WA
DRUG TRENDS
2011

Findings from the Illicit Drug Reporting System (IDRS)

Candice Rainsford
and Simon Lenton

National Drug Research Institute, Curtin University

NDARC Technical Report No. 79

ISBN 978-0-7334-3119-7

©NDARC 2012

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. All other rights are reserved. Requests and enquiries concerning reproduction and rights should be addressed to the information manager, National Drug and Alcohol Research Centre, University of New South Wales, Sydney, NSW 2052, Australia.

TABLE OF CONTENTS

LIST OF TABLES 5
LIST OF FIGURES 6
GLOSSARY OF TERMS 12
Guide to days of use/injection 12
EXECUTIVE SUMMARY 13
1. INTRODUCTION 25
1.1 Study aims 25
2. METHOD 26
2.1 Survey of IDU 26
2.2 Survey of KE 26
2.3 Other indicators 27
2.4 Data analysis 27
3. DEMOGRAPHICS 28
3.1 OVERVIEW OF THE IDU PARTICIPANTS 28
3.2 Drug use history and current drug use 30
4 HEROIN 39
4.1 Use 39
4.2 Heroin use in the general population 41
4.3 Price 42
4.4 Availability 43
4.5 Heroin detected at the Australian border 45
4.6 Purity 47
4.7 Summary of heroin trends 52
5. METHAMPHETAMINE 53
5.1 Use 53
5.2 Methamphetamine use in the general population 56
5.3 Price 56
5.4 Availability 58
5.5 Amphetamine-type stimulant detections at the Australian border 60
5.6 Purity 62
5.7 Summary of methamphetamine trends 66
6. COCAINE 67
6.1 Use 67
6.2 Cocaine use in the general population 68
6.3 Price 68
6.4 Availability 69
6.5 Cocaine detected at the Australian border 69
6.6 Purity 70
6.7 Summary of cocaine trends 72

7. CANNABIS ... 73
7.1 Use ... 73
7.2 Cannabis use in the general population ... 75
7.3 Price ... 75
7.4 Availability ... 77
7.5 Cannabis detected at the Australian border ... 79
7.6 Potency ... 80
7.7 Summary of cannabis trends ... 82
8. OPIOIDS ... 83
8.1 Illicit use of methadone ... 83
8.2 Use of illicit buprenorphine ... 84
8.3 Morphine ... 85
8.4 Oxycodone ... 86
8.5 Use of OTC codeine ... 87
8.6 Other opioids (not elsewhere specified) ... 88
9. OTHER DRUGS ... 91
9.1 Benzodiazepines ... 91
9.1.1 Alprazolam (Xanax) ... 92
9.1.2 Other Benzodiazepines ... 92
9.2 Pharmaceutical stimulants ... 93
9.3 Hallucinogens ... 93
9.4 Ecstasy ... 93
9.5 Inhalants ... 94
9.6 Alcohol ... 94
9.7 Tobacco ... 94
9.8 Seroquel® (Quetiapine) ... 94
9.9 Summary of other drug trends ... 95
10. HEALTH-RELATED HARMS ASSOCIATED WITH DRUG USE ... 96
10.1 Overdose and drug-related fatalities ... 96
10.2 Calls to telephone help lines ... 98
10.3 Drug treatment ... 101
10.4 Hospital admissions ... 105
10.5 Injecting risk behaviours ... 108
10.6 Mental and physical health problems and psychological distress ... 114
11. LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH DRUG USE ... 117
11.1 Reports of criminal activity among IDU participants ... 117
11.2 Arrests ... 117
11.3 Expenditure on illicit drugs ... 120
12 SPECIAL TOPICS OF INTEREST ... 121
12.1 Heavy Smoking Index nicotine dependence ... 121
12.2 Injecting equipment use in the last month ... 122

12.3 Mental and physical health problems ... 124
12.4 Health services accessed ... 126
12.5 Alcohol Use Disorders Identification Test- Consumption ... 126
12.6 Pharmaceutical Opioids ... 127
12.7 Online activities ... 128
12.8 Policy ... 131

LIST OF TABLES

Table 1: Demographic characteristics of IDU participants, 2007-2011 29
Table 2: Source of recruitment and previous participation in IDRS and EDRS, 2011 30
Table 3: Injection history, drug preferences and polydrug use of IDU participants, 2007-2011 31
Table 4: Drug injected most often in the last month 2010-2011 33
Table 5: Proportion of IDU participants reporting the last location for injection, 2010-2011 . 34
Table 6: Drug use history of the IDU sample, 2011 37
Table 7: Price of most recent heroin purchases by IDU participants, 2010-2011 42
Table 8: Participants' reports of heroin availability in the past six months, 2010-2011......... 44
Table 9: Participants' perceptions of heroin purity in the past six months, 2010-2011 48
Table 10: Patterns of methamphetamine use in the last six months by form, 2010-2011 53
Table 11: Price of most recent methamphetamine purchases by IDU participants, 2011 57
Table 12: Participants' reports of methamphetamine availability in the past six months, 2010-2011 59
Table 13: Methamphetamine purity by user report 2010-2011 63
Table 14: Price of most recent cocaine purchases by IDU participants, 2011...................... 68
Table 15: Price of most recent cannabis purchases by IDU participants, 2011.................... 76
Table 16: Participants' reports of cannabis availability in the past six months, 2010-2011 .. 78
Table 17: IDU estimates of cannabis potency 2010-2011 81
Table 18: Over the counter Codeine use and pain, WA IDRS, 2011 88
Table 19: Criminal activity as reported by IDU participants, 2010-2011 117
Table 20: Heavy Smoking Index for nicotine dependence, WA, 2011 121
Table 21: Use of injecting equipment in the last month among those who commented, WA IDRS, 2011... 122
Table 22: Re-use of injecting equipment in the last month among those who commented, WA IDRS, 2011 123
Table 23: Injecting equipment cleaned in the last month among those who commented, WA IDRS, 2011... 124
Table 24: SF-12 Mental and Physical Health Mean Component Scores, WA IDRS, 2011. 125
Table 25: Health Service Access in the last four weeks, WA IDRS, 2011 126
Table 26: AUDIT-C among people who inject drugs and drank alcohol in the past year, WA IDRS, 2010 and 2011... 127
Table 27: Pharmaceutical opioids use among people who inject drugs, WA, 2011 128
Table 28: Proportion of IDU that online activity related to drug use, IDRS, 2011 130
Table 29: Support for measures to reduce problems associated with heroin, for legalisation of illicit drugs and the increase of penalties for illicit drugs, WA, 2011........................ 132

LIST OF FIGURES

Figure 1: Drug of choice, 2000-2011 ... 32
Figure 2: Drug injected most last month, 2000-2011 ... 33
Figure 3: Drug last injected prior to interview 2000-2011 ... 34
Figure 4: Last drug injected reported by NSP attendees, WA 2003-2010 ... 35
Figure 5: Sources of syringe distribution in WA 1996/1997-2010/11 ... 35
Figure 6: Patterns of heroin use, 2000-2011 ... 39
Figure 7: Daily heroin users, 2000-2011 ... 40
Figure 8: Mean days of heroin use in past six months, 2000-2011 ... 40
Figure 9: Prevalence of heroin use among the population aged 14 years and over in Australia, 1993-2010 ... 42
Figure 10: Median price of one gram of heroin estimated from IDU purchases, 2000-2011 43
Figure 11: IDU reports of current heroin availability, 2000-2011 ... 45
Figure 13: Number and weight of heroin seizures by WAPS and AFP, WA 2002/03-2009/10 ... 47
Figure 14: Proportion of IDU reporting current heroin purity as 'high', 'medium' or 'low', 2000-2011 ... 49
Figure 15: Number of heroin seizures analysed in WA, by quarter, 2002/03-2009/10 ... 50
Figure 16: Purity of heroin seizures analysed in WA, by quarter, 2002/03-2009/10 ... 51
Figure 17: Mean days of use for any methamphetamine by WA IDU 2000-2011 ... 54
Figure 18: Proportion of IDU reporting methamphetamine use in the last six months, 2000-2011 ... 55
Figure 19: Prevalence of methamphetamine use among the population aged 14 years and over in Australia, 1993-2010 ... 56
Figure 20: Median prices of methamphetamine per gram estimated from IDU purchases, 2002-2011 ... 58
Figure 21: IDU reporting 'easy' or 'very easy' availability of methamphetamine by form in WA 2002-2011 ... 60
Figure 22: Total weight and number of amphetamine-type stimulants detected by the Australian Customs and Border Protection Service, financial years 001/02-2010/11 ... 61
Figure 23: Number and weight of amphetamine-type stimulant seizures by WAPS and AFP, WA 2002/03-2009/10 ... 62
Figure 24: Proportion of IDU reporting each methamphetamine by form as 'high' purity, 2002-2011 ... 63
Figure 25: Number of methamphetamine seizures analysed in WA, by quarter, 2002/03-2009/10 ... 64
Figure 26: Purity of methamphetamine seizures analysed in WA, by quarter, 2002/03-2009/10 ... 65
Figure 27: Cocaine use in the past six months, 2000-2011 ... 67
Figure 28: Prevalence of cocaine use among the population aged 14 years and over in Australia, 1988-2010 ... 68
Figure 29: Number and weight of detections of cocaine detected at the border by the Australian Customs and Border Protection Service, financial years 2001/02-2010/11 . 69
Figure 30: Number and weight of cocaine seizures by WAPS and AFP, WA 2002/03-2009/10 ... 70
Figure 31: Number of cocaine seizures analysed in WA, by quarter, 2002/03-2009/10 ... 71
Figure 32: Purity of cocaine seizures analysed in WA, by quarter, 2002/03-2009/10 ... 71
Figure 33: Recent use and daily users of cannabis in the past six months, 2000-2011 ... 73
Figure 34: Median days of cannabis use in the past six months, 2000-2011 ... 74
Figure 35: Prevalence of cannabis use among the population aged 14 years and over in Australia, 1993-2010 ... 75

Figure 36: Median prices of an ounce of cannabis estimated from IDU participant purchases, 2000-2011 ... 77
Figure 37: Participant reports of current cannabis availability as 'very easy', 2000-2011 ... 79
Figure 38: Number of cannabis seizures made at the Australian border by Australian Customs Service (ACS), 2003/04-2010/11 ... 80
Figure 39: Number and weight of cannabis seizures by WAPS and AFP, WA 2002/03-2009/10 ... 80
Figure 40: Participant reports of current cannabis potency as 'high', 2000-2011 ... 82
Figure 41: Proportion of IDU reporting recent and daily illicit morphine use in the past six months 2001-2011 ... 85
Figure 42: Recent illicit use of opioids other than heroin by IDU survey respondents 2004-2011 ... 89
Source: IDRS IDU interviews ... 89
Figure 43: Proportion of IDU reporting any benzodiazepine use (including Alprazolam), daily use and injection in the preceding six months, 2000-2011 ... 91
Figure 44: Median days use of any benzodiazepines (including Alprazolam) in the past six months, 2000-2011 ... 92
Figure 46: Number of ambulance callouts to narcotic overdoses, WA, 2nd quarter 2002-2nd quarter 2011 ... 97
Figure 47: Number of enquiries to ADIS regarding heroin, Jan 2000-Jun 2011 ... 98
Figure 48: Number of enquiries to ADIS regarding amphetamines, Jan 2001-Jun 2011 ... 99
Figure 50: Number of enquiries to ADIS regarding cannabis, Jan 2000-Jun 2011 ... 100
Figure 51: Proportion of participants reporting current pharmacotherapy, 2000-2011 ... 101
Figure 52: Percentage of closed treatment episodes where heroin was the principal drug of concern, WA, 2001/02-2009/10 ... 102
Figure 53: Percentage of closed treatment episodes where amphetamines was the principal drug of concern, WA, 2001/02-2009/10 ... 103
Figure 55: Percentage of closed treatment episodes where cannabis was the principal drug of concern, WA, 2001/02 -2009/10 ... 104
Figure 56: Estimated number of pharmacotherapy clients by pharmacotherapy drug type and dosing site, WA, 2010 ... 105
Figure 57: Rate per million persons of principle opioid-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94- 2008/09 ... 106
Figure 58: Rate per million persons of principle amphetamine-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94-2008/09 ... 107
Source: AIHW, 2011b ... 107
Figure 59: Rate per million persons of principle cocaine-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94-2008/09 ... 107
Figure 61: Proportion of IDU reporting sharing each type of injecting equipment among those that shared equipment, 2000-2011 ... 109
Figure 62: Proportion of IDU reporting sharing injecting equipment in the month preceding interview, 2000-2011 ... 110
Figure 63: Total notifications for unspecified and incident HBV and HCV infection, WA, 1999-2011 ... 111
Figure 64: Percentage of NSP participants in WA testing positive for HCV antibody, 2003-2010 ... 112
Figure 65: Percentage of NSP participants in WA testing positive for HIV antibody, 2003-2010 ... 112
Figure 66: Proportion of IDU reporting injection-related problems in past month, by problem type, 2000-2011 ... 113
Figure 67: Main drug causing dirty hit of those that reported a dirty hit in last month, 2005-2011 ... 114
Figure 68: Total K10 scores by risk category among IDU, WA 2011 ... 115
Figure 69: Driving under the influence of illicit drugs by drug type, WA, 2011 ... 116
Figure 70: Number of heroin consumer/provider arrests, WA, 2002/03-2009/10 ... 118

Figure 71: Total (consumer and provider) Number of ATS arrests, WA, 2002/03-2009/10 118
Figure 73: Number of cocaine consumer/provider arrests, WA, 2002/03-2009/10 120
Figure 74: Expenditure on illicit drugs on day prior to interview by IDU who reported spending money on drugs, WA, 2000-2011 120
Figure 75: SF-12 scores for WA IDRS participants compared with the general Australian population (ABS), 2011 125

Acknowledgements

In 2011, the Illicit Drug Reporting System (IDRS) was funded by the Australian Government Department of Health and Ageing (AGDH&A). The IDRS team would like to thank Mr Chris Milton, Dr Robyn Davies and Mr Joe Upston and colleagues of the AGDH&A for their assistance throughout the year.

The IDRS is co-ordinated nationally by the National Drug and Alcohol Research Centre (NDARC). The authors would like to thank the Chief Investigator Dr Lucy Burns and the National Co-ordinators Natasha Sindicich and Jennifer Stafford for their support and assistance throughout the project.

The authors would also like to thank the many other individuals and organisations who provided assistance during the project. These included:

- the injecting drug users (IDU) and key experts who participated in the project for sharing their knowledge and experience of the illicit drug scene in Perth;
- the Western Australian Substance Users Association (WASUA) for its continued assistance in recruitment of IDU and allowing IDRS interviews to be conducted at its needle and syringe program;
- the agencies and pharmacies throughout the Perth metropolitan area that provided assistance with the recruitment of IDU for participation in the project;
- Phil Townsend (St John Ambulance Australia), Trinity Fredericks (Sexual Health and Blood-borne Virus Program) and Stacey Childs (ADIS) and the other organisations and individuals who generously provided indicator data for inclusion in the report;
- Amanda Roxburgh at NDARC for her help with access and analysis of some indicator data;
- Klaudia Jones, Rachael Brand and Clare Stevens for their assistance in conducting IDU interviews for 2011; and
- all who have been involved in the IDRS in previous years, including the previous chief investigators Professor Wayne Hall, Professor Shane Darke and Professor Louise Degenhardt, the previous national co-ordinators Dr Libby Topp, Ms Courtney Breen, Ms Jennifer Stafford, Ms Susannah O'Brien and Ms Emma Black; and the many other research personnel around the country who also contributed greatly to the IDRS in previous years.

Abbreviations

ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ACS	Australian Customs Service
ADHD	Attention deficit hyperactivity disorder
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AGDH&A	Australian Government Department of Health and Ageing
AIHW	Australian Institute of Health and Welfare
ATS	Amphetamine-type stimulant
ATSI	Aboriginal or Torres Strait Islander
AUDIT-C	Alcohol Use Disorders Identification Test-Consumption
BBVI	Blood-borne viral infections
BMI	Body mass index
CI	Confidence interval
CIDI	Composite International Diagnostic Interview
CPR	Cardiopulmonary resuscitation
DPMP	Drug Policy Modelling Program
ED	Emergency Department
EDRS	Ecstasy and related Drugs Reporting System
GP	General Practitioner(s)
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HDWA	Health Department of Western Australia
HIV	Human immunodeficiency virus
HSI	Heavy Smoking Index
Hydro	Hydroponically grown cannabis
IDRS	Illicit Drug Reporting System
IDU	Injecting drug user(s)
K10	Kessler Psychological Distress Scale
KE	Key expert(s)
LSD	Lysergic acid diethylamine
MCS	Mental Component Score
MDMA	3, 4-methylenedioxymethamphetamine
N (or n)	Number of participants
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NCIS	National Coronial Information System
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NNDSS	National Notifiable Diseases Surveillance System
NSP	Needle and syringe program(s)
NSW	New South Wales
OCD	Obsessive compulsive disorder
OTC	Over the counter

PCS	Physical component score
PDI	Party Drugs Initiative
Pharm. Stim.	Pharmaceutical stimulants
PO	Pharmaceutical Opioid
PTSD	Post Traumatic Stress Disorder
PWI	Personal Wellbeing Index
ROA	Route of administration
SF-12	Short Form 12-Item Health Survey
SD	Standard deviation
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
STI	Sexually transmitted infection(s)
WA	Western Australia
WAPS	Western Australian Police Service

GLOSSARY OF TERMS

Cap	Small amount, typically enough for one injection
Compared	Not statistically significant (p=>0.05)
Eight ball	Weighs an eighth of an ounce
Half weight	0.5 gram
Illicit	Illicit refers to pharmaceuticals obtained from a prescription in someone else's name, e.g. through buying them from a dealer or obtaining them from a friend or partner
Indicator data	Sources of secondary data used in the IDRS (see Method section for further details)
Injecting Drug User(s)	Also referred to as IDU. In the context of the IDRS, refers to persons participating in the IDU Survey component of the IDRS (see Method section for further details)
Key expert(s)	Also referred to as KE; persons participating in the Key Expert Survey component of the IDRS (see Method section for further details)
Licit	Licit refers to pharmaceuticals (e.g. methadone, buprenorphine, morphine, oxycodone, benzodiazepines, antidepressants) obtained by a prescription in the user's name. This definition does not take account of 'doctor shopping' practices; however, it differentiates between prescriptions for self as opposed to pharmaceuticals bought on the street or those prescribed to a friend or partner
Lifetime injection	Injection (typically intravenous) on at least one occasion in the participant's lifetime
Lifetime use	Use on at least one occasion in the participant's lifetime via one or more of the following routes of administration: injecting, smoking, snorting and/or swallowing
Participant	In the context of this report, refers to persons who participated in the IDU survey (does not refer to KE participants unless stated otherwise)
Point	0.1 gram although may also be used as a term referring to an amount for one injection (similar to a 'cap'; see above)
Recent injection	Injection (typically intravenous) in the six months preceding interview
Recent use	Use in the six months preceding interview via one or more of the following routes of administration: injecting, smoking, snorting and/or swallowing
Use	Use via one or more of the following routes of administration: injecting, smoking, snorting and/or swallowing

Guide to days of use/injection

180 days	daily use/injection* over preceding six months
90 days	use/injection* every second day
24 days	weekly use/injection*
12 days	fortnightly use/injection*
6 days	monthly use/injection*

*as appropriate

EXECUTIVE SUMMARY

Common terms used throughout the report
Regular IDU: Injected a drug on six or more separate occasions in the previous six months
Recent use: Used at least once in the previous six months
Sentinel group: A surveillance group that point towards trends and harms
Median: The middle value of an ordered set of values
Mean: The average
Frequency: The number of occurrences within a given time period

Demographic characteristics of injecting drug user participants

In 2011, only 70 participants were recruited for the 2011 WA IDRS participant survey, which was less than the usual 100 participants recruited in previous year's samples. This decrease in participant numbers in 2011 was most likely due to an unanticipated delay to the start of recruitment; therefore less time was available to recruit participants. Despite the smaller sample, demographic characteristics of injecting drug users (IDU) in 2011 were mostly similar to last year's sample. The mean age was 40 years, which was significantly greater than 37 years in 2010. Comparable to previous samples, males comprised of just over half (57%) of the current sample, however this was a significant decrease from 65% males in the 2010 sample. Almost the entire 2011 sample (99%) reported that English was the main language spoken at home and only a small minority identified as Aboriginal or Torres Strait Islander (ATSI). Fewer than one-half (42%) reported a prison history, which was a comparable proportion to the 2010 sample. Over one-half (59%) of the sample reported currently being in drug treatment, which was comparable to 47% in 2010.

There were no significant differences in employment status compared to last year's sample. However, there was a notable difference between sample years' regarding tertiary education. The average years of education remained comparable to last year at 10 years. In 2011, almost one third (27%) of the IDU sample reported having university/college qualifications, which significantly increase from 13% in 2010. The proportions reporting no tertiary qualifications and trade/technical qualifications were comparable between sample years. Current unemployment was reported by 70% in 2011 which was comparable to 77% in 2010. Further, 6% in 2011 reported full-time employment compared to 3% in 2010. Overall, the current sample of IDU appear to be more tertiary educated in comparison to the 2010 IDU sample

Patterns of drug use among the IDU sample

Mean age of first injection increased from 19 years in most previous years' sample to 20 years in 2011; however this was not a significant increase. Frequency of injection proportions were mostly comparable to 2010 findings, with the exception of an observed increase in the proportion reporting frequency of injection as 'more than weekly, less than daily' from 35% in 2010 to 44% in 2011. All other frequency of injection proportions were comparable to last year.

Heroin and amphetamines remained the most commonly nominated drugs first injected. However, the current proportion nominating heroin as the first drug injected significantly increased from 39% in 2010 to 47% in 2011. The proportion nominating amphetamine remained comparable at 36% in 2011 (53% in 2010). Since 2009, heroin has surpassed methamphetamine as the drug most often injected in the last month; this trend continued in 2011 with 54% reporting heroin vs. 21% reporting methamphetamine as drug most often

injected in the last month. A similar trend has been observed in most recent drug injected, with the greatest proportion of 50% reporting heroin vs. 19% reporting methamphetamine in 2011 sample. The proportion nominating heroin as the drug of choice was also comparable to 2010, with 66% in 2011 compared to 60% in 2010. In 2011, crystal methamphetamine was the most commonly nominated form of methamphetamine in all these contexts; whereas in 2010 the most commonly nominated form was speed methamphetamine.

In 2011, over half the sample reported use of tobacco, alcohol, cannabis and heroin in the last six months.

Heroin

Lifetime and recent use of heroin were not significantly different across the last two years. In 2011, 96% of IDU reported lifetime use of heroin (89% in 2010) and 79% reported recent use (69% in 2010). The average days of use in the last six months also remained comparable between sample years from 75 days in 2010 to 72 days in 2011. The proportion of daily heroin users were also comparable, from 23% in 2010 to 16% in 2011. The proportion of IDU reporting lifetime use of homebake was not significantly different across years (74% in 2010 vs. 90% in 2011), however, the proportion reporting recent use significantly increased from 31% in 2010 to 39% in 2011. Powder remained the most commonly reported form of heroin used in 2011, with 43% nominating white/off white followed by 21% reporting brown rock; these findings were not significantly different to 2010.

The median price of recent purchases of one gram of heroin was $650 (not significantly different to $600 in 2010). The greatest proportion of participants reported on the price of a one-quarter gram (n=25), which had a median price of $200; this was a significant increase from $173 in 2010. The median price for one point of heroin was reported as $100 in 2011, which was comparable to $50 in 2010. In 2011, availability of heroin remained comparable to last year. Availability was reported as either ‘easy’ or ‘very easy’ by 86% of IDU in 2011, not significantly different to 92% in 2010. Availability over the last six months was reported as ‘stable’ by the greatest proportion of the sample (69%) which was not significantly different to last year’s sample (67%). Similarly, 2011 IDU perception of heroin purity were mostly similar to those found in 2010, with the greatest proportion nominating current purity of heroin as ‘medium’ (29%), which was comparable to 2010 (40%). The proportion who nominated heroin purity as ‘high’ or ‘low’ were also comparable to 2010 findings. In regards to changing heroin purity, the greatest proportion of the current sample reported purity as ‘stable’ over the last six months (41% in 2011 vs. 27% in 2010). All changes to purity proportions were comparable to 2010 findings.

Methamphetamine

The IDRS distinguishes between methamphetamine powder (‘speed’), methamphetamine base, and crystal methamphetamine (‘ice’ or ‘crystal’).

Across the last two years there were no significant differences in lifetime (96% in 2011 vs. 99% in 2010) and recent (64% in both 2011 and 2010) use of any form of methamphetamine. Similarly, lifetime use of all forms of methamphetamine remained comparable across the two years, with lifetime use of powder (86% in 2011 vs. 91% in 2010), crystal (81% in 2011 vs. 80% in 2010) and base (23% in 2011 vs. 29% in 2010). Recent use of powder (43% in 2011 vs. 51% in 2010) and base (6% in 2011 vs. 8% in 2010) also remained comparable; however, a significant increase was observed in recent use of crystal from 40% in 2010 to 46% in 2011. Average days of any methamphetamine use in the last six months significant decreased from 41 days in 2010 to 27 days in 2011. The average number of days speed (15 days in 2011 vs. 29 days in 2010) and base (10 days in 2011 vs. 8 days in 2010) methamphetamine were used remained comparable to last year, however the average number of days crystal methamphetamine was used significantly decreased 36

days in 2010 to 23 days in 2011. These significant differences in crystal methamphetamine suggest that more participants have used crystal in the last six months; however, these recent users had used crystal less frequently than recent crystal users in the 2010 IDRS sample.

The median prices for one point of crystal remained $100; however, in 2011, the median price for one point of speed significantly increased from $50 in 2010 to $100 in 2011. In 2011, no participants reported on price purity or availability for base. Ratings of availability as either 'easy' or 'very easy' were reported by 86% for powder (78% in 2010) and 90% for crystal (82% in 2010). The most common source and location for last purchase of all forms of methamphetamine were from friends at a friend's home. Purity of powder was mostly rated as 'high' by 50% in 2011, which was comparable to 25% in 2010. Purity of crystal was also mostly reported as 'high' by 43% in 2011, which was comparable to 42% in 2010.

Cocaine

There was no significant difference in the proportion of IDU reporting lifetime use of cocaine (67% in 2011 vs. 65% in 2010). Recent use was also comparable (10% in 2011 vs. 15% in 2010). The average days of cocaine use were also comparable, with three days reported in both 2010 and 2011. No participants reported on cocaine price in 2011 and only two participants reported on purity and availability, therefore making it difficult to draw conclusions about the cocaine market in Western Australia (WA).

Cannabis

The vast majority of IDU across all years have reported lifetime use of cannabis and this remained the same in 2011 at 99% (96% in 2009). Use of cannabis use in the last six months was reported by 71% of IDU in 2011, which was not significantly different to 70% in 2010. The proportion of daily cannabis users was also comparable: 47% in 2010 and 44% in 2011. The average days of use were 104 days in 2011, which was comparable to 105 days in 2010. Hydroponic cannabis remained the most commonly used form, reported by 84% in 2011 (91% in 2010).

The median price of one ounce of hydroponic cannabis was $350, the same median price was reported in 2010 and the median price of one ounce of bush was $300 which was significantly greater than $250 in 2010. Ratings of availability as either 'easy' or 'very easy' were reported for hydroponic by 83% in 2011 (88% in 2010) and for bush by 75 in 2011 (87% in 2010). Reports of potency were mostly similar to last year, with the majority rating hydroponic cannabis as 'high' (64% in 2011 vs. 63% in 2010) and bush as 'medium' (50% in 2011 vs. 62% in 2010). Perceptions of changes to hydroponic and bush potency in the last six months were reported by the majority, in both categories, as 'stable' (95% and 82% respectively). These proportions were comparable to those reported in 2010.

Illicit use of pharmaceuticals

IDU who reported illicit use of pharmaceuticals in the last six months were asked the reasons for this use. The most common response for all pharmaceutical types was that it was a substitute for heroin.

Methadone

In 2011, recent illicit use of methadone syrup significantly increased from 13% in 2010 to 26% in 2011. The proportion reporting recent use of physeptone tablets were comparable between sample years', from 4% in 2010 compared to 7% in 2011. Average days of illicit methadone use were 25 days in 2011, which was not significantly different to six days in 2010. Mean days of illicit physeptone use was nine, which was comparable to six days in 2010. Only four participants reported on illicit sourcing of methadone. The reported price was one dollar per one millilitre, which has been comparable to previous years'.

Buprenorphine and buprenorphine-naloxone
Recent illicit use of buprenorphine (Subutex) and buprenorphine-naloxone (Suboxone) was not significantly different to last year, with recent illicit use of Subutex reported by 11% of IDRS respondents in 2011 (18% in 2010) and recent use of Suboxone reported by 14% in 2011 (17% in 2010). Mean days of illicit use of Subutex were not significantly different across the last two years (nine days in 2011 compared to 15 days in 2010). The average number of days illicit Suboxone was used significantly decreased from 81 days in 2010 to 28 days in 2011. In 2011, the median reported price of eight milligrams of Subutex was $40 (same in 2009 and 2010) and eight milligrams of Suboxone was $45 ($40 in 2010); however, this was based on a small number of respondents and therefore may not accurately reflect the current market price. Friends were nominated as the most common source person for obtaining both Subutex and Suboxone.

Morphine
The proportion of respondents reporting recent illicit use of morphine in 2011 was 33%, which was not significantly different to 28% in 2010. Average days of use were also comparable: 22 days in 2011 vs. 36 days in 2010. MS Contin remained the most commonly reported type of morphine used. The median price for 100mg of MS Contin was $70 ($58 in 2009), although this finding was based on a small number of participants and may not accurately reflect the current market price. Friends remained the most commonly reported source person, as was friends' homes as the last location for obtaining morphine.

Oxycodone
The proportion of respondents reporting lifetime use of oxycodone was comparable, with 44% in 2010 compared to 63% in 2011. Recent illicit use of oxycodone significantly increased from 20% in 2010 to 30% in 2011. Average days of use were comparable to last year; 51 days in 2010 compared to 30 days in 2011. The most common type of oxycodone used was Oxycontin. The median price for 40mg of Oxycontin was $25 and for 80mg was $50, both reported prices were comparable to 2010 findings. As with the other illicitly obtained pharmaceuticals, friends and friends' homes were the most commonly reported last source and location.

Over the counter codeine
Since 2009, participants have been asked about the use of over the counter (OTC) codeine separately, whereas in previous years IDRS samples, OTC codeine has been included in 'other opiates'. In 2011, over half (57%) the sample reported using OTC codeine in their lifetime, which was the same proportion reported in 2010. Recent use was reported by 34% in 2011, which was comparable to 35% in 2010. The average number of days OTC codeine was used was 18 days, which was comparable to 17 days in 2010.

Other opioids (not elsewhere specified)

Use of other opioids (not including OTC codeine) has consistently been uncommon among IDU interviewed in the WA IDRS, however in 2011; the other opioid use section included prompting participants for use of Panadeine Forte. Therefore, comparison cannot be made between current and previous years' findings. In 2011, lifetime use of other opioids was reported by 61% of IDU. Recent use was reported by 30% of the 2011 IDU sample on an average of 38 days in the last six months.

Other drugs

Benzodiazepines
For the first time in 2011, participants were asked separately about the use of alprazolam and other benzodiazepine use. In 2011, 41% of the WA sample reported using some form of

alprazolam in their lifetime (24% licit and 40% illicit). The same proportion (41%) also reported recent use of any form of alprazolam on a median of six days in the last six months.

Just over half (57%) of the WA sample had used any other benzodiazepine (excluding alprazolam) in their lifetime. Over half (56%) had recently used any form of other benzodiazepines on a median of 96 days in the last six months.

The majority (81%) of the sample reported the use of benzodiazepine (including alprazolam) at some stage in their lifetime. Sixty one per cent reported recent use of benzodiazepine on a median of 96 days. Like in previous year's samples, in 2011 the majority of recent benzodiazepine (any form) use was reported to be licit.

Pharmaceutical stimulants
Lifetime prevalence of pharmaceutical stimulants (licit or illicit) by the WA IDU sample was 50% in 2011 which was not significantly different to 46% in 2010; recent use was also comparable with 16% in 2011 compared to 17% in 2010. The average number of days of use among recent users was four days in 2011, which was a significant decrease from 22 days reported in 2010. In 2011 among IDU who had recently used pharmaceutical stimulants, all reported illicit use and most reported dexamphetamine was the stimulant used. ROA was reported as swallowing (64%) and injecting (46%).

Hallucinogens and ecstasy
Lifetime use of hallucinogens was reported by 83% in 2011, which was comparable to 70% in 2010. Recent use was also not significantly different in 2011, with 10% reported in both sample years'. The average days of use among recent users was nine which was comparable to four days in 2010. The majority (86%) of recent users reported LSD as the most commonly used hallucinogen; the remaining 14% reported mushrooms. Lifetime use of ecstasy was also comparable between recent samples, reported by 80% in 2011 and 73% in 2010. Recent use was only reported by one participant in 2011 (1%), which was a significant decrease from 21% in 2010. This one participant reported swallowing ecstasy once in the last six months.

Inhalants
Lifetime use of inhalants was reported by 27% of the WA IDU sample in 2011, which was comparable to 22% in 2010. Recent use was reported by 4%, which was also not significantly different to the 6% reported in 2010. In 2011, the average number of days inhalants were used was one day and no respondents reported using inhalants daily.

Alcohol and tobacco
Lifetime use of alcohol was reported by 94% of the WA IDU sample in 2011, comparable to 97% in 2010. Recent use was reported by 70% in 2011, not significantly different from 63% in 2010. Lifetime use of tobacco was reported by 90% in 2011 (92% in 2010) and recent use was reported by 83% in 2011 (85% in 2010 and 2009). In 2011, the average number of days used in the last six months was 51 days for alcohol (55 days in 2010) and 174 days for tobacco (166 days in 2010).

Seroquel® (Quetiapine)
For the first time in 2011, participants were asked about the use of Seroquel® (Quetiapine). Of which, 63% reported lifetime use (36% licit and 31% illicit) and 36% reported using Seroquel® in the last six months (17% licit and 19% illicit). No participant reported injecting Seroquel® neither ever nor in the last six months, swallowing was the only route of administration (ROA) reported.

Health-related harms

A lifetime history of heroin overdose was reported by 64% in 2011, which was not significantly different to 47% in 2010. However, this current proportion represents the greatest reported since 2000. Overdose in the last 12 months was reported by 29% in 2011, which significantly increased from 17% in 2010. A lifetime history of overdose on any other drug was reported by 23% in 2011, which was comparable to 15% in 2010; no participant reported overdose in the last 12 months.

Indicator data from the Australian Bureau of Statistics reported 433 accidental deaths nationally in 2009. The number of accidental deaths due to opioids among those aged 15 to 54 years in WA was 65 (compared to 45 deaths in 2008), representing a 40% increase and comprising 15% of the national total. In WA, these fatalities comprised of 53 males and 12 females.

In 2011, 59% of IDU reported currently being in drug treatment, which was comparable to 47% in 2010; of these participants, 95% were receiving pharmacotherapies for opioid dependence. Methadone (59%) remained the most cited pharmacotherapy, followed by Suboxone (32%) then Natrexone (5%).

Of closed treatment episodes in WA for 2009/10, cannabis represented 19%, amphetamines represented 14% and heroin represented 9%. Of total calls to the WA Alcohol and Drug Information Service (ADIS) for 2010/11, 15-21% related to amphetamines, 10-14% to cannabis and 2-4% to heroin.

Hospital admissions

The number of opioid-related separations remained stable between 2007/2008 and 2008/09, the most recent data available at the time of publication. As with most indicator data reflecting harms related to opioids, figures remained substantially lower than those reported prior to the 2001 heroin shortage. The number of amphetamine hospital admissions per million persons has followed a steady, increasing trend over time, with rates in WA consistently being higher than national rates. Heroin related hospital admission in WA were relatively stable between 2001/02 and 2007/08, however this number of heroin related hospital admissions more than double in 2008/09 and far exceeded those reported at a national level. Cocaine-related hospital admissions remained low relative to those for heroin and methamphetamine. Cannabis-related admissions have steadily increased nationally, but appear to be decreasing in WA.

Injecting risk behaviours

In 2011, 80% of IDU reported obtaining their needles from a needle and syringe program (NSP). The vast majority (93%) reported that they had not used a needle after someone else in the last month. Of the remainder that did report using a needle after someone else (7%, n=5), common frequencies were using a needle once (n=1), twice (n=2), three to five times (n=1) and more than 10 times (n=1) in the last month. Of these respondents, all reported that only one person had used the needle before them and the most common type of person was a regular sex partner. In 2011, 9% of the IDU reported that someone else had used a needle after them in the last month; which was comparable to 16% in 2010. Use of injecting equipment after someone else was reported by 17% (36% in 2010), with the most commonly reported equipment being spoons/mixing containers.

In WA, the hepatitis C virus (HCV) continues to be more commonly notified than the hepatitis B virus (HBV). The prevalence of human immunodefiency virus (HIV) among those people who inject drugs in Australia has also remained stable at relatively low rates over the past decade, with HCV more commonly reported.

Among the IDU sample interviewed as part of the IDRS, the most commonly reported injection-related problem remained scarring/bruising reported by 32% in 2011, which was comparable to 44% in 2010. The next most common injection-related problem was difficulties injecting, reported by 27% of IDU in 2011, compared to 38% in 2010. The proportion reporting a dirty hit did not change significantly, being 15% in 2011 compared to 18% in 2010.

Mental health problems and psychological distress
Mental health problems were reported by 44% of IDU in 2011, which was not significantly different from 51% in 2010. As in previous years, the most commonly reported problems were depression and anxiety. Of those that self-reported a mental health problem, 54% reported attending a professional in relation to the problem.

According to the Kessler Scale of Psychological Distress, 38% of IDU in 2011 were at high or very high risk of psychological distress, which was comparable to 47% of IDU in 2010. Current findings place IDU at much greater risk of psychological distress than the general population, with 9% of the population scoring at these levels according to the 2010 National Drug Strategy Household Survey (NDSHS, 2011).

Driving risk behaviours
Of those IDU who had driven a vehicle in the last six months, 13% in 2011 reported driving under the influence of alcohol, which was comparable to 19% in 2010. In contrast, 76% of IDU in 2011 reported driving after consuming illicit drugs (83% in 2010). Of these IDU in 2011, heroin was the most commonly reported drug consumed after which participants' drove (69%). The majority (59%) of participants reported that consuming illicit drugs had no impact on their driving ability.

Law enforcement trends

The proportion of IDU reporting arrest in the last 12 months was comparable to recent sample years, being 22% in 2011 compared to 31% in 2010. In 2011, the greatest proportion of those who had been arrested in the last 12 months was for use/possession (27%), whereas in 2010 the greatest proportion of those arrested in the last 12 months reported property crime. In 2011, the proportion reporting criminal activity in the last six months was 30%, which was comparable to 51% in 2010. As in previous years, the most commonly reported criminal activity was drug dealing (22% in 2011 vs. 37% in 2010).

In 2009/10, law enforcement data for WA as a whole indicated that the number of consumer/provider arrests for cannabis (n=6,274) was relatively stable and heroin (n=150) and cocaine (n=80) slightly increased, whilst the number of consumer/providers arrests for amphetamine-type stimulants (n=2,190) decreased compared to the previous financial year.

Special topics of interest

Heavy Smoking Index for nicotine dependence

For the first time in 2011, participants who smoked daily were asked two questions from the Fagerstrom test for nicotine dependence. Among those who reported smoking daily (n=54), half reported having their first cigarette within the first five minutes of waking and 35% of daily smokers reported smoking between 21-30 cigarettes a day.

Among daily smokers the mean HSI score was 3.4. Over one-third (35%) of the daily smokers scored 5 or above indicating high nicotine dependence.

Alcohol Use Disorders Identification Test-Consumption

Among those who drank recently (70%), the mean score on the AUDIT-C was 5.0, There was no significant difference between male and female mean AUDIT total scores, with 60% of males and 46% of females scoring 5 or more indicating the need for further assessment.

Pharmaceutical Opioids

Over one-third (40%) of the WA sample reported recently using pharmaceutical opioids such as methadone and oxycodone. Of those who had recently used pharmaceutical opioids, almost half (43%) reported using them for pain relief and around one-third (29%) to seek an opiate effect. Twenty-nine per cent of those who commented reported they had been refused pharmaceutical medications due to injecting history. Of those who commented, more than two-thirds (71%) were prescribed pharmaceutical opioids by their general practitioner.

Mental and Physical Health problems (SF12)

The SF-12 was administered for the first time in the 2011 IDRS. WA IDRS participants scored a mean of 39.5 for the mental component score (MCS) and 43.7 for the physical component score (PCS). Overall, participants in the WA IDRS have a significantly lower MCS and PCS compared to the Australian population. Scores indicated that IDRS participants had poorer mental and physical health then the population average.

Health Services Accessed

Participants in the 2011 IDRS were asked about access to health services in the previous four weeks. Just under half of the 2011 sample reported visiting a GP in the last four weeks preceding interview on a median of two occasions. Of those who had visited a GP, 55% had visited on two occasions in the last four weeks and 45% reported the visit was substance use related.

Online activities

In 2011, a set of one-off questions about online activity was asked in the IDRS questionnaire. Of the WA participants who commented, (n=55), 46% reported that they never used the internet in the last month, while 20% reported daily use of the internet and 16% reported using the internet at least weekly.

Of those who had gone on the internet in the last month, one third reported going 'online' to gain information about drugs. Small numbers reported going online to buy drugs (10%) or to post information about drugs online (7%). Of those who commented, 20% stopped using a drug and 11% used a new combination of drugs as a result of information found online. Text messaging was reported to be the preferred medium to obtain drugs.

Policy

In 2011, additional questions in the IDRS were asked to provide data about how IDU perceive Australian drug policy. The majority of WA IDRS participants (n=67, 99%) supported needle and syringe programs to reduce problems associated with heroin use. The

majority also supported methadone/buprenorphine maintenance programs, treatment with drugs (not including methadone) and regulated injecting rooms.

The majority of the WA IDRS sample also supported the legalisation of cannabis (88%) for personal use and just over two thirds (73%) supported the legalisation of heroin for personal use. Small numbers supported the increased penalty for the supply of cannabis (9%). One-fifth supported increased penalty for sale and supply of heroin (20%), almost one-half (45%) supported increased penalties for the sale of methamphetamine and just over one third supported increased penalties for the sale of cocaine and ecstasy (37% and 35% respectively).

SUMMARY AND IMPLICATIONS

The findings from the 2011 WA IDRS have policy and research implications, and recommendations are outlined below. It may be worth noting that several of these issues have already received attention and/ or may be in the process of further investigation.

Demographics

Findings from the 2011 WA IDRS demonstrate little change from last year's sample in most areas and in others, some significant changes in drug use patterns and perceptions among IDU in Perth. Despite a smaller sample than in previous years, the demographic characteristics of the 2011 WA IDRS sample were mostly similar to the 2010 sample. However, there were significant differences observed in the average age of the 2011 sample, which has been significantly increasing since 2009; from 35 years in 2009, 37 years in 2010 and to an average age of 40 years in 2011. This trend suggests an ageing sample of regular injecting drug users in the WA IDRS, although this could in part reflect the high proportion of the sample recruited from the WA Substance Users Association (WASUA).;If the increasing age does reflect actual changes in the injecting population in Perth then this has implications for health strategies focused towards an aging cohort of injecting drug users. The implications of an ageing IDU population have been addressed in a number of countries (O'Kelly & O'Kelly, 2012) and we recommend further research is conducted on the ageing injecting drug users in WA.

There were also some notable changes between samples regarding tertiary education, with a greater proportion of the 2011 IDRS sample reporting completion of university/college qualifications than in 2010. . It is unknown why the current sample of IDU appears to be more tertiary educated than the 2010 sample.

Another noted demographic change in the 2011 IDU sample was that more than half (59%) of the current sample were currently engaging in drug treatment. Although this current treatment proportion was not significantly different to the 2010 sample, this proportion represented the greatest percentage currently engaging in drug treatment since WA IDRS data collection began. It may be important to note that prior to 2009, a maximum of one-third of the entire IDU sample recruited could be in drug treatment at the time of interview. However, since 2009, this treatment ceiling has been waived in all IDRS jurisdictions, allowing for no upper limit on the proportion of IDU in current drug treatment.

Heroin

Findings from previous years' WA IDRS samples have observed changing trends in heroin use patterns, which has mostly been explained by continuous shifts in heroin availability and purity. In 2011 patterns of heroin use and frequency of use were mostly comparable to 2010 findings, suggesting some stability currently among IDU who use heroin. However, a significant increase was observed in the proportion reporting current heroin availability as 'very difficult' to obtain. In regards to homebake use in the 2011 IDRS sample, a significant increase was observed in the proportion of current IDU reporting recent use of homebake.

As homebake is often sourced as a substitute for heroin, it may be that fluctuations in heroin availability in 2011 may have led to increase homebake use. Further research on this issue is needed.

The median price of one quarter of a gram of heroin significantly increased in 2011; however, there was no significant difference in the price of any other quantity of the drug. Still, the price of heroin still remains more expensive in WA than prior to the heroin shortage in 2001. Heroin purity appears to have remained modest in WA, with perceptions of purity both currently and changes to purity remaining mostly stable in 2011. Overall, reports on heroin by 2011 WA IDU suggest that heroin use has been stable over the last two sample years'.

Methamphetamine

In 2011, there were no other significant differences in the proportion reporting lifetime and recent use of most methamphetamine forms, the only exception being recent use of crystal methamphetamine which significantly increased in 2011. Average number of days of use for any methamphetamine form significantly decreased from 2010 to 2011, as did the average number of days crystal was reportedly used in 2011. This suggests that more IDU in 2011 had used crystal in the past six months; however, the frequency of use was less than in 2010.

However, overall methamphetamine use among IDU samples recruited in Perth appears to be decreasing over time, a trend seen in a number of the indicators since 2007. The other methamphetamine price, purity and availability proportions remained mostly comparable to those observed in 2010; the only exception was a significant increase observed in the median price of a point of speed and in the perceived purity of speed as 'high' in 2011. This may suggest the presence of a higher purity and possibly more expensive form of speed methamphetamine available in the Perth drug market at the time of data collection.

Non-fatal overdose

In 2011, lifetime history of heroin overdose was reported by 64% of the 2011 sample, even though this was not a significant increase from 47% in 2010, this current proportion represents the greatest percentage reporting lifetime overdose on heroin since 2000. Additionally, the proportion reporting recently overdosed in the last 12 months significantly increased from 2010. Despite 2011 IDU reporting patterns of heroin use and markets as mostly unchanged since 2010, self-reported accidental lifetime and recent heroin overdose proportions increased. It is uncertain why this discrepancy has occurred, although the self-report of overdoses by participants within the IDRS, may be more sensitive to trends in current heroin purity in Perth than the purity of a non-random selection of heroin seizures analysed by police in the same period. Supportive of this, a number of Key Experts who commented in 2011 reported on the presence of a number of high purity batches of heroin during the year and suggested that as a consequence, a greater number of regular heroin users were accidentally overdosing.

Further, ambulance data indicated that the number of ambulance callouts to narcotic overdoses in WA has increased significantly in the last five years. However, ambulance callout figures remain far lower than those prior to the heroin shortage. Overdose fatalities in WA remain low compared to the pre-shortage levels, which is probably because, overall, heroin purity appears to remain modest in WA, however there are indications that heroin purity has been fluctuating in recent times.

Overall, these findings reinforces the need to continue to implement the prudent steps already commenced in WA (Rainsford, Lenton & Fetherston, 2010) to prevent heroin overdoses and fatalities. These have included continued monitoring of overdose trend data; reviewing and updating resources and training materials; considering targeting those most at

risk of overdose, including people leaving prison and abstinence oriented treatment programs; reviewing protocols regarding police attendance at overdoses; and considering expanding access to naloxone for peer administration (Lenton, Dietze et al. 2009; Lenton, Dietze et al. 2009).

Other opioids and drugs
Significant increases were observed in proportion of the 2011 WA IDRS reporting recent use of illicitly obtained methadone syrup. All other use of illicit pharmacotherapy treatments was reported as comparable to last year, although a significant decrease was observed in the average number of days illicit Suboxone was used in the last six months. This finding may be due to the higher proportion of the 2011 WA IDRS sample currently engaged in drug treatment. 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 representatives of all those enrolled in maintenance pharmacotherapy programs. Overall, development and implementation of strategies to reduce diversion of and non-adherence with prescribed pharmaceutical opioids are warranted.

There was a significant increase in the proportion of the sample who had used oxycodone in the last six months in the 2011 sample compared to the previous year's sample.Conversely, the average number of day's illicit oxycodone was injected in the last six months significantly decreased from last year. In 2011, all participants reporting use of illicit oxycodone in the last six months reported injecting. Clearly, there are potential risks associated with illicit, intravenous use of prescribed medications intended for oral administration. In particular, problems with oxycodone use have been well documented in North America and elsewhere, and this needs to continue to be closely monitored in Australia (Drugs and Crime Prevention Committee, 2007).

In 2011, only one participant reported recent use of ecstasy, which was a significant decrease from 21% in 2010, which is consistent with other indicators that ecstasy use and availability was low in Perth during time of interview. Although, the IDRS is not designed to monitor trends in ecstasy and related drug use as the frequency and prevalence of use among IDU has always been low. For more information on ecstasy trends in Perth, see the 2011 WA EDRS report (http://ndarc.med.unsw.edu.au/resource-type/drug-trends-jurisdictional-reports).

Injecting risk behaviours
Self-reported rates of sharing of needles and syringes among IDU participants have steadily declined over time, with 7% of the current cohort reported use of another person's used needle/syringe in the month prior to interview. Similarly, the number of participants reporting providing their used equipment to another person was 36% in 2010 compared to 17% in 2011; however, this was not a significant decrease. In 2011, participants were asked for the first time what injecting equipment they had re(?)-used in the last month, of those who commented (n=60), 42% reported the re-use of 1ml needles and syringes and 37% reported cleaning then re-using 1ml needle/syringes. Re-use of injecting equipment increases the risk of inadvertent sharing of other's equipment. Given these levels of injection-related risk-taking behaviour, risk of transmission of HCV and HIV remains a concern. Therefore, continuing education is necessary to inform IDU of the dangers of sharing injecting equipment. Furthermore, further exploration of the reasons why people re-use their own equipment needs to be identified. In the past cost of equipment was identified as a significant contributor to decisions to re-use. In general terms, the results also reinforce the ongoing need for readily available access to clean needles..

Mental health problems and psychological distress
Just under half (44%) of the current sample reported having experienced a mental health problem in the six months prior to interview. As in previous years, depression and anxiety

were the most commonly reported mental health problems. Participants were considerably more likely to score in the 'high' or 'very high distress' categories than the general Australian population as measured by the Kessler Psychological Distress Scale (K10) (38% vs. 9%). In 2011, the SF-12 was included to assess the mental and physical health of IDU. Participants in the 2011 WA IDRS scored a significantly lower mental component score and physical component score than the Australian population, indicating that IDRS participants had poorer mental and physical health then the average population. These data suggest the need for strategies to improve the mental and physical health of people who inject drugs.

Driving risk behaviour

The vast majority of IDU reported driving under the influence of illicit drugs and most perceived this to have no impact on their driving ability. Thus, the provision of accurate information about the impact of drugs on driving ability is needed. Providing information through needle exchanges, and on fitpacks sold through community pharmacies as well as at the point of roadside drug testing may be some opportunities for addressing this issue..

Heavy smoking index for nicotine dependence

Among those who reported daily smoking (77%), just over one-third of daily smokers scored 5 or above indicating high nicotine dependence. Within health care or treatment settings, nicotine addiction is sometimes overlooked as a primary drug of concern among injecting drug users, despite the fact that tobacco use is the largest preventable cause of death and disease in Australia. An increased emphasis on providing targeted interventions and suited pharmacological management for IDU who smoke tobacco is warranted to help drug injectors quit smoking.

1. INTRODUCTION

The Illicit Drug Reporting System (IDRS) aims to provide a national co-ordinated approach to monitoring data on the use of opioids, cocaine, methamphetamine and cannabis. It is intended to act as a strategic early warning system that identifies emerging drug problems of state and national concern. Rather than describe such phenomena in detail, the IDRS is designed to be timely and sensitive to emerging drug trends, thereby providing direction for more detailed data collection.

The IDRS is funded by the Australian Government Department of Health and Ageing (AGDH&A). The project is coordinated at the national level by the National Drug and Alcohol Research Centre (NDARC) at the University of New South Wales, thereby ensuring that comparable data is collected in every jurisdiction in Australia.

The IDRS commenced in New South Wales (NSW) in 1996 and has been conducted in Western Australia (WA) since 1998; thus, this report presents the findings of the 13 year of data collection in WA. Results are summarised according to the four main drug types, with the use of other drugs also reported. Additionally, this report continues the initiative commenced in 2003 when the IDRS attempted to collect more detailed information on the illicit markets for pharmaceutical opioids. A separate study monitoring trends in ecstasy and related drug use (Ecstasy and Related Drugs Reporting System, or EDRS, formerly known as the Party Drugs Initiative, or PDI) commenced in NSW in 2000 and has been conducted nationally since 2003.

Both IDRS and EDRS jurisdictional and national reports can be downloaded from the NDARC website: http://ndarc.med.unsw.edu.au

1.1 Study aims

As in previous years, the specific aims of the WA component of the 2011 IDRS were to examine:

- to document the price, purity, availability and patterns of use of the four main illicit drug classes in Perth, WA, primarily focusing on heroin, methamphetamine, cocaine and cannabis;
- to document risks and harms associated with drug use; and
- to detect and document emerging drug trends of national and state significant that require further and more detailed investigation.

2. METHOD

Three data collection methods are used in the IDRS:

- a quantitative survey of people who regularly inject drugs (IDU);
- a semi-structured interview with key experts (KE) who worked with illicit drug users; and
- analyses of indicator data sources related to illicit drug use.

These methods provide effective means to determine drug trends and the triangulation of data sources allows for validation of observed trends across the different sources. People who regularly inject drugs (injecting drug users or IDU) are surveyed because they are regarded as a sentinel group for detecting illicit drug trends due to their increased exposure to many types of illicit drugs. Irrespective of their drug of choice, IDU often have firsthand knowledge of the price, purity and availability of the other illicit drugs under study. KE are interviewed because they provide contextual information on drug use patterns and other drug-related issues, including health. Indicator data are collected to provide quantitative support for the trends in drug use detected by the other methods.

2.1 Survey of IDU

The IDU survey consisted of face-to-face interviews with regular IDU from Perth between June and August 2011. In 2011, only 70 regular IDU were recruited for the WA IDRS compared to 100 IDU interviews in most previous years' WA samples, this was most likely due to an unforeseen delay to the start of the 2011 WA IDU recruitment. Subjects were recruited through flyers distributed at pharmacies throughout the Perth metropolitan region and recruitment at a central needle and syringe programs (NSP). Snowballing techniques were also utilised. Potential participants were screened upon contact with researchers to ensure they fulfilled the participation criteria. Criteria were: having injected at least monthly in the six months prior to interview, having been resident in the Perth metropolitan area for no less than 12 months prior to interview; and being a minimum of 16 years of age. Ethics approval was granted from the Curtin University Human Research Ethics Committee (HR48/2009). This sampling strategy has produced demographic characteristics comparable to IDU interviewed in preceding years.

The interview schedule included sections on demographics; drug use history; the price, purity and availability of illicit drugs; criminal activity; injection risk-taking behaviour; health-related issues; driving risk behaviour; and experiences with law enforcement. Interviews took approximately 45 minutes to complete and participants were reimbursed $40 for their time and travel expenses. Descriptive analyses of the quantitative data derived from the IDU survey were conducted using IBM SPSS Statistics 19.0 for Windows. Confidence intervals (CI) were calculated using an Excel spreadsheet available at http://www.cebm.net/index.aspx?o=1023 (Tandberg).

2.2 Survey of KE

In 2011, ten KE interviews were conducted. Eligibility for participation in the study was having at least weekly contact with illicit drug users in the six months prior to interview and/or contact with 10 or more illicit drug users in that time. KE interviews were either conducted in person or over the telephone in accordance with convenience and availability. Interviews took approximately 20-30 minutes, with KE invited to comment on drug use patterns, drug availability, criminal behaviour, health and other issues affecting the illicit drug users with whom they had contact. KE in 2011 consisted of needle exchange workers, drug treatment workers, counsellors, general health and emergency department workers, law enforcement workers and drug analysts for the WA Police and Customs.

2.3 Other indicators

Secondary data sources were examined to complement and validate the data collected from both the IDU and KE surveys. Data were utilised that provided indicators of illicit drug use and related harms, and included law enforcement data, national survey data and health data.

The selection criteria to determine what sort of indicator data should be included in the IDRS were developed in the pilot study (Hando et al., 1997b). Where possible, information is provided in financial year format to cover the same time period as that covered by the study. A number of sources provided indicator data for the 2011 IDRS:

- Australian Crime Commission (ACC) for information on drug seizures and arrests;
- Australian Institute of Health and Welfare (AIHW) for treatment data obtained from the National Minimum Data Set and National Opioid Pharmacotherapy Statistics;
- telephone advisory service data from the Alcohol and Drug Information Service (ADIS);
- Australian Bureau of Statistics (ABS) for overdose data;
- overdose-related calls attended by the WA St John Ambulance Service provided by St John Ambulance Australia WA Inc;
- Data on needle and syringe distribution, provided by the Sexual Health Branch, Health Department of Western Australia (HDWA);
- Rates of unspecified and incident cases of the hepatitis B virus (HBV) and the hepatitis C virus (HCV) from the Communicable Diseases Network, Australia, National Notifiable Diseases Surveillance System database; and,
- Blood-borne viral infection (BBVI) rates from blood testing carried out as part of the Australian NSP survey, prepared by the National Centre in HIV Epidemiology and Clinical Research (NCHECR).

2.4 Data analysis

The IDU participant survey results are used as the primary basis on which to estimate drug trends. These participants provide the most comparable information on drug price, availability and use patterns in all jurisdictions and over time. However, purity of drug seizures data provided by the ACC is an objective indicator of drug purity, and such data are also presented in this report. Other indicator data are reported to provide a broader overview and a basis against which trends in IDU participant data may be contextualised. KE data are discussed within the individual jurisdictional reports to provide a context around the quantitative data from the IDU surveys.

Categorical variables were analysed using $\chi 2$. All data were analysed using SPSS Statistics 19.0 for Windows. Further analysis was conducted on the main drugs of focus in the IDRS to test for significant differences between 2010 and 2011 for drug of choice, last drug injected, drug injected most often in the last month, recent use, purity and availability. Confidence intervals (CI) were calculated using an Excel spreadsheet available at http://www.cebm.net/index.aspx?o=1023 (Tandberg). Higher and lower CI results which crossed over the value of zero were not significant. Confidence intervals were only included in the report if findings were statistically significant (p=<.05). This calculation tool was an implementation of the optimal methods identified by Newcombe (Newcombe, 1998). Significance testing using the Mann-Whitney U calculation was used to compare 2010 and 2011 median days of use for the major drug types discussed.

More detailed analyses on specific issues may be found in other literature, including quarterly bulletins and peer-reviewed articles produced by the project, details of which may be found on the NDARC website, www.ndarc.med.unsw.edu.au.

3. DEMOGRAPHICS

3.1 OVERVIEW OF THE IDU PARTICIPANTS

Despite a smaller sample in 2011, demographic characteristic for the 2011 IDU sample were mostly similar to those interviewed in the IDRS in previous years. The demographic characteristics of 70 IDU who took part in the 2011 WA IDRS are presented in Table 1. The mean age of the sample was 40 years (range=21-63 years), which was significantly greater than a mean age of 37 years in 2010 (t=2.847, df=69, p=.006). Fifty-seven per cent of the current sample were male, which was significantly less than 65% males in 2010 (95%CI 0.28, 0.02). Four per cent identified as Aboriginal and/or Torres Strait Islander (ATSI), which was comparable to 9% in 2010. Almost all the 2011 sample reported English as the main language spoken at home, with the exception of one participant reporting Vietnamese as the main language spoken at home. The majority (83%) identified as heterosexual. In 2011, IDU were asked about current relationship status; the greatest proportion of the current sample was single (41%), next most common was partnered (26%), then married/de facto (20%). Just under half (42%) reported a prison history, which was not significantly different to last year (47%).

The mean years of education remained unchanged at 10 years (range 7-12 years). However, there was a notable difference between samples regarding tertiary education. In 2011, almost a third of the current sample (27%) reported completion of university and college education, which was a significant increase from the 13% in 2010 (95%CI 0.38, 0.12). Proportions reporting having no tertiary education were comparable between sample years', reported by 37% in 2011 compared to 53% in 2010. Some 36% of the 2011 IDU sample reported completion of trade/technical qualifications, which was not significantly different to the 34% in 2010. The proportion of the sample reporting current unemployment was 70% in 2011, which was comparable to 77% in 2010. Similarly, the proportion reporting current full-time employment was 6% in 2011, which was not significantly different to 3% in 2010. Only 4% of the 2011 sample reported receiving income from sex work in the last month compared to 1% in 2010. Overall, in comparison to last year, the current sample of IDU appeared to be more tertiary educated and less unskilled. The average weekly income reported by the current sample was $465, which was an increase by more than $100 from $348 in 2010.

KE made several comments regarding the age and gender of IDU. There was agreement among KE that the majority of IDU range from their early twenties to late 60s. Most KE reported that a greater proportion of IDU were male, whilst a few KE reported an equal ratio of male to female. These statements were largely supported by the demographics found in the current sample of IDU.

With regards to ethnicity, two KE reported that IDU were mostly Caucasian Australian, whereas one KE also diverse ethnic background and a small proportion were from ATSI backgrounds. KE reported that IDU generally had varied levels of education, with the majority educated to Grade 10 or below. However, one KE reported most were skilled or trade qualified. In regards to employment status, it was reported by most KE that IDU were largely unemployed and unwaged, often on disability pensions or government assistance. Few KE also noted that some IDU had a history of previous imprisonment or a criminal history.

Table 1: Demographic characteristics of IDU participants, 2007-2011

	2007 N=80	2008 N=100	2009 N=100	2010 N=100	**2011 N=70**
Age (mean years, range)	37 (17-59)	37 (19-61)	35 (18-62)	37 (18-63)	**40 (21-63)***
Sex (% male)	61	62	60	65	**57***
Employment (%):					
Not employed	78	61	71	77	**70**
Full time	4	13	6	3	**6**
Part time/casual	15	19	12	14	**13**
Home duties	0	1	2	1	**0**
Student	0	2	5	1	**1**
Other	4	4	4	4	**1**
Received income from sex work last month	4	0	3	1	**3**
Aboriginal and/or Torres Strait Islander (%)	7	3	4	9	**4**
Heterosexual (%)	84	89	81	88	**83**
Bisexual (%)	9	6	7	7	**6**
Gay or lesbian (%)	5	4	8	5	**6**
Other (%)	3	1	4	0	**6**
School education (mean no. years, range)	10 (6-12)	10 (7-12)	10 (7-12)	10 (6-12)	**10 (7-12)**
Tertiary education (%):					
None	56	38	37	53	**37**
Trade/technical	38	42	54	34	**36**
University/college	6	20	9	13	**27***
Average weekly income	-	-	$304	$348	**$465***
Currently in drug treatment^ (%)	34	37	30	47	**59**
Prison history (%)	46	45	49	47	**42**

Source: IDRS IDU interviews
^ Refers to any form of drug treatment, including pharmacotherapies, counselling, detoxification, etc
* Significant at alpha level .05

3.1.1 Current and previous treatment

Of IDU in 2011, the proportions reporting currently engaging in drug treatment were comparable to last year, from 47% in 2010 to 59% in 2011. Of participants engaged in treatment, 59% were receiving methadone syrup and 32% were on Suboxone. Smaller proportions reported drug counselling and Naltrexone (5% each). Methadone syrup was also the most common treatment reported in the 2010 sample. Of 2011 IDU in treatment, the mean duration in current treatment was 40 months (range=1-132).

Participants were also asked if they had been engaged in treatment at any time during the previous six months preceding interview and 43% reported that they had. The greatest proportion of these participants reported previous methadone treatment (25%) followed by previous Suboxone treatment (20%). Smaller proportions reported previous drug counselling (11%), Subutex and oxycodone (2% each).

3.1.2 Recruitment

Participants were asked if they had participated in the IDRS or EDRS in previous years, as shown in Table 2. More than one-third of the current sample (40%) had previously participated in the IDRS and a minority (2%) had participated in the EDRS. Approximately three-quarters (73%) of current IDU were recruited via a NSP and one-quarter (25%) through word of mouth. Current sources of recruitment were comparable to the proportions of those in the 2010 sample. Similar to 2008, 2009 and 2010 IDRS recruitment methods, IDRS advertising and interviewing could be conducted at the WA NSP site; this has proved to be a method that is both convenient and comfortable for both participants and interviewers, and therefore assists in attaining the required participant numbers within the desired recruitment time.

Table 2: Source of recruitment and previous participation in IDRS and EDRS, 2011

Characteristic	2011 N=70
Participated in IDRS in previous years (%)	40
Where found out about IDRS survey (%):	
NSP	73
Treatment provider	0
Advert in street press	0
Word of mouth	25
Chemist	0
Other	2
Participated in EDRS in previous years (%)	2

Source: IDRS IDU interviews

3.2 Drug use history and current drug use

Table 3 presents injection history, drug preferences and polydrug use of IDU in 2011. The mean age of first injection among current IDU was 20 years, which was comparable to 19 years reported in the last three sample years.

Frequency of injection proportions were mostly similar to 2010 findings, with the exception of an observed increase in the proportion reporting the most commonly reported frequency of injection as 'more than weekly, but 'less than daily', from 35% in 2010 to 44% in 2011 (95%CI 0.41, 0.12). The next greatest frequency of injection proportions were 'weekly or less' (24% in 2011 vs. 21% in 2010), followed by 2-3 times a day' (16% in 2011 vs. 27% in 2010), then 'once per day' (11% in 2011 vs. 10% in 2010) and lastly 'more than three times a day' (4% in 2011 vs. 7% in 2010).

In 2011, heroin exceeded amphetamines as the most common drugs first injected, with 47% nominating heroin in 2011, which significantly increased from 39% in 2010 (95%CI, 0.41, 0.13). The proportions reporting first injecting amphetamine were reported by 36% in 2011, which was comparable to 53% in 2010.

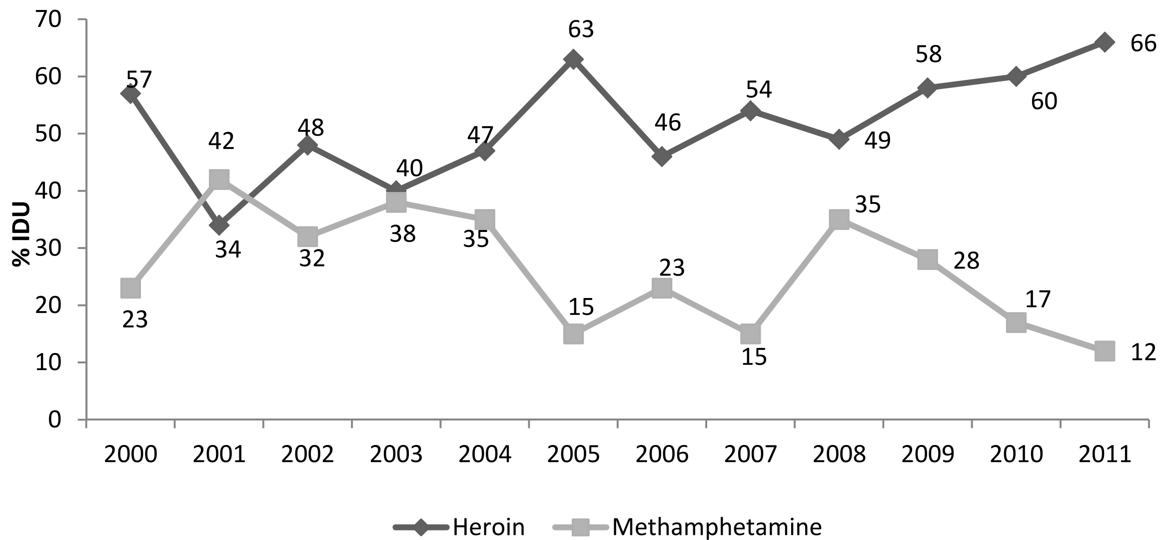
Table 3: Injection history, drug preferences and polydrug use of IDU participants, 2007-2011

	2007 N=80	2008 N=100	2009 N=100	2010 N=100	**2011 N=70**
Age first injection (mean years)	19	19	19	19	**20**
First drug injected (%)					
Heroin	44	38	34	39	**47***
Amphetamines	43	51	56	53	**36**
Cocaine	0	1	0	0	**0**
Morphine	10	5	5	3	**6**
Drug of choice (%)					
Heroin	54	49	58	60	**66**
Cocaine	1	1	1	0	**1**
Methamphetamine (any form)	15	35	28	17	**12**
Speed	*13*	*11*	*17*	11	**3**
Base	*3*	*0*	*0*	0	**0**
Crystal methamphetamine (ice)	*0*	*24*	*11*	6	**9**
Cannabis	8	7	4	11	**7**
Drug injected most often in last month (%)					
Heroin	38	32	50	47	**54**
Cocaine	0	0	1	0	**0**
Methamphetamine (any form)	33	43	32	25	**21**
Speed	*24*	*19*	*24*	17	**7**
Base	*3*	*0*	*0*	0	**0**
Crystal methamphetamine (ice)	*6*	*24*	*8*	8	**14**
Most recent drug injected (%)					
Heroin	36	34	46	38	**50**
Cocaine	0	0	1	1	**0**
Methamphetamine (any form)	29	42	30	25	**19**
Speed	*21*	*17*	*22*	18	**4**
Base	*3*	*0*	*0*	0	**0**
Crystal methamphetamine (ice)	*5*	*25*	*8*	7	**14**
Frequency of injecting in last month (%)					
Not injected in last month	*1*	*1*	1	0	**0**
Weekly or less	11	38	16	21	**24**
More than weekly, but less than daily	31	31	33	35	**44***
Once per day	29	17	19	10	**11**
2-3 times a day	18	8	26	27	**16**
>3 times a day	10	5	5	7	**4**

Source: IDRS IDU interviews

Heroin remained the most commonly reported drug of choice as nominated by 66% of IDU in 2011, which was not significantly different from the 60% in 2010 (Figure 1). There was no significant change in the proportion reporting methamphetamine (speed, base and crystal) as the drug of choice, which was 12% in 2011 compared to 17% in 2010.

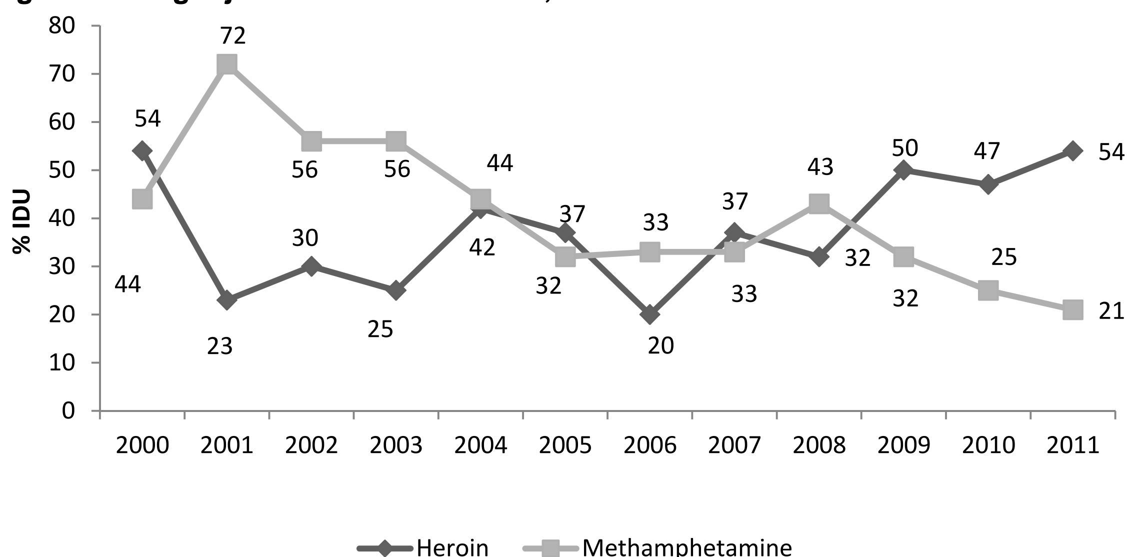
Figure 1: Drug of choice, 2000-2011



Source: IDRS IDU interviews

Findings from the 2011 WA IDRS sample suggested increasing trends in heroin use over the last three sample years. This was also apparent in responses to questions regarding injection, with more than half (54%) the 2011 sample reporting heroin as the drug most commonly injected in the last month, which was comparable to 47% in 2010 (Figure 2 and Table 4). Additionally, the proportions reporting any form of methamphetamine as the drug most often injected in the last month were also comparable to last year, with 21% in 2011 compared to 25% in 2010. In 2011, crystal methamphetamine exceeded speed as the most commonly reported form of methamphetamine most often injected in the last month, reported by 14% of the currently sample compared to 8% in 2010. Smaller proportions of the current sample reported Buprenorphine (Subutex®) (10%), speed (7%), morphine (6%) and oxycodone (4%) as the drug injected most often in the last month (see Table 4).

Figure 2: Drug injected most last month, 2000-2011



Source: IDRS IDU interviews

Table 4: Drug injected most often in the last month 2010-2011

Drug	**2010 N=100**	**2011 N=70**
Heroin	47	54
Methamphetamine		
Speed	17	7
Ice/crystal	8	14
Buprenorphine**	12	10
Morphine	5	6
Oxycodone	1	4
Cocaine	0	0
Other opiates	1	0
Other	6	0

Source: IDRS IDU interviews
** Includes buprenorphine-naloxone (Suboxone)

Locations of injection

Participants were asked about the location of last injection (Table 5). The most commonly nominated last location of injection was at a private home, reported by 75% in 2010, which was not significantly different to 80% in 2010. Following this, 11% nominated a car as last location of injection, comparable to 11% in 2010. Smaller proportions nominated public toilet, other (6% each) and street/car park/beach (2%).

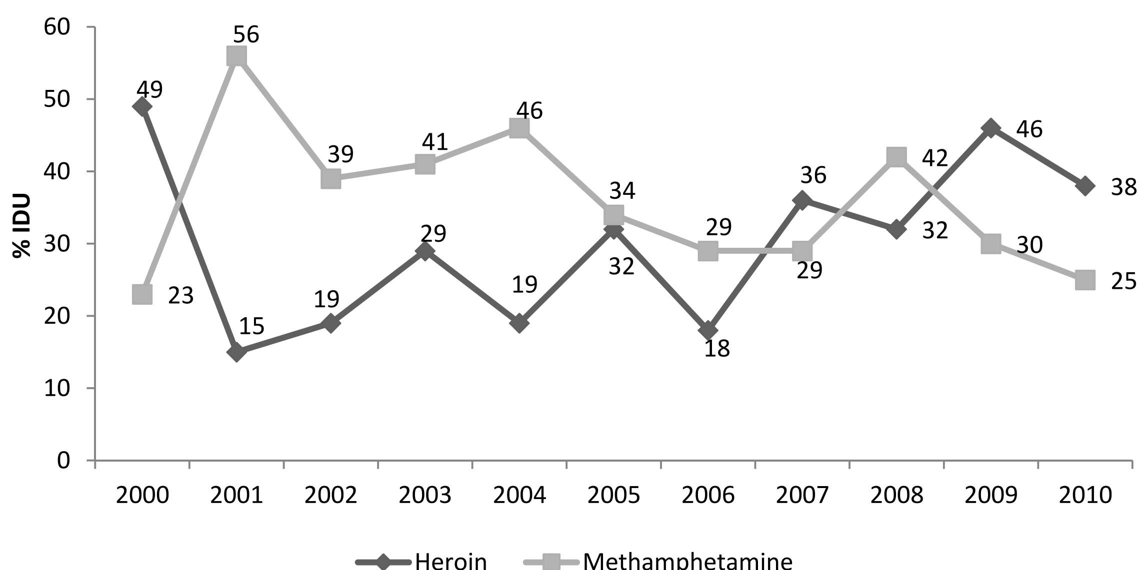
Table 5: Proportion of IDU participants reporting the last location for injection, 2010-2011

Location	2010	2011
Private home	80	75
Street/car park/beach	6	2
Car	11	11
Public toilet	3	6
Other	0	6

Source: **IDRS IDU interviews**

In 2011, the greatest proportion of respondents nominated heroin (50%) as the drug most recently injected. This was followed by almost one-fifth (19%) of the 2011 sample nominating methamphetamine as the drug last injected. These findings were comparable to last year (38% and 25% respectively) (Figure 3).

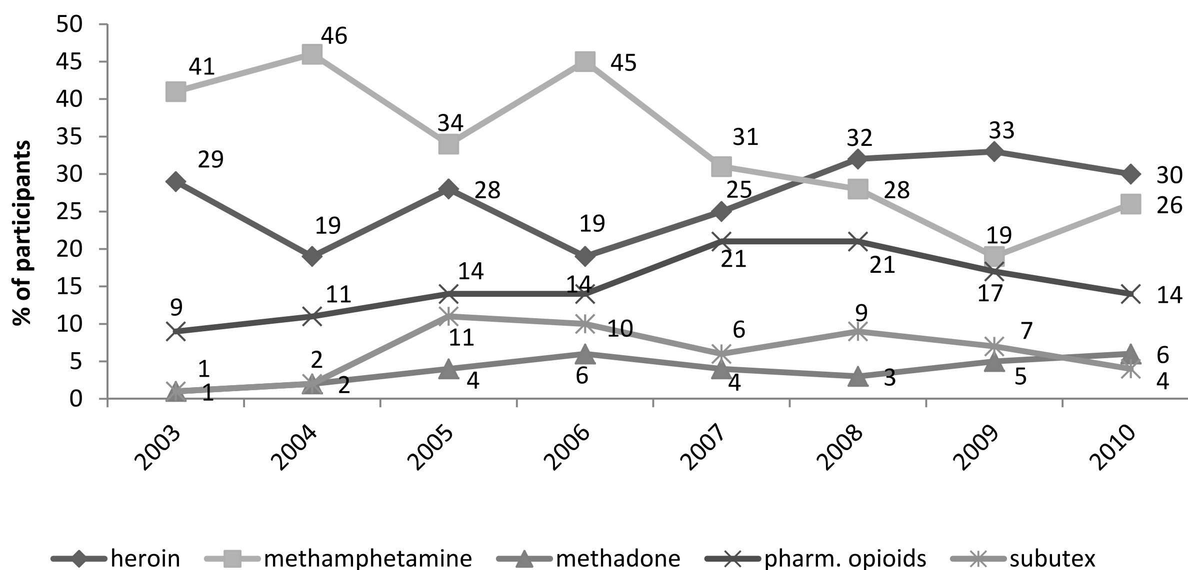
Figure 3: Drug last injected prior to interview 2000-2011



Source: IDRS IDU interviews

Data from the NSP Survey (NCHECR, 2011), presented in Figure 4, shows that methamphetamine has been the most commonly reported last drug injected by participants in this survey from 2003 to 2007. However, in 2008, heroin exceeded methamphetamine as the drug last injected by NSP attendees. This trend continued into 2010 (the most recent data collection year), with the greatest proportion of survey respondents (30%) reporting heroin as the last drug injected, closely followed by methamphetamine (26%) as the last drug injected.

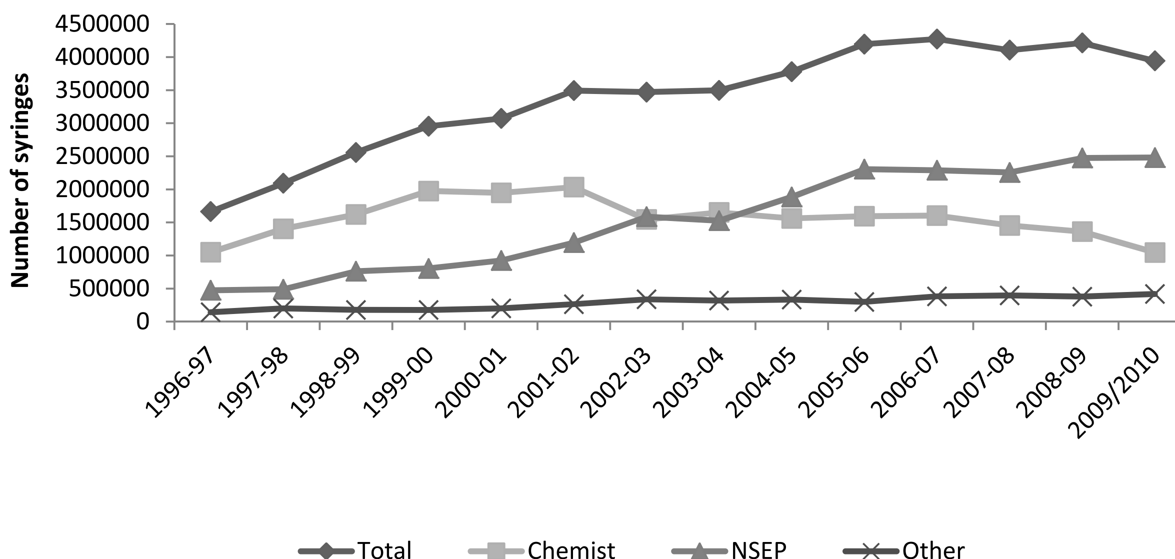
Figure 4: Last drug injected reported by NSP attendees, WA 2003-2010



Source: Australian NSP Survey (NCHECR), 2011

Figures from the Sexual Health Branch of the HDWA show that 4,274,095 syringes were distributed in WA during the 2010/11 financial year. As has been the case since 2003/04, the bulk of these were distributed via NSP, responsible for 2,587,212 in 2010/11. Less common sources of syringes were chemists distributing 1,192,919 and other sources such as hospitals and vending machines accounting for 493,964. Data concerning syringe distribution in WA since 1996/97 is portrayed in Figure 5.

Figure 5: Sources of syringe distribution in WA 1996/1997-2010/11



Source: Sexual Health Branch, HDWA

Drug use history of the IDU sample, 2011

The drug use histories of IDU participants in the WA IDRS in 2011, including route of administration (ROA), are presented in Table 6. Over one-half of the 2011 sample had used the following drugs in the last six months: tobacco (83%), heroin (79%), cannabis (71%) and alcohol (70%). Further discussion of the use and market characteristics of each drug type can be found under the relevant section heading in the report.

Table 6: Drug use history of the IDU sample, 2011

Drug class	Ever used %	Ever injected %	Injected last 6 mths %	Mean (median) 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 %	Mean (median) days in treatment[*] last 6 mths	Mean (median) days used[^] in last 6 mths[*]
Heroin	96	94	79	70 (48)	36	3	21	1	21	1	79		72 (68)
Homebake heroin	90	89	39	22 (3)	1	1	1	1	4	3	39		20 (3)
Any heroin (inc. homebake)	*99*	*97*	*87*	*71 (55)*	*37*	*4*	*23*	*3*	*24*	*3*	*87*		*71 (55)*
Methadone (prescribed)	60	20	9	40 (29)					56	31	36	150 (180)	151 (180)
Methadone (not prescribed)	47	27	14	13 (6)					34	11	26		25 (5)
Physeptone (prescribed)	10	6	1	5 (5)	0	0	0	0	6	1	3	3 (3)	3 (3)
Physeptone (not prescribed)	31	17	3	7 (7)	0	0	0	0	19	4	7		9 (2)
Any methadone (inc. physeptone)	*74*	*39*	*20*	*39 (9)*					*70*	*40*	*51*		*116 (180)*
Buprenorphine (prescribed)	39	19	3	14 (14)	0	0	0	0	31	3	4	17 (20)	17 (20)
Buprenorphine (not prescribed)	41	34	10	6 (2)	1	1	1	1	20	3	11		9 (3)
Any buprenorphine (exc. buprenorphine-naloxone)	*64*	*44*	*17*	*8 (3)*	*1*	*1*	*1*	*1*	*40*	*6*	*16*		*11 (6))*
Buprenorphine-naloxone (prescribed)	29	17	7	53 (60)	1	0	0	0	24	16	19	85 (90)	95 (90)
Buprenorphine-naloxone (not prescribed)	26	19	11	29 (11)	1	1	0	0	14	4	14		28 (10)
Any buprenorphine-naloxone	*43*	*29*	*25*	*42 (20)*	*3*	*1*		*0*	*33*	*19*	*29*		*74 (81)*
Morphine (prescribed)	23	17	4	82 (60)	0	0	0	0	4	0	4		82 (60)
Morphine (not prescribed)	74	68	33	22 (4)	1	0	0	0	20	3	33		22 (4)
Any morphine	*68*	*71*	*36*	*30 (6)*	*1*	*0*	*0*	*0*	*22*	*3*	*36*		*30 (6)*
Oxycodone (prescribed)	16	11	3	91 (91)	0	0	0	0	6	3	6		46 (3)
Oxycodone (not prescribed)	63	56	30	20 (4)	0	0	0	0	14	3	30		30 (5)
Any oxycodone	*54*	*11*	*3*	*27 (4)*	*0*	*0*	*0*	*0*	*39*	*20*	*21*		*28 (4)*
Other opioids (not elsewhere classified)	61	4	0	1 (1)	0	0	0	0	59	29	30		38 (10)

Table 6: Drug use history of the IDU sample, 2011 (continued)

Drug class	Ever used %	Ever injected %	Injected last 6 mths %	Mean (median) 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 %	Mean (median) days in treatment[*] last 6 mths	Mean (median) days used[^] in last 6 mths[*]
Speed powder	86	84	43	14 (3)	33	3	36	1	27	3	43		14 (3)
Base/point/wax	23	20	4	12 (1)	3	1	3	0	1	0	6		10 (1)
Ice/shabu/crystal	81	81	44	28 (12)	30	13	13	3	13	3	46		23 (11)
Amphetamine liquid	9	7	1	1 (1)					1	0	3		.5 (.5)
Any form methamphetamine[#]	*96*	*96*	*63*	*26 (8)*	*41*	*14*	*44*	*3*	*33*	*4*	*64*		*27 (9)*
Pharmaceutical stimulants (prescribed)	6	0	0	0 (0)	0	0	0	0	6	0	0		0 (0)
Pharmaceutical stimulants (not prescribed)	47	20	7	2 (2)	0	0	1	0	39	10	16		4 (2)
Any form pharmaceutical stimulants	*51*	*20*	*7*	*2 (2)*	*0*	*0*	*1*	*0*	*44*	*10*	*16*		*4 (2)*
Cocaine	67	46	9	3 (3)	7	0	43	4	7	0	10		3 (2)
Hallucinogens	83	9	0	0 (0)	0	0	0	0	78	10	10		9 (2)
Ecstasy	80	29	0	0 (0)	1	0	9	0	77	1	1		1 (1)
Other benzodiazepines (prescribed)	63	3	1	1 (1)	1	0	0	0	63	43	43		119 (165)
Other benzodiazepines (not prescribed)	34	4	1	6 (6)	0	0	0	0	29	16	23		12 (3)
Alprazolam (prescribed)	*24*	0	*0*	*0 (0)*	*0*	*0*	*0*	*0*	*23*	*17*	*17*		*84 (40)*
Alprazolam (not prescribed)	*40*	3	*3*	*3 (3)*	*1*	*1*	*0*	*0*	*39*	*24*	*27*		*14 (4)*
Any form benzodiazepines	*81*	*10*	*6*	*3 (1)*	*1*	*1*	*0*	*0*	*80*	*59*	*61*		*99 (96)*
Seroquel (prescribed)	*36*	0	*0*	*0 (0)*	*0*	*0*	*0*	*0*	*34*	*17*	*17*		*108 (135)*
Seroquel (not prescribed)	31	0	0	0 (0)	0	0	0	0	31	19	19		5 (3)
Any Seroquel	63	0	0	0 (0)	0	0	0	0	63	36	36		n.a.
Over the counter codeine	57	0	1	1 (1)	0	0	0	0	55	33	35		18 (6)
Alcohol	94	0	0	0 (0)					94	69	70		50 (12)
Cannabis	99				96	70			49	6	71		104 (98)
Inhalants	27										4		1 (1)
Tobacco	90										83		174 (180)

Source: IDRS IDU interviews

[^] Refers to any ROA, i.e. includes use via injection, smoking, swallowing, and snorting

[#] Category includes speed powder, base, ice/crystal and amphetamine liquid; does not include pharmaceutical stimulants

4 HEROIN

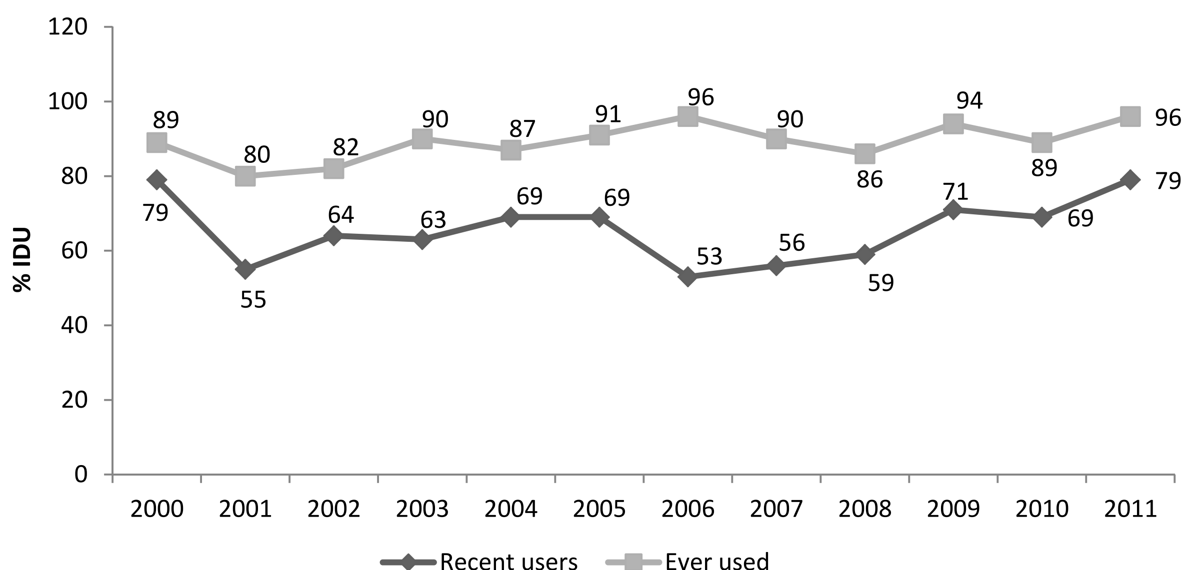
4.1 Use

4.1.1 Heroin use among IDU participants

A lifetime history of heroin use was reported by 96% of the 2011 IDU sample which was not significantly different to 89% in 2010 (Figure 6). Of current IDU that reported lifetime use, 99% had injected, 37% had smoked, 22% had swallowed and 22% had snorted heroin in their lifetime.

The proportion of IDU reporting lifetime use of homebake was comparable to recent sample years, from 90% in 2011 to 74% in 2010. Of current IDU that reported lifetime use, 98% had injected, 5% had swallowed and 2% each had smoked and snorted homebake in their lifetime.

Figure 6: Patterns of heroin use, 2000-2011

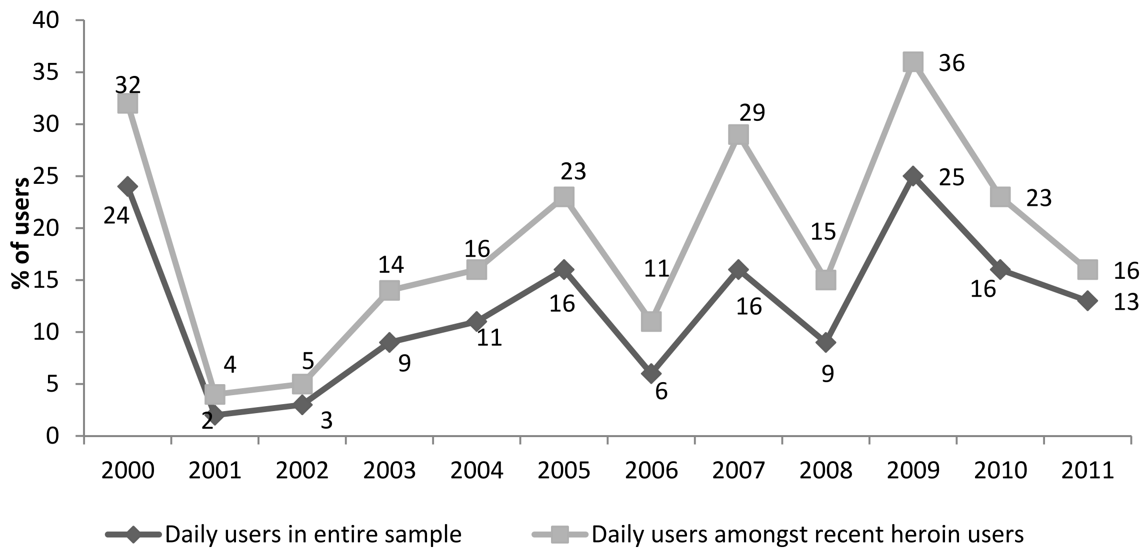


Source: IDRS IDU interviews

4.1.2 Current patterns of heroin use

Use of heroin in the six months prior to interview was also comparable to last year, with 79% of the current IDU sample reporting recent heroin use compared to 69% in 2010 (Figure 7). Of these participants, 100% had injected heroin in the last six months, 4% had smoked it, 2% had swallowed it, and 2% had snorted it. Days of use ranged from one to 180 days, with the number of daily users of heroin among the entire sample remaining comparable, from 16% in 2010 to 13% in 2011. The number of recent heroin users reporting daily use was also comparable from 23% in 2010 to 16% in 2011 (Figure 7).

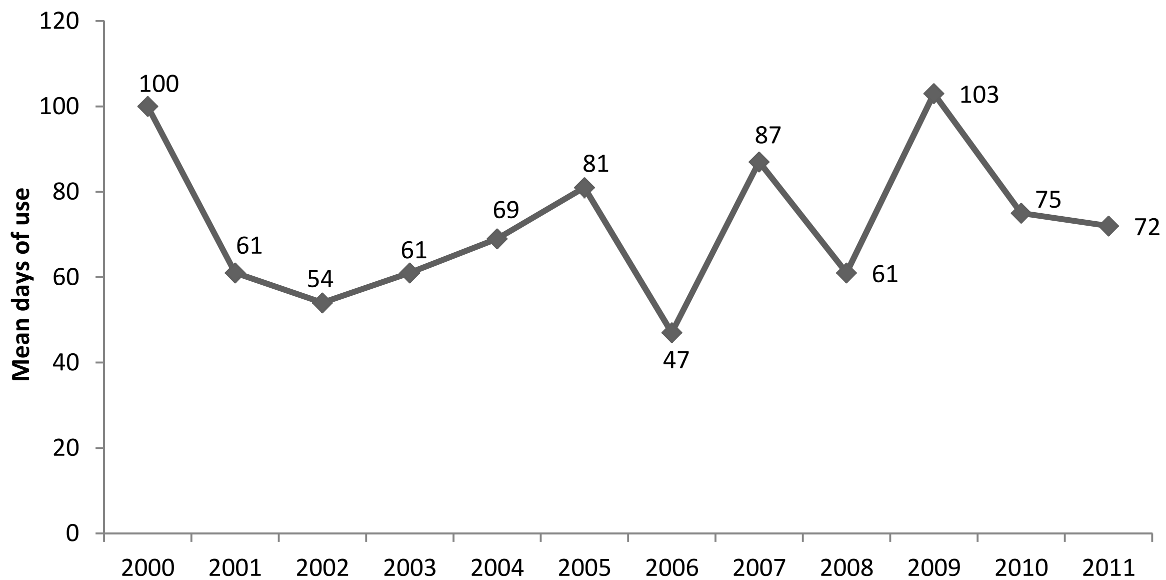
Figure 7: Daily heroin users, 2000-2011



Source: IDRS IDU interviews

The mean days of heroin use among recent users was 72 days in 2011, which was comparable to 75 days in 2010 (Figure 8). Evident in Figure 8, peaks and falls in mean days of use have been consistently occurring since 2005 however this seems to have stabilised in the last 2 sample years. Overall, this may indicate ongoing variability in heroin availability.

Figure 8: Mean days of heroin use in past six months, 2000-2011



Source: IDRS IDU interviews

The proportion reporting recent use of homebake was 39% in 2011, which was significantly greater than 31% in 2010 (95%CI 0.38, 0.09). Of these participants, 100% reported injecting homebake in the last six months and the mean days of use reported was 20 days reported in 2011, which was significantly less than the 37 days reported in 2010 (t=-2.321, df=26, p=.028).

Of the total IDU sample, 87% reported use of any form of heroin (including homebake) in the last six months. Of these participants, 100% reported injection as a ROA for any heroin used in the last six months.

In 2011, a flashcard presenting different forms and colours of heroin was provided to IDU participants in order to identify the form of heroin most commonly used in the last six months. In 2011, 56 IDU provided information pertaining to the forms of heroin they had used in the last six months. Powder was the most common form used, with 43% reporting use of white/off white powder, followed by 21% reporting use of brown rock then 14% reporting use homebake, 11% reporting use of white/off white rock, 9% reporting brown powder and 2% reporting powder of another colour. .

KE who commented on heroin reported solely on intravenous use. Four KE reported an observed increase in the purity of heroin seen in Perth in the last 12 months, reporting heroin seemed to be stronger than usual, causing more overdoses and heroin overdose deaths. One KE also reported an increased emergence and popularity in heroin use over the last 18 months, which may be due to the higher quality heroin currently available in Perth. One KE commented that heroin users were also typically polydrug users, using any combination(s) of drugs made available, either prescribed or non-prescribed.

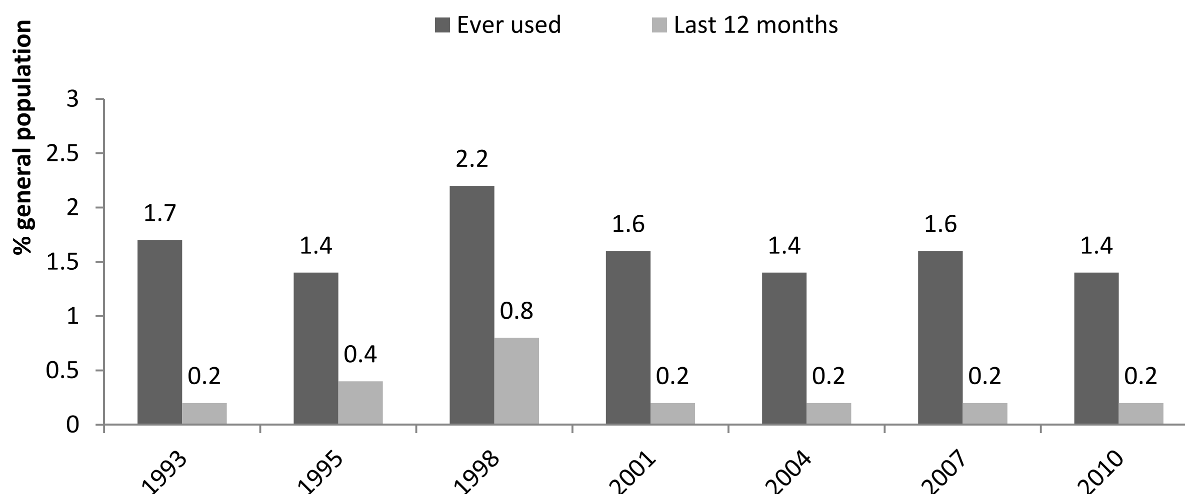
4.1.3 Heroin preparation before last injection

In 2011, IDU participants were asked questions about the preparation of heroin for last use, of which 43 participants responded. Eighteen of these participants (42%) reported using heat and one participant (2%) reported using citric acid to ‘cook’ heroin. The greatest proportion of these respondents reported having to do either preparation methods for white/off white powder or rock heroin by 63%, followed by brown powder or rock by 37%.

4.2 Heroin use in the general population

According to the 2010 National Drug Strategy Household Survey (NDSHS), 1.4% of the general Australian population aged 14 years and older had ever used heroin (AIHW, 2010). This was similar to 1.6% in 2007 (Figure 9). The proportion reporting use of heroin in the previous 12 months was the same in 2004, 2007 and 2010 at 0.2%; which was comparable at 0.3% of the WA population. Males were more likely than females to have ever used heroin (2% vs. 1%) and to have used heroin in the last 12 months (0.3% vs. 0.2%). The 30-34 years age group was the most likely age group to report ever using heroin (3%), while the 20-29 years age group was the most likely to report use of heroin in the previous 12 months (1.7%).

Figure 9: Prevalence of heroin use among the population aged 14 years and over in Australia, 1993-2010



Source: **NDSHS 1988-2010 (AIHW, 2011a)**

4.3 Price

Table 7 presents the prices that the IDU interviewed in the IDRS reported paying for heroin on the last occasion of purchase. The most common size of purchase reported was one-quarter gram (n=25), which had a median price of $200, which was significantly greater than to $173 in 2010 (t=2.274, df=23, p=.033). One-half gram of heroin was reported by 10 participants in 2011 and had a median price of $350, which was comparable to $300 in 2010. Thirteen participants reported on one point of heroin with a median price of $100, which was comparable to a median of $50 reported last year. One gram of heroin had a median price of $650 (n=7) in 2011, which was comparable to a median of $600 in 2010. The median price of one cap of heroin was $100 in 2011 (n=4), which was not statistically different from a median of $50 in 2010 (n=5), however this was based on a small number of respondents in both sample years.

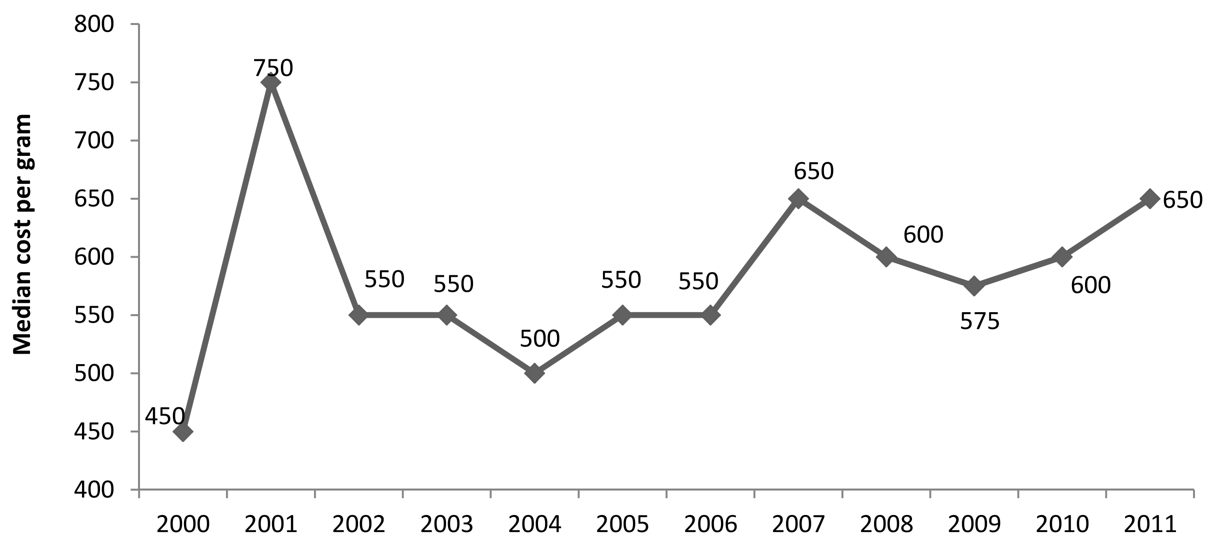
Table 7: Price of most recent heroin purchases by IDU participants, 2010-2011

Amount	Median price* $	Range	Number of purchasers*
Cap	100^ (50^)	50-100	4 (5)
Point	100 (50)	25-1200	13 (20)
Quarter gram	200* (173)	150-250	25 (34)
Half gram (Half weight)	350 (300)	50-400	10(11)
Gram	650^ (600)	200-800	7 (20)

Source: IDRS IDU interviews
* 2010 data are presented in brackets
^ figures based on less than 10 reports
* Significant at alpha level .05

The median price of one gram of heroin in Perth across IDRS surveys is shown in Figure 10. In 2000, the median price was $450, which drastically increased to $750 the following year, since, then it stabilised to around $550 per gram through to 2006. In 2007, the median price was $650 per gram compared to $600 per gram in 2008 followed by a median price of $575 per gram in 2009 and a median of $600 in 2010. In 2011, the median price of one gram of heroin was $650, which was not significantly different from the previous year's sample. Overall, it appears that the median price per gram of heroin has been steadily increasing since 2009.

Figure 10: Median price of one gram of heroin estimated from IDU purchases, 2000-2011



Source: IDRS IDU interviews

Participants were also asked whether the price of heroin had changed in the last six months. In 2011, 43 IDU responded to this item, with more than two-thirds (69%) reporting the price as 'stable'. This was comparable to the 2010 sample with 66% of those who responded reporting the price of heroin as 'stable' over the previous six months. Just more than one quarter (28%) reported the price had increased, while only 2% (n=1) reported it as 'fluctuating', both were comparable to last year's findings (20% and 9% respectively). No respondents reported the price as 'decreasing'.

Only one KE reported on the price of heroin and stated that it was approximately $500-$600 per gram and that price has slightly decreased over the past year.

4.4 Availability

Participants were asked about the current availability of heroin and any change in availability over the last six months (Table 8). In 2011, 48 IDU commented on these items compared to 59 IDU in 2010. In 2011, responses were mostly similar to 2010 findings with the greatest proportion (46%) of those who commented reporting the current availability of heroin as 'very easy', which was comparable to 53% in 2010. The next greatest proportion reported current heroin availability as 'easy' (40%), which was also comparable to 39% in 2010. The proportion reporting current availability as 'difficult' was reported by 6% in 2011, which was comparable to 7% in 2010. Only 8% of the current sample rated current availability as 'very difficult', which was a significant increase from 2% in 2010 (95%CI 0.19, 0.02). With regard to changes in availability over the last six months, again, responses were largely similar across previous years with the greatest proportion reporting 'stable' by 69% in 2011, which

was comparable to 67% in 2010. Together, these results suggest that IDU perceived heroin availability as very easy or easy and that this availability has been relatively stable from 2010 to 2011. However, a significant increase was observed in the proportion reporting current heroin availability as 'very difficult' from last year, suggesting that heroin might currently be slightly more difficult to obtain than it was last year.

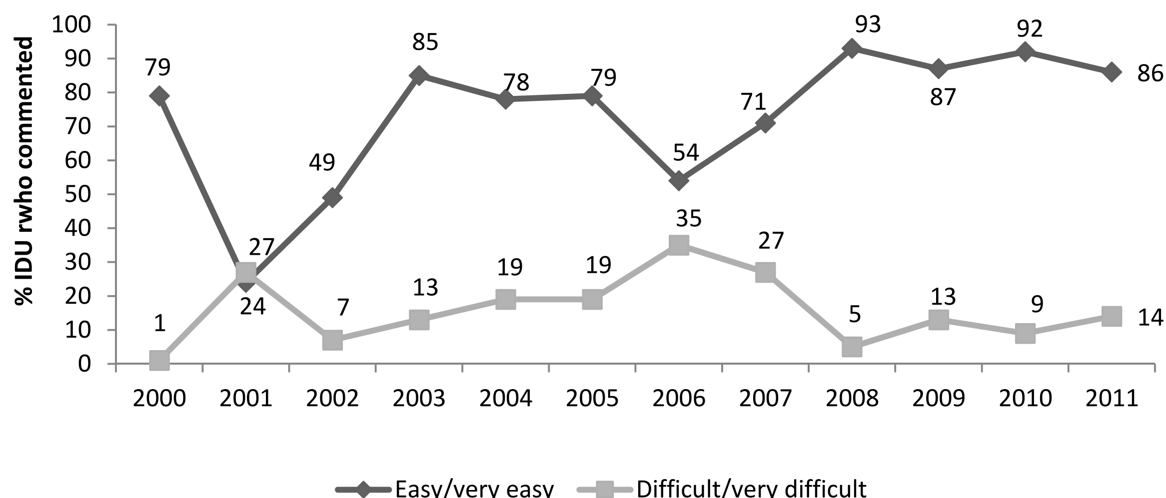
Table 8: Participants' reports of heroin availability in the past six months, 2010-2011

	2010 (N=100)	**2011 (N=70)**
Current availability		
Did not respond* (%)	41	18
Did respond (%)	59	52
Of those who responded:		
Very easy (%)	53%	46%
Easy (%)	39%	40%
Difficult (%)	7%	6%
Very difficult (%)	2%	8%
Availability change over the last six months		
Did not respond* (%)	43	22
Did respond (%)	57	48
Of those who responded:		
More difficult (%)	12%	17%
Stable (%)	67%	69%
Easier (%)	16%	13%
Fluctuates (%)	5%	2%

Source: IDRS IDU interviews
* 'Did not respond' refers to participants who did not feel confident enough in their knowledge of the heroin market to respond to survey items

Reports of current availability of heroin across surveys are shown in Figure 11 and illustrate a trend towards increasing availability since 2006.

Figure 11: IDU reports of current heroin availability, 2000-2011



Source: IDRS IDU interviews

Two KE reported an overall increase in the perceived availability of heroin in Perth during this time. In addition, a few health sector KE believed heroin availability had increased due to observed increases in the number of heroin-related overdose in emergency departments over the past 18 months.

In 2011, 47 IDU responded to questions about persons and locations for last sourcing heroin. The most commonly nominated source of heroin of last purchase was friends (51%), followed by known dealers (36%). These proportions were comparable to 2010. Smaller proportions of the current sample nominated street dealers and mobile dealers (4% each), followed by workmates (2%).

In 2011, the most commonly nominated last location for obtaining heroin was at a friend's home (36%) whereas in 2010 the most commonly reported last location for obtaining heroin was at an agreed public location (35%). Of those who commented in 2011, 36% nominated last sourcing heroin from friends' home, followed by 28% nominating agreed public location, then 19% nominated dealers home. Smaller proportions also nominated home delivery (13%) and car park (2%).

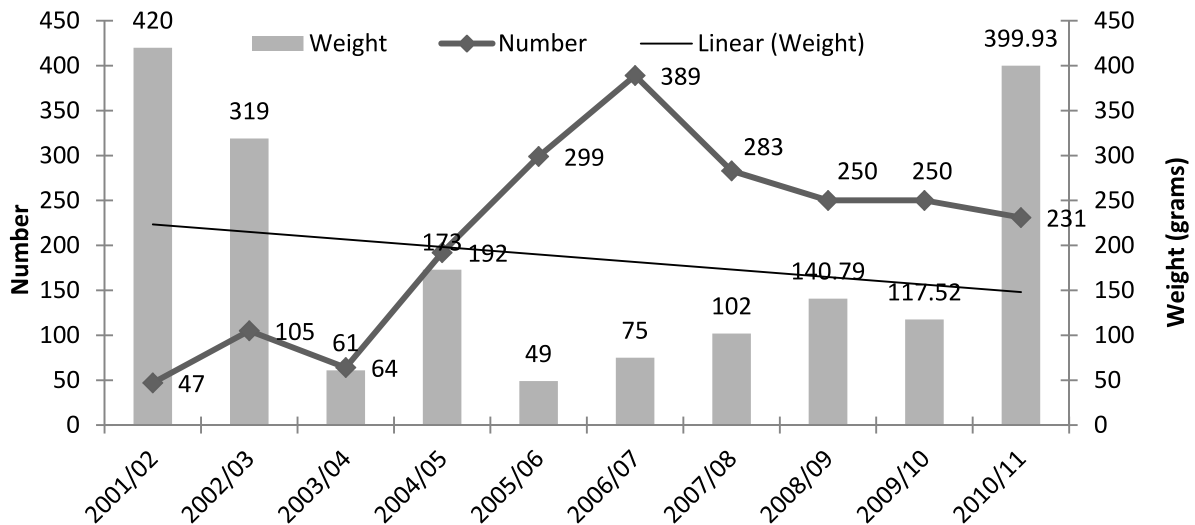
4.5 Heroin detected at the Australian border

Figure 12 presents the weight and number of heroin detection by the Australian Customs and Border Protection Service at the Australian border over the past 10 years.

In the financial year 2010/11, there were 231 heroin detections at the Australian border, representing a decrease from a record high of 389 detections in 2006/07. Numbers of detections have been steadily increasing since 2003/04, while weights remain much lower. The total weight of detections in 2010/11 was 399.93 kilograms (significantly higher than 117.52 kilograms in 2009/10. The cargo and international post stream accounted for 95% of

the total weight of heroin detected (Australian Customs Border and protections Service, 2011) Figure 12.

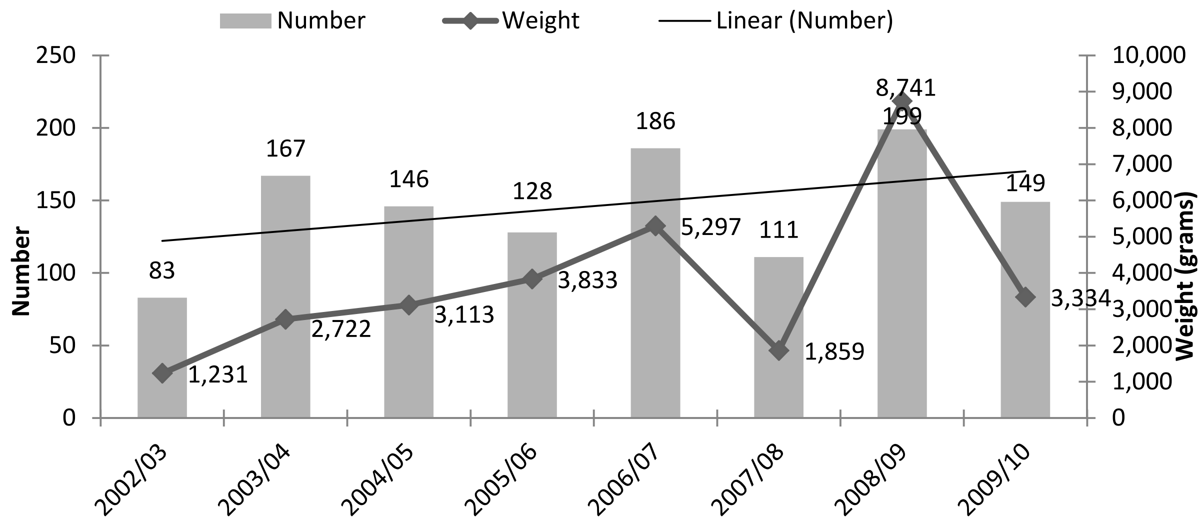
Figure 12: Number and weight of detections of heroin made at the border by the Australian Customs and Border Protection Service, financial years 2001/02-2010/11



Source: **Australian Customs and Border Protection Service**

Figure 13 presents the total number and combined weight of heroin seizures made by the West Australian Police Service (WAPS) and the Australian Federal Police (AFP) in WA from 2002/03 to 2009/10. It is evident that while the number of seizures has fluctuated across time, the weight of seizures had been steadily increasing until a dramatic decline in 2007/08 to 1,859 grams, following this, a drastic increase occurred in 2008/09 to 8,741 grams, followed by another dramatic decline in 2009/10 to 3,334 grams. In 2009/10, WAPS made 133 heroin seizures in WA with a weight of 419 grams, while AFP made 16 heroin seizures in WA with a weight of 2,915 grams. Thus, while WAPS made more seizures, those made by the AFP were of greater total weight.

Figure 13: Number and weight of heroin seizures by WAPS and AFP, WA 2002/03-2009/10



Source: ACC

4.6 Purity

Participants were asked to comment on their perception of the purity of heroin and any change in purity over the last six months (Table 9). In 2011, 48 participants commented on purity. In 2011, the greatest proportion reported current purity of heroin as 'medium' (29%), which was comparable to 40% in 2010. Additionally, the 2011 proportions reporting current purity as 'high', 'low' and 'fluctuates' were not significantly different to 2010.

With regard to changes in purity over the last six months (Table 9), the greatest proportion of the current sample reported purity as 'stable' over the last six months, from 27% in 2010 to 41% in 2011. However, this was not a significant increase. The remaining purity proportions were also comparable to last year, with 24% reporting purity as 'increasing' n the last six months compared to 30% in 2010, 7% reported purity as 'decreasing' compared to 18% in 2010 and 28% reported purity as 'fluctuating' in 2011 compared to 25% in 2010.

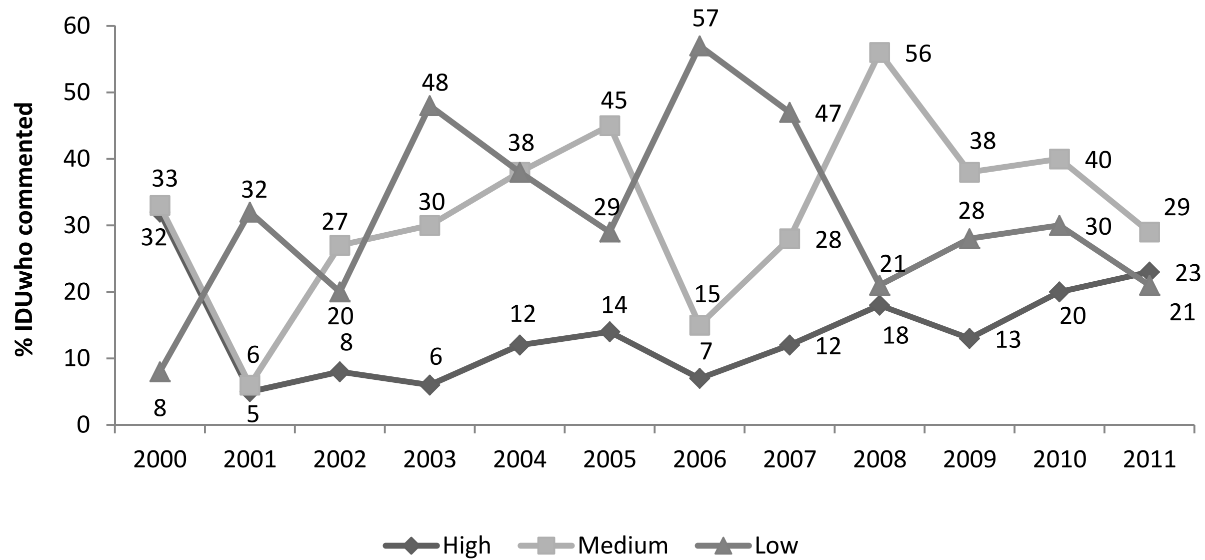
Table 9: Participants' perceptions of heroin purity in the past six months, 2010-2011

	2010 (N=100)	**2011 (N=70)**
Current purity		
Did not respond* (%)	40	22
Did respond (%)	60	48
Of those who responded:		
High (%)	20	23
Medium (%)	40	29
Low (%)	30	21
Fluctuates (%)	10	27
Purity change over the last six months		
Did not respond* (%)	44	24
Did respond (%)	56	46
Of those who responded:		
Increasing (%)	30	24
Stable (%)	27	41
Decreasing (%)	18	7
Fluctuating (%)	25	28

Source: IDRS IDU interviews
* 'Did not respond' refers to participants who did not feel confident enough in their knowledge of the heroin market to respond to survey items

Figure 14 presents reports of current purity across IDRS surveys from 2000 to 2011. It was evident in 2008, there was an increasing trend in reports of purity as 'medium' and a decreasing trend in reports of purity as 'low' since 2006; since then, however, reports of purity as 'medium' have been decreasing over time from 56% in 2008 to 38% in 2009, 40% in 2010 to 29% in 2011. The proportions reporting purity as either 'high' or 'low' also remained comparable to 2010, suggesting that heroin purity appears to remain modest in WA.

Figure 14: Proportion of IDU reporting current heroin purity as ‘high’, ‘medium’ or ‘low’, 2000-2011

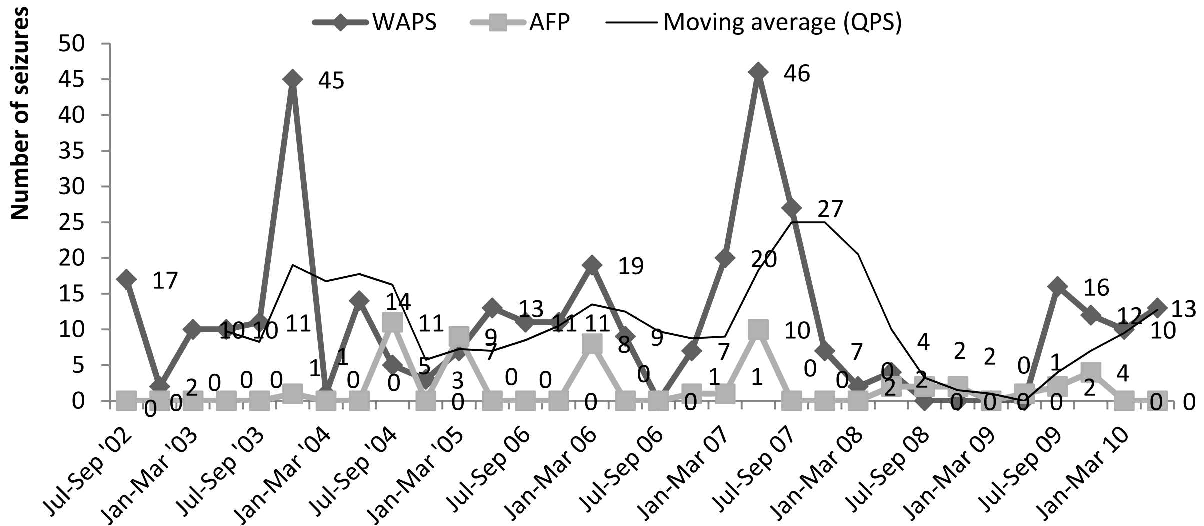


Source: IDRS IDU interviews

Four KE reported on the increasing purity of heroin, with two KE from a law and drug analysis background reporting that heroin was currently of high purity, approximately 50% on average with a few higher batches doing the rounds. It was reported by a number of KE that this increase in purity has anecdotally contributed to an increase in the number of overdoses and presentations in emergency departments across Perth (refer to Figure 46).

Figure 13 above presented the total number of heroin seizures in WA for which a weight was recorded. Figure 15 presents the number of heroin seizures made in WA by WAPS and AFP for which purity was analysed at a forensic laboratory from 2002/03 to 2009/10. It is apparent that, prior to October-December 2007, WAPS has been responsible for the majority of heroin seizures analysed in WA, with the AFP often recording no seizures in a quarter. However, as evident in Figure 15, the number of heroin seizures made by the WAPS has fluctuated over time, and have increased again in recent quarters whereas the number of heroin seizures made by the AFP in WA have remained low. In 2009/10, WAPS reported 51 heroin seizures analysed and the AFP reported six heroin seizures analysed in WA.

Figure 15: Number of heroin seizures analysed in WA, by quarter, 2002/03-2009/10

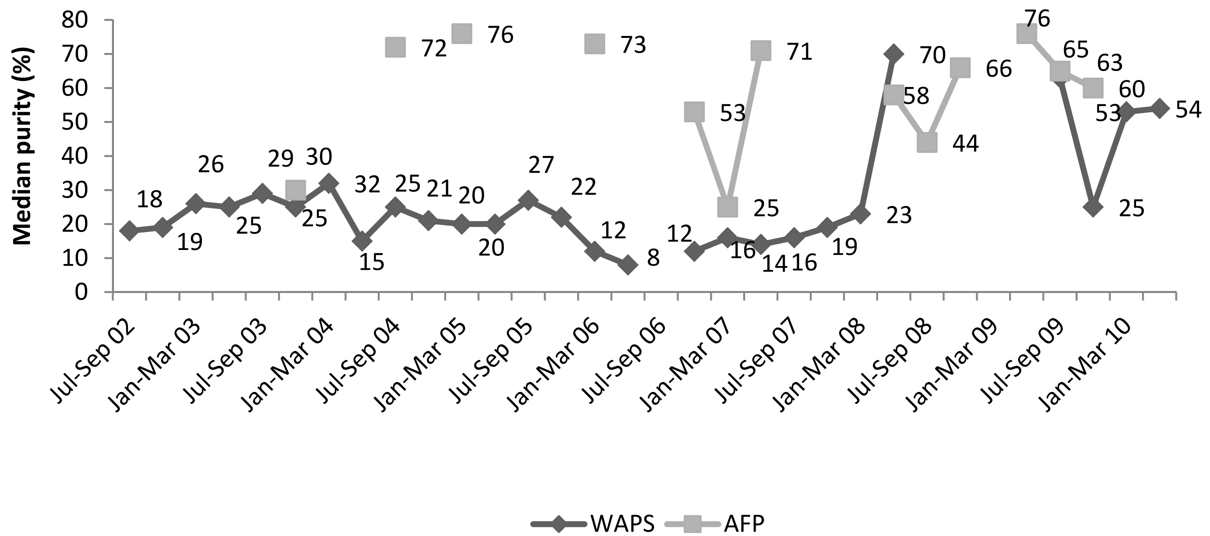


Source: ACC

Figure 16 shows the median purity of heroin seizures presented above in Figure 15. It is evident that the median purity of seizures made by WAPS was relatively consistent from 2002 until a sharp increase in April-June 2008 to a median purity of 70%; since then there has been much fluctuation; ranging from no heroin seizures followed by sharp increases and decreases in median purity of samples analysed by the WAPS. The median purity of seizures made by the AFP has remained consistently higher than those of WAPS, with the exception of April-June 2008 when WAPS seizures purity superseded this trend. Since then, purity of seizures made by AFP has remained comparable to previous purity levels. From July 2009 to June 2010, the median purity across all WAPS seizures analysed was 51% and for AFP seizures analysed was 60%.

It must be noted that the seizures and accompanying purity data reported here is not a truly random sample of all seizures made by these agencies as they make operational decisions about which seizures they will subject to analysis to determine purity. As a result it is not possible to say the extent to which the purities reported here are representative of all seizures made by these law enforcement agencies in WA.

Figure 16: Purity of heroin seizures analysed in WA, by quarter, 2002/03-2009/10



Source: ACC

Note: Where there are no data points, no seizures were analysed

4.7 Summary of heroin trends

- Prevalence of lifetime and recent use of heroin were comparable to last year. In 2011, lifetime use was reported by 96% of IDU (89% in 2010) and recent use by 79% (69% in 2010).
- Frequency of recent use was comparable to last year, with an average of 72 days reported in 2011 compared to 75 days in 2010.
- Furthermore, the proportion of daily heroin users was comparable to recent sample years from 23% in 2010 to 16% in 2011.
- The median reported price for one gram of heroin was $650 in 2011 compared to $600 in 2010. The majority of those who responded reported the price of heroin as 'stable' over the last six months.
- Current availability of heroin was rated as 'very easy' or 'easy' by 86% in 2011, which was comparable to 92% of participants in 2010.
- Current purity was rated as 'high' by 22% in 2011, which was comparable to 20% in 2010, and as 'medium' by 29% in 2011, comparable to 40% in 2010. In regards to changes in purity over the last six months, the greatest proportion of 41% reported 'stable' which was comparable to 27% in 2010.
- In sum, IDU reports in 2011 suggest that frequency of heroin use, current price; purity and availability have mostly remained stable since 2010.

5. METHAMPHETAMINE

For the purposes of the IDRS and in response to emerging methamphetamine markets, data are collected for three different forms of methamphetamine: methamphetamine powder (referred to as speed); methamphetamine base (referred to as base or paste); and crystal methamphetamine (referred to as ice or crystal). Speed is typically a white or off white fine-grained powder; base is typically of a brown, waxy form; and crystal may be translucent or white crystals of varying size. Another less common form of methamphetamine is liquid amphetamine (referred to as 'ox blood'), which is typically red/brown in colour. IDU were asked about their use of this form, but due to its rarity, were not questioned about its market. For the other forms, IDU were asked if they were able to comment on market aspects such as price, purity and availability.

5.1 Use

5.1.1 Methamphetamine use among IDU participants

In 2011, lifetime use of any form of methamphetamine was reported by 96%, which was not significantly different to last year (99%). Of these participants, 96% had ever injected, 41% had ever smoked, 44% had ever snorted and 33% had ever swallowed a form of methamphetamine.

Specific to form, 86% reported lifetime use of speed (91% in 2010), 23% reported lifetime use of base (29% in 2010), 81% reported lifetime use of crystal (80% in 2010) and 9% reported lifetime use of liquid amphetamine (19% in 2010). There were no significant differences between lifetime use of speed, base, crystal and liquid methamphetamine forms. Patterns of lifetime and recent use of methamphetamine across years are shown in Table 10.

Table 10: Patterns of methamphetamine use in the last six months by form, 2010-2011

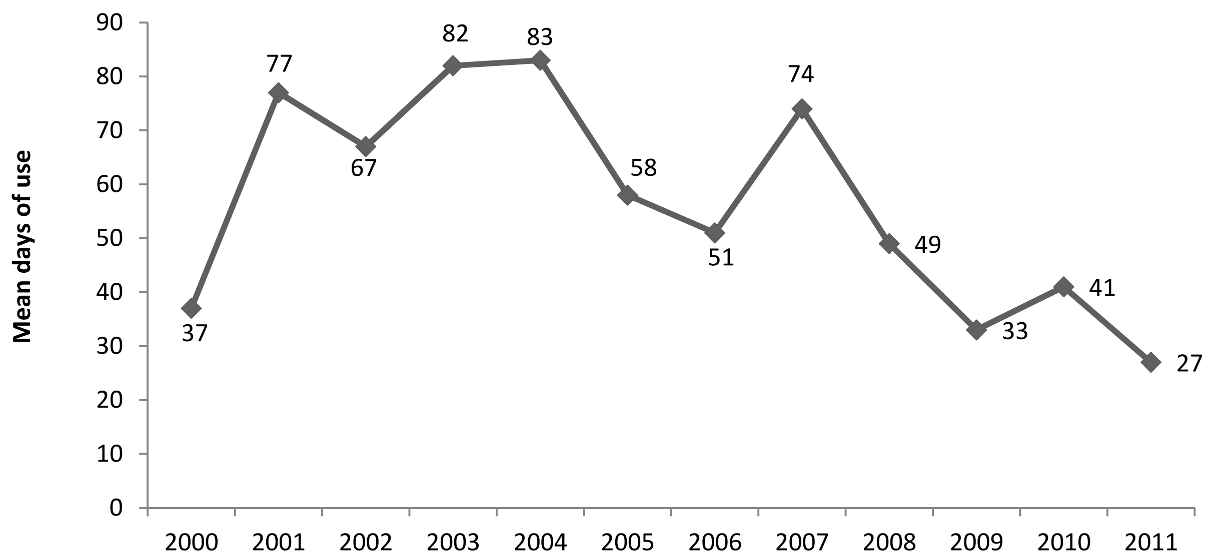
Form used (%)	2010 (N=100)	**2011 (N=70**
Speed		
Ever used	91	86
Used last six months	51	43
Base		
Ever used	29	23
Used last six months	8	6
Crystal		
Ever used	80	81
Used last six months	40	46*
Liquid		
Ever used	19	9
Used last six months	1	1
Any methamphetamine		
Ever used	99	96
Used last six months	64	64

Source: IDRS IDU interviews
* Significant at alpha level .05

5.1.2 Current patterns of methamphetamine use

In 2011, 64% of IDU reported use of any form of methamphetamine in the last six months, which was the same proportion reported in the 2010 sample. Of these participants, 96% injected a form of methamphetamine during this period. As shown in Figure 17, the average number of days any form of methamphetamine was used during the last six months by these participants was 27 days (median of 9 days). This significantly decreased from an average of 41 days in 2010 (t=-2.22, df=44, p=.033).

Figure 17: Mean days of use for any methamphetamine by WA IDU 2000-2011



Source: IDRS IDU interviews

In 2011, recent use of speed (powder) was reported by 43% of the sample, which was not significantly different to the 51% who did so in 2010. In 2011, all (100%) of these participants reported injecting speed in the last six months. Days of use ranged from one to 180 days, with only one respondent reporting using speed on a daily basis (which was comparable to 2010). Mean days of use was 15, which significantly decreased from an average of 29 days reported in 2010 (t=-2.37, df= 29, p=0.25), suggesting that WA IDU are currently using speed less frequently than it was used in the 2010 sample.

Recent use of base was reported by 6% of IDU in 2011, which was comparable to 8% in 2010. The majority of recent base users (75%) reported injecting in the last six months. Days of use ranged from two to 35; no respondents reported using base on a daily basis, which was comparable to 2010 findings. Mean days of use were ten, which was not significantly different to an average of eight days reported in 2010.

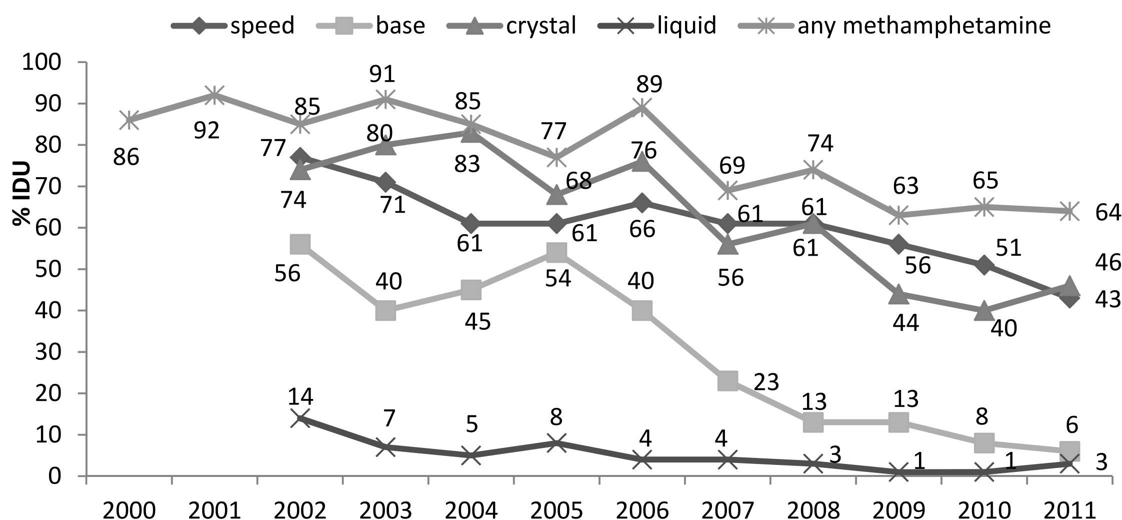
Recent use of crystal was reported by 46% of IDU, which significant greater than the 40% reported in 2010 (95%CI 0.39, 0.10). The majority of recent crystal users (97%) reported injecting crystal in the last six months. Twenty-eight percent of recent users of crystal reported smoking crystal in the last six months; this was followed by 6% each reporting swallowing and snorting crystal in the last six months. Days of use ranged from one to 100, with no participants reporting use of crystal on a daily basis (compared to one respondent in 2010). Mean days of use were 23, which significantly decreased from an average of 36 days in 2010 (t=-2.630, df=31, p=.013). Overall it appears that significantly more WA IDU participants have used crystal at least once in the past 6 months than in 2010, however, on average they have done so on fewer days than last year.

Recent use of liquid methamphetamine remained uncommon; with only 1% (n=1) of IDU reporting use in 2011 (equal proportion in 2010). This one respondent who reported using liquid amphetamine had only injected it in the last six months on a total of one day.

With regards to the form of methamphetamine most commonly used in the 2011 sample, 51% nominated crystal and 49% nominated speed. Similar findings were reported in 2010 with 56% nominating speed as the form most commonly used, followed by 42% nominating crystal and 2% nominating base.

Figure 18 shows the proportion of IDU in Perth reporting use of methamphetamine in the last six months across IDRS surveys. Use of most forms has been relatively stable in the last six months, with the exception of crystal, which significantly increased in recent use proportions from 2010. No other significant changes were observed.

Figure 18: Proportion of IDU reporting methamphetamine use in the last six months, 2000-2011



Source: IDRS IDU interviews
Note: Prior to 2006, 'any methamphetamine' included pharmaceutical stimulants

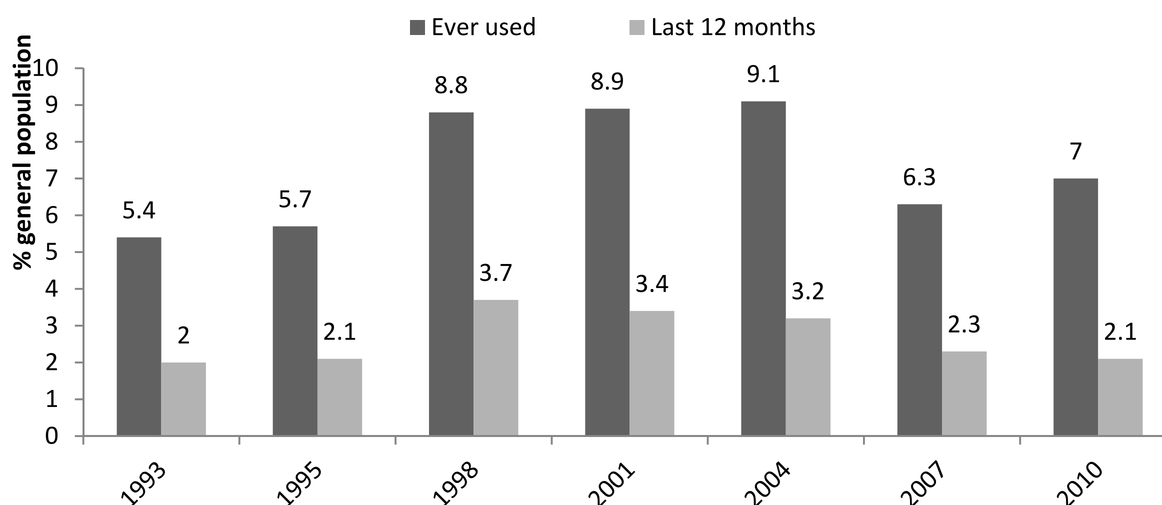
In regards to methamphetamine forms and colours, one KE reported on the preference for crystal (rock) methamphetamine or speed methamphetamine among regular IDU. This same KE also reported a perceived increase in purity of all forms of methamphetamine in the last year. Two KE reported an increase in the amount of speed around in Perth in the last year, although crystal is still the most prevalent form of methamphetamine. A number of KE reported that methamphetamine was the one of the most problematic drugs in Perth at the time. Main reasons given for this were: increased prevalence and purity of drug in the drug market recently, increasing numbers of clandestine laboratories being uncovered, the violent nature of the users, the difficulties in seeking treatment for methamphetamine addiction and the lack of community and user understanding about the behavioural and psychological harms methamphetamine causes to its users. These factors are making methamphetamine a problematic and often dangerous drug to deal with within the community. In addition, a number of KE from health backgrounds emphasised how difficult methamphetamine users, particular crystal users, are to deal with in a hospital setting. Two KE reported an observed increase in the amount of methamphetamine-induced psychosis presentations to emergency departments, with one KE reporting an increase in people coming into hospitals displaying far more aggression and with more unusual behaviours than has been seen in the past. Often these individual are binging on methamphetamine for days at a time. Three KE also

expressed the difficulty in treating methamphetamine users, largely because there is currently no clear treatment or agonist drug available. One KE also reported that amphetamine users were frightened to seek treatment.

5.2 Methamphetamine use in the general population

According to the 2010 NDSHS, 7% of the Australian general population aged 14 years and older had ever used methamphetamine (AIHW, 2011a). This represents a significant increase from 6.3% in 2007 (Figure 19). The proportion reporting use of methamphetamine in the previous 12 months was 2.1% in 2010, which was comparable to 2.3% in 2007. Males are more likely than females to have ever used methamphetamine (8.2% vs. 5.9%) and to have used methamphetamine in the last 12 months (2.5% vs. 1.7%). The 30-39 years age group was the most likely age group to report lifetime methamphetamine use (14.7%), while the 20-29 years age group were more likely to have recently used methamphetamine (5.9%).

Figure 19: Prevalence of methamphetamine use among the population aged 14 years and over in Australia, 1993-2010



Source: NDSHS 1988-2010 (AIHW, 2011a)

5.3 Price

Participants in the WA IDRS were asked what different amounts of the various forms of methamphetamine cost and how much they paid for their most recent purchase. The latter is presented in Table 11 and median prices for one gram of each form of methamphetamine are presented in Figure 20.

In 2011, 12 participants reported on the price of one point of speed with a median of $100, which significantly increased from $50 in 2010 (t=19, df=11, p=.000) and three participants reported on the price of one gram of speed with a median of $550, which was not significantly different to $400 in 2010. There was 1 participant who reported on the price of a half weight of speed, with that one participant reporting a median of $400, compared to $200 in 2010. No participants reported on the price of an eight ball of speed in 2011, compared to four participants in 2010 reporting a median price of $1,150. Overall current price reports appear to have increased from those reported last year; however current findings are based on the reports of a smaller number of participants than in 2010.

In 2011, no respondents commented on the reported price of any quantity of base compared to only three participants reporting in 2010, therefore no conclusive findings can be made.

In 2011, 15 participants reported on the price of one point of crystal with a median of $100 (same in 2010). Five participants reported on the price of one gram of crystal with a median of $600, which was comparable to $500 in 2010. There were seven participants who reported on the price of a half weight of crystal, with a median of $300, this significantly increased from $200 in 2010 (t=6.355, df=6, p=.001). One participant reported on the price of an eight ball of crystal reporting it currently cost $1,400, which was comparable to $1,350 in 2010. However, reports on the price of a half weight, gram and eight ball were based on a small number of respondents and therefore should be interpreted with caution.

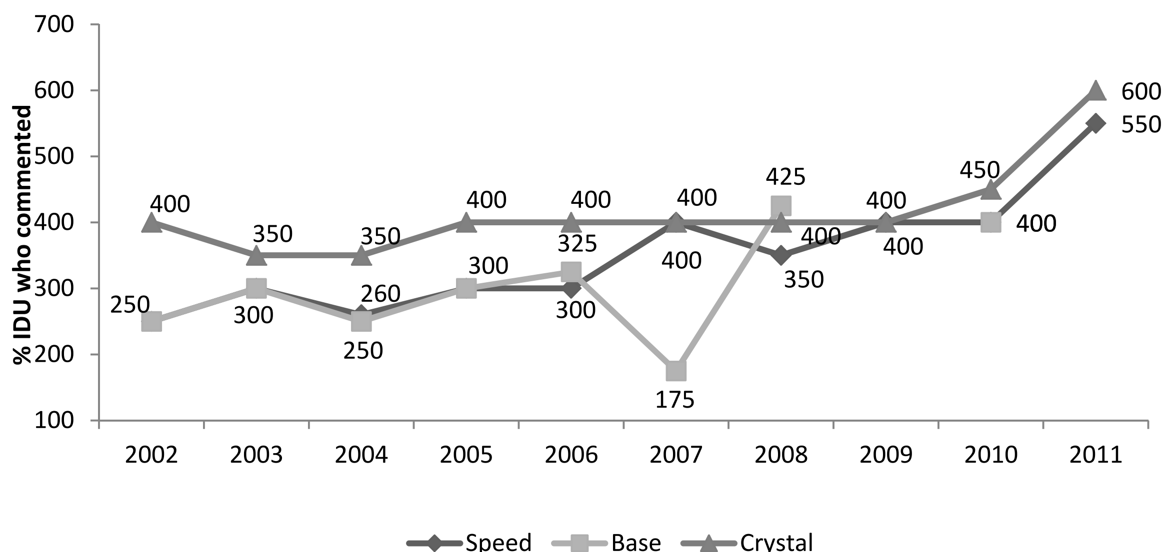
Table 11: Price of most recent methamphetamine purchases by IDU participants, 2011

Amount	Median price* $	Range	Number of purchasers*
Speed			
Point (0.1 gram)	100* (50)	70-100	12 (23)
Half weight (0.5 grams)	400^ (200)	400-400	1 (11)
Gram	550^ (400^)	350-1000	3 (7)
Eight ball (3.5 grams)	- (1150)	-	- (4)
Base			
Point	- (50^)	-	0 (2)
Half weight (0.5 grams)	- (-)	-	0 (0)
Gram	- (400^)	-	0 (1)
Eight ball (3.5 grams)	- (-)	-	0(0)
Crystal			
Point (0.1 gram)	100 (100)	50-100	15 (21)
Half weight (0.5 grams)	300^* (200^)	250-400	7 (5)
Gram	600^ (500^)	350-800	5 (6)
Eight ball (3.5 grams)	1400^ (1350^)	1400-1400	1 (4)

Source: IDRS IDU interviews
* 2010 data are presented in brackets
^ Based on small (<10) purchases
* Significant at alpha level .05

Figure 20 presents the median prices per gram of most recent purchase for each methamphetamine form across years. The median price for one gram of crystal increased for the first time since 2005, from $400 to $600 in 2011; however, this was not a significant increase. The median price of one gram of speed also increased from $400 since 2009 to $550 in 2011, this too was not a significant increase. No participants reported the median price of one gram of base.

Figure 20: Median prices of methamphetamine per gram estimated from IDU purchases, 2002-2011



Source: IDRS IDU interviews

Note: Price data for base methamphetamine in 2007 and 2008 is based on only two purchases. Purchases of other quantities of base do not support evidence that a real fall in price occurred in 2007

Participants were asked if they perceived any changes in the price of methamphetamine over the last six months. There were 15 IDU who responded about speed with the greatest proportion of 40% reporting price as 'stable', followed by 33% reporting price as 'increasing' in the last six months. Of the 22 IDU responding about crystal, 46% reported the price as 'stable', 41% as 'increasing', and 14% as 'fluctuating'. In 2011, no respondent reported on the price of base. Additionally, no respondents for each methamphetamine form reporting price change as 'decreasing' in the last six months. Overall, findings from 2011 suggest that the price of speed and crystal methamphetamine is perceived by the majority to be 'stable'.

One KE reported that methamphetamine prices had increased slightly over the past year and another KE reported that the price of methamphetamine in WA is more expensive than the other states. One of these KE reported also reported on the current price of crystal methamphetamine in Perth, reporting $50-$100 per point and approximately $600 per gram.

5.4 Availability

IDU were asked about the current availability of each form of methamphetamine and any changes in availability over the last six months (Table 12). Of the 14 participants who commented on speed, the majority rated current availability as both 'very easy' and 'easy' (43% each). More than half (57%) rated the availability of speed over the last six months as 'stable'. Of the 21 participants who commented on crystal, just over half (52%) rated current availability as 'very easy', followed by 38% rating it as 'easy'. Crystal availability over the last six months was rated by over half (55%) as 'stable'. No participants commented on the availability of base in 2011.

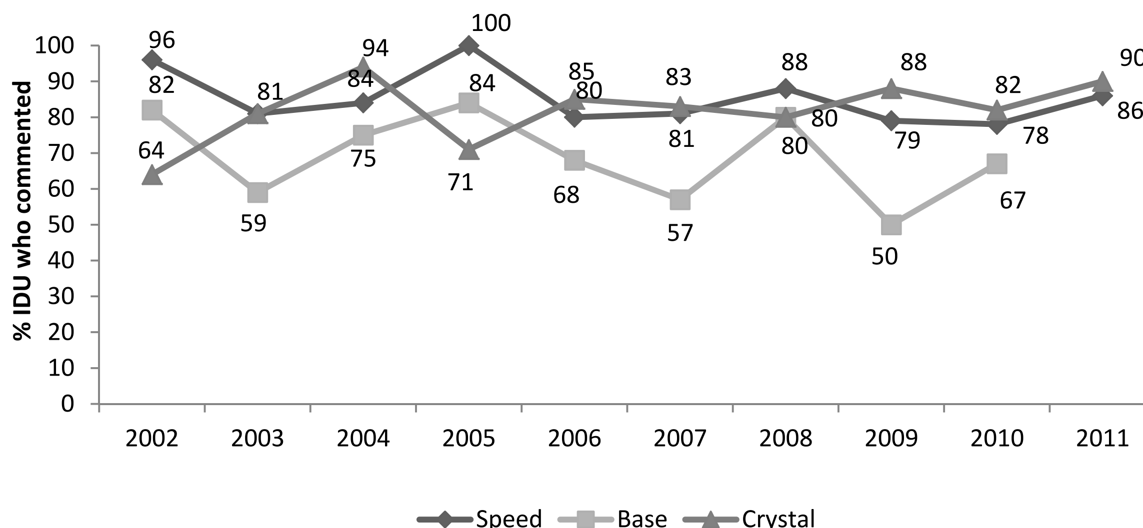
Table 12: Participants' reports of methamphetamine availability in the past six months, 2010-2011

	Speed		Base		Crystal	
	2010 (N=100)	**2011 (N=70)**	2010 (N=100)	**2011 (N=70)**	2010 (N=100)	**2011 (N=70)**
Current availability						
Did not respond* (%)	64	**56**	97	**70**	67	**49**
Did respond (%)	36	**14**	3	**0**	33	**21**
Of those who responded:						
Very easy (%)	47	**43**	33	**0**	33	**52**
Easy (%)	31	**43**	33	**0**	49	**38**
Difficult (%)	17	**7**	33	**0**	12	**10**
Very difficult (%)	6	**7**	0	**0**	6	**0**
Availability change over the last six months						
Did not respond* (%)	64	**56**	97	**70**	69	**50**
Did respond (%)	36	**14**	3	**0**	31	**20**
Of those who responded:						
More difficult (%)	11	**29**	33	**0**	13	**15**
Stable (%)	78	**57**	67	**0**	71	**55**
Easier (%)	3	**7**	0	**0**	10	**25**
Fluctuates (%)	8	**7**	0	**0**	7	**5**

Source: IDRS IDU interviews
* 'Did not respond' refers to participants who were not confident in their knowledge of the market

The proportion of IDU who rated current availability as 'easy' or 'very easy' for each form of methamphetamine across IDRS surveys is presented in Figure 21. It is evident that there has been fluctuation over the years; however, since 2006, ratings for speed and crystal have been relatively stable. Again, there were no reports for base in 2011, although in previous years, reports for base show considerable variation, which is most likely due to the small number of participants who comment on base each year.

Figure 21: IDU reporting 'easy' or 'very easy' availability of methamphetamine by form in WA 2002-2011



Source: **IDRS IDU interviews**
Note: 'Don't know' responses excluded. No one reported on base in 2011.

KE reported that availability of methamphetamine seemed to be increasing in Perth, with two KE reporting an observed increase in the amount of crystal available and one KE reporting an observed increase in speed availability in the last year.

IDU were asked about sources of each form of methamphetamine. Of the 15 participants who reported on speed, one third (33%) each nominated friends and known dealers as the person from whom speed was last obtained. One-fifth (20%) nominated acquaintances and smaller proportions nominated street dealers and 'other' (7% each). With regards to locations of purchase, 27% reported dealers' home, 20% reported an agreed public location, 13% each reported for home delivery, friends' home and acquaintances house and lastly 7% each reported street market and 'other'.

No participant reported on price, purity or availability for base in 2011.

There were 21 participants who reported on the source person and location for when they last obtained crystal. Of these almost half (48%) nominated friends, followed by 29% nominating known dealers. Another 10% each reported acquaintances and street dealer as a common last source person and 5% nominated unknown dealers. Home delivery was reported by 33% as the most common last location of purchase, followed by 19% each reporting an agreed public location and dealers' homes; 14% reported friends' home. Smaller proportions of 5% nominated street market, acquaintances' homes and 'other'.

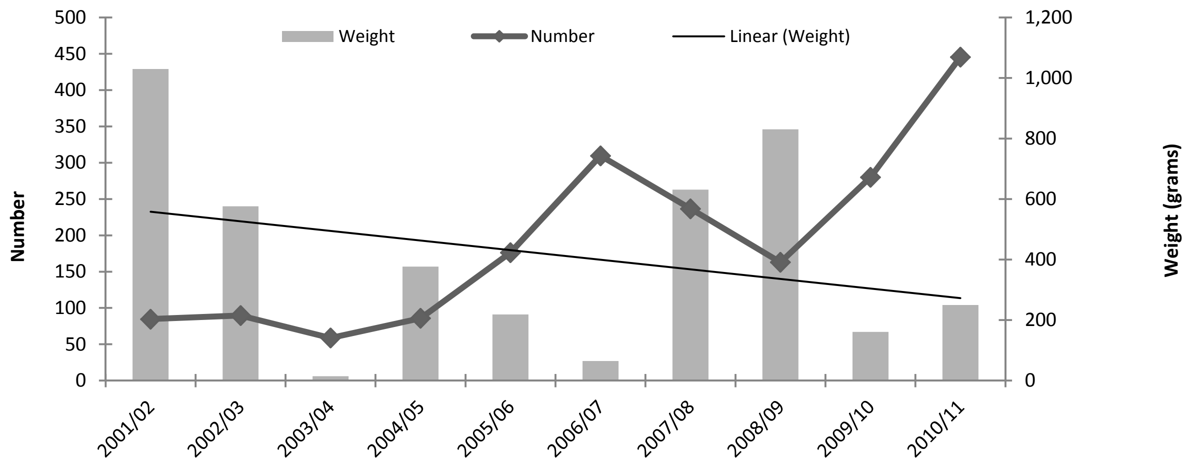
Overall, known dealers and friends were the most common last person nominated and dealers' home and home delivery were the most common last location from which they sourced methamphetamine.

5.5 Amphetamine-type stimulant detections at the Australian border

Figure 22 shows the weight and number of amphetamine-type stimulants detected at the Australian border by the Australian Customs and Border Protection Service. In 2010/11, the number of detections increased markedly from 672 in 2009/10 to 1,069. Weight of detections also increased from 67 in 2009/10 to 104 kilograms in 2010/11. The increase in number and

weight of detections was mainly due to the growth in detections in the cargo and international post stream (Australian Customs Border and Protection Service, 2011)

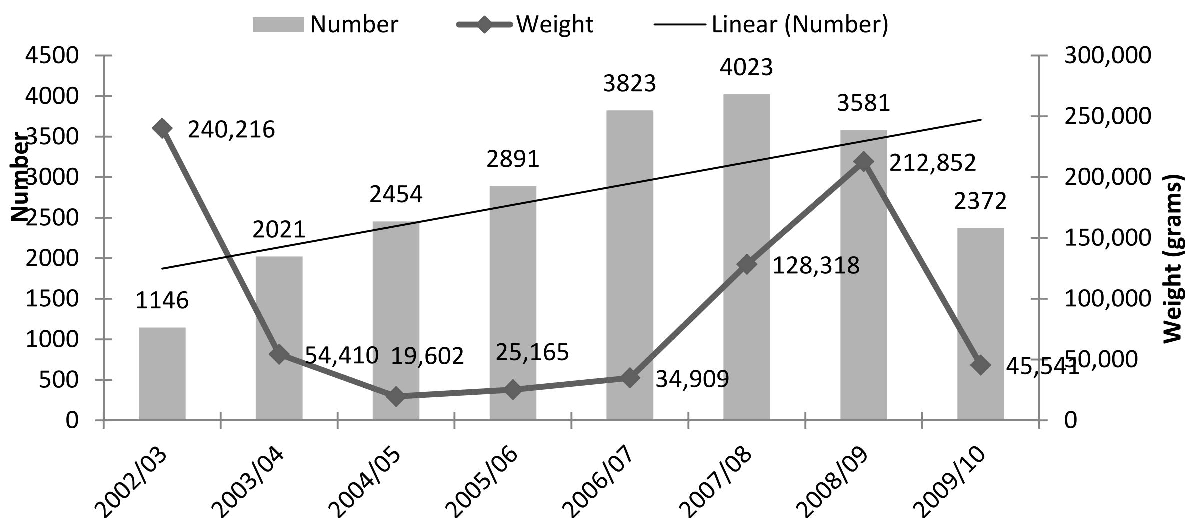
Figure 22: Total weight and number of amphetamine-type stimulants detected by the Australian Customs and Border Protection Service, financial years 001/02-2010/11



Source: **Australian Customs and Border Protection Service**

Figure 23 presents the total number and combined weight of ATS seizures made by WAPS and AFP in WA from 2002/03 to 2009/10. It is evident that while the number of seizures increased across time, the weight of seizures sharply decreased from 2002/03 to 2006/07, followed by a sharp increase in 2008/09 and more recently; a sharp decrease. Since 2007/08, the number of ATS seizures by WAPS and AFP appears to be decreasing over time, although the linear trend line appears to have gradually increased over time .These findings suggests that WAPS and AFP appear to be making less seizures with lesser weights than those recorded in previous years, however these findings include only those seizures for which a drug weight was recorded and different counting rules applied in WA during this period, therefore findings should be interpreted with caution. In 2009/10, WAPS and the AFP made 2,372 ATS seizures in WA with a total weight of 45,541 grams.

Figure 23: Number and weight of amphetamine-type stimulant seizures by WAPS and AFP, WA 2002/03-2009/10



Source: **ACC**

Two KE from a law enforcement background reported that the biggest concern for the WA police force was the number of improvised drug manufacture sites in WA, with the number uncovered steadily increasing over the last three years. This KE reporting that, at time of interview, 176 labs had already been uncovered in WA. However, it was reported that most of these labs are only 'small cooks' where the cooks are also the end users. This KE emphasised how dangerous these improvised drug manufacture sites can be to the community and environment as well as the individuals residing in the dwelling of the site. The individuals currently engaging in these 'small cooks' were reported to be of varying economic and educational backgrounds.

5.6 Purity

IDU were asked about the current purity of each form of methamphetamine (Table 13) and perceived changes in purity over the last six months. Of the 14 participants who responded regarding speed, the greatest proportion (50%) rated current purity as 'high', followed by just over one fifth (21%) each rating it as 'medium' and 'fluctuates'. These current findings were not significantly different to last year. No participants reported on the purity of base in 2011. Of the 21 participants who responded for crystal, the greatest proportion rated purity as 'high' (43%), followed by reporting purity as 'fluctuates' (33%), then 'medium' (19%) and 'low' (5%). These ratings for crystal were comparable from 2010.

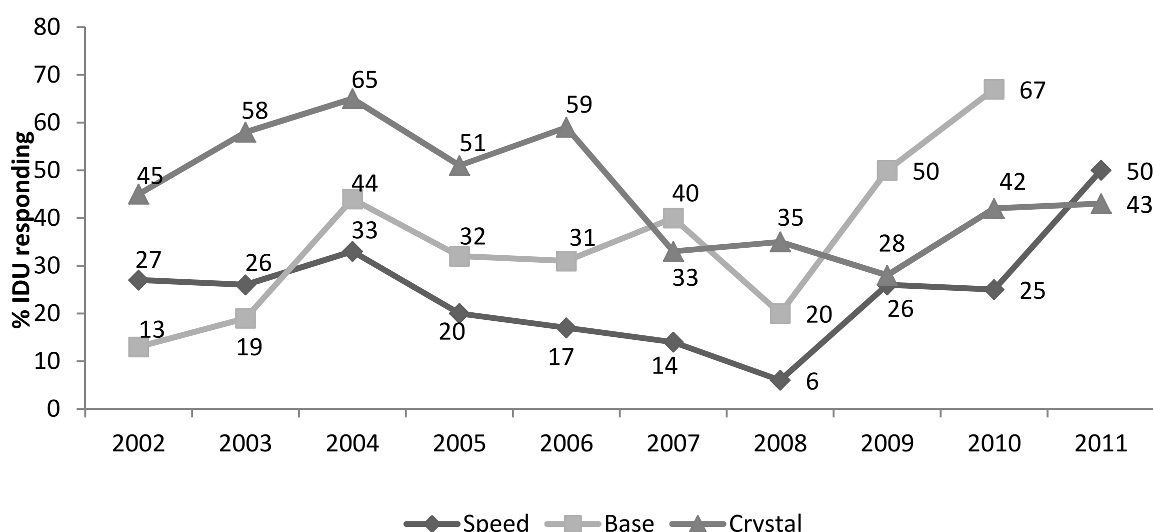
Table 13: Methamphetamine purity by user report 2010-2011

	Speed		Base		Crystal	
	2010 (N=100)	**2011 (N=70)**	2010 (N=100)	**2011 (N=70)**	2010 (N=100)	**2011 (N=70)**
Current purity						
Did not respond* (%)	64	**56**	97	**70**	67	**49**
Did respond (%)	36	**14**	3	**0**	33	**21**
Of those who responded:						
High (%)	25	**50**	67^	**0**	42	**43**
Medium (%)	36	**21**	33^	**0**	24	**19**
Low (%)	17	**7**	0	**0**	15	**5**
Fluctuates (%)	22	**21**	0	**0**	18	**33**

Source: IDRS IDU interviews
* 'Did not respond' refers to participants who did not feel confident in their knowledge of the market to respond to survey items
^ Based on less than 10 participants

Figure 24 presents the proportion of IDU commenting on methamphetamine who rated each form as 'high' purity across IDRS surveys. In comparison to 2010 findings, ratings of speed purity as 'high' have increased overall. Ratings of crystal as 'high' were comparable to 2010 findings.

Figure 24: Proportion of IDU reporting each methamphetamine by form as 'high' purity, 2002-2011



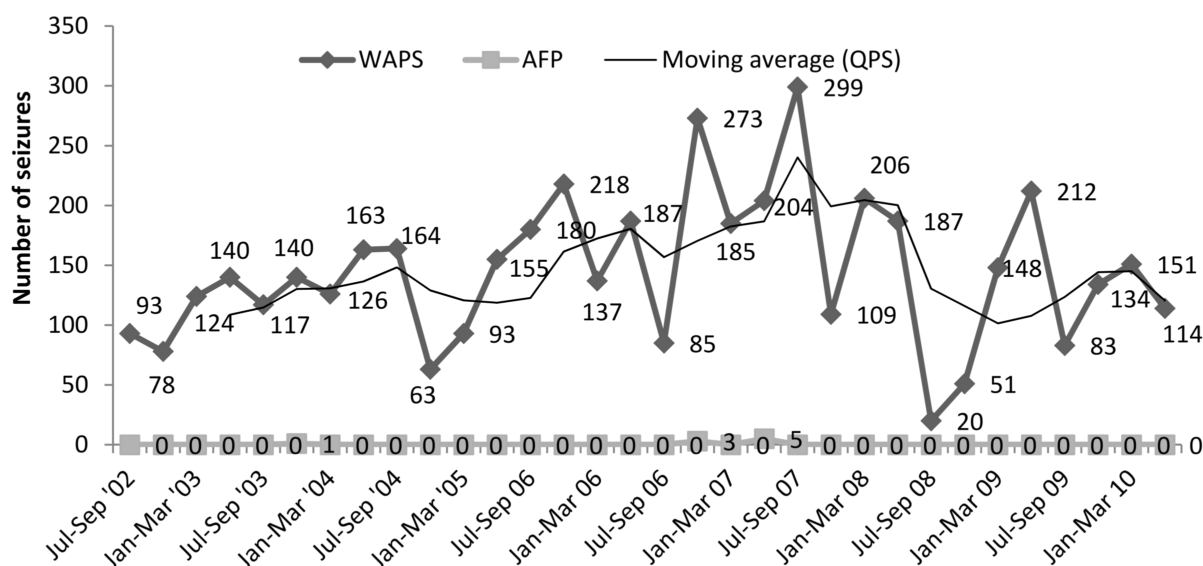
Source: IDRS IDU interviews
NB: In 2010 only three participants responded for base, suggesting extreme caution in interpretation. No participants reported for base in 2011.

Asked whether the purity of speed had changed in the six months prior to interview, the greatest proportion equally reported it was 'stable' and 'fluctuating' (31%). This was followed by 23% who rated it as 'increasing' and 15% as 'decreasing'. No participants reported on purity of base in 2011. The greatest proportion (40%) of those who commented on crystal rated it as 'stable', followed by 30% rating it as 'fluctuates', 20% as 'increasing', and 10% as 'decreasing'.

As with availability, two KE perceived current methamphetamine purity to be increasing over the past year. Therefore this may offer some plausible explanation to why more KE are reporting a more aggressive level of methamphetamine-induced psychosis presentations in hospital emergency departments.

Figure 25 presents the number of methamphetamine seizures made in WA by WAPS and AFP for which purity was analysed at a forensic laboratory from 2002/03 to 2009/10. It is apparent that WAPS are responsible for almost all methamphetamine seizures analysed in WA, with AFP only recording seizures in three-quarters (October-December 2003, October-December 2006, and April-June 2007). WAPS seizures were stable from July-September 2002 to July-September 2004, but then decreased sharply. A steady increase followed until October-December 2006; since then, the number of seizures has fluctuated. In July-September 2008, this number decreased to the lowest number of seizures analysed since July-September 2002; since then, they have been gradually increasing, until a slight decrease was observed in the most recent quarter. In 2009/10, WAPS and AFP made a total of 482 methamphetamine seizures analysed in WA.

Figure 25: Number of methamphetamine seizures analysed in WA, by quarter, 2002/03-2009/10

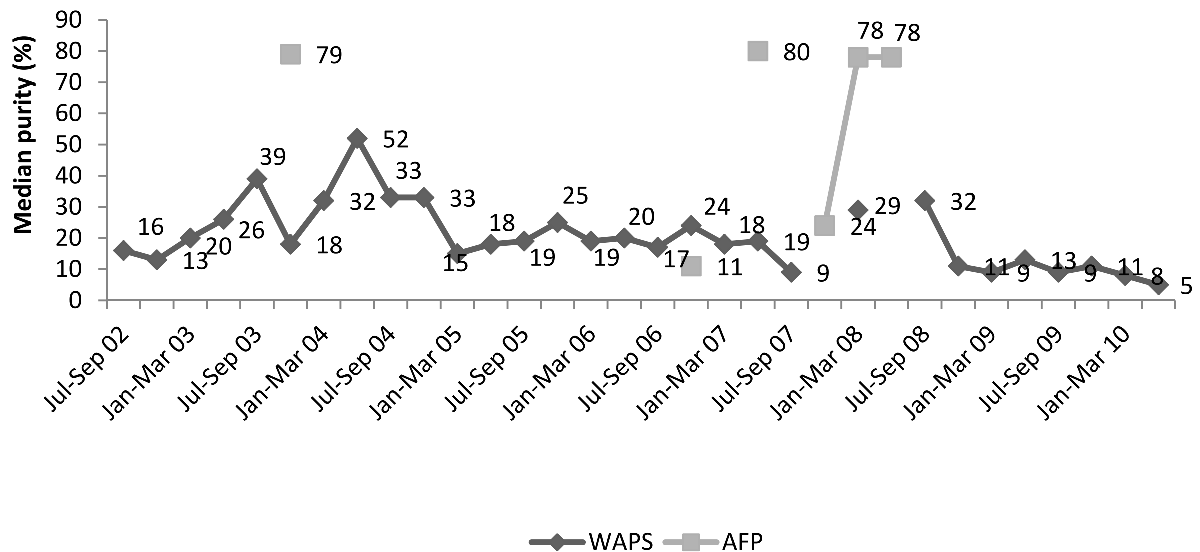


Source: ACC

Figure 26 shows the median purity of methamphetamine seizures presented above in Figure 25. It is evident that the median purity of seizures made by WAPS fluctuated between July-September 2002 and January-March 2005, but has since stabilised. All AFP seizures from 2007/08 were of much greater purity than the WAPS seizures. From July 2009 to June 2010, the median purity across all WAPS seizures analysed was 8%, while no methamphetamine seizures were analysed by AFP in WA during this period.

It must be noted that the seizures and accompanying purity data reported here is not a truly random sample of all seizures made by these agencies as they make operational decisions about which seizures they will subject to analysis to determine purity. As a result it is not possible to say the extent to which the purities reported here are representative of all seizures made by these law enforcement agencies in WA.

Figure 26: Purity of methamphetamine seizures analysed in WA, by quarter, 2002/03-2009/10



Source: ACC

5.7 Summary of methamphetamine trends

- There was no significant change in lifetime or recent use of all forms of methamphetamine from 2010 to 2011, with the exception of recently used crystal, which significantly increased from 40% in 2010 to 46% in 2011.
- Lifetime use of speed was reported by 86% in 2011 compared to 91% in 2010. Recent use was also comparable, from 51% in 2010 to 43% in 2011.
- Lifetime use of crystal was reported by 81% of IDU which was comparable to 80% in 2010; recent use significantly increased from 40% in 2010 to 46% in 2011.
- Lifetime use of base was reported by 23% in 2011, which was comparable to 29% in 2010. Recent use was also comparable, from 8% in 2010 to 6% in 2011.
- Among those who had used methamphetamine in the last six months, the average days used for all forms of methamphetamine was 27 days, which significantly decreased from 41 days in 2010. Speed was used an average of 15 days which significant decreased from an average of 29 days in 2010; base was used an average of 10 days, which was comparable to eight days in 2010 (although based on a small sample size in both years); and crystal was used an average of 23 days, which significant decreased from an average of 36 days in 2010.
- The median price for one point of speed and crystal methamphetamine was $100 in 2011, with a significant increase observed in the median price of a point of speed from $50 in 2010 to $100 in 2011. The median price for one gram of speed was $550. The median price for a gram of crystal was $600 in 2011. No participant reported on price of base in 2011. In regards to changes in price for crystal and speed, the greatest proportions perceived price change of speed and crystal as 'stable'.
- 86% of those who commented on speed and 90% for crystal rated current availability as 'very easy' or 'easy'. No participants reported on the availability of base in 2011. The greatest proportion of IDU reported availability for all forms was stable in the last six months.
- Current purity was rated as 'high' by the greatest proportion of those who responded for speed (50%) and crystal (43%). No participants commented on the purity of base.

6. COCAINE

6.1 Use

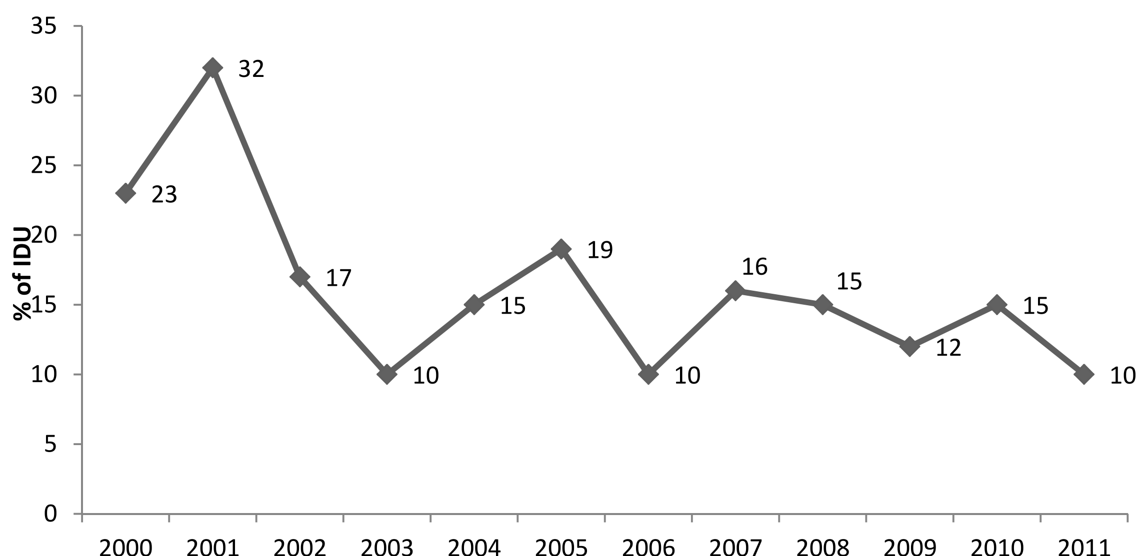
6.1.1 Cocaine use among IDU participants

In 2011, lifetime use of cocaine was reported by 67% of IDU, which was comparable to 65% reported in 2010. Of these participants in 2011, 68% reported lifetime injection of cocaine, 64% reported lifetime snorting and 11% each reported lifetime smoking and swallowing of cocaine.

6.1.2 Current patterns of cocaine use

Use of cocaine in the six months preceding interview was reported by 10% of IDU, which was not significantly different to the 15% who reported recent use in 2010. Of these participants, 86% reported injecting cocaine in the last six months and 43% reported snorting. Days of use ranged from one to five, with an average of three days of use in the last six months, which was the same in 2010. Recent cocaine use by IDU across IDRS surveys is presented in Figure 27 and shows that it has remained at low prevalence since 2002.

Figure 27: Cocaine use in the past six months, 2000-2011



Source: IDRS IDU interviews

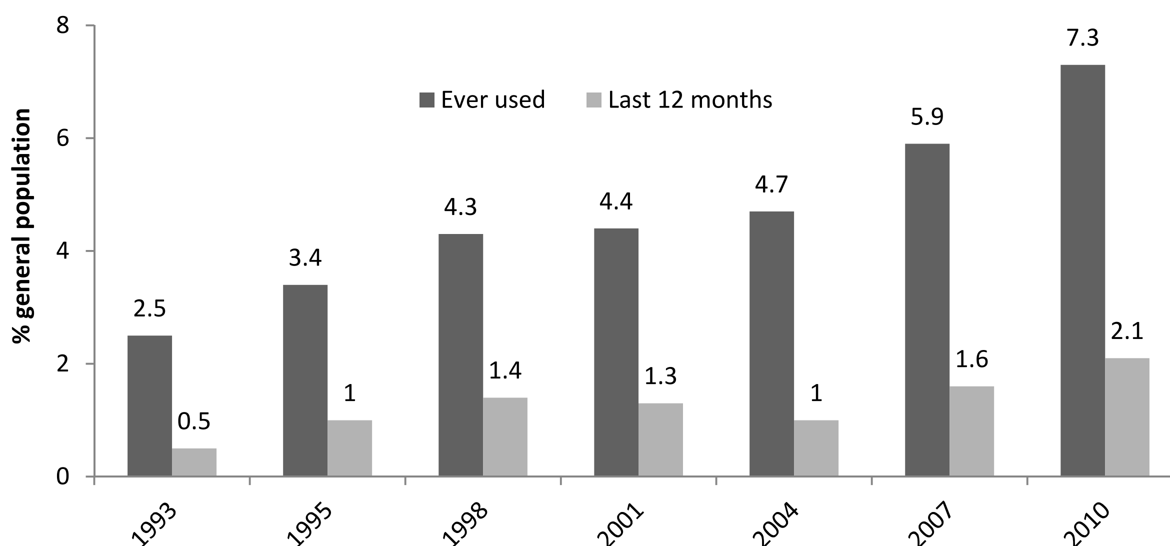
Of the seven IDU who provided information on the forms of cocaine used, more than half (57%) reported that the form most used was powder cocaine; the remaining 43% reported rock as the form of powder cocaine most used.

Two KE commented that cocaine use appears to have increased in the last year, although two KE also reported that they had not seen any cocaine use in the health system over the last year. Two KE from law enforcement backgrounds reported that cocaine appeared to be becoming more popular, reporting that traditionally it was a high end however recently it has become a little cheaper and therefore being used by individual who previously could not afford it. In terms of demographic characteristics, one KE reported that cocaine was typically used by over 25 year olds, mostly males and especially popular within the art and creative scene in Perth.

6.2 Cocaine use in the general population

According to the 2010 NDSHS, 7.3% of the general population aged 14 years and older had ever used cocaine (AIHW, 2011a). This represented a significant increase from 5.9% in 2007 (Figure 28). There was also a significant increase in the proportion reporting use of cocaine in the previous 12 months from 1.6% in 2007 to 2.1% in 2010. Males were more likely than females to have ever used cocaine (8.7% vs. 6%) and to have used cocaine in the last 12 months (2.7% vs. 1.5%). Those aged 30-39 years were more likely to have ever used cocaine (14.4%), this was closely followed by those aged 20-29 years (14.1%). People aged between 20-29 years were most likely to have used cocaine use in the previous 12 months (6.5%).

Figure 28: Prevalence of cocaine use among the population aged 14 years and over in Australia, 1988-2010



Source: **NDSHS 1988-2010 (AIHW, 2011a)**

6.3 Price

In 2011, no participants reported on the price of cocaine, whereas only two participants reported in 2010. Last years' price reporting have been recorded in brackets in Table 14.

Table 14: Price of most recent cocaine purchases by IDU participants, 2011

Amount	Median price* $	Number of purchasers*
Point	- (40^)	(1)
Quarter gram	- (-)	- (-)
Half gram (half weight)	- (-)	- (-)
Gram	- (325^)	- (2)

Source: IDRS IDU interviews
[*] 2010 data are presented in brackets
[^] Based on a small number of purchases

In regards to price change for cocaine in the last six months, no participants reported on this in 2011. Numbers reporting in previous years' WA IDRS studies have also been low.

Two KE reported that the price of cocaine had decreased during the 12 months preceding interview. With one KE stating that cocaine was currently 'cheaper than meth' reported to be approximately $380 per gram.

6.4 Availability

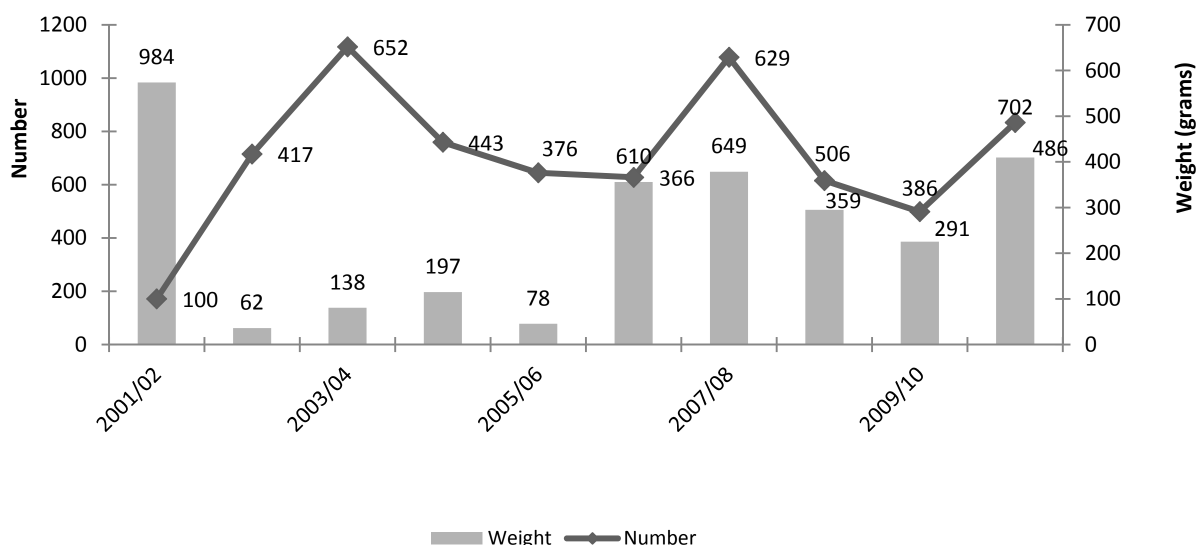
Only two participants commented on availability of cocaine, with one participant reporting the current availability of cocaine as 'easy' and one participant reported availability as 'difficult'. Only one respondent reported on changes to cocaine availability in the last six months, reporting it as 'more difficult'. Due to the extremely small number of respondents that reported, these findings should be interpreted with caution.

One respondent commented on source of cocaine, reporting last purchasing cocaine from friends. This was purchased during a home delivery.

6.5 Cocaine detected at the Australian border

During 2010/11, the Australian Customs and Border Protection Service made 486 detections of cocaine at the Australian border, an increase from 291 in 2009/10 (**Error! Reference source not found.**). The detections weighed a total of 702 kilograms which increased from 386 kilograms in 2009/10. There was a significant increase in the total weight detected through the shipping and aircraft stream due to the major detection of 401kg from a yacht in Queensland. However, the vast majority of cocaine detections occurred through the cargo and international post stream (Australian Customs Border and Protection Service, 2011).

Figure 29: Number and weight of detections of cocaine detected at the border by the Australian Customs and Border Protection Service, financial years 2001/02-2010/11

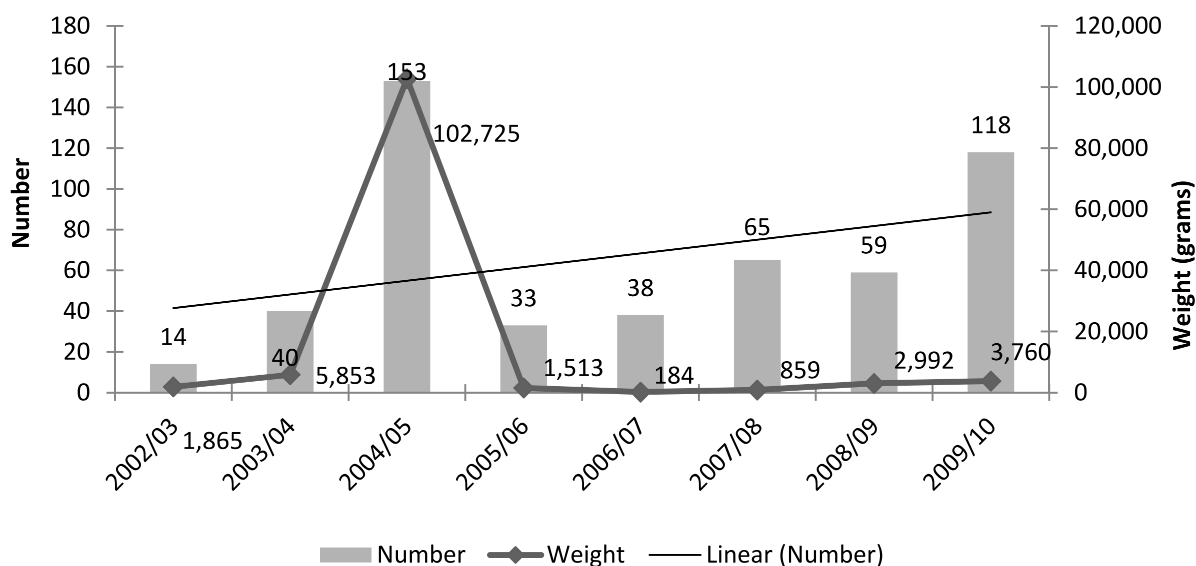


Source: Australian Customs and Border Protection Service

Figure 30 presents the total number and combined weight of cocaine seizures made by WAPS and AFP in WA from 2002/03 to 2009/10. The number and weight of seizures have been relatively low, with the exception of 2004/05. This was due to a marked increase in

AFP seizures to 109 seizures with a weight of 101,691 grams. In 2009/10, WAPS and AFP made 118 cocaine seizures in WA with a total weight of 3,760 grams.

Figure 30: Number and weight of cocaine seizures by WAPS and AFP, WA 2002/03-2009/10



Source: **ACC**

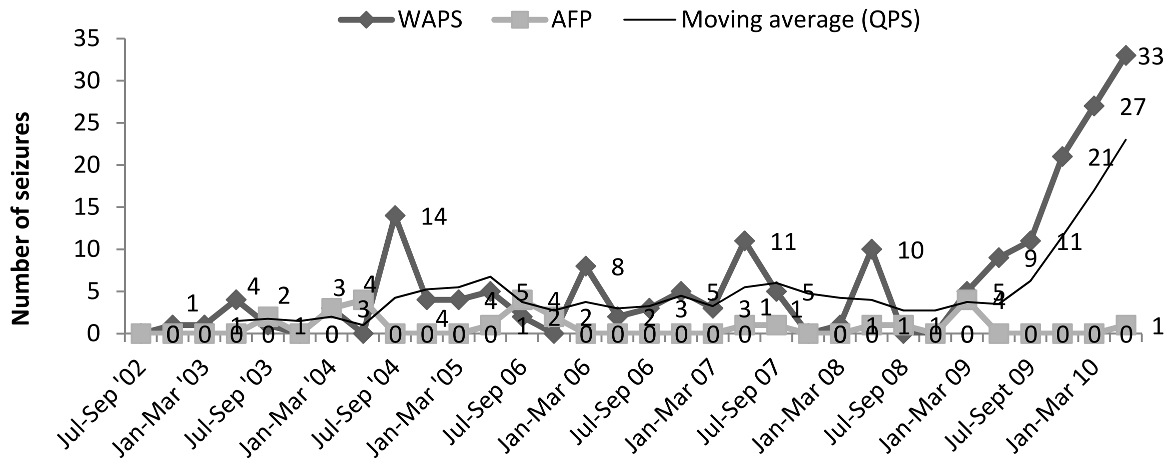
Two KE reported that cocaine was more readily available in Perth during 2011, with one KE reporting that it used to be seen occasionally and now it is seen as a drug used every weekend.

6.6 Purity

As with availability, only a small number of IDU (n=2) commented on purity of cocaine. Both these participants reported current purity as 'high'. Changes in purity of cocaine over the last six months was reported by only one participant, who reported cocaine purity as 'fluctuating' over the last six months. Again, due to the small sample reporting on purity, these findings should be interpreted with caution.

Figure 31 presents the number of cocaine seizures made in WA by WAPS and AFP for which purity was analysed at a forensic laboratory from 2002/03 to 2009/10. It is apparent that WAPS was responsible for the majority of cocaine seizures analysed in WA, with AFP recording no seizures in the majority of quarters. The number of both WAPS and AFP seizures has fluctuated over time; however, they are low in comparison to the number of seizures of other drugs such as amphetamines and cannabis in WA. In 2009/10, WAPS made a total of 92 cocaine seizures, which was the greatest number of seizures analysed since 2002. AFP analysed one cocaine seizure between 2009/10 in WA.

Figure 31: Number of cocaine seizures analysed in WA, by quarter, 2002/03-2009/10

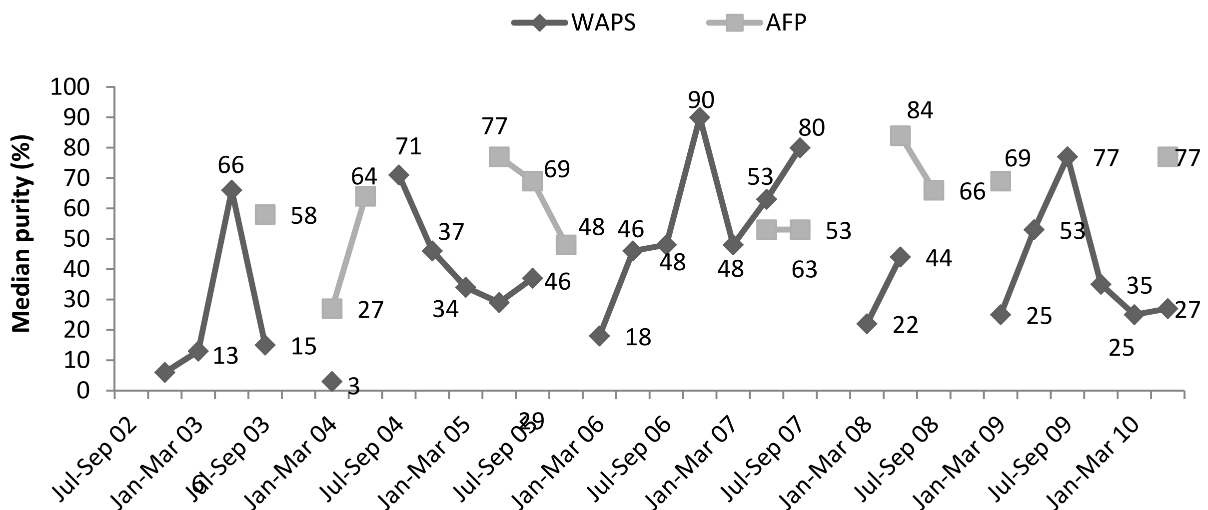


Source: ACC

Figure 32 shows the median purity of cocaine seizures presented above in Figure 31. It is evident that the median purity of seizures made by both WAPS and AFP has fluctuated over time. From July 2009 to June 2010, the median purity across all WAPS seizures analysed was 28%, while the median purity across all AFP seizures analysed was 77%.

It must be noted that the seizures and accompanying purity data reported here is not a truly random sample of all seizures made by these agencies as they make operational decisions about which seizures they will subject to analysis to determine purity. As a result it is not possible to say the extent to which the purities reported here are representative of all seizures made by these law enforcement agencies in WA.

Figure 32: Purity of cocaine seizures analysed in WA, by quarter, 2002/03-2009/10



Source: ACC

One KE from a drug analysis background reported that cocaine purity in Perth is currently stable, reported to be approximately 30% purity.

6.7 Summary of cocaine trends

- Lifetime use of cocaine by IDU was reported by 67% of the 2011 sample, which was not significantly different from the 65% who reported lifetime use in 2010.
- Recent use was reported by 10% of the 2011 sample, which was not significantly different from the 15% in 2010.
- Frequency of cocaine use was reported to be an average of three days in 2011, which was the same reported in 2010.
- In 2011, no participants commented on the price of cocaine.
- Only two participants reported on availability and purity of cocaine with varying responses, therefore making it difficult to draw conclusions about the cocaine market in WA.

7. CANNABIS

7.1 Use

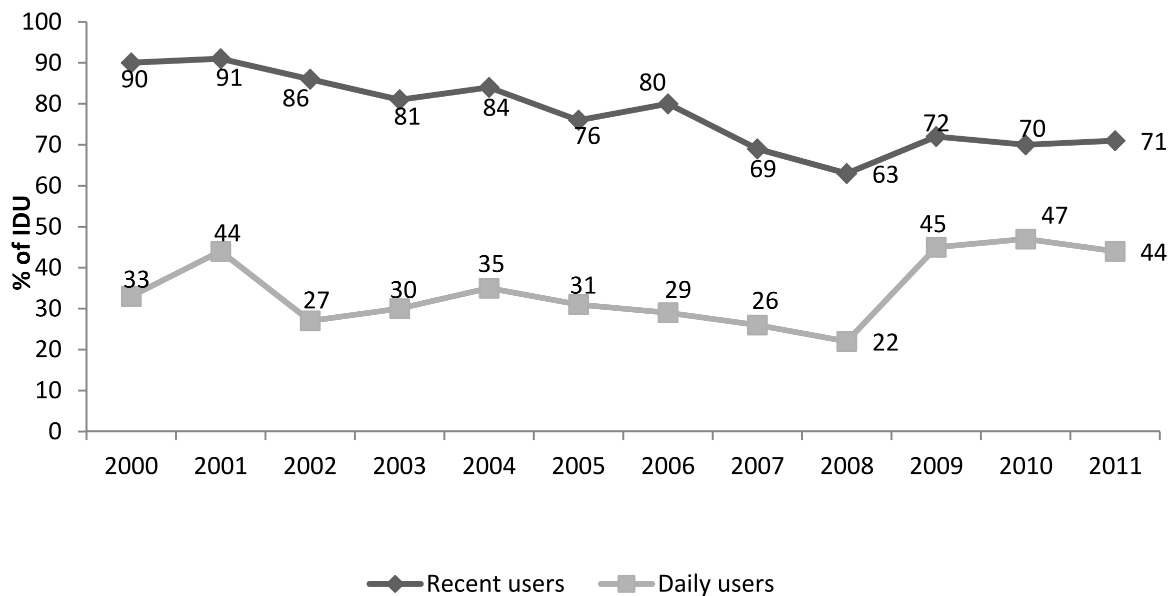
7.1.1 Cannabis use among IDU participants

In 2011, lifetime use of cannabis was reported by 99% of IDU, which was comparable to 96% who reported lifetime use in 2010.

7.1.2 Current patterns of cannabis use

Use of cannabis in the last six months was reported by 71% of IDU in 2011, which was not significantly different from the 70% who reported recent use in 2010. In 2011, days of use ranged from two to 180, with 44% of the total IDU sample reporting use of cannabis on a daily basis, which was comparable to the 47% reported in 2010. Mean days of use was 104, which was also comparable to the 105 days reported in the 2010 sample. The proportion of IDU reporting any use and daily use of cannabis in the last six months is presented in Figure 33.

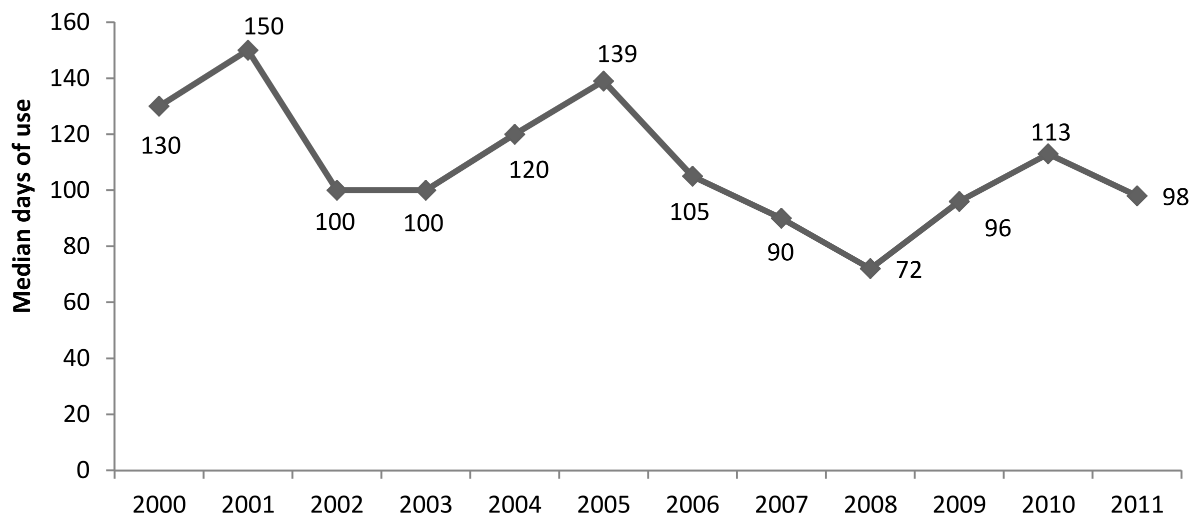
Figure 33: Recent use and daily users of cannabis in the past six months, 2000-2011



Source: IDRS IDU interviews

Figure 34 shows the median number of days cannabis was used among IDU across IDRS surveys. As evident in Figure 34, there has been some variation since 2000; however, from 2005 to 2008, the use of cannabis by IDU was steadily decreasing. Since then, recent IDU samples suggest that frequency of cannabis use by IDU had been increasing followed by a slight decline in the current sample, from a median of 113 days in 2010 to 98 days in 2011.

Figure 34: Median days of cannabis use in the past six months, 2000-2011



Source: IDRS IDU interviews

IDU who reported use of cannabis were asked about forms of cannabis used in the last six months. In the past, use of hydroponic cannabis (hydro) has consistently been more commonly reported than bush cannabis among WA IDU. This trend remained in 2011: 50 participants responded, with 84% reporting that hydro was the form they mostly used, while 14% reported bush and 2% reported hash.

Participants who had smoked cannabis in the last six months were asked how much cannabis they smoked on the occasion of last use. Forty participants said they used cones, with a median of 2.5 cones smoked (range=0.5-20 cones). Eight participants smoked joints, with a median of three joints smoked (range=1-10 joints).

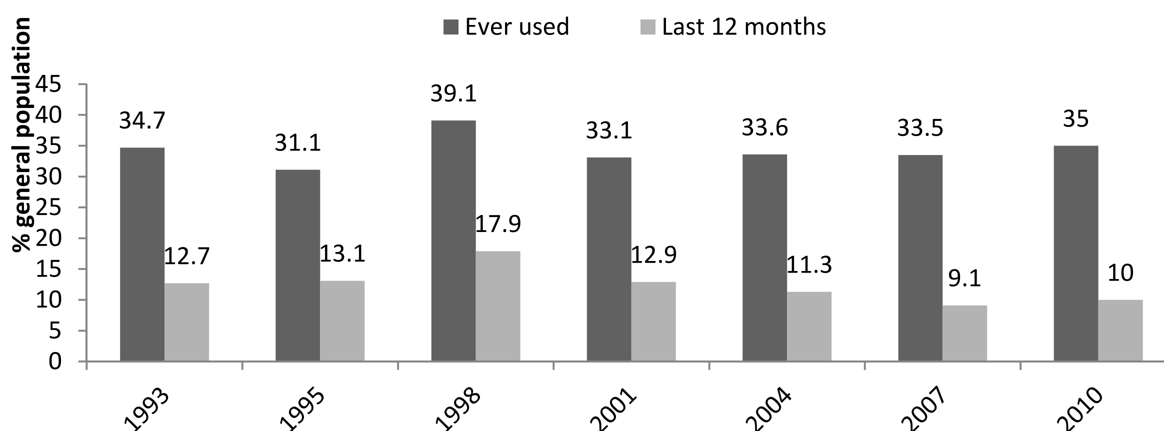
KE made only a few comments regarding cannabis use among IDU. KE reported that generally most IDU use cannabis although it is not frequently their preferred drug of choice. Most noted that no notable changes have been observed in cannabis use patterns in the last 12 months and it remains the most widely available drug. One KE commented that cannabis use can often be problematic for individuals more predisposed to mental health problems such as schizophrenia and psychosis, and that often when dependent cannabis users stop using, their mental health deteriorates very rapidly which often results in contact with the health system to try to manage this. One KE from a health care setting reported that regular cannabis users presenting with cannabinoid hyperemesis syndrome was a regular occurrence, which a disorder associated with long -term cannabis use (Sontineni et al., 2009). Symptoms include cyclical vomiting and a bizarre hot showering behaviour, where the heat is reported to minimise the symptoms. This KE suspected harmful chemicals used to encourage growth in hydroponic cannabis plants caused this phenomenon. A number of KE also commented on the use of 'Kronic' over the last 12 months and how this these synthetic cannabinoids sold online have been a challenge to monitor and ban. One KE reported that 22 synthetic cannibinoids have been banned out of a possible 200+ potential synthetic cannibinoids, there is also not a lot known about the health implications and dangers of these synthetic substances, both to the individual (e.g. intoxication and overdose) and to the community (e.g. driving under the influence). There was one reported Kronic related death reported in 2011.

7.2 Cannabis use in the general population

According to the 2010 NDSHS, 35% of the Australian general population aged 14 years and older had ever used cannabis (AIHW, 2011a), which was a significant increase from 33.5% in 2007. There was also a significant increase in the proportion reporting use of cannabis in the previous 12 months from 9% in 2007 to 10% in 2010 (Figure 35). The proportion reporting use in the previous 12 months peaked in 1998 and has steadily declined across subsequent surveys.

As with other drugs presented in the NDSHS, males are more likely than females to have ever used cannabis (38.9% vs. 32%) and to have used cannabis in the last 12 months (12.9% vs. 7.7%). The 30-39 years age group was the most likely group to report lifetime cannabis use (55.7%), while the 18-19 and the 20-29 years age group were equally most likely to report use in the previous 12 months (21.3%).

Figure 35: Prevalence of cannabis use among the population aged 14 years and over in Australia, 1993-2010



Source: **NDSHS 1993-2010**

7.3 Price

IDU were asked to report on the current price of cannabis and how much they paid at their most recent purchase.

Hydro

Prices paid at last purchase are shown in Table 15. The greatest number of participants (n=18) reported on the last price paid for one ounce of hydro, which had a median price of $350 (range=$280-$400). Eight participants reported on the price of one gram of hydro, with a median price of $25 (range=$20-$100) and two participants reported on the price of one half ounce of hydro, with a median of $175 (range=$175-$175). These prices were the same as those reported in 2010, suggesting that the price of hydroponic cannabis in Perth has been stable over the last year.

Bush

Only a few participants reported on price at last purchase of bush (Table 15). Ten participants reported on the current price of one ounce of bush, with a median of $300 (range=$180-$300), this increased from the $250 reported in 2010, however this was not significant. In 2011, no participants reported on the price of one-half of an ounce of bush and only one participant reported on the median price of a gram of bush, reported to be $20

compared to $25 in 2010. However, caution must be exercised in interpreting this difference given the small number of participants who responded.

No participants reported on the price of hash or hash oil in 2011, compared to only two participants in 2010.

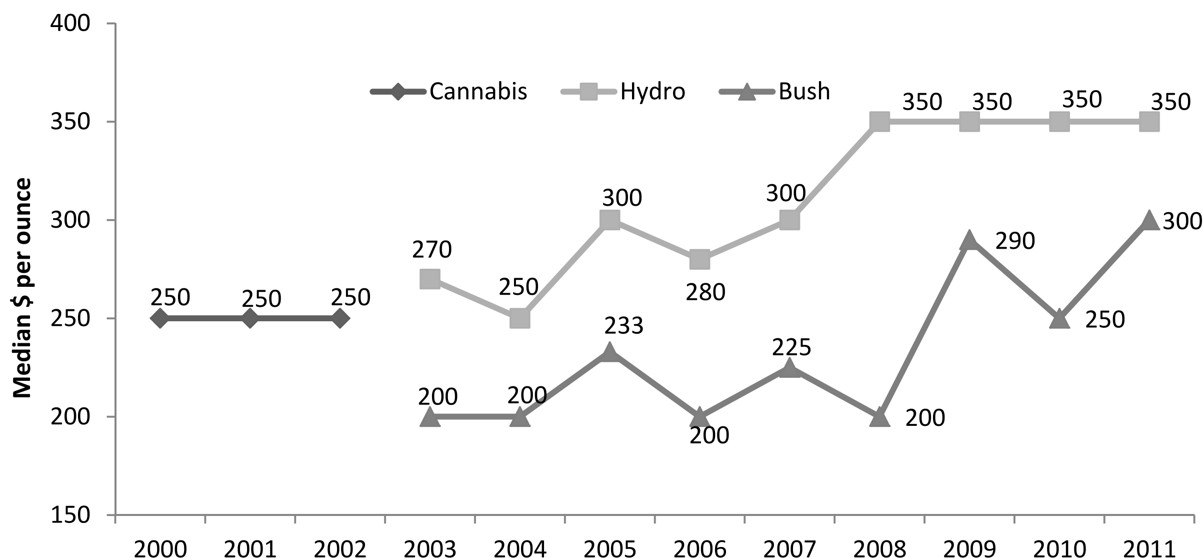
Table 15: Price of most recent cannabis purchases by IDU participants, 2011

Amount	Median price* $	Range	Number of purchasers
Hydro			
Gram	25^ (25)	20-100	8 (15)
Half Ounce	175^ (175)	175-175	2 (11)
Ounce	350 (350)	280-400	18 (27)
Bush			
Gram	20^ (25^)	20-20	1 (8)^
Half Ounce	0 (160^)	-	0 (4)^
Ounce	300 (250)	180-300	10 (12)

Source: IDRS IDU interviews
* 2010 data are presented in brackets
^ Based on small (<10) purchases

The median price of one ounce of cannabis as reported by IDU across IDRS surveys is presented in Figure 36. Hydro has consistently been more expensive than bush across time. In previous sample years, the price of bush has remained relatively stable; however, the median price for an ounce of bush cannabis appears to be gradually increasing over time. There was a sharp increase observed in 2009, followed by a significantly declined in 2010 and another increase in 2011; however this was not a significant increase. These findings are based on a small number of respondents reporting and therefore findings should be interpreted with caution. Conversely, the price of hydro has been stable since the 2008 IDU sample.

Figure 36: Median prices of an ounce of cannabis estimated from IDU participant purchases, 2000-2011



Source: IDRS IDU interviews
Note: No distinction was made between cannabis forms prior to 2003

With regard to any change in the price of cannabis over the last six months, 34 participants reported on hydro and 20 reported on bush. Regarding the price of hydro, 77% reported it as 'stable', 21% reported it as 'increasing' and 3% reported it as 'fluctuating'. For bush, 80% reported the price as 'stable', 15% reported it as 'increasing' and 5% as 'decreasing'.

One KE reported on the current price of cannabis, reporting an ounce to cost between $350 and $500.

7.4 Availability

IDU were asked about the current availability of cannabis and any perceived changes in availability over the last six months (Table 16).

Hydro

In 2011, almost half (46%) of participants who commented reported current availability of hydro as 'very easy', which was comparable to 51% reported in 2010. This was followed by 37% reporting current availability as 'easy', the same amount reported in 2010. Seventeen per cent rated current availability as 'difficult', which was a significant increase from the 11% report in 2010 (95%CI 0.25, 0.02). In 2011, no respondents reported availability of hydroponic as 'very difficult'. With regard to change in availability over the last six months, 71% rated it as 'stable' which was comparable to the 82% reported in 2010. There was a significant increase in the proportion rating it as 'more difficult' from 5% in 2010 to 12% in 201 (95%CI 0.23, 0.03). Nine per cent each rated changes in hydroponic availability as 'easier' and 'fluctuates', which was comparable to 2010. These 2011 findings suggest that overall hydroponic cannabis remains 'very easy' and 'easy' to obtain, although there was a significant increase in the proportion reporting availability as difficult from 2010. Any changes to availability also appear to have been stable over the last six months.

Bush
In 2011, half (50%) of those who commented reported current availability of bush as 'easy' followed by 25% rating currently availability as 'very easy', which was comparable to 27% in 2010. Twenty-five per cent also rated current availability as 'difficult', which was a significant increase from the 10% reported in 2010 (95%CI 0.38, 0.13). No participants rated availability as 'very difficult' in 2011. With regard to availability over the last six months, 68% rated it as 'stable', which was a significant decrease from 76% in 2010 (95%CI 0.30, 0.11). While over one-fifth (21%) rated availability as 'more difficult', which was comparable to 2010 findings. Eleven per cent reported that availability had become easier which was comparable to 7% in 2010 and no respondents rated it as 'fluctuating', which was the same in 2010. in 2011, the current availability of bush cannabis has been perceived as mostly 'easy' to obtain by the largest proportion of those reporting, although a greater proportion of the current sample reported current availability to be more 'difficult' than in 2010. Changes to this availability over the last six months have been mostly stable.

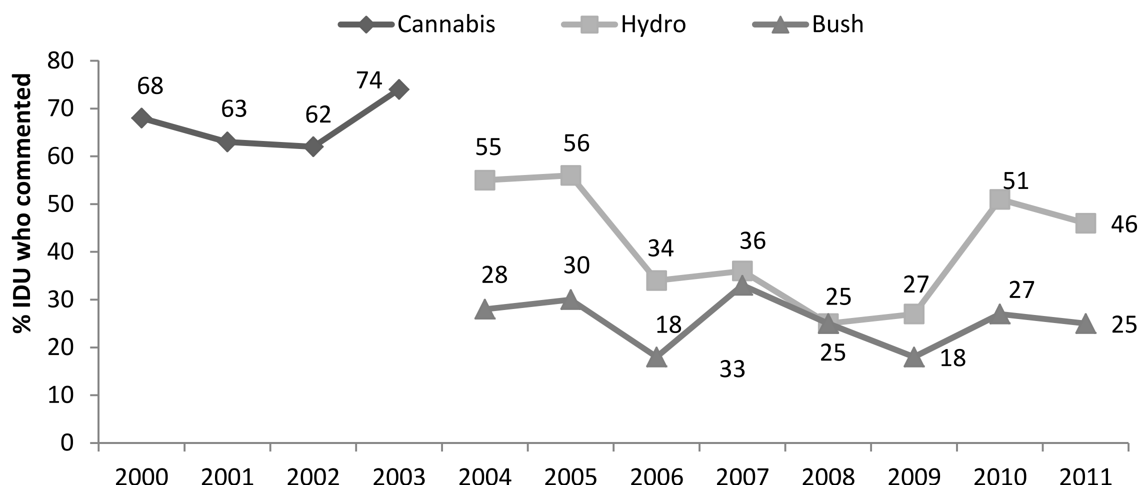
Table 16: Participants' reports of cannabis availability in the past six months, 2010-2011

Current availability	**Hydro**		**Bush**	
	2010 (N=100)	**2011 (N=70)**	**2010 (N=100)**	**2011 (N=70)**
Did not respond* (%)	43	**35**	70	**50**
Did respond (%)	57	**35**	30	**20**
Of those who responded:				
Very easy (%)	51	**46**	27	**25**
Easy (%)	37	**37**	60	**50**
Difficult (%)	11	**17**	10	**25**
Very difficult (%)	2	**0**	3	**0**
Availability change over the last six months				
Did not respond* (%)	44	**36**	71	**51**
Did respond (%)	56	**34**	29	**19**
Of those who responded:				
More difficult (%)	5	**12**	17	**21**
Stable (%)	82	**71**	76	**68**
Easier (%)	9	**9**	7	**11**
Fluctuates (%)	4	**9**	0	**0**

Source: IDRS IDU interviews
* 'Did not respond' refers to participants who did not feel confident enough in their knowledge of the market to respond to survey items

Figure 37 presents the proportion of IDU who commented that rated current availability of cannabis as 'very easy'. It is evident that ratings of both hydroponic and bush as 'very easy' have been fluctuating over time but more recently has stabilised in availability.

Figure 37: Participant reports of current cannabis availability as 'very easy', 2000-2011



Source: IDRS IDU interviews
Note: A distinction between hydro and bush cannabis was introduced in 2004; prior to this time, survey items referred to any form of cannabis

Of the 35 IDU responding to questions about who was the last person they obtained hydro from, 66% indicated that it came from a friend, which was also the most common response in previous years. Other common responses were known dealers (17%) and street dealers (11%). The most common location for last obtaining hydroponic cannabis was at a friend's home, nominated by 40%. Also common were home delivery (14%), dealers' home (14%), street market and agreed public location (9% each).

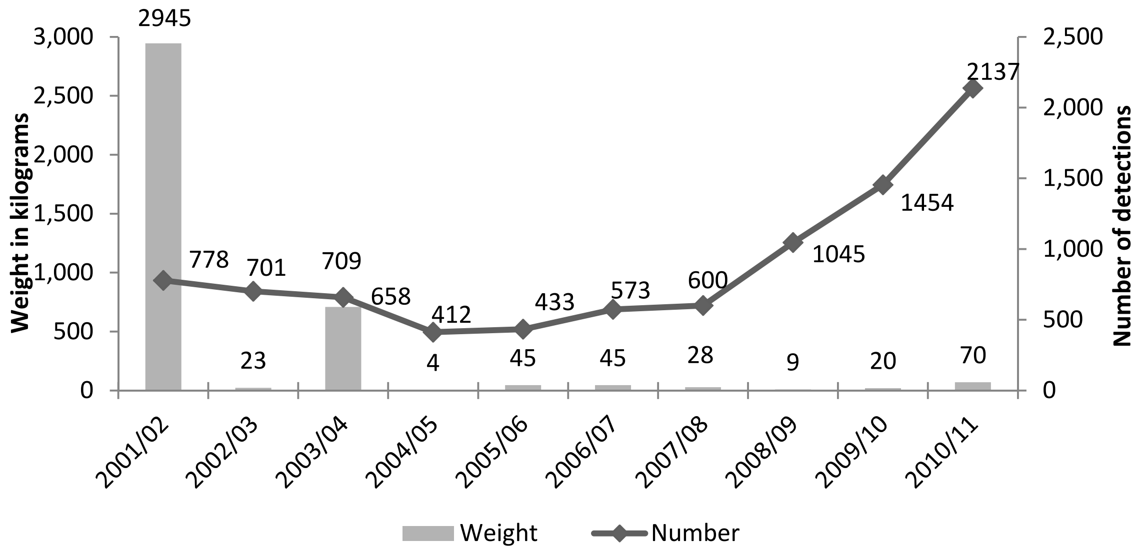
There were 19 IDU who provided information concerning where they last obtained bush cannabis from. As with hydro, the most common last source was friends nominated by 68%, followed by known dealers (16%), street dealer (11%) and a small proportion nominated an 'other' (5%). The most common last location for obtaining bush cannabis was at a friend's home, nominated by 47%, followed by agreed public location and home delivery (both 16%). This was followed by nominating dealers' homes (11%), followed by a smaller proportion nominating street market and an 'other' (5% each).

7.5 Cannabis detected at the Australian border

Cannabis production occurs in many parts of Australia and much of the cannabis consumed in Australia is believed to be domestically produced. However, there are also numerous cannabis detections made by the Australian Customs and Border Protection Service each year.

The number of cannabis detections continued to increase in 2010/11 to 2,137 (up from 1,454 in 2009/10), while weights of seizures continues to fluctuate (Figure 38)(Australian Customs Border and Protection Service, 2011).

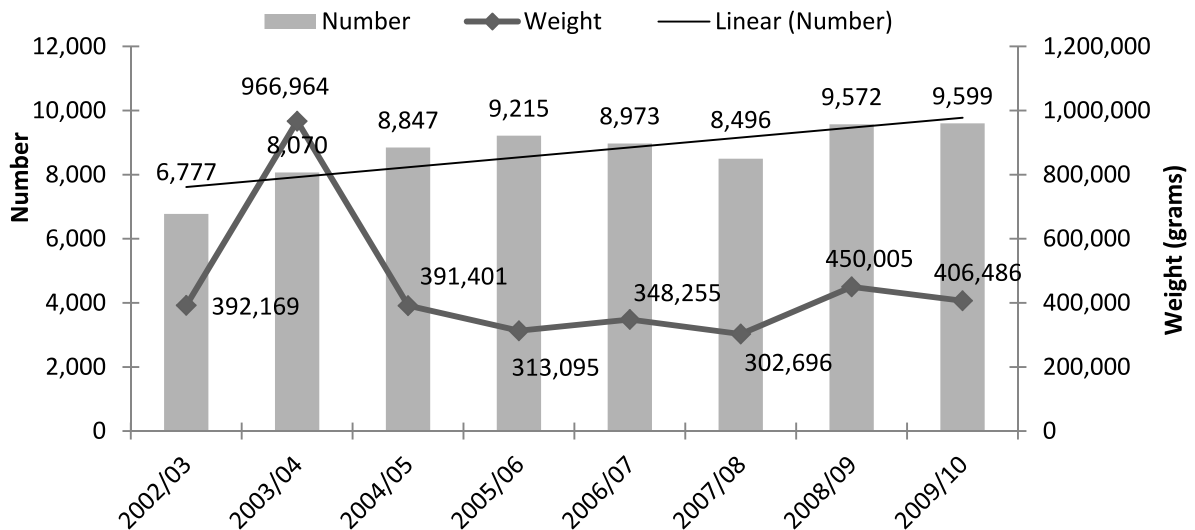
Figure 38: Number of cannabis seizures made at the Australian border by Australian Customs Service (ACS), 2003/04-2010/11



Source: **ACS**

Figure 39 presents the total number and combined weight of cannabis seizures made by WAPS and AFP in WA from 2002/03 to 2009/10. The number of seizures increased from 2002/03 to 2004/05 and has since stabilised. The weight of seizures increased sharply from 2002/03 to 2003/04, but has since decreased and stabilised. In 2009/10, WAPS and AFP made 9,599 cannabis seizures in WA with a weight of 406,486 grams.

Figure 39: Number and weight of cannabis seizures by WAPS and AFP, WA 2002/03-2009/10



Source: ACC

7.6 Potency

IDU were asked about the current potency of cannabis and any change in potency over the last six months (Table 17). Thirty-six IDU commented on hydro, with the majority (64%) nominating current potency as 'high', which was comparable to last year. This was followed

by 19% reporting purity as 'medium', which was comparable to 30% in 2010, and 17% reporting 'fluctuates', which significantly increased from 7% in 2010 (95%CI 0.29, 0.06). With regard to changes in potency over the last six months, the greatest proportions (82%) reported potency as 'stable'. Smaller proportions reported purity changes as 'increasing' and 'fluctuating' (9% each).

Twenty IDU responded for bush cannabis; the majority (50%) nominated its current potency as 'medium', which was comparable to 62% in 2010. This was followed by 30% nominating current potency of bush as 'high', which was a significant increase from 21% in 2010 (95%CI 0.35, 0.07). Smaller proportions nominated bush purity as 'low' and 'fluctuates' (10% each); these findings were also comparable to 2010. With regard to changes in potency of bush over the last six months, the greatest proportion (95%) rated it as 'stable', which was not significantly different to 57% in 2010. The remaining proportion in 2011 rated changes in purity as increasing (5%) and no participants reported changes to bush purity to be 'decreasing' or 'fluctuating' in 2011. All these findings were comparable to those reported in 2010.

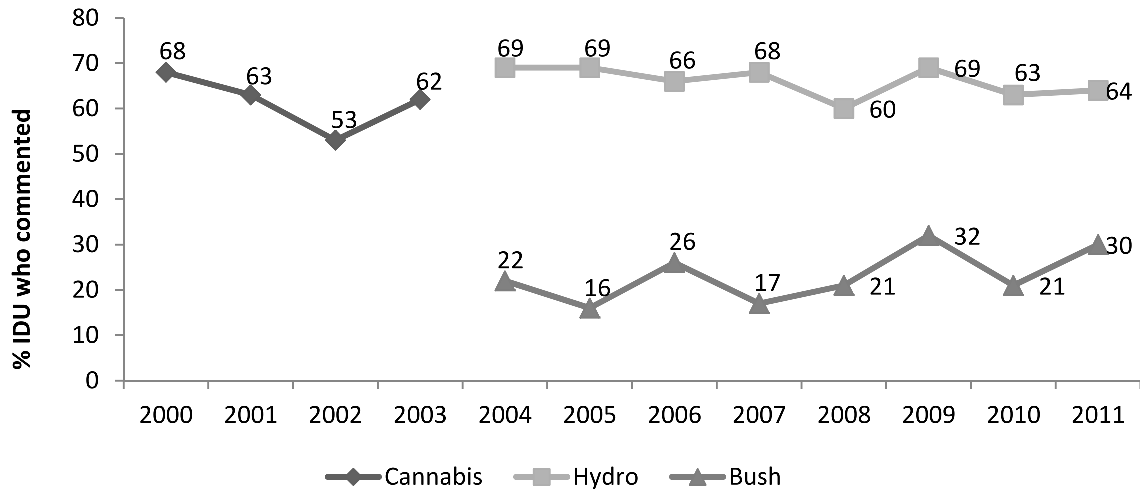
Table 17: IDU estimates of cannabis potency 2010-2011

Current potency	Hydro		Bush	
	2010 (N=100)	2011 (N=70)	2010 (N=100)	2011 (N=70)
Did not respond* (%)	44	**34**	71	**50**
Did respond (%)	56	**36**	29	**20**
Of those who responded:				
High (%)	63	**64**	21	**30**
Medium (%)	30	**19**	62	**50**
Low (%)	0	**0**	7	**10**
Fluctuates (%)	7	**17**	10	**10**
Potency change over the last six months				
Did not respond* (%)	45	**37**	72	**50**
Did respond (%)	55	**33**	28	**20**
Of those who responded:				
Increasing (%)	13	**9**	11	**5**
Stable (%)	69	**82**	57	**95**
Decreasing (%)	4	**0**	7	**0**
Fluctuating (%)	15	**9**	25	**0**

Source: IDRS IDU interviews

Figure 40 presents the proportion of IDU who commented that rated current cannabis potency as 'high' across IDRS surveys. It is evident that more recent ratings of hydro potency as 'high' have been stable. Ratings for bush show greater variation with a range of 16%-32% of participants rating its current potency as 'high' across years. However, the proportion of the sample reporting current bush purity as 'high' (30%) significantly increased from 2010 (95%CI 0.35, 0.07).

Figure 40: Participant reports of current cannabis potency as 'high', 2000-2011



Source: IDRS IDU interviews

Note: A distinction between hydro and bush cannabis was introduced in 2004; prior to this time, survey items referred to any form of cannabis

7.7 Summary of cannabis trends

- Similar to previous years, the vast majority of IDU (99%) reported lifetime use of cannabis.
- Recent use of cannabis was not significantly different to last year: 71% in 2011 and 70% in 2010. Frequency of use among recent cannabis users was 104 days in 2011, which was comparable to in 2010. The number of participants reporting daily use of cannabis was also comparable, with 44% in 2011 and 47% in 2010.
- The reported price of hydro was comparable to last year, with the median price for an ounce being $350 since 2008. The median price of one ounce of bush was $300 in 2011, which was comparable to $250 in 2010. However, only a small number of respondents commented on the price of an ounce.
- Current availability of hydro was rated as 'very easy' or 'easy' by 83% in 2011, which was comparable to 88% in 2010. Current availability of bush cannabis was reported as 'easy' or 'very easy' by 75% in 2011, which was comparable to 2010 (87%).
- Current potency of hydro was rated as 'high' by 64% of those who responded in 2011 (63% in 2010). Current potency of bush was rated as 'medium' by 50% of those who responded in 2011 (62% in 2010).

8. OPIOIDS

The IDRS monitors illicit (non-prescribed) use patterns and market characteristics of opioid pharmaceutical medications. This includes those typically prescribed for opioid substitution treatment (i.e. methadone, buprenorphine, buprenorphine-naloxone) and for pain relief (i.e. morphine, oxycodone, OTC codeine). For information on data relating to licit use of methadone, buprenorphine and buprenorphine-naloxone, please see section 10.3, Drug Treatment.

8.1 Illicit use of methadone

Methadone is prescribed for the treatment of opioid dependence and is usually administered in syrup form or, less commonly, as tablets called Physeptone.

8.1.1 Use patterns

Lifetime illicit use of methadone was reported by 47% of IDU; of these, 58% reported ever injecting and 73% reported ever swallowing illicit methadone. The proportion reporting illicit use of methadone in the last six months was 26% in 2011, which was a significant increase from 13% in 2010 (95%CI 0.37, 0.11). Of these participants, 56% reported injecting and 44% reported swallowing in the last six months. Days of use ranged from one to 180, with five median days use. Mean days of use was 25 in 2011, which was comparable to the six days reported in 2010. Mean days of injection in the last six months was also comparable, with an average of 13 days reported in 2011, which was comparable to an average of six days in 2010. .

Lifetime illicit use of physeptone was reported by 31% of IDU; of these, 59% reported ever swallowing and 55% reported ever injecting. The proportion reporting illicit use of physeptone in the last six months was 7%, which was not significantly different to the 4% in 2010. Of these participants, 40% (n=2) reported injecting and 60% (n=3) reported swallowing in the last six months. Days of use ranged from one to 30 days, with a median of approximately two days used. Mean days of use was nine, which was comparable to the six days reported in 2010. Mean days of injection in the last six months was comparable to last year, with an average of approximately seven days in 2011 compared to five days in 2010.

In 2011, IDU were asked about the reasons for illicitly using methadone and six IDU responded. The most commonly reported reason was as a self-treatment (n=4). Two participants also nominated substitute for heroin/opiates as a reason for illicitly using methadone.

8.1.2 Market characteristics

Price data per millilitre of methadone syrup were not commonly provided by IDU in 2011, as in previous years. Four of the 18 participants who had used illicit methadone in the last six months provided information; the median price of illicit methadone was reported to be approximately $1.00 per millilitre, which reflects the findings of previous years. Four participants reported changes in methadone price, with all reporting it to be stable over the six months preceding interview. No participants reported on the illicit price of 5mg of Physeptone; however, two participants reported 10mg of Physeptone reporting a median price of $7.50 (range $5-$10).

There were also four participants also reported on the availability of illicitly obtained methadone. Current availability was rated by two participants as ‘easy’ and by one participant as ‘very easy’ and one participant as ‘difficult’. Availability over the last six months was rated by two participants as ‘stable’, and by one participant as ‘more difficult’ and one participant as ‘easier’.

Of the four participants who reported that they illicitly bought methadone in the last six months, three nominated friends and one nominated known dealers as the source person last time illicit methadone was purchased. There were also four participants who reported on last location for illicitly sourcing methadone, with two nominating friends home and one each nominating home delivery and dealers home.

8.2 Use of illicit buprenorphine

Buprenorphine is sold under the brand name of Subutex and buprenorphine-naloxone as Suboxone.

8.2.1 Use patterns

Lifetime illicit use of Subutex was reported by 41% of IDU; of these participants, 83% reported ever injecting and 48% reported ever swallowing. Illicit use in the last six months was reported by 11%, which was not significantly different to 18% reported in 2010. Of these participants, 88% reported injecting and 25% reported swallowing in the last six months, which was comparable to proportions reported in the 2010 sample. Days of use ranged from one to 30, with a median of three days, compared to seven days in 2010. The mean number of days of use was approximately 9 days, which was not significantly different to the 15 days reported in 2010. Mean days of injection was 6 days in 2011, which was not significantly different to the 13 days reported in 2010.

Lifetime illicit use of Suboxone was reported by 26% of IDU; of these participants, 72% reported ever injecting and 56% per cent reported ever swallowing. Illicit use in the last six months was reported by 14%, which was comparable to 17% in 2010. Of these participants, 80% reported injecting and 30% reported swallowing in the last six months. Days of use ranged from one to 96, with a median of 10 days use. Mean days of use was 28, which significantly decreased from 81 days in 2010 ($t=-4.48$, $df=9$, $p=.002$). Mean days of injection was approximately 23 days in 2011 which was also significantly less than the 80 days reported in 2010 ($t=-4.768$, $df=9$, $p=.001$).

In 2011, IDU were asked about the reasons for illicitly using Subutex and one participant responded. This participant reported the reason was ‘to try’. Reasons for illicit use of Suboxone were provided by 7 IDU with the most common reason was intoxication (n=3). The remaining respondents reported that the main reason for using illicit Suboxone was ‘self-treatment’, ‘as a substitute for heroin’, ‘to try’, ‘pain management’ and to ‘increase prescribed dose’.

8.2.2 Market characteristics

There was one participant who reported on the illicit price of 8mg of Subutex, reporting that is was $40 which was comparable to last year’s median price. This participant also reported that price change was stable for illicit Subutex over the last six months. No participants reported the price paid for 0.4mg or 2mg of illicitly obtained Subutex in 2011. Seven participants reported on the illicit price of 8mg of Suboxone, with a median of $45 (range $25-$70). One participant also reported on the price of 2mg of illicit Suboxone, which was $30. In regards to changes in price over the previous six months, the most commonly reported response was that the price of illicit Suboxone was stable (n=4).

In 2011, one participant reported on the availability of illicitly obtained Subutex, with current availability reported as ‘easy. Availability changeover the last six months was reported as ‘stable’. Seven participants reported on availability of illicitly obtained Suboxone. Four participants rated current availability as ‘easy’, by two as ‘very easy’ and the remaining two

reported they ‘don’t know’. Availability over the last six months was rated by five participants as ‘stable’ and by two as ‘don’t know’.

The one participant that reported on the source of their illicitly obtained Subutex nominated friends as their last source person and friend’s home as the last location of purchase. Six participants reported on the last source person and location from which they had illicitly obtained Suboxone. Of these participants, five nominated friends as the last source person, followed by one nominating an ‘other’. Six participants also reported on last location of purchase, with two each nominating friends’ homes and an agreed public location, one nominating home delivery and one reporting an ‘other’. .

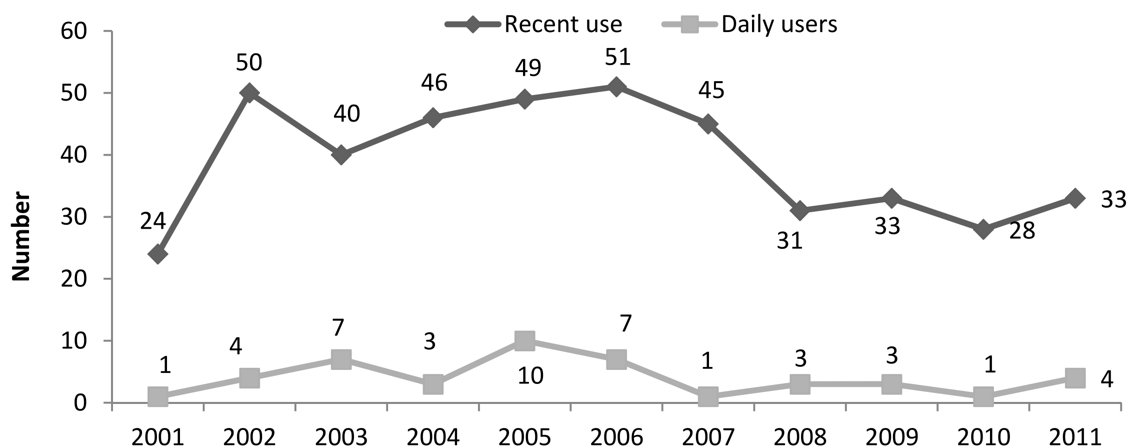
8.3 Morphine

8.3.1 Use patterns

Lifetime illicit use of morphine was reported by 74% of the 2011 IDRS sample, which was not significantly different to the 60% in 2010. Of the current sample, 92% reported ever injecting which was comparable to 90% in 2010. Almost one-third (28%) of those who had ever used morphine reported swallowing, which was also comparable to 33% in 2010. The proportion reporting illicit use of morphine in the last six months was 33%, which was not significantly different to the 28% reported in 2010. Of these participants, all reported injecting (96% in 2011) and 9% reported swallowing in the last six months, which was comparable to 25% reported in 2010. Days of use ranged from one to 160, with a median of 4 days. Mean days of use was 22, which was comparable to 36 days reported in 2010. Mean days of injection was also 22 days, which was again comparable to last year’s average of 36 days.

Figure 41 presents the proportion of IDU who reported illicit use of morphine in the last six months and daily illicit use across IDRS surveys. It is evident that the proportion of IDU reporting illicit use of morphine has steadily decreased since 2006 but has since stabilised from 2008. The proportion reporting daily use has remained low since data collection began in 2001.

Figure 41: Proportion of IDU reporting recent and daily illicit morphine use in the past six months 2001-2011



Source: IDRS IDU interviews

Twelve participants reported on the reasons for illicitly using morphine. The most common reasons given for using illicit morphine were self-treatment (n=8), as a substitute for heroin/opiates (n=3), away from home and 'other' (n=4 each).

Twenty-five IDU reported any use of morphine in the last six months and, of these, 88% reported illicit use was the more common type of use, which was comparable to 87% in 2010. These participants reported MS Contin as the most common brand used, reported by 89% (n=17). This was also the most common brand reported in previous years.

8.3.2 Market characteristics

As in previous years, the most commonly reported form of illicitly purchased morphine was MS Contin. Eight participants reported on the price of a 100mg tablet, with a median price of $70 (range=$50-$80). Six participants reported on the price of 60mg, with a median of $32.50 (range=$25-$40). Sixteen participants reported on any perceived change in the illicit price of morphine in the last six months. Of these participants, 50% rated it as 'increasing' (n=8), 44% as 'stable' (n=10), and 1% as 'fluctuating' (n=1).

Sixteen participants also reported on the availability of illicitly obtained morphine in the last six months. Current availability was rated by 38% as 'very easy' and 'difficult' (n=6 each), followed by 25% as 'easy' (n=4). Availability over the last six months was rated by 69% as 'stable' (n=11), followed by 25% as 'more difficult' (n=4) and 6% as 'don't know' (n=1).

Eighteen participants also reported on the last source person and last location of illicitly obtained morphine. Friends were the most commonly reported last source person (88%, n=14) and friends' homes (50%, n=8) was the most commonly reported last source location.

8.4 Oxycodone

8.4.1 Use patterns

Lifetime illicit use of oxycodone was reported by 63% of the 2011 IDRS sample, which was comparable to 44% in 2010. The vast majority of 87% (n=39) reported ever injecting and 23% reported ever swallowing. The proportion reporting use in the last six months was 30% in 2011, which was a significant increase from 20% in 2010 (95%CI 0.36, 0.08). Of these participants, all reported injecting which was comparable to 2010 and 10% reported swallowing in the last six months compared to 5% in 2010. Days of use ranged from one to 180, with a median of five days. The mean days of use were 30, which was comparable to a mean of 51 days in 2010. Mean days of injection was 20, which was a significant decrease from a mean of 51 days in 2010 (t=-3.476, df=20, p=.002).

Twelve participants reported on the reasons for illicitly using oxycodone. The most common reasons given were as a substitute for heroin/opiates (n=5), intoxication and self-treatment (n=2 each) and away from home and depression (n=1 each).

Twenty-one participants reported any use of oxycodone in the last six months and of these, 63% reported illicit use was the most common type of use. Of those that had mostly used oxycodone illicitly, Oxycontin was the most common brand, reported by 63% of recent users. The remainder reported using Oxynorm and Endone.

8.4.2 Market characteristics

In 2011, four participants reported on the price of 40mg of oxycodone, with a median price of $25 (range=$20-$50). Seven participants reported on the price of an 80mg tablet, with a median price of $50 (range=$50-$80). Of the 9 participants who were able to comment on any perceived change in price over the last six months, five participants rated it as 'stable' (57%), three as 'increasing' (33%) and one as 'don't know' (11%).

Nine participants were able to report on the current availability of illicitly obtained oxycodone. Four participants reported it as ‘very easy’ and four reported it as ‘difficult’ (44% each) and one as ‘don’t know’ (11%). Nine participants were also able to report on availability over the last six months, with 6 rating it as ‘stable’ (67%), two as ‘more difficult’ (22%) and one as ‘don’t know’ (11%).

Nine participants reported on the last source person and last location for illicitly obtained oxycodone. The most common last source person was friends by 89% (n=8) and the most common last location of purchase was friends’ homes by 44% (n=4).

8.5 Use of OTC codeine

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

In 2011, participants in the IDRS survey were asked questions about the use of over the counter (OTC) codeine for medical and non-medical purposes (Table 18).

Just over half (57%) of the WA sample reported the use of OTC codeine in their lifetime, which was the same proportion reported in 2010. Thirty four per cent of the 2011 sample reported using OTC codeine in the last six months on a median of 6 days. The mean days of use were 18, which was comparable to 17 days in 2010. No participants reported injecting OTC codeine in the last six months. Eighty-seven per cent (n=20) reported the use of illicit OTC codeine as the form mainly used in the previous six months. The most common brand reported was Nurofen Plus® by 48%.

Thirty per cent of participants reported using OTC codeine for medical purposes in the last six months on a median of seven days. The main type medical purpose was short-term pain (71%). Nurofen Plus® (38%) was reported as the last brand used for medical purposes in the last six months. Among those who had use OTC for medical purposes the median amount of relief received from OTC codeine was 60% (range 0-100%). The median amount of tabs/caps taken was two.

Seven per cent (n=4) of the 2011 WA sample reported the use of OTC codeine for non-medical purposes on a median of two days. The median amount of tabs/caps taken was five. The maximum number taken in any one session was 10 tabs/caps. The most common brand of OTC codeine used in a ‘most’ occasion for non- medical purposes was Chemists own strong pain relief®, Mersyndol, Nurofen Plus® and Panadeine (25% each, n=4).

Table 18: Over the counter Codeine use and pain, WA IDRS, 2011

OTC Codeine	WA n=70
Ever used OTC codeine (%)	57
Recently used OTC codeine (%)	34
Median days used OTC codeine in the last six months*	5.5
Use OTC codeine for medical purposes in the last six months (%)	30 (n=21)
Acute/short-term	71
Chronic non-malignant	14
Chronic malignant	10
Used OTC codeine for non-medical purposes (%)	3 (n=2)
To feel numb	*0*
To go to sleep	*0*
Substitute for heroin	*100*
Substitute for pharmacotherapy	*0*
Supplement pharmacotherapy	0
Other	67

Source: IDRS participant interviews
* Among those who recently used
** Response could be between 0-100%
# Multiple responses allowed

One KE reported that an increased number of individuals were being admitted to hospital for over use of OTC codeine. This KE reported that when OTC codeine is taken in high doses, ibuprofen can lead to renal failure and gastrointestinal bleeding. This emerging trend has implications for harm reduction strategies.

8.6 Other opioids (not elsewhere specified)

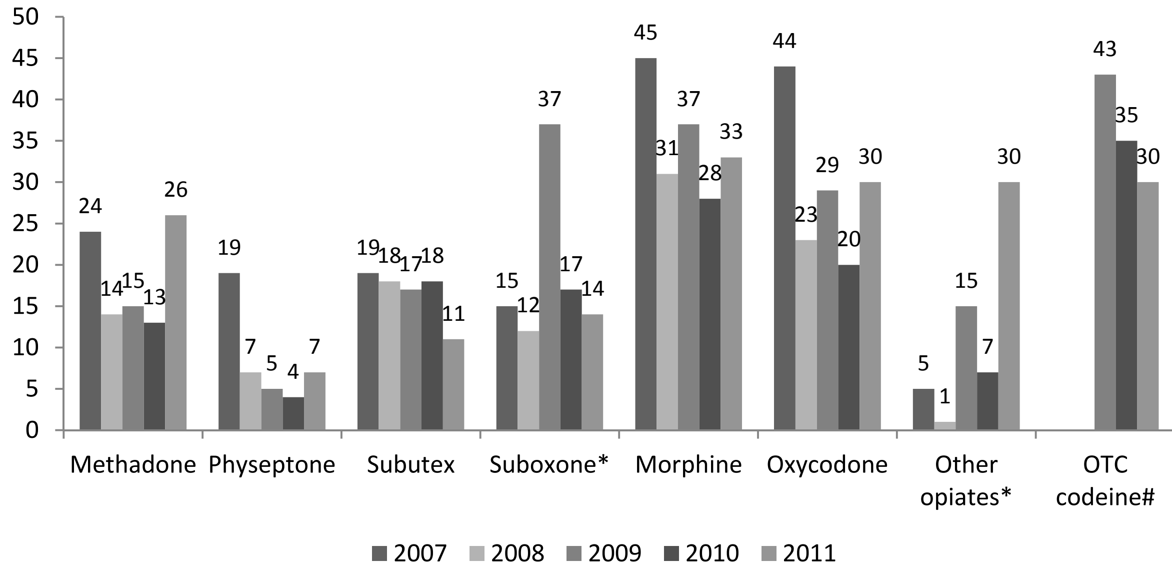
Other opioids include (but are not limited to) opium and pethidine (not including OTC codeine), for the first time in 2011, other opioid use also included prompting for codeine phosphate such as Panadeine Forte use. Therefore meaningful analysis cannot be made between the current sample and previous year's samples. In 2011, lifetime use of other opioids was reported by 61% of the WA IDRS sample. Of these respondents, 7% reported ever injecting and 98% per cent reported ever swallowing. Recent use was reported by 30% on a median of 10 days in the last six months, the mean days of use was 38 days in 2011. Of those participants who had used in the last six months (n=21), all participants reported swallowing in the last six months, no participants reported injecting, snorting or smoking other opioids in the last six months.

Figure 42 presents the proportion of IDRS samples across survey years that reported illicit use of the various opioid drugs other than heroin in the six months preceding interview. It is evident that the 2011 proportions reporting recent use of methadone, physeptone, morphine, oxycodone and other opioids (including Panadeine Forte in 2011) have increased from 2010.

Three KE reported that the selling of pharmaceuticals, even diverted, was often common practice. Two KE also commented on the poor injecting practices that were occurring among IDU injecting diverted pharmaceuticals, with many of these individuals ending up in the health system with endocarditis and infected injection sites. One KE reported that an

increased number of individuals are being caught 'doctor shopping' for pharmaceutical opioids and benzodiazepines. One KE reported on the current price of diverted pharmaceutical opioids, reporting that they generally cost $1 per mg. Another KE also reported an observed overall increase in opioid use in the last six months.

Figure 42: Recent illicit use of opioids other than heroin by IDU survey respondents 2004-2011



Source: IDRS IDU interviews

Data only collected since 2009, previously included in 'other opiates' category

* Other Opioids included Panadeine Forte prompt during interview in 2011

8.7 Summary of opioid trends

- Recent (last 6 months) illicit use of methadone was reported by 26% of the sample in 2011, which significantly increased from 13% in 2010. The average days of use was 25 days in 2011, which was comparable to six days in 2010.
- Recent illicit use of physeptone was reported by 7% of the sample in 2011, which was not significantly different to 4% in 2010. The average days of use was nine days, which was comparable to six days in 2010.
- Recent illicit use of Subutex was not significantly different across the last two years: 11% in 2011 compared to 18% in 2010. In 2011, the average days of use were 9 days, not significantly different from 15 days in 2010.
- Recent illicit use of Suboxone was reported by 14% in 2010, which was comparable to 17% in 2010; the average days of use significantly decreased from 81 days in 2010 to 28 days in 2011.
- Recent illicit use of morphine was reported by 33% of the sample in 2011, which was not significantly different to the 28% in 2010. In 2011, the average days of use was 22, not significantly different to the 36 days in 2010.
- Recent illicit use of oxycodone significantly increased from 20% in 2010 to 30% in 2011. In 2011, the average days of use was 30, which was comparable to 51 days in 2010.
- Recent use of OTC codeine was reported by 34% in 2011, which was not significantly different to the 35% in 2010. In 2011, the average number of days used was 18 days, which was comparable to 17 days in 2010.
- For the first time in 2011, the other opioid category included prompting for Panadeine Forte use, therefore 2011 proportions for other opioid use cannot be compared to previous years' other opioid proportions. In 2011, recent use of other opiates was reported by 30% of IDU and the average number of days of use was 38 days in the last six months.
- In sum, recent illicit use of other opioids has remained relatively stable, with the exception of a significant increase in the proportion of the sample having used illicit methadone and oxycodone in the six months preceding interview.

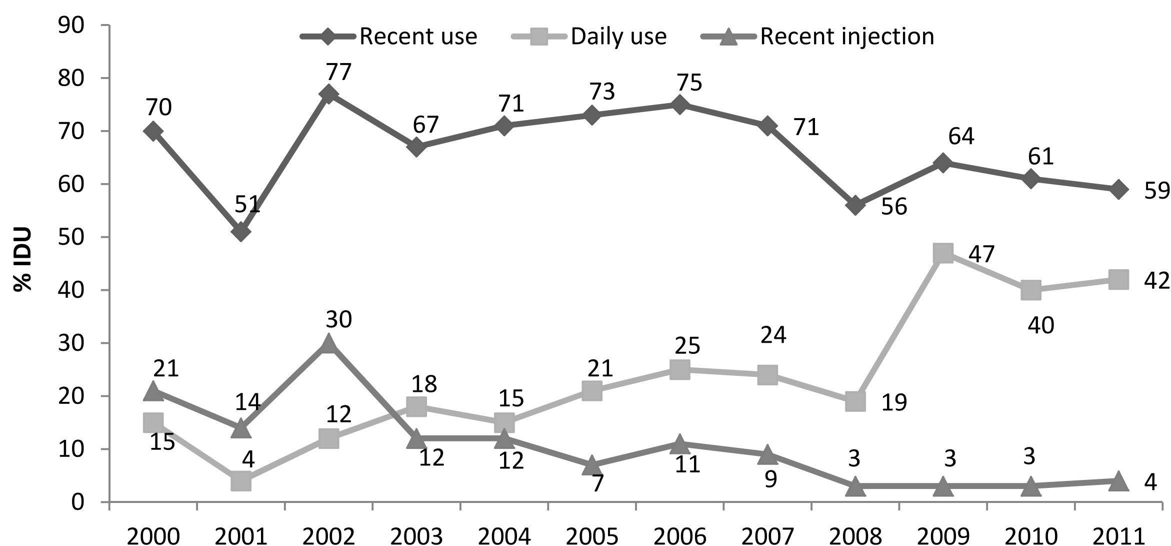
9. OTHER DRUGS

9.1 Benzodiazepines

The majority (81%) of the WA IDRS sample had reported the use of benzodiazepines at some stage in their lifetime. Sixty one per cent of the current sample reported the recent use of benzodiazepines, which was the same proportion reported in 2010. The median number of days any form of benzodiazepine was used was 96 days, which was comparable to 90 days reported in 2010. Among those who recently used benzodiazepines, 42% reported using them daily.

Figure 43 presents the proportion of IDU reporting any use of benzodiazepines in the six months preceding interview across IDRS surveys. This data includes both licit and illicit use, which was not explicitly asked about prior to 2007. Thus, caution is warranted in interpreting the figure since it cannot be known what types of use IDU were referring to in previous survey years. Nevertheless, it is evident that the proportion of the 2011 IDU reporting recent use and daily use of benzodiazepines has been stable from 2010 to 2011.

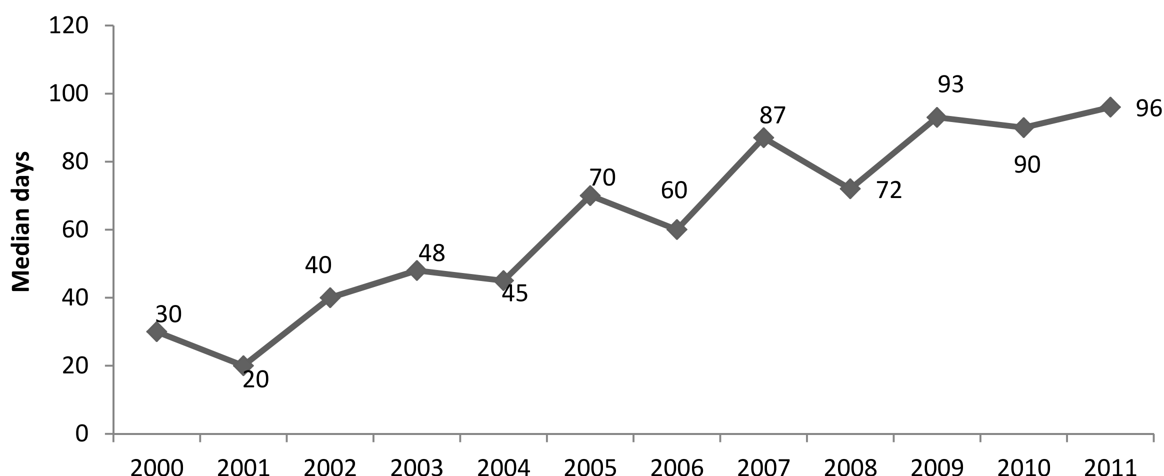
Figure 43: Proportion of IDU reporting any benzodiazepine use (including Alprazolam), daily use and injection in the preceding six months, 2000-2011



Source: IDRS IDU interviews

Only small numbers reported recently injecting benzodiazepines (6%) on a median of one day in the last six months. Of those that reported any use of benzodiazepines in the last six months (n=38), licit use was more common, reported by 74%. The median days of use was 165 and 15 participants reported daily use (compared to 21 participants in 2010). Figure 44 shows the median days of use of any benzodiazepine (including Alprazolam) across IDRS surveys.

Figure 44: Median days use of any benzodiazepines (including Alprazolam) in the past six months, 2000-2011



Source: IDRS IDU interviews

For the first time in 2011, participants were asked separately about the use of alprazolam and other benzodiazepine use (please see below).

9.1.1 Alprazolam (Xanax)

Forty one per cent of the WA sample reported using some form of alprazolam in their lifetime (24% licit and 40% illicit). Nearly half (41%) reported recently using any form of alprazolam on a median of six days in the last six months. Seventeen per cent had recently used licit alprazolam on a median of 40 days while 27% had recently used illicit alprazolam on a median of four days in the last six months.

A smaller proportion (3%) had injected alprazolam at some stage in their life (3% illicit, 0% licit), and that same proportion (3%) also reported injecting alprazolam (illicitly) in the last six months.

9.1.2 Other Benzodiazepines

Just over half (57%) of the WA sample had used any other benzodiazepine (licit/illicit) not including alprazolam in their lifetime. Over half (56%) recently used any form of other benzodiazepines on a median of 96 days in the last six months.

Forty three per cent of the WA sample reported having used licitly obtained other benzodiazepines and 23% illicitly obtained benzodiazepines in the last six months preceding interview.

Proportions of respondents reporting the recent injection of other benzodiazepines (any form-excluding alprazolam) in the last six months were low at 2%.

Lifetime use of either prescribed or illicitly obtained other benzodiazepines (other than Alprazolam) was reported by 57% of the 2011 sample, which cannot be compared to 2010 findings because Alprazolam (Xanax) was included in benzodiazepine category in 2010. In the current sample, all of participants reporting ever swallowing, while ever injecting was rare (10%). Use of any benzodiazepine in the last six months was reported by 56% of the 2011

sample, which was comparable to 61% in 2010; however use of Alprazolam was also included in this proportion so therefore findings should be interpreted with some caution. Of those that reported recent use of any other benzodiazepines in 2011, 97% reported swallowing.

Excluding alprazolam, similar to previous years, the most commonly used benzodiazepine was diazepam (Valium), reported by 78%. Following this was oxazepam (Serepax) reported by 8% and clonazepam (Rivotril) reported by 5%.

Two KE reported that most IDU use benzodiazepines, both licitly and illicitly.

9.2 Pharmaceutical stimulants

Pharmaceutical stimulants refer to prescription medication such as dexamphetamine and methylphenidate (Ritalin), commonly prescribed for psychiatric disorders such as attention deficit hyperactivity disorder (ADHD).

Lifetime use of either prescribed or illicitly obtained pharmaceutical stimulants was reported by 50% in 2011, which was not significantly different to 46% in 2010. Of these participants in 2011, lifetime swallowing was reported by 86% and lifetime injection by 37%. Sixteen per cent reported any use of pharmaceutical stimulants in the last six months, which was not significantly different to the 17% in 2010. All of these participants in 2011 reported illicit use, which was not significantly different to 93% in 2010. Swallowing was reported by 64% and 46% reported injecting. Days of use ranged from one to 20 days, with a median of two days use in the last six months. This was not significantly different from the median of four days use among those reported illicit use in 2010. The average number of days of use was four, which was a significant decrease from 22 days in 2010 ($t=-10.760$, $df=10$, $p=.000$). In 2011, the majority of those who reported use of pharmaceutical stimulants in the last six months reported dexamphetamine as the form of stimulant most used (50% in 2011 vs. 93% in 2010), followed by Ritalin (40% in 2011 vs. 7% in 2010). In 2011, one respondent also reported using Strattera as the main brand used in the past six months (10%), no respondent reported using the form Strattera in 2010.

9.3 Hallucinogens

Lifetime use of hallucinogens was reported by 83% of IDU, which was comparable to 70% in the 2010 IDU sample. This was not statistically significant. Across the two years, recent use was reported by 10% in both sample years. Among participants who reported recent use of hallucinogens in 2011, days of use ranged from one to 50, with a median of two days and an average of nine days of use. These findings were comparable to those reported in 2010. Participants were asked what hallucinogen was most used in the last six months; with 86% reporting LSD as the most commonly used form, the remaining 14% reported mushrooms as the most commonly used hallucinogen. No respondents reported recent use of mushrooms in 2010.

9.4 Ecstasy

Lifetime use of ecstasy was reported by 80% of IDU in 2011, which was comparable to 73% in 2010. Of the 2011 participants that reported lifetime use, 96% reported ever swallowing, 36% reported ever injecting ecstasy, 11% reported ever snorting and 2% reported smoking. In 2011, only one respondent (1%) reported use of ecstasy in the last six months, which was a significant decrease from 21% in 2010 (95%CI -0.10, -0.28). The one respondent that reported recent use reported swallowing ecstasy on one day over the last six months. This participant did not report on the most common form of ecstasy used, although in previous year's ecstasy pills have been the most commonly reported form.

9.5 Inhalants

Lifetime use of inhalants was reported by 27% of IDU in 2011, which was comparable to 22% in 2010. Use in the last six months was reported by 4%, which was also not statistically significant from the 6% recorded in 2010. Days of use ranged from one to one, with a median of one day of use in the last six months. The average number of days of use was also one day. No respondent reported using inhalants daily in 2010. This one participant reported using spray paint as the main form used in the last six months.

9.6 Alcohol

Lifetime use of alcohol was reported by 94% of IDU and 70% reported use in the last six months. These proportions were similar to last year when 97% reported lifetime use and 63% reported recent use. No participants in 2011 reported injecting alcohol in their lifetime or in the past six months. Days of use ranged from one to 180, with a median of approximately 14 days use, compared to 24 days in 2010. The mean number of days was 51 days in 2011, which was comparable to 55 days in 2010. Eight participants (17%) reported daily use of alcohol, which was comparable to 14% in 2010.

9.7 Tobacco

Prevalence of tobacco use was also comparable across years. In 2011, lifetime use of tobacco was reported by 90% of IDU (92% in 2010) and 83% reported use in the last six months (85% in 2010). Days of use ranged from ten to 180, with a median of 180 days and a mean of 174 days, which was a significant increase from an average of 166 days reported in 2010 ($t=2.475$, $df=57$, $p=.016$). Daily tobacco use was reported by 95% (n=55) of IDU, which was comparable to 87% in 2010.

9.8 Seroquel® (Quetiapine)

For the first time in 2011, participants were asked about the use of Seroquel® (quetiapine). Of the WA sample, 63% reported lifetime use of Seroquel® (36% licit and 31% illicit). Thirty six per cent had use Seroquel® in the last six months (17% licit and 19% illicit). Licit Seroquel® has been used on a median of 108 days compared to only five days for illicit. No participant reported injecting Seroquel® ever or in the last six months, swallowing was the main ROA reported.

KE generally reported that most IDU use alcohol and tobacco. Additionally, one KE reported an observed increase in the number of people presenting in hospitals with alcohol addictions. A few KE commented on MDMA availability in the last two years, all reporting that availability has been extremely low. One KE reported an observed increase in LSD availability and use in the last two years. Two KE reported that alcohol continues to be a massive problem within the health and emergency services.

9.9 Summary of other drug trends

- The majority (81%) of the sample reported the use of benzodiazepine (including alprazolam) at some stage in their lifetime. Sixty one per cent reported recent use of benzodiazepine on a median of 96 days. Only a small proportion (6%) reported recently injecting benzodiazepines on a median of one day. Three per cent reported recently injecting alprazolam.
- Like in previous year's samples, in 2011 the majority of recent benzodiazepine (any form) use was reported to be licit.
- Lifetime use of pharmaceutical stimulants was reported by 50% in 2011, which was not significantly different from 46% in 2010. Recent use was reported by 16% of the 2011 sample, which was comparable to 17% in 2010. Mean days of use was 4 days, which was a significant decrease from 22 days in 2010.
- Of those that reported recent pharmaceutical stimulant use in 2011, the majority reported illicit use.
- In 2011, 83% of the sample reported lifetime use of hallucinogens, which was comparable to 70% in 2010. Recent use was also not significantly different being 10% in both 2011 and 2010in 2010 to 13% in 2009. The average number of days hallucinogens were used was four.
- Lifetime use of ecstasy was reported by 73% of IDU in 2010, which was comparable to 77% in 2009. Recent use was also not significantly changed across the years: 21% on an average of five days in 2010, versus 29% on an average of nine days in 2009.
- Lifetime and recent use of inhalants has been uncommon across years.
- The majority of IDU across years reported lifetime and recent use of alcohol and tobacco.
- The use of Seroquel® ever was reported by 63% of the WA sample, 36% reported recent use of Seroquel®.

10. HEALTH-RELATED HARMS ASSOCIATED WITH DRUG USE

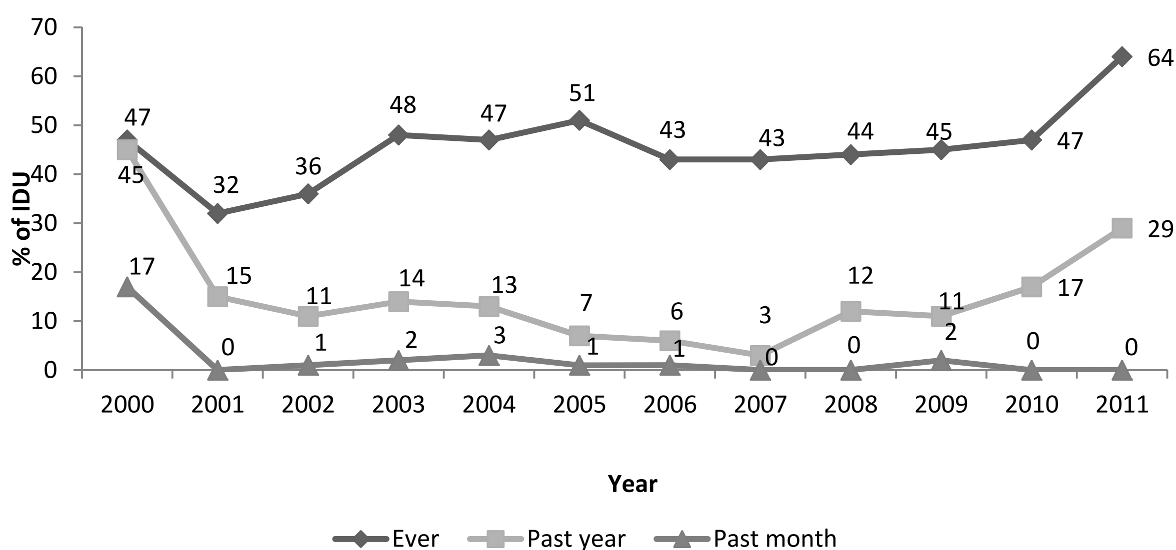
10.1 Overdose and drug-related fatalities

10.1.1 Heroin and other opioids

10.1.1.1 Non-fatal overdose

The IDRS participants were asked how many times they had overdosed on heroin and the length of time since their last heroin overdose. A lifetime history of heroin overdose was reported by 64% of IDU in 2011, which was not significantly different to 47% in 2010. However, this current proportion represents the greatest number of self-reported heroin overdose by the WA IDRS sample since 2000. The median number of times 2011 IDU reported ever overdosing on heroin was four times. Some 29% (n=12) of the 2011 sample reported overdose on heroin in the last 12 months, which was significantly greater than the 17% reported in 2010 (95%CI 0.37, 0.11). In 2011, no respondent reported overdosing on heroin in the past month prior to interview, which was the same proportion reported in 2010. Figure 45 presents the proportion of IDU across IDRS surveys that had overdosed on heroin.

Figure 45: Proportion of WA IDU participants who had ever overdosed, overdosed in the past 12 months and in the past month on heroin, 2000-2011



Source: IDRS IDU interviews

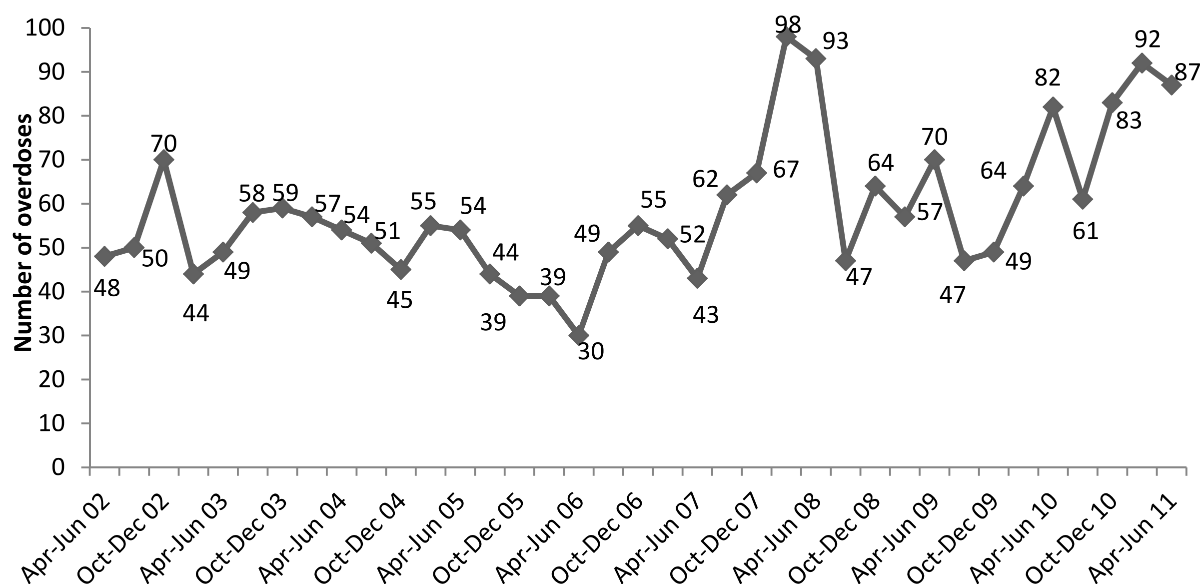
In 2011, participants who had overdosed on heroin in the last 12 months were asked what treatment they received both immediately and post overdose at the time of their last overdose. Twelve participants responded to this question, and the most commonly reported immediate treatment was receiving Narcan and ambulance attendance (n=4 each), followed by receiving CPR from a friend/partner/peer, CPR from a health professional and 'did not receive treatment' (all n=3 each), then hospital emergency department and 'don't know/can't remember' (n=2 each); one respondent each also reported getting oxygen and receiving CPR from another person. Multiple treatment responses were allowed for this question. Eleven participants reported on seeking treatment or information post overdose, with the most commonly reported response being that they did not receive any treatment or information post overdose (n=10), however, one participant reported to seek information from the local needle exchange (WASUA) post most recent overdose.

Four KE reported an observed increase in heroin overdose both recently and over the last few years. These KE reported that heroin purity must be quite high as many of the overdoses are very regular users who report using the same amount as usual. This has obvious implications for harm reduction strategies aiming towards users having a small 'taste' first or halving their usual amount to test product purity.

Figure 46 presents the number of narcotic overdoses attended by St John Ambulance from April 2002 to June 2011. It is evident that apart from a peak (n=70) in the final quarter of 2002, the number of overdoses remained relatively stable to the third quarter in 2005 (n=44). Following this, there was a decline in the number of overdoses until the third quarter of 2006 (n=49) at which time the number of overdoses returned to previous levels. Commencing in the third quarter 2007 (n=62), the number of overdoses began to increase and reached 98 overdoses in the first quarter 2008 and 93 overdoses in the second quarter 2008. During the fourth quarter of 2008, these numbers temporarily decreased to those found prior to 2008 (n=47) followed by an observed peak in the second quarter of 2010 (n=82); since then, there was a decline in July-September 2010 followed by an observed peak in the three most recent quarters.

Overall these findings indicate that the number of ambulance callouts to narcotic overdoses in WA has increased in the last four years (see Figure 46); however, these findings remain far lower than those prior to the heroin shortage.

Figure 46: Number of ambulance callouts to narcotic overdoses, WA, 2nd quarter 2002-2nd quarter 2011



Source: St John Ambulance, WA

Note: Due to missing data for September 2005, that month was allocated a data value equal to the average for the 3rd quarter 2005

10.1.1.2 Fatal overdose

The Australian Bureau of Statistics (ABS) collates drug-related death data and from 2006 it relied solely on data contained on the National Coronial Information System (NCIS). Because of this change in methods of collating death data, comparisons to earlier overdose bulletins by NDARC (Degenhard and Roxburgh, 2007a; Degenhard and Roxburgh, 2007b) are not possible. Prior to 2006, coronial offices were also visited to manually update causes of deaths. One consequence of this difference is that, since 2006, there were higher

numbers of deaths coded as 'cause unknown'. For this reason, data since 2006 cannot be compared with previous death data for 1988 to 2005. The following data represent findings from preliminary data for 2009. The ABS will be releasing two subsequent revisions of the 2009 deaths data in March 2012 and March 2013 respectively. Accordingly, these figures may represent an underestimate of opioid-related deaths (ABS causes of death data).

Nationally in 2009, there were 433 accidental deaths due to opioids. In WA, the number of accidental deaths due to opioids among those aged 15 to 54 years was 65 (compared to 45 in 2008), representing 15% of the national total (n=433). In WA, these fatalities comprised of 53 males and 12 females.

10.1.2 Other drugs

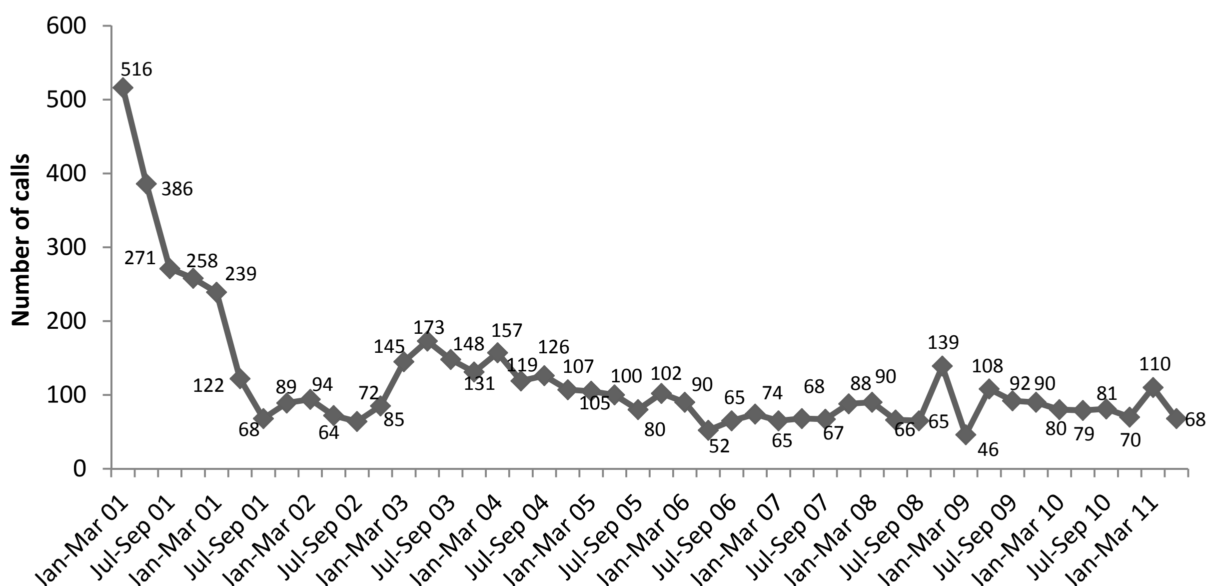
10.1.2.1 Non-fatal overdose

In addition to heroin overdose, participants were asked whether they considered themselves to have ever accidentally overdosed on any other drug(s). A lifetime history of overdose on any other drug was reported by 23% of IDU in 2011. Of these participants, none reported overdosing on another drug in the last 12 months and no participant reported accidentally overdosing on another drug in the last month.

10.2 Calls to telephone help lines

Figure 47 presents the number of telephone calls to WA ADIS regarding heroin for each quarter from January 2000 to June 2011. The highest number of calls was in the first quarter of 2001 (n=516), following which there was a sharp decrease to the lowest number of calls in July-September 2002 (n=64). There was a subsequent increase in calls and then, since July-September 2006, the number of ADIS calls enquiring about heroin stabilised. In 2008/09, both increases and decreases occurred, particularly in the last quarter of 2008 when the highest number of calls (n=139) was recorded since 2004; conversely, in the first quarter of 2009, the lowest number of calls to ADIS regarding heroin (n=46) was recorded. Since the 2009/10 financial year, heroin-related calls have been stable, with little variation between the number of calls in each quarter.

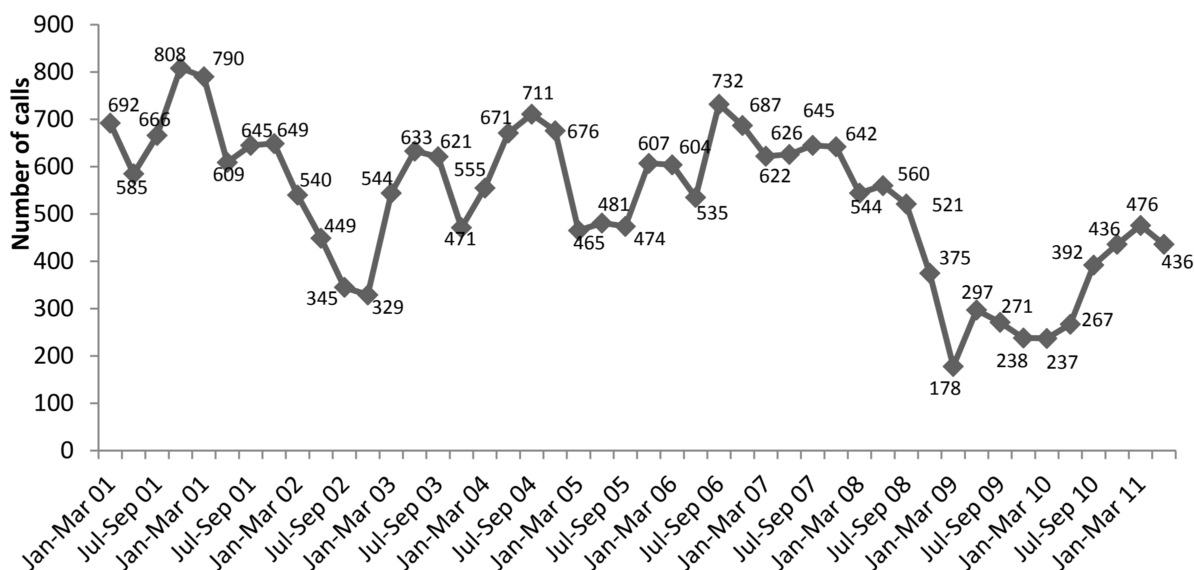
Figure 47: Number of enquiries to ADIS regarding heroin, Jan 2000-Jun 2011



Source: ADIS

Figure 48 presents the number of telephone calls to WA ADIS enquiring about amphetamines for each quarter from January 2001 to June 2011. It is evident that the number of calls regarding amphetamines has fluctuated over time. The highest number of calls was in the last quarter of 2001 (n=808) and the lowest number of calls was in the first quarter of 2009 (n=178). The latest data for the 2010/11 financial year showed signs of an overall increase in the number of calls in comparison to the 2009/10 financial year; however, the number of calls in the 2009/10 financial year still remains lower than numbers recorded prior to 2009.

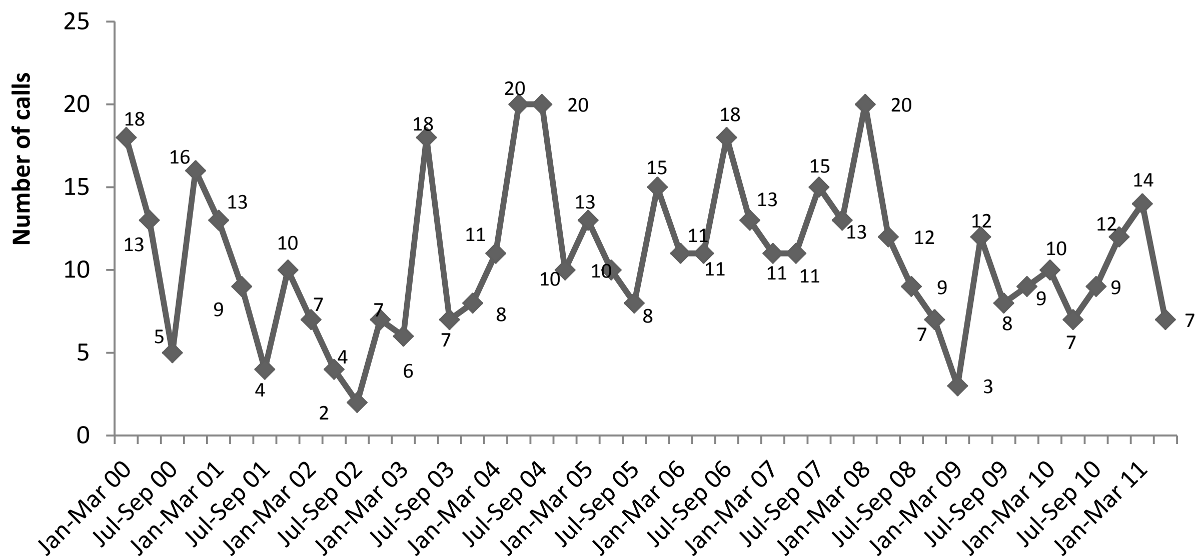
Figure 48: Number of enquiries to ADIS regarding amphetamines, Jan 2001-Jun 2011



Source: ADIS

Calls to WA ADIS concerning the use of cocaine for each quarter from January 2000 to June 2011 are shown in Figure 49. While there has been fluctuation in cocaine-related calls, the numbers remain low. The highest number of calls was in April-June 2004, July-September 2004 and April-June 2008 (n=20). The lowest number of calls was in July-September 2002 (n=2) and in January-March 2009 (n=3). In the 2010/11 financial year, cocaine-related calls accounted for less than 0.1% of total calls to ADIS.

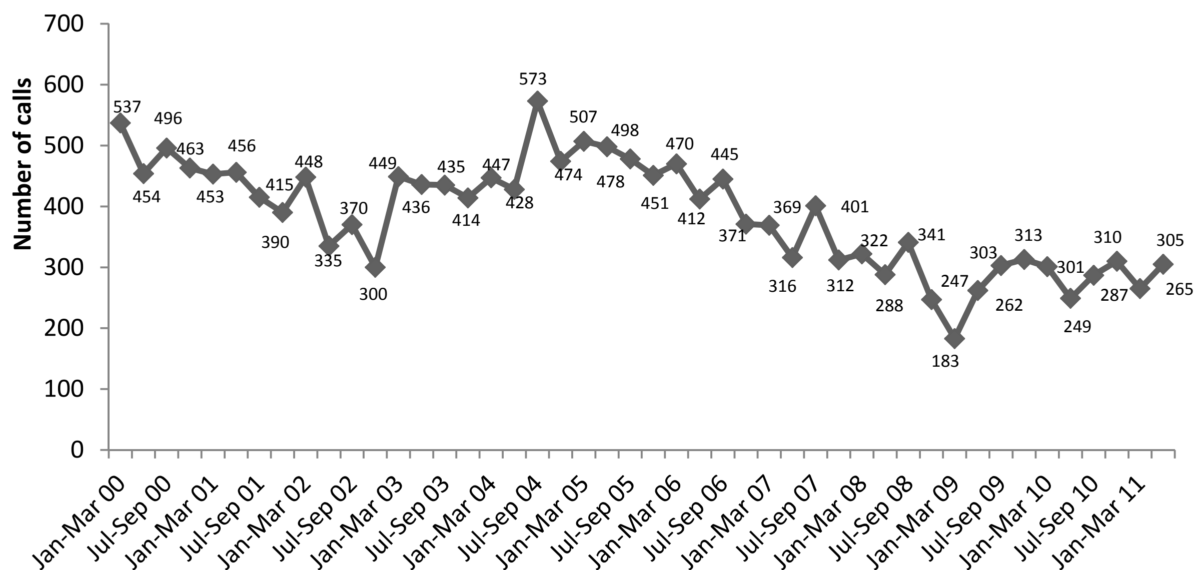
Figure 49: Number of enquiries to ADIS regarding cocaine, Jan 2000-Jul 2011



Source: ADIS

Figure 50 presents the number of cannabis-related calls received by ADIS for each quarter from January 2000 to June 2011. The highest number of calls was in July-September 2004 (n=573); following this, there has been an overall gradual decline in the number of calls regarding cannabis, with the lowest number of calls recorded in January-March 2009 (n=183). Since then, the number of cannabis-related calls has slightly increased again and has since been stable; however, this number still remains low compared to those reported prior to 2008, suggesting that the number of cannabis-related calls to ADIS has declined over time. In 2010/11, cannabis-related calls accounted for 10%-14% of total calls to ADIS.

Figure 50: Number of enquiries to ADIS regarding cannabis, Jan 2000-Jun 2011



Source: ADIS

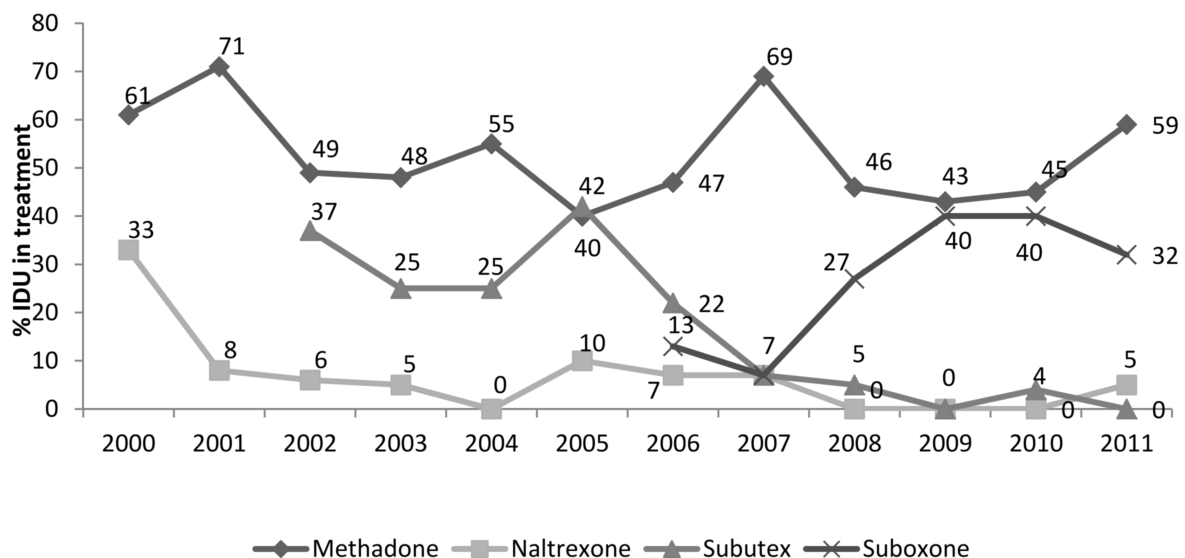
10.3 Drug treatment

10.3.1 WA IDRS sample

Pharmacotherapy treatment

In 2011, 59% (n=41) of participants reported currently being in drug treatment, which was comparable to 47% reported in 2010. Of those in current drug treatment, 95% (n=39) were receiving pharmacotherapies for opioid dependence. Methadone remained the most common pharmacotherapy and was reported by 59% of those in current treatment, followed by Suboxone reported by 32% and Naltrexone reported by 5% of those in treatment. The proportion of IDU in pharmacotherapy treatment for opioid dependence across IDRS surveys is displayed in Figure 51. It is evident that the proportion of participants reporting current methadone treatment has increased from 2010; however this was not a significant increase. The proportion reporting current Suboxone treatment slightly decreased from last year, again this was not a significant change. Caution is warranted in interpreting this figure as the number of participants recruited through pharmacies has decreased in recent years, which may impact on the data regarding pharmacotherapies. Only two respondents reported on recent Naltrexone treatment in 2011, compared to none in 2010. This small proportion may in part be due to the large proportion of the IDU sample that has been recruited through the needle exchange over the past four years.

Figure 51: Proportion of participants reporting current pharmacotherapy, 2000-2011



Source: IDRS IDU interviews
Note: Suboxone was not reported prior to 2006

Of the total sample in 2011, 32% reported licit use of methadone in the last six months, with a median of 180 days used/in treatment (range=48-180 days), which was comparable to 26% in 2010 with a median of 180 days used. Only two participants reported licit use of physeptone in the last six months with a median of 5 days used/in treatment, compared to one participant in 2010. Three participants reported licit use of Subutex in the last six months with a median of 20 days used/in treatment (range=6-24); five participants had used licit Subutex in 2010, which was on a median of daily use. Licit use of Suboxone was reported by 19%, with a median of 90 days used/in treatment (range=14-180 days), which was comparable to 20% with a median of 180 days in 2010.

One KE reported an increase in pharmaceutical treatment among IDU and one KE reported that there were more treatment options available in the past year. In addition, one KE reported the difficulty in treating methamphetamine-dependent individuals, largely because there is no clear treatment, or agonist drug, currently available. One KE also reported that many methamphetamine-addicted individuals are fearful of seeking treatment.

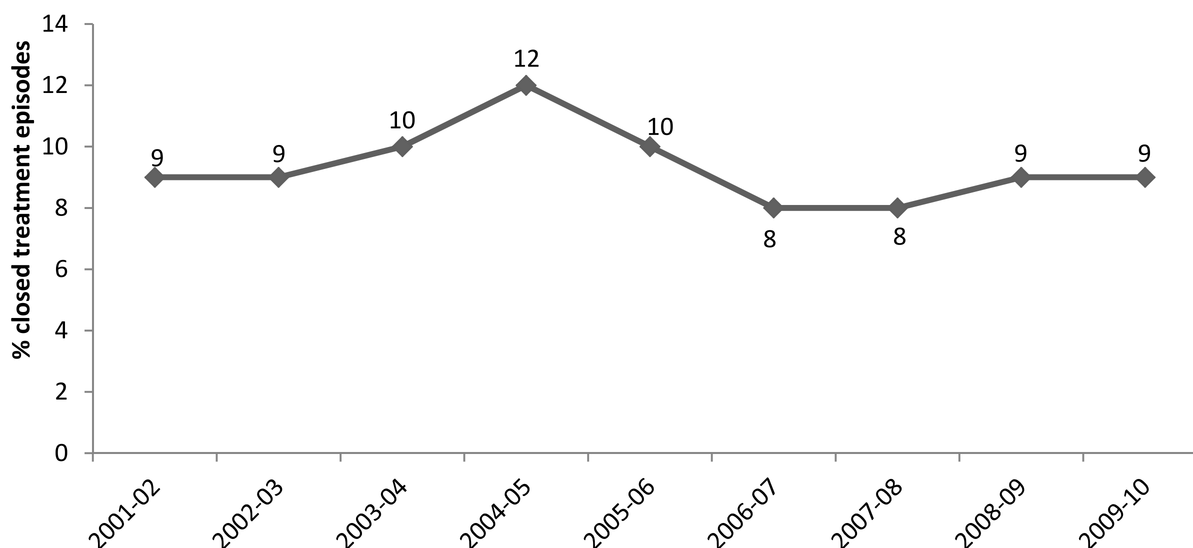
10.3.2 Drug treatment in WA

Throughout Australia, 671 government-funded alcohol and other drug treatment agencies supplied data for the 2009-10 audit of treatment services. Of these, 52 were in Western Australia, and 42 of these were non-government agencies. Data from the Drug and Alcohol Office showed that in WA in 2009/10, there were 17,187 closed treatment episodes in WA (based on the date of commencement). The large majority (93%) of closed treatment episodes in the state involved clients seeking treatment for their own drug use. The remaining 7% involved clients seeking treatment in relation to another person's alcohol or other drug use. Treatment episodes by principal drug of concern, where relevant to the IDRS, are presented below.

Heroin

Figure 52 presents the percentage of closed treatment episodes for heroin in WA from 2001/02 to 2009/10. Following a peak in 2004/05 (12%), the percentage of closed treatment episodes where heroin was the principal drug of concern steadily decreased until it stabilised in 2006/2007 and 2007/08 to the lowest percentage reported (8%); since then, there has been a slight increase to 9% both 2008/09 and 2009/10. In 2009/10, heroin represented 9% of closed treatment episodes in WA compared to 10% nationally.

Figure 52: Percentage of closed treatment episodes where heroin was the principal drug of concern, WA, 2001/02-2009/10



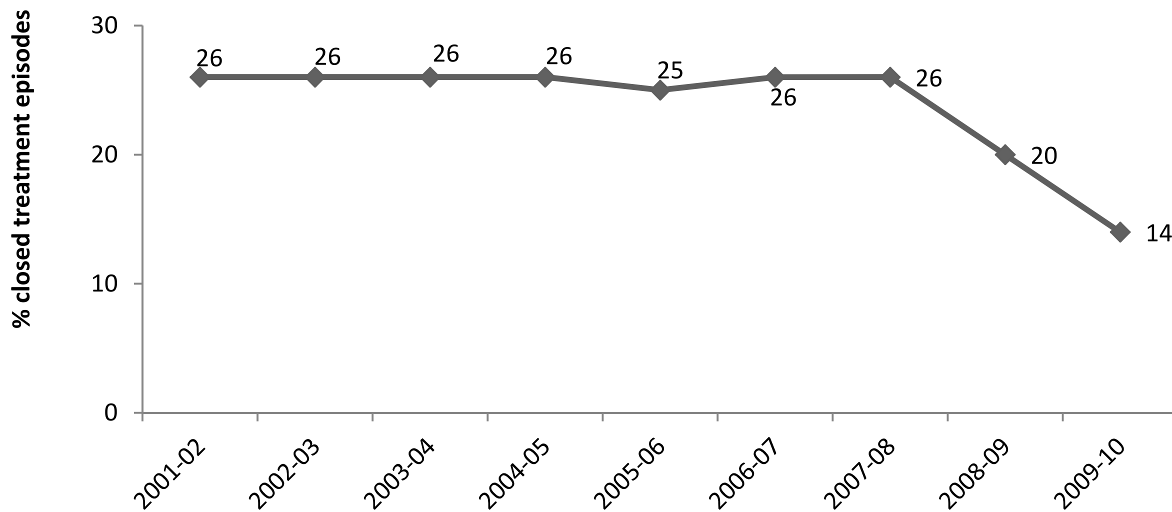
Source: 2009/10 National Minimum Data Set, AIHW 2011b and WA Drug and Alcohol Office

Amphetamines

Figure 53 presents the percentage of closed treatment episodes for amphetamines in WA from 2001/02 to 2009/10. It is evident that up until 2008/09, the percentage attributed to amphetamines has shown little variation across time, accounting for around one-quarter of closed episodes in each year. However, since 2007/08, the proportions accounting for

closed episodes each year where amphetamines was the principal drug of concern have been steadily declining, with the most recent financial year representing the lowest proportion observed since 2001/02. In 2009/10, amphetamines represented 14% of closed treatment episodes in WA compared to 7% nationally.

Figure 53: Percentage of closed treatment episodes where amphetamines was the principal drug of concern, WA, 2001/02-2009/10

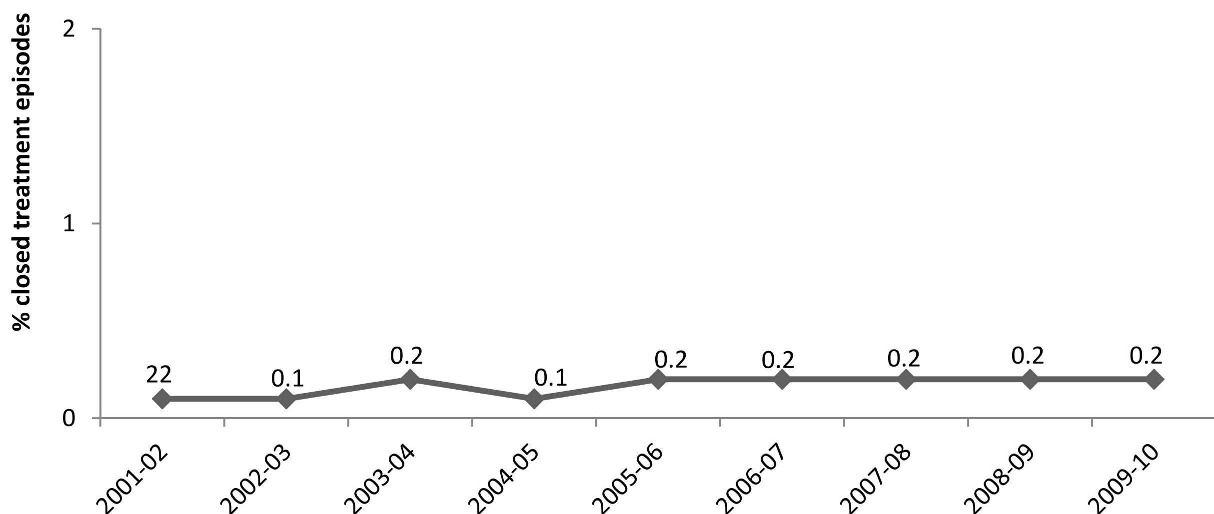


Source: 2009/10 National Minimum Data Set, AIHW 2011b and WA Drug and Alcohol Office

Cocaine

Figure 54 presents the percentage of closed treatment episodes for cocaine in WA from 2001/02 to 2009/10. It is evident that cocaine-related treatment episodes have been consistently below 1% over time.

Figure 54: Percentage of closed treatment episodes where cocaine was the principle drug of concern, WA 2001/02-2009/10

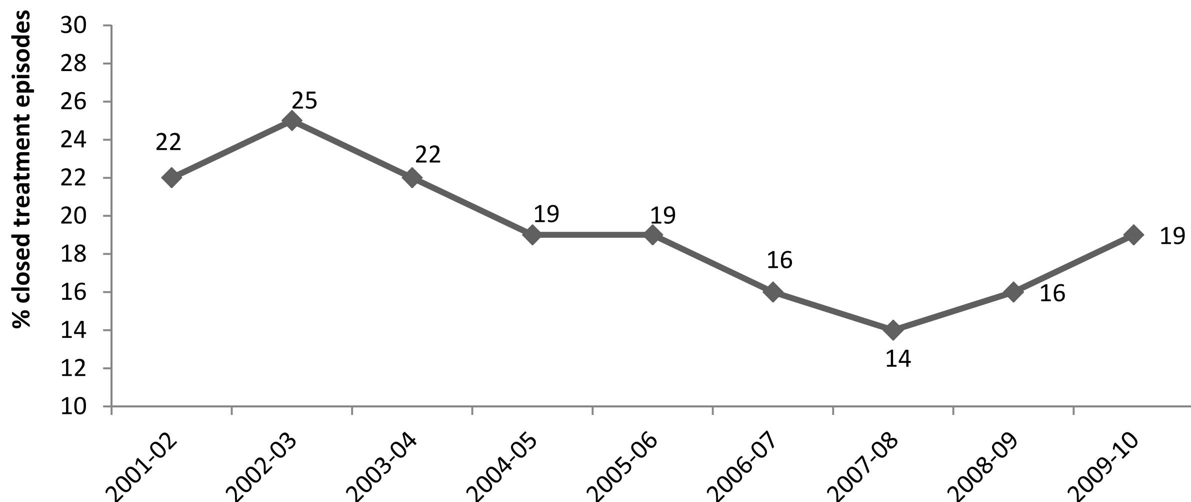


Source: **2009/10 National Minimum Data Set, AIHW 2011b, and WA Drug and Alcohol Office**

Cannabis

Figure 55 presents the percentage of closed treatment episodes for cannabis in WA from 2001/02 to 2009/10. Following an initial increase from 2001/02 to 2002/03, the percentage of closed episodes attributed to cannabis has steadily decreased over time. However, a steady increase has been observed since 2007/08 until the most recent financial year. In 2008/09, cannabis represented 19%% of closed treatment episodes in WA compared to 23% nationally.

Figure 55: Percentage of closed treatment episodes where cannabis was the principal drug of concern, WA, 2001/02 -2009/10

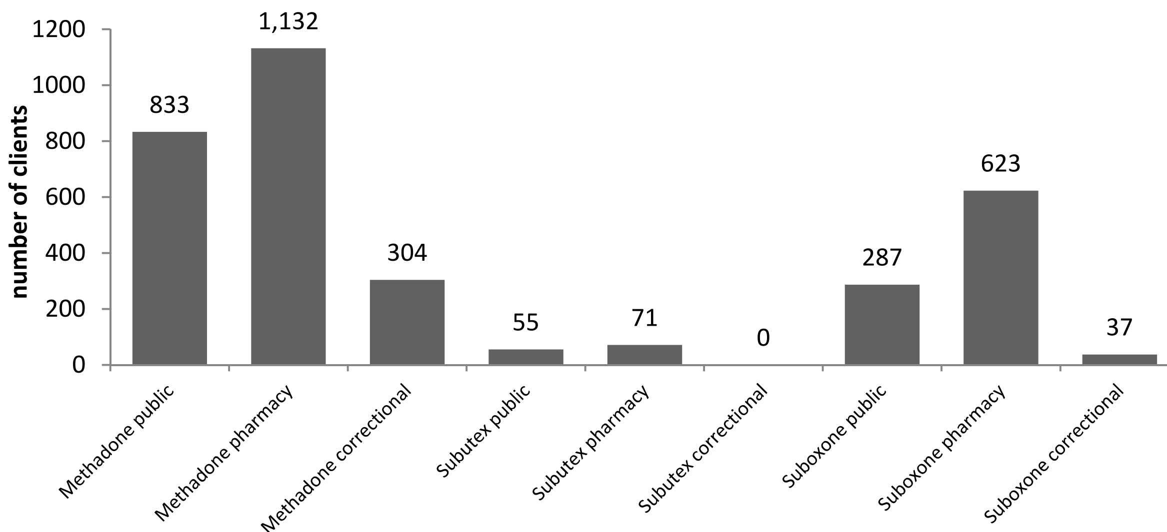


Source: 2009/10 National Minimum Data Set, AIHW 2011b and WA Drug and Alcohol Office

Pharmacotherapy treatment

With regards to pharmacotherapy treatment, the National Opioid Pharmacotherapy Statistics Annual Data Collection conducted in 2010 provides information about clients accessing this form of treatment. Figure 56 presents the estimated number of pharmacotherapy clients by pharmacotherapy drug type and dosing site in WA. It is evident that the most common form of pharmacotherapy treatment in WA is methadone administered at a pharmacy (n=1,132). Following this is methadone administered at a public clinic (n=833), then Suboxone administered in a pharmacy (n=623), then methadone administered at a correctional facility (n=304) and Suboxone administered at a public clinic (n=287). Small numbers were reported for Subutex administered in a pharmacy (n=71), in public (n=55) and for Suboxone correctional (n=37).

Figure 56: Estimated number of pharmacotherapy clients by pharmacotherapy drug type and dosing site, WA, 2010



Source: National Opioid Pharmacotherapy Statistics annual data collection (2011c), AIHW

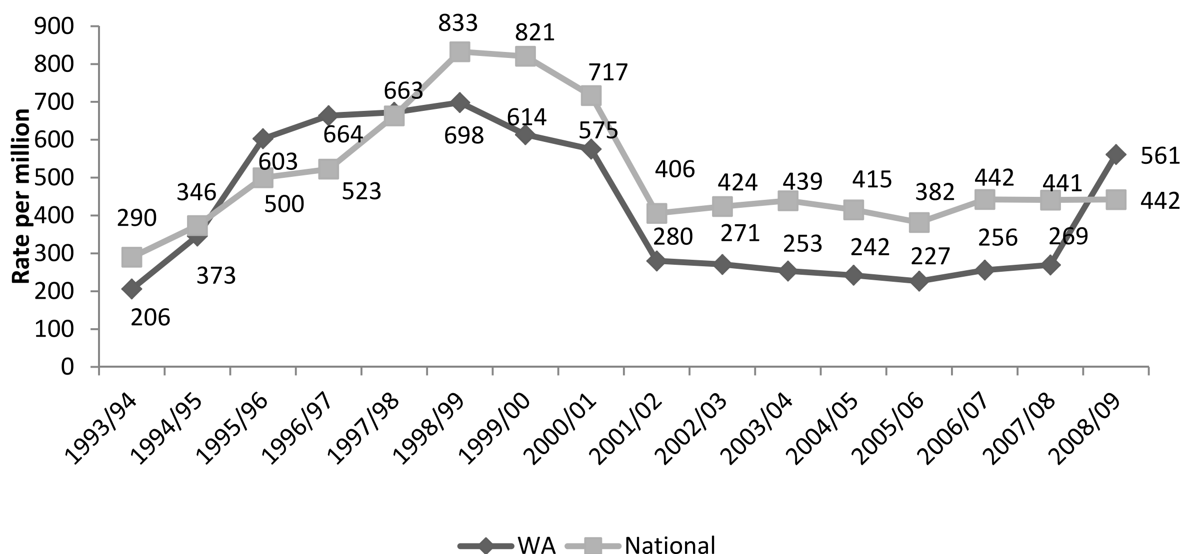
10.4 Hospital admissions

At the time of printing, hospital admissions data from the AIHW for the 2009/10 period was not available.

10.4.1 Opioids

The rate per million persons aged 15-54 years of hospital admissions in which the principle diagnosis was opioid related is shown in Figure 57. A principle diagnosis that is opioid-related is recorded where opioids are established (after discharge) to be chiefly responsible for occasioning the person's episode of care. It is evident that WA has followed a similar trend to the national rate, with the exception of 1995/96 (n=602) to 1996/97 (663) when WA overtook national rates. National rates peaked in 1998/99 (832) to 1999/00 (820) and decreased sharply in 2001/02 (405). Since this time, both WA and national rates stabilised until the most recent data collection year when WA rates dramatically increased.

Figure 57: Rate per million persons of principle opioid-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94- 2008/09

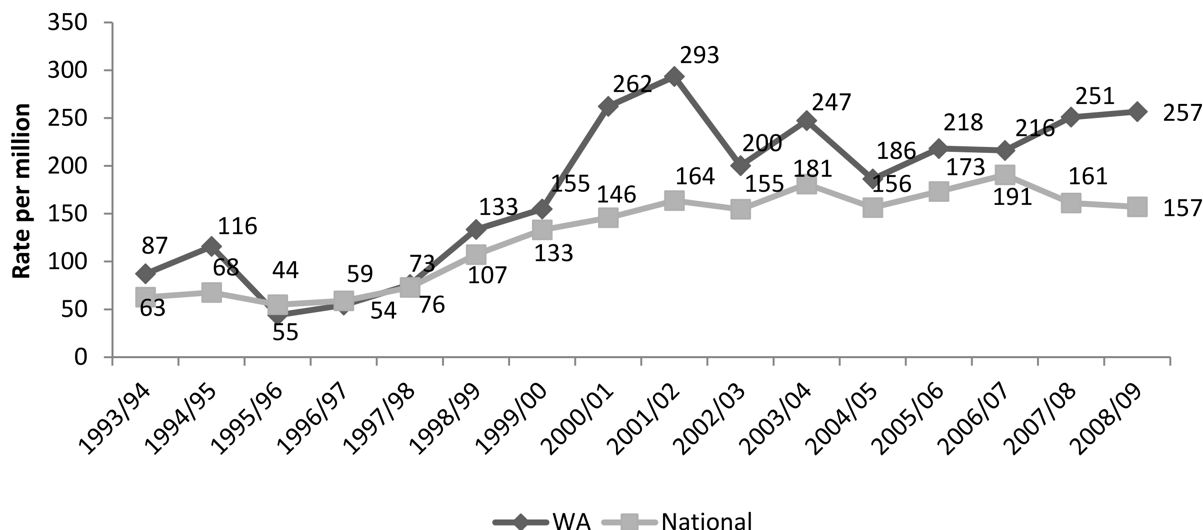


Source: AIHW, 2011b

10.4.2 Amphetamines

The rate per million persons aged 15-54 years of hospital admissions in which the principle diagnosis was amphetamine related is shown in Figure 58. While national rates have followed a steady, increasing trend over time, rates for WA have fluctuated. WA rates have consistently been higher than national rates with the exception of 1995/96 (44 vs. 55) to 1996/97 (54 vs. 59). WA rates increased from this time to peak in 2001/02 (293). Since this time, WA rates have decreased and showed some stability from 2004/05 to 2006/07. Increases have been observed in the most recent two financial years with WA hospital admission rates increasing and national hospital admissions rates decreasing.

Figure 58: Rate per million persons of principle amphetamine-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94-2008/09

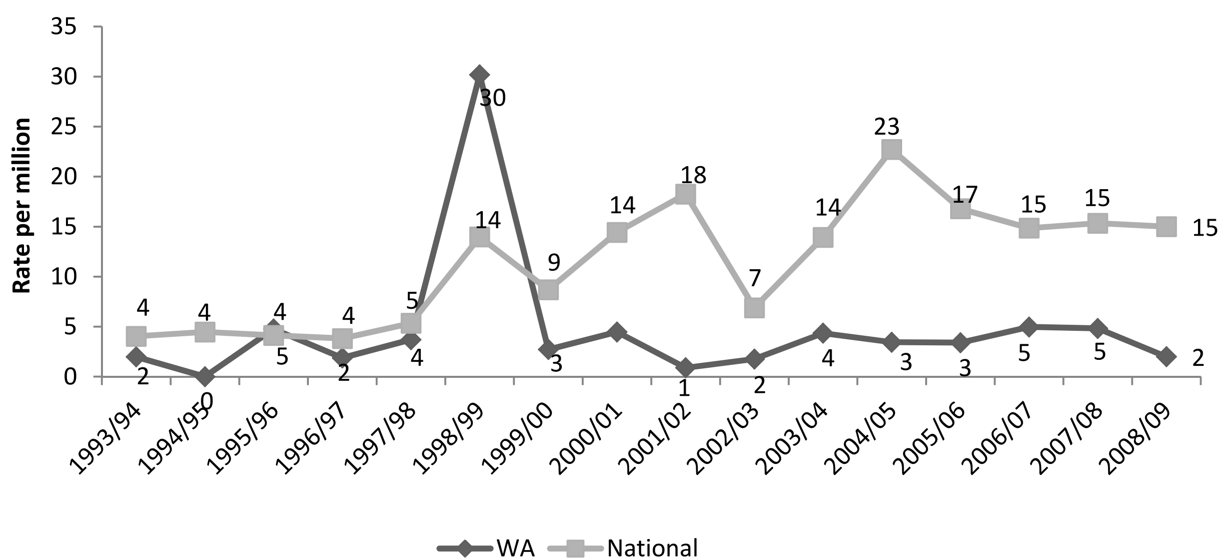


Source: AIHW, 2011b

10.4.3 Cocaine

The rate per million persons aged 15-54 years of hospital admissions in which the principle diagnosis was cocaine related is shown in Figure 59. WA rates have been consistently low across time, with the exception of 1998/99 when the rate peaked at 30. National rates have fluctuated across time and have been consistently higher than WA rates, with the exception of the WA peak in 1998/99. In recent data collection, both WA and national rates have been stable.

Figure 59: Rate per million persons of principle cocaine-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94-2008/09

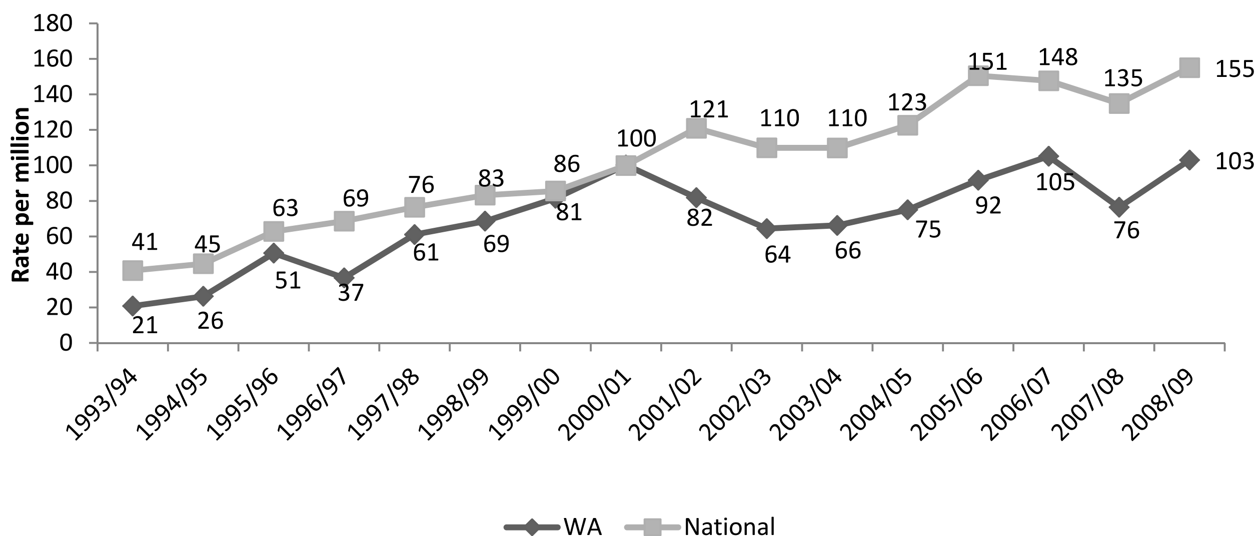


Source: AIHW, 2011b

10.4.4 Cannabis

The rate per million persons aged 15-54 years of hospital admissions in which the principal diagnosis was cannabis related is shown in Figure 60. Both national and WA rates have shown an increasing trend over time, with national rates consistently higher than those for WA.

Figure 60: Rate per million persons of principle cannabis-related hospital admissions among people aged 15-54 years, WA and nationally, 1993/94 -2007/08



Source: AIHW, 2011b

10.5 Injecting risk behaviours

10.5.1 Access to needles and syringes

For the first time in 2011, IDRS participants were asked to report on the frequency of injecting and frequency of obtaining needles and syringes over the two week preceding interview. Of these participants (n=64), the average number of times WA IDU reported injecting over preceding two weeks was 12 times (range 0-70 times), which is on average almost once a day. The average number of times participants obtained needles and syringes over the two weeks preceding interview was approximately four times (range 0-100) and the number of needles and syringes obtained in total over that two week period was 49 on average (range 0- 500).

In 2011, participants were also asked for the first time to report how many of those obtained needles and syringes they sold or gave away over that two week period, with an average of 23 needles and syringes reported to be sold or given away by IDU reporting. Of these participants, 11% (n=7) reported they had trouble obtaining or getting access to needles and syringes during that two week reported period.

10.5.2 Sharing of needles by IDU participants

Participants were asked from what sources they obtained their needles in the last six months (more than one response was allowed). The majority (80%) reported obtaining needles from a NSP; chemist was reported by 53%, 30% reported from friends, 11% reported from their dealer, and 3% reported from an outreach/peer worker. The high proportion of respondents reporting NSP as the main location to source needles is most likely due to the large proportion of the IDRS sample recruited through NSP. NSP was also the most common source of needles/syringes in the last month in the NSP Survey in WA, reported by 84%

(NCHECR, 2011). Proportions in the NSP survey that reported obtaining needles/syringes from a chemist/pharmacy or from a friend/dealer were greater than the 2009 IDRS sample; 26% and 15% respectively.

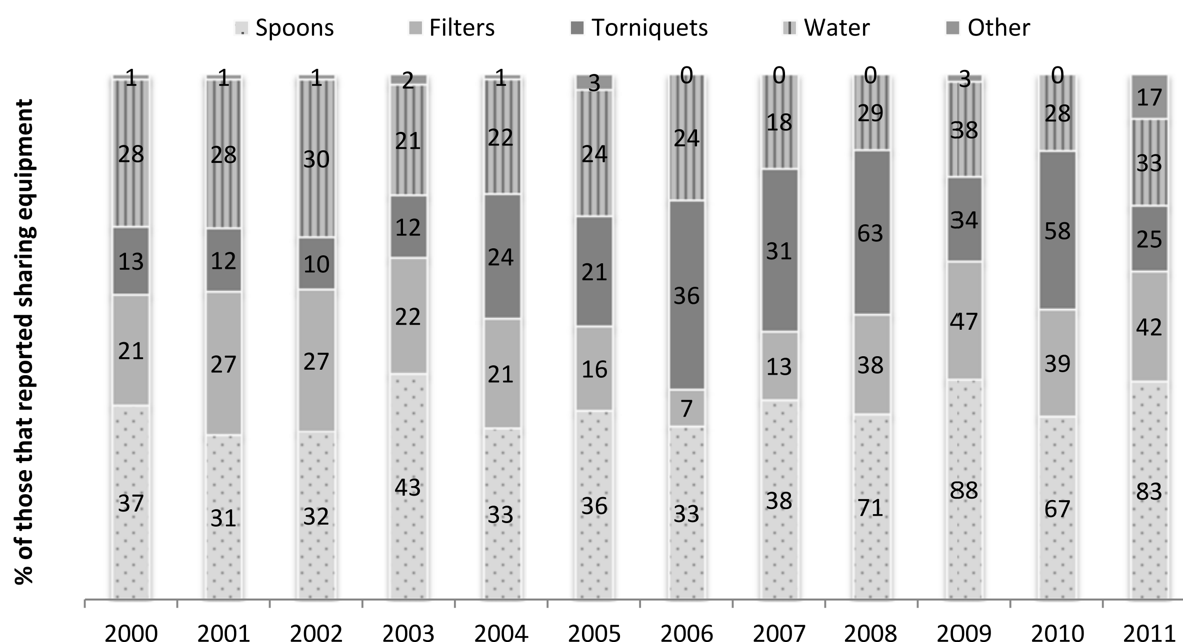
With regard to sharing needles, the vast majority (93%) reported that they had not used a needle after someone else in the last month. Of those that did (n=5), one participant reported using a needle once, two participants reported using a needle two times after someone else, one participant reported three to five times after someone else and one participant reported doing so more than 10 times in the last month. Of those who reported using a needle after someone else, all (n=5) reported only one person had used the needle before them. The most common people to use a needle before were a regular sex partner (n=3) and a close friend (n=2).

In 2011, 9% of IDU reported that someone else had used a needle after them in the last month; which was comparable to 16% in 2010. All participants were asked how many times in the last month they had re-used their own needles and 57% reported never. Re-use of own needle once was reported by 20%, twice by 37%, three to five times by 27%, six to 10 times by 10%, and more than 10 times by 7%.

10.5.2 Sharing of other injecting equipment

In 2011, participants were asked if they had used injecting equipment after someone else in the last month and almost one-fifth (17%) of the sample reported that they had, which was comparable to 36% in 2010. Of these participants, 83% reported using spoons/mixing containers, 42% reported using filters, 25% reported using tourniquets and 33% reported using water. Figure 61 presents the proportions sharing each type of equipment among those that reported sharing equipment across IDRS surveys.

Figure 61: Proportion of IDU reporting sharing each type of injecting equipment among those that shared equipment, 2000-2011

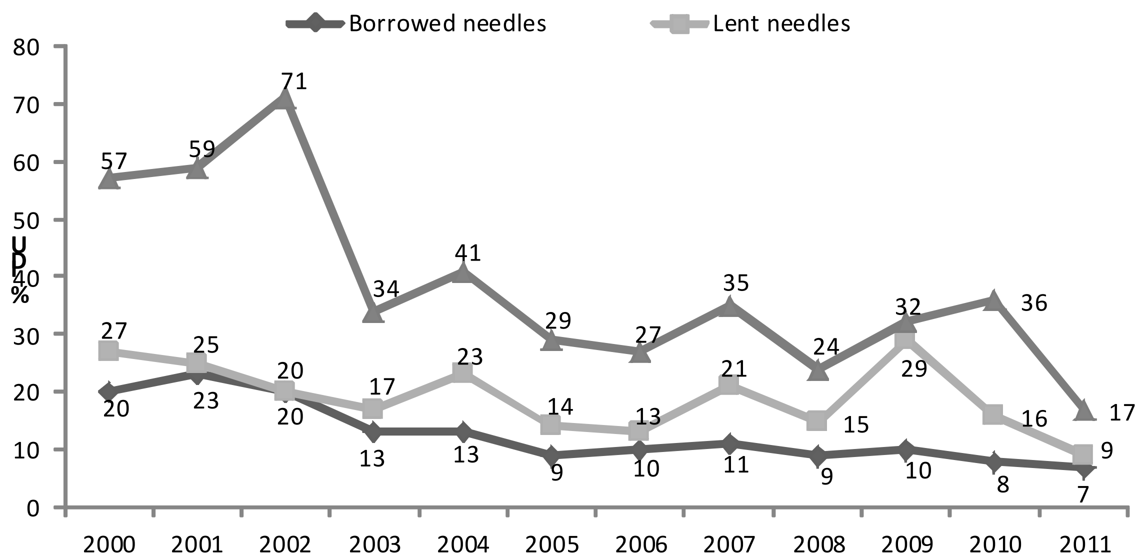


Source: IDRS IDU interviews

Figure 62 presents the proportion of IDU across IDRS surveys that reported sharing needles and injecting equipment in the month before interview. Those that used a needle after someone else are referred to as 'borrowed needles' and those who had someone else use a needle after them are referred to as 'lent needles'. It is evident that proportions in both these

categories appear to have decreased since 2010; however these were not significant decreases. The proportion reporting borrowing a needle in the last month has remained relatively stable.

Figure 62: Proportion of IDU reporting sharing injecting equipment in the month preceding interview, 2000-2011



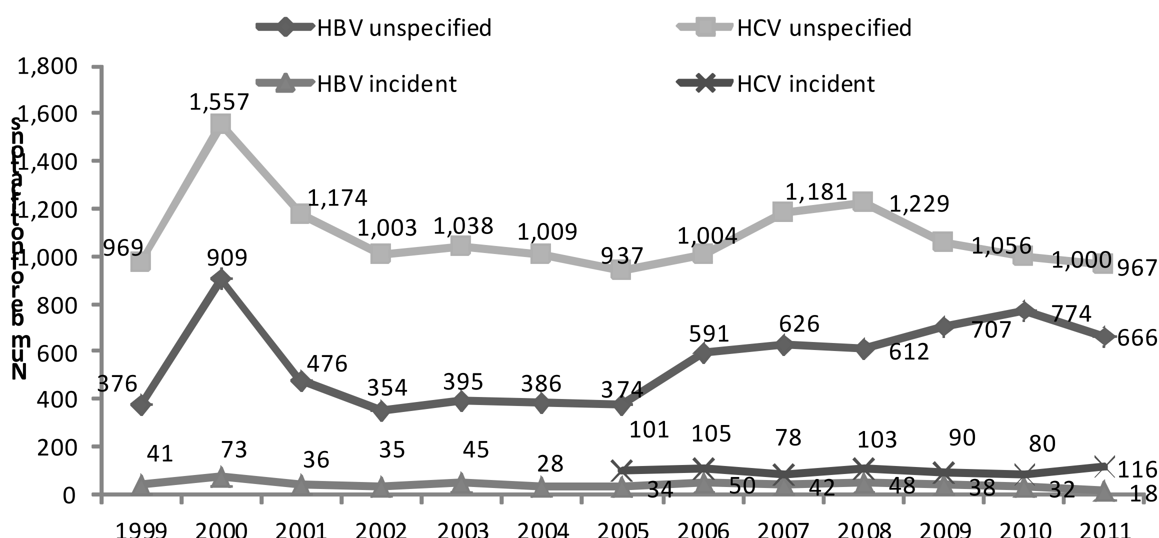
Source: IDRS IDU interviews

A number of KE from health care backgrounds reported an alarming increase in unsafe and poor injecting practices among IDU recently, with abscesses, endocarditis and skin infections from injection being more frequently treated in hospitals and treatment services. One KE reported that for IDU, access to clean needles and filters can be challenging both geographically (for those who live in the outer suburbs) and financially, since clean needles and filters are sometimes costly. Another KE reported on alarming pill injecting practices where IDU are sucking the coating off of pharmaceutical tablets and then grinding up the pills and injecting them. This emerging trend has implications for harm reduction strategies involving educating the individual users and their peer groups on safe injecting practices.

10.5.3 Blood-borne viral infections

Figure 63 presents' data from the National Notifiable Diseases Surveillance System (NNDSS) for cases of unspecified and incident HBV and HCV for WA from 1999 to 2011. Incident or newly acquired infections, and unspecified infections (i.e. where the timing of the disease acquisition is unknown) are presented. It is evident that unspecified cases far exceed incident cases for both types of BBVI. There was a peak in both HBV and HCV in 2000, following which cases decreased and stabilised. From 2005, there is some indication of an increase in notifications of both HBV and HCV; however, HCV appears to be decreasing since 2008, whereas there is some indication that HBV has been gradually increasing since 2005. In 2011, the number of HCV unspecified cases decreased slightly from 1,000 in 2010 to 967 in 2011, and the number of HBV unspecified cases also decreased from 774 in 2010 to 666 in 2011. However, fluctuations in unspecified cases are more likely the result of a push for people to get tested. The number of HBV (n=18) and HCV (n=116) incident cases in 2011 have remained relatively stable over time.

Figure 63: Total notifications for unspecified and incident HBV and HCV infection, WA, 1999-2011

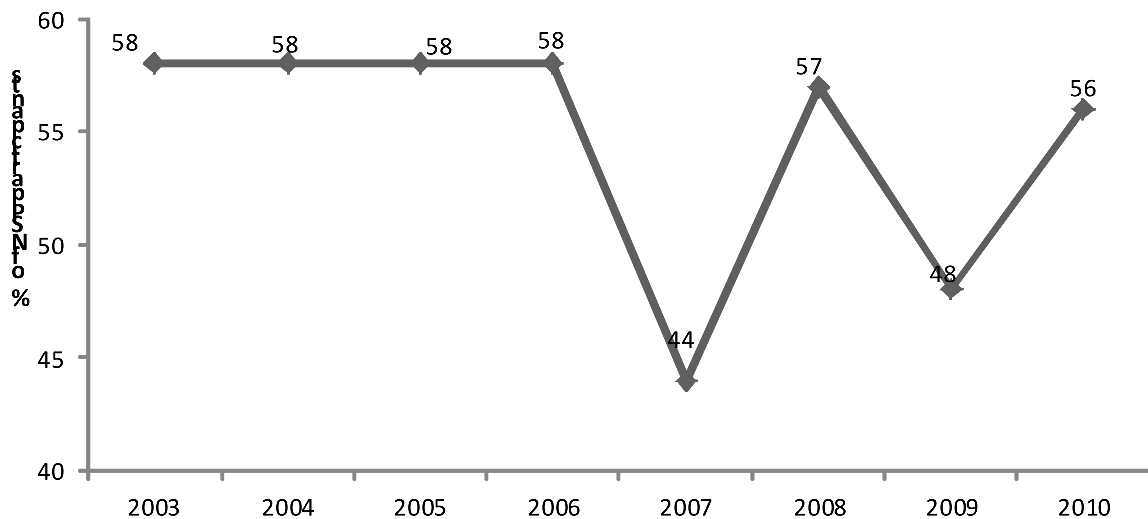


Source: Communicable Diseases Network – Australia – NNDSS[1]
Note: Data for HCV incident for WA was not available prior to 2005

As part of the Australian Needle and Syringe Program Survey (ANSPS) all clients attending selected NSP sites across Australia during a specified two-week survey period are asked to complete a brief self-administered questionnaire and to provide a capillary blood sample for HIV and HCV antibody testing. Figure 64 presents the percentage of NSP participants in WA from 2003 to 2010 testing positive for HCV infection. It is evident that the proportion of NSP participants testing positive for HCV antibodies was stable at 58% from 2003 to 2006; since then it has fluctuated significantly, there was then a decrease in 2007 to 44% followed by an increase in 2008 to 57%, another decrease to 48% in 2009 and more recently another increase to 56% in 2010.

[1] There are several caveats to the NNDSS data that need to be considered. As no personal identifiers are collected, duplication in reporting may occur if patients move from one jurisdiction to another and are notified in both. In addition, notified cases are likely to represent only a proportion of the total number of cases that occur, and this proportion may vary between diseases, between jurisdictions, and over time.

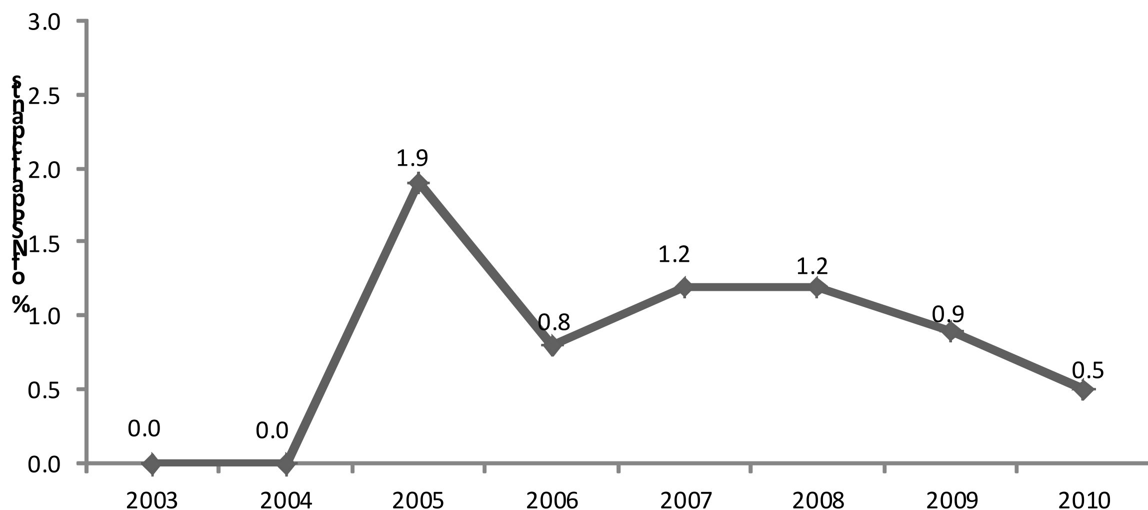
Figure 64: Percentage of NSP participants in WA testing positive for HCV antibody, 2003-2010



Source: **NCHECR, 2011**

Figure 65 presents human immunodeficiency virus (HIV) prevalence among NSP participants in WA from 2003 to 2009. Following two years of no reports of HIV, three NSP participants tested positive for HIV in 2005, one NSP participant each tested positive for HIV in 2006 and 2007, and two NSP participants were positive for HIV in 2008 and 2009. In 2010, one NSP participant tested positive for HIV.

Figure 65: Percentage of NSP participants in WA testing positive for HIV antibody, 2003-2010



Source: **NCHECR, 2011**

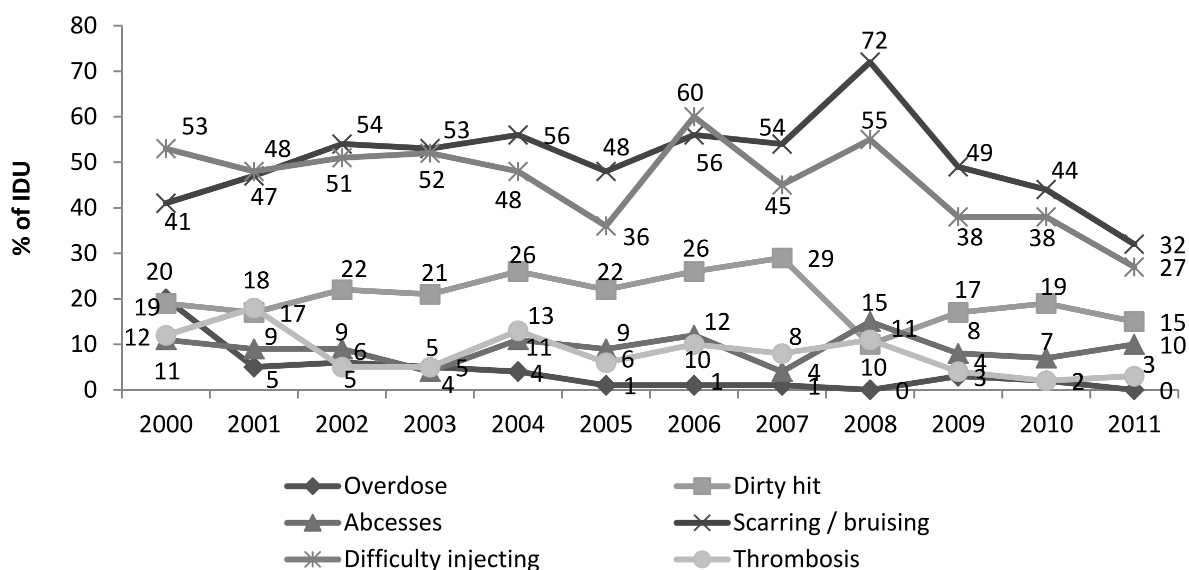
On KE from a health background reported an alarming increase in Hepatitis C positive diagnosis. However, this is most likely due to an increase in the number of IDU being tested for BBV. Therefore more individuals are gaining access to treatment early.

10.5.4 Injection-related health problems

Participants were asked about injection-related health problems they experienced in the month prior to interview. In 2011, no participants reported overdose in this time compared to two participants in 2010. Fifteen per cent of the 2011 sample reported experiencing a dirty hit, which was not significantly different to the 19% in 2010. The most commonly reported injection problem remained prominent scarring/bruising reported by 32% in 2011; this was comparable to 44% in 2010. This was followed by difficulty injecting, reported by 27% in 2011, which was comparable to 38% in 2010. Smaller proportions in 2011 reported abscesses/infections from injecting (10%) and thrombosis (3%).

Figure 66 presents the proportion of IDU who reported injection-related problems across IDRS surveys. It is evident that scarring/bruising has consistently been the most commonly reported problem (with the exception of 2006) and increased to its highest level in 2008; it has since been consistently declining with 2011 representing the lowest proportion reported since 2000. Difficulty injecting has consistently been the second most common problem (with the exception of 2006), however this also appears to have steadily declined in proportions reporting since 2008. Reports of a dirty hit had been stable across survey years, but decreased to the lowest proportion recorded in 2008 and has since increased to rates more comparable to previous years' samples in 2011.

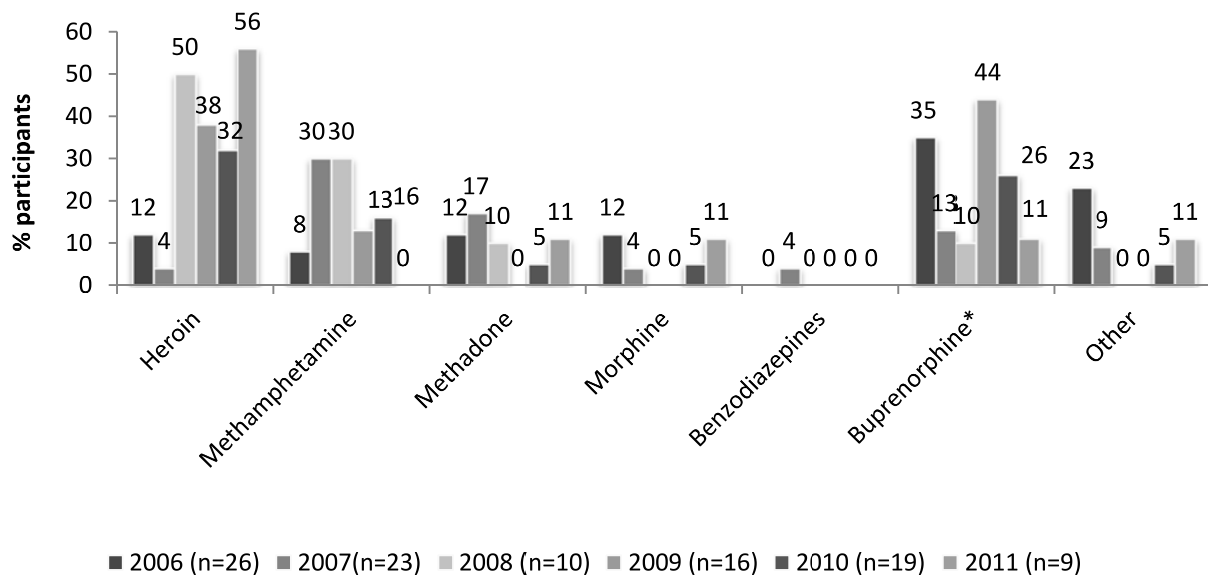
Figure 66: Proportion of IDU reporting injection-related problems in past month, by problem type, 2000-2011



Source: IDRS IDU interviews

Of the 9 participants in 2011 that reported experiencing a dirty hit, five each nominated heroin as the main drug while one each nominated methadone, morphine, Suboxone and 'other'. Figure 67 presents the main drugs nominated by participants who reported a dirty hit across IDRS surveys.

Figure 67: Main drug causing dirty hit of those that reported a dirty hit in last month, 2005-2011



Source: **IDRS IDU interviews**
* Buprenorphine includes both Subutex and Suboxone

10.6 Mental and physical health problems and psychological distress

10.6.1 Self-reported mental health problems

In 2011, the IDRS included items regarding self-reported experience of mental health problems and health service utilisation for such problems, including obtaining prescription medications. It is important to note that the following data refer to participants' perception of their mental health and were not confirmed by a formal diagnosis (although the participant may have received such a diagnosis from a health professional in the course of treatment).

In 2011, 44% of IDU reported experiencing a mental health problem in the last six months, which was not significantly different to the 51% in 2010. As in previous years, the most commonly reported mental health problems were depression (70%, n=19) followed by anxiety (30%, n=8). Five participants each reported panic and any personality disorder, three each reported paranoia, OCD, schizophrenia and phobias, two participants reported other psychosis (not drug induced) and one each reported panic, personality disorder and drug-induced psychosis.

Of those reporting a mental health problem (n=27), 54% reported attending a professional in relation to the problem. These participants (n=14) were asked about prescription medications and two reported taking no medication. Of the remaining participants (n=12), 58% reported taking antipsychotics of which the most common were Seroquel (quetiapine) (n=6) and Zyprexa (olanzapine) (n=1). Seven participants also reported taking benzodiazepines (58%); the most common was Valium (diazepam) (n=5), Serepax (oxazepam) and Xanax (alprazolam) (n=1 each). Of those prescribed medication for their mental health problem, six participants reported taking antidepressants with the most common type being Avanza (mirtazapine) (n=2) and Pristiq (desvenlafaxine).

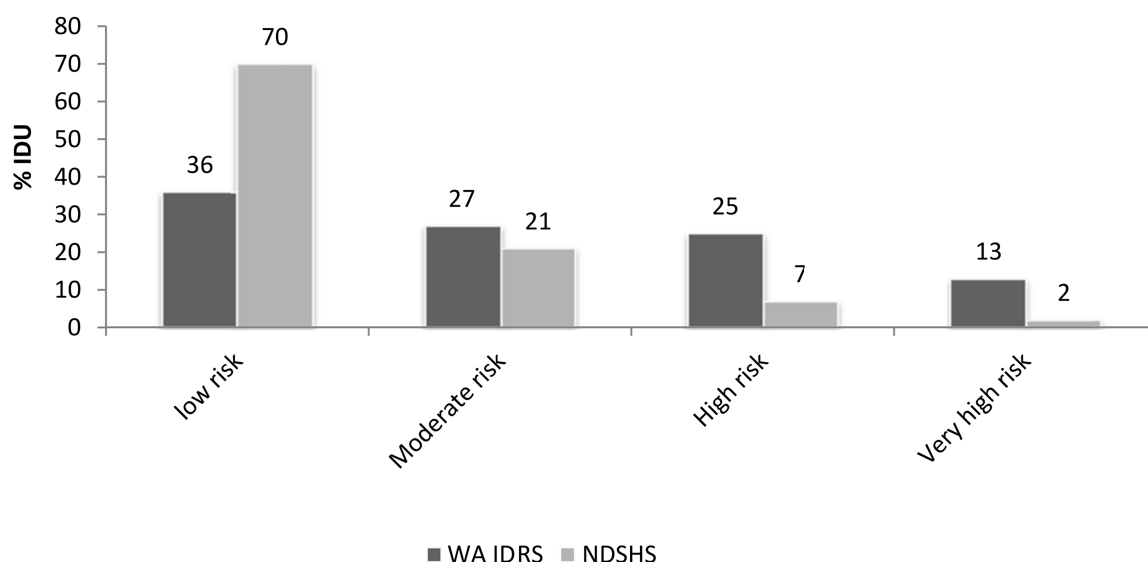
Numerous KE reported a large proportion of IDU have mental health and behavioural issues, with one KE reporting that depression and anxiety are the most common mental health problems by IDU, which reflects IDRS findings. Three KE reported an increase in mental health problems among methamphetamine users, with problems observed to be severe and increasingly more aggressive.

10.6.2 The K10 psychological distress scale

The Kessler Psychological Distress Scale or K10 (Kessler & Mroczek, 1994) was designed as a screening tool for assessing psychological distress. It is comprised of 10 items measuring the level of anxiety and depressive symptoms a person may have experienced during the previous four weeks. A five-point Likert scale is used to measure responses from all of the time to none of the time with a maximum possible score of 50. The K10 can be scored according to four distress categories: low=10-15, moderate=16-21, high=22-29, and very high=30-50. The K10 has been shown to have sound psychometric properties and demonstrated validity in identifying anxiety and affective disorders, as assessed by the Composite International Diagnostic Interview or CIDI (Andrews and Slade, 2001).

In 2011, 56 participants completed the K10 and scores are presented by risk category in Figure 68. The median total score in 2011 was 17 (range=10-48). In 2011, 36% scored at low risk, 27% scored at moderate risk, 25% scored at high risk and 13% scored at very high risk.

Figure 68: Total K10 scores by risk category among IDU, WA 2011



Source: IDRS IDU interviews

K10 scores for IDU in 2011 can be compared to the general population using data from the 2010 NDSHS (AIHW, 2011a). Persons aged 18 years or older completed the K10 as part of the 2010 NDSHS. Low risk was obtained by 70%, moderate risk by 21%, high risk by 7% and very high risk by 2%. Thus, compared to the general population, IDU are substantially more likely to be at risk of psychological distress, with 47% scoring at high or very high risk compared to 10% of the general population scoring at these levels.

10.7 Driving risk behaviour

10.7.1 Driving and alcohol

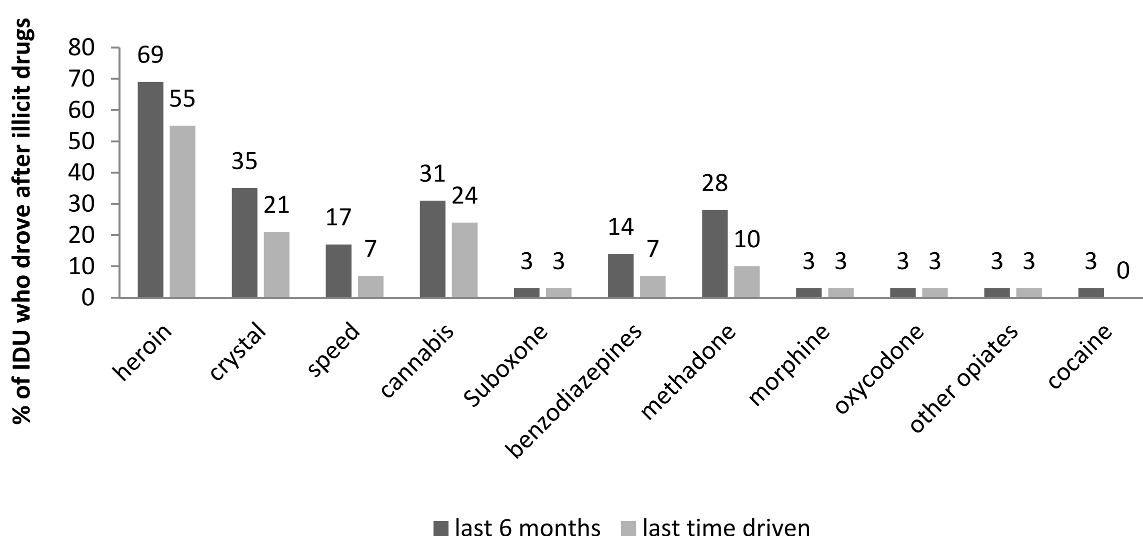
In 2011, 58% of the sample reported driving a vehicle in the six months preceding interview (54% in 2010). Of these participants, 13% reported driving under the influence of alcohol during that time, which was not significantly different to the 19% who did so in 2010. In 2011, three participants reported driving over the legal limit for blood alcohol content. The median number of times these participants had driven over the legal limit was five (range=1-10).

10.7.2 Driving and illicit drugs

In 2011, 76% of those who had driven a vehicle in the last six months reported driving after consuming illicit drugs (83% in 2010). The median number of times these participants had driven after taking drugs was 24 (range=1-180). Participants were asked how many minutes after consuming drugs they had driven on the last occasion, with a median of 5 minutes (range=1-120 minutes).

The most common drug after which these participants had driven after consuming was heroin, reported by 69%. This was followed by crystal (35%), cannabis (31%), methadone (28%), speed (17%) and benzodiazepines (14%). Smaller proportions reported Suboxone, morphine, oxycodone, other opiates and cocaine (3% each, n=1). Heroin was also the drug reported by the greatest proportion as the drug last driven under the influence of, reported by 55%. Cannabis was reported by 24%, crystal by 21%, methadone by 10% and speed and benzodiazepines each by 7%. Figure 69 presents the proportion of IDU that drove after consuming each drug type in the last six months and on the last driving occasion.

Figure 69: Driving under the influence of illicit drugs by drug type, WA, 2011



Source: IDRS IDU interviews

Participants who had driven after taking illicit drugs were asked how impaired they believed their driving ability to have been the last time they drove under the influence. The majority of participants (59%) reported it had had no impact. Following this, 31% reported that they were slightly impaired and smaller proportions reported that they were slightly improved and quite improved (7% and 3% respectively).

Four participants in 2011 reported they had been drug driving tested before: with all four reporting they had been tested once and no participants reporting being tested for drug driving more than once. All four of these participants commented on the most recent result of their last drug-driving test, with one reporting a negative result and the remaining three reporting a positive result. The three respondents who tested positive reported that opiates (n=2) and cannabis (n=1) were the drugs positively identified in the drug-driving test.

11. LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH DRUG USE

11.1 Reports of criminal activity among IDU participants

11.1.1 Criminal activity

In 2011, 22% of the sample reported they had been arrested in the last 12 months, which was not significantly different to the 31% who did so in 2010. Unlike recent years' samples when property crime was the most commonly reported reason for arrest, in 2011 the greatest proportion of those who had been arrested in the last 12 months was for use/possession (27%). This was followed by three participants reporting property crime, two participants each for fraud, driving offenses, drugs and driving and 'other offenses', and one each for alcohol and driving and violent crime.

Participants were asked what crimes they had engaged in during the last month (Table 19). The crime section is divided into four crimes: property crimes, dealing, fraud and crimes involving violence. In 2011, 30% of IDU reported involvement in any crime in the last six months; which was not significantly different to the 51% reporting any crime in 2010. As in previous years, the most common type of criminal activity was drug dealing, reported by 16 participants in 2011. Of those that reported dealing, seven participants reported engaging in this activity less than once a week, five participants reported more than once a week and three participants reported daily. Twelve participants reported engaging in property crime in the last month, with five reporting less than once a week, two reporting once a week, four reporting more than once a week but less than daily, and one reporting daily. Three participants reported engaging in violent crime, with two participants reporting doing so less than once a week and one participant reporting doing so once a week. One participant reported engaging in fraud, and this one participant reported doing so less than once a week.

Table 19: Criminal activity as reported by IDU participants, 2010-2011

Criminal activity (%)	2010 N=100	2011 N=70
Criminal activity in last month:		
Dealing	37	22
Property crime	25	18
Fraud	3	2
Violent crime	3	5
Any crime	51	30
Arrested in last 12 months	31	22

Source: IDRS IDU interviews

KE reports of criminal activity varied from some to all IDU being involved in criminal activity of some kind. One KE observed an increase in methamphetamine manufacturing among regular methamphetamine users.

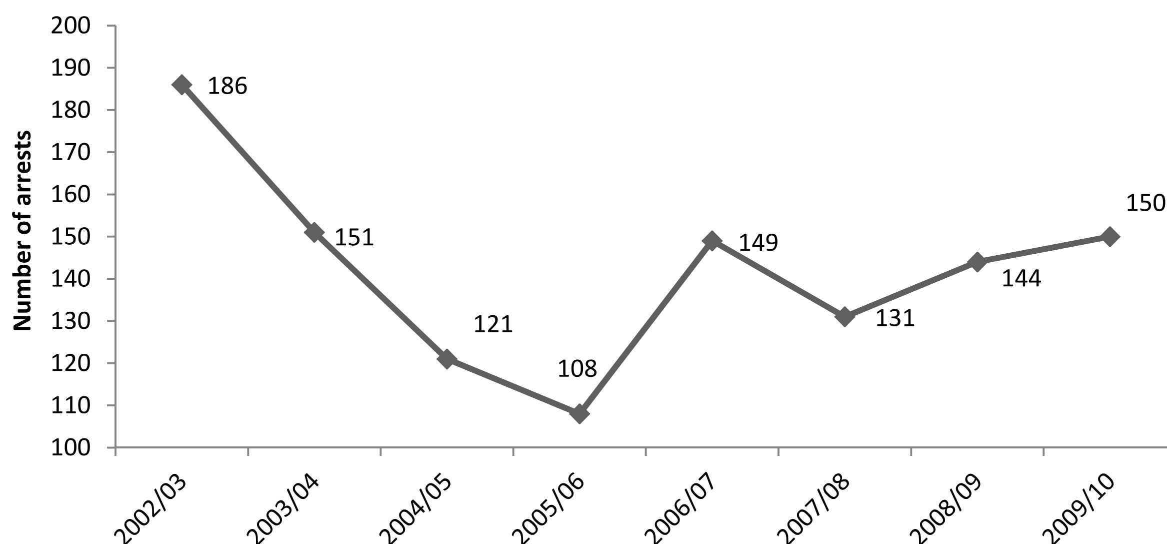
11.2 Arrests

11.2.1 Heroin

The number of heroin arrests made in WA by WAPS and AFP from 2002/03 to 2009/10 is shown in Figure 70. It is evident that the number of heroin arrests steadily decreased over time until 2006/07, which showed a sharp increase in arrests (n=149) followed by a decrease in 2007/08 (n=131), then a slight increase again in 2008/09 (n=144) and 2009/10

(n=150). Heroin arrests in WA for 2009/10 represented 5% of the national total, with the greatest proportion of heroin arrests occurring in Victoria (50%).

Figure 70: Number of heroin consumer/provider arrests, WA, 2002/03-2009/10

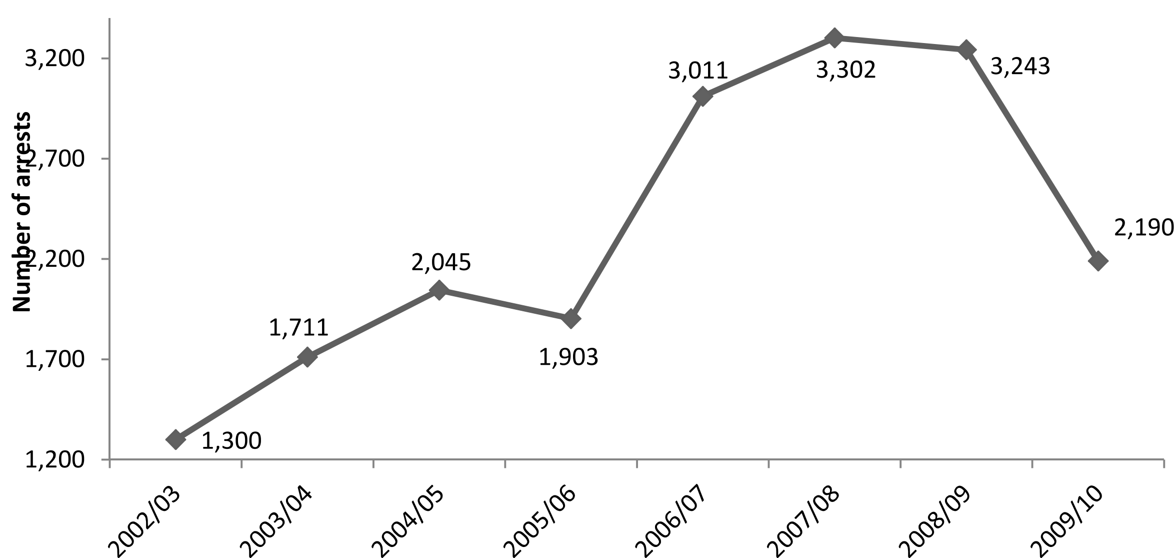


Source: **ACC**

11.2.2 ATS

The number of ATS arrests made in WA by WAPS and AFP from 2002/03 to 2009/10 is shown in Figure 71. It is evident that the number of ATS arrests have steadily increased until 2008/09, with the exception of a slight decrease from 2004/05 (n=2,045) to 2005/06 (n=1,903). Following this, there was an observed sharp decrease in 2009/10 (n=2,190). ATS arrests in WA for 2009/10 represented 16% of the national total, with the greatest proportion of ATS arrests occurring in NSW (29%).

Figure 71: Total (consumer and provider) Number of ATS arrests, WA, 2002/03-2009/10

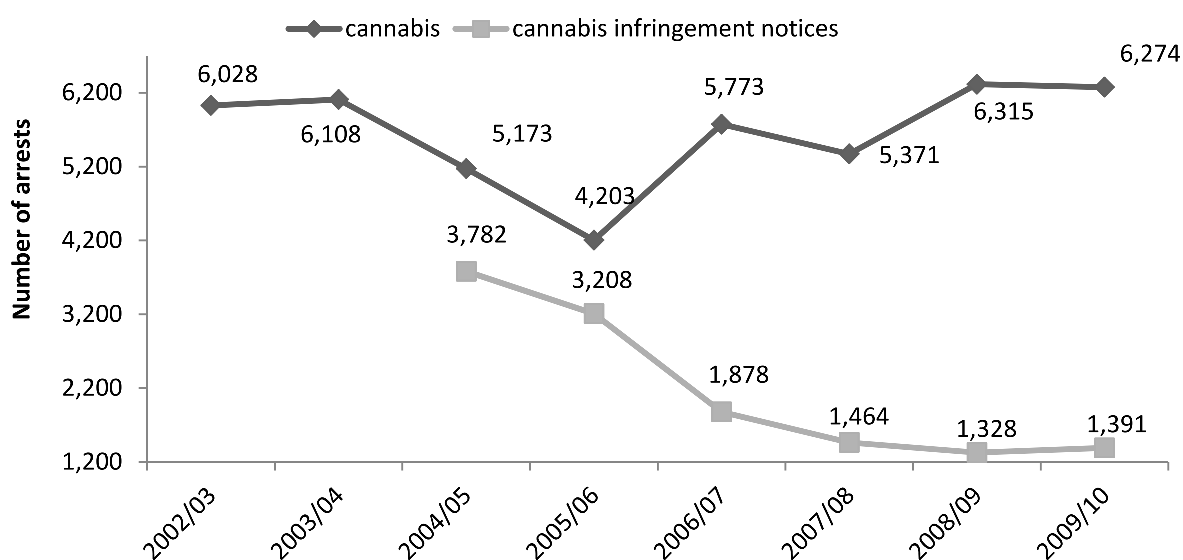


Source: **ACC**

11.2.3 Cannabis

The number of cannabis arrests made in WA by WAPS and AFP from 2002/03 to 2008/10 is shown in Figure 72. The number of cannabis arrests was initially stable then decreased until 2006/07 (n=5,773), which returned to numbers similar to those obtained in 2002/03 (n=6,028), following this, the number of cannabis arrests decreased in 2007/08 (n=5,371). In 2008/09, the number of cannabis arrests increased (n=6315), representing the greatest number of cannabis arrest recorded since 2002/03, since then the number of cannabis arrests has remained stable in 2009/10 (n= 6274). Cannabis infringement notices were introduced in March 2004 after the passage of the *Cannabis Control Act 2003* (WA), but their use has continued to decrease over time and they have effectively not been used since the election of the Barnett Liberal Government in October 2008, which eventually repealed the Act in 2010. Cannabis arrests in WA for 2009/10 represented 11% of the national total, with the greatest proportion of arrests occurring in Queensland (29%).

Figure 72: Number of cannabis consumer/provider arrests, WA, 2002/03-2009/10

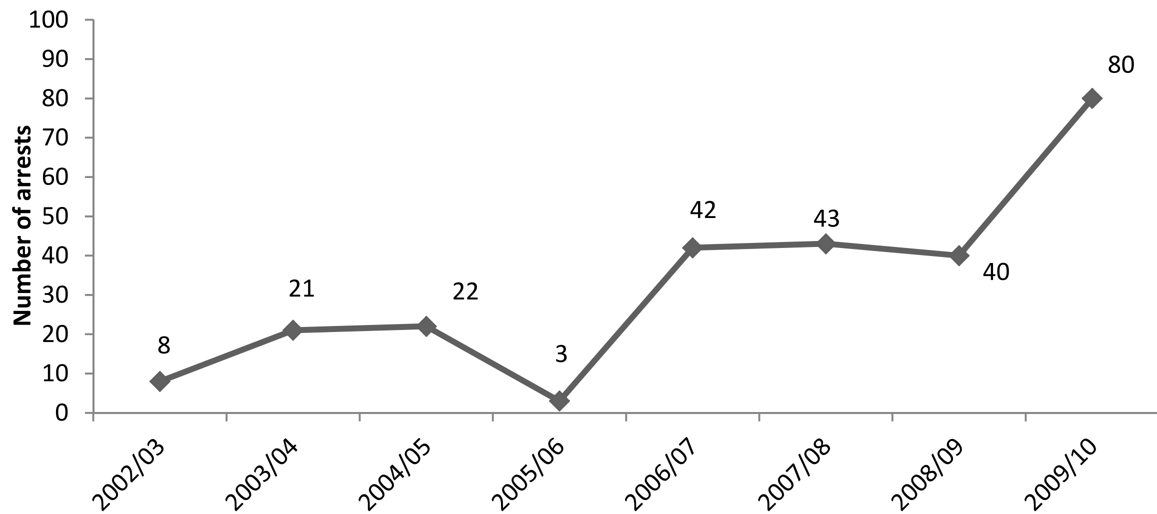


Source: **ACC**

11.2.4 Cocaine

The number of cocaine arrests made in WA by WAPS and AFP from 2002/03 to 2008/09 is shown in Figure 73. It is evident that the number of cocaine arrests has remained low across time, but appears to be gradually increasing over time and have increased dramatically in 2009/10 (n=80). Cocaine arrests in WA for 2009/10 represented 6% of the national total, with the greatest proportion of cocaine arrests occurring in NSW (59%).

Figure 73: Number of cocaine consumer/provider arrests, WA, 2002/03-2009/10

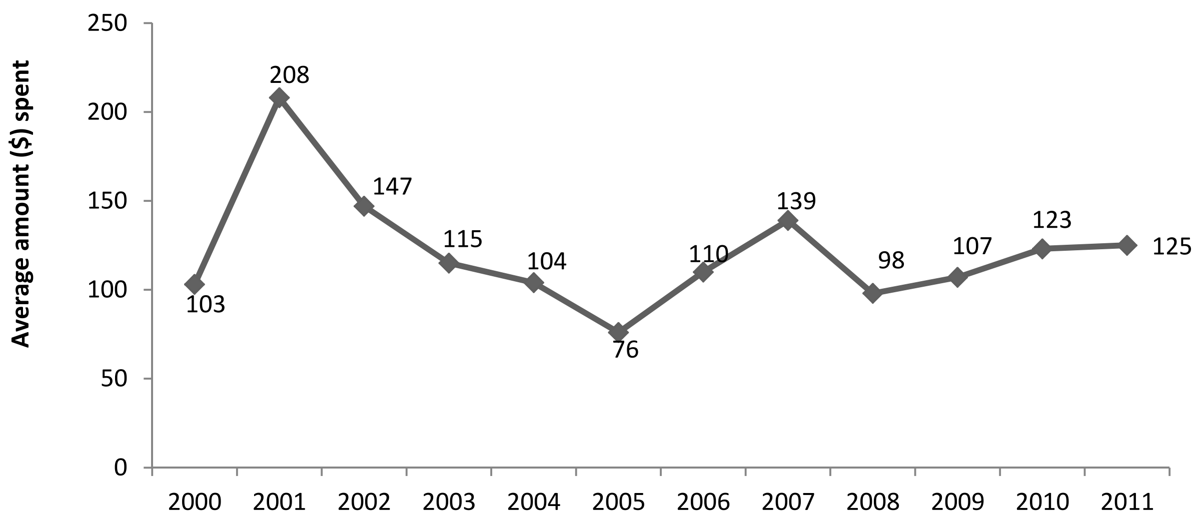


Source: **ACC**

11.3 Expenditure on illicit drugs

IDU were asked how much money they had spent on drugs the day before interview. Thirty-eight IDU reported spending no money on buying drugs on the previous day, and one IDU did not respond. Of the remaining 31 IDU, the mean amount spent was $125 (range=$10-$600), which was not significantly different to the average of $123 spent on drugs the day before interview in 2010. The median amount spent in 2011 was $75. Figure 75 presents the average amount spent on drugs among IDU who had spent money on drugs the day prior to interview across IDRS surveys.

Figure 74: Expenditure on illicit drugs on day prior to interview by IDU who reported spending money on drugs, WA, 2000-2011



Source: IDRS IDU interviews

12 SPECIAL TOPICS OF INTEREST

12.1 Heavy Smoking Index nicotine dependence

For the first time in 2011, participants who smoked daily were asked two questions from the Fagerstrom test for nicotine dependence, known as the Heavy Smoking Index (HSI) (n=54). These questions included 'How soon after walking do you smoke your first cigarette?' and 'How many cigarettes a day do you smoke?'. The responses were then scored between zero and six. A score of zero is 'no dependence', 1-2 - 'very low dependence', 3 - 'low to moderate dependence', 4 - 'moderate dependence' and 5 or above - 'high dependence' (Heatherton et al., 1989).

As seen in **Error! Reference source not found.**20, half of the WA sample who commented reported smoking their first cigarette within 5 mins of waking and almost one-third (30%) between 5 to 30 mins of waking. Thirty-five per cent of daily smokers reported smoking between 21-30 cigarettes a day and 32% between 11-20 or less cigarettes a day. The mean HSI score was 3.4. Just over one-third of daily smokers scored 5 or above indicating high nicotine dependence.

Table 20: Heavy Smoking Index for nicotine dependence, WA, 2011

Time till first cigarette	**WA** **n=54**
Within 5 minutes (%)	50
5-30 mins (%)	30
31-60 mins (%)	4
60 mins (%)	17
Number of cigarettes smoked a day	**n=54**
10 or less cigarettes (%)	24
11-20 cigarettes (%)	32
21-30 cigarettes (%)	35
31 or more cigarettes (%)	9
Nicotine dependence	**n=54**
No dependence (%)	11
Very low (%)	15
Low to moderate (%)	19
Moderate (%)	20
High (%)	35
Mean score	**3.4**

Source: IDRS participant interviews

12.2 Injecting equipment use in the last month

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

Outlined in Table 21, Table 22 and Table 23 are the results from the WA IDRS survey compared to the NSP survey (National Centre in HIV Epidemiology and Clinical Research, 2009). The IDRS found similar results to the 2008 ANSPS survey.

In Table 21 the majority (97%; 76% in the ANSPS survey) of the national sample who commented reported the use of 1ml needle and syringes in the last month followed by a 3ml syringe (24%; 22% in the ANSPS survey) and a wheel filter (22%; 11% in the ANSPS survey) (Table 78). The re-use of 1ml needle and syringe was reported by 42% of the WA IDRS sample who commented (32% in the ANSPS survey) and 12% reported the re-use of wheel filters (4% in the ANSPS survey (Table 22).

Table 21: Use of injecting equipment in the last month among those who commented, WA IDRS, 2011

	Australian NSP Survey*	WA
	2008	2011
Injecting equipment used in the last month* (%)		n=63
1ml needle/syringe	76	97
3ml syringe (barrel)	22	24
5ml syringe (barrel)	17	6
10ml syringe (barrel)	9	6
20ml syringe (barrel)	6	8
50ml syringe (barrel)	n.a	12
Detached needle (tip)	19	17
Winged view infusion set (butterfly)	12	13
Wheel filter	11	22

Source: IDRS participant interviews
* More than one item could be selected

Table 22: Re-use of injecting equipment in the last month among those who commented, WA IDRS, 2011

	Australian NSP Survey*	WA
	2008	**2011**
Injecting equipment reused in the last month* (%)		n=60
1ml needle/syringe	32	42
3ml syringe (barrel)	7	6
5ml syringe (barrel)	6	0
10ml syringe (barrel)	4	0
20ml syringe (barrel)	3	2
50ml syringe (barrel)	n.a.	3
Detached needle (tip)	4	3
Winged view infusion set (butterfly)	5	3
Wheel filter	4	12

Source: IDRS participant interviews
*more than one item could be selected

Of those who commented (N=60), 37% reported cleaning 1ml needle/syringes in the WA IDRS compared to 30% in the ANSPS survey. Of those who reported cleaning their injected equipment (n=30), around two-thirds (60%) reported last cleaning a 1ml needle/syringe, followed by a wheel filter (17%) then a 3ml syringe (13%) (Table 23).

Table 23: Injecting equipment cleaned in the last month among those who commented, WA IDRS, 2011

	Australian NSP Survey*	WA
	2008	
Cleaning of injecting equipment in the last month* (%)		n=60
1ml needle/syringe	30	37
3ml syringe (barrel)	8	7
5ml syringe (barrel)	6	2
10ml syringe (barrel)	4	2
20ml syringe (barrel)	3	2
50ml syringe (barrel)	n.a.	3
Detached needle (tip)	5	5
Winged view infusion set (butterfly)	4	7
Wheel filter	3	12
Last injecting item cleaned (%)**		n=30
1ml needle and syringe (%)	n.a.	60
3ml syringe (barrel) (%)	n.a.	13
5ml syringe (barrel) (%)	n.a.	3
10ml syringe (barrel) (%)	n.a.	0
20ml syringe (barrel) (%)	n.a.	0
Detachable needle (tip) (%)	n.a.	0
Winged vein infusion set (butterfly) (%)	n.a.	7
Wheel filter (%)	n.a.	17

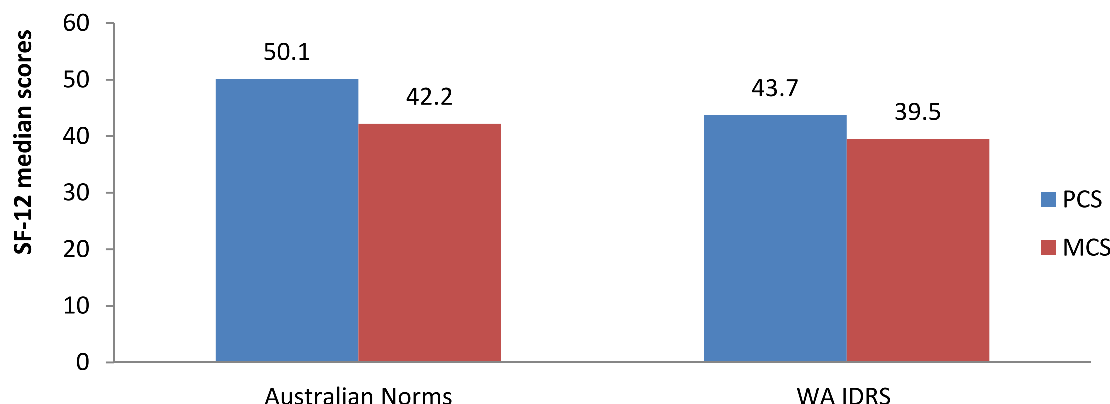
Source: IDRS participant interviews
* More than one item could be selected
** Among those who cleaned equipment in the last month

12.3 Mental and physical health problems

The Short Form 12-Item Health Survey (SF-12®) is a questionnaire designed to provide information on general health and wellbeing and includes 12 questions from the SF-36®. The SF-12 was administered for the first time in the IDRS in 2011. The SF-12 includes twelve questions and measures health statues across eight dimensions concerning physical functioning, role limitations due to physical health problems, bodily pain, general health, energy/fatigue, social functioning, role limitations due to emotional problems and psychological distress and wellbeing. The scores generated by these eight components are combined to generate two composite scores, the physical component score (PCS) and the mental component score (MCS) (Ware et al., 1995, Ware et al., 1996). A higher score indicates better health.

The SF-12 scoring system was developed to yield a mean of 50 and a standard deviation of 10. Participants in the 2011 WA IDRS scored a mean of 39.5 (SD=11.9) for the MCS and 43.7 (SD=9.3) for the PCS (Figure 75).

Figure 75: SF-12 scores for WA IDRS participants compared with the general Australian population (ABS), 2011



Source: WA IDRS participant interviews , (Australian Bureau of Statistics, 1995)

Table 24 presents the MCS and PCS for participants interviewed in the IDRS compared with those of the general Australian population[2] from the National Health Survey (Australian Bureau of Statistics, 1995). It appears that WA IDRS participants in 2011 had a significantly lower MCS compared with the Australian population average (39.5% versus 49.8%). (t=-4.151, df=22, p=.000). It was also found that IDRS participants reported a significantly lower PCS score than the Australian population (43.7% versus 50.1%) (t=-3.265, df=22, p=.004). The IDRS MCS and PCS were found to be one standard deviation below the Australian population mean score. This would indicate that IDRS participants had poorer mental and physical health than the population average.

Table 24: SF-12 Mental and Physical Health Mean Component Scores, WA IDRS, 2011

SF-12 Component scores	SF-36 Australian Population Norms (ABS)	SF-12 Australian Population Norms (ABS)	WA n=23
MCS	49.8	53.70	39.5
PCS	50.1	52.22	43.7

Source: IDRS participant interviews, (Australian Bureau of Statistics, 1995), (Australian Bureau of Statistics, 1997)

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

12.4 Health services accessed

Participants in the 2011 IDRS were asked about access to health services in the previous four weeks. Table 82 looks at the median number of occasions a participant visited a particular health service and of those occasions how many were substance use related.

Almost half (41%) of WA IDRS participants (n=29) reported visiting a GP in the last four weeks on a median of two occasions (range 1-5 occasions). Of those who had visited a GP, 55% had visited on two occasion in the last four weeks and 45% reported the visit was substance use related (Table25).

Table 25: Health Service Access in the last four weeks, WA IDRS, 2011

National IDRS	Number of occasions visited					Number of visits due to substance use*			
	Median	1	2	3	4 or more	0	1	2	3 or more
Hospital ED/Casualty (n=3) %	1 (1-2)	33	67	0	0	67	33	0	0
Hospital Outpatient (n=4)	1 (1-1)	100	0	0	0	100	0	0	0
Hospital Inpatient (n=1)	2 (2-2)	0	100	0	0	100	0	0	0
GP visit (n=29)	2 (1-5)	28	55	3	14	55	21	21	3
Specialist (n=3)	1 (1-3)	67	0	33	0	33	67	0	0
Dentist (n=8)	1 (1-3)	88	0	13	0	75	25	0	0
Other health professional (n=3)	1 (1-3)	67	0	33	0	100	0	0	0
Ambulance (n=2)	1 (1-1)	100	0	0	0	0	100	0	0
Psychiatrist (n=5)	1 (1-2)	80	20	0	0	60	40	0	0
Psychologist (n=7)	1 (1-4)	71	14	14	0	57	29	0	14
Social/welfare worker (n=5)	1 (1-2)	60	40	0	0	60	40	0	0
Drug/alcohol counsellor (n=2)	1 (1-4)	33	44	11	11	22	33	22	22
Other (n=0)	-	-	-	-	-	-	-	-	-

Source: IDRS participant interviews
*Among those who reported accessing a health service

12.5 Alcohol Use Disorders Identification Test- Consumption

Recently a lot of media attention has focused on young people and alcohol. However, there has been less focus on alcohol use amongst people who regularly inject drugs. People who regularly inject drugs are particularly at risk for alcohol related harms due to a high prevalence of the hepatitis C virus (HCV). Half of the participants interviewed in the Australian NSP Survey 2010 (n=2,396) were found to have HCV antibodies(The Kirby Institute, May 2011). Given that the consumption of alcohol has been found to exacerbate HCV infection and to increase the risk of both non-fatal and fatal opioid overdose and depressant overdose (Coffin et al., 2007, Schiff and Ozden, 2004, Darke et al., 1996, Darke et al., 2007) it is important to monitor risky drinking among IDU.

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

Among the 2011 WA sample, the overall mean score on the AUDIT-C was 5.0 (SD=3.2, median=5, range=1-12). There was no significant difference between the male and female mean AUDIT total scores. According to Dawson et al (2005) and the AGDH&A's Guidelines for the Treatment of Alcohol Problems (Haber et al., 2009) and a cut-off score of 5 or more indicated that further assessment is required.

Over half (54%) of the participants who drank in the past year scored 5 or over on the AUDIT-C. Sixty per cent of males and 46% females scored 5 or more indication the need for further assessment (Table 26).

Table 26: AUDIT-C among people who inject drugs and drank alcohol in the past year, WA IDRS, 2010 and 2011

	WA 2010 N=100	WA 2011 N=70
Mean AUDIT-C score, SD (range)	**3.5, 3.8 (0-12)**	**5.0, 3.2, (1-12)**
Score of 5 or more* (%)	**34**	**54**
Males (%)	39	60
Females (%)	26	46

Source: IDRS participant interviews
*Among those who drank alcohol in the past year

12.6 Pharmaceutical Opioids

Since the heroin shortage the Illicit Drugs Reporting System (IDRS) has noted an increase in the use and injection of morphine and oxycodone. Over the same period the age of people who inject drugs (PWID) has also increased. The Australian Needle Syringe Program (NSP) survey (The Kirby Institute, May 2011) noted similar findings over the same period. We know from a number of Australian and international studies that IDU experience excess morbidity and mortality when compared to those in the general population ((Hulse et al., 1999, English et al., 1995, Vlahov et al., 2004, Randall et al., 2001) and that prescribers are often reluctant to prescribe opioid analgesics to people with a history of injecting drug use(Baldacchino et al., 2010, Merrill and Rhodes, 2002). This section aimed to examine the complex interplay among IDU, pain management and the extra-medical use of pharmaceutical opioids (PO).

In 2011, participants in the IDRS were asking questions about the use of PO and pain. Pharmaceutical opioids included morphine, oxycodone, and other PO such as fentanyl, pethidine and tramadol. Excluded were methadone, buprenorphine and buprenorphine-naloxone. Of the WA sample, around forty percent reported the use of PO in the last six months (Table 84). Among those who recently used PO (N=28), 43% reported using them for pain relief, 29% to seek an opioid effect and 18% to treat self-dependence. Participants were asked if they were refused PO medications for pain due to injecting history. Of those who commented 29% reported 'yes' and 32% 'hadn't sought pain relief' (table 84).

Among those who sought pain relief (n=19), just over a third (37%) reported being prescribed PO for pain relief. Twenty-eight percent reported having trouble obtaining pain relief from their doctor. No participants reported informing their doctor about their drug use at the time and 29% reported that their doctor already knew about their drug use. Of those who commented (n=7), just over three-quarters (71%) were prescribed PO by their GP, followed by 14% by a pain specialist and 14% by a hospital doctor (Table 27).

Table 27: Pharmaceutical opioids use among people who inject drugs, WA, 2011

	WA
Used pharmaceutical opioids in the last 6 months (%)	40
Reason for using pharmaceutical opioids*	n=28
Treat self-dependence (%)	18
Seek an opioid effect (%)	29
Pain relief (%)	43
Know what dose to expect (%)	4
Cheaper than heroin (%)	11
Current heroin purity (%)	0
Couldn't score heroin (%)	7
Refused pharmaceutical opioids medications for pain due to injecting history	n=28
Yes (%)	29
Haven't sought pain relief (%)	32
Prescribed pharmaceutical opioids#	n=19
For pain last six months (%)	37
Trouble obtaining pain relief from doctor	28
Informed doctor about drug use	n=14
Yes (%)	0
Yes, but not all (%)	7
Doctor already knew (%)	29
Pharmaceutical opioids prescribed by##	n=7
Pain specialist (%)	14
Hospital doctor (%)	14
OST specialist (%)	0
GP (%)	71

Source: IDRS participant interviews
* Among those who recently used. Multiple responses were allowed
# Among those who sought pain relief
Among those who were prescribed PO for pain in the last six months

12.7 Online activities

The use of the internet has become part of everyday life. The internet is used to find out information, communicate with others, and to undertake commercial transactions. Those who use illicit drugs may undertake these types of activities in respect to their drug use: There is huge potential for the internet and other electronic mediums to be used as a way of

relating health and safety messages (Belenko et al., 2009). The success of such messages will rely heavily on an increased understanding of the online drug market.

Therefore, a set of one-off questions about online activity was asked in the 2011 IDRS. Of the WA participants who commented (n=55), 46% reported that they never use the internet (went 'online') in the last month, while 20% reported daily internet use and 16% use at least weekly (Table 28).

Of those who had used the internet in the last month (n=30), one-third reported going 'online' to get information about drugs. Small numbers went 'online' to buy drugs (10%) or to post information about drugs (7%). Participants were then asked their favourite drug site. Of those who commented (n=15), 67% said they don't use drug websites, while 33% reported an 'other' website, the most commonly reported website was AIVL (**Error! Reference source not found.**28).

Of those who commented (n=9), 20% stopped using a drug, 11% used new drug combination and 10% reported an 'other' as a result of information found online. Nearly half of those who commented (n=32) reported using text messaging as the preferred medium to obtain drugs. Half of the participants who commented (n=12), reported buying substance sold as 'legal' highs in the last six months (**Error! Reference source not found.**28).

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

Table 28: Proportion of IDU that online activity related to drug use, IDRS, 2011

	WA
How often did you go online last month (%)	**n=55**
Never	46
Daily	20
At least weekly	16
At least fortnightly	9
At least monthly	9
In the last six months did you go on line to (%)	**n=30**
Get information about drugs	33
Post information about drugs	7
Buy ingredients to make drugs	0
Buy drugs	10
Sell drugs	0
Didn't go online for these activities	n=30 63
Favourite drug site*	**n=15**
Don't use websites	67
Pill reports	0
Erowid	0
Wikipedia	0
Actions taken due to information found online:	**n=9**
Tried new drug	11
Altered drug dose	0
Used new drug combination or ROA	0
Stopped using a drug	20
Other	10
Text messaging as preferred medium for obtaining drugs	**n=32** **41**
Bought substances sold as 'legal highs' in last six months	**n=12** **50**

Source: IDRS participant interviews
*websites listed are the three highest proportions reported

12.8 Policy

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

The policy questions were drawn from the National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2008a) to ensure comparability with general population responses. Participants in the 2011 IDRS were asked three policy questions (1) Thinking about the problems associated with heroin use, to what extent would you support or oppose measures such a.....', (2) To what extend would you support or oppose the person use of the following drugs being made legal?' and (3) To what extent would you support or oppose the increased penalties for sale or supply of the following drugs?'. Table 29 presents the 'support' response findings from participants in the IDRS and from the 2007 National Drug Strategy Household Survey. The majority of IDRS participants commented (n=67), with 99% supporting needle and syringe programs to reduce problems associated with heroin use. The majority of the participants also supported methadone/buprenorphine maintenance programs (88%), treatment with drugs (not including methadone) (88%) and regulated injecting rooms (91%). In Table 29, comparisons can be seen with the National Drug Strategy Household Survey, 2007.

The majority of the IDRS sample also supported the legalisation of cannabis (88%) for personal use and just over two-thirds (73%) supported the legislation of heroin for person use. Small numbers supported the increased penalties for sale or supply of cannabis (9%). Around one-third supported the increased penalties for sale or supply of heroin, methamphetamine or cocaine (Table 29).

Table 29: Support for measures to reduce problems associated with heroin, for legalisation of illicit drugs and the increase of penalties for illicit drugs, WA, 2011

	National Drug Strategy Household Survey 2007		WA
Support measures to reduce problems associated with heroin use:	**Never used**	**Ever used**	**n=67**
Needle syringe programs (%)	66.8	80.4	99
Methadone/Buprenorphine maintenance program (%)	67.7	68.8	88
Treatment with drugs (not methadone) (%)	68.3	77.9	88
Regulated injecting room (%)	49.6	66.5	91
Trial of prescribed heroin (%)	32.4	59.1	88
Rapid detoxification therapy (%)	79.0	71.7	51
Use of naltrexone (%)	74.8	73.9	54
Support legalisation (personal use) of:	**Males**	**Females**	**n=66**
Cannabis (%)	23.8	18.5	88
Heroin (%)	5.8	4.6	73
Methamphetamine (%)	5.4	3.9	24
Cocaine (%)	6.3	4.5	29
Ecstasy (%)	7.1	4.8	36
Support for increased penalties for sale or supply of illicit drugs:	**Males**	**Females**	**n=65**
Cannabis (%)	59.6	66.4	9
Heroin (%)	84.3	85.1	20
Methamphetamine (%)	84.2	85.2	45
Cocaine (%)	82.4	84.2	37
Ecstasy (%)	80.5	83.6	35

Source: IDRS participant interviews; (Australian Institute of Health and Welfare, 2008b)

REFERENCES

Andrews, G., & Slade, T. (2001). Interpreting scores on the Kessler Psychological Distress Scale (K10). *Australian and New Zealand Journal of Public Health*, *25*, 494-497.

Australian Bureau of Statistics. (2007). *National Survey of Mental Health and Wellbeing: Summary of Results.* Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2009). *National Health Survey. Summary of Results 2007-2008.* Canberra: Australian Bureau of Statistics.

Australian Crime Commission. (2004). Illicit *Drug Data Report 2002-03*. Canberra: Australian Crime Commission.

Australian Crime Commission. (2005). *Illicit Drug Data Report 2003-04*. Canberra: Australian Crime Commission.

Australian Crime Commission. (2006). *Illicit Drug Data Report 2004-05*. Canberra: Australian Crime Commission.

Australian Crime Commission. (2007). *Illicit Drug Data Report 2005-06*. Canberra: Australian Crime Commission.

Australian Crime Commission. (2008). *Illicit Drug Data Report 2006-07*. Canberra: Australian Crime Commission.

Australian Crime Commission. (2009). *Illicit Drug Data Report 2007-2008.* Canberra: Australian Crime Commission.

Australian Crime Commission. (2010). *Illicit Drug Data Report 2008-09.* Canberra: Australian Crime Commission.

Australian Crime Commission. (2011). *Illicit Drug Data Report 2009-2010*. Canberra: Australian Crime Commission.

Australian Customs Border and Protection Service. (2011). *Australian Customs and Border Protections Service Annual Report 2010-11*. Canberra, Australian Customs and Border Protection Service.

Australian Institute of Health and Welfare. (2008). *2007 National Drug Strategy Household Survey: Detailed Findings.* Drug Statistics Series No. 22. Cat. No. PHE 107. Canberra: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare). (2009). *National Opioid Pharmacotherapy Statistics Annual Data Collection: 2009 Report*. Bulletin No. 79. Cat No. AUS 125. Canberra: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare. (2009b). *National Opioid Pharmacotherapy Statistics Annual Data Collection: 2008 Report*. Bulletin No. 72. Cat. No. AUS 115. Canberra: Australian Institute of Health and Welfare.

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: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare. (2011a). 2010 National Drug Strategy Household Survey report. Drug Statics series no. 25. Cat. No. PHE 145. Canberra, AIHW.

Australian Institute of Health and Welfare. (2011b). Alcohol and other drug treatment services in Australia 2009-10: Report on the National Minimum Data Set. Drug Treatment Series. No. 14. Cat. No. HSE 114. Canberra, AIHW.

Australian Institute of Health and Welfare. (2011c). National Opioid Pharmacotherapy Statistics Annual Data collection: 2010 report. Cat. no. HSE 109. Canberra, AIHW.

Baldacchino, A., Gilchrist, G., Fleming, R. & Bannister, J. (2010). Guily until proven innocent: A qualitative study of the management of chronic non-cancer pain among patients with a history of substance abuse. *Addictive Behaviours*, 35, 270-272.

Belenko, S., Dugosh, K., Lynch, K., Mericle, A. & Forman, R. (2009). Online illegal drug use information: an exploratory analysis of drug related website viewing by adolescents. *J Health Commun*, 14, 612-630.

Bush, K., Kivlahan, D. R., McDonell, M. B., Fihn, S. D. & Bradley, K. A. (1998). The AUDIT Alcohol Consumption Questions (AUDIT-C). *Arch Intern Med, 158*, 1789-1795.

Coffin, P. O., Tracy, M., Bucciarelli, A., Ompad, D. C., Vlahov, D. & Galea, S. (2007). Identifying injection drug users at risk of nonfatal overdose. *Academic Emergency Medicine, 14*, 616-623.

Darke, S., Ross, J. & Hall, W. (1996). Overdose among heroin users in Sydney, Australia: I. Prevalence and correlates of non-fatal overdose. *Addiction*, *91*, 405-411.

Darke, S., Duflou, J. & Kaye, S. (2007). Comparative toxicology of fatal heroin overdose cases and morphine positive homicide victims. *Addiction, 102*, 1793-1797.

Dawson, D. A., Grant, B. F., Stinson, F. S. & Zhou, Y. (2005). Effectiveness of the Derived Alcohol Use Disorders Identification Test (AUDIT-C) in Screening for Alcohol Use Disorders and Risk Drinking in the US General Population. *Alcoholism: Clinical and Experimental Research, 29*, 844-854.

Degenhardt, L. & Roxburgh, A. (2007a). Accidental drug-induced deaths due to opioids in Australia, 2005. Sydney, National Drug Research Centre.

Degenhardt, L. & Roxburgh, A. (2007b). Cocaine and amphetamine related drug-induced deaths in Australia 2005. Sydney, National Drug and Alcohol Research Centre.

English, D. R., Holman, C. D. J., Milne, E., Winter, M. G., Hulse, G. K., Codde, J. P., Bower, C.I., Corti,B., De Klerk, N. & Knuiman, M. W. (1995). *The quantification of drug caused morbidity and mortality in Australia.* Canberra, Commonwealth Department of Human Services and Health.

Haber, P., Lintzeris, N., Proude, E. & Lopatko, O. (2009). *Guidelines for the Treatment of Alcohol Problems.* Canberra: Australian Government Department of Health and Ageing.

Hando, J., O'Brien, S., Darke, S., Maher, L. & Hall, W. (1997b). *The Illicit Drug Reporting System Trial: Final Report.* Monograph No. 31. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

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. *Br J Addict*, 84, 791-9.

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.

Kessler, R. & Mroczek, D. (1994). *Final version of our Non-specific Psychological Distress Scale*. Ann Arbort (MI): Survey Research Centre of the Institute for Social Research, University of Michigan.

Kirby Institute. (May 2011). Australian NSP Survey: Prevalence of HIV, HCV and injecting and sexual behaviour among Needle and Syringe Program attendees. Prepared by Jenny Iversen, L. T. A. L. M. (Ed.). *National data Report 1995-2010*. Sydney, The University of New South Wales.

Lenton, S. R., Dietze, P. M., et al. (2009). Naloxone for administration by peers in case of heroin overdose. *Medical Journal of Australia,* 189(8), 469.

Lenton, S. R., Dietze, P. M., et al. (2009). Now is the time to take steps to allow peer access to naloxone for heroin overdose in Australia. *Drug and Alcohol Review,* 28(6), 583-585.

Matthew-Simons, F., Love, S. & Ritter, A. (2008). A review of Australian public opinion surveys on illicit drugs. *DPMP Monograph Series No. 17*. Sydney, National Drug and Alcohol Centre, University of New South Wales.

National Centre in HIV Epidemiology and Clinical Research. (2009). *Australian NSP Survey National Data Report 2005-2009.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

National Prescribing service Ltd. (2009). Quality use of over-the-counter codeine; Position Statement. Sydney, National Prescribing Service Ltd.

Newcombe, R, G. (1998). Interval Estimation for the Difference between Independent Proportions: Comparison of Eleven Methods. *Statistics in Medicine*, 17, 873-890.

O'Kelly, F, D. & O'Kelly, C, M. (2012). The natural history of injecting drug use: a 25-year longitudinal study of a cohort of injecting drug users in inner city Dublin. *Irish Journal of Medical Science*, 1-8.

PASW (2009). PASW Statistics 18. 18 ed. Chicago, PASW inc.

Rainsford, C., Lenton, S. & Fetherston, J. (2010). *Indications of changing trends in heroin and other opioid use in IDRS data nationally and in Western Australia.* Drug Trend Bulletin, April 2010. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Randall, D., Degenhardt, L. & Al., E. (2001). Increasing cancer mortality among opioid dependent persons in Australia: a new public health challenge for disadvantaged population. Australian and New Zealand Journal of Public Health.

Roxburgh A. and Burns L. (2012). *Drug-induced deaths in Australia, 1993-2009*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Schiff, E. R. & Ozden, N. (2004). *Hepatitis C and Alcohol. Publications.* Bethesda, National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health.

Sindicich, N. & Burns, L. (2012). Australian Trends in Ecstasy and Related Drug Markets 2011: Findings from the Ecstasy and Related Drugs Reporting System. *Australian Drug trend Series. No. 82*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

Sontineni, S. P., Chaudhary, S. Sontineni, V., & Lanspa, S. J. (2009). Cannabinois hyperemesis syndrome: Clinical diagnosis of an under recognised manifestation of chronic cannabis abuse. *World Journal of Gastroenterology, 15*(10), 1264-1266.

Sproule, B. A., Busto, U. E., Somer, G., Romach, M. & Sellers, E. (1999). Characteristics of dependent and nondependent regular users of codeine. *Journal of Clinical Psychopharmacology*, 19, 367-372.

Tandberg, D. Improved confidence intervals for the difference between two proportions and numbers needed to treat (NNT). 1.49 ed.

Ware, J. E. J., Kosinski, M. & Keller, S. D. (1995). SF-12: How to Score the SF-12 Physical and Mental Health Summary Scales. Boston, Massachusetts, The Health Institute, New England Medical Centre.

Ware, J. E. J., Kosinski, M. & Keller, S. D. (1996). A 12-item Short-Form Health Survey, Construction of Scales and Preliminary Tests of Reliability and Validity. *Medical Care*, 34, 220-233.