxycodone has only been collected since 2005, a trend toward increasing availability was observed up until 2013. In 2005, 39% of participants who commented reported access to be 'easy' or 'very easy'; this rate has increased to 72% in 2013 ($\chi^2(1_{n=76})=5.36$, p=0.02). In 2014, with the introduction of the new preparation of OxyContin, the oxycodone market underwent changes. Compared with 2013, fewer participants were able to comment on the availability of oxycodone, and of those who did, a small decrease was noted in the rate reporting 'easy/very easy' access (63% versus 45%: p=0.1).

Figure 66: PWID reports of 'easy' or 'very easy' availability of illicit pharmaceutical opioids, 2004-2014



Source: IDRS PWID interviews

5.6 Benzodiazepines

Key Points:

- Benzodiazepines were most commonly sourced from medical practitioners and friends (given or purchased); and
- Participants generally considered availability of illicit benzodiazepines to be 'easy' or 'very easy', and that this situation had remained stable in the preceding six months; and
- The number of patients receiving prescriptions in Tasmania for alprazolam decreased since 2013, as did the number of patients receiving prescriptions for both alprazolam and an S8 (762 in 2012/13 to 670 in 2013/14).

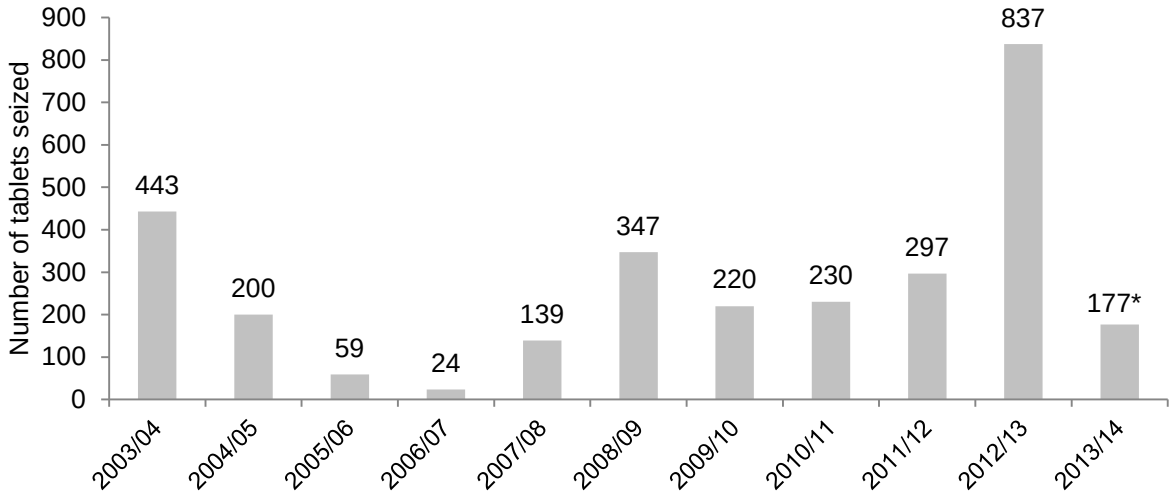
5.6.1 Availability and access

In some instances KE found it difficult to separate licit and illicit use of benzodiazepines amongst the groups of consumers they were reporting on, as often there was a substantial amount of overlap in use, with, for example, some people receiving illicit medications as a gift from a friend, or others bingeing on a benzodiazepine prescription then having to purchase illicit benzodiazepines to maintain their usual base level of use. When PWID were asked their primary source of prescribed/licit benzodiazepines in the preceding six months, all except one participant noted accessing these through a medical doctor for genuine symptoms (n=50) (Table 33). Illicit benzodiazepines were most commonly sourced from friends in the form of either a purchase or gift (76%, n=35). Similarly, when considering all modes of access to benzodiazepines in the preceding six months, the majority of respondents reported accessing tablets via a doctor for genuine symptoms (64%, n=52), a purchase or gift from friends (56%, n=45), and from a dealer (22%, n=18) (Table 32).

Those participants that had accessed illicit benzodiazepine tablets in the six months prior to interview were asked about their ease of access to such drugs. Two-thirds of participants who commented (67%, n=29) felt that benzodiazepines were either 'easy' or 'very easy' to access ('easy': 51%; 'very easy': 16%), however, one-third of this group reported that it was 'difficult' or 'very difficult' for them to access illicit benzodiazepines (33%: 'difficult': 28%; 'very difficult': 5%). In addition, half of this group reported availability had remained unchanged during the six months preceding (55%, n=23) and one-quarter noted availability had declined (26%, n=11).

Tasmania Police reports seizures of benzodiazepines. Between 2003/04 and 2006/07, the number of tablets/capsules seized decreased from 443 to 24. Since this time, the number of tablets/capsules of benzodiazepines seized by Tasmania Police has remained relatively stable, ranging between 139 and 347 per financial year, with the exception of 2012/13, when 837 tablets/capsules were seized (Figure 67).

Figure 67: Total numbers of benzodiazepine tablets seized by Tasmania Police, 2003/04-2013/14



Source: State Intelligence Services, Tasmania Police
* 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

Table 32: All modes of obtaining benzodiazepines in the six months prior to interview, 2004-2014

All modes of access	2004 (n=85) %	2005 (n=86) %	2006 (n=81) %	2007 (n=77) %	2008 (n=83) %	2009 (n=75) %	2010 (n=70) %	2011 (n=81) %	2012 (n=75) %	2013 (n=76) %	2014 (n=81) %
Doctors (genuine symptoms)	59 *(n=50)*	64 *(n=55)*	59 *(n=48)*	62 *(n=47)*	49 *(n=41)*	56 *(n=42)*	47 *(n=33)*	63 *(n=51)*	56 *(n=42)*	58 *(n=44)*	64 *(n=52)*
Doctors (fake symptoms)	2 *(n=2)*	0	2 *(n=2)*	9 *(n=7)*	2 *(n=2)*	9 *(n=7)*	9 *(n=6)*	2 *(n=2)*	0	0	3 *(n=2)*
Forged prescriptions	0	0	0	1 *(n=1)*	0	1 *(n=1)*	0	1 *(n=1)*	0	0	0
Friends (gift or purchase)	56 *(n=48)*	53 *(n=46)*	69 *(n=56)*	75 *(n=57)*	60 *(n=50)*	65 *(n=49)*	70 *(n=49)*	47 *(n=38)*	75 *(n=56)*	59 *(n=45)*	56 *(n=45)*
Friends (purchase)	40 *(n=34)*	30 *(n=26)*	44 *(n=36)*	21 *(n=16)*	47 *(n=39)*	41 *(n=30)*	49 *(n=34)*	27 *(n=22)*	64 *(n=48)*	39 *(n=30)*	40 *(n=32)*
Dealer / street (purchased)	22 *(n=19)*	9 *(n=8)*	12 *(n=10)*	21 *(n=16)*	30 *(n=25)*	24 *(n=18)*	33 *(n=23)*	20 *(n=16)*	32 *(n=24)*	28 *(n=21)*	22 *(n=18)*
Dealer / street (swap drugs)	31 *(n=26)*	17 *(n=15)*	37 *(n=30)*	28 *(n=21)*	12 *(n=10)*	19 *(n=14)*	19 *(n=13)*	17 *(n=14)*	15 *(n=11)*	13 *(n=10)*	6 *(n=5)*
Theft	2 *(n=2)*	1 *(n=1)*	0	9 *(n=7)*	2 *(n=2)*	4 *(n=3)*	0	4 *(n=3)*	3 *(n=2)*	0	0

Source: IDRS PWID interviews

Table 33: Primary modes of obtaining benzodiazepines in the six months prior to interview, 2004-2014

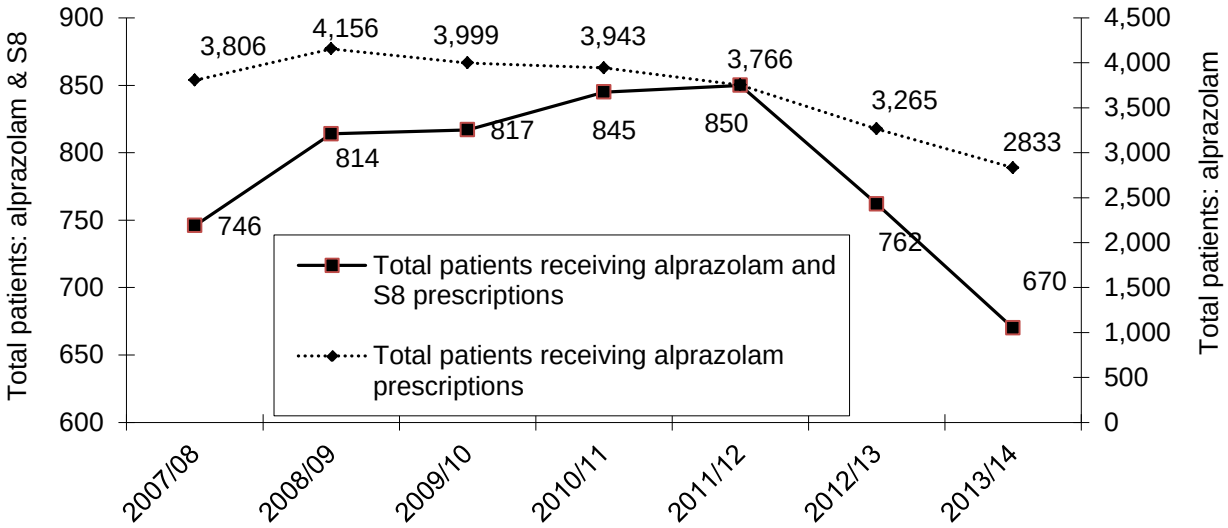
Primary mode of access	2004 (n=85) %	2005 (n=86) %	2006 (n=80) %	2007 (n=76) %	2008 (n=83) %	2009 (n=75) %	2010 (n=57) %	2011 (n=81) %	2012 (n=42) %	2013 (n=44) %	2014 (n=51) %
Doctor (genuine symptoms)	95 *(n=37)*	100 *(n=48)*	95 *(n=42)*	90 *(n=46)*	95 *(n=41)*	93 *(n=39)*	86 *(n=32)*	98 *(n=49)*	100 *(n=42)*	100 *(n=44)*	98 *(n=50)*
Doctor (fake symptoms)	5 *(n=2)*	0	5 *(n=2)*	10 *(n=5)*	5 *(n=2)*	7 *(n=3)*	14 *(n=5)*	2 *(n=1)*	0	0	2 *(n=1)*
	(n=85) %	**(n=86) %**	**(n=80) %**	**(n=76) %**	**(n=83) %**	**(n=75) %**	**(n=57) %**	**(n=81) %**	**(n=61) %**	**(n=56) %**	**(n=46) %**
Forged prescriptions	0	0	0	0	0	0	0	1 *(n=1)*	0	0	0
Friends (gift or purchase)	26 *(n=22)*	20 *(n=17)*	19 *(n=15)*	64 *(n=49)*	52 *(n=43)*	67 *(n=38)*	63 *(n=36)*	42 *(n=34)*	74 *(n=45)*	70 *(n=39)*	76 *(n=35)*
Friends (purchase)	13 *(n=11)*	14 *(n=12)*	18 *(n=14)*	25 *(n=19)*	37 *(n=31)*	27 *(n=20)*	47 *(n=27)*	26 *(n=21)*	66 *(n=40)*	41 *(n=23)*	48 *(n=22)*
Dealer/street (purchase)	5 *(n=4)*	5 *(n=4)*	4 *(n=3)*	17 *(n=13)*	23 *(n=19)*	12 *(n=9)*	30 *(n=17)*	15 *(n=12)*	23 *(n=14)*	25 *(n=14)*	22 *(n=10)*
Dealer/street (swap drugs)	7 *(n=6)*	6 *(n=5)*	5 *(n=4)*	16 *(n=12)*	4 *(n=3)*	13 *(n=10)*	7 *(n=4)*	10 *(n=8)*	3 *(n=2)*	5 *(n=3)*	2 *(n=1)*
Theft	0	0	0	3 *(n=2)*	0	0	0	4 *(n=3)*	0	0	0

Source: IDRS PWID interviews

Alprazolam prescription rates

Pharmaceutical Services (Tasmanian Department of Health and Human Services) has provided data summarising alprazolam prescription changes from 2007/08 (when the regulatory changes were implemented) to 2013/14. The total number of patients receiving prescriptions for alprazolam in the 2007/08 period was 3,806 (Figure 68). This number has gradually decreased since then, with 2,833 patients in 2013/14. The total number of patients receiving prescriptions for both alprazolam and a Schedule 8 (S8) drug gradually increased from 746 in 2007/08 to 850 in 2011/12, however, this has decreased to 670 patients in 2013/14.

Figure 68: Total numbers of Tasmania patients receiving alprazolam and both alprazolam and a Schedule 8 drug, 2007/08-2013/14

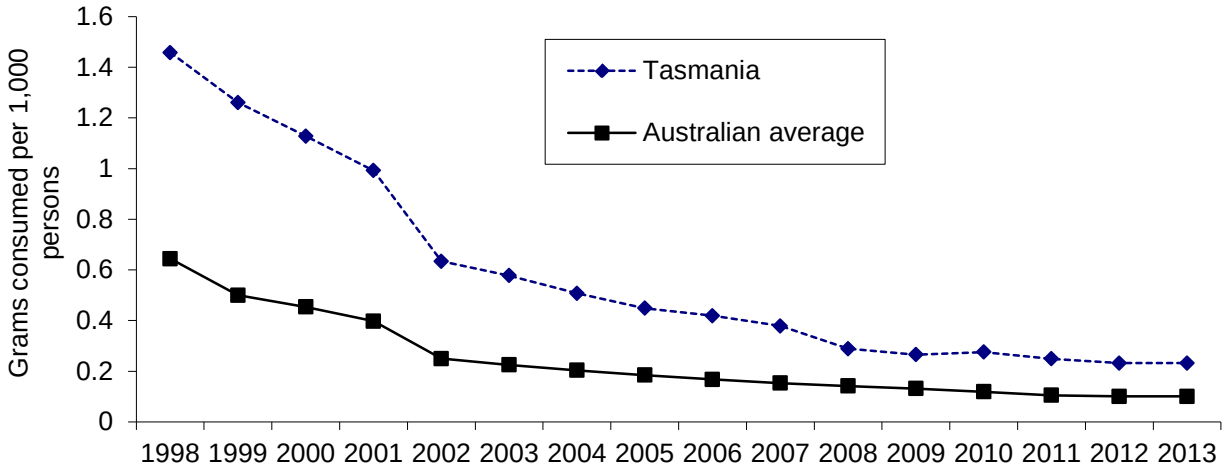


Source: Pharmaceutical Services, Department of Health and Human Services

Flunitrazepam consumption

Flunitrazepam (Hypnodorm, previously sold as Rohypnol) is a benzodiazepine that is preferred by some PWID due to its potent and quick-acting effect. Despite the prescription of this drug being tightly defined through the Pharmaceutical Benefits Scheme and its classification as a Schedule 8 drug, participants in recent local IDRS and related studies have continued to report some oral and intravenous use of Hypnodorm tablets, albeit in small amounts. Prescription rates of flunitrazepam in Tasmania (Figure 69) show low and declining levels of prescription of the drug both in the state and nationally, although prescription rates of flunitrazepam in Tasmania have remained consistently above 200% that of the national average between 1998 and 2013.

Figure 69: Consumption of flunitrazepam per 1,000 persons, 1998-2013



Source: National Drug System (formerly DRUMS), Pharmaceutical Services, Department of Health and Human Services

5.7 Other drugs

Key Points:

Ecstasy:

- The Tasmanian EDRS reported the median price of ecstasy ($30) matched that reported in the 2011 to 2013 studies, but was lower than that reported in previous studies;
- Availability of ecstasy was considered by most participants to be 'easy'/'very easy';
- Subjective reports regarding purity suggested this to be 'medium' or 'fluctuating'; and
- Preliminary data from Tasmania Police suggest a marked decline in seizures since 2008/09.

Alkaloid poppies:

- From 2007/08, the number of thefts of alkaloid poppies has decreased, as has the number of seizures reported by Tasmania Police; a slight increase in these rates was observed in 2013.

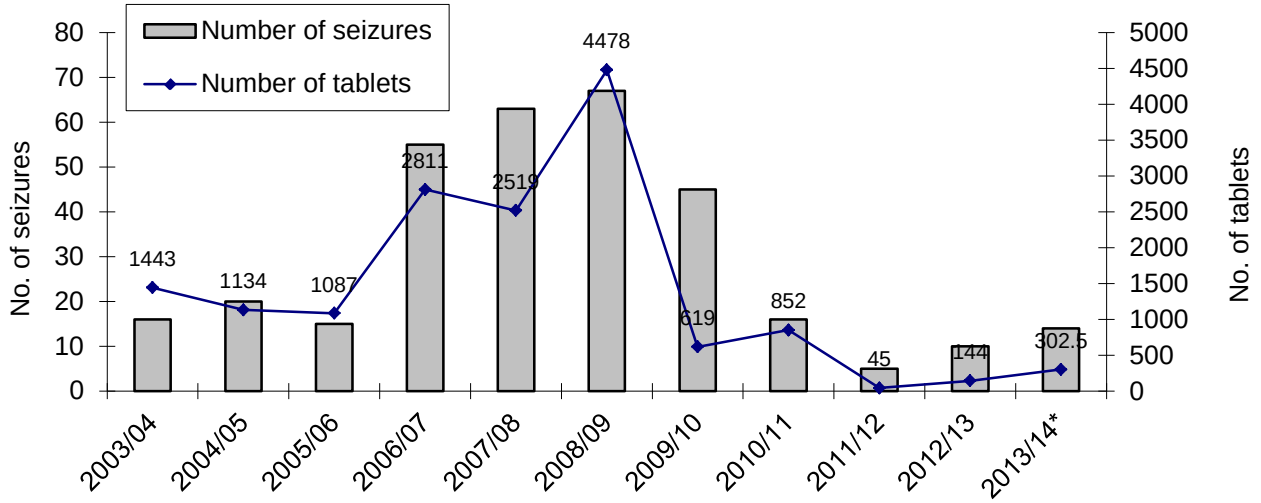
5.7.1 Ecstasy and related drugs

Trends in regard to price, purity and availability of ecstasy are not examined in detail within the IDRS study. However, a study conducted during a similar time-frame and methodology to the current study, using regular ecstasy users (REU) as the drug user cohort, has been conducted (Matthews, Batt & Bruno, 2015), and examines trends in ecstasy and other 'party drug' use in greater depth. This study found that the median price of ecstasy was $30 in 2014; the same as reported between 2012 and 2013, but cheaper than reported between 2003 and 2010 (ranging between $35 and $45). In 2012/13, the ACC reported the median price of an ecstasy tablet capsule was $35. Data for 2013/14 was not available at the time of publication (ACC, 2014). Participants noted that ecstasy was 'easy' (56%) or 'very easy' (22%) to access in 2014. Ecstasy was reported to be 'medium' (33%) or 'fluctuating' (33%) in purity in the past six months, consistent with 2013 reports.

Figure 70 shows the number of ecstasy tablets seized by Tasmania Police. The number of tablets and the number of seizures increased in 2006/07; again in 2008/09 a substantial increase in the total number of tablets seized was reported (4,478 tablets). In 2009/10 there was a considerable decrease in both the number of seizures and the total number of tablets seized and the number of seizures continued to reduce substantially in 2010/11 and 2011/12. In the subsequent two reporting periods the number of seizures and the total number of tablets seized was slightly higher with a total of 302.5 tablets/capsules seized across 14 seizures in 2013/14[20]. Tasmania Police conducts purity analyses for some ecstasy seizures. See Matthew, Batt and Bruno (2015) for discussion of this.

[20] 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

Figure 70: Total number of tablets suspected to contain ecstasy seized by Tasmania Police, 2003/04-2013/14



Source: ACC & State Intelligence Services, Tasmania Police
* 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

5.7.2 Hallucinogens

In 2001/02, the ACC reported the price of one tab of LSD as $20-25 in this period. No price data was reported until 2008/09, when one tab was reported to cost $40; in 2009/10, one tab was reported to cost $25; in 2011/12, this price was $20, and in 2012/13, the price range of $10-20 was reported (ACC, 2014). .

ACC data for hallucinogens include tryptamines such as LSD and psilocybin (mushrooms). There have been a small number of arrests and seizures in Tasmania in relation to hallucinogens between 1997/98 and 2013/14. In the 2013/14 period, Tasmania Police reported three consumer and one provider arrests in relation to hallucinogens[21]. In the 2013/14 period, Tasmania police reported three consumer arrests and one provider arrest in relation to LSD, and 9 seizures.

5.7.3 Alkaloid poppies

Tasmania Police State Intelligence Services reported stable prices of $10 and $20 per 'ball' of poppy tar between January 2000 and June 2001, but have not reported price information for alkaloid poppy preparations since this time. Seizures of poppy products are reported in a variety of measures (including grams of tar, resin, seed, poppy product and vegetable matter, numbers of capsules and plants, and units of plant material), rendering it difficult to clearly identify trends in seizure data (Table 34). In 2013/14[22], Tasmania Police reported making seizures of 46 units/counts of a poppy product.

The diversion rates of Tasmanian alkaloid poppy crops, shown in Table 34, indicate a decreasing amount of poppies stolen from crops in 2003/04 onwards. In 2003/04, 39 incidents of theft were reported, and 24,128 poppy capsules were reported stolen. By 2013/14, this had decreased to just 21 incidents of theft involving 3,923 poppy capsules.

[21] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.
[22] Note: 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

Table 34: Tasmanian alkaloid poppy crop diversion rates, 2003/04-2013/14

	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14
Number of capsules stolen	24,128	16,201	10,263	9,344	820	2,280	4,772	1,473	687	2,895	3,923
Cost per hectare of securing poppy crops	$47	$44	$62	$68	$71	$33	$30	$26	$26	$19	n/r
Number of capsules stolen per hectare sown	1.97	1.25	1.06	1.04	0.07	0.14	0.23	0.06	0.03	0.09	0.18
Number of theft incidents reported	39	35	13	7	8	17	33	11	12	19	21
% of PWID sample reporting use	13	21	8	10	10	11	7	8	5	4	11
Median days used (among PWID using)	3 (1-96)	3 (1-144)	3 (1-100)	2 (1-45)	7 (1-100)	3 (1-90)	14 (1-45)	15 (2-30)	n/r	n/r	n/r
TASPOL seizures	*601 caps; 18g resin; 31 plants**	*626 caps; 2,515.4g caps; 2.7g resin; 473 plants; 11.7g seed*	*59 caps; 33 plants; 3 seeds; 224.7g poppy products*	*363 caps; 283.2g of caps; 290ml liquid; 8 plants; 8 seeds*	*144 plants; 26 caps; 64g*	*445 g of poppy products; 231 units*	*908 caps; 3 units liquid; 2 units plant material; 49.2g seed; 0.3g veg matter*	*56 plants; 15.5g seed; 114g veg matter*	*24 plants;4 units veg matter; 116 caps; 0.6g resin*	*1,258 caps; 1001 liquid units; 200 plants; 17g seeds*	*46 units/ counts*

Source: Poppy Advisory and Control Board, Department of Justice Tasmania, Department of Justice Tasmania Annual Report 2013/14, Tasmania Police State Intelligence Services, IDRS PWID interviews.

Note: 'caps' refers to poppy capsules

* May be an overestimate of seizures as Tasmania Police data are an amalgamation of plants, capsules and weight of seizures. Data reported here are the best estimate of seizure quantity. Note: 2013/14 data from Tasmania Police is preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

n/r Not reported

6 HEALTH-RELATED TRENDS ASSOCIATED WITH DRUG USE

6.1 Overdose and drug-related fatalities

Key Points:

- Nearly one-third(30%) of the sample reported ever having experienced an opioid overdose, and 5% reported this occurring in the preceding 12 months; and
- 2% of the sample reported experience of a stimulant overdose in the preceding 12 months.

6.1.1 Opioids

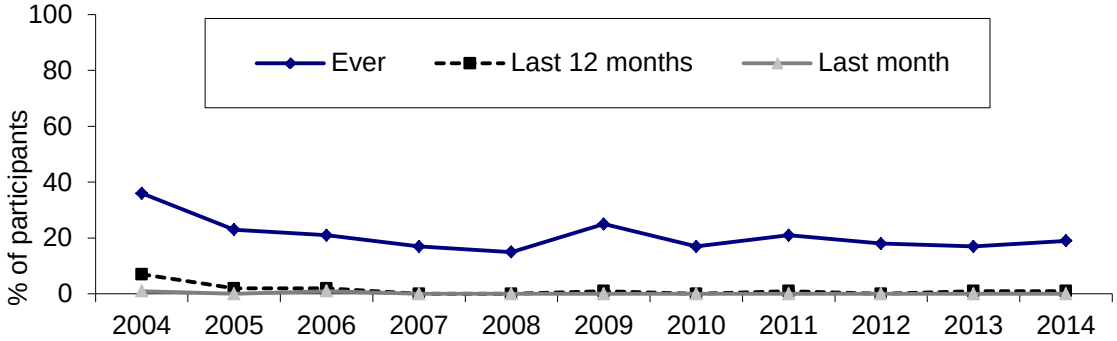
Non-fatal overdose

All participants in the 2014 IDRS cohort reported that they had used some form of opioid in their lifetime and of the 98 who commented, 30% (n=30) of these had ever experienced a (non-fatal) opioid overdose. Among the 30 individuals that had ever experienced an opioid overdose, 18 had overdosed on heroin, 10 with morphine, 6 on methadone and 3 on oxycodone (Table 35). The proportion of the sample reporting ever having overdosed on an opioid in the 2014 cohort was similar to that observed in the 2013 cohort (30% versus 32%, respectively). Five participants in the current cohort (5%) had overdosed on any opioid in the year prior to interview: 3 with morphine, 1 with heroin, and 1 with oxycodone. Of those participants who had ever overdosed on any opioid, the median number of times they had overdosed was 1. Specifically, for heroin overdose: median 1, range 1-4 times; for morphine overdose: median 1, range 1-3 times; for methadone overdose: median 1, range 1-100; and for oxycodone: median 1, range 1. Among those that had ever experienced an opioid overdose, the median time since their last overdose was five years: amongst those that had overdosed on heroin it was 9 years (range 2 months-23 years); for morphine it was four years (range 2 months-15 years); for methadone six years (range 2-10 years) and for oxycodone 15 months (range 1-3 years).

Heroin

A single participant in the current cohort reported experiencing a non-fatal heroin overdose in the year prior to interview. Examining trends in experience of heroin overdose in the IDRS PWID cohorts over time (Figure 71), it appears that recent experience of heroin overdose has been declining over time, consistent with the decline in use of this drug in successive cohorts.

Figure 71: Proportion of PWID participants who had ever overdosed on heroin, overdosed in the past 12 months, and the past month, 2004-2014



Source: IDRS PWID interviews

Methadone

Six participants in the current cohort reported ever having experienced a non-fatal methadone overdose; none of these participants experienced this in the 12 months preceding the interview. The numbers of reports of methadone overdose are similar to those in 2013, where eight participants had experienced a methadone overdose in their lifetime, and two in the 12 months prior to interview.

Morphine

Overall, ten PWID participants in the current cohort reported ever having experienced a non-fatal morphine overdose and three participants reported such an experience in the year prior to interview. The rate of these experiences in the current cohort was similar to those in the 2013 cohort, where eleven participants had experienced a methadone overdose in their lifetime, and three in the 12 months prior to interview.

Oxycodone

Three participants in the current cohort reported ever having experienced a non-fatal oxycodone overdose, one of which occurred in the year prior to interview. In 2013, two participants had an overdose in their lifetime, both of which occurred in the preceding 12 months in conjunction with morphine.

Table 35: Reported experience of non-fatal opioid overdose among the PWID sample, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Overdosed (ever)	46%	33%	32%	34%	26%	40%	29%	36%	25%	32%	30%
Median times ever overdosed	3	2	2	1	1	1	1	1	1	1	1
Overdosed last 12 months	11%	6%	1%	7%	4%	11%	4%	7%	6%	8%	5%

Source: IDRS PWID interviews.
Note: N=100 in 2004-2011; N=106 in 2012; N=107 in 2013; N=101 in 2014

Fatal Opioid Overdoses

The Australian Bureau of Statistics (ABS) has changed the way they collate deaths data, making comparisons to earlier overdose bulletins published by the National Drug and Alcohol Research Centre (Degenhardt & Roxburgh, 2007a; Degenhardt & Roxburgh, 2007b) difficult. Since 2003, the ABS has progressively ceased visiting jurisdictional coronial offices to manually update causes of death that had not been loaded onto the computerised National Coronial Information System (NCIS), and in 2006 the ABS began to rely solely on data contained on NCIS at the time of closing the deaths data file. This data is subject to a revision process: preliminary data is released and then two successive revisions are published at 12 month intervals.

In addition, 2011 and 2012 data presented in the reports by Roxburgh and Burns (2014a, b) are projected estimates which have been based on changes that were observed in the 2008 and 2009 data. Therefore these data should also be interpreted with caution. For a full description of the methodology and caveats concerning these data, see the full reports (Roxburgh & Burns, 2014a, b)

As supply of heroin decreased around 2000 and 2001, the number of accidental opioid-related (heroin and other opioids) deaths amongst people aged 15 to 43 declined dramatically (386 in 2001

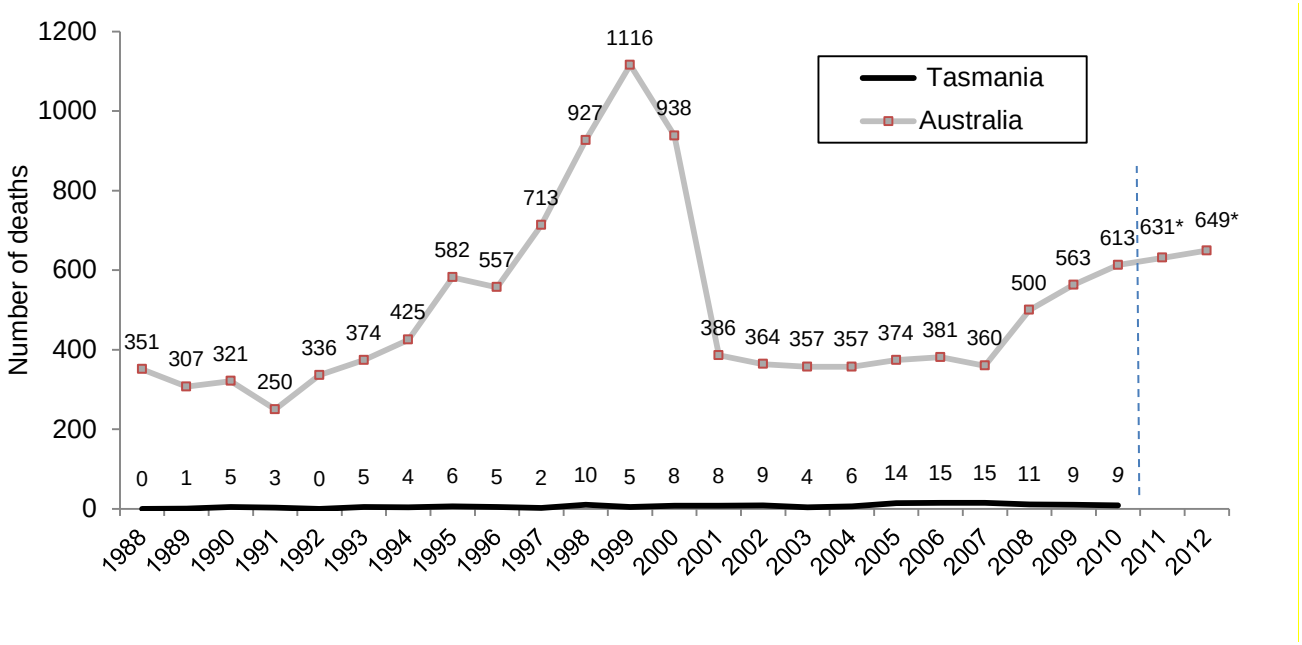
compared to 1,115 in 1999). Up until 2007, the number of accidental opioid related deaths remained stable (ranging between 360 and 381), then increasing to 613 in 2010. Projected estimates suggest rates have stabilised since, with an estimated 631 deaths occurring in 2011 and 639 in 2012 (Roxburgh & Burns, 2014a).

The number of accidental Tasmanian deaths that were attributable to opioids was stable between 1988 and 1997 (0 to 5 deaths per year), increasing to 10 deaths in 2010. This increase coincided with increasing reports of pharmaceutical opioid use locally (de Graaff & Bruno, 2008). Projected estimates for 2011 and onwards were not available at the time of publication.

Figure 73 shows the rate of accidental opioid-related deaths per 1,000,000 persons. A dramatic increase nationally can be observed, peaking in 1999, with a rate of 101.9 deaths per 1,000,000 persons nationally, and then decreasing to a stable rate of approximately 32 deaths per 1,000,000 persons. From 2008 to 2010 this rate increased, with 49.5 deaths per 1,000,000 persons in 2010.

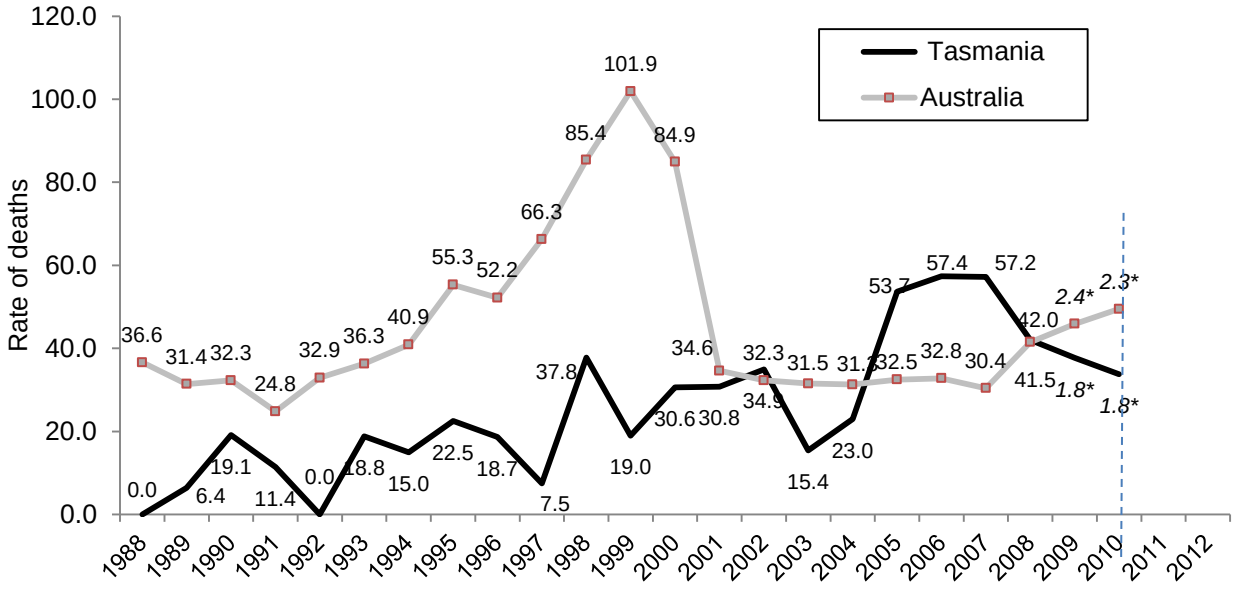
A different pattern is seen for Tasmanian rates: the dramatic increase in 1999 observed in the national rate was not observed locally, in part because Tasmania is geographically removed from the mainland heroin market. The Tasmanian rate of deaths increased notably in 2005 from a mean of 20 deaths per 1,000,000 persons (between 1990 and 2004) to 53.7 deaths per 1,000,000 persons in 2005. As noted above, this local increase coincided with increased reports of use of pharmaceutical opioids, such as morphine and oxycodone (de Graaff & Bruno, 2008). Over the subsequent two reporting periods, this rate has decreased to 37.7 and 33.8 deaths per 1,000,000 persons in 2009 and 2010, respectively.

Figure 72: Accidental deaths due to opioid use among those aged 15-54 years, 1988-2012



Source: Roxburgh & Burns, 2014a
* Data for causes of death for 2011 and 2012 are projected estimates, and are likely to change with the release of the revised reports. Projected estimates were only available for national rates.

Figure 73: Rate of accidental deaths per 1,000,000 persons due to opioid use among those aged 15-54 years, 1988-2010



Source: Roxburgh & Burns, 2014a; ABS population data cubes
* Data for causes of death for 2011 and 2012 were not available

6.1.2 Stimulants

Non-fatal stimulant overdoses

Participants were asked if they had ever experienced a non-fatal methamphetamine overdose. Methamphetamine overdose is often characterised by profuse sweating, increased pulse, blood pressure and body temperature, and in severe cases (which occur infrequently) can also result in cardiovascular problems, stroke, kidney failure and death. Amongst the current cohort, two participants reported ever having experienced a non-fatal methamphetamine overdose, both of which occurred in the preceding 12 months. This is in keeping with reported overdoses in 2013.

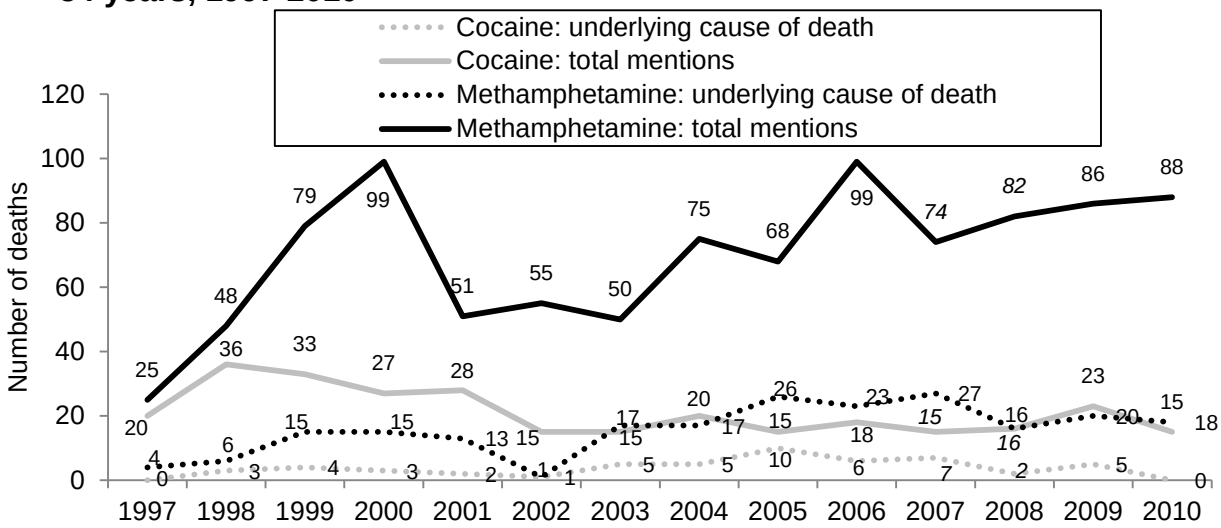
Fatal stimulant overdoses

As mentioned above, the Australian Bureau of Statistics (ABS) has changed the way they collate deaths data, making comparisons to earlier overdose bulletins published by the National Drug and Alcohol Research Centre (Degenhardt & Roxburgh, 2007a; Degenhardt & Roxburgh, 2007b) difficult. Data for 2013 to 2014 were not available at the time of publication.

There were fewer deaths attributable to methamphetamine than to opioids. There was a limited understanding of the role of methamphetamine in causing death and, therefore, mortality data may under-represent cases where methamphetamine contributed to the death, such as premature death related to cerebral vascular pathology (e.g. haemorrhage or thrombosis in the brain). Nationally, there were a total of 88 deaths in which methamphetamine was mentioned among those aged 15-54 years in 2010 (Figure 74). Methamphetamine was determined to be the underlying cause of death in 18 cases in 2010 (Roxburgh & Burns, 2014b).

Nationally, 15 drug-related deaths in which cocaine was mentioned occurred among the 15-54 year age group in 2010 (Roxburgh & Burns, 2013b). The number of deaths in which cocaine was determined to be the underlying cause of death was not specified for 2010 to protect confidentiality.

Figure 74: Number of accidental deaths due to stimulant use among those aged 15-54 years, 1997-2010



Source: Roxburgh & Burns, 2014b
Note: The number of deaths where cocaine was determined as the underlying cause was not published to protect confidentiality

6.1.3 Naloxone Program and Distribution

Naloxone is a short-acting opioid antagonist that has been used for over 40 years to reverse the effects of opioids. It is the frontline medication for the reversal of heroin and other opioid overdose in particular. In Australia, naloxone has largely only been available for use by medical doctors (or those auspiced by medical doctors such as nurses and paramedics) for the reversal of opioid effects. In 2012, a take-home naloxone program commenced in the ACT through which naloxone was made available to peers and family members of people who inject drugs for the reversal of opioid overdose as part of a comprehensive overdose response package. Shortly after, a similar program started in NSW and some other states have followed suit (for more information refer to http://www.cahma.org.au/Naloxone.html and/or http://www.naloxoneinfo.org/).

In 2013 and 2014, the IDRS included a series of questions about take-home naloxone and naloxone more broadly. Of those who commented in the 2014 cohort (n=94), 73% had heard of naloxone. Of this group, 49% reported that naloxone was used to 'reverse heroin', 43% to 're-establish consciousness' and 5% to 'help start breathing'. Participants were asked if they had heard of the take-home naloxone programs: 23% of participants reported that they had (Table 36).

Participants were asked what they would do if they witnessed someone overdose or found someone they had suspected had overdosed. Almost all participants (97%) reported that they would call 000, one-quarter (25%) would turn the victim on their side, one-quarter (25%) would administer mouth-to-mouth cardiopulmonary resuscitation (CPR), and only 16% would stay with the victim (Table 36).

Three-quarters of those who commented (73%, n=67) said they would participate in a Naloxone program if introduced in Tasmania. Participants were also asked if naloxone was available would they (a) carry naloxone if trained in its use, (b) administer naloxone after witnessing someone overdose, (c) want peers to give them naloxone if they overdosed, and (d) stay with someone after

giving them naloxone? A similar percentage answered in the affirmative to these questions (Table 36).

Table 36: Take-home naloxone program and distribution, 2013-2014

	2013 N=106 (%)	2014 N=94 (%)
Heard of naloxone	76	73
Description of naloxone (n=81)		
Reverses heroin	54	49
Help start breathing	30	5
Re-establishes consciousness	42	43
Heard of take-home naloxone program	18	23
If you witnessed an overdose, would you:		
Turn victim on their side	52	25
Mouth-to-mouth CPR	45	25
Call 000	97	97
Stay with victim	58	16
If naloxone was available, would you:		
Carry naloxone if trained	92	71
Administer naloxone after overdose	94	73
Want peers to give you naloxone	97	73
Stay with person after giving naloxone	96	73

Source: IDRS PWID interviews

6.2 Drug treatment

Key Points:

- The 2012/13 National Minimum Data Set - Alcohol and Other Drug treatment data (AIHW, 2013) reported that alcohol was the principal drug of concern in 39% of treatment episodes in Tasmania, similar to the national rate (41%);
- Cannabis was the next most commonly reported as a drug of concern in Tasmania (30%), and this rate was significantly higher than the national rate (24%);
- Methamphetamine was reported as the principal drug of concern for 12% of treatment episodes in Tasmania, similar to rates nationally (14%); and
- Morphine was reported as the principal drug of concern in 5% of treatment episodes in Tasmania, significantly greater than the national rate (1%).

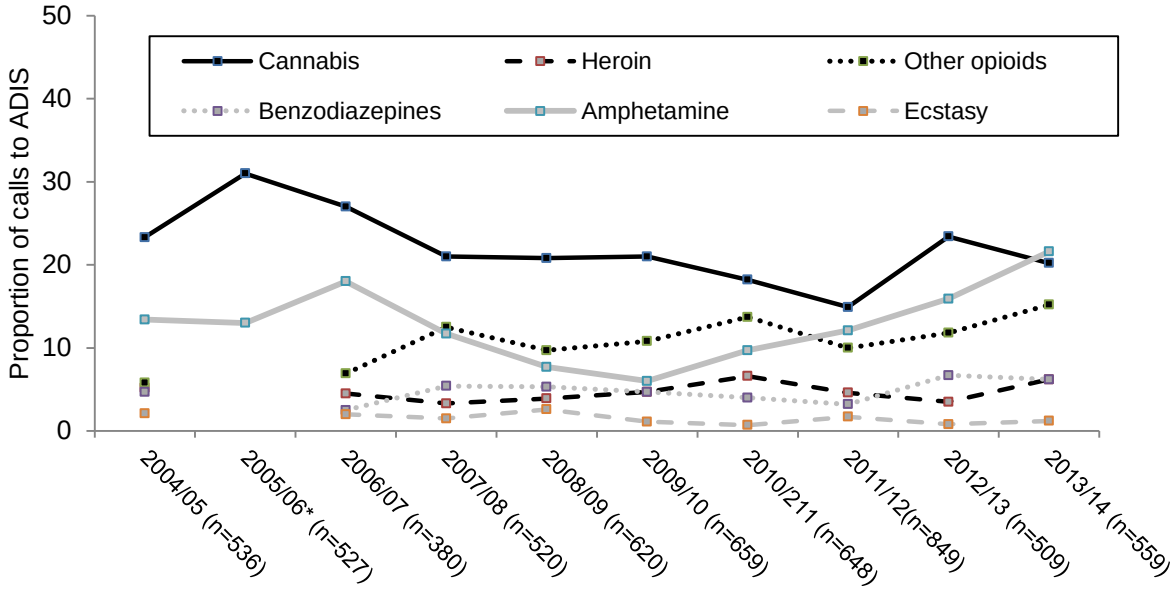
6.2.1 Information-seeking: Alcohol and Drug Information Service (ADIS)

The Tasmanian Alcohol and Drug Information Service (ADIS) has been administered by Turning Point Alcohol and Drug Centre in Victoria since May 2000. Turning Point systematically records data for each call received; however, data has been reported over differing time periods due to the requirements of the Department of Health and Human Services. Thus, for comparative purposes (and since these annual data are the only information available to the authors), these slightly differing reporting periods will each be treated as financial year periods.

In 2013/14, 52% of the drug users identified in calls to ADIS related to males, a similar rate recorded in previous ADIS datasets. Trends in the age of drug consumers identified in calls to ADIS over time are difficult to identify due to differences in the age groupings adopted across reports. Since 2004/05, there has been a slow shift towards an increasing age of drug consumers identified in ADIS calls: 50% of drug consumers identified in calls to ADIS in 2013/14 were identified as 30 to 44 years old.

In terms of the types of drugs that were enquired about in ADIS calls, again, it is difficult to make clear inferences regarding trends due to shifts in reporting criteria. Up until 2006/07, the majority of calls pertaining to illicit drugs in each year were related to cannabis use, followed by amphetamine. Call data from the 2007/08 period indicated a decrease in the proportion of calls related to amphetamine and an increase in calls relating to use of ‘other opioids’. This trend continued for the subsequent two reporting periods and then reversed. In 2013/14, 22% of calls related to an amphetamine and 15% for opioids (methadone, buprenorphine, and other narcotic analgesics) (Figure 75).

Figure 75: Percentage of calls to ADIS referring to persons using specific drugs, 2004/05-2013/14



Source: ADIS Tasmania Reports, Turning Point Alcohol and Drug Centre
* 2005/06 data were only provided for amphetamines and cannabis
Note: Calls referring to heroin, other opioids, benzodiazepines and ecstasy were not specified in the 2004 reporting

6.2.2 Treatment: Tasmanian Alcohol and Other Drug Treatment Minimum Data Set

The National Minimum Data Set (NMDS) for Alcohol and other Drug (AOD) Treatment Services was developed as a nationally consistent response to data collection for AOD treatment services. Data is reported from 2004/05 onwards and includes data from Tasmanian government and non-government agencies across the state (Table 37). Data from clients receiving only methadone maintenance treatment, and admitted patients in psychiatric hospitals or general hospital wards, are not included in these figures.

The findings from the 2012/13 data show that 68% of those receiving services were male, a lower rate than reported previously. Alcohol was reported as the principal drug of concern in 39% of treatment episodes, amphetamine in 12% and cannabis in 30% (Table 37). This marks a substantial increase in calls related to amphetamine, which in previous years ranged between 6% and 13%.

There are several notable changes in the NMDS figures between the 2004/05 and 2012/13 datasets (Figure 76). Since 2004/05, alcohol and cannabis were the principal drugs of concern for equal proportions of treatment clients. In 2012/13, there were a greater proportion of treatment clients with alcohol as the principal drug of concern compared to the number of treatment clients with cannabis as the principle drug of concern (39% versus 30%, respectively). Variations in the proportion of treatment episodes related to nicotine have also occurred. In 2004/05, 17% of episodes were reported for nicotine as the primary drug of concern, declining to 1% or less of treatment episodes in 2012/13. Specific changes in relation to other drug types are discussed separately in following sections.

Table 37: Tasmanian Alcohol and Other Drug Treatment Services Minimum Data Set, 2004/05-2012/13

Total Data Set	2004/05	2005/06	2006/07	2007/08*	2008/09*	2009/10	2010/11	2011/12	2012/13
n	1,921	1,512	1,564	2,302	2,081	1,544	1,738	1,672	2,338
% receiving service for their own use	71% (n=1,364)	90% (n=1,357)	95% (n=1,478)	92% (n=2,124)	95% (n=1,983)	94% (n=1,452)	95% (n=1,653)	93% (n=1,554)	91% (n=2,130)
Sex (% male)	59% (n=805)	60% (n=814)	64% (n~950)	69% (n~1,455)	70% (n=1,388)	71% (n=1,030)	74% (n=1,215)	72% (n=1,117)	68% (n=1,449)
Aboriginal and/or Torres Strait Islander	7% (n=95)	7% (n=95)	11% (n~165)	11% (n~232)	10% (n=198)	10% (n=141)	11% (n=189)	n/r	8% (n=167)
Principal drug of concern									
Alcohol	31%(n=423)	38%(n=515)	36% (n=532)	32% (n~682)	38%(n~748)	34% (n=500)	39% (n~641)	39% (n=619)	39% (n=840)
Nicotine	17%(n=226)	2% (n=27)	0	n/r	1%(n~22)	<1% (n=4)	<1% (n~7)	1% (n=16)	1% (n=16)
Cannabis	31% (n=423)	34% (n=462)	39% (n=583)	45% (n~936)	39% (n~767)	44% (n=644)	39% (n~643)	34% (n=540)	30% (n=638)
Amphetamine	10% (n=134)	12% (n=160)	13% (n=190)	11% (n~239)	9% (n=167)	6% (n=88)	9% (n~142)	10% (n=154)	12% (n=263)
Cocaine	0	<1% (n=1)	0	0	0	<1% (n=1)	<1% (n~2)	<1% (n=1)	<1% (n=2)
'Ecstasy' and related	<1% (n=10)	1% (n=15)	2% (n=25)	2% (n~36)	1% (n~26)	2% (n=28)	<1% (n~10)	<1% (n=8)	<1% (n=4)
Heroin	<1% (n=3)	<1% (n=11)	<1% (n=6)	<1% (n~7)	<1% (~10)	<1% (n=9)	<1% (n~8)	<1% (n=6)	1% (n=14)
Morphine	6% (n=80)	5% (n=64)	3% (n=40)	5% (n~97)	6% (n~127)	6% (n=89)	5% (n~84)	7% (n=102)	5% (n=110)
Methadone	2% (n=27)	3% (n=46)	2% (n=25)	1% (n~23)	1% (n~26)	1% (n=18)	1% (n~20)	1% (n=15)	1% (n=29)
Other opioids	<1% (n=12)	n/r	n/r	<1% (n~12)	2% (n~38)	2% (n~22)	2% (n~36)	4% (n=64)	1% (n=15)
Benzodiazepines	<1% (n=11)	1% (n=18)	1% (n=21)	1% (~27)	1% (n~28)	1% (n~19)	2% (n~31)	1% (n=17)	2% (n=45)
Other	1% (n=15)	1% (n=15)	3% (n=48)	2% (n~36)	0	3% (n~36)	<1% (n~5)	<1% (n=12)	<1% (n=5)

Source: Australian Institute of Health and Welfare

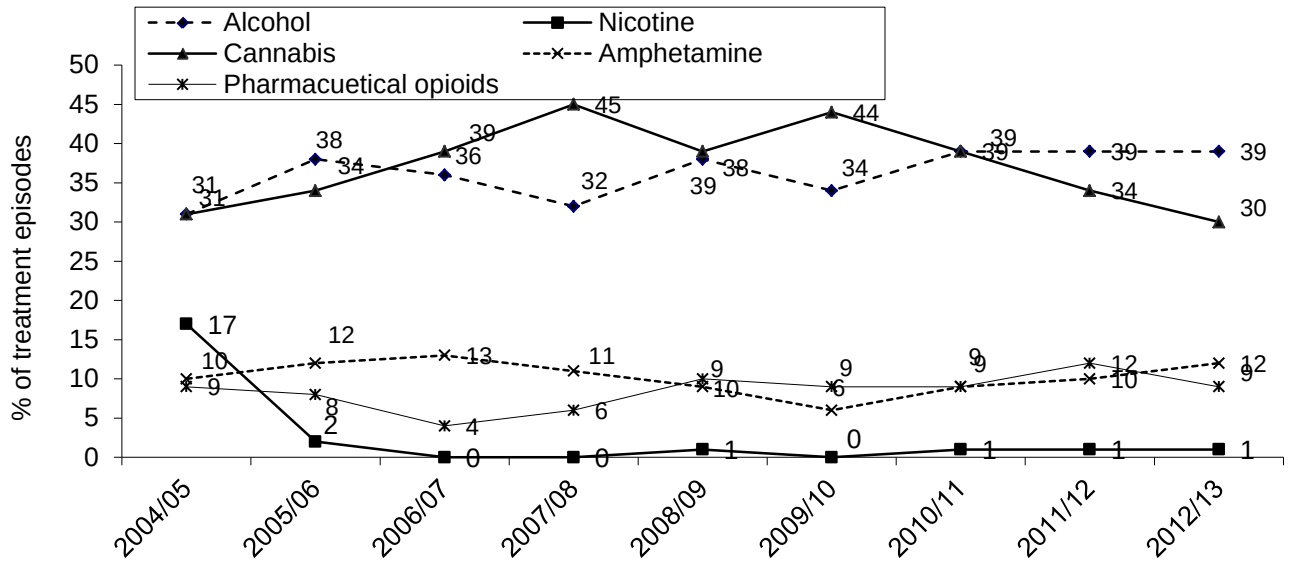
* The total number of closed treatment episodes may be undercounted because two agencies only supplied drug diversion data

n/r Not recorded

~ Approximately

Note: Multiple presentations of the same individual excluded. The data presented for 2009/10 were taken from AIHW data cubes, and differ from the NMDS 2009/10 National Report, as there were errors in the Tasmanian data that were included in this report

Figure 76: Tasmanian Alcohol and Other Drug Treatment Services Minimum Data Set: Principal drug of concern, 2004/05-2012/13



Source: Australian Institute of Health and Welfare

Heroin

The proportion of treatment episodes noting heroin as the principal drug of concern has remained very low in Tasmania, at 1% or less since 2003/04. Local rates are notably lower than those reported nationally, where 8% of treatment episodes were related to heroin as a principal drug of concern in 2012/13 ($\chi^2(1_{n=157,281})=161.12$, p<0.001) (AIHW, 2014).

Methamphetamine

In the 2012/13 NMDS, methamphetamine was reported as the principal drug of concern for 12% of treatment episodes in Tasmania and 14% nationally (p=0.1) (AIHW, 2014). This local rate is significantly lower than reported in nationally ($\chi^2(1_{n=157,281})=6.71$, p=0.010) (Table 37). Several KE working in alcohol and drug treatment services reported increased rates of treatment-seeking by people who are using methamphetamine, however, NMDS treatment episodes in Tasmania have remained relatively steady over time.

Calls relating to use of amphetamine to the Tasmanian ADIS telephone service increased relatively between 2000 and 2006/07, from 6% to 18%, however, in the subsequent three reporting periods, this rate decreased to 6%. Since this time, a small increase has been observed, with 16% of total calls relating to use of amphetamines.

Cocaine

In 2012/13, there was just 0.09% of treatment episodes provided in which cocaine was the principal drug of concern in Tasmania. Reports of cocaine as the principal drug of concern amongst Tasmanian clients of drug treatment services have been consistently low over time (AIHW, 2008c, 2014). This is comparable with national figures: in 2012/13, just 0.33% of treatment episodes reported in the NMDS related to individuals whose principal drug of concern was cocaine.

Cannabis

In 2012/13, 30% of Tasmanian drug treatment episodes reported to the NMDS related to clients with cannabis as their principal drug of concern (AIHW, 2014). This was significantly higher than the national rate reported for cannabis (24%: $\chi^2(1_{n=157,281})=45.88$, p<0.001). The proportion of treatment

episodes in Tasmanian drug treatment services relating to concerns with cannabis has been between 31% and 45% since 2003/04.

Methadone

The proportion of treatment episodes where methadone was the principal drug of concern in Tasmania was 1% in 2012/13 (AIHW, 2014). Whilst the national rate was not published for this financial year, in 2012/13 it was 1.2% (AIHW, 2014). Between 2003/04 and 2006/07, the proportion of treatment episodes in Tasmania for individuals reporting methadone as their principal drug of concern ranged between 2% and 3%, slightly higher than the 1% reported from 2007/08 onwards (noting that methadone presentations for OST specifically are excluded).

Morphine

During 2012/13, morphine was reported as the principal drug of concern in 5% of treatment episodes in Tasmania (AIHW, 2014). The rate nationally for 2012/13 was 1.2%, a significantly lower proportion than that reported in Tasmania ($\chi^2(1_{n=157,281})=249.81$, $p<0.001$). The local Tasmanian rate of treatment episodes for morphine has varied between 3% and 7% since 2003/04.

Alcohol

In 2012/13, 39% of Tasmanian drug treatment episodes reported to the NMDS related to clients reporting alcohol as their principal drug of concern (AIHW, 2013). This rate was similar to that reported nationally (41.1%: $\chi^2(1_{n=157,281}=2.35$, $p=0.13$).

6.3 Hospital Admissions

Key Points:

Heroin and other opioids

- Following a dramatic increase in the number of hospital admissions in 2006/07, admissions decreased in 2008/09 and 2009/10; the rate per million population of hospital admissions in Tasmania was 61% of the national rate in 2012/13.

Methamphetamine

- Between 2006/07 and 2007/08, the Tasmanian rate of admissions was 130% of the national rate. This was reversed in the subsequent reporting periods; the Tasmanian rate was21% of the national rate in 2012/13.

Cannabis

- In 2009/10, the rate of admissions per million persons in Tasmania was 83, equating to 51% of the national rate (164 per million persons). These rates recently increased to 141% and 159% of the national rate in 2011/12 and 2012/13.

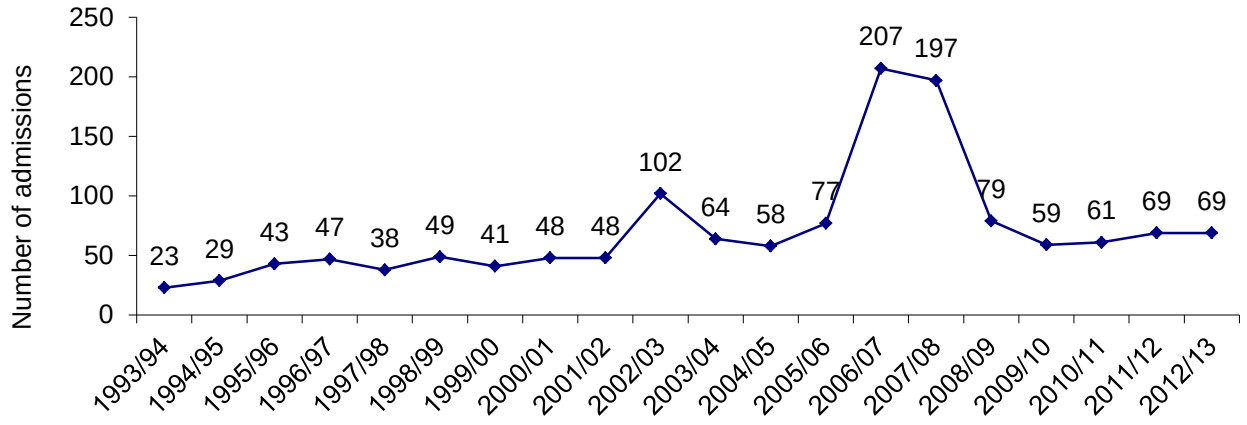
Hospital morbidity data in relation to use of drugs have been provided by the AIHW for the 1993/94 to 2012/13 financial year periods (data for 2013/14 were not available at the time of publication) (Roxburgh & Burns, *in press*). These data relate to Tasmanian public hospital admissions for individuals aged between 15 and 54 years where drug use was recorded as the 'principal diagnosis'; namely, where the effect of drugs was established, after study, to be chiefly responsible for occasioning the patient's episode of care in hospital (with the exception of admissions for psychosis and withdrawal). These figures were based on diagnoses coded according to the International Classification of Diseases (ICD) 10, second edition. It is also important to note that data from the state's single public specialist detoxification centre were only included in this dataset from June 2002.

6.3.1 Heroin and other opioids

Tasmanian hospital admissions in relation to opioids are presented in Figure 77. Between 1993/94 and 2001/02, primary diagnoses relating to opioid use in Tasmania had remained relatively stable – between 23 and 49 admissions per financial year. However, when data from the state's public detoxification centre were included in these figures (July 2002), there was a marked but unsustained increase in the number of admissions (rising from 48 admissions in 2001/02 to 102 in 2002/03, and falling to 64 in 2003/04). Over the following two financial years, the number of opioid-related hospital admissions remained slightly higher than seen prior to 2002 (58 and 77 admissions respectively). In 2006/07, the number of hospital admissions increased dramatically to 207. This increase was sustained in 2007/08 (197 admissions), however, in the subsequent reporting periods this decreased (between 61 and 79 admissions from 2008/09 to 2012/13) (data for 2013/14 were not available at the time of publication) (Roxburgh & Burns, *in press*).

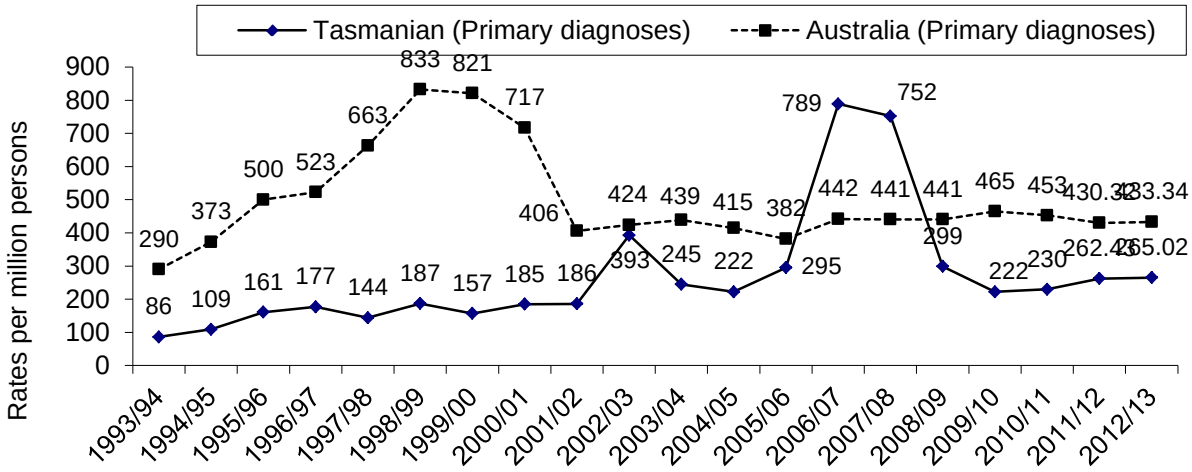
As can be seen in Figure 78, when the Tasmanian rate of opioid-related admissions per million population is compared to that of the national Australian level, prior to the inclusion of figures from the public detoxification service (July 2002), local admission rates for such cases were substantially lower than the national rates. In 2002/03, when detoxification patients were included, local admission rates were comparable to those nationally (393 versus 424 admissions per million persons between the ages of 15 and 54 years respectively). However, in 2003/04, local admission rates returned to around half that of the national level, and remained at a similar level in 2004/05 (222 versus 415 admissions per million persons between the ages of 15 and 54 years respectively), reflecting the decrease in admissions locally in comparison to a stable level nationally. In 2005/06, the rate of Tasmanian admissions increased to 77% of the national rate, and over the subsequent two financial years, the rate of Tasmanian admissions increased dramatically to 164% in 2006/07 and 170% in 2007/08 of the national rate. This trend was reversed in the subsequent reporting periods, 2008/09 and 2009/10, with a dramatic decrease in the rate of admissions locally (ranging between 48% and 68% of the national rate), remaining at consistent (61% of the national rate) in 2011/12 and 2012/13 (Roxburgh & Burns, *in press*).

Figure 77: Public hospital admissions amongst persons aged 15-54 in Tasmania where opioid use was noted as the primary factor contributing to admission, 1993/94-2012/13



Source: Roxburgh & Burns, *in press*
Note: 2013/14 data were not available at the time of publication

Figure 78: Public hospital admissions among persons aged 15-54 where opioids were noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia, 1993/94-2012/13

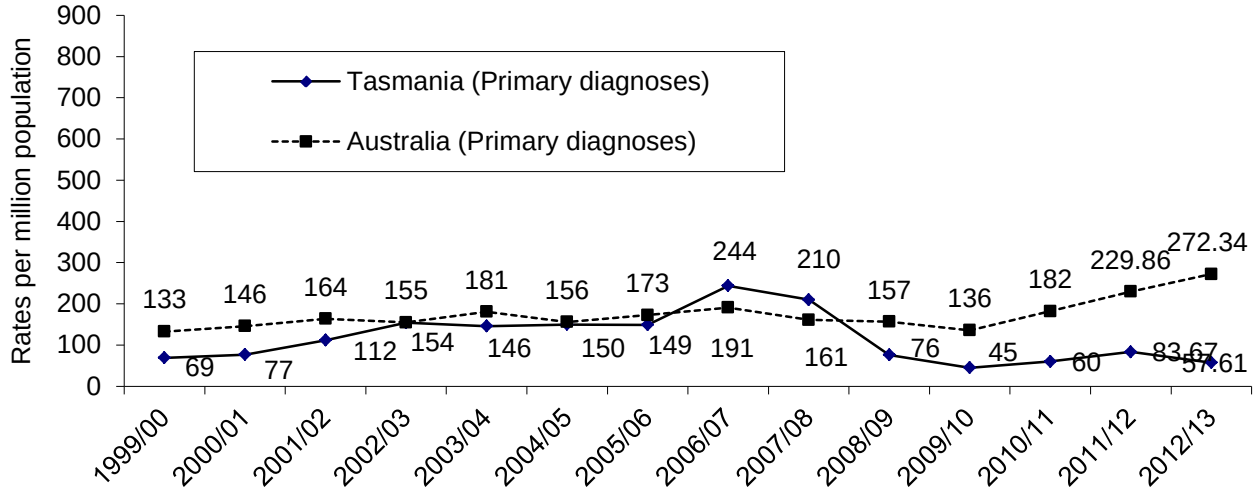


Source: Roxburgh & Burns, *in press*
Note: 2013/14 data were not available at the time of publication

6.3.2 Methamphetamine

Population-adjusted rates of Tasmanian public hospital admissions, where methamphetamine use was noted as the principal diagnosis, are presented in Figure 79. Local population-adjusted rates were substantially lower than the national figures prior to 2002/03. However, these figures did not include data from the state's detoxification service (introduced for the first time in the 2002/03 figures). Between 2002/03 and 2005/06, local population-adjusted rates were similar to the national figures. However, in 2006/07 and 2007/08, the Tasmanian rate of admissions per million persons increased to approximately 130% of the national rate. This was reversed in 2008/09, with the Tasmanian rate of admissions per million population decreasing from 210 in 2007/08 to 76 in 2008/09 (48% of the national rate). Between 2009/10 and 2012/13, the Tasmanian rates has been between 45 and 84 admissions per million population respectively (21% of the national rate in 2012/13).

Figure 79: Public hospital admissions among persons aged 15-54 where methamphetamine was noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia, 1999/00-2012/13

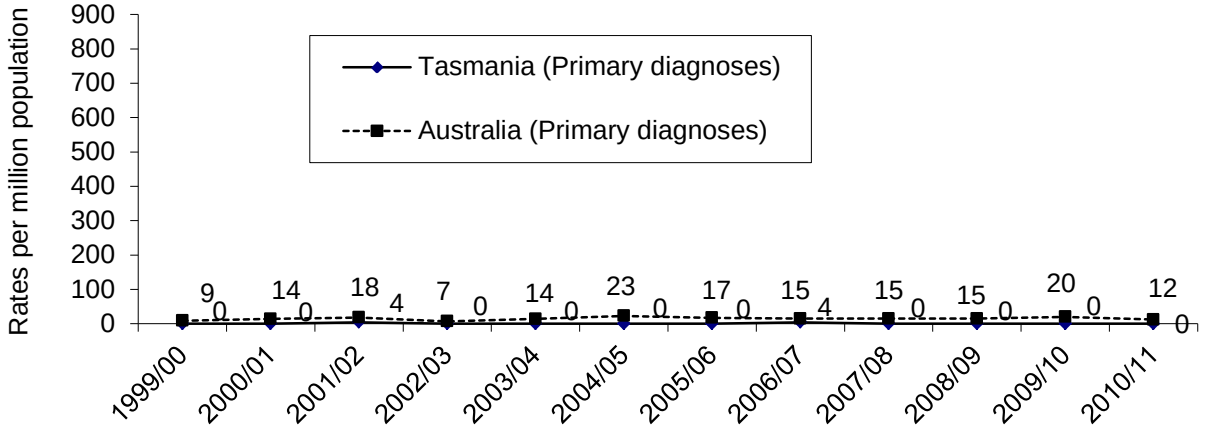


Source: Roxburgh & Burns, *in press.* Note: 2013/14 data were not available at the time of publication

6.3.3 Cocaine

Consistent with the apparent low levels of availability and use of cocaine locally, the rate of cocaine-related hospital admissions amongst those aged between 15 and 54 years in Tasmania is consistently very low (between zero and four persons per million between 1999/00 and 2012/13) (Figure 80). When the local rates of cocaine-related public hospital admissions are compared to the national Australian rate, these are substantially lower, with the total local cases where cocaine was noted as the primary factor contributing to the admission remaining 26% or less than that of the national rate between 1999/00 and 2012/13 (data for 2013/14 were not available at the time of publication) (Roxburgh & Burns, *in press*).

Figure 80: Public hospital admissions among persons aged 15-54 where cocaine was noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia, 1999/00-2012/13



Source: Roxburgh & Burns, *in press*
Note: 2013/14 data were not available at the time of publication

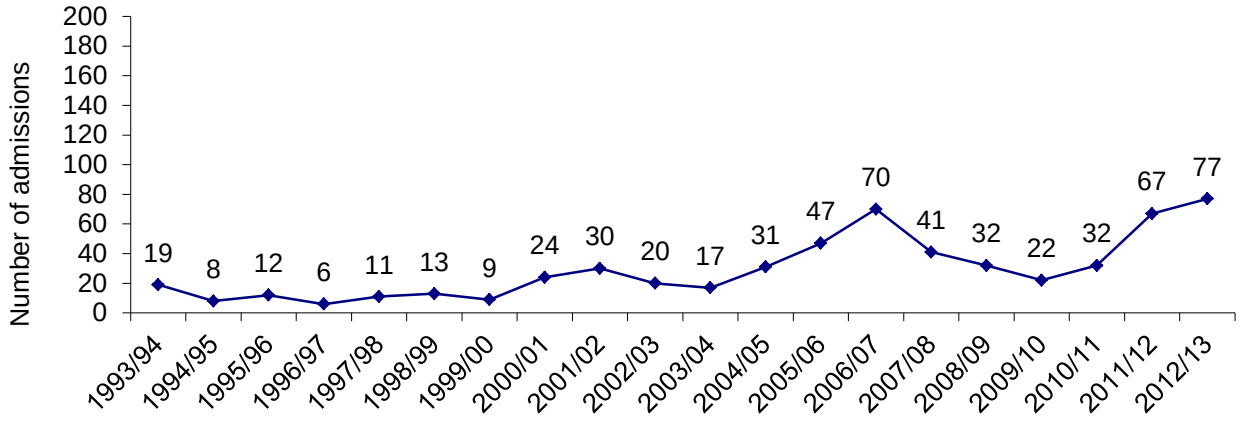
6.3.4 Cannabis

Tasmanian public hospital admissions where cannabis use was noted as the principal diagnosis among persons aged 15-54 years are presented in Figure 81. Examining these figures, it appears that the number of cases per annum has varied in recent years: between 1993/94 and 1999/00 there were around 11 cases per financial year (range 6-19); subsequently, between 2000/01 and 2004/05, the number of admissions was higher, ranging between 20 and 31 per financial year. In the following two reporting periods, a spike in admission numbers occurred, with 70 reported in 2006/07. While the number of admissions had returned to levels observed between 2000/01 and 2004/05 between 2008/09 to 2010/12 (22-32 admissions per year), 2011/12 and 2012/13 saw an increase in 2006/07 levels, with 67 and 77 admissions recorded, respectively (data for 2013/14 were not available at the time of publication) (Roxburgh & Burns, *in press*).

The population-adjusted rates for cannabis-related admissions in Tasmania increased overall between 1994/95 and 2006/07, from 30 per million population to 267 (Figure 82). In the subsequent three reporting periods, this trend has reversed (156, 121 and 83 admissions per million persons reported respectively). In 2010/11, a small increase was observed, with 121 admissions per million persons. The national rate has also gradually increased – from 41 admissions per million population in 1993/94 to 164 in 2010/11. The Tasmanian admission rate per million population had been consistently lower than the national rate between 1994/95 and 2004/05, however, this trend was reversed in 2005/06, with the Tasmanian admission rate increasing to 119% of the national rate. This peaked in 2006/07, with the Tasmanian rate being 180% of the national rate. Over the subsequent reporting periods, the Tasmanian admission rate decreased (71% of the national rate in 2010/11) (Figure 82) (Roxburgh & Burns, *in press*). However, rates returned to 2006/07 levels in

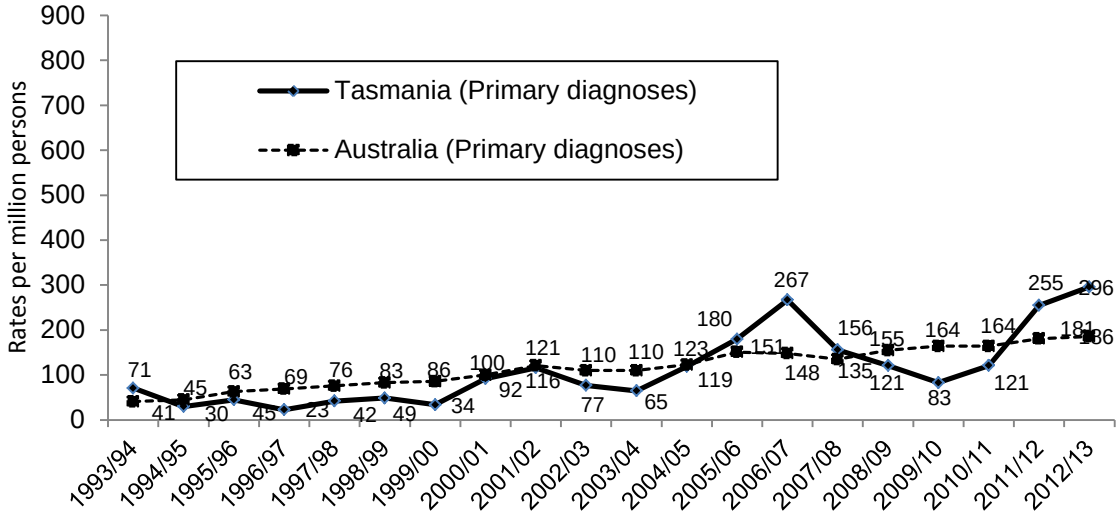
2011/12 and 2012/13: Tasmanian admission rates were 141% and 159% of the national rate. Data for 2013/14 were not available at the time of publication.

Figure 81: Public hospital admissions amongst persons aged 15-54 in Tasmania where cannabis use was noted as the primary factor contributing to admission, 1993/94-2013/14



Source: Roxburgh & Burns, *in press*
Note: 2013/14 data were not available at the time of publication

Figure 82: Public hospital admissions among persons aged 15-54 where cannabis was noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia, 1993/94-2012/13



Source: Roxburgh & Burns, *in press*
Note: 2013/14data were not available at the time of publication

6.4 Injecting risk behaviours

Key Points:

- In 2014, 2% of participants reported using another person's used needle/syringe in the preceding month, and 6% reported lending their used needle/syringe to another person in this period;
- Two-fifths of the sample (41%) reported re-using their own injecting equipment in the preceding month, most commonly winged-infusion sets ('butterflies'), followed by 1mL barrels and 20ml syringes;
- The majority of participants reported use of filters in the preparation of morphine (94%) and oxycodone (100%); four-fifths (80%) used a filter when last injecting benzodiazepines; three-quarters (73%) used a filter when last injecting prescription stimulants; three-fifths (63%) used a filter when last injecting methadone in syrup form; and half used a filter when last injecting methadone in tablet form (54%) and methamphetamine (48%); and
- Two-thirds of the sample (64%) reporting that the introduction of sterile water costs at NSP outlets had led them to decrease or cease using sterile water use.

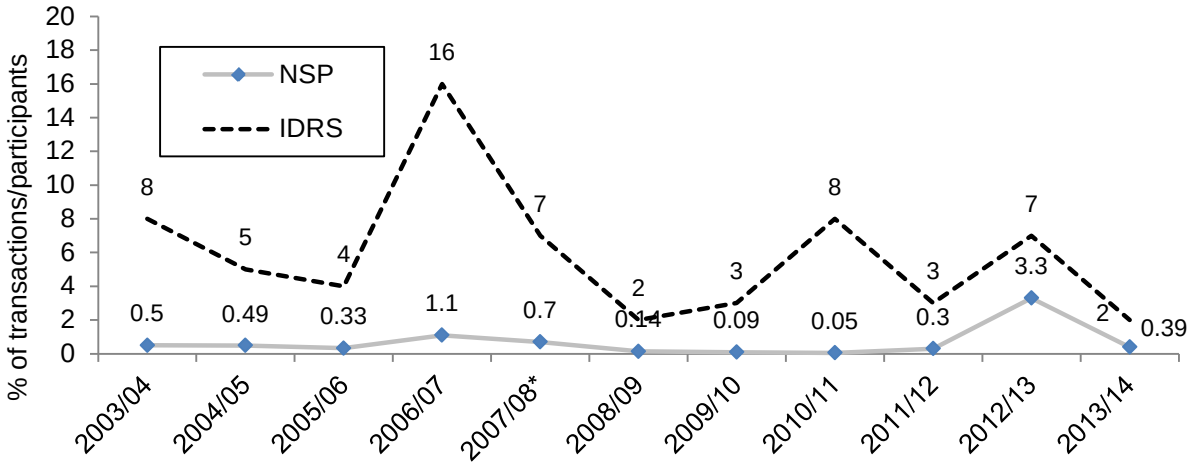
6.4.1 Sharing of injecting equipment

Needle and Syringe Program Data

The sharing of needles, syringes and other equipment associated with the preparation or injection of drugs is important with respect to the risk of exposure to blood-borne viral infections (BBVI) such as HIV, HBV and HCV. Clients of non-pharmacy NSP outlets are routinely asked whether they have shared needles and syringes or other injection equipment since their last visit to the service.

Reports of sharing of needles/syringes by clients of non-pharmacy Needle and Syringe Program remained at or below 1% in all years since 2003/04, with the exception of 2012/13 (3.3%) (Figure 83).

Figure 83: Reported sharing of needles and syringes by non-pharmacy Needle and Syringe Program clients and IDRS participants, 2003/04-2013/14



Source: Population Health, Department of Health and Human Services. IDRS PWID interviews
* In 2007/08, one NSP outlet, accounting for 19% of transactions, did not collect data on sharing. The transactions from this outlet were excluded from this calculation

IDRS PWID data

Amongst the 2014 IDRS PWID sample, sharing and re-use of injecting equipment was seen at similar levels to previous studies, with the exception of 2007 (in 2007, many of the measures for sharing of injecting equipment increased dramatically from previously stable levels).

Among these samples of regular injecting drug users in Hobart, the proportion of respondents reporting using a needle/syringe after it had been used by someone else has remained relatively stable since 2004, ranging between 2% and 8% of each sample (exception 2007 when 16% of the sample reported this behaviour), with 2% of the 2014 IDRS PWID sample reporting this injecting behaviour (Table 38). It is noteworthy that despite a decreased rate of sharing, this level of recent sharing among a regular injecting cohort remains substantially greater than that reported in the NSP client data.

Among the 2014 IDRS PWID sample, 6% (n=5) of participants reported providing a used needle/syringe to others in the month prior to interview, similar to the rate reported in 2013 (8%; Table 38). These participants reported providing their used equipment to others either once (n=2) or twice (n=3).

Overall, 6% of the sample had used another person's used needle/syringe and/or lent such equipment to another person in the preceding month. This is a similar rate as reported in 2013 (8%).

Sharing other types of injecting equipment in the month prior to interview (such as tourniquets, water, swabs and mixing containers) was reported by 33%: 15% had shared water, 13% had shared spoon/containers, and 5% had shared tourniquets and filters respectively (Table 38). It is important to note that these reports of sharing of equipment include cases where all individuals involved were using sterile equipment (e.g. two people using sterile syringes to draw a drug mix from a spoon), however, even these practices provide some risk of exposure to BBVI.

Of those who commented (n=92), half (41%, n=38) reported re-using their own injection equipment in the month prior to interview: similar to the rate reported in 2013 (48%, p=0.5). Among the current group who reported re-use of their injecting equipment, the majority had done this on either one (24%, n=9), two occasions (45%, n=17) or three to five occasions (18%, n=7) in the last month; with small minorities doing so on six to ten occasions (5%, n=2) or more than 10 occasions (8%, n=3) in the month preceding the interview.

The equipment most commonly re-used were winged-infusion sets ('butterflies', 45%, n=17), 1ml syringes (32%, n=12), 20ml syringes (21%, n=8), and 3mL barrels (18%, n=7). Less commonly re-used equipment were 5ml barrels (13%, n=5), 10ml barrels (8%, n=3) and needles only (5%, n=2). Of those who commented (n=31), the predominant reason reported for last re-use of needles was because they required equipment on occasions when accessible outlets were closed (nights or weekends, 55%, n=17) or because the outlet was too far away for them to access (26%, n=8).

Re-using other types of injecting equipment in the month prior to interview (such as tourniquets, water, swabs and mixing containers) was reported by 55% of those amongst the 2014 IDRS cohort who commented (n=89). Spoons and mixing containers were shared by 34%, tourniquets by 27%, water by 8%, commercial filters by 5% and wheel filters by 5%.

Table 38: Proportion of the PWID sample reporting sharing of injection equipment in the month prior to interview, 2004-2014

	Proportion of IDRS PWID in the past month										
	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Borrowed used needles	8	5	4	16	7	2	3	8	2	7	2
Lent used needles to others	12	14	13	29	9	13	13	10	8	8	6
Shared spoons/containers	8	4	7	20	15	17	19	17	15	19	13
Shared water	11	5	11	17	11	6	6	8	9	11	15
Shared filters	8	2	5	8	6	8	12	3	4	12	5
Shared tourniquets	21	15	16	22	11	16	14	10	11	13	5

Source: IDRS PWID interviews
Note: N=100 in 2004-2011, N=106 in 2012, N=107 in 2013, N=101 in 2014; multiple responses allowed

In the current study, some aspects of injection practices were examined in more detail. Despite the current PWID cohort being regular injecting drug users, just under one-fifth (15%, n=15) reported that they did not always inject themselves. Six participants (6%) stated they 'never' self-injected, four participants (4%) 'usually' injected themselves, 3% (n=3) self-injected 'about half the time', and 1% (n=1) self-injected 'sometimes' in the preceding month. The demographic characteristics of participants that did not always self-inject were similar to participants that always self-injected in terms of age, cultural background, sexual preference, education, employment, accommodation, prison history, injecting career, frequency of injection, and engagement in drug treatment. However, participants reporting not always self-injecting were significantly more likely to be female (71% versus 31%: $\chi^2(1_{n=96})=8.65$, p=0.003), less likely to be single (29% versus 63%: $\chi^2(1_{n=96})=5.97$, p=0.015), and reported a significantly older mean age of first injection (25.6 versus 19.3 years, t(94)=-3.25, p=0.002) than those who 'always' injected themselves

Of the participants who commented on the last venous site they injected into, the majority (70%, n=64) reported last injecting in their arm, with an additional 13% (n=12) last injecting into their hand/wrist. Small proportions reported last injecting into their foot (7%, n=6), leg (4%, n=4), neck (3%, n=3), and groin (2%, n=2).

6.4.2 Use of filters

Injection of pharmaceutical and other drugs (such as methamphetamine or heroin) carries a variety of risks to the user. The range of ingredients contained within a solution for injection in addition to the desired active ingredient varies widely, with many carrying the potential to cause harm when injected. Both pharmaceuticals and 'street' drugs contain particles that may not dissolve in solution and, when injected, may be large enough to form tissue granulomas in various body organs (particularly the liver and lungs) or to cause blockage of pulmonary capillaries, which may potentially lead to pulmonary hypertension and right-sided heart failure. Larger particles or clumps of particles can also become lodged in blood vessels, decreasing and potentially stopping the blood supply to the surrounding tissue, resulting in death of that tissue (gangrene). Use of filters in the preparation of drugs for injection can assist in reducing some of these risks.

Participants in the current study were asked to comment on their use of commercial and makeshift filters in the preparation of drugs for injection. Filter types commonly used include commercially-available syringe filters: 0.45μm wheel filters (hereafter referred to as a 'pill filter'); 0.22μm wheel filter ('bacterial filter'); and makeshift filters, including filters commercially sold for use with hand-rolling tobacco ('roll-your-own filter'), filters taken from tailor-made cigarettes ('tailor cigarette filter'), and cotton buds, cotton balls, tampons or alcohol swabs.

Morphine

Of the participants who had recently injected morphine who commented (n=71), 94% (n=67) had used some form of filter the last time they prepared morphine for injection. The most commonly used filter amongst this group was cigarette filters (56%, n=40) followed by wheel filters (27%, n=19) (Table 39).

Participants were asked if they had heated the morphine tablet/capsule during preparation for injection. This question was included as heating morphine tablets in water for injection prior to filtering may allow wax to pass through filters, subsequently forming into particles when cooling, which effectively undermines the effectiveness of the filtering process (McLean et al., 2009). Of those participants commenting, 85% (n=60) reported using heat on the last occasion of preparing morphine tablets for injection.

Oxycodone

Of those participants commenting on use of a filter during the preparation of oxycodone tablets for injection (n=46), all had used some sort of filter on the last occasion of injection (100%, n=46). The filters most commonly used for the last injection of oxycodone were cigarette filters (61%, n=28) followed by wheel filters (28%, n=13) (Table 39). Three-fifths of recent oxycodone injectors had heated the tablet last time they prepared the drug for injection (62%, n=28).

Methadone syrup

Among those able to comment on preparation of methadone syrup for injection (n=27), over one-third (37%, n=10) had not used a filter last time they injected this drug, with 52% (n=14) participants using a wheel filter and 11% (n=3) participants using a cigarette filter (Table 39).

Three KEs employed in NSP outlets reported increased demand for filters in general, with two employees noting a specific increase in wheel filters, although cigarette filters were the predominant filter type chosen. One KE noted that clients report a greater propensity to use filters due to increased use of tap water, instead of purchasing sterile water from NSP outlets (see Section 6.4.3).

Physeptone

Of the participants who commented on use of a filter in preparation of Physeptone to inject (n=35), nearly half (46%, n=16) had not used a filter the last time they injected the drug. Wheel filters were the most commonly used (34%, n=12), followed by cigarette filters (14%, n=5). Of the 33 participants who commented, 18% (n=6) had used heat the last time they prepared Physeptone to inject.

Methamphetamine

Of the participants who commented on use of a filter in preparation of methamphetamine to inject (n=58), half (52%, n=30) reported no use of a filter on the last occasion of preparation, with the majority of the remainder reporting use of a cigarette filter (26%, n=35) or wheel filter (n=16%, n=5).

Pharmaceutical stimulants

Of the participants who commented on use of a filter in preparation of pharmaceutical stimulants to inject (n=26), the most commonly cited filter was a wheel filter (62%, n=16). One-quarter (27%, n=7) reported no use of a filter on their last occasion of injecting pharmaceutical stimulants (Table 39).

Benzodiazepines

Five participants commented on their use of a filter during the preparation of a benzodiazepine tablet or capsule for injection. Two participants (40%) used a wheel filter, two participants (40%) used a cigarette filter, and one participant (20%) used no filter on their last occasion of preparation for injection (Table 39).

Table 39: Use of a filter the last time injected a drug, 2014

	No filter	Wheel filter *('bacterial or pill filter')*	Commercial filter for hand-rolling tobacco *('roll-your-own filter')/ or* filter from tailor-made cigarette *('tailor cigarette filter')*	Cotton wool
Opioids				
Morphine (n=71)	6% (n=4)	27% (n=19)	56% (n=40)	8% (n=6)
Oxycodone (n=46)	0	28% (n=13)	61% (n=28)	11% (n=5)
Methadone syrup (n=27)	37% (n=10)	52% (n=14)	11% (n=3)	0
Physeptone (n=35)	46% (n=16)	34% (n=12)	14% (n=5)	3% (n=1)
Methamphetamine *(n=58)*	52% (n=30)	16% (n=5)	26% (n=35)	4% (n=2)
Pharmaceutical stimulants *(n=26)*	27% (n=7)	62% (n=16)	8% (n=2)	0
Benzodiazepines *(n=5)*	40% (n=2)	40% (n=2)	20% (n=1)	0

Source: IDRS PWID interviews
Note: Multiple responses allowed
N represents the number who commented on their use.

6.4.3 Use of sterile water for injection

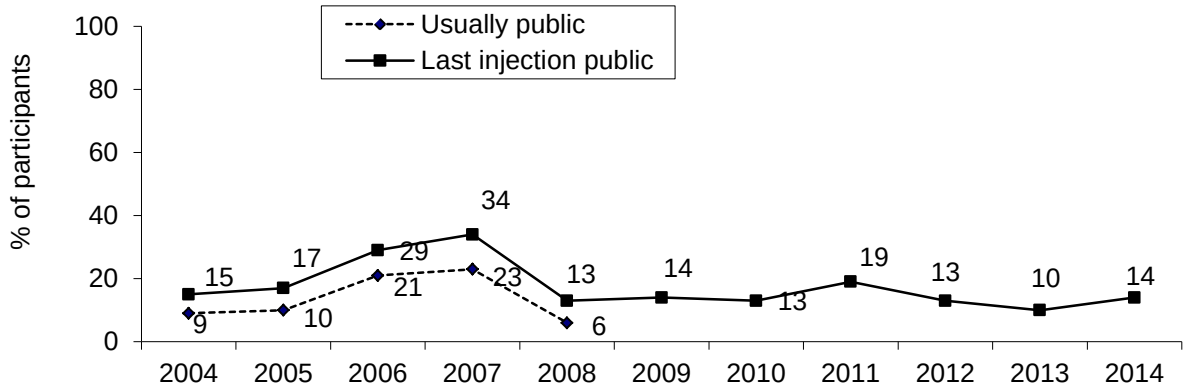
Budgetary constraints across Tasmanian Government departments since 2011 have resulted in changes to equipment provision in Tasmanian NSP, resulting in the introduction of a small fee for access to sterile water. Unlike heroin and methamphetamine which are readily soluble in small amounts of solution, significant amounts of water (3-6ml per dose) are needed for injection of pharmaceutical opioid tablets (e.g. morphine, oxycodone) according to best-practice evidence (McLean et al, 2009). Non-sterile water may be contaminated with bacteria or insoluble particles, which, if injected, may cause harm to the consumer, for example, with infections or inflammation at injection sites.

Of the 86 participants who commented, two-thirds (64%, n=56) reported that the cost of sterile water had impacted on their injecting practices: 35% noted they continued to use sterile water, but less often; and 29% stated they no longer used sterile water. In addition, 8 of these participants noted experience of a health problem in the preceding four weeks due to injection of non-sterile water. Half of these participants (n=4) reported they had experienced a 'dirty hit', with effects such as feeling physically unwell soon after injection, headaches, vomiting and fever. Interestingly, KE working in NSPs commented on increased purchase of sterile water in the preceding six months.

6.4.4 Location of injections

Participants were asked to comment on the location in which they last injected in the month preceding the interview (Figure 84). Injecting in a public space is of particular concern as it is related to increased risk of overdose and injecting-related vascular problems (Darke, Kaye & Ross, 2001). Between the 2004 and 2007 surveys, 15% to 34% of each cohort reported last injecting in public. Since the 2008 survey, the proportion reporting last injecting in public locations such as a public toilet, a car, or on the street, has been lower (ranging between 10% and 19%). Of the 91 participants who commented from the 2014 cohort, only 14% (n=13) reporting last injecting in a public location (Figure 84).

Figure 84: Proportion of PWID participants reporting injecting in a public place, 2004-2014



Source: IDRS PWID interviews
Note: Since 2009, only 'location of last injection' was asked

6.4.5 Sources of new injecting equipment

Of the 92 participants who commented, almost all (97%, n=89) reported having accessed clean needles/syringes from a non-pharmacy NSP in the six months preceding the interview, with almost half the sample (46%) accessing needles from a vending machine (Table 40). This is consistent with the fact that the majority of participants were recruited and interviewed at non-pharmacy NSP

outlet sites. One-third (31%, n=28) reported that they had experienced difficulty in the last month getting new needles/syringes when needed.

Table 40: Source of clean needles/syringes in the preceding six months, 2014

Sources of needles/syringes	% (N=92)
Non-pharmacy NSP	97%
Vending machine	46%
Pharmacy	12%
Friend	8%
Partner	1%
Dealer	1%

Source: IDRS PWID interviews.
Note: Multiple responses allowed

Of the 79 participants who commented in the 2014 IDRS cohort, 66% (n=52) reported that they were able to access wheel filters, 54% (n=43) were able to access cigarette filters, 10% (n=8) were able to access cotton filters, and 6% (n=5) didn't know if they were able to access filters. Of the 85 participants who commented, 8% (n=7) reported difficulties in accessing filters in the last month, with only one participant specifying the cost as a barrier.

6.5 Blood-borne viral infections

Blood-borne viral infections (BBVI), in particular HIV/AIDS, HBV and HCV, are a major health risk for individuals who inject drugs. An integrated surveillance system has been established in Australia for the purposes of monitoring the spread of BBVI diseases. The Department of Health and Human Services, Public Health Division, records notifications of diagnoses of HIV, HBV and HCV in Tasmania, and, where possible, records the relevant risk factors for infection the person may have been exposed to. Table 41 indicates the number of cases of BBVI recorded in the state between 2004 and 2014. Since 2004, the number of incident cases has been similar, ranging between 14 and 27 cases per annum, with the exception of 2006 (10 cases reported) (Figure 85).

In contrast, unspecified (not new infections) notifications of HCV declined over 2004 and 2005 (falling from 285 cases in 2004 to 213 in 2005). The number of unspecified notifications remained relatively stable between 2006 and 2010, ranging between 240 and 260 cases per annum (with the exception of a small increase in 2008 to 327 cases). Since 2011, the number of such cases has been slightly lower (202 to 221 cases in 2014; Table 41). These findings reflect reports from KE working in NSPs in 2014, who report that communication between clients and staff regarding incident of Hepatitis C remains stable.

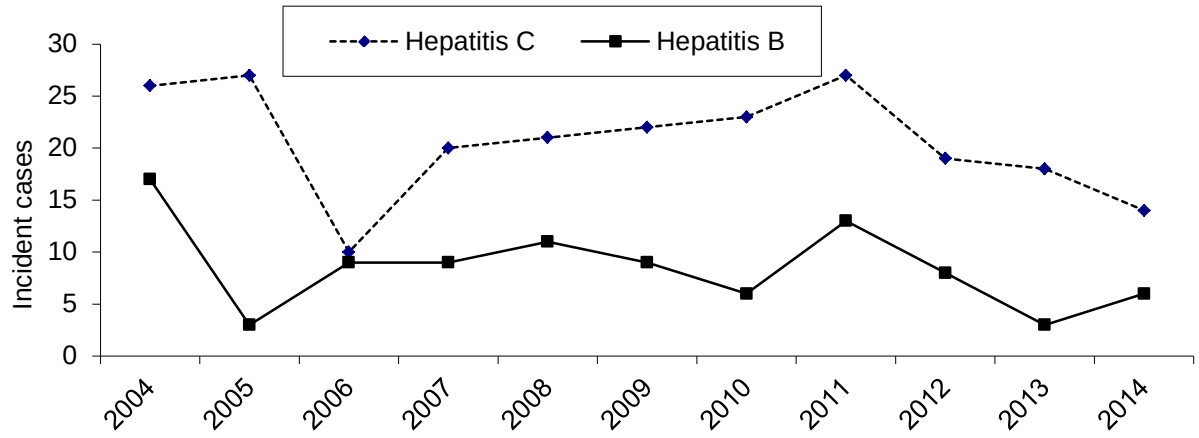
Similar to the pattern for incident cases of HCV, incident cases of HBV have remained low between 2005 and 2014 (ranging between 3 and 13 cases over this period). Reports of unspecified HBV infections (not new cases) have varied around 40 cases (22-76) per annum between 1991 and 2014, showing no clear trend in any direction.

Table 41: Numbers of notifiable blood-borne viral infections in Tasmania, 2004-2014

	Blood-borne viral infections			
Year	**Hepatitis C (incident)**	**Hepatitis C (unspecified)**	**Hepatitis B (incident)**	**Hepatitis B (unspecified)**
2004	26	285	17	60
2005	27	213	3	52
2006	10	259	9	46
2007	20	254	9	36
2008	21	327	11	59
2009	22	260	9	76
2010	23	240	6	51
2011	27	202	13	40
2012	19	223	8	62
2013	18	212	3	57
2014	14	221	6	56

Source: Communicable Diseases Network – Australia New Zealand – National Notifiable Diseases Surveillance System, and Public Health, Department of Health and Human Services (data as of Jan 13, 2015 and subject to revision)

Figure 85: Total notifications of incident hepatitis B and C infections in Tasmania, 2004-2014



Source: Communicable Diseases Network – Australia New Zealand – National Notifiable Diseases Surveillance System, and Public Health, Department of Health and Human Services. (data as of January 13, 2015 and subject to revision)

6.6 Self-reported injection-related health problems

Key Points:

- Over two-thirds (70%) of the sample reported experience of at least one injection-related problem in the preceding month, most commonly difficulty injecting and scarring/bruising of the injection site. This rate reflects an increase relative to previous years (2005 to 2013: 50% to 63%).

Of the 71 participants who completed this section in the 2014 IDRS cohort, over two-thirds (70%, n=50) reported at least one injection-related health problem in the preceding month (Table 42). This rate of experience of injection-related health problems is higher than that observed in the 2005 to 2013 period, with between 50% and 63% of each sample reporting one or more problems – with the exception of 2009 (80%). Of those KE commenting, the majority reported no change in reports of injection-related health problems. One KE working in a medical setting stated that presentations related to injection problems occurred typically on a fortnightly basis, predominantly featuring abscesses or injection into the artery. These statements are reflected in the IDRS cohort: the most commonly reported problems were scarring/bruising of injection sites (52%) and 'difficulty injecting' (51%), indicating vascular damage.

Reported rates of experience of a 'dirty hit' amongst the cohorts ranged between 15% and 24% between 2004 and 2007. Since this time, the rate has been lower, ranging between 9% and 17% (Table 42). Experience of a 'dirty hit' – feeling physically unwell soon after injection – is commonly due to the injection of contaminants or impurities. In the 2014 cohort, 15 participants reported past month experience of a 'dirty hit'. Of the 14 participants who commented, 29% attributed the dirty hit to methadone (n=4), with two participants reporting methamphetamine (14%), morphine (14%), and oxycodone (14%) as the primary responsible drug respectively.

Table 42: Injection-related health problems reported by participants in the PWID survey in the month prior to interview

	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
Scarring/bruising	42	31	29	33	31	71	51	38	42	40	52
Difficulty injecting	49	47	38	40	39	53	42	42	46	40	51
Thrombosis	8	12	5	3	4	10	9	4	3	1	13
'Dirty hit'	24	19	15	15	9	17	12	14	14	17[£]	17[¥]
Infections/abscesses	11	11	7	11	5	7	10	4	9	3	6
Overdose	1	1	1	4	0	4	2	1	2	0	1
At least one injection-related problem	72 (range 1-5, median 2[*])	62 (range 1-5, median 2[*])	50 (range 1-3, median 1[*])	57 (range 1-5, median 2[*])	54 (range 1-5, median 1[*])	80 (range 1-5, median 2[*])	63 (range 1-4, median 2[*])	61 (range 1-4, median 1[*])	59 (range 1-4, median 2[*])	58 (range 1-3, median 2*)	70 (range 1-4, median 2*)
Median injection frequency	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week	More than once per week
% injecting daily	27	30	37	20	29	30	43	36	26	28	36

Source: IDRS PWID interviews.

Note: N=100 in 2004-2011; N=106 in 2012; N=95 in 2013; N=101 in 2014; however, only 87 participants completed this section in 2014

* For those noting injection-related problems in 2013 and 2014:

[£] Of those who commented, 33% were attributable to benzodiazepines, and 17% respectively for methadone syrup, oxycodone, morphine and other opioids

[¥] Of those who commented, 29% attributed the dirty hit to methadone (n=4), with two participants reporting methamphetamine (14%), morphine (14%), and oxycodone (14%), respectively

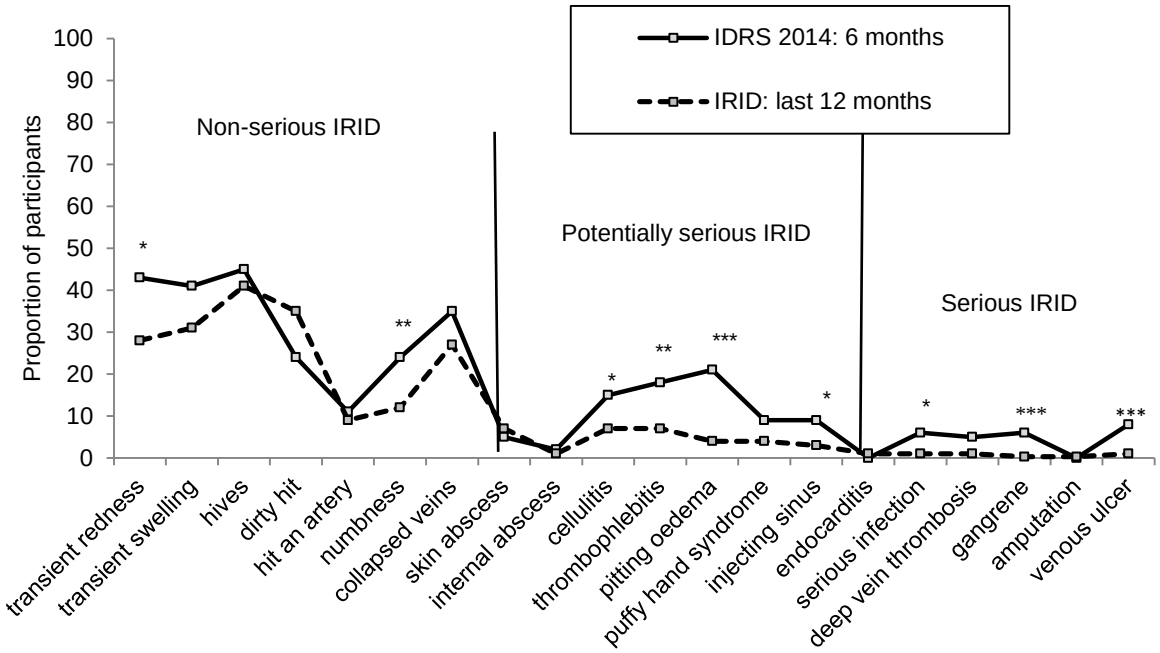
In 2012, a new set of questions were included in the PWID survey focused on experience of non-viral injecting-related injuries and diseases (IRID). These injuries and diseases vary from non-serious events such as hives, to medical emergencies including endocarditis. Dwyer and colleagues (2007) conducted a large Australian multi-site study (Victoria, New South Wales & Queensland) into the experience of IRID. Questions regarding lifetime and recent experience of IRID were taken from this study, and IRID were classified in accordance with Dwyer et al.'s system, to allow for comparison between the cohorts:

- Non-serious IRID: transient redness, transient swelling, hives, 'dirty hit', hitting an artery, numbness or pins and needles and collapsed/blocked veins;
- Potentially serious IRID: abscesses, cellulitis, thrombophlebitis, oedema, puffy hands syndrome, injecting sinus, and;
- Serious IRID: systemic infections, deep vein thrombosis, gangrene, amputation & venous ulcer.

Figure 86 presents the rates of recent experience of IRID amongst the 2014 IDRS sample (last six months) and the IRID cohort (last 12 months) reported on by Dwyer et al. (2006). Dwyer and colleagues' cohort was recruited from a range of sites across Victoria, New South Wales and Queensland. The predominant drugs used in the preceding 12 months by this group were heroin and methamphetamine. In contrast, the Tasmanian IDRS cohort reported higher rates of injecting of pharmaceutical opioids such as morphine, oxycodone and Physeptone, along with methamphetamine.

The IDRS cohort was significantly more likely to report recent experience of transient redness around the injecting site (43% versus 28%: $\chi^2(1_{n=478})=2.39$, p=0.011), numbness (24% versus 12%: $\chi^2(1_{n=478})=6.83$, p=0.009), cellulitis (15% versus 7%: $\chi^2(1_{n=478})=4.95$, p=0.026), thrombophlebitis (18% versus 7%: $\chi^2(1_{n=478})= 8.21$, p=0.004), pitting oedema (21% versus 4%: $\chi^2(1_{n=478})=28.41$, p<0.001), an injecting sinus (9% versus 3%: $\chi^2(1_{n=478})=5.55$, p=0.018), a serious infection (6% versus 1%: $\chi^2(1_{n=478})=6.51$, p=0.011), gangrene (6% versus 0.3%: $\chi^2(1_{n=478})=13.61$, p<0.001) or a venous ulcer (8% versus 1%: $\chi^2(1_{n=478})=13.14$, p<0.001. It is possible that these higher rates of experience of IRID amongst IDRS participants are related to injecting pharmaceutical tablets, as there are large quantities of particulate matter, much of which is insoluble and large enough to block blood vessels; however, further work needs to be done in this area before conclusions may be drawn. In saying this, it is notable that the reporting period for IDRS participants was just half of that of the IRID participants (i.e. 6 months versus 12 months).

Figure 86: Recent experience of IRID amongst IDRS (2014) and IRID (2007) study cohorts



Source: IDRS PWID interviews, Dwyer et al., 2007
Note: IDRS N=85, IRID cohort, N=393
*p<0.05; **p<0.01; *** p<0.001

6.7 Mental health and psychological distress

Key Points:

- Over two-fifths (44%) of the sample self-reported experience of a mental health problem in the preceding six months, a slightly lower rate than reported in 2013 (54%); four-fifths of this group (77%) had recently attended a health professional for mental health issues. Depression and anxiety were most commonly cited;
- Using a measure of psychological distress, one-fifth (19%) of the 2014 IDRS sample scored in the 'very high' category (indicative of the need for professional help). This was significantly higher than the rate reported for the general Australian population (4%); and
- The mean Physical and Mental Component Scores generated by the SF12 indicate that IDRS participants experienced poorer mental and physical health than the population average.

6.7.1 Mental health

As there exists a substantial body of work identifying increased rates of mental health issues among those who use illicit drugs, PWID participants were asked if they had experienced a mental health problem in the six months preceding the interview (Table 43). Of the 79 participants who commented, 44% (n=35) self-reported experiencing a mental health problem in this period, a similar rate to that reported in 2013 (54%: $\chi^2(1_{n=177})=1.31$, p=0.25) (Table 43). Four-fifths of the group reporting recent experience of a mental health problem had recently attended a health professional for mental health issues (77%, n=27), a similar rate to that reported in preceding years (ranging between 61% and 82%) with the exception of 2012 (58%). Participants had predominantly seen a

general practitioner (85%, n=23), psychologist (26%, n=7), psychiatrist (22%, n=6) counsellor (15%, n=4), and a mental health nurse (11%, n=3) for support with their mental health problems.

The most commonly reported mental health problems amongst this group of participants were depression (69%, n=24) and anxiety (60%, n=21). These have remained the predominant issues in each of the IDRS cohorts, just as they are in the general population (ABS, 2006). These findings also reflect those from KE: one KE working as an alcohol and drug counsellor commented that over half the presentations to their organisation involved co-existing mental health problems, predominantly depression and anxiety.

In regard to changes in self-reported mental health problems amongst PWID participants across these studies, reports of depression (among those reporting recent experience of any mental health problem) have remained relatively stable since 2006 (between 67% and 82%), with the exception of the 2007 sample (57%). The rate of participants self-reporting anxiety has fluctuated between 42% and 67% between 2006 and 2014. Reports by participants regarding experiences of paranoia have generally remained at very low levels between 2006 and 2014 (ranging between 0% and 6%), with the exception of higher rates in 2010 (12%) and 2012 (20%). Self-reported rates of psychosis and related problems (psychotic episodes, schizophrenia, drug-induced psychosis) have ranged between 11% and 21% between 2006 and 2014, with the exception of 2008 (7%) and 2014 (9%).

More than three-fifths of the participants self-reporting a mental health problem reported they had been prescribed medication for this in the preceding six months (71%, n=24). Of this group, half had been prescribed an antidepressant (50%, n=12), most commonly desvenlafaxine (pristiq) and mirtazapine. Over two-fifths commented that they had been prescribed a benzodiazepine (46%, n=11), predominantly diazepam. One quarter (25%, n=6) of participants reported having had an antipsychotic prescribed to them in the preceding six months, predominantly quetiapine.

Table 43: Experience of mental health problems amongst IDRS PWID participants, 2006-2014

	2006 IDRS		2007 IDRS		2008 IDRS		2009 IDRS		2010 IDRS		2011 IDRS		2012 IDRS		2013 IDRS		2014 IDRS^	
	%	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	%	*n*	%	*n*
% self-reporting mental health problem last 6 months	50	*50*	60	*60*	43	*43*	46	*46*	52	*52*	69	*65*	46	*49*	54	*53*	44	*35*
Of these:																		
% attending a health prof. for a mental health problem in past 6 months	76	*38*	82	*49*	72	*31*	61	*28*	73	*38*	80	*52*	58	*28*	81	*42*	77	*27*
Specific type of mental health problem experienced amongst those with a self-reported mental health problem																		
	%	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***
Depression	80	*40*	57	*34*	79	*34*	67	*31*	77	*40*	72	*47*	82	*40*	74	*39*	69	*24*
Bipolar Disorder	6	*3*	15	*9*	9	*4*	20	*9*	14	*7*	12	*8*	12	*6*	19	*10*	6	*2*
Anxiety	62	*31*	48	*29*	42	*18*	43	*20*	52	*27*	46	*30*	67	*33*	57	*30*	60	*21*
Panic	8	*4*	8	*5*	19	*19*	11	*5*	19	*10*	9	*6*	25	*12*	17	*9*	20	*7*
Paranoia	4	*2*	2	*1*	-	-	4	*2*	12	*6*	3	*2*	20	*10*	6	*3*	3	*1*
Schizophrenia/Psychosis	14	*7*	18	*10*	7	*3*	11	*5*	15	*8*	15	*10*	20	*10*	21	*11*	9	*3*
Obsessive-compulsive disorder	2	*1*	2	*1*	-	-	-	-	4	*2*	2	*1*	8	*4*	8	*4*	-	-
Personality disorder	4	*4*	5	*3*	-	-	7	*3*	10	*5*	5	*3*	14	*7*	8	*4*	3	*1*
Post-traumatic stress disorder	-	-	5	*3*	-	-	4	*2*	8	*4*	12	*8*	-	-	25	*13*	17	*6*

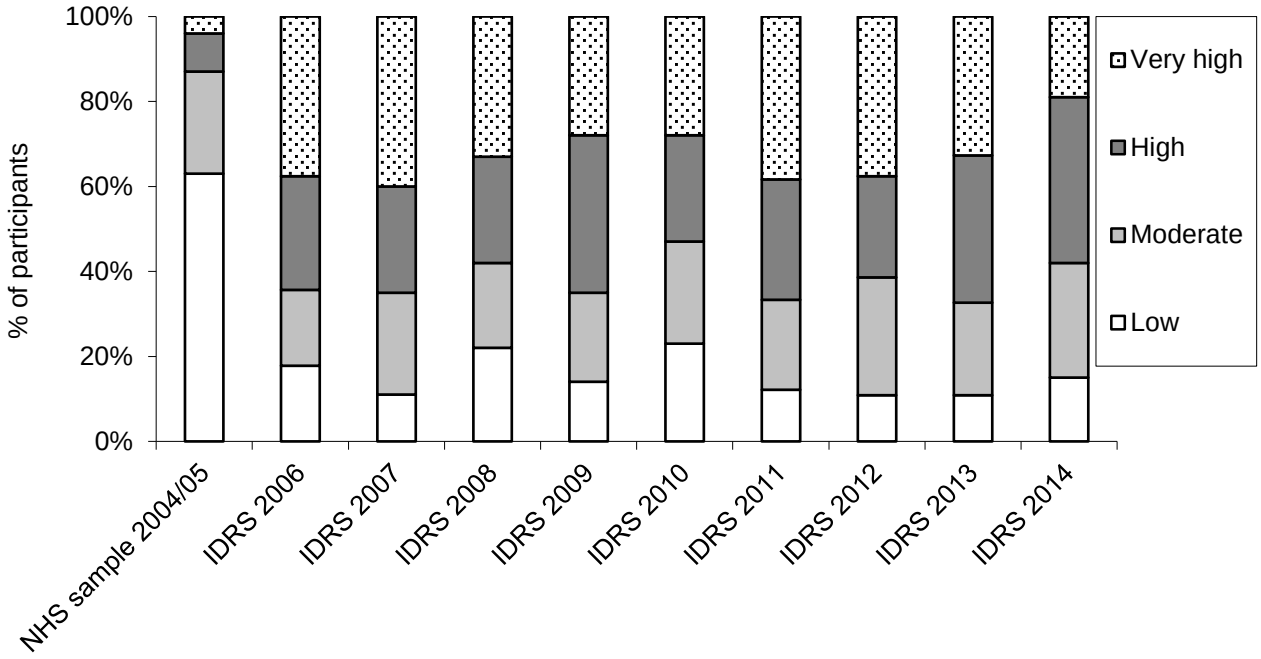
Source: IDRS PWID interviews

^ Only 79 participants completed this section in 2014

With the aim of a more objective assessment of the degree of psychological distress amongst the PWID samples, participants were asked to complete the Kessler 10 Scale (K10). The K10 examines negative emotional states, with a focus on anxiety and depressive symptoms, in the four weeks preceding the interview. The scores are totalled and grouped into four categories of psychological distress: low; medium; high; and very high. Participants who fall into the 'very high' category may require professional help (ABS, 2001), and demonstrate high concordance with the presence of a diagnosable mental health disorder. Sixty-two participants in the current study completed the K10 in 2014 (Figure 87). Almost three-fifths of participants scored in either the 'very high' or 'high' categories of psychological distress (39%, n=24 and 19%, n=12 respectively), 27% (n=17) scored in the 'moderate' category; and just 15% (n=9) fell into the 'low' level of psychological distress category.

These findings are similar to those from previous IDRS studies, but are dramatically and statistically significantly different to those found in the National Health Survey (2004/05, which focused on a sample of 19,680 from the general population) (ABS, 2006), in which two-thirds of the participants (63%) were classified in the 'low' level of psychological distress (compared with 15% of the Tasmanian IDRS: $\chi^2(1_{n=25,962})=58.06$, $p<0.001$), and just 4% were classified in the 'very high' level (compared with 39% in the IDRS: $\chi^2(1_{n=25,962})=181.52$, $p<0.001$), indicative of a potential need for professional assistance (Figure 87). In keeping with these findings, KE commenting on primary consumers of cannabis and methamphetamine noted mental health problems amongst these client groups including depression, anxiety, paranoia, psychosis, and difficulties with emotional regulation. Several KE working in NSPs and alcohol and other drug counselling reported increased psychiatric presentations (predominantly drug-induced psychosis) amongst consumers of methamphetamine 'ice', paralleling the increase in use of this form amongst the 2014 sample.

Figure 87: Responses to the K10 questionnaire in the National Health Survey 2004/05 and Tasmanian IDRS, 2006-2014



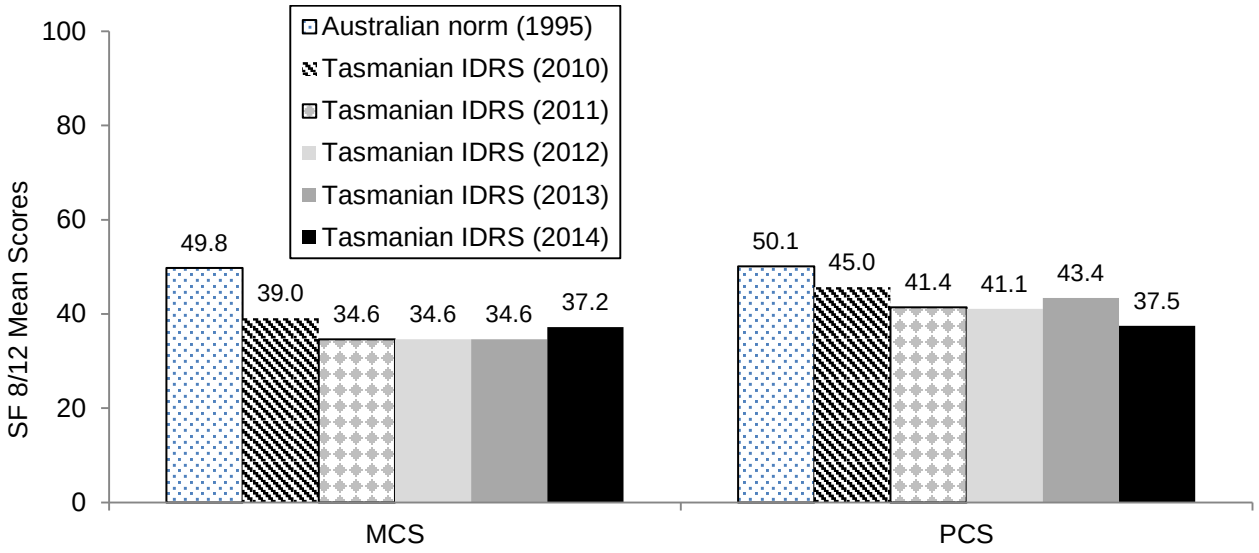
Source: IDRS PWID interviews and National Health Survey (ABS), 2004/05
Note: 62 participants completed the K10 as part of the 2014 IDRS

6.8 Physical health

6.8.1 Physical Health problems (SF-12)

The Short Form-8 Health Survey (SF-8) and Short Form-12 Health Survey (SF-12) are questionnaires designed to provide information on general health and wellbeing. These questionnaires were administered for the first time in the IDRS in 2008. The SF-8 and SF-12 measure eight health concepts: physical functioning; role limitations due to: physical health problems; bodily pain; general health; energy/fatigue; social functioning; role limitations due to emotional problems; and psychological distress and wellbeing. The scores generated by these eight variables are combined to generate two composite scores, the physical component score (PCS) and the mental component score (MCS) ((Lefante Jr., Harmon, Ashby, Barnard, & Webber, 2005). The SF-8 scoring system was developed to yield a mean of 50 and a standard deviation of 10. Participants in the 2014 Tasmanian IDRS study who completed this section (n=51) scored a mean of 37.2 (SD=10.5) for the MCS, significantly lower than the Australian general population mean score of 49.8 (ABS, 1995) ($t_{(50)}$=-8.59, p<0.001). Similarly, the mean score for the PCS for the IDRS sample was 37.5 (SD=10.5), significantly lower than the Australian general population mean score of 50.1 (ABS, 1995) ($t_{(50)}$=-8.58, p<0.001). This indicates that PWID had both poorer mental and physical health than the population average (Figure 88).

Figure 88: SF-8/12 scores for PWID compared with the general Australian population, 2010-2014



Source: IDRS PWID interviews, Australian Bureau of Statistics, 1995

6.9 Driving risk behaviour

Key Points:

- The majority (85%) of participants who reported having driven a vehicle in the preceding six months reported doing so after consuming illicit drugs; and
- Illicit morphine was the most commonly reported drug used prior to driving (42%), returning to the levels reported pre-2012 (24% to 42%). Driving under the influence of cannabis was also common but the rate was lower than that observed in 2013 (23% versus 65%, respectively). One-third (36%) of those who had used illicit drugs prior to driving had consumed methamphetamine.

Of the 91 participants who commented from the 2014 IDRS cohort, more than half (58%, n=53) had driven a car in the preceding six months (Table 44). The majority of these participants self-reported that they had driven after consuming illicit drugs[23] (85%, n=45). This rate is slightly higher than reported in 2013 (82%), although it is important to note that in previous years these analyses were restricted to participants who had driven within one hour of taking drugs. Table 44 summarises the drugs that were used: illicit morphine (42%), cannabis (23%) and methamphetamine (36%).

When reviewing rates of reported driving soon after consuming an illicit drug over time, one of the more notable changes was the overall reduction in use of illicit methadone. In 2007, 50% of participants reporting recent driving had done so within one hour of consuming illicit methadone syrup. By 2008, this had decreased to 22%, and since this time has ranged between 12% and 35%.

Use of illicit morphine in the context of drug driving remained relatively stable between 2007 and 2011, ranging between 24% and 42%. In 2012, this decreased to 18%, however, a dramatic increase was reported in 2013, with 68% of recent drivers reporting driving within one hour of consuming illicit morphine in the last six months ($\chi^2(1_{n=64})=14.13$, $p<0.001$). In 2014, this rate decreased to pre-2012 levels, with 42% reporting use of illicit morphine prior to driving in the preceding six months.

Use of methamphetamine has also been variable: between 2008 and 2012 the rate of use prior to driving has ranged between 7% and 40% of participants. In 2013, this rate increased to 48% (15% in 2012: $\chi^2(1_{n=64})=6.74$, $p=0.009$). In 2014, 36% of participants reported recent use of methamphetamine prior to driving.

Given the overall relatively stable and high rates of driving under the influence of drugs in the past eight cohorts, it is important to monitor changes in such behaviour in future PWID cohorts as roadside drug testing and drug driving education campaigns are increasingly implemented in the state.

Roadside drug testing was introduced in Tasmania in 2005. Drivers who are selected for this are required to provide a saliva sample, which is then analysed, returning a result in approximately five minutes. Drivers who test positive are then requested to provide a blood sample for confirmation of this result. In Tasmania, drivers are typically tested for cannabis, amphetamine and MDMA.

[23] Note that this includes prescription drugs but only if they were not prescribed to the individual using them.

Table 44: Proportion of PWID driving a car in the preceding six months that had driven soon after using non-prescription drugs, 2007-2014

	2007		2008		2009		2010		2011		2012		2013		*2014*	
	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	n	*%*	*n*
Drove a vehicle in last 6months	57	*57*	64	*64*	65	*65*	59	*59*	63	*60*	64	*68*	55	*54*	58	*53*
Of these:																
% driven within 1 hour of consuming illicit drugs *(2007 to 2013)*	74	*42*	64	*41*	78	*51*	73	*43*	67	*40*	67	*33*	57	*31*		
% driven after consuming illicit drugs *(2014)*															85	*34*
Opioids																
Heroin	-	-	-	-	-	-	-	-	3	*1*	0	*0*	6	*2*	-	-
Methadone (illicit)	50	*21*	22	*9*	18	*9*	35	*15*	15	*6*	33	*11*	19	*6*	19	*10*
Morphine (illicit)	33	*14*	42	*17*	24	*12*	30	*13*	33	*13*	18	*6*	68	*21*	42	*22*
Methamphetamine																
(any)	40	*17*	7	*3*	25	*13*	12	*5*	20	*8*	15	*5*	48	*15*	36	*19*
Powder	36	*15*	5	*2*	16	*8*	12	*5*	15	*6*	12	*4*	35	*11*	25	*13*
Base	5	*2*	-	-	10	*5*	-	-	3	*1*	3	*1*	6	*2*	4	*2*
Crystal/ice	5	*2*	2	*1*	-	-	-	-	3	*1*	0	*0*	29	*9*	19	*10*
Cannabis	67	*28*	56	*24*	51	*26*	37	*16*	35	*14*	58	*19*	65	*20*	23	*12*
Benzodiazepines	33	*14*	22	*9*	6	*3*	9	*4*	20	*8*	12	*4*	29	*9*	15	*8*
Ecstasy	-	-	-	-	2	*4*	2	*1*	-	-	0	*0*	6	*2*	2	*1*

Source: IDRS PWID interviews

Note: Participants were asked whether they had driven within 1 hour of consuming illicit drugs in the 2007-2013 IDRS interviews, whereas in the 2014 IDRS interview participants were asked whether they had driven after consuming illicit drugs. As such, these numbers are not directly comparable.

7 LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH DRUG USE

Key Points:

- One-third of participants had been arrested in the preceding 12 months, most commonly for property crimes.

Tasmania Police arrests

- The number of opioid-related arrests decreased between 2012/13 and 2013/14, from 18 to 11;
- The number of methamphetamine-related arrests decreased between 2012/13 and 2013/14 from 125 to 63; and
- The number of cannabis-related arrests has been decreasing since 2010/11, from 1,767 to 918 in 2013/14.

Drug-related charges in Tasmanian courts

- Since 2010/11, the number of individuals before the Hobart Magistrates Court for alleged dealing and trafficking, cultivation, and possession charges decreased; and
- The number of individuals incarcerated at Hobart Prison in relation to drug offences, and the number of offences amongst these individuals, increased between 2012/13 and 2013/14.

7.1 Reports of criminal activity among PWID participants

One-third of participants self-reported they had been arrested in the preceding 12 months (35%) (Table 45). Property crimes were the most commonly cited (47%), followed by use and/or possession of drugs (18%). The proportion of participants reporting a recent arrest for a property crime remained relatively stable between 2004 and 2012, ranging between 14% and 29%, however in 2013, this rate increased to 50% (14% in 2012: $\chi^2(1_{n=81})=9.40$, p=0.002). In 2014, this higher rate has remained unchanged (47%). Similarly, the rate of participants reporting recent arrest for a driving offence has remained relatively low, ranging between 6% and 12% between 2004 and 2014, with the exception of 2013, when 36% of recent arrests were associated with a driving offence.

Participants were asked to comment on the frequency of any criminal activity in the month preceding the interview. Among those reporting involvement in property crimes (n=26), 42% (n=11) noted such activity occurring less than weekly; 31% (n=8) more than once per week (but less than daily); and 19% (n=5) daily.

One-third of participants reported dealing drugs in the month preceding the interview (32%, n=32). Amongst this group, participants reported dealing drugs infrequently, with 56% (n=18) doing so less than once per week. Small proportions reported dealing drugs on a weekly basis (9%, n=3), more than weekly (but less than daily) (19%, n=6) and daily 16% (n=5).

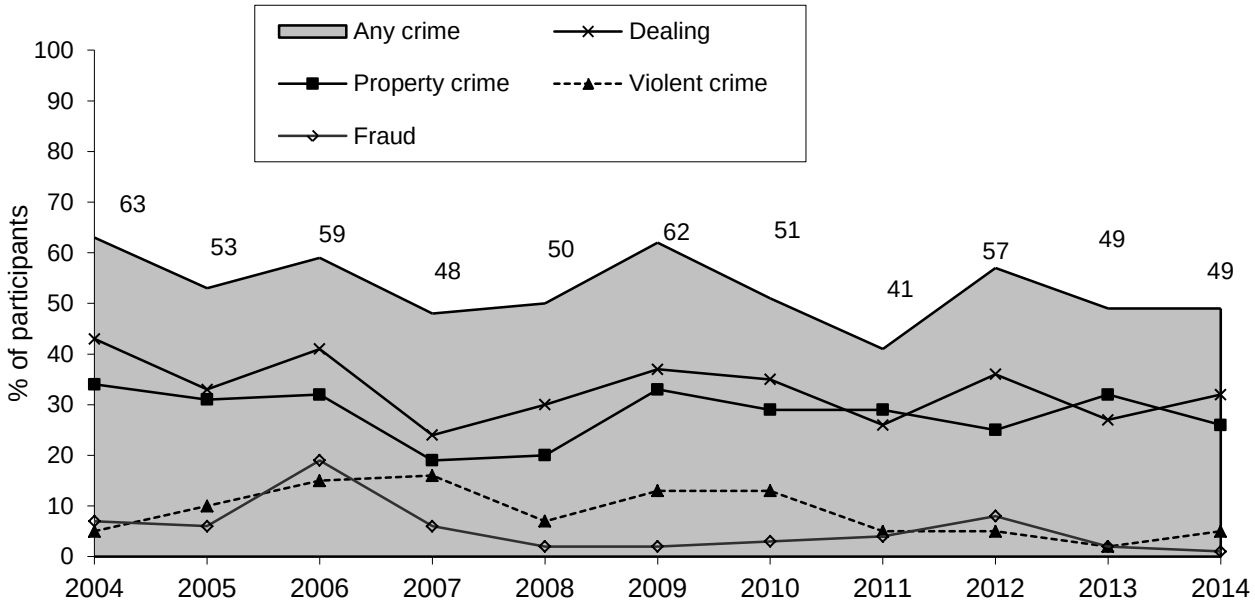
The rate of participants self-reporting involvement in any criminal activity in the month preceding the interview has remained stable in most years, ranging between 48% and 63% since 2004, with the exception of 2011 (41%) (Figure 89). It should be noted that these fluctuations are within the range expected for sampling variability.

Table 45: Self-reported arrests among PWID, 2004-2014

Activity	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %
% arrested last 12 months	51	47	55	46	47	49	47	34	37	39	35
% arrested for:											
Property crime	29	16	16	19	20	23	20	15	14	50	47
Use/possession-drugs	9	5	5	2	10	4	9	4	8	10	18
Violent crime	9	11	16	9	8	10	19	4	7	14	3
Fraud	2	1	3	2	1	2	0	1	-	-	-
Dealing/trafficking	1	2	3	1	0	4	2	1	4	2	3
Driving offence	6	11	10	6	10	12	6	7	11	36	12
Alcohol and driving	1	0	0	6	1	5	5	1	4	2	3
Drugs and driving	2	0	1	6	1	2	2	5	6	5	12
Use/possession-weapons˜	-	-	-	-	2	5	2	-	-	2	6
Other reason	14	16	22	17	11	9	6	5	5	12	18

Source: IDRS PWID interviews
˜ This response was only included in the 2008-2014 studies

Figure 89: Self-reported criminal activity in the preceding month amongst PWID, 2004-2014



Source: IDRS PWID interviews

7.2 Arrests

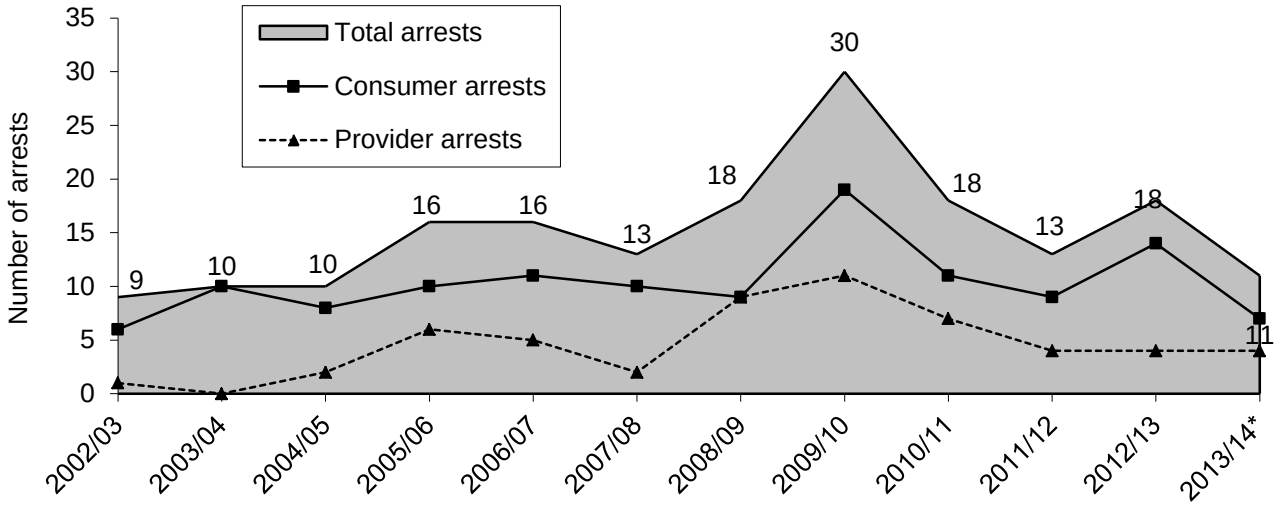
Since 2000, Tasmania has had a drug diversion program (the Illicit Drug Diversion Initiative). This diversion model encompasses individuals who have been apprehended for no more than three offences in the past ten years, and follows a three-tiered approach to diversion. Individuals with a first minor cannabis offence are cautioned and provided with health and legal information, as well as contact details of referral and treatment services, and do not receive any criminal record. Second-time offenders are cautioned and diverted into a brief face-to-face intervention with a health professional. Again, there is no criminal conviction; however, if they fail to attend the brief intervention the individual is prosecuted for the drug offence. Third-time offenders are cautioned and diverted directly to assessment and treatment through the Department of Health and Human Services, Alcohol and Drugs Service. Charges are not pursued providing there is attendance and compliance with the requirements of treatment as assessed. In the case of a first offence with an

illicit drug other than cannabis, individuals are immediately diverted to the third tier of diversion (as per third time cannabis offenders). As such, while diversions may be employed for consumer offences for any illicit drug, as the majority of diversions involve cannabis consumers, data from the Illicit Drug Diversion Initiative (IDDI) are summarised in the cannabis arrests section below (Section 7.2.4).

7.2.1 Heroin and other opioids

Since 2002/03, the number of arrests relating to opioids (including heroin and other narcotics[24]) has remained relatively small and stable. With the exception of 2009/10 (30 such arrests), the number of arrests fluctuated at around 13 cases per annum (range 9-18) (Figure 90).

Figure 90: Number of arrests for opioid-related offences in Tasmania, 2003/04-2013/14



Source: Australian Illicit Drug Reports 1997/98-2001/02, Australian Bureau of Criminal Intelligence; Illicit Drug Data report 2002/03- 2008/09, Australian Crime Commission; and Tasmania Police State Intelligence Services State-wide Illicit Drug Reports

***** 2013/14 data are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report and ACC-IDDI due to differences in counting rules

Note: Counting rules for arrests prior to 2002/03 differ from those applied currently, so these years are not directly comparable. Arrests for 2005/06 were only reported to the ACC for part of the financial year

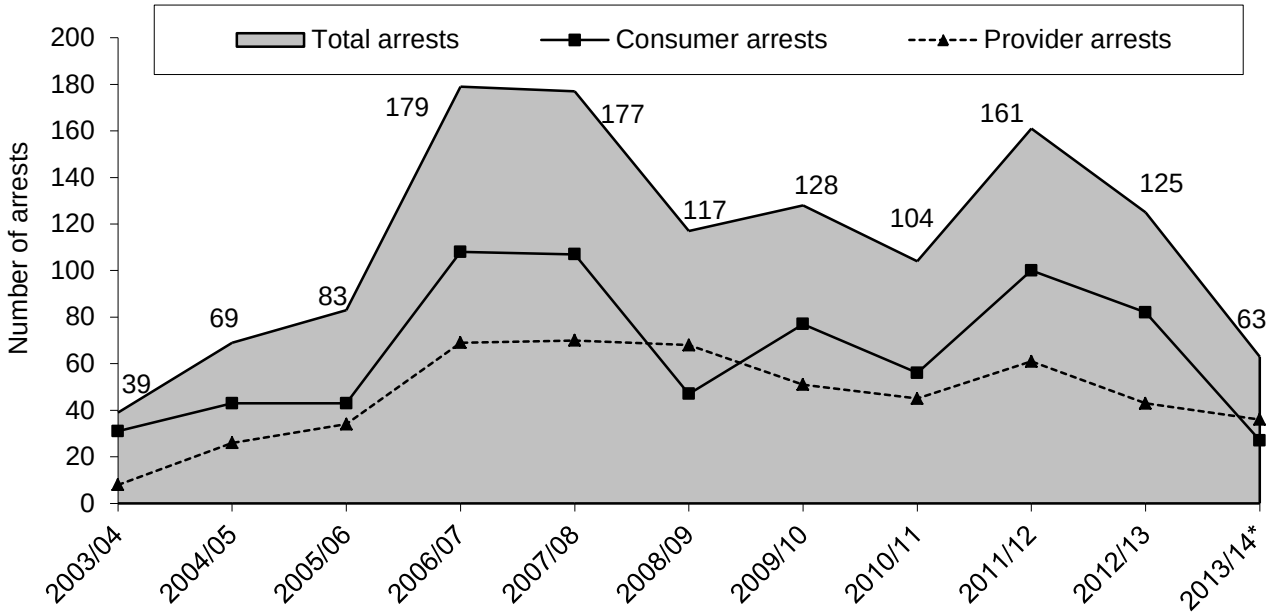
7.2.2 Methamphetamine

Arrest data for methamphetamine-related offences indicate a marked increase in the total number of arrests in 2006/07 and 2007/08 (177-179 arrests) relative to previous years (39-83 arrests) (Figure 91). While a reduced number of arrests was reported between 2008/09 and 2010/11 (104-128 arrests) an increase in the total number of arrests was reported in 2011/12 (161 arrests). This increase was largely attributable to an increase in the number of consumer arrests, with 100 arrests reported compared to 56 in 2010/11. Since this time, arrests in relation to methamphetamine have been in decline, with 125 arrests (82 consumer, 43 provider) in 2012/13, and 63 arrests in 2013/14 (27 consumer and 36 provider). It is important to note that these data are preliminary and subject to revision (totals may differ from those reported in the Department of Police and Emergency

[24] For recording purposes, Tasmania Police class any Schedule 8 drug as 'Narcotic'. Schedule 8 drugs are 'Drugs of Addiction'.

Management annual report due to differences in counting rules), and as such, care should be taken when interpreting it.

Figure 91: Number of arrests for methamphetamine related offences in Tasmania, 2003/04-2013/14



Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

* 2013/14 data is preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules. Cases here relate to both arrest and summons charges for methamphetamine-related offences

Note: 'Consumer' refers to persons charged with use-type offences (e.g. possession, administration), while 'provider' refers to persons charged with supply-type offences (e.g. supply, cultivation or manufacture). Where a person has been charged with multiple offences within a category, that person is only counted once in these statistics. Note, Total arrests includes those offenders whose consumer/provider status was not stated, so total may exceed the sum of the consumer and provider arrests

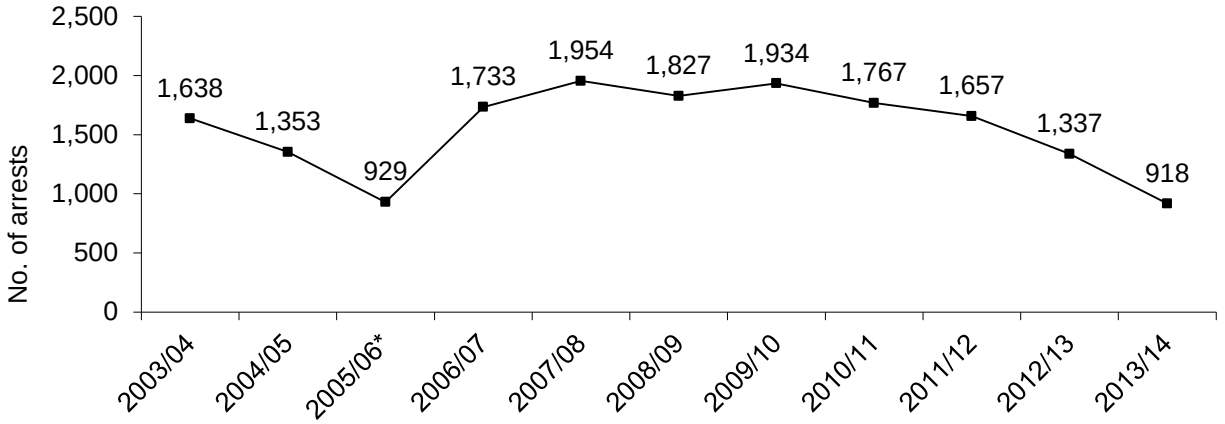
7.2.3 Cocaine

Arrests for cocaine-related offences in Tasmania have been infrequent. In 2013/14, just one arrest was made in relation to cocaine. Between 2003/04 and 2012/13, the number of arrest relating to cocaine offences ranged between none and three (Australian Bureau of Criminal Intelligence, 2001; Australian Crime Commission, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 & 2014; and State Intelligence Services, Tasmania).

7.2.4 Cannabis

Figure 92 shows the number of cannabis-related arrests made by Tasmania Police between 2003/04 and 2013/14. Cautions and arrests relating to cannabis declined to 929 cases in 2005/06 (although arrests for 2005/06 were only reported to the ACC for part of the financial year) from 1,638 in 2003/04. A substantial increase in cannabis-related arrests was observed in 2006/07 and rates remained relatively stable until 2010/11. Since this time, the number of arrests related to cannabis has declined, with 918 reported for the 2013/14 financial year. It is important to note that these data are preliminary and subject to revision (totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules), and as such, care should be taken when interpreting it.

Figure 92: Number of arrests (including cautions and diversions) for cannabis-related offences in Tasmania, 2003/04-2013/14



Source: Australian Crime Commission and State Intelligence Services, Tasmania Police
*Arrests for 2005/06 were only reported to the ACC for part of the financial year
Note: 2013/14 data were provided by State Intelligence Services and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

The Tasmanian Illicit Drug Diversion Initiative, which primarily, but not exclusively, relates to cannabis consumer offences, has been well supported by police, with well in excess of 1,000 diversions made per annum between 2003/04 and 2006/07 (Table 46). A notable increase in diversions was apparent in 2007/08 (1,681 diversions) with this level maintained in the subsequent two reporting periods (1,528-1,609). There was a reduction in the total number of diversions between 2009/10 (1,609 diversions) and 2013/14 (690 diversions) and in the number of second-level and third-level diversions (to health interventions) (307 in 2011/12 versus 205 in 2013/14).

The reductions observed in 2010/11 were in part due to a change in the way IDDI cautions and diversions were made: at the end of 2010, following advice from the Solicitor General, Tasmania Police made a policy decision that minor drug offenders under the age of 18 years would be dealt with in accordance with the *Youth Justice Act 1997* and encouraged to access appropriate health interventions, but would not be included in IDDI. As a result, data from the second half of the 2010/11 does not include persons less than 18 years of age.

Table 46: Drug diversions or cautions issued statewide by Tasmania Police, 2003/04-2013/14

	2003 /04	2004 /05	2005 /06*	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14
Number cautions/ diversions	1,398	1,330	1,158	1,361	1,681	1,528	1,609	1,132	869	778	690
No. diverted to health intervention	179	365	236	369	634	536	615	413	307	260	205

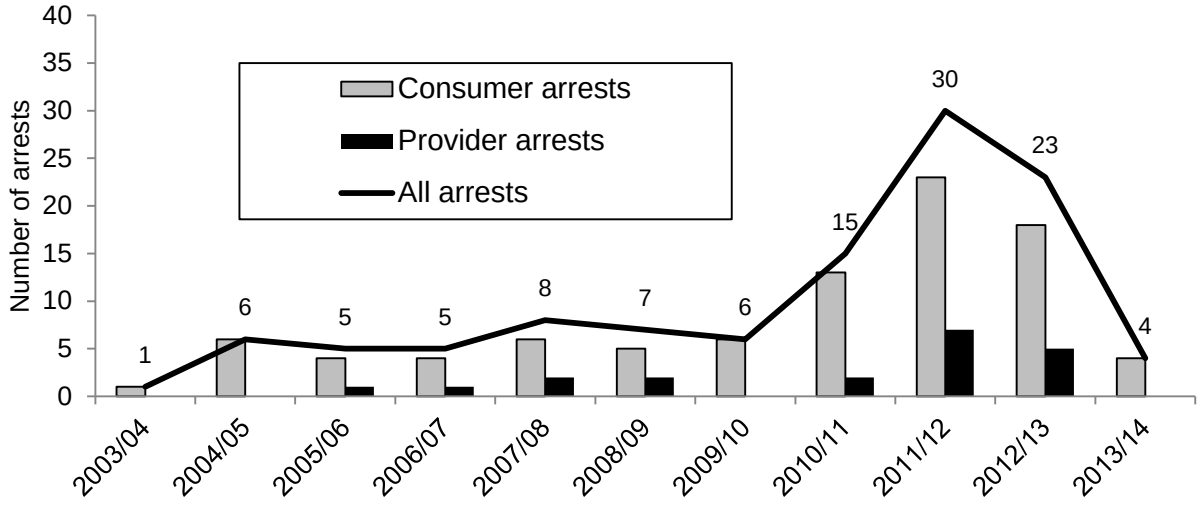
Source: Alcohol and Drug Services, Tasmanian Department of Health and Human Services

7.2.5 Benzodiazepines

Between 2003/04 and 2011/12, police arrests related to benzodiazepines increased, albeit involving small numbers. In 2003/04, just one arrest was reported; this subsequently increased to 30 arrests

in 2011/12. Subsequently, the number of arrests has decreased, with just four reported for 2013/14. Consumer-type offences have made up the bulk of these arrests each year (Figure 93).

Figure 93: Number of arrests for benzodiazepine-related offences in Tasmania, 2003/04-2013/14



Source: Tasmania Police
Note: 2013/14 data were provided by State Intelligence Services and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

7.2.6 Drug-Related Charges in Tasmanian Courts

There has been a downward trend in the total number of drug-related offences over the past three years (Figure 94). This decline is largely due to a decrease in the number of offences relating to the possession/use of illicit drugs. In 2013/14, the number of individuals before the Hobart magistrates court (248 individuals) was relatively stable in comparison to 2012/13 (271 individuals). Data relating to drug-related offences before the Supreme Court were not available for inclusion in the present report (Table 47).

The number of individuals incarcerated at Hobart Prison in relation to drug offences in 2013/14 (93 individuals) was considerably higher compared to 2012/13 (47 individuals), as was the number of offences among those incarcerated (217 in 2013/14 compared to 111 in 2012/13) (Table 47).

Table 47: Number of individuals before Tasmanian courts or imprisoned on drug charges, 2004/05-2013/14

	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14
HOBART MAGISTRATES COURT										
Number of individuals before the court for:										
(alleged number of offences in parentheses)										
Import/export of illicit drugs	0	1 (1)	0	1 (1)	3 (4)	1 (1)	3 (3)	6 (13)	2 (6)	4(6)
Deal or traffic in illicit drugs commercial quantity	17 (20)	22 (25)	21 (25)	34 (42)	29 (30)	17 (24)	24 (28)	28 (28)	28 (30)	26 (34)
Deal or traffic in illicit drugs non-commercial quantity	42 (123)	47 (110)	48 (108)	34 (68)	68 (126)	91 (172)	90 (173)	62 (128)	37 (103)	49 (98)
Manufacture of illicit drugs	3 (4)	1 (2)	0	1 (1)	0	0	3 (4)	1 (3)	0	1 (1)
Cultivation of illicit drugs	86 (105)	68 (78)	90 (104)	61 (77)	85 (100)	89 (99)	107 (142)	84 (103)	73 (88)	71 (79)
Possession of illicit drug	106 (564)	91 (440)	120 (561)	129 (494)	151 (653)	159 (677)	188 (843)	179 (746)	116 (661)	90 (493)
Use of illicit drug	2 (39)	2 (41)	1 (50)	2 (51)	5 (71)	3 (81)	3 (90)	7 (85)	8 (93)	3 (51)
Other Illicit drug offences	12 (135)	15 (129)	10 (150)	18 (151)	19 (184)	16 (169)	15 (214)	18 (191)	7 (150)	5 (127)
HOBART PRISON*										
Number of individuals incarcerated	55	57	56	n/p	84	53	80	81	47	93
Number of offences among those incarcerated	101	117	128	144	166	121	183	237	111	217
OFFENCE BREAKDOWN:										
Grow prohibited plant/substance										
Cultivate a controlled plant	11	4	7	10	11	8	8	14	1	5
Cultivate prohibited plant	2	9	6	1	5	1	0	1	0	0
Possession/use										
Possess a controlled drug	14	8	7	12	18	14	25	32	10	28
Possess a prohibited plant	1	2	3	0	2	1	0	0	0	0
Possess controlled plant or its products	26	36	41	42	38	30	56	70	44	87
Possess prohibited substance	1	3	1	0	1	1	0	0	0	0
Possess restricted substance	2	1	0	0	0	0	1	8	0	0
Possess/Use/Administer a controlled drug	1	2	2	5	0	1	2	10	8	13
Possess narcotic substance	1	0	0	0	0	0	0	0	0	0
Use a controlled drug	7	6	3	9	7	16	16	16	9	21
Use prohibited substance	1	2	0	0	0	0	0	0	0	0
Possess thing used for administration of controlled drug	9	11	15	15	10	12	22	30	12	0

Sources: Department of Public Prosecutions (Supreme Court data); Magistrates Court (Magistrates Court data); Corrective Services (Prison data), Department of Justice

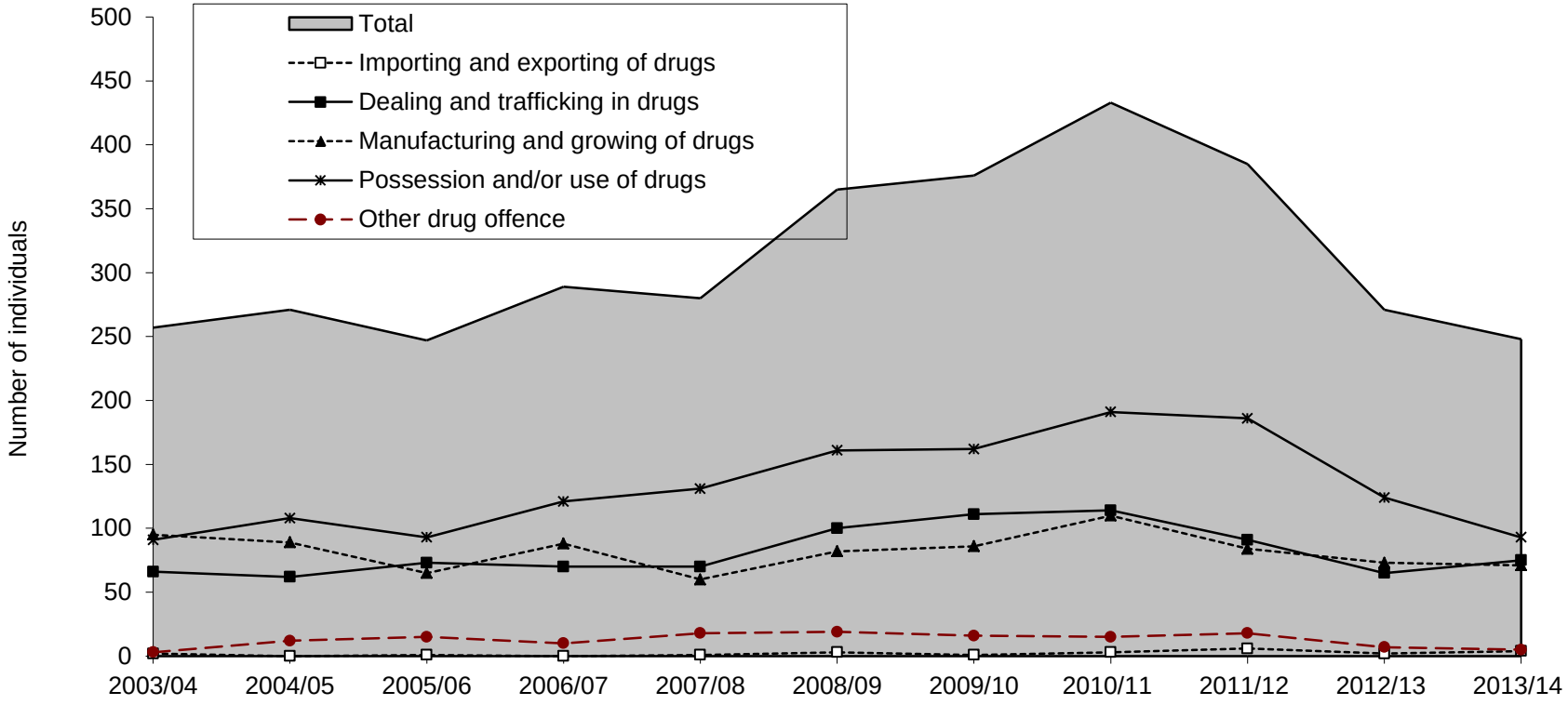
***** This includes all indictable charges under the *Misuse of Drugs Act 2001*, which includes manufacturing a controlled drug for sale, cultivating a controlled plant for sale, possession of thing used in manufacture of a controlled substance for sale, possession of thing used for cultivation of a controlled plant for sale, manufacturing a controlled precursor intended for use in manufacture of controlled drugs for sale, selling a controlled precursor for use in manufacturing a controlled drug, trafficking in controlled substances and controlled drugs

Table 47: Number of individuals before Tasmanian courts or imprisoned on drug charges, 2003/04-2012/13 (continued)

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Prescription offences											
Possess a prescription knowing it to be forged or unlawfully altered	0	0	1	0	0	0	0	0	0	0	0
Unlawfully alter a prescription	0	0	1	0	1	0	0	0	0	0	0
Unlawfully possess blank prescription form	0	0	1	0	0	0	0	0	0	0	0
Utter a prescription knowing it to be forged or unlawfully altered	1	0	3	0	1	1	2	0	10	0	0
Sell/supply narcotic substance											
Supply or Sell raw narcotic or narcotic substance	1	0	0	0	0	0	0	0	0	0	0
Selling/Supplying controlled drug	5	6	4	1	3	8	5	10	13	5	7
Sell/supply prohibited substance/plant											
Make, refine, prepare, sell or supply a prohibited substance	0	1	0	0	0	0	0	0	0	0	0
Sell prohibited substance	0	2	0	1	0	0	1	0	0	0	0
Sell or supply controlled plant	3	3	1	1	4	4	5	10	12	8	12
Sell prohibited plant	0	0	1	0	0	0	0	0	0	0	0
Cultivate a controlled plant for sale	1	0	1	1	1	5	2	0	2	0	0
Possessing thing intended for use in cultivation of controlled plant for sale	1	0	0	0	0	1	1	3	0	0	
Traffic in controlled/prohibited/narcotic substance	1	0	3	0	0	0	0	0	0	0	0
Traffic narcotic substance	7	7	8	22	36	52	22	23	17	13	20
Trafficking in controlled substance											
Traffic prohibited plant											
Traffic in a prohibited plant	4	1	4	1	1	0	0	0	0	0	0
Manufacture a controlled drug for sale											
Manufacturing a controlled drug for sale	0	0	2	1	0	1	0	1	0	0	0
Manufacturing controlled drug	0	0	0	0	1	0	0	0	0	0	0
Possessing thing intended for use in manufacture of controlled substance for sale	1	1	1	1	0	1	0	0	0	0	0
Other											
Fail to comply with *Poisons Act* provisions	2	0	0	0	0	0	0	0	0	0	0
Possess implement Contrary to the Act	1	3	1	0	0	0	0	0	0	0	0
Supplying controlled drug to a child	0	0	1	1	2	0	0	0	0	0	0

Sources: Department of Public Prosecutions (Supreme Court data); Magistrates Court (Magistrates Court data); Corrective Services (Prison data), Department of Justice

Figure 94: Number of individuals before the Hobart Magistrates Court for drug-related offences, 2003/04-2013/14



Source: Hobart Magistrates Court

7.3 Expenditure on illicit drugs

PWID participants were asked how much money they had spent on illicit drugs on the day prior to interview (Table 48). This shows that almost three-fifths of the cohort (63%) spent money on illicit drugs the day prior to the interview. The average amount of money spent amongst the sample was $64 (SD=$84, range $0-450, median $25). Amongst the group that did spend money on illicit drugs on the day prior to the interview, the average expenditure was $101 (SD=$86, range $10-450, median $80).

Table 48: Amount spent on illicit drugs on the day prior to interview, 2005-2014

Amount spent on day prior to interview	2006 N=100 %	2007 N=100 %	2008 N=100 %	2009 N=96 %	2010 N=89 %	2011 N=98 %	2012 N=106 %	2013 N=106 %	2014 N=101
Nothing	45	49	46	34	30	52	29	43	37
<$20	4	4	2	5	5	3	5	2	6
$20-$49	12	19	18	15	15	13	15	15	12
$50-$99	17	13	15	24	21	15	16	16	19
$100-$199	11	12	17	18	21	11	22	17	16
$200-$399	8	2	2	4	6	4	8	6	10
≥$400	3	1	0	0	2	0	6	1	1

Source: IDRS PWID interviews

8 SPECIAL TOPICS OF INTEREST

8.1 Homelessness

A notable proportion of people who are homeless experience higher rates of mental health disorders compared to the general population. Specifically, substance use disorders have been repeatedly recorded as the most common mental health diagnosis amongst homeless populations throughout Western countries (Fazel, Khosla, Doll, & Geddes, 2008). Whilst research examining substance use among homeless populations has been undertaken, very few studies have looked at the relationship of homelessness amongst heavy substance users, including PWID. The aim of this module was to obtain information on the lifetime and recent homelessness experiences amongst PWID.

The lifetime prevalence of homelessness among the 57 participants in the 2014 PWID sample who commented was 72% (Table 49). Of those PWID with a homelessness history, 6% were currently homeless at the time of interview. It is clear that the rate of homelessness among PWID is notably higher than the general Australian population estimate of 0.5% (Australian Bureau of Statistics, 2012). One-fifth of these participants (23%, n=8) were identified to be chronic, long-term rough sleepers, as they reported that they had slept rough or stayed in emergency accommodation every day for at least six months because they had nowhere else to live.

Participants who had experienced homelessness who commented (n=34) reported that the most common factor that contributed to their first episode of homelessness was drug use/dependence (62%), followed by family relationship breakdown (44%), unemployment (18%), friend relationship breakdown (15%) and alcohol use/dependence (12%). Among the participants with an episode of homelessness, two-fifths (42%) reported being homeless for more than three years of their lives (Table 49). Participants also reported heightened exposure to various forms of violence during the last six months of their most recent episode of homelessness, with over one-tenth being mugged (15%), stood over (14%) and physically attacked (10%) during this time.

The most commonly experienced forms of homelessness during both lifetime and the past six months for those who had ever experienced homelessness were couch surfing (85%; 22% respectively), sleeping rough (63%; 13%), boarding rooms/hostels (29%; 7%) and medium/long term accommodation (22%; 10%) (Table 50). Participants typically first experienced each state of homelessness between 22 and 25 years of age.

Table 49: Homelessness history among people who inject drugs, 2014

	TAS IDRS (N=57) %
Lifetime homelessness history	72 (n=41)
Factors contributing to first episode of homelessness*#	**(n=34)**
Drug use/dependence	62
Relationship breakdown (family)	44
Unemployment	18
Relationship breakdown (friends)	15
Alcohol use/dependence	12
Financial difficulties	9
Domestic violence	9
Mental health problems	6
Physical or sexual abuse	3
Released from prison	3
Gambling	3
Physical health problems	3
Disability	-
Length of time since last homelessness episode*	**(n=32)**
Currently homeless	6
In the past six months	19
7-12 months	6
1-2 years	6
2-5 years	16
More than 5 years	47
Total duration of homelessness over lifetime*	**(n=34)**
Less than six months	12
6-11 months	5
1-2 years	32
3-5 years	24
6-10 years	-
More than 10 years	18
Exposed to violence during last six months of homelessness*	**(n=21)**
Physically attacked	10
Stood over	14
Robbed	5
Mugged	15

Source: IDRS participant interviews
* Among those with a homelessness history
# Multiple responses allowed

Table 50: Proportion of IDRS sample who experienced forms of homelessness, 2014

Forms of Homelessness (n=41)	Ever %	Last six months %	Mean age in years at first episode (range)*
Slept rough	63	13	22 (11-49)
Crisis or emergency accommodation	17	2	22 (11-38)
Medium or long term accommodation	22	10	25 (12-39)
Lived with relatives, friends or acquaintances (couch surfing)	85	22	24(12-49)
Bordering or rooming houses or hostels (other than on holiday)	29	7	23 (7-44)
Caravan park (other than on holiday)	27	0	22 (13-40)

Source: IDRS participants with a homelessness history
Note: Multiple responses allowed
*Of those who reported this form of homelessness in their lifetime

8.2 Oxycodone use

Over the past decade there has been a considerable rise in the prescribing of pharmaceutical opioids in Australia: between 1992 and 2012, the number of pharmaceutical opioid dispensing episodes in Australia increased 15-fold (Blanch, Perarson, & Haber, 2014). The rise in opioid prescriptions – including oxycodone - has seen a concurrent increase in extra-medical use of these medications among samples of people who inject drugs. This includes tampering with opioid medications (e.g. crushing, chewing, snorting, smoking, injecting or dissolving/drinking opioid medications intended for oral administration; (Katz et al., 2011) to allow a larger quantity of the active ingredient to become available and resulting in increased euphoric effects.

In response, pharmaceutical companies have begun developing formulations that are less prone to tampering. Oxycodone is a semi-synthetic opioid agonist prescribed for the treatment of moderate to severe chronic pain. It is available in eight different products in Australia, with OxyContin® being the most frequently prescribed controlled release formulation. A new tamper resistant formulation of controlled release oxycodone hydrochloride tablets (Reformulated OxyContin®) were released onto the Australian market in April 2014. The tablets are designed to be bioequivalent to the original formulation, but employ a controlled release technology (that makes them difficult to crush) with a hydro-gelling matrix (so the tablet develops into a viscous gel when dissolved in water) (Sellers et al., 2013). Early U.S. surveillance of the reformulation suggests that there have been reductions in misuse ((Butler et al., 2013; Havens, Leukefeld, Deveaugh-Geiss, Coplan, & Chilcoat, 2014), street price (Sellers, Perrino, Colucci, & Harris, 2013) and OxyContin® poisonings (Severtson et al., 2013).

Post-marketing surveillance of the new formulation is currently underway in Australia , and early findings have indicated that there has been a decline in national pharmacy sales of 80mg OxyContin® (the dose most commonly used and injected among people who inject drugs), as well as a reduction in prevalence of overall use and injection, street price and attractiveness for misuse via tampering among a prospective cohort of people who tamper with pharmaceutical opioids (Degenhardt et al., in press; Larance et al., submitted)

Given the concerns regarding oxycodone and the changes in the types of oxycodone available, the aim of the oxycodone module was to examine the use and misuse of oxycodone products. Participants were asked about their use of the original OxyContin®, in addition to the Reformulated OxyContin®. Participants were asked about their use of Original OxyContin® and Reformulated OxyContin®. Of those who commented (N=91), three-quarters (75%) reported ever using any form of oxycodone. Of those who reported lifetime use of oxycodone (N=68), the majority (59%) reported

recent use of Original OxyContin®, followed by Endone® (18%) (Table 51). Only nine participants reported use of Reformulated OxyContin®. As noted in Section 4.6.2, there was a trend towards decreased use of illicit oxycodone in the preceding six months compared to previous IDRS cohorts (2014: 47% versus 2013: 62%), and a decrease in frequency of use (2014: 6 days versus 2013: 18 days).

Nine KE in the current study commented on use of oxycodone, all of whom noted a decrease in use in the preceding few months (although all reported that some clients were still using oxycodone), as well as decreased rates of injection (see Section 4.6.2), with some consumers swapping to oral administration. KE commented that there was generally widespread awareness of the release of the reformulated product, with considerable conjecture amongst clients as to whether the reformulation could be prepared for intravenous use, and indirect anecdotal reports 'successful' tampering with the product. KE noted that clients reported an increase in price for any original product which could be sourced (approximately $2 per mg) whilst the price of the reformulated product was unknown or yet to be established (see Section 5.5.1). Whilst several KE noted that a number of consumers had switched from oxycodone to morphine, the rates of recent morphine use amongst the 2013 and 2014 IDRS cohorts are similar (66% versus 71%, respectively), as is the median frequency of use (48 days for both cohorts) (see Section 4.6.1).

Table 51: Lifetime and recent use of oxycodone (any form) among PWID, 2014

	TAS IDRS (N=91) %
Ever used oxycodone	75 (n=68)
Recent use of oxycodone[*] (any form):	**N=68**
% Endone® [#]	18
% Original OxyContin®	59
% Reformulation OxyContin®	14
% OxyNorm® tabs	2
% OxyNorm® liquid	-
% OxyNorm® Solution	2
% Targin®	-
% Proladone®	-

Source: IDRS PWID interviews
[*] Among those who reported ever using oxycodone
[#] Note that only 63 participants responded to this item

Please refer to Degenhardt, Larance and colleagues for further information on changes in use and misuse of oxycodone products following the introduction of Reformulated OxyContin®, as monitored by the National Opioid Medications Abuse Deterrence (NOMAD) study.

8.3 Chronic Conditions

People who inject drugs are an ageing cohort so to develop a better understanding of the health issues they now face, questions were included in the 2014 IDRS on the lifetime diagnosis of chronic conditions and how often they were using the various health services.

Of those who commented (n=68), one-third (34%) reported a lifetime diagnosis of asthma: four-fifths of these participants (81%) reporting they either still had the condition or received treatment for the condition in the last 12 months (Table 52). Nearly two-fifths reported lifetime liver disease (37%)

however, only one-tenth (12%) of these participants still had the condition or received treatment for the condition in the last 12 months. One-fifth (19%) had ever experienced gout, rheumatism, and/or arthritis, with one-third of these participants (31%) experiencing the condition or receiving treatment for it in the last year. Rates of other chronic condition diagnosis were low (≤12%).

Table 52: Lifetime and recent diagnosis of chronic conditions and treatment received in the last 12 months, 2014

	TAS IDRS (N=68) %
Asthma	
Lifetime diagnosis	34
Had condition or received treatment last 12 months*	81
Cancer	
Lifetime diagnosis	7
Had condition or received treatment last 12 months*	100
Stroke	
Lifetime diagnosis	0
Had condition or received treatment last 12 months*	0
Heart/circulatory condition	
Lifetime diagnosis	9
Had condition or received treatment last 12 months*	80
Gout, rheumatism, arthritis	
Lifetime diagnosis	19
Had condition or received treatment last 12 months*	31
Diabetes/high blood sugar levels	
Lifetime diagnosis	11
Had condition or received treatment last 12 months*	86
Liver disease	
Lifetime diagnosis	37
Had condition or received treatment last 12 months*	12
Respiratory disease	
Lifetime diagnosis	12
Had condition or received treatment last 12 months*	63
Skin problems	
Lifetime diagnosis	6
Had condition or received treatment last 12 months*	50

Source: IDRS PWID interviews
*Among those with a lifetime diagnosis of the chronic condition

Participants were also asked how often they had a visited a health service in the past 12 months (Table 53). Four-fifths of the sample who commented (83%) had seen a general practitioner in the past 12 months on a median of 12 occasions, equating to one visit per month. One-third of the sample (31%) had been admitted to hospital and one-fifth (23%) had been attended by an

ambulance. Accessing drug and alcohol-related services were reported by a significant minority, with two-fifths (38%) seeing an OST doctor and one-fifth (20%) seeing a drug and alcohol counsellor. Less than one-fifth (17%) had seen a psychologist, with only 14% reporting recent access of psychiatric services.

Table 53: Median number of days visited a health service in the past 12 months among PWID who visited the health service, 2014

	TAS IDRS (N=64)	
	% Seen Service (last 12 months)	Median number of visits for those who attended (range)
General practitioner	83	12 (1-180)
OST doctor	38	9 (1-52)
Drug and alcohol counsellor	20	4 (1-52)
Psychiatrist	14	6 (1-12)
Specialist doctor	11	2 (1-5)
Psychologist	17	8 (1-26)
Social or welfare worker	13	6 (1-48)
Dentist	38	1 (1-10)
Other health professional	11	6 (1-40)
Attended by an ambulance	23	1 (1-10)
Admitted to hospital	31	2 (1-9)
Outpatient clinic	22	3 (1-52)

Source: IDRS PWID interviews

9 IMPLICATIONS

The findings of the Tasmanian 2014 IDRS suggest the following areas for further investigation and possible consideration in policy.

1. Roll-out of take-home naloxone program in Tasmania

In 2012, a take-home naloxone program commenced in the ACT through which naloxone was made available to peers and family members of people who inject drugs for the reversal of opioid overdose as part of a comprehensive overdose response package. The intervention includes an education program with subsequent dispensing of the naloxone.

In Tasmania in 2010, the rate of accidental opioid-related deaths per million population was 34. In addition, amongst the local 2014 IDRS sample, almost one-third reported ever experiencing a non-fatal opioid overdose, and 5% had experienced such an event in the preceding 12 months. Participants were overwhelmingly supportive of such a program being introduced locally. Other Australian jurisdictions such as the ACT and NSW have already established such programs, as they have been recognised as an effective way to reduce opioid overdose deaths. The Tasmanian Department of Health and Human Services, in conjunction with NGOs, should ensure the establishment of such a program in Tasmania as a matter of priority. This has also been recognised in the Budget Priorities Statement 2014-2015 published by Alcohol, Tobacco & other Drugs Council Tasmania Inc.

2. Monitoring the impact of introducing a tamper-resistant oxycodone formulation

Alongside morphine, oxycodone is one of the main pharmaceutical opioids illicitly used and injected by IDRS cohorts. However, there was a trend towards a decline in recent illicit oxycodone use amongst the 2014 IDRS sample compared to the 2013 sample (47% versus 61%, respectively) and earlier samples, coupled with a lower frequency of use (median of 6 days versus 15 days in the past six months) and lower rates of injection (46% versus 59%). A 'tamper-resistant' controlled release oxycodone product was released in Australia as of April 1, 2014 to replace the original formulation. Early findings from post-marketing surveillance research have indicated that there has been a decline in national pharmacy sales of 80mg product (the dose most commonly used and injected among people who inject drugs), as well as a reduction in prevalence of overall use and injection, street price and attractiveness for misuse via tampering among a prospective cohort of people who tamper with pharmaceutical opioids (Degenhardt et al., in press. IDRS interviews were conducted in June, 2015, two months post-introduction of the reformulation. However, the decline in use evident amongst the sample could reflect an early shift in the drug market and patterns of use in response to the reformulated product. There was no significant increase in the number of participants reporting recent use of heroin or other pharmaceutical opioids, suggesting that the introduction of the reformulation had not forced greater uptake of other drugs, nor was there a change in treatment service engagement, although such conclusions are preliminary given the very brief period between the introduction of the reformulation and data collection. KE were unanimous in reporting decreased oxycodone use and injection amongst clients although, in contrast to the present findings, several noted a change in preference from oxycodone to morphine post-reformulation introduction amongst some clients. Given the high rates of pharmaceutical opioid misuse (particularly oxycodone misuse) amongst the Tasmanian IDRS cohort and the potential impact of a tamper-resistant formulation, continued monitoring of oxycodone use and tampering and other pharmaceutical opioid use is crucial to determine the longer-term efficacy of this strategy and ensure timely responses to any unanticipated consequences of this change in the drug market.

A number of KE reported actively notifying and educating clients regarding the change in formulation and potential hazards of tampering. The reformulated tablets are designed to be bioequivalent to the original formulation, but employ a controlled release technology (that makes them difficult to crush) with a hydro-gelling matrix (so the tablet develops into a viscous gel when

dissolved in water) (Sellers et al., 2013). Frontline workers need to continue to be aware of these issues and to implement harm reduction interventions with potential injecting consumers of this drug, as the acute and long-term consequences of tampering with the reformulated product in regards to injecting-related injuries and diseases are not known.

3. Monitoring and application of region-specific drug trend information

In regional Tasmania, as in many other rural and regional jurisdictions nationally, there have been many anecdotal reports regarding increased use and availability of crystal methamphetamine. Through media and public meetings, calls have been made for enhanced treatment services and increased policing, with the goal of reducing use of this drug and harms associated with it. However, to date, there has been a lack of any rigorous research conducted in these regional areas of Tasmania to support these claims.

The IDRS methodology was developed to identify new and emerging trends in drug markets and associated harms, so is well placed to inform the public debate regarding increasing use of crystal methamphetamine in these areas. Pilot studies extending the IDRS into the north and north-west regions of Tasmania were conducted in 2003 and 2006 (Bruno, 2004a; de Graaff & Bruno 2007b), which identified trends in use, availability and purity of drugs that were divergent from trends reported for Hobart. The IDRS is well-placed to identify drug use trends and related harms in these regions of Tasmania in a timely manner, which would contribute substantially to the ongoing debate regarding the 'ice epidemic'.

4. Proactive harm reduction interventions targeted to injectors of pharmaceuticals

Tasmania, like a number of other regions removed from heroin distribution networks (such as the Northern Territory and New Zealand) has a long-established culture of injection of opioid-based pharmaceuticals. In the 2014 Tasmanian IDRS, high levels of injecting use of morphine and oxycodone have continued (although rates of injecting oxycodone slightly decreased, potentially attributable to the introduction of reformulated tamper-resistant oxycodone). In addition, new formulations of drugs, such as Suboxone sublingual film, potentially introduce new harms to consumers who inject these drugs. As such, research into factors that would reduce the harms associated with these preparations used within the local PWID population, and dissemination of this information to users through continued training of NSP staff and peer groups, are necessary.

Recent Hobart-based studies investigated the efficacy of a range of different filtration methods on samples of morphine and oxycodone tablets. These studies found that the commercially available filters (0.22 μm bacterial filter and 0.45 μm pill filter) dramatically reduced the presence of large particles that may potentially cause harm to the user, and, when used appropriately, do not result in any loss of the active drug (McLean et al., 2009). However, preparation of injections using a sterilising 0.22 μm bacterial filter is a time-consuming process. Evaluation of a new filter that is effective and simplifies the filtering process has commenced in several sites nationally.

In the face of relatively high rates of injection of pharmaceutical opioid tablets and capsules amongst injecting drug users locally and in other Australian jurisdictions, consideration of other effective harm reduction approaches such as trials of injectable opioid treatments warrant renewed attention.

5. Evaluation of the impact of, and further targeting of, drug driving interventions among regular drug consumers, with particular emphasis on exploring trialling a drink-driving court

A substantial proportion of the consumers interviewed in the IDRS study reported driving while affected by drugs (85% of those who had driven in the past six months). This has remained stable across the past seven IDRS PWID cohorts, despite the implementation of roadside drug-testing by Tasmania Police and associated driver education campaigns. This suggests that drug-driving

interventions may require further monitoring and evaluation, particularly where this information could be used to tailor campaigns to this particularly risky demographic. In late 2013, the Chief Magistrate initiated a project to explore alternative therapeutic justice options such as the establishment of Drink Driving Courts (DDC). Since that time a working group has considered the policy and operational aspects associated with establishing a DDC within Tasmania, with recommendations of trialling such a process. Continued monitoring by the IDRS project of driving under the influence of substances, particularly alcohol, will assist in building evidence regarding the effectiveness of the DDC.

REFERENCES

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition).* Washington DC: American Psychiatric Association.

Australian Bureau of Statistics (1995). *National Health Survey: SF36 Population Norms, Australia.* Canberra: ABS.

Australian Bureau of Statistics (1998). *Mental Health and Wellbeing: Profile of Adults, Australia 1997.* Canberra: ABS.

Australian Bureau of Statistics (2001). *Information Paper: Use of the Kessler Psychological Distress Scale in ABS Health Surveys, Australia, 2001*. Canberra: ABS.

Australian Bureau of Statistics (2006). *2004-05 National Health Survey: Summary of Results.* Canberra: ABS.

Australian Bureau of Statistics (2009). *National Health Survey: Summary of Results, 2007/08*. Canberra: ABS.

Australian Bureau of Statistics (2012). *Census of population and housing: Estimating homelessness, 2011*. Canberra: ABS.

Australian Crime Commission (2005). *Australian Illicit Drug Report 2003-04*. Canberra: ACC.

Australian Crime Commission (2007). *Australian Illicit Drug Report 2005-06*. Canberra: ACC.

Australian Crime Commission (2008). *Australian Illicit Drug Report 2006-07*. Canberra: ACC.

Australian Crime Commission (2009). *Australian Illicit Drug Report 2007-08*. Canberra: ACC.

Australian Crime Commission (2010). *Australian Illicit Drug Report 2008-09*. Canberra: ACC.

Australian Crime Commission (2011). *Australian Illicit Drug Report 2009-10*. Canberra: ACC.

Australian Crime Commission (2012). *Australian Illicit Drug Report 2010-11*. Canberra: ACC.

Australian Crime Commission (2013). *Australian Illicit Drug Report 2011-12*. Canberra: ACC.

Australian Crime Commission (2014). *Australian Illicit Drug Report 2012-13*. Canberra: ACC.

Australian Institute of Health and Welfare (1999). *1998 National Drug Strategy Household Survey: First Results.* AIHW Cat. No. PHE 15, (Drug Statistics Series). Canberra: AIHW.

Australian Institute of Health and Welfare (2002a). *2001 National Drug Strategy Household Survey: First Results.* AIHW Cat. No. PHE 35, (Drug Statistics Series). Canberra: AIHW.

Australian Institute of Health and Welfare (2002b). *2001 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW Cat. No. PHE 37, (Drug Statistics Series). Canberra: AIHW.

Australian Institute of Health and Welfare (2005a). *2004 National Drug Strategy Household Survey: First Results.* AIHW Cat. No. PHE 57, Drug Statistics Series No. 13. Canberra: AIHW.

Australian Institute of Health and Welfare (2005b). *2004 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW Cat. No. PHE 66, Drug Statistics Series No. 16. Canberra: AIHW.

Australian Institute of Health and Welfare (2008a). *2007 National Drug Strategy Household Survey: First Results.* AIHW Cat. No. PHE 98, Drug Statistics Series No. 20. Canberra: AIHW.

Australian Institute of Health and Welfare (2008b). *2007 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW Cat. No. PHE 102, Drug Statistics Series No. 21. Canberra: AIHW.

Australian Institute of Health and Welfare (2008c). *Alcohol and other drug treatment services in*

Tasmania: Findings from the National Minimum Data Set (NMDS) 2006-07, Drug Statistics Series*.* Canberra: AIHW.

Australian Institute of Health and Welfare (2011). *2010 National Drug Strategy Household Survey Report.* AIHW Cat. No. PHE 145, Drug Statistics Series No. 25. Canberra: AIHW.

Australian Institute of Health and Welfare (2014). *2013 National Drug Strategy Household Survey detailed report.* AIHW Cat. No. PHE 183, Drug Statistics Series No. 28. Canberra: AIHW.

Australian Institute of Health and Welfare (2009). *Alcohol and other drug treatment services in Tasmania: Findings from the National Minimum Data Set (NMDS) 2007-08*, Drug Statistics Series*.* Canberra: AIHW.

Australian Institute of Health and Welfare (2010). *Alcohol and other drug treatment services in Australia 2008–09: report on the National Minimum Data Set.* Drug treatment series no. 10. Cat. no. HSE \92.Canberra: AIHW.

Australian Institute of Health and Welfare (2013). *Alcohol and other drug treatment services in Australia 2011–12*. Drug treatment series 21. Cat. no. HSE139. Canberra: AIHW.

Australian Institute of Health and Welfare (201TS-NMDS Findings: State/Territory Supplementary Tables. http://www.aihw.gov.au/aodts-nmds-supplementary-tables Retrieval date: 18 Jan, 2012.

Australian Institute of Health and Welfare (2014). *Alcohol and other drug treatment services in Australia 2012–13*. Drug treatment series 24. Cat. no. HSE150. Canberra: AIHW

Australian Institute of Health and Welfare 2014. *National opioid pharmacotherapy statistics 2013.* Drug treatment series no. 23. Cat. no. HSE 147. Canberra: AIHW

Babor, T., Higgins-Biddle,J., Saunders, J., Monteiro, M. (2001). *AUDIT – The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care.* Geneva: World Health Organization.

Baldacchino, A., Gilchrist, G., Fleming, R. & Bannister, J. (2010) Guilty until proven innocent: A qualitative study of the management of chronic non-cancer pain among patients with a history of substance abuse. *Addictive Behaviors,* 35**,** 270-272.

Black, E., Roxburgh, A., Degenhardt, L., Bruno, R., Campbell, G., de Graaff, B., Fetherston, J., Kinner, S., Moon, C., Quinn, B., Richardson, M., Sindicich, N. & White, N. (2008) *Australian Drug Trends: Findings from the Illicit Drug Reporting System, 2007.* NDARC Australian Drug Trends Series No. 1. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Blanch, B., Pearson, S.A., & Haber, P. (2014). An overview of the patterns of prescription opioid use, costs and related harms in Australia. *British Journal of Clinical Pharmacology*, 78(5), 1159-1166.

Breen, C., Degenhardt, L., Roxburgh, A., Bruno, R., Duquemin, A., Fetherston, J., Fischer, J., Jenkinson, R., Kinner, S., Longo, M. & Rushforth, C. (2003). *Australian Drug Trends: Findings from the Illicit Drug Reporting System, 2002.* NDARC Monograph No. 50. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Breen, C., Degenhardt, L., Roxburgh, A., Bruno, R., Fetherston, J., Jenkinson, R., Kinner, S., Moon, C., Proudfoot, P., Ward, J. & Weekley, J. (2004). *Australian Drug Trends 2003: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 51. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Brennan, F., Carr, D.B. & Cousins, M. (2007). Pain Management: A Fundamental Human Right. *Anaesthesia & Analgesia*, 105, 205-11.

Bruno, R. (2004a, unpublished). *Status of Drug Use in Tasmania, Second Report*. Hobart: Tasmanian Department of Health and Human Services.

Bruno, R. (2004b, unpublished). *Tasmanian Technical Report: Benzodiazepine and Pharmaceutical*

Misuse and Their Relationship to Crime. Hobart: University of Tasmania.

Bruno, R. (2005). *Tasmanian Drug Trends 2004: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 215. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. (2006). *Tasmanian Drug Trends 2005: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 245. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. (2007). *Benzodiazepine and pharmaceutical opioid misuse and their relationship to crime: An examination of illicit prescription drug markets in Melbourne, Hobart and Darwin. Tasmanian Report.* National Drug Law Enforcement Research Fund Monograph No. 22. Hobart: Commonwealth of Australia

Bruno, R. & McLean, S. (2000). *Tasmanian Drug Trends 1999: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 84. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. & McLean, S. (2001). *Tasmanian Drug Trends 2000: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 109. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. & McLean, S. (2002). *Tasmanian Drug Trends 2001: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 135. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. & McLean, S. (2003). *Tasmanian Drug Trends 2002: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 148. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. & McLean, S. (2004a). *Tasmanian Drug Trends 2003: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 178. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R. & McLean, S. (2004b). *Tasmanian Party Drug Trends 2003: Findings From the Party Drug Initiative (PDI).* NDARC Technical Report No. 186. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bruno, R., Murray, N., McLean, S., de Graaff, B. & Brandon, S. (2008) *Filtering pharmaceutical opioids for injection: What methods are being used and how effective are they?* Paper presented at APSAD Conference, Sydney, 2008.

Butler, S.F., Cassidy, T.A., Chilcoat, H., Black, R.A., Landau, C., Budman, S.H. *et al.* (2013) Abuse rates and routes of administration of reformulated extended-release oxycodone: initial findings from a sentinel surveillance sample of individuals assessed for substance abuse treatment. *Journal of Pain,* 14, 351-358.

Chesher, G.B. (1993). Pharmacology of the sympathomimetic psychostimulants. In: D. Burrows, B. Flaherty & M. MacAvoy (eds.), *Illicit Psychostimulant Use in Australia*. Canberra: Australian Government Publishing Service (pp. 9-30).

Communicable Diseases Network Australia, *National Notifiable Diseases Surveillance System*. Available at: http://www.health.gov.au/pubhlth/cdi/nndss/nndss2.htm

Cormack, S., Faulkner, C., Foster Jones, P. & Greaves, H. (1998). *South Australian Drug Trends 1997: Findings From the Illicit Drug Reporting System (IDRS)*. NDARC Technical Report No. 57. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Darke, S., Kaye, S. & Ross, J. (2001). Geographical injection locations among injecting drug users in Sydney, Australia. *Addiction*, 96, 241-46.

Degenhardt, L. (2001). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Degenhardt, L. (2002). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Degenhardt, L. (2003). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Degenhardt, L., Bruno, R., Ali, R., Lintzeris, N., Farrell, M., and Larance, B. (in press). The introduction of a potentially abuse deterrent oxycodone formulation: early findings from the Australian National Opioid Medication Abuse Deterrence (NOMAD) Study. *Drug and Alcohol Dependence*. In press.

Degenhardt, L., Larance, B., Bruno, R., Lintzeris, N., Ali, R., and Farrell, M. (2014). Evaluating the potential impact of a reformulated version of oxycodone upon tampering, non-adherence and diversion of opioids: The National Opioid Medications Abuse Deterrence (NOMAD) Study Protocol. *Addiction*, 110(2), 226-237.

Degenhardt, L., Kinner, S., Roxburgh, A., Black, E., Bruno, R., Fetherston, J. & Fry, C. (2008). Drug use and risk among regular injecting drug users in Australia: does age make a difference? *Drug and Alcohol Review*, 27 (4), 357-60.

de Graaff, B. & Bruno, R. (2007a). *Tasmanian Drug Trends 2006: Findings from the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 273. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2007b, unpublished). *Tasmanian Statewide Extension of the Illicit Drug Reporting System.* Hobart: University of Tasmania.

de Graaff, B. & Bruno, R. (2008). *Tasmanian Drug Trends 2007: Findings from the Illicit Drug Reporting System (IDRS).* NDARC Australian Drug Trends Series No. 5. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2009). *Tasmanian Drug Trends 2008: Findings from the Illicit Drug Reporting System (IDRS).* NDARC Australian Drug Trends Series No. 23. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2010). *Tasmanian Drug Trends 2009: Findings from the Illicit Drug Reporting System (IDRS)* NDARC, Australian Drug Trends Series No. 41. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2011). *Tasmanian Drug Trends 2010: Findings from the Illicit Drug Reporting System (IDRS)* NDARC, Australian Drug Trends Series No. 59. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2012). *Tasmanian Drug Trends 2011: Findings from the Illicit Drug Reporting System (IDRS)* NDARC, Australian Drug Trends Series No. 77. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2013). Tasmanian Drug Trends 2012. Findings from the Illicit Drug Reporting System (IDRS). *Australian Drug Trends Series No. 95.* Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

de Graaff, B. & Bruno, R. (2014). Tasmanian Drug Trends 2013. Findings from the Illicit Drug Reporting System (IDRS). *Australian Drug Trends Series No. 113.* Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

Doab, A., Treloar, C. & Dore, G. (2005) Knowledge and attitudes about treatment for hepatitis C infection and barriers to treatment among current injection drug users in Australia. *Journal of Clinical and Infectious Diseases*, vol 40, (supp5) ppS313-20.

Dwyer, R. & Rumbold, G. (2000). *Victorian Drug Trends 1999: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 89. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Dwyer, R., Power, R., Topp, L., Maher, L., Jauncey, M., Conroy, A., Kemp, R., Lloyd, B., Najman, J., Walsh, N., Lewis, J., Sweeney, R., Harris, A. & Aitken, C. (2007). *The IRID Project: an exploratory study of non-viral injecting-related injuries and diseases among Australian injecting drug users*. Melbourne: Macfarlane Burnet Institute of Medical Research and Public Health.

English, D., Holman, C., Milne, E., Winter, M., Hulse, G., Codde, J., Bower, C., Corti, C., de Klerk, N. & Knuiman, M. (1995) *The quantification of drug caused morbidity and mortality in Australia.* Canberra: Commonwealth Department of Human Services and Health.

Fazel, S., Khosla, V., Doll, H., & Geddes, J. (2008). The prevalence of mental disorders among the homeless in Western countries: Systematic review and meta-regression analysis. *PLoS Medicine*, 5(12), e225.

Fetherston, J. & Lenton, S. (2006). *West Australian Drug Trends 2005: Findings from the Illicit Drug Reporting System.* NDARC Technical Report No. 252. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Fraser, S., Valentine, K., Treloar, C. & Macmillan, K. (2007). *Methadone Maintenance Treatment in New South Wales and Victoria: Takeaways, diversion and other key issues.* Sydney: National Centre in HIV Social Research, University of New South Wales.

Fry, C. & Bruno, R. (2002). Recent trends in benzodiazepine use among injecting drug users in Victoria and Tasmania. *Drug and Alcohol Review*, 21, 363-7.

Fry, C., Smith, B., Bruno, R., O'Keefe, B. & Miller, P. (2007). *Benzodiazepine and Pharmaceutical Opioid Misuse and their Relationship to Crime: An examination of illicit prescription drug markets in Melbourne, Hobart and Darwin (National Report).* National Drug Law Enforcement Research Fund Monograph No. 21. Commonwealth of Australia.

Glenday, K., Li, J. & Maher, L. (2006). *Australian NSP Survey: Prevalence of HIV, HCV and injecting and sexual behaviour among IDU at Needle and Syringe Programs. National data report 2001-2005.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B., Hall, W. et al. (1995) The Severity of Dependence Scale (SDS): Psychometric properties of the SDS in English and Australian samples of heroin, cocaine and amphetamine users. *Addiction,* 90, 607-614.

Hando, J. & Darke, S. (1998). *New South Wales Drug Trends 1997: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 56. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Hando, J., O'Brien, S., Darke, S., Maher, L. & Hall, W. (1997). *The Illicit Drug Reporting System Trial: Final Report.* NDARC Monograph No. 31. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Hargraves, K. & Lenton, S. (2002). *WA Drug Trends 2001: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 134. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Havens, J.R., Leukefeld, C.G., Deveaugh-Geiss, A.M., Coplan, P., and Chilcoat, H.D. (2014). The impact of a reformulation of extended-release oxycodone designed to deter abuse in a sample of prescription opioid abusers. *Drug and Alcohol Dependence,* 139, 9-17.

Heatherton, T., Kozlowski, L., Frecher, R., Rickert, W. & Robinson, J. (1989) Measuring the heaviness of smoking: using self-reported time to the first cigarette of the day and number of cigarettes smoked per day. *British Journal of Addiction,* 84**,** 791-9.

Heatherton, T., Kozlowski, L., Frecker, R. & Fagerstrom, K. (1991) The Fagerstrom Test for Nicotine Dependence: a revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addiction,* 86**,** 1119-27.

Henry-Edwards, S., Gowing, L., White, J., Ali, R., Bell, J., Brough, R., Lintzeris, N., Ritter, A. & Quigley, A. (2003). *Clinical Guidelines and Procedures for the Use of Methadone in the Maintenance Treatment of Opioid Dependence*. Canberra: National Drug Strategy.

Hulse, G., English, D., Milne, E. & Holman, C. (1999) The quantification of mortality resulting from the regular use of illicit opiates. *Addiction,* 94**,** 221-230.

IBM SPSS Inc. (2013). SPSS for Windows, Release 22.0.0.0, Standard Version.

Intergovernmental Committee on Drugs (2007). *National Pharmacotherapy Policy for People Dependent on Opioids.* Canberra: National Drug Strategy.

Iraurgi, I.C., González, S.F., Lozano R.O., Landabaso V.M. & Jiménez L.J. (2010) Estimation of cutoff for the Severity of Dependence Scale (SDS) for opiate dependence by ROC analysis. *Actas Esp Psiquiatr*, 38(5), 270-7.

Iversen, J., Topp, L. & Maher, L. (2007). *Australian NSP Survey: Prevalence of Injecting and Sexual Behaviour Among IDUs at Needle and Syringe Programs. National Data Report 2002-2006.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Iversen, J., Topp, L. & Maher, L. (2011). *Australian NSP Survey: Prevalence of HIV, HCV and injecting and sexual behaviour among Needle and Syringe Program Attendees: National Data Report 1995-2010.* Sydney: Kirby Institute, University of New South Wales.

Iversen, J. & Maher, L. (2014). *Australian Needle and Syringe Program National Data Report 2009-2013.*Sydney: Kirby Institute, University of New South Wales.

Iversen, J., Deacon, R. & Maher, L. (2008). *Australian NSP Survey: Prevalence of HIV, HCV and Injecting and Sexual Behaviour Among IDUs at Needle and Syringe Programs. National Data Report 2003-2007.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Katz, N., Dart, R. C., Bailey E., Trudeau, J., Osgood, E., & Paillard, F. (2011). Tampering with prescription opioids: nature and extent of the problem, health consequences and solutions. *The American Journal of Drug and Alcohol Abuse,* 37(4), 205-217.

Kessler. R., Andrews, G., Colpe, et al, (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32, 959-956.

Larance, B., Lintzeris, N., Bruno, R., Peacock, A., Cama, E., Kihas, I. *et al.* (submitted). The characteristics of a cohort who tamper with prescribed and diverted opioid medications. *Drug and Alcohol Dependence*.

Lefante, J., Harmon, G., Ashby, K., Barnard, D. & Webber, L. (2005) Use of the SF-8 to assess health-related quality of life for a chronically ill, low-income population participating in the Central Louisiana Medication Access Program. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, 14(3), 665-73.

McKetin, R., Darke, S. & Godycka-Cwirko, K. (1999). *New South Wales Drug Trends 1998: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 72. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

McKetin, R., Darke, S. & Kaye, S. (2000). *New South Wales Drug Trends 1999: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 86. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

McKetin, R., Darke, S., Humeniuk, R., Dwyer, R., Bruno, R., Fleming, J., Kinner, S., Hargraves, K. & Rysavy, P. (2000). *Australian Drug Trends 1999: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 43. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

McLean, S., Bruno, R., Brandon, S. & de Graaff, B (2009) Effect of filtration on morphine and particle content of injections prepared from slow-release oral morphine tablets. *Harm Reduction Journal*, 6(37).

Matthews, A. & Bruno, R. (2005). *Tasmanian Party Drug Trends 2004: Findings From the Party Drug Initiative (PDI).* NDARC Technical Report No. 225. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2006). *Tasmanian Party Drug Trends 2005: Findings From the Party Drug Initiative (PDI).* NDARC Technical Report No. 251. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2007). *Tasmanian Trends in Ecstasy and Related Drug Markets 2006: Findings from the Ecstasy and Related Drugs Reporting System.* NDARC Technical Report No. 281. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2008). *Tasmanian Trends in Ecstasy and Related Drug Markets 2007: Findings From the Ecstasy and Related Drugs Reporting System.* Australian Drug Trends Series No. 14. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2009). *Tasmanian Trends in Ecstasy and Related Drug Markets 2008: Findings From the Ecstasy and Related Drugs Reporting System.* Australian Drug Trends Series No. 32. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2010). *Tasmanian Trends in Ecstasy and Related Drug Markets 2009: Findings From the Ecstasy and Related Drugs Reporting System.* Australian Drug Trends Series No. 50. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. & Bruno, R. (2011). *Tasmanian Trends in Ecstasy and Related Drug Markets 2010: Findings From the Ecstasy and Related Drugs Reporting System.* Australian Drug Trends Series No. 68. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A., & Bruno, R. & Peacock, A. (2012). *Tasmanian Trends in Ecstasy and Related Drug Markets 2011: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 86. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A., & Bruno, R. (2013). *Tasmanian Trends in Ecstasy and Related Drug Markets 2012: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 104. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A., Bruno, R., Nicholls, C. (2014). *Tasmanian Trends in Ecstasy and Related Drug Markets 2013: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 122. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A., Batt, T., & Bruno, R. (2015). *Tasmanian Trends in Ecstasy and Related Drug Markets 2013: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No.140 Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

National Centre in HIV Epidemiology and Clinical Research. (2009). *Australian NSP Survey National Data Report 2004-2008: Prevalence of HIV, HCV and injecting and sexual behaviour among IDUs at Needle and Syringe Programs.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

National Centre in HIV Epidemiology and Clinical Research. (2010). *Australian NSP Survey National Data Report 2005-2009.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Nielsen, S., & Cameron, J. (2009). *Over the counter pain relievers … hidden harms? Results of a web based survey,* Paper presented at the Australian Professional Society on Alcohol and Other Drugs (APSAD) Conference. Darwin, November 2009.

O'Brien, S., Degenhardt, L., Roxburgh, A., Black, E., Bruno, R., Campbell, G., de Graaff, B., Fetherston, J., Jenkinson, R., Kinner, S., Moon, C. & White N. (2007). *Australian Drug Trends 2006: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 60. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Reinert, D.F. & Allen, J.P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism: Clinical and Experimental Research,* 26 (2), 272-9.

Ritter, A. & di Natale, R. (2005). The relationship between take-away methadone policies and methadone diversion. *Drug and Alcohol Review*, 24, 347-52.

Roxburgh, A. & Burns, L. (2010). *Drug-induced deaths in Australia, 2008 Edition*. Sydney: National Drug and Alcohol Research Centre, UNSW.

Roxburgh, A. & Burns, L. (2009). Drug-induced deaths in Australia, 2006 Edition. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns, L. (*2012b*). Drug-induced deaths in Australia, 2009 Edition. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns, L. (*2012c*). *Drug related hospital stays in Australia 1993 to 2009*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns, L. (*in press*). *Drug related hospital stays in Australia 1993 to 2012*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns,L.(*2013a*). *Accidental opioid-induced deaths in Australia, 2009.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns,L.(*2013b*). *Cocaine and methamphetamine related deaths in Australia, 2009.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Roxburgh, A. & Burns, L. (in press) *Drug-related hospital stays in Australia, 1993-2013*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales

Roxburgh, A. and Burns,L.(2014a). *Accidental drug-induced deaths due to opioids in Australia, 2010.* Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Roxburgh, A. and Burns, L (2014). *Cocaine and methamphetamine related drug-induced deaths in Australia, 2010*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Rumbold, G. & Fry, C. (1998). *Victorian Drug Trends 1997: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Technical Report No. 59. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Saunders, J.B., Aasland, O.G., Babor, T.F., de la Fuente, J.R. & Grant, M. (1993). Development of the Alcohol Use Disorders Screening Test (AUDIT). WHO collaborative project on early detection of persons with harmful alcohol consumption. II. *Addiction 88,* 791-804.

Sellers, E.M., Perrino, P.J., Colucci, S.V., & Harris, S.C. (2013). Attractiveness of reformulated Oxycontin® tablets: assessing comparative preferences and tampering potential. *Journal of Psychopharmacology*, 27(9), 808-816.

Severtson, S.G., Bartelson, B.B., Davis, J.M., Munoz, A., Schneider, M.F., Chilcoat, H. et al. (2013) Reduced abuse, therapeutic errors, and diversion following reformulation of extended-release oxycodone in 2010. *Journal of Pain,* 14, 1122-1130.

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

Stafford, J. & Burns, L. (2011). *Australian Drug Trends 2010: Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trends Series No. 55. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J. & Burns, L. (2012). *Australian Drug Trends 2011: Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trends Series. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J. & Burns, L. (2013). Australian Drug Trends 2012. *Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trend Series No. 91. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J. & Burns, L. (2014). *Australian Drug Trends 2013. Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trend Series No. 109. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J., Sindicich, N., Burns, L., Cassar, J., Cogger, S., de Graaff, B., George, J., Moon, C., Phillips, B., Quinn, B. & White, N. (2009) *Australian Drug Trends 2008: Findings from the Illicit Drug Reporting System (IDRS)*. Australian Drug Trends Series. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J., Degenhardt, L., Black, E., Bruno, R., Buckingham, K., Fetherston, J., Jenkinson, R., Kinner, S., Moon, C., Ward, J. & Weekley, J. (2005). *Australian Drug Trends 2004: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 55. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Stafford, J., Degenhardt, L., Black, E., Bruno, R., Buckingham, K., Fetherston, J., Jenkinson, R., Kinner, S., Newman, J. & Weekly, J. (2006). *Australian Drug Trends: Findings from the Illicit Drug Reporting System, 2005.* NDARC Monograph Report No. 59. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Topp, L. & Mattick, R. (1997) Choosing a cut-off on the severity of dependence scale (SDS) for amphetamine users. *Addiction.* 92(7) 839-45

Topp, L. & Churchill, A. (2002). *Australia's Dynamic Methamphetamine Markets.* Drug Trends Bulletin, June, 2002. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Topp, L., Darke, S., Bruno, R., Fry, C., Hargreaves, K., Humeniuk, R., McAllister, R., O'Reilly, B. & Williams, P. (2001). *Australian Drug Trends 2000: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 47. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Topp, L., Hando, J. & Darke, S. (2001). *Procedure Manual for the 2001 Illicit Drug Reporting System (IDRS).* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Topp, L., Kaye, S., Bruno, R., Longo, M., Williams, P., O'Reilly, B., Fry, C., Rose, G. & Darke, S. (2002). *Australian Drug Trends 2001: Findings From the Illicit Drug Reporting System (IDRS).* NDARC Monograph No. 48. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Treloar, C., Abelson, J., Cao, W., Brener, L., Kippax, S., Schultz, L., Schultz, M. & Bath, N. (2004). *Barriers and Incentives to Treatment of Illicit Drug Users*. National Drug Strategy Monograph Series No. 53. Canberra: Commonwealth of Australia.

Treloar, C., Fraser, S. & Valentine, K. (2007). Valuing methadone take-away doses: The contribution of service user perspectives to policy and practice. *Drugs: Education, Prevention & Policy*, 14, 61-74.

United Nations Office on Drugs and Crime (UNODC) (2012) *South-East Asia opium survey 2012: Lao PDR, Myanmar.* UNODC, Vienna. Viewed 12 February 2014, http://unodc.org/documents/crop-monitoring/sea/SouthEastAsia_Report_2012_low.pdf.

Wardlaw, G. (1993). Supply reduction (law enforcement) strategies pertaining to illicit use of psychostimulants. In: D. Burrows, B. Flaherty & M. MacAvoy (eds.), *Illicit Psychostimulant Use in Australia*. Canberra: Australian Government Publishing Service.

Wilkins, R., Warren, D., Hahn, M. & Houng, B. (2010) *Families, Incomes and Jobs, Volume 5: A Statistical Report on Waves 1 to 7 of the Household, Income and Labour Dynamics in Australia Survey.* Melbourne: Melbourne Institute of Applied Economic and Social Research: University of Melbourne.

Winstock, A. & Bell, J. (2006). Clinical Guidelines: Assessing suitability for unsupervised medication doses in the treatment of opioid dependency. Australasian Chapter of Addiction Medicine: Sydney.

Winstock, A.R., Lea, T. & Sheridan, J. (2008*).* Prevalence of diversion and injection of methadone and buprenorphine among clients receiving opioid treatment at community pharmacies in New South Wales, Australia. *International Journal of Drug Policy*, 19(6), 450-8.

Winstock, A., Mitcheson, L. & Marsden, J. (2010) Mephedrone: still available twice the price. *The Lancet,* 376(6), pp 1537.

Vlahov, D., Wang, C., Galai, N., Bareta, J., Metha, S. H., Strathdeem, S. A. & Nelson, K. E. (2004) Mortality risk among new onset injection drug users. *Addiction,* 99**,** 946-954.