

South Australia

R. Sutherland and Dr. L. Burns

SA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2011
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

Australian Drug Trends Series No. 87

SOUTH AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2011



Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

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**National Drug and Alcohol Research Centre
University of New South Wales**

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ABBREVIATIONS

1,4B	1, 4 butanediol
2CB	4-bromo-2, 5-dimethoxyphenethylamine
2CE	5-dimethoxy-4-ethylphenethylamine
2CI	2, 5-dimethoxy-4-iodophenethylamine
4-MTA	4-methylthioamphetamine
5MEO-DMT	5-methoxy-dimethyltryptamine
ABCI	Australian Bureau of Criminal Intelligence
ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ACPR	Australian Centre for Policing Research
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
AODTS-NMDS	Alcohol and Other Drug Treatment Services National Minimum Data Set
A&TSI	Aboriginal and/or Torres Strait Island
AQFV	Alcohol Quantity Frequency and Variability Assessment
AUDIT	Alcohol Use Disorders Identification Test
BAC	Blood alcohol concentration
BBVI	Blood-borne viral infection(s)
BMI	Body Mass Index
BZP	Benzylpiperizine(s)
CI	Confidence Intervals
CME-DIS	Client Management Engine-DASC Information System
DASC	Drug and Alcohol Services Council
DASSA	Drug and Alcohol Services of South Australia
DOB	2, 5-dimethoxy-4-bromoamphetamine
DOI	2, 5-dimethoxy-4-iodoamphetamine, 'Death on Impact'
DOM	2, 5-dimethoxy-4-methylamphetamine
DMT	Dimethyltryptamine
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, text revision
DXM	Dextromethorphan hydrobromide
ED	Emergency Department
EDRS	Ecstasy and Related Drugs Reporting System
ERD	Ecstasy and related drug(s)
EPS	Emerging psychoactive substances
GBL	Gamma-butyrolactone
GHB	Gamma-hydroxybutyrate
GP	General Practitioner
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
HPV	Human papillomavirus (Genital warts)
HSI	Heavy Smoking Index

ICD-9	International Statistical Classification of Diseases and Related Health Problems, Ninth Revision
ICD-10	International Statistical Classification of Diseases and Related Health Problems, Tenth Revision
IDRS	Illicit Drug Reporting System
IDU	Person(s) who inject(s) drugs; injecting drug user(s)
K10	Kessler Psychological Distress Scale
KE	Key expert(s)
LSD	<i>d</i> -lysergic acid
MDA	3, 4-methylenedioxyamphetamine
MDEA	3, 4-methylene dioxylethylamphetamine
MDMA	3, 4-methylenedioxymethamphetamine
MI	Millilitres
N	(or n) Number of participants
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NDSHS	National Drug Strategy Household Survey
NHMD	National Hospital Morbidity Database
NNDSS	National Notifiable Diseases Surveillance System
NSP	Needle and syringe program
OCD	Obsessive compulsive disorder
OTC	Over the counter
PDI	Party Drugs Initiative
PMA	Para-methoxyamphetamine
QOL	Quality of life
RAH	Royal Adelaide Hospital
RC	Research chemicals
REU	Regular ecstasy users(s)
ROA	Route of administration
ROL	REM onset latency
SA	South Australia
SAPOL	South Australia Police
SEN	Simple Expiation Notice
SD	Standard Deviation
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
TFMPP	3-trifluoromethylphenylpiperazine
WHO	World Health Organization

GLOSSARY OF TERMS

Binge	Use over 48 hours without sleep
Eightball	3.5 grams
Halfweight	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 EDRS (see Method section for further details)
Key expert(s)	Also referred to as KE; persons participating in the Key Expert Survey component of the EDRS (see Method section for further details)
Licit	Licit refers to pharmaceuticals (e.g. benzodiazepines, antidepressants and opioids such as methadone, buprenorphine, morphine and oxycodone) 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 shelving/shafting; and/or swallowing
Opiates	Opiates are derived directly from the opium poppy by departing and purifying the various chemicals in the poppy
Opioids	Opioids include all opiates but also include chemicals that have been synthesised in some way e.g. heroin is an opioid but not an opiate, morphine is both an opiate and opioid
Point	0.1 gram although may also be used as a term referring to an amount for one injection
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
Shelving/shafting	Use via insertion into vagina (shelving) or the rectum (shafting)
Use	Use via one or more of the following routes of administration: injecting; smoking; snorting; shelving/shafting; 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

This report presents the findings from the eleventh year in which data has been collected in South Australia. The Ecstasy and Related Drugs Reporting System (EDRS; formerly the Party Drugs Initiative, or PDI), monitors the price, purity and availability of 'ecstasy' (MDMA) and other drugs such as methamphetamine, cocaine, gamma-hydroxybutyrate (GHB), *d*-lysergic acid (LSD), 3,4-methylenedioxyamphetamine (MDA) and ketamine. It also examines the demographic characteristics and patterns of drug use among regular ecstasy users (REU), the prevalence of risk-taking and harms related to drug use, as well as the level of criminal involvement among this group. It utilises data from three sources: (a) surveys with regular ecstasy users (REU); (b) surveys with key experts (KE) who have contact with REU through the nature of their work; and (c) the analysis of existing data sources that contain information on ecstasy and related drugs (ERD). The EDRS surveys are not representative of ecstasy and other drug users in the general population. The REU are a sentinel group that provides information on patterns of drug use and market trends.

The findings from each year not only provide a snapshot of the ERD market in Australia, but in total they help to provide an evidence base for policy decisions; for helping inform harm reduction messages and to provide directions for further investigation when issues of concern are detected. Continued monitoring of the ERD markets in Australia will help add to our understanding of the use of these drugs; the price, purity and availability of these drugs and how these may impact on each other; and the associated harms which may stem from the use of these drugs.

Drug trends in this publication primarily represent trends in Adelaide, where new drug trends are likely to emerge. Patterns of drug use may vary among other groups of REU in Adelaide and in regional areas.

Demographic Characteristics of regular ecstasy users

Seventy six participants were recruited to the 2011 sample. As in previous years, the REU interviewed were young, with a median age of 21 and two-thirds of the participants were male (68%). One-fifth of the sample reported being in full-time employment with a mean income of \$459 per week. Most participants were well educated and over half had completed some kind of post school qualification, while 8% were full-time students. Virtually the entire sample identified as heterosexual and 4% were currently undergoing treatment for their drug use. In comparison to participants in 2010, the 2011 sample were generally similar, however, there were significant increases in age, heterosexuality and those who were working and studying.

Patterns of drug use among participants

Cannabis was the main drug of choice nominated by participants, meaning that for the first time in history of the SA EDRS, ecstasy had dropped out of favour as the preferred drug of choice among REU. There was also a significant increase in the proportion of REU nominating alcohol as their drug of choice, and a significant decrease in cocaine as a favourite drug. Aside from ecstasy, alcohol was the most commonly used drug among REU, followed by cannabis, tobacco and methamphetamine. As in 2010, polydrug use was common among this sample, with participants having tried a median of twelve different drugs in their lifetime, and eight within the preceding six months. In 2011, there were significant increases in the recent use of tobacco, crystal methamphetamine, nitrous oxide, benzodiazepines and pharmaceutical stimulants.

The proportion of participants who reported recent bingeing on ecstasy or other related drugs increased slightly in 2011. The type of drugs that participants reported as being used in a binge session differed somewhat to those in 2010. Larger proportions of participants reported binge use of ecstasy, crystal methamphetamine, cannabis, alcohol and tobacco.

Injecting drug use remained low in 2011, with only five participants reporting that they injected any drug within the preceding six months.

Ecstasy

Although ecstasy appears to be dropping out of favour among REU, there has been little change in the parameters of ecstasy use, with the reported median age of first use, 'average' or 'most' amount used in a typical session, and median days of use in a six month period all remaining relatively stable. The proportion of participants reporting using more than one tablet in a typical session also remained stable at 83%. Over a third of REU reported that they had binged on ecstasy in the past six months, a slight increase from 2010. Swallowing was the main route of administration for ecstasy, and was used most commonly at nightclubs.

The proportion of participants who reported using other drugs 'with ecstasy' remained stable in 2011, whilst the use of other drugs to come down from ecstasy increased (although this was not significant). Cannabis was the most common drug used to come down from ecstasy, followed by alcohol, benzodiazepines and tobacco.

The reported price of ecstasy was relatively stable compared to 2010. This was confirmed by half of the sample who reported that price had remained stable over the preceding six months; although one-fifth did report that the price had increased. Availability continued to be considered 'easy' or 'very easy' by participants, with a small decrease in the proportion of participants who considered it to be difficult. The majority of REU reported that current purity of ecstasy was low, although there was a significant increase in the proportion of REU who perceived purity to be medium. The Australian Crime Commission (ACC) reported that the median purity of South Australian Police (SAPOL) seizures of phenethylamines in 2009/10 continued to decrease and was reported to be 6.8 % (an almost threefold decrease from 2008/09).

Ecstasy was generally purchased for both self and others, with one participant reporting purchasing ecstasy for others only. Ecstasy was purchased from a median of three people in the six months prior to interview. The majority of participants purchased ecstasy one to 12 times in that period, with seventeen percent purchasing ecstasy between 13-24 times in that period. REU obtained a median of four pills on the last occasion of purchase, a significant decrease from 2010. Ecstasy was mainly purchased from friends or known dealers and at a private residence or nightclub.

Methamphetamine

In 2011, the proportions of the participant sample reporting recent use of powder and base remained relatively stable, whilst there was a significant increase in the use of crystal methamphetamine. The frequency of use within the preceding six months remained relatively stable, and low (range 4-5.5 days) for all three forms of methamphetamine. In the six months prior to interview, smoking of crystal methamphetamine continued to be the preferred route of administration. Swallowing and smoking as a route of administration have become the primary methods of administering base; and swallowing and snorting were the preferred methods for administering powder methamphetamine.

The price for a point of both powder and base remained stable in 2011, whilst the price for a point of crystal methamphetamine increased to \$95. There were fairly substantial increases in the prices for a gram of the different forms of methamphetamine, however, due to small numbers these figures should be viewed with caution.

The purity of powder and base was largely perceived as medium, and participants reported that this had remained stable within the last six months. The majority of participants reported crystal purity as high, and again it was reported that this had remained stable in the preceding six months of interview. In contrast, seizures analysed by South Australia Police (SAPOL) revealed that the median purity of methamphetamine in 2009/10 had almost halved compared to 2008/09. All forms of methamphetamine were considered easy to very easy to obtain recently, with methamphetamine base appearing to be the easiest to purchase according to participant reports.

Overall, participants mostly reported obtaining all three forms of methamphetamine from friends or a known dealer, and at their friend's home.

Of the illicit drugs, most key experts (KE) considered methamphetamine to be an issue of particular concern at the moment. This was attributed to its increasing prevalence, its addictive nature, and the effects (health, mental and social) that it has on both the individual and their family/friends.

Cocaine

As mentioned previously, there was a significant decrease in the proportion of REU who nominated cocaine as their preferred drug of choice in 2011. However, the proportion of participants who reported lifetime and recent use of cocaine remained relatively stable. Frequency of use remained low and stable among those who reported recent use. Participants largely reported that the purity of cocaine was low, with a third believing it to be medium. Reports regarding the availability of cocaine were mixed, with equal proportions reporting that it was easy or difficult to obtain. Availability was largely reported to have remained stable over the preceding six months.

Few KE reported having contact with cocaine users, however those that did reported that there may have been a slight increase in the use of cocaine (although prevalence was reported to still be very low). One KE reported that levamisole is starting to be added to cocaine, which is an issue of great concern. Levamisole is a pharmaceutical drug which is thought to reduce blood pressure, and so manufacturers may be adding it to counteract the increased blood pressure that accompanies cocaine use. This is extremely problematic with US based studies revealing that cocaine related fatalities have been attributed to the presence of levamisole.

LSD

Almost one-third of the participant sample in 2011 reported recent use of LSD, stable from 2010. Frequency of LSD use was stable and remained consistently low. The amount of LSD used in a typical and heavy session remained stable, and the majority of participants reported being at a private venue (own/friend's home) at last time of intoxication.

The median price of LSD was slightly higher than that reported in 2010. The purity of LSD was perceived as high, and participants largely believed this had remained stable over the past six months. The availability of LSD changed quite considerably

in 2011, with almost equal proportions reporting that LSD was easy or difficult to obtain.

Virtually all of the KE reported that the prevalence of LSD was very low, and that they had seen very little of it among their clientele. Two KE noted that LSD had dropped off and appeared to have been replaced with 2, 5-dimethoxy-4-iodoamphetamine (Death on Impact - DOI).

Cannabis

The prevalence of cannabis use remained exceptionally high in 2011, with 94% of the sample reporting lifetime use and 92% reporting use within the preceding six months. The frequency of recent cannabis use by participants was lower than reported in 2010, dropping to a median of 50 days within a six month period. Participants reported 'usually' obtaining cannabis from a friend in the six months prior to interview. The price reported for a bag of hydro /bush remained stable in 2011, as did the availability (with participants reporting that cannabis was easy or very easy to obtain). The purity of hydro was reported as high and bush as medium, with the purity of both types of cannabis perceived as stable in the previous six months.

Other drugs

As in previous years, the large majority of the participant sample reported recent use of alcohol, although frequency of use did drop to a median of 48 days in a six month period (approximately twice a week). Many KE considered alcohol to be a particularly problematic drug due to its widespread prevalence, availability and social acceptability. Binge drinking was raised as an issue of particular concern. Almost the entire sample reported lifetime use of tobacco, and there were significant increases in both lifetime and past six month use of tobacco.

Fifteen percent of participants reported recent use of illicit benzodiazepines, at a frequency of about once a month. A very small proportion of participants reported recent use of illicit antidepressants.

Recent use of nitrous oxide increased significantly in 2011, with a third of the sample reporting use within the preceding six months. The prevalence of recent amyl nitrate use also increased, although this was not found to be significant. Frequency of use remained low for both inhalants. There were no significant changes in the use of ketamine, GHB or MDA.

Lifetime use of illicit pharmaceutical stimulants remained stable in 2011; however, use within the preceding six months increased significantly from 2010. One quarter of the sample reported that they had used magic mushrooms in the six months prior to interview, although frequency remained low. Recent use of heroin, over the counter (OTC) codeine and steroids remained stable in 2011.

Emerging psychoactive substances

Participants in 2011 were asked about their use of a range of research chemicals (RC). Those most recently used were 4-bromo-2,5-dimethoxyphenethylamine (2CB) (29%) and 2,5-dimethoxy-4-iodophenethylamine (2CI) (16%), both of which increased significantly in 2011. Several KE noted an increase in use of benzylpiperizine (BZP) and 3-trifluoromethylphenylpiperazine (TFMPP) which, when combined, produce an effect very similar to 3, 4-methylenedioxymethamphetamine (MDMA). It was also reported that due to the decreasing availability of ecstasy, manufacturers seemed to be experimenting with new mixes so that consumers really had no idea of what was in their pill. That is, consumers often buy pills which are

being sold as ecstasy, however, forensic analysis has revealed that these pills contain very little/no MDMA.

Health related issues

There were significant increases in lifetime and recent (past 12 month) overdoses, for both stimulants and depressants.

Sixteen percent of participants reported having accessed one or more medical or health service in the six months prior to interview in relation to their use of ecstasy and related drugs; this was a decrease compared to 2010 in which 24% reported seeking professional help. The most commonly accessed service in relation to 'any' drug use, by the few participants able to comment, was a general practitioner.

The proportion of clients attending Drug and Alcohol Services South Australia (DASSA) treatment services, with ecstasy as the primary drug of concern, decreased in 2011 and still remained relatively low compared to other illicit drugs. The proportion of clients nominating amphetamines as the primary drug of concern increased in 2011, with amphetamines being the second most commonly nominated primary drug of concern by clients of DASSA (after alcohol).

In 2011, there were increases in the prevalence of REU who reported experiencing problems as a result of their drug use, with a significant increase being noted for risk associated problems. Alcohol was nominated as the main drug associated with all types of harms.

In 2011, twenty-nine percent of the participants were assessed at high to very high risk of psychological distress as measured by the Kessler Psychological Distress Scale (K10), in the four-weeks prior to the survey.

Risk behaviour

Injecting risk behaviour

Sixteen percent of the sample reported that they had ever injected any drug. Five participants reported recently injecting any drug in 2011, most commonly some form of methamphetamine. With regard to longer-term trends, there was no evidence of a change in the prevalence of recent injecting amongst participants across the years. Of those who had injected in the past six months, only one participant reported that they had shared needles or injecting equipment.

Sexual risk behaviour

Evidence of risky sexual behaviour was again apparent among the participant sample in 2011. Of the participants who reported having had penetrative sex with a casual partner in the last six months, about half of the sample reported that they did not use protection during their last sexual encounter, regardless of whether they were sober or intoxicated. In addition, the vast majority of those who reported recent penetrative sex, reported having done so whilst under the influence of drugs – most commonly alcohol followed by cannabis and ecstasy.

Driving risk behaviour

Two-thirds of those who had driven in the six months prior to interview reported that they had driven whilst under the influence of alcohol; of these participants the majority reported driving over the legal blood alcohol concentration (BAC) limit on a median of two occasions in that period. Sixty percent of participants reported driving within an hour of consuming an illicit drug, and these participants had done so on a

median of eight times in the six months prior to interview. Cannabis and ecstasy were the most commonly used illicit drugs while driving.

Alcohol risk behaviours

The Alcohol Use Disorders Identification Test (AUDIT) is a brief screening tool which is used to identify individuals with alcohol problems. Using this test, participants scored a mean of 15.8, with males having significantly higher scores than females. Ninety percent of the sample scored eight or more; these are levels at which alcohol intake may be considered hazardous.

Law enforcement-related trends

Compared to 2010, there was a significant increase in the prevalence of past month criminal activity among REU (22% in 2010 versus 46% in 2011). Drug dealing continued to be the most common offence which had been committed, followed by property offences. Fraud and violent crime remained low among REU. The number of participants reporting past-year arrest remained stable.

Two-thirds of the sample reported that the level of police activity had remained stable over the preceding six months, while one-third reported an increase in activity.

Special topics of interest

Heavy Smoking Index nicotine dependence

Among those who had smoked daily, over one-third reported waiting 60 minutes or longer before smoking their first cigarette, and 49% reported smoking 10 or less cigarettes a day. Approximately one-quarter of daily smokers scored 4 or above indicating moderate-high dependence, with the mean Heavy Smoking Index (HSI) score being 2.2

Online drug-related activity

The majority of participants reported daily use of the internet, with only 9% of the sample reporting that they hadn't been online in the six months preceding interview. Of those who had used the internet in the last six months, 59% reported going online to obtain information about drugs.

Sleep patterns and practice associate with drug use

Over a third of the sample reported that the quality of their sleep was 'good' in the month preceding interview, although this seemed to decline on weekends. Thirty-seven percent of participants reported experiencing some form of sleep problem, and 42% reported that drug use had had a negative impact upon their quality of sleep. Perhaps as a result of this, almost a third of the sample reporting using sleep medications in the preceding month, the most common being Valium (diazepam).

Pleasure, happiness and quality of life scale

Participants were asked about the contribution of 15 life aspects to each of the three concepts: pleasure; happiness; and quality of life (QOL). The results indicate that quality of life is quite high among ecstasy users in SA, with participants scoring a mean of seven (out of ten) on the quality of life scale. REU reported that taking drugs contributed to feelings of pleasure quite considerably, but less so to their quality of life.

Ecstasy Dependence

Almost half of the sample obtained a score of zero on the ecstasy Severity of Dependence Scale (SDS), and just under a quarter obtained a score of 1 on the scale. This indicates that the majority of respondents reported no or few symptoms of dependence in relation to ecstasy use.

Conclusions

The results reported here describe trends in the use of ERD in 2011 in Adelaide, South Australia, and provide comparisons with the findings of the 2010 study. Many characteristics of ERD in the current study were comparable to previous years and remained stable. The notable changes in 2011 centred on the increase use of drugs other than ecstasy, particularly crystal methamphetamine, 2CI and 2CB – possibly as a result of continued reports of difficulties in obtaining ecstasy and the reports of decrease in the purity of ecstasy. Alcohol was most commonly associated with drug-related harms. Furthermore there was inconsistent condom use, driving under the influence of alcohol and other drugs, and a significant increase in past month criminal activity.

Implications

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

- Continued use by REU of multiple drugs in combination, and binge use of drugs warrants continued education regarding the harms associated with such behaviour, and continued promotion of harm reduction strategies.
- The significant increases in both stimulant and depressant overdoses is a serious public health concern, and it is essential that education and harm reduction be developed to address this issue.
- Methamphetamine continues to be prevalent and was nominated by the majority of KE as a problematic drug of concern. It is, therefore, important to develop and disseminate education and harm reduction strategies, regarding the harms associated with use of methamphetamine, to young people.
- Given the increasing use of emerging psychoactive substances (particularly 2CI and 2CB) among REU, close monitoring is required to monitor the harms associated with these drugs.
- Given the prevalence of supply of ecstasy to friends among REU there is a need for education strategies to better inform this group of the illegality of their behaviour and the consequences of such behaviour. This is highlighted by the lack of knowledge participants had about the laws surrounding ecstasy use.
- Continued close monitoring is required of the prevalence of injecting among REU, and development and implementation of strategies to reduce harms associated with injecting among this group of illicit drug users.
- Increased promotion of 'safe sex' practices is needed within this population of illicit drug users, especially regarding casual sexual experiences.
- Given the prevalence of drink and drug driving among REU, and the introduction of roadside drug testing in SA, there is a need for development and implementation of education and harm-reduction programs, targeted at young people, addressing the harms associated with such behaviour and the effects of different drug types upon driving ability.
- Considering the prevalence of alcohol related harm among REU, and daily alcohol consumption by some REU, specific harm reduction information is

needed to target this group. Key experts also noted that binge drinking was an ongoing problem that needs to be addressed. The high prevalence of tobacco use among REU is also an issue of grave concern.

- Considering the substantial prevalence of mental health issues, development and implementation of strategies is needed to address issues associated with drug misuse and dependence.
- The substantial increase in past month criminal activity was a surprising finding and it is important that this phenomenon continues to be closely monitored.

1 INTRODUCTION

The EDRS evolved from the Illicit Drug Reporting System (IDRS), an ongoing annual project funded by the Australian Government Department of Health and Ageing in South Australia (SA) since 1997, and in all states and territories of Australia since 1999. To date, the purpose of the IDRS has been to provide a coordinated approach to the monitoring of the use of illicit drugs, in particular heroin, methamphetamine, cannabis and cocaine. It is intended to serve as an early warning system, identifying emerging trends of local and national concern in various illicit drug markets. The study is designed to be sensitive to such trends, providing data in a timely fashion, rather than to describe phenomena in detail, such that it will provide direction for more detailed data collection on specific issues.

In June 2000, the National Drug Law Enforcement Research Fund (NDLERF), administered by the Australasian Centre for Policing Research (ACPR), funded a two-year, two state trial in New South Wales and Queensland of the feasibility of monitoring emerging trends in the markets for ecstasy and related drugs using the extant IDRS methodology. In addition, Drug and Alcohol Services Council (DASC), now known as Drug and Alcohol Services of South Australia (DASSA), agreed to provide funding for two years to allow the trial to proceed in this state. This component of the IDRS was known as the Party Drugs Module and the term 'party drug' was considered to include any drug that was routinely used in the context of entertainment venues such as nightclubs or dance parties, and by a population of users different to those surveyed by the main IDRS. 'Party drugs' included drugs such as 'ecstasy' (3, 4-methylenedioxymethamphetamine, MDMA), methamphetamine, LSD, ketamine, 3, 4-methylenedioxyamphetamine (MDA), and gamma-hydroxy butyrate (GHB).

In 2002, the National Drug and Alcohol Research Centre (NDARC) provided funding for the Party Drugs Module to be conducted in NSW, as did DASSA in South Australia. In 2003, NDLERF provided funding for the Party Drugs Module to be conducted in all jurisdictions across Australia, under the title of the Party Drugs Initiative (PDI), representing the first year that data for this project had been collected nationally. Funding was again provided by NDLERF in 2004. In 2005, the Australian Government Department of Health and Ageing and the Ministerial Council on Drug Strategy provided funding, as a project under the cost shared funding arrangement. In 2006, the Australian Government Department of Health and Ageing provided funding. In 2006, the PDI was renamed and is now known as the Ecstasy and Related Drugs Reporting System (EDRS).

1.1 Study aims

The specific aims of the 2011 South Australian EDRS were to:

- describe the characteristics of a sample of ecstasy users surveyed in Adelaide in 2011;
- examine the patterns of ecstasy and other drug use among this sample;
- document the current price, purity and availability of ecstasy and related drugs in Adelaide;
- examine participants' perception of the incidence and nature of ecstasy and other drug-related harms, including physical, psychological, occupational, social and legal harms;
- identify emerging trends in the ecstasy and related drug markets that require further investigation; and
- where possible, to compare findings of the 2011 EDRS.

2 METHOD

Methodology for this study was conducted as per the methodology trialled in the feasibility study (Breen et al., 2002). Data were triangulated from three sources, as follows:

- face to face interviews with current regular ecstasy users (REU) living in the Adelaide metropolitan area;
- telephone interviews with key experts (KE) who work professionally or as volunteers in the drug and alcohol area or a related field, and have knowledge of, or regular contact with, ecstasy and related drug users; and
- an examination of existing, current indicator data relating to drug use and drug-related issues.

2.1 Survey of regular ecstasy users (REU)

As detailed by White et al. (2003), ecstasy has been the most widely used of the group of drugs referred to previously as 'party drugs' in the last several years, and it was decided that regular ecstasy use should define the sentinel population of ecstasy and related drug users that the study sought to recruit. This decision was partly based on the knowledge that a market for 'ecstasy' (tablets sold purporting to contain MDMA) has existed in Australia for more than a decade, and, in contrast, other drugs used by this population have either declined substantially in popularity since the appearance of ecstasy (e.g. LSD), fluctuated widely in availability (e.g. MDA), or are relatively new in the market and are yet to be as widely used as ecstasy (e.g. ketamine and GHB).

2.1.1 Recruitment

The sample consisted of people who had regularly used ecstasy at least once per month in the 6 months prior to interview. In 2011, the desired sample of 100 participants was unable to be reached, and it is thought that this was due to a decline in ecstasy use and frequency. More specifically, 162 potential participants contacted the project co-ordinator about the study, but of these 46% were found to be ineligible (primarily because they had not used ecstasy frequently enough in the preceding six months). A total of 76 regular ecstasy users were interviewed from April to July of 2011. Participants were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements in two entertainment-focused street magazines, on university noticeboards and in several centrally located music stores. In addition, advertisements were posted on various websites. Some participants were also recruited using 'snowball' procedures (Biernacki & Waldorf, 1981). 'Snowballing' is a means of sampling 'hidden' populations that relies on peer referral and is widely used to access illicit drug users both in Australian studies (e.g. Boys et al., 1997; Ovendon & Loxley, 1996; Solowij et al., 1992) and international studies (e.g. Dalgarno & Shewan, 1996; Forsyth, 1996; Peters et al., 1997). For the EDRS, on completion of the survey, participants were asked to pass on information regarding the study to any friends or associates they believed may have been eligible to participate in the study, and a 'business card' with study contact details was provided for the purpose.

2.1.2 Procedure

Participants contacted the research officer either by telephone or email (via a web-site link) and were screened for eligibility. To meet entry criteria, participants had to be at least 16 years of age (due to ethical constraints), they must have used ecstasy at least six times over the last six months, and have been a resident (not incarcerated) of the Adelaide metropolitan region for at least the last 12 months.

Participants were assured that all information they provided was strictly confidential and anonymous, and that the study would involve a face-to-face interview that would take between 30 and 60 minutes to complete. All participants were volunteers who were reimbursed \$40 for their time and travel expenses. Interviews took place in varied locations convenient to the participants. Trained research interviewers with experience and understanding of how to administer the survey questionnaire conducted all interviews. The nature and purpose of the study was explained to participants before informed consent to participate was obtained, according to ethical guidelines.

2.1.3 Measures

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp et al., 1998; Topp et al., 2000), which incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij et al., 1992) and powder amphetamine/methamphetamine (Darke et al., 1994; Hando & Hall, 1993; Hando et al., 1997). The interview focused primarily on the preceding six months, and assessed:

- demographic characteristics;
- patterns of ERD use, including frequency and quantity of use and routes of administration;
- drug market characteristics: the price; purity; and availability of different ERD;
- risk behaviours (such as injecting, sexual behaviour, driving under the influence of alcohol and other drugs);
- help-seeking behaviour;
- mental and physical health, personal health and wellbeing;
- self-reported criminal activity;
- ecstasy-related problems, including relationship, legal and occupational problems;
- general trends in ERD markets, such as new drug types, new drug users and perceptions of police activity; and
- areas of special interest included online drug-related activity, ecstasy dependence, sleep patterns and pleasure, happiness and quality of life.

2.1.4 Data analysis

Statistical analyses (descriptive and inferential) were performed using the Statistical Package for the Social Sciences (SPSS) for Windows, Version 18.0. (PASW 2009). Continuous, normally distributed variables were analysed using *t*-tests and means reported. Where continuous variables were skewed, medians were reported and the Mann-Whitney *U*-test, a non-parametric analogue of the *t*-test (Siegel & Castellan 1988), was employed. Confidence Intervals (CI) were calculated using an excel spreadsheet available at <http://www.cebm.net/index.aspx?o=1023> (Tandberg). This calculation tool was an implementation of the optimal methods identified by Newcombe (1998).

2.2 Survey of key experts (KE)

The eligibility criterion for KE participation in the EDRS was regular contact, in the course of employment or otherwise, with a range of ecstasy users throughout the last six months. Specifically, average weekly contact with at least ten ecstasy users over the time period was required, unless individuals were considered appropriate due to their level of expertise in the field (e.g. police and intelligence analysts).

The interview schedule was a semi-structured instrument that included sections on drug use patterns, drug availability, criminal behaviour, health issues and police activity. The majority of interviews took approximately 30 minutes to conduct. Notes were taken during the interview and the responses were analysed and sorted for recurring themes. Interviews were conducted via telephone between September and October 2011. KE were remunerated with a small incentive (e.g. box of chocolates) for their time.

There were ten KE from various metropolitan regions of Adelaide. The majority of KE worked in the health sector, including in drug diversion, community drug and alcohol work, drug treatment services, mental health services, health promotion/information and emergency treatment. There were three KE from the law enforcement sector, ranging from forensic scientists to intelligence analysts.

In the following report, the information obtained from the KE will be presented in a qualitative fashion, by identifying the common themes and discussing them. Any major differences found between the KE reports will also be reviewed. No personal information was collected on any of the ecstasy or other drug users that KE had been in contact with.

2.3 Other indicators

To complement and validate data collected from the ecstasy user and KE surveys, a range of secondary data sources were utilised, including population surveys and other health and law enforcement data.

Data sources included in the report were:

- telephone advisory data provided by the Alcohol and Drug Information Service (ADIS) of South Australia;
- treatment services data from Drug and Alcohol Services South Australia (DASSA);
- data from the National Campaign Against Drug Abuse Household Survey of 1991 and 1993, and the National Drug Strategy Household Survey (NDSHS) of 1995, 1998, 2001, 2004 and 2007 (reports published by the Australian Institute of Health and Welfare);
- purity of drug seizures made by South Australian Police (SAPOL) and the Australian Federal Police (AFP), provided by the Australian Crime Commission (ACC);
- state-wide rates of drug-related arrests provided by SAPOL;
- national rates of methamphetamine-related and cocaine-related fatalities provided by the Australian Bureau of Statistics (ABS), in Roxburgh, A. & Burns, L. (in press) 2008;
- drug-related admissions to the Emergency Department of the Royal Adelaide Hospital (RAH), provided by the Emergency Department (ED);
- drug-related hospital admissions data (state and national) provided by the Australian Institute of Health and Welfare (AIHW) 2008.

3 DEMOGRAPHICS

Key Findings

- A total of 76 participants were interviewed for the EDRS survey in 2011.
- Participants were aged in their early-20s (median age of 21 years), predominantly male (68%), with the majority identifying as heterosexual (99%).
- The REU interviewed were well educated: half had gained post-secondary qualifications, while 8% were full-time students.
- Roughly one-fifth of the sample were currently in full-time employment with a mean income of \$459 per week. The majority were renting/owned (59%) or living in the parental/family home (40%).
- Three participants were currently in drug treatment.
- Demographic characteristics were generally consistent from 2010, except for age, sexuality and employment.

3.1 Overview of the REU participant sample

3.1.1 Demographic characteristics of the REU sample

In the 2011 EDRS, 76 participants were interviewed in South Australia. Eleven percent of the EDRS sample had participated in previous years; 5% in 2008, 4% in 2010, and one percent in 2002, 2004, 2005, 2006, 2007 and 2009. One participant had participated in a previous SA IDRS survey of injecting drug users.

In 2011, two-thirds (68%) of the sample interviewed were male. The mean age of the sample was 23 years (SD=6.05, range=17-45) with a median age of 21 years. The majority of participants reported their sexual identity as heterosexual (99%), and nominated English as their main language (97%). One participant was of Aboriginal and/or Torres Strait Island (A&TSI) descent.

Three-fifths (62%) of the sample reported that they were of single status, one-third (36%) had a partner and 3% reported to be married or living in a de facto relationship. Three-fifths (59%) lived in their own (owned or rented) accommodation and 40% lived in their parents' or family's home.

The median number of years of school education completed by the sample was 12 (range 9-12) and two-thirds (67%) of the participants had completed year 12. Half (55%) had completed courses after school, with 28% having completed a university degree and 28% a trade/technical qualification. Just over a fifth of participants were employed on a full-time basis (21%), a third were employed on a part-time/casual basis (36%), one-fifth were currently students (8% full-time, 13% part-time) and one-fifth were currently unemployed (22%). The mean weekly income was \$459.

Three participants were receiving drug treatment at the time of interview, two of which were receiving counselling and one of which was on the subutex program.

Table 1 presents key demographic characteristics across time. The demographic characteristics of regular ecstasy users recruited for the EDRS have remained relatively stable between 2003 and 2011. Demographic comparisons between the 2011 sample and 2010 sample showed a significant decrease in age ($p = 0.003$); and a significant increase in participants who identified as heterosexual ($p=0.011$; 95% CI: -0.038 – -0.2) and who were both working and studying ($p=0.005$; 95% CI: -0.05 – -0.22).

Table 1: Demographic characteristics of REU sample, 2003–2011

Characteristic	2003 (n=100)	2004 (n=100)	2005 (n=100)	2006 (n=100)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)	2011 (n=76)
Age (median in years) (range)	22 (17-56)	23 (16-41)	22 (16-43)	23 (16-48)	24 (16-51)	24 (17-59)	22 (16-54)	24 (18-51)	21 (17-45)
Sex (% male)	63	62	58	63	53	53	65	62	68
Sexual Identity (%)									
<i>Heterosexual</i>	91	84	89	89	84	80	83	87	99
<i>Gay male</i>	1	3	3	8	4	4	5	2	-
<i>Lesbian</i>	2	3	-	-	1	7	1	3	-
<i>Bisexual</i>	6	8	8	2	10	6	10	8	1
<i>Other</i>	-	-	-	1	1	4	1	-	-
English main language spoken at home (%)	95	98	99	98	99	99	99	99	97
A&TSI (%)	1	0	1	7	2	3	4	1	1
Employment (%)									
<i>Not employed</i>	20	15	17	14	18	23	33	20	22
<i>Full-time</i>	29	34	39	28	38	22	29	30	21
<i>Part-time/casual</i>	21	23	24	27	24	26	25	34	36
<i>Full-time student</i>	31	25	19	26	3	3	4	10	8
<i>Part-time student</i>	-	3	1	-	-	-	-	2	-
<i>Both studying & employed[#]</i>	-	-	-	-	12	18	8	1	13
<i>Home duties</i>	-	-	-	-	-	1	-	3	-
<i>Other</i>	-	-	-	6	5	7	1	-	-
School education* (median in years) (range)	12 (9-13)	12 (8-13)	12 (6-13)	12 (9-13)	12 (9-13)	12 (8-12)	11 (7-12)	12 (7-13)	12 (9-12)
Tertiary education (%)									
<i>None</i>	54	54	46	50	42	43	48	47	45
<i>Trade/Technical</i>	24	26	38	28	40	31	36	30	28
<i>University/College</i>	22	20	16	22	18	26	16	23	28
Prison history (%)	1	5	1	5	10	7	8	6	Not asked
Current drug treatment (%)	1	1	2	2	1	0	1	0	4

Source: EDRS interviews

* Question changed from 'How many years of school did you complete?' to 'What grade of school did you complete?'

Response option added to include 'both studying and employed'

4 CONSUMPTION PATTERN RESULT

Key Findings

- For the first time in the history of the SA EDRS, cannabis was the most popular drug of choice nominated by REU. Inversely, the proportion of REU who nominated ecstasy as their drug of choice declined significantly from 2010.
- There were significant increases in the recent use of tobacco, crystal methamphetamine, nitrous oxide, benzodiazepines and pharmaceutical stimulants.
- Less than one in five REU reported that they had ever injected a drug, which remained relatively stable from 2010.
- Almost half of the sample had recently binged on ecstasy and/or related drugs. The most commonly used drugs were ecstasy, alcohol and cannabis.
- When asked about changes in the drug market, the predominant theme to emerge among REU was that there had been an overall increase in drug use, or that people were switching to new drugs.

4.1 Drug use history and current drug use

In 2011, participants were asked about lifetime (i.e. ever having used) and recent (last six months) use of a broad range of drug types, including alcohol and tobacco. Table 2 presents the proportion of REU reporting lifetime and recent use of the main drug types investigated by the EDRS across the sampling years (methamphetamine, cocaine, LSD, MDA, GHB and ketamine), as well as the proportion reporting lifetime and recent use of alcohol and tobacco.

Regular ecstasy users are often described as polydrug users and the 2011 sample was no exception. Participants were asked about their lifetime and recent use of 23 different drug types¹. Participants reported using a median of twelve (range 3-22; n=76) drug types in their lifetime and a median of eight (range 3-18; n=76) in the preceding six months. An increasing proportion of REU reported the use of less commonly used substances, including many of the synthetic analogues known as 'research chemicals' including mephedrone, ivory wave, dimethyltryptamine (DMT - a powerful hallucinogen); synthetic drugs such as 2CI, 2CB and BZP; and naturally occurring drugs, such as kava (data not shown). In 2011, the EDRS included a section investigating the prevalence of use of these substances among this sample. Results can be found in Section 4.8: 'Emerging psychoactive substances (EPS) use'.

Table 2 presents the proportion of REU reporting lifetime and recent drug use across time. The drugs most likely to have 'ever' been used and to have been used in the preceding six

¹ Drug types were ecstasy (pills, powder & capsules), methamphetamine (powder, base & crystal), pharmaceutical stimulants, cocaine, LSD, MDA, 'magic mushrooms', ketamine, GHB (includes 1,4-butanediol and gamma-butyrolactone (GBL)), amyl nitrate, nitrous oxide, alcohol, cannabis, benzodiazepines, antidepressants, tobacco, heroin, methadone, buprenorphine, over the counter (OTC) stimulants, steroids, OTC codeine and other opiates

months were alcohol, followed by cannabis and tobacco. This has remained relatively constant over the years.

Table 2: Lifetime and recent (last six months) use of REU, 2003–2011

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alcohol									
Ever used (%)	100	100	100	99	98	99	96	99	99
Used last six months (%)	98	96	99	97	94	97	93	92	99
Cannabis									
Ever used (%)	100	97	97	98	97	95	98	100	97
Used last six months (%)	87	81	87	83	80	74	96	84	92
Tobacco									
Ever used (%)	81	76	90	87	86	84	90	80	93
Used last six months (%)	72	65	78	73	73	70	80	69	86
Meth. powder (speed)									
Ever used (%)	82	86	83	75	81	55	60	71	67
Used last six months (%)	65	62	66	51	53	30	30	38	45
Meth. base									
Ever used (%)	75	84	88	72	81	46	46	49	41
Used last six months (%)	70	72	82	63	64	34	21	28	24
Crystal meth. (ice/crystal)									
Ever used (%)	60	60	62	73	66	47	52	55	50
Used last six months (%)	48	47	41	62	49	34	32	26	43
Cocaine									
Ever used (%)	57	59	67	49	71	53	45	69	75
Used last six months (%)	37	26	49	31	36	20	20	42	45
LSD									
Ever used (%)	73	77	82	71	75	64	71	66	63
Used last six months (%)	30	36	48	34	33	35	37	35	30
MDA									
Ever used (%)	31	30	19	21	30	16	8	27	32
Used last six months (%)	21	14	9	9	7	1	2	7	15
Ketamine									
Ever used (%)	47	51	44	35	49	37	31	49	37
Used last six months (%)	36	39	24	11	26	20	19	13	8
GHB/1,4B/GBL									
Ever used (%)	38	35	33	31	32	19	9	24	26
Used last six months (%)	12	12	18	8	11	4	2	8	5

Source: EDRS interviews

Table 2: Lifetime and recent (last six months) use of REU, 2003–2011(continued)

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Amyl nitrate									
Ever used (%)	40	43	31	30	41	27	30	40	45
Used last 6 months (%)	13	16	9	9	13	7	16	8	17
Nitrous oxide									
Ever used (%)	82	74	74	67	61	50	53	59	59
Used last 6 months (%)	55	47	46	33	30	26	33	20	36
Benzodiazepines*									
Ever used (%)	49	57	54	50	49	32	34	42	53
Used last 6 months (%)	30	40	26	33	32	18	19	25	42
Antidepressants*									
Ever used (%)	24	31	31	33	39	32	25	28	28
Used last 6 months (%)	12	14	10	16	14	7	5	12	13
Pharmaceutical stimulants*									
Ever used (%)	-	54	60	49	46	28	30	45	49
Used last 6 months (%)	-	21	24	20	15	4	5	10	24
Mushrooms									
Ever used (%)	-	-	55	50	60	47	45	52	62
Used last 6 months (%)	-	-	14	18	12	5	18	14	24
Heroin									
Ever used (%)	10	19	9	9	22	19	17	12	16
Used last 6 months (%)	2	3	3	1	4	8	6	2	7
Methadone									
Ever used (%)	0	8	6	6	5	8	11	5	11
Used last 6 months (%)	-	0	0	2	1	1	1	0	4
Buprenorphine									
Ever used (%)	0	8	2	3	5	7	4	1	5
Used last 6 months (%)	-	6	1	2	1	4	1	0	5
Other Opiates									
Ever used (%)	22	24	20	21	22	19	30	15	41
Used last 6 months (%)	7	10	8	4	12	10	15	9	20

Source: EDRS interviews

* Includes both licit and illicit use

Compared to 2010, significant changes in consumption patterns for 2011 were:

- higher lifetime use of tobacco (80% in 2010 versus 93% in 2011; 95% CI: -0.025 – -0.2297; p=0.027);
- higher recent use of tobacco (69% in 2010 versus 86% in 2011; 95% CI: -0.042 – -0.29; p=0.016);
- higher recent use of crystal methamphetamine (26% in 2010 versus 43% in 2011; 95% CI: -0.029 – -0.31; p=0.028);

- higher recent use of nitrous oxide (20% in 2010 versus 36% in 2011; 95% CI: -0.025 – -0.29; $p=0.032$);
- higher recent use of benzodiazepines (25% in 2010 versus 42% in 2011; 95% CI: -0.028 – -0.31; $p=0.029$);
- higher recent use of pharmaceutical stimulants (10% in 2010 versus 24% in 2011; 95% CI: 0.026 – -0.26; $p=0.026$);
- higher lifetime use of other opiates (15% in 2010 versus 41% in 2011; 95% CI: -0.12 – -0.38; $p=0.00038$)

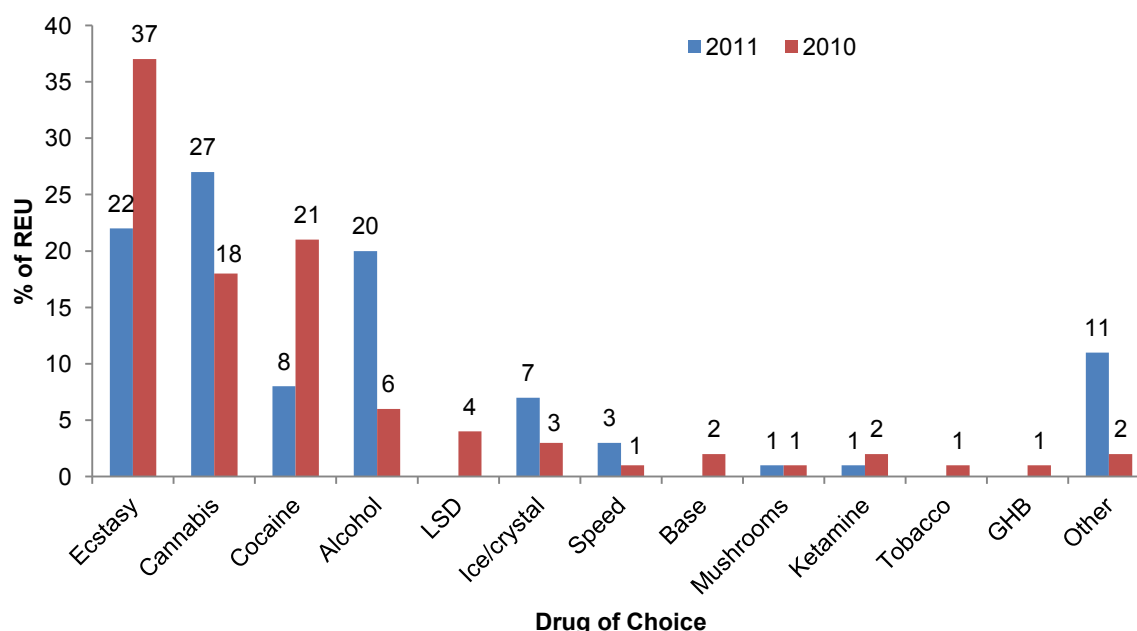
4.1.1 Injecting drug use

In 2011, sixteen per cent of the sample ($n=12$) reported having ever injected any drug, and of those 42% ($n=5$) reported injecting in the 6 months prior to interview. This has remained relatively stable from 2010. See Section 7.1 'Injecting Risk Behaviour' for further analyses on injecting and injecting-related risk behaviour.

4.1.2 Drug of choice and binge drug use

Figure 1 shows the main drug of choice nominated by participants in 2011. Cannabis was the preferred drug of choice for 27% of the sample, and was then followed by ecstasy (22%). It is interesting to note that this is the first time in the history of the SA EDRS that ecstasy was not the most popular drug of choice nominated by REU. The next most preferred drug was alcohol (20%), which had increased significantly from 2010 ($p=0.019$; 95% CI: -0.24 – 0.03). There was a significant decrease in the proportion of participants nominating cocaine as their drug of choice ($p=0.036$; 95% CI: 0.019–0.23), with this dropping in rank to the fourth most popular drug of choice. The decline of ecstasy was also significant ($p=0.04$; 95% CI: 0.016–0.29).

Figure 1: Drug of choice of REU, 2010 & 2011



Source: EDRS participant interviews

Participants were asked whether they had binged on ERD in the six months proceeding interview. Bingeing was defined as using drugs on a continuous basis for more than 48

hours without sleep (Ovendon & Loxley, 1996). The proportion of participants who reported bingeing on ERD within the six months prior to interview was 48%, a slight increase from 2010 (38%). Bingeing occurred on a median of two occasions (range 1-30) with the median length of the longest binge being just over two days (55 hours, range 48-120). The frequency remained stable from 2010, whilst the duration of the binge episode was lower compared to 2010 which reported a median longest binge of three days (72 hours; range 48-164).

Amongst those who had binged for over 48 hours, ecstasy (40%) was the drug most commonly reported being used in a binge session. Alcohol (> five standard drinks) (36%), tobacco (36%), cannabis (28%), ice/crystal methamphetamine (21%), energy drinks (13%), and speed (11%) were also commonly reported as being used in a binge session. Other drugs reported included base (9%), cocaine (7%), nitrous oxide (7%), LSD (4%), mushrooms (4%), GHB (3%), MDA (3%), ketamine (3%), pharmaceutical stimulants (3%) and amyl nitrate (1%). The type of drugs that participants reported as being used in a binge session differed somewhat to those in 2010. Larger proportions of participants reported binge use of ecstasy (32% versus 40%), crystal methamphetamine (12% versus 21%), cannabis (17% versus 28%), alcohol (24% versus 38%) and tobacco (22% versus 36%).

Table 3: Proportion of participants reporting use of various drugs during a 'binge'* episode in the last six months, 2010 & 2011

Drug	Percent of whole sample to include drug in 'binge' episode in the last 6 months	
	2010 (n=92)	2011 (n=76)
Ecstasy	32	40
Meth powder	11	11
Meth base	10	9
Meth crystal	12	21
Pharmaceutical stimulants	3	3
Cocaine	10	7
LSD	8	4
Mushrooms	1	4
MDA	1	3
Ketamine	0	3
GHB	2	3
Amyl nitrate	0	1
Nitrous oxide	2	7
Cannabis	17	28

Source: EDRS participant interviews

* Defined as an episode of use of ecstasy and/or related drugs for >48 hours continuously, without sleep

Table 3: Proportion of participants reporting use of various drugs during a ‘binge’* episode in the last six months, 2010 & 2011 (continued)

Drug	Percent of whole sample to include drug in ‘binge’ episode in the last 6 months	
	2010 (n=92)	2011 (n=76)
Alcohol	24	38
<5 std drinks	1	3
>5 std drinks	23	36
Other	2	3
Tobacco	22	36
Energy drinks	16	13

Source: EDRS participant interviews

* Defined as an episode of use of ecstasy and/or related drugs for >48 hours continuously, without sleep

4.1.3 Frequency of use in REU

In 2011, participants were asked how often they used ERD. The majority of responses reported between monthly and weekly use. In comparison to 2010, there has been an increase in fortnightly use and a slight decrease in monthly use. Only a small proportion reported using ecstasy and related drugs daily or more than once a week.

Table 4: Frequency of ERD use in the REU sample, 2010 & 2011

	2010 (n=89) %	2011 (n=76) %
Not in the last month	9	1
Monthly	25	22
Fortnightly	30	37
Weekly	27	30
More than once a week	9	5
Once a day	0	1
More than once a day	0	3

Source: EDRS REU interviews

4.1.4 Change in trends of ERD use

KE and REU participants were asked to report if there was anything new happening in relation to drug use, such as new drugs, patterns etc. in the last six months. Fifty percent of the REU sample indicated that there had been some recent change in drug use.

Most commonly reported by participants:

The primary theme to emerge was that there had been an increase in drug use, or that people had switched to different/new drugs (n=25). The primary drugs mentioned were amphetamines (n=7) and psychedelics (n=6), with three participants also noting that there had been an increase in the use of opiates.

KE Comments

- KE information supported the view that MDMA had been on the decrease and that there was very little ecstasy around at the moment. One KE attributed this to the crackdown in manufacturing precursors. Price was thought to be about \$15-25 for a pill.
- Some KE also mentioned that the use of pharmaceuticals was increasing, and that REU were increasingly using pharmaceuticals such as alprazolam to come down from other drugs.
- The issue of binge drinking, principally among young people, was noted as an issue of particular concern.

4.2 Ecstasy use

Key Findings

- The median age of first use was 17 years of age.
- There were no significant gender differences, for either age of first use or age of first regular use.
- Participants reported using ecstasy a median of 12 days in the preceding six months, stable from 2010.
- The proportion of participants who reported using more than one pill in a typical session, and who had consumed ecstasy in a binge session, remained relatively stable in 2011.
- Swallowing was the primary route of administration both across lifetime and in the last six months.
- Over a third of the sample (38%) reported that the last time they consumed ecstasy they had been at a nightclub.

4.2.1 Ecstasy use among REU

Table 5 summarises the ecstasy use patterns of the participant sample across 2004 to 2011. Both the mean and median age at which participants first tried ecstasy was 17 years (SD=2.75; range 12-30; n=76), with 84% of the sample being 18 or under. Participants reported that regular (at least monthly) ecstasy use occurred at a mean age of 19 years (SD =3.46) and at the median age of 18 years (range 15-35 years). There were no significant differences in terms of gender, for either age of first use or age of first regular use.

In 2011, participants were asked to provide information on their use of ecstasy pills, powder and capsules². The median number of days participants reported using any ecstasy (pills, powder or capsules) within the previous six months was 12 (range 6-120; n=92); this was stable from 2010.

Fifty-seven percent of the sample reported using ecstasy (any form) once a fortnight or less (53% reported such use in 2010). Thirty percent of participants reported using ecstasy between fortnightly and weekly (32% reported such use in 2010). The proportion of participants who reported use of ecstasy more than weekly was 13% (15% in 2010). Twenty-four days within six months equates to once weekly use on average. Readers are reminded that the minimum frequency of use of six days corresponds to the survey entry requirement for participants.

Participants reported that the median number of ecstasy tablets used in a typical session was two and a half tablets (range 1-10; n=76) and this has remained stable since 2004. There was no change in the median 'most' amount typically used in a single session, with a median of five tablets (range 1-25; n=76) reported by participants in 2011. Over three-quarters (83%) of REU reported that they typically used more than one tablet and just over a half (51%) reported using over two tablets per session. Forty percent reported having binged on ecstasy in the preceding six months and amongst those who had reported

² This is the fourth year we have distinguished capsules from pills as a form of ecstasy.

bingeing on ecstasy, the longest binge session reported was a median of 55 hours (range 48-120 hours). Whilst the prevalence of ecstasy bingeing was stable from 2010, there was a decline in the duration of longest binge session (55 versus 72 hours).

Table 5: Patterns of ecstasy use among the participants, 2004–2011

	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)	2011 (n=76)
Median age first used ecstasy (years)	18	18	18	18	18	17	18	17
Median age first used ecstasy regularly (years)	19	19	19	19	19	19	19	19
Median days used ecstasy in the last six months (range)	12 (6-180)	15 (6-96)	12 (6-96)	12 (6-72)	12 (6-96)	16 (5-74)	12 (6-120)	12 (6-120)
Median tablets in typical session* (range)	2 (0.8-7)	2 (0.25-6)	2 (0.5-10)	2 (1-8)	2 (1-10)	2 (0.5-10)	2 (0.5-24)	2.5 (1-10)
Typically use >1 tablets (%)	84	73	80	80	70	81	81	83
Recently binged** on ecstasy (%)	47	57	55	59	27	38	32	40
Ever injected# ecstasy (%)	18	9	10	14	18	6	8	7
Use other drugs with ecstasy (%)	94	87	93	95	99	77	91	90
Use other drugs to come down from ecstasy (%)	79	83	85	85	81	60	54	67

Source: EDRS participant interviews

* A session was defined as a period of continuous drug use

** A binge was defined as an episode of use of party drugs or stimulants for >48 hours continuously, without sleep

Refers to ecstasy 'pills' only; excludes powder and capsules

Note: Medians rounded to nearest whole number

4.2.2 Other drug use with ecstasy and when coming down from ecstasy

In regards to their last episode of ecstasy use, participants were asked to provide detail on the other substances they had used either 'with ecstasy', or when 'coming down' from ecstasy. The results are presented in Table 6.

The large majority of participants (90%) reported that on their last occasion of use, they had used other drugs in combination with ecstasy. This was stable from 2010 (91%). The most

commonly used drug in this context was alcohol (75%), followed by tobacco (62%), cannabis (49%), energy drinks (15%), methamphetamine powder (15%), crystal methamphetamine (15%) and base (9%). The use of other drugs in combination with ecstasy was very low. These figures are relatively consistent from 2010; there was a notable increase in the use of tobacco in combination with ecstasy, however, this was not significant.

Two-thirds of the sample reported that, on their last episode of ecstasy use, they had used other drugs to come down from ecstasy. This was a slight, although non-significant, increase from 2010. Cannabis was the drug most commonly used by participants to come down from ecstasy, and this increased significantly in 2011 (36% in 2010 versus 53% in 2011; $p=0.043$; 95% CI: -0.017 – -0.31). Thirteen percent of the sample reported using alcohol, benzodiazepines or tobacco (respectively) to come down from ecstasy.

Table 6: Proportion of participants reporting use of other drugs in combination with, and coming down from, ecstasy: by drug type, 2010 & 2011

Drug	Used in combination with ecstasy		Coming down from ecstasy	
	(% of participants)		(% of participants)	
	2010 (n=92)	2011 (n=76)	2010 (n=92)	2011 (n=76)
Methamphetamine powder	5	15	0	0
Methamphetamine base	7	9	1	1
Methamphetamine crystal	11	15	0	0
Pharmaceutical stimulants	0	0	0	0
Cocaine	11	4	0	0
LSD	7	4	0	0
MDA	0	4	0	0
Mushrooms	2	0	0	0
Ketamine	1	1	2	3
GHB	1	1	0	0
Amyl nitrate	2	1	0	0
Nitrous oxide	4	5	2	1
Cannabis	41	49	36	53

Source: EDRS participant interviews

Table 6: Proportion of participants reporting use of other drugs in combination with, and coming down from, ecstasy: by drug type, 2010 & 2011 (continued)

Drug	Used in combination with ecstasy		Coming down from ecstasy	
	(% of participants)		(% of participants)	
	2010 (n=92)	2011 (n=76)	2010 (n=92)	2011 (n=76)
Alcohol:	85	75	15	13
< 5 standard drinks	12	5	9	0
> 5 standard drinks	73	70	7	13
Anti-depressants	0	-	0	-
Benzodiazepines	0	8	2	13
Tobacco	48	62	26	13
Energy Drinks	21	15	2	0
Other	1	4	4	5
Any	91	90	54	67

Source: EDRS participant interviews

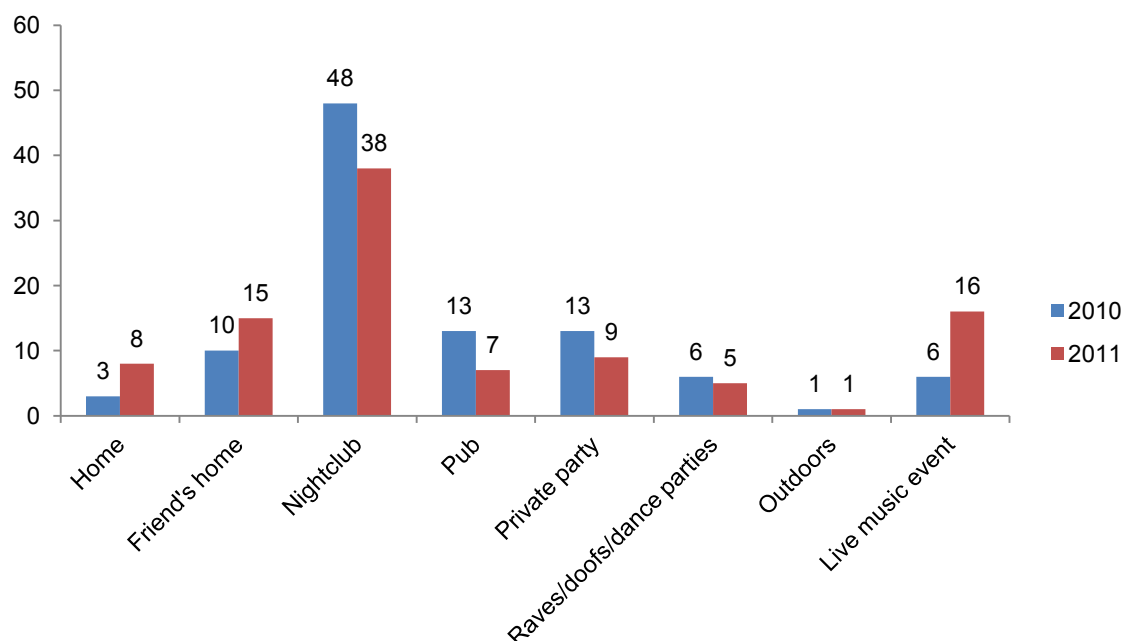
4.2.3 Route of administration

In the six months preceding the interview, 100% of participants had swallowed ecstasy pills (97% in 2010), 76% had snorted them (59% in 2010), 8% had shelved/shafted them (4% in 2010) (refers to vaginal/anal administration respectively), 7% had smoked them (3% in 2010) and 1% had injected ecstasy pills (4% in 2010). Ecstasy capsules were predominantly swallowed by 33% of the entire sample (34% in 2010); 18% had snorted them (14% in 2010), and no participants had smoked (1% in 2010), injected (1% in 2010) or shelved/shafted (0% in 2010) ecstasy capsules in the preceding six months. Ecstasy powder was swallowed by 21% of the sample in the preceding six months (7% in 2010), snorted by 24% (13% in 2010), smoked by one participant and also injected by one participant (stable from 2010). One participant reported having shelved or shafted ecstasy powder during that time (one report in 2010). The vast majority of participants (79%) nominated oral ingestion as their main route of ecstasy administration, 20% mainly snorted the drug, and 1% mainly smoked it. No participants' reported injecting as their main route of administration.

Reported routes of administration for both recent and lifetime use have remained relatively stable from 2010. In relation to lifetime prevalence, larger proportions of the sample reported snorting ecstasy pills (91% versus 74%), powder (43% versus 37%) and capsules (36% versus 25%). There was also an increase in the prevalence of swallowing ecstasy powder (37% versus 21%). In relation to recent use, the prevalence of snorting ecstasy pills and powder increased, as did the prevalence of swallowing ecstasy powder. Prevalence of use, particularly recent use, by other routes of administration (smoking or injecting) remains low.

Figure 2 presents the types of locations that participants 'last used' ecstasy. It should be noted that participants were asked to consider where they were for the majority of the time they were 'under the influence' of the drug, not where they were when they 'took [administered] the drug'. The location of last ecstasy use by participants while intoxicated in the six months prior to interview was at a nightclub (38%), followed by home (23%) (own home or a friend's home), live music event (16%), with fewer numbers reporting a private party (9%), pub (7%), rave (5%) or outdoors (1%).

Figure 2: Location of last ecstasy use by participants, 2011



Source: EDRS participant interviews

4.2.4 Understanding of laws around ecstasy use

In 2011, participants were asked about their understanding of some of the laws surrounding ecstasy use. More specifically, they were asked how much ecstasy they would need to be caught with to be charged with supply, and whether they thought there would be a difference in penalty if they were caught with ecstasy and they mentioned it was for personal use versus for friends.

In regards, to the amount of ecstasy that one would need to be caught with to be charged with supply, 42% of REU reported that they did not know what this amount might be. The remaining participants believed that they would need to be caught with a median of eight tablets/pills to be charged with supply (range 1-75).

Forty-seven percent believed that if they were caught with ecstasy there would be no difference in penalty if they reported that it was for personal use, or for friends. Of those who thought there would be a difference in penalty, the majority (76%) thought the penalty would be heavier if they had obtained ecstasy for friends rather than for personal use. Three participants thought the penalty would be less, and six participants weren't sure what the difference in penalty would be.

4.2.5 Use of ecstasy in the general population

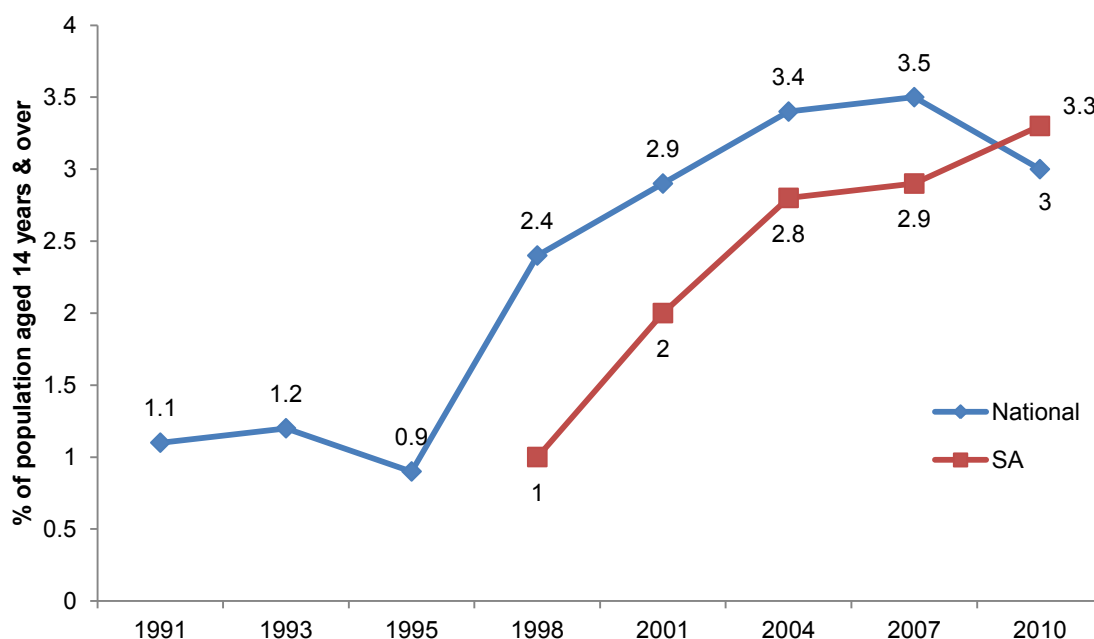
The Australian Institute of Health and Welfare has conducted household surveys over the last decade and collected data on the prevalence of use of various illicit drugs among the general population of Australia (Australian Institute of Health and Welfare, 2008).

Figure 3 shows the long-term trend in the prevalence of ecstasy use in Australia from 1991 to 2010 and in South Australia from 1998 to 2010. As can be seen, from 1995-2007 there was a rapid increase in the prevalence of ecstasy use in the previous 12 months. However, in 2010 (for the first time since 1995) there was a statistically significant decline in recent ecstasy use. This decrease was seen among males and those aged between 14-19 years (Australian Institute of Health and Welfare, 2011). Recent use of ecstasy remained most prevalent among 20 to 29 year olds, with one in ten (9.9%) having used ecstasy in the previous 12 months. In general, males were more likely to be recent users of ecstasy except among 12 to 17 year olds, where the rates were virtually equal (males 0.7% versus females 0.8%) (Australian Institute of Health and Welfare, 2011). Of those that had used ecstasy in the last 12 months, half reported using once or twice a year (53.1%), almost a third reported using every few months (31.4%), 12.2% reported monthly use and 3.3% reported daily or weekly use during that period (Australian Institute of Health and Welfare, 2011).

Figure 3 also shows that in 2010, for the first time, South Australia had a slightly higher prevalence of recent use of ecstasy than among the national population (3.3% versus 3.0%). The prevalence of recent use of ecstasy reported in 2010 (SA) was the highest recorded since data collection began for this survey.

In 2010, 10.3% of the Australian population aged 14 years and older had ever used ecstasy, an increase from 8.9% in 2007. Again, lifetime use of ecstasy was highest amongst those in the 20 to 29 year age group (24%) (Australian Institute of Health and Welfare, 2011).

Figure 3: Prevalence of recent* ecstasy use in Australia and South Australia, 1991–2010



Sources: National Campaign Against Drug Abuse Household Survey 1991, 1993; National Drug Strategy Household Survey 1995, 1998, 2001, 2004, 2007, 2010 (Australian Institute of Health and Welfare, 2005, 2008, 2011); Drug and Alcohol Services internal document 2008

* Used at least once in the last 12 months

Note: In the 2001 and earlier surveys, ecstasy was analysed as ecstasy/designer drugs, the term 'designer drugs' not being defined in the survey. The 2004 survey separated out ecstasy, ketamine and GHB and did not cover any other 'designer drugs'

Similar to the EDRS sample, the majority of recent users of ecstasy surveyed by the National Drug Strategy Household Survey (NDSHS) in 2010 reported that they had typically obtained ecstasy from a friend or acquaintance (68%), although there was a statistically significant increase in those obtaining ecstasy from a dealer (21.6% in 2007 versus 28.3% in 2010). The most common place to use ecstasy was at raves/dance parties (61.7%), with large proportions also using at public establishments (55%) and private premises (52.9%) (Australian Institute of Health and Welfare, 2011). This has remained relatively stable from 2007.

4.3 Methamphetamine Use

Key Findings

- Lifetime use of methamphetamine remained stable at 83%, although there was a significant increase in recent (past six month) use of crystal methamphetamine.
- Frequency of use, for all three forms of methamphetamine, remained stable in 2011.
- Median age of first use remained stable for methamphetamine powder, whilst decreasing slightly for base and crystal methamphetamine.
- Smoking continued to be the common route of administration for crystal methamphetamine. There was an increase (non-significant) in the proportion of REU who reported snorting powder methamphetamine and an increase in the those who reported smoking base (although again this didn't quite reach significance, $p=0.052$).

4.3.1 Methamphetamine use among REU

Whilst the majority (83%) of participants reported having used one or more forms of methamphetamine (speed, base and/or ice/crystal) at some stage during their lifetimes (stable from 2010), there was an increase in the recent use of any form of methamphetamine (67% versus 56%). Fifteen percent of participants reported having ever injected methamphetamine. The median number of days used was 6 (range 1-165).

The distinction between three forms of methamphetamine continued in the 2011 survey. For a detailed commentary on the reasons for the differentiation into three distinct types, see White, Breen & Degenhardt (2003). The three forms of methamphetamine discussed are powder, base and ice/crystal methamphetamine.

4.3.2 Methamphetamine powder (speed)

Table 7 summarises the patterns of use of methamphetamine powder among the participants in 2011, with 2010 data for comparison. In 2011, participants reported having first used powder at a median of 18 years (range 15-29 years). Sixty-seven percent of participants reported lifetime use, and 45% of participants reported using methamphetamine powder in the six months prior to interview. A closer analysis of frequency of use revealed that 59% ($n=20$) of methamphetamine powder users had used once a month or less. A further 27% ($n=9$) reported using between monthly and fortnightly, 6% ($n=2$) reported using between fortnightly and weekly and 9% ($n=3$) used on a greater than weekly basis.

With respect to the 'average' and 'most' amounts used in a single session of use, a larger number of participants provided information in terms of grams rather than points or lines. The median amount of grams used in a session was 0.85 (range 0.10-3), and the median amount of points was 1 (range 0.25-4). The 'most' amount of powder methamphetamine used in a single session reported by participants was a median of 1.5 grams (range 0.10-5) and the median number of points was 1.5 (range 0.25-6). Compared to 2010, the 'average' and 'most' quantities reported remained relatively stable. Readers are reminded, however,

that the measure of a 'point' is likely to be variable and unreliable as a measure of quantity actually consumed.

Most users of methamphetamine powder reported swallowing (62%) or snorting (62%) as a route of administration in the six months prior to interview. Forty-four percent reported having smoked and 9% reported having injected powder, in that time. In comparison to 2010, in 2011 there was a shift in the various routes of administration, with snorting of powder methamphetamine increasing to reach equality with swallowing as a route of administration. In 2011, almost two-thirds of participants reported snorting as a route of administration (62%) compared to 53% in 2010. Smoking as a route of administration of this form of methamphetamine also increased, with 44% of participants reporting that they had smoked methamphetamine powder in the preceding six months, compared to 26% in 2010. The proportion of participants reporting bingeing on powder methamphetamine in 2011 (22%) doubled compared to 2010 (11%).

Table 7: Patterns of methamphetamine powder use and route of administration of methamphetamine powder among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	18 (14-45)	18 (15-29)
Ever used (lifetime) (%)	71	67
Used in last 6 months (%)	38	45
Days used in last 6 months [#] : median (range)	2 (1-90)	4 (1-96)
Average amount used in a single session [*] :		
Grams: median (range; n)	1 (0.1-3.0; 17)	0.85 (0.1-3.0; 22)
Points: median (range; n)	1.5 (0.5-3.0; 8)	1 (0.25-4.0; 6)
Lines: median (range; n)	2 (1-3; 5)	-
Most amount used in a single session [*] :		
Grams: median (range; n)	1 (0.25-4.0; 14)	1.5 (0.1-5.0; 23)
Points: median (range; n)	2 (0.50-6; 8)	1.5 (0.25-6.0; 6)
Lines: median (range; n)	2 (1-3; 3)	-
Routes of Administration recent use [#] (%):	(n=34)	(n=34)
Swallowing	68	62
Snorting	53	62
Smoking	27	44
Injecting	12	9

Source: EDRS participant interviews

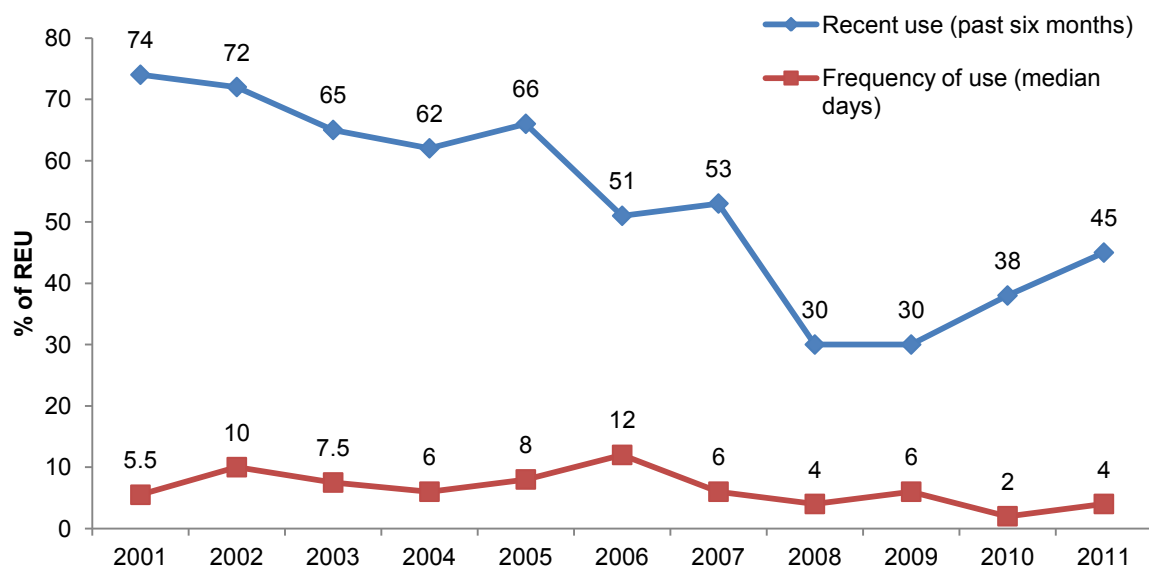
[#] Of those who reported use in the last 6 months

^{*} A session was defined as a period of continuous drug use without sleep, in the last 6 months

An analysis of trends over time (see Figure 4) revealed that between 2003 and 2009 there was a steady decline in the proportion of participants reporting recent use of powder methamphetamine. However, it appears that the use of methamphetamine powder may be on the rise again with 45% of REU reporting that they had used methamphetamine powder

in 2011. The median number of days used in the last 6 months has remained relatively stable at 4 days.

Figure 4: Methamphetamine powder – trends in recent use and median days used, 2001–2011



Source: EDRS participant interviews

4.3.3 Methamphetamine base

Table 8 summarises the patterns of use of methamphetamine base reported by participants in 2011. The median age of first use was 18 years (range 15-38). Forty-one percent of the sample had used in their lifetime, with 24% of participants reporting that they had used methamphetamine base in the six months prior to interview. Analysis of the frequency of use over the previous 6 months revealed that 59% (n=10) of base users had used once a month or less, 12% (n=2) reported using greater than monthly and up to once per fortnight, 12% (n=2) reporting between fortnightly and weekly, and the remaining 18% (n=3) reported using more than weekly.

With respect to the ‘average’ and ‘most’ amounts used in a session of use, most participants provided information in terms of ‘points’ of base, with considerably fewer participants commenting on the use of grams. The ‘average’ amount of base methamphetamine used in a session reported by participants was a median of two points (range 0.50-20). The median ‘most’ amount of points of powder methamphetamine used in a session was three (range 0.50-30) Compared to 2010, there has been little change in the ‘average’ or ‘most’ amounts of points or grams consumed.

Participants who had used methamphetamine base in the last six months reported having used by swallowing (83%), smoking (83%), snorting (39%), and/or injecting (17%). Readers should note that smoking base methamphetamine overtook snorting in 2007 and remained the second most popular route of administration until 2010. In 2011, smoking equalled swallowing as the main route of administration for methamphetamine base. The proportion of participants reporting bingeing on base methamphetamine in 2011 was 19%.

Table 8: Patterns of methamphetamine base use and route of administration of methamphetamine base among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	19 (14-45)	18 (15-38)
Ever used (lifetime) (%)	49	41
Used in last 6 months (%)	28	24
Days used in last 6 months [#] : median (range)	3 (1-150)	5 (1-150)
Average amount used in a single session [*] : Grams: median (range; n) Points: median (range; n)	- 2 (0.10-5;19)	0.5 (n=1) 2 (0.5-20; 15)
Most amount used in a single session [*] : Grams: median (range; n) Points: median (range; n)	1.25 (1-4; 4) 2 (0.25-20.00; 15)	0.5 (n=1) 3 (0.5-30; 15)
Routes of Administration recent use [#] (%):	(n=26)	(n=18)
Swallowing	65	83
Snorting	19	39
Smoking	50	83
Injecting	12	17

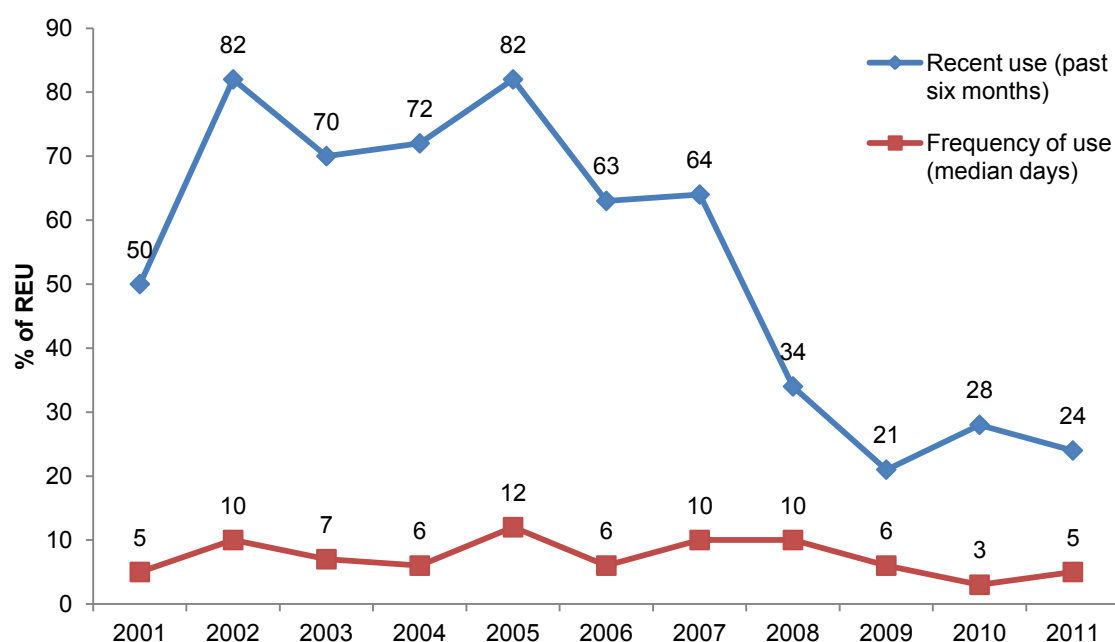
Source: EDRS participant interviews

[#] Of those who reported use in the last 6 months

^{*} A session was defined as a period of continuous drug use without sleep, in the six months prior to interview

An analysis of trends over time (see Figure 5) reveals that the recent use of base methamphetamine has fluctuated over time, with a steady decline being noted since 2005. The median number of days used increased slightly to 5 days in the last 6 months.

Figure 5: Methamphetamine base – trends in recent use and median days used, 2001–2011



Source: EDRS participant interviews

4.3.4 Crystal methamphetamine

Table 9 presents the patterns of use of ice/crystal methamphetamine by participants in 2011, with 2010 data for comparison. In 2011, the median age of first use was 19 years (range 15-38 years). Fifty percent of participants had used ice/crystal in their lifetime. Forty-three percent of participants reported using crystal methamphetamine in the preceding six months, for a median of five and a half days (range 1-150).

Fifty percent (n=16) of crystal users had used once a month or less, 28% (n=9) reported using greater than monthly and up to once per fortnight, 6% (n=2) reported using between fortnightly and weekly and 9% (n=3) reported using greater than weekly.

With respect to the 'average' and 'most' amounts used in a single session of use, most participants provided information in terms of 'points' of crystal, with a limited number commenting on the use of grams. The median number of points used in an 'average' single session was one (range 0.50-20) and the median 'most' amount used in a single session was two points (range 0.5-30). Compared to 2010, participant reports in 2011 of 'average' and 'most' amounts used in a session remained relatively stable.

Participants who had used ice/crystal methamphetamine in the previous six months reported smoking (76%), swallowing (67%), snorting (30%) and/or injecting (12%) as the route of administration in that time. Aside from injecting, all routes of administration increased in 2011, with the most notable increase being in relation to snorting (30% in 2011 versus 13% in 2010). Smoking of crystal methamphetamine continued to be the preferred route of administration, with injection remaining stable. The proportion of participants reporting bingeing on crystal methamphetamine in 2011 was 44%.

Table 9: Patterns of crystal methamphetamine use and route of administration of crystal methamphetamine among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	22 (15-40)	19 (15-38)
Ever used (lifetime) (%)	55	50
Used in last 6 months (%)	26	43
Days used in last 6 months [#] : median (range)	5 (1-40)	5.5 (1-150)
Average amount used in a single session [*] :		
Grams: median (range; n)	-	0.1 (n=1)
Points: median (range; n)	2 (0.10-10.00; 19)	1 (0.5-20; 27)
Most amount used in a single session [*] :		
Grams: median (range; n)	1(1; 1)	1 (0.25-2; 3)
Points: median (range; n)	3 (0.25-20.00; 16)	2 (0.5-30; 25)
Routes of Administration recent use [#] (%)	(n=24)	(n=33)
Swallowing	42	67
Snorting	13	30
Smoking	71	76
Injecting	13	12

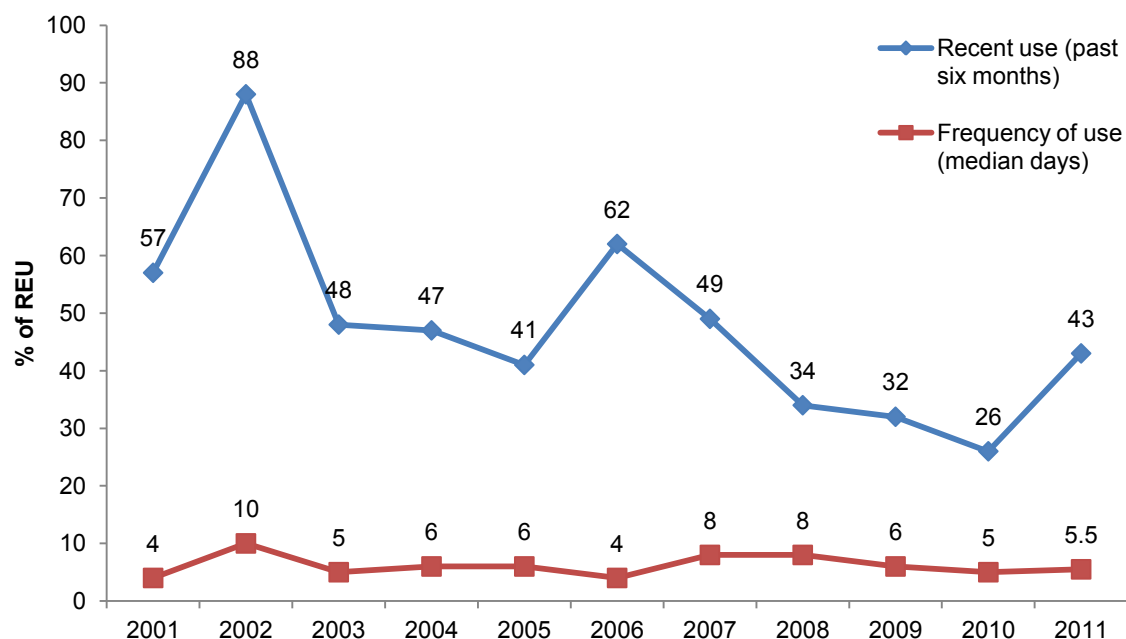
Source: EDRS participant interviews

[#] Of those who reported use in the 6 months prior to interview

^{*} A session was defined as a period of continuous drug use without sleep, in the last six months

An analysis of trends over time (see Figure 6) reveals that, after a steady decline of recent use of crystal methamphetamine from 2006-2010, there was a significant increase in 2011 ($p=0.028$; 95% CI: -0.029 – -0.31). The median number of days has remained stable.

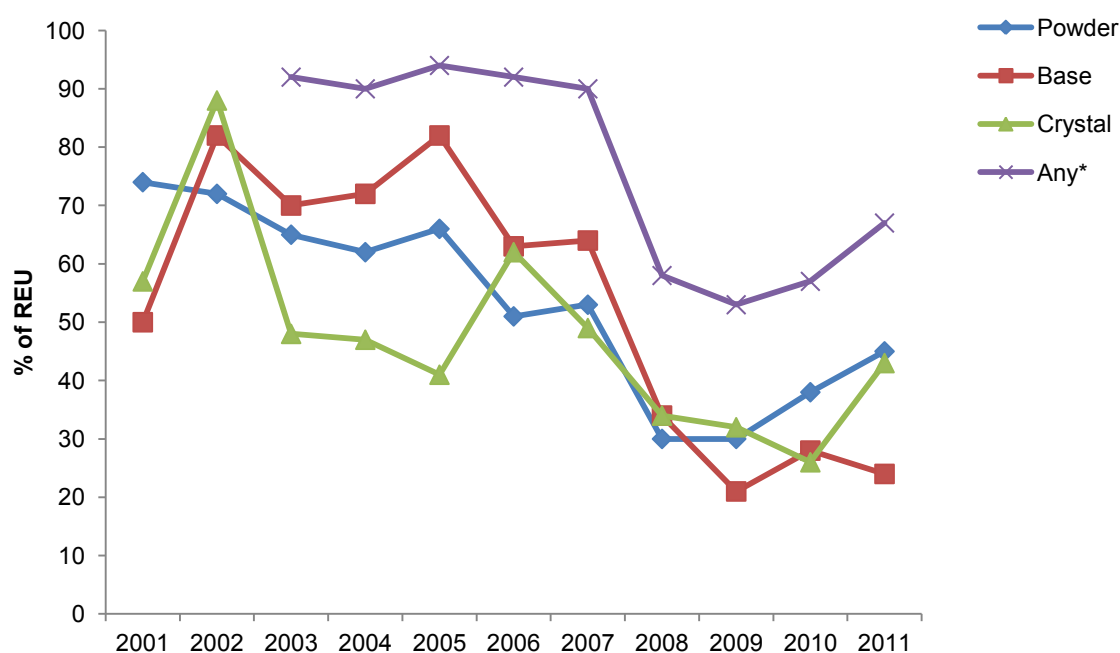
Figure 6: Methamphetamine crystal – trends in recent use and median days used, 2001–2011



Source: EDRS participant interviews

Figure 7 presents trends in recent methamphetamine (all forms) use from 2001 to 2011. Whilst the prevalence of recent use of ‘any’ methamphetamine (collapsed data) by participants remains much lower than 2001-2007 levels, there has been a general upward trend since 2009.

Figure 7: Trends in recent use of the main forms of methamphetamine, 2003–2011



Source: EDRS participant interviews

* Collapsed powder, base and crystal categories

Information about where participants last used the various forms of methamphetamine is presented in Table 10. The most common venues participants 'last' used methamphetamine powder and base was in a private residence either their home or a friend's home, with the most common venue for last use of crystal methamphetamine being in a nightclub.

Table 10: Last venue where methamphetamine was used by participants in the six months prior to interview, 2011

	Where did you last use methamphetamine?		
	Powder (%) (n=19)	Base (%) (n=11)	Crystal (%) (n=21)
Home	16	55	33
Friend's home	32	18	33
Dealers home	0	0	0
Nightclub	5	0	10
Private party	21	0	0
Pub	16	0	5
Rave	5	9	10
Live music event	5	18	10

Source: EDRS participant interviews

Key Expert Comments

- ➡ The majority of KE noted that their clientele didn't distinguish between speed, base and ice; rather they just referred to meth/amphetamines more generally. Indeed, one KE noted that his younger clients didn't have much of an idea about what type of methamphetamine they were consuming. For example, clients might report that they were using speed but they were actually using ice.
- ➡ The majority of KE reported that the use of methamphetamine had remained stable over the past year. Three KE believed that the use of methamphetamines had increased in the past year, with one KE noting that this shift was the result of the lack of availability of ecstasy.
- ➡ One KE noted that the price of methamphetamine had increased, whilst reports regarding purity were mixed.
- ➡ When asked what drug they considered to be most problematic at the moment, the majority of KE nominated methamphetamine (and alcohol equally). The reasons for this were varied and ranged from the fact that it was highly prevalent, its addictive nature and the effects (health, mental and social) that it had on both the individual and their family/friends.
- ➡ Ice was considered to be the common form of methamphetamine being used, although one KE did note that paste seemed to be on the rise and was being used more so than powder and ice.
- ➡ Smoking was the most common route of administration, although several KE did note that injecting of methamphetamine was more common among older/dependent users.
- ➡ In terms of the characteristics of methamphetamine users, KE reports were quite mixed. Two experts noted that methamphetamine users were getting younger and were from good socio-economic backgrounds. One KE noted that there had been an increase in polydrug use (mixing benzodiazepines and opiates with methamphetamine), and another noted that there had been an increase in violence, psychosis and paranoia (and that as methamphetamine use increased, so too would these problems).

4.4 Cocaine use

Key Findings

- The median age of first use was 19 years.
- Recent use of cocaine remained relatively stable at 45%.
- Frequency of use remained low and stable.
- Snorting continued to be the main route of administration.

4.4.1 Cocaine use among REU

The median age of first use of cocaine by participants was 19 years (range 14-29 years). In 2011, seventy-five percent of the sample reported having ever used cocaine, and 45% had used in the preceding six months (stable from 2010). The frequency of use also remained stable with a median of two days (range 1-20 days) in the six months prior to interview, although the parameters were smaller than in 2010 (range 1-40) (see Table 11). The majority of recent cocaine users (85%) had used less than monthly (79% in 2010); 9% had used between monthly and fortnightly (10% in 2010); and 6% reported using between fortnightly and weekly (5% in 2010). No participants reported greater than weekly or daily use of cocaine.

The median amount of cocaine used in a typical or average session in the preceding six months was one gram (range 0.10-2 grams) and 2 points (range 1-2 points). The 'most' amount of cocaine used in a single session was also a median of one gram (range 0.10-23) and 2 points (1-2). The reported 'average' amount of grams was similar to that reported in 2010.

The majority of cocaine users (n=34) reported recent use of cocaine by snorting (97%), followed by swallowing (32%) and smoking (6%). No participants in 2011 reported recent use by snorting/shafting or injecting. Fourteen percent of recent cocaine users reported that they had binged on cocaine in the preceding six months.

Table 11: Patterns of cocaine use and route of administration among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	21 (16-50)	19 (14-29)
Ever used (lifetime) (%)	69	75
Used in last 6 months (%)	42	45
Days used in last 6 months*: median (range)	2 (1-40)	2 (1-20)
Average** amount used in a single session:		
Grams: median (range; n)	0.75 (0.25-2.0; 18)	1 (0.10-2; 27)
Points: median (range; n)	-	2 (1-2; 4)

Source: EDRS REU interviews, 2010-2011

* Of those who reported use in the last six months

** A session was defined as a period of continuous drug use without sleep, in the last six months

Table 11: Patterns of cocaine use and route of administration among the participant sample, 2010 & 2011 (continued)

	2010 (n=92)	2011 (n=76)
Most amount used in a single session ^{**} :		
Grams: median (range; n)	1 (0.25-2.50; 16)	1 (0.10-3; 28)
Points: median (range; n)	-	2 (1-2; 3)
Routes of Administration recent use (%):	(n=39)	(n=34)
Swallowed	15	32
Snorted	95	97
Smoked	0	6
Injected	0	0
Shelved/shafted	-	0

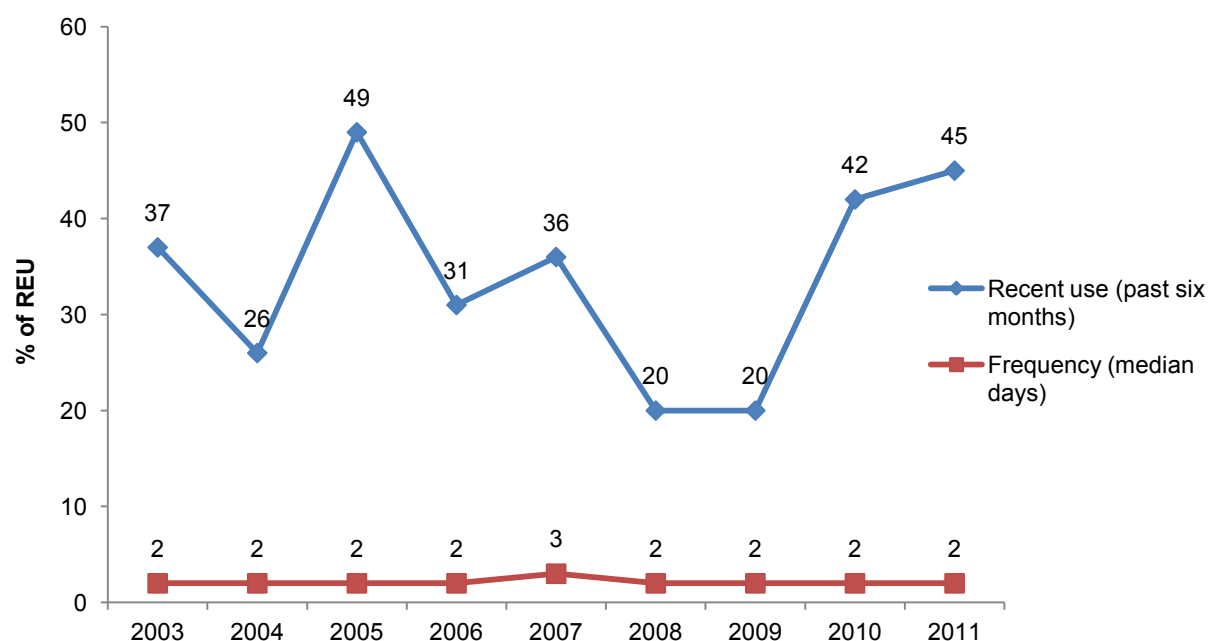
Source: EDRS REU interviews, 2010-2011

* Of those who reported use in the last six months

** A session was defined as a period of continuous drug use without sleep, in the last six months

As can be seen in Figure 8, recent use of cocaine doubled from 20% in 2009 to 42% in 2010; and remained relatively stable in 2011. Indeed, the 45% prevalence rate is similar to that reported in 2005. The frequency of use, however, has remained stable across the years.

Figure 8: Cocaine – trends in recent use and median days used, 2003–2011



Source: EDRS participant interviews

Twenty-three participants commented on location of last use. The most common venues reported were: friend's home (n=5); private party (n=5); nightclub (n=4); and a live music event (n=3).

Key Expert Comments

- The majority of KE reported that they had little contact with cocaine users but that the prevalence appeared to be very low in SA. Two KE noted that there might have been a slight increase in the use of cocaine.
- One KE reported that analysis of cocaine seizures had revealed that levamisole is starting to be added to cocaine at the point of manufacture. Levamisole is a pharmaceutical drug which can reduce blood pressure, and so perhaps may be being added to counteract the increased blood pressure that accompanies cocaine use. However, this is extremely problematic with studies in the US attributing several cocaine related fatalities to the presence of this drug.

4.5 LSD use

Key Findings

- The median age of first use was 17, stable from 2010.
- Recent use and frequency remained stable in 2011, with the majority of participants using less than monthly.
- The amount used in a typical and heavy session remained stable.
- All participants reported swallowing LSD, although there was an increase in snorting as a route of administration.
- The majority who commented last used LSD in their own home.

4.5.1 LSD use among REU

The median age of first LSD use was 17 years (range 14-20 years). Sixty-three percent of participants reported having used LSD in their lifetime and 30% had used it in the last six months. Recent users reported having used LSD on a median of two days (range 1-20 days) in the six months prior to interview. The majority (82%) of recent LSD users had used less than monthly (95% in 2010); 5% used between monthly and fortnightly (4% in 2010); and 9% used between fortnightly and weekly (1% in 2010). No participants reported greater than weekly use.

The 'average' and 'most' amounts of LSD used in a single session were generally reported as tabs/trips, with a median amount of one tab/trip (range 0.25-2) used on 'average' and one tab/trip (range 0.5-4) also used in the heaviest recent session. All LSD users reported recent use by swallowing (100%, n=23), and three participants also reported snorting LSD in the preceding six months. No other route of administration was reported. Only three participants reported bingeing on LSD in the preceding six months.

Table 12: Patterns of LSD use among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	17.5 (12-36)	17 (14-20)
Ever used (lifetime) (%)	66	63
Used in last 6 months (%)	35	30
Days used in last 6 months: * median (range)	3.5(1-24;32)	2 (1-20; 22)
Average amount used in a single session: **		
Tabs: median (range; n)	1(0.5-2; 27)	1 (0.25-2; 20)
Most amount used in a single session: **		
Tabs: median (range; n)	2(0.5-7; 21)	1 (0.5-4; 20)

Source: EDRS participant interviews

* Of those who reported use in the last six months

** A session was defined as a period of continuous drug use without sleep, in the last six months

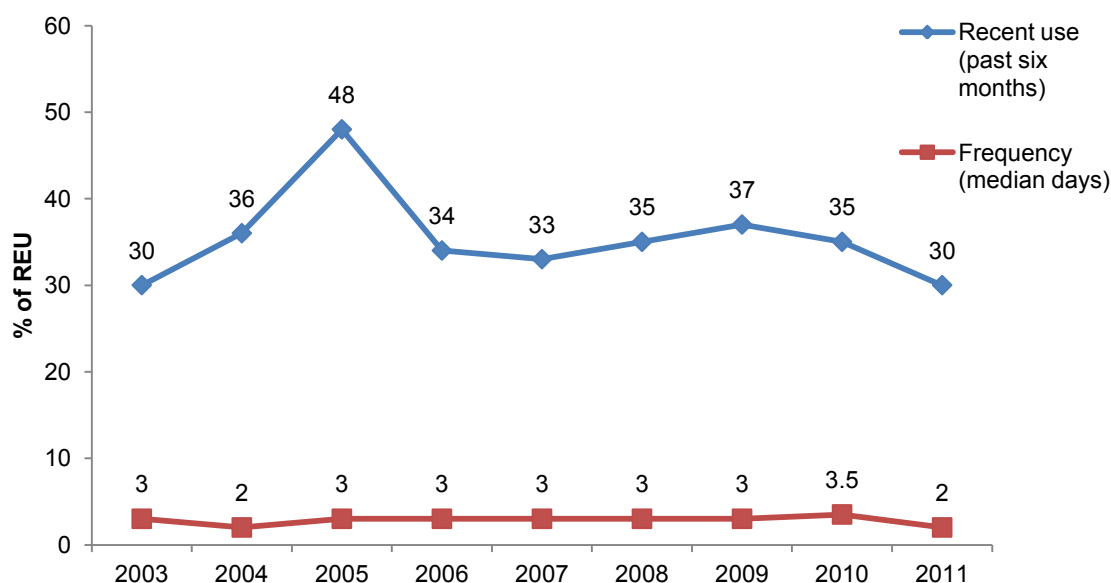
Table 12: Patterns of LSD use among the participant sample, 2010 & 2011 (continued)

	2010 (n=92)	2011 (n=76)
Routes of Administration* (%):	(n=32)	(n=23)
Swallowed	100	100
Snorted	0	13
Smoked	0	0
Shelved/Shafted	0	0
Injected	0	0

Source: EDRS participant interviews

* Of those who reported use in the last six months

An analysis of trends over time (see Figure 9) reveals that between 2006 and 2011 the proportion of participants who reported recent use of LSD has remained relatively stable. There has been little change in the frequency of use, with this parameter remaining consistently stable and low across the years.

Figure 9: LSD – Trends in recent use and median days used, 2003–2011

Source: EDRS participant interviews

In relation to the venue of last intoxication, the vast majority of recent LSD users reported that they had been at their own home (45%, n=7) or a friend's home (31%, n=5). One participant reported being at a nightclub and one at a private party.

Key Expert Comments

- ➡ Virtually all of the KE reported that the prevalence of LSD is very low and that they weren't seeing any use among their clientele. Two KE noted that LSD has dropped off and appears to have been replaced with DOI.

4.6 Cannabis use

Key Findings

- Median age of first use was relatively stable in 2011, with the majority of participants having first used cannabis at 14 years of age.
- Prevalence of cannabis use was exceptionally high, with 94% of REU reporting lifetime use and 92% reporting use in the preceding six months.
- Frequency of use declined in 2011, to a median of 50 days (approximately twice a week).
- On the last occasion of use, cannabis users reported using a median of three cones or one joint. This was stable from 2010.
- The majority of cannabis users reported using in their own home, or at a friend's home.

To ensure more detailed information was collected on the different forms of cannabis, Section 5.5 was separated into 'hydro' (hydroponically grown) and 'bush' (grown outdoors) cannabis (Breen et al., 2004; Stafford et al., 2005). However, the use patterns reported below refer to any form of cannabis.

It should also be noted that the use of hashish (hash) and hash oil was rarely reported by REU participants ($n < 10$), therefore, further details are not reported.

The current legal approach to cannabis use in South Australia is one of 'prohibition with civil penalties'. Under this approach, the production, possession or use of cannabis is illegal in South Australia. Any cultivation of a cannabis plant by hydroponic means will result in the accused being arrested / reported and required to attend court. A single cannabis plant grown in the ground, i.e. not grown hydroponically, will attract an expiation fee. More than one cannabis plant grown in the ground (bush cannabis), results in the accused being arrested and required to attend court. There are varying penalties for possession of cannabis offences and these penalties are dependent on the amount the person is located with. Under the Cannabis Expiation Notice Scheme, police issue the offender with an, 'on-the-spot' fine notice. If the offender disagrees with any aspect of the charge, they can elect to go to court and defend the case rather than pay the expiation fee. Failure to pay the prescribed fee within the expiation period results in a summons being issued for the offender to appear in court. The original expiation fee becomes the fine, with the additional court costs.

4.6.1 Cannabis use among REU

In 2011, the median age at which participants first used cannabis was 14 years (range 11-19 years), slightly younger than reported in 2010 (15 years, range 7-20). Further examination of the age at which participants first used cannabis reveals that 51% reported use by the age of 14 years, 88% by 16 years, and 96% by 18 years. Ninety-four percent of the sample reported having used cannabis in their lifetime, and 92% had used in the preceding six months.

The frequency of cannabis use reported by participants in 2011 was a median 50 days (range 1-180 days); this was lower compared to the frequency of use reported by

participants in 2010 (60 days, range 1-180 days). Amongst recent cannabis users, 9% (n=6) had used once a month or less, 7% (n=5) reported using between monthly and fortnightly, 9% (n=6) reported using between fortnightly and weekly, 68% (n=47) reported using greater than weekly and 26% (n=18) reported daily use.

Recent cannabis users were asked how much cannabis they had smoked on the last day of use, as measured by the number of cones or joints used on that occasion. Cannabis had been predominantly smoked in cones (47%) as opposed to joints (25%). Among those who had smoked in cones, the median number used on the last day was three 'cones' (range 0.25-15 cones), while the median number of joints smoked was one 1 (range 0.50-3 joints). Daily users of cannabis had smoked a median of five cones (range 1-15 cones) or two joints (range 1-3) on the last day of use. Unfortunately sixteen participants didn't specify whether they were smoking cones or joints, and as such, it is not possible to accurately determine the amounts that they had consumed. One participant reported smoking one pipe and one participant reported consuming one cookie.

All of those who had used cannabis reported recent use by smoking (n=70), and 40% (n=28) also reported use by swallowing. Thirty percent of recent cannabis users reported bingeing on cannabis in the preceding six months.

Table 13: Patterns of hydroponic and bush cannabis use among the participant sample, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Age first used: median in years (range)	15 (7-20)	14 (11-19)
Ever used (lifetime) (%)	100	94
Used in last 6 months (%)	84	92
Days used in last 6 months: median (range)	60 (1-180)	50 (1-180)
Smoked*	100	100
Swallowed*	33	40
Cones used last time (range)*	3 (1-180)	3 (0.25-15)
Joints used last time (range)*	1 (0.5-4)	1 (0.5-3)

Source: EDRS participant interviews

* Of those who reported use in the last six months

Among the participants who commented, the majority reported last using hydro cannabis in their own home (52%) followed by a friend's home (31%). This was a similar pattern for those who used bush cannabis in their own home (58%) and at a friend's home (29%).

Key Expert Comments

- ➡ All KE reported that there was no real change in the cannabis market. Two KE reported that a bag of cannabis costs \$25 (consistent with participant reports), and one reported that it costs between \$2,200-3,600 for a pound of cannabis.
- ➡ One KE noted that although the cannabis market was stable, there had been an increase in the prevalence of mental health disorders among regular cannabis users.
- ➡ Two KE noted that outdoor crops were not very common, with hydro being the preferred form of cannabis.

4.7 Other drug use

Key Findings

- There were no significant changes in the use of ketamine, GHB or MDA in 2011.
- Virtually the entire sample (99%) reported consuming alcohol in the six months preceding interview, and they had done so a median of 48 days. Among these participants, seventeen percent reported drinking on a daily basis.
- Recent tobacco use increased significantly, from 69% in 2010 to 86% in 2011.
- Recent use of nitrous oxide increased significantly in 2011, although frequency remained low at a median of 3 days.
- There were significant increases in the recent use of illicit pharmaceutical stimulants and lifetime use of other opioids.

4.7.1 Ketamine

The median age of first ketamine use was 21.5 years (range 18-38 years). Ketamine was the main drug of choice for 1% of the sample. In 2011, a lower proportion of the sample reported lifetime use (37%) compared to 2010 (49%), and fewer participants reported recent use of ketamine (8% versus 13%); although this remains substantially greater than reported in the 2010 NDSHS (0.2%) (Australian Institute of Health & Welfare, 2011). The frequency of use decreased by one day, to a median of two days (range 1-20 days) in the six months prior to interview.

The majority of participants (67% or 4 out of 6) had used less than monthly (79% in 2010); whilst the remaining participants reported using between monthly and fortnightly (n=1); and between fortnightly and weekly (n=1). No participants reported more than weekly use.

Ketamine use was commonly reported in 'bumps'. The median amount of ketamine used for an average session was 1 bump (range 1-2), whilst the 'most' amount used in a session was 2 bumps (range 1-2). Ketamine use was also quantified in grams (n=2) and points (n=1).

Recent use of ketamine was reported to be either snorted (100%, n= 6) or swallowed (17%, n=1). Two participants reported recent bingeing on ketamine within the past six months.

4.7.2 GHB

The median age at which participants reported first using gamma-hydroxy butyrate (GHB) was 18 years (range 17-22 years). A quarter (26%) of the sample reported having ever used GHB and 5% had used it in the 6 months preceding interview; this is relatively stable from 2010 (24% and 8% respectively). Frequency of use, however, had increased ninefold to a median of nine days (range 1-24). This, of course, should be viewed with caution due to the small numbers (n=4).

GHB use was typically quantified in millilitres (ml). The median amount used in a typical or average episode in the preceding six months was 5 ml (range 2-10 ml). Recent GHB users

reported using a median of 15 ml (range 2-30 ml) during the heaviest recent use episode; this was a threefold increase from 2010.

All GHB users reported swallowing GHB in the preceding six months. Two participants reported using GHB less than monthly, one participant reported using between monthly and fortnightly and one reported using on a weekly basis. Two participants reported including GHB in a binge session in 2011.

4.7.3 MDA

In 2011, the median age at which participants reported first use of 3,4-methylenedioxyamphetamine (MDA) was 19.5 years (range 15-29 years), and this remained stable compared to 2010 (20 years). Thirty-two percent of the sample reported lifetime use of MDA, and fifteen percent had used in the preceding six months. Frequency of use was low, with participants reporting using on a median of four days (range 1-12).

A median of one and a quarter capsules (range 1-5 capsules) was used in a typical session, and a median of two capsules (range 1-10) were used in the heaviest session of use over the preceding six months. Swallowing and snorting were equally popular routes of administration with ten participants reporting that they had swallowed MDA in the preceding six months, and an additional ten reporting that they had snorted it. There were no reports of injecting, smoking or shelving/shafting MDA. Two participants reported including MDA in a binge session.

4.7.4 Alcohol

In 2011, the median age at which participants reported first using alcohol was 13 years (range 5-17 years). Virtually the entire sample had ever used alcohol, and recent use remained high at 99%. Among those who had used alcohol, use had occurred on a median of 48 days (approximately twice a week) in the past six months (range 3-180); this was a (non-significant) decrease from 60 days (range 1-180) in 2010. Seventy-one percent of recent alcohol users reported using alcohol more than once per week, and seven percent reporting drinking on a daily basis (14% in 2010).

Thirty-eight percent of participants reported including alcohol in a binge session in 2011, which was higher than the proportion in 2010 (24%); however, the proportion of participants who reported typically using alcohol (> 5 standard drinks) with ecstasy was lower (70% in 2011 compared to 80% in 2010). A slightly higher proportion of participants reported using alcohol to come down from ecstasy (13% in 2011 versus 7% in 2010).

In 2011, the Alcohol Use Disorders Identification Test (AUDIT) was administered to participants. Detailed information regarding the AUDIT in the 2011 EDRS can be found in Section 7.5: The Alcohol Use Disorders Identification Test (AUDIT).

4.7.5 Tobacco

The median reported age of first use of tobacco was slightly older than that for alcohol and cannabis at 15 years (range 8-180 years). The proportion of participants reporting recent use of tobacco was significantly higher in 2011, with 86% reporting recent use compared to 69% in 2010 ($p=0.016$; 95% CI: -0.0416 – -0.2887). The frequency of participants' tobacco use has remained at peak levels across the eleven years of the survey at a median of 180 days in the previous six months (equivalent to daily use), with 52% reporting daily use. This greatly exceeds the 2010 daily smoking prevalence rate in the general South Australian

population aged 14 years and over, of 15.1% (Australian Institute of Health & Welfare, 2011).

4.7.6 Benzodiazepines

Since 2007 participants have been asked to distinguish between their use of licit and illicit benzodiazepines.

The median age of first use of illicit benzodiazepines was 19 years (range 14-40 years), which is stable from 2010. In 2011, forty-two percent of REU reported lifetime use of illicit benzodiazepines, and 15% had used these substances within the preceding six months. This is stable since 2010. Recent users of illicit benzodiazepines reported using on a median of six days (range 1-25).

4.7.7 Antidepressants

Since 2007 participants have been asked to distinguish between their use of licit and illicit antidepressants.

The median age of first use of illicit antidepressants was 18 years (range 13-29 years), stable from 2010. In 2011, eight percent of REU reported ever having used illicit antidepressants, and four percent reported using in the preceding six months. Those who had recently used illicit antidepressants reported doing so on a median of 6 days (range 2-48). In 2010, the parameters were larger (median=4; range 2-180) but due to such small numbers no conclusions may be drawn.

4.7.8 Inhalants use

4.7.8.1 Nitrous oxide

The median age of first use of nitrous oxide was 18 years (range 13-30 years). In 2011, fifty-nine percent of participants reported that they had ever used nitrous oxide, and 36% reported recent use (compared to 20% in 2010). Recent nitrous oxide users reported using on a median of three days (range 1-20). Five participants (7%) reported having binged on nitrous oxide, four participants (5%) reported having typically used nitrous oxide 'with' ecstasy and one participant reported using nitrous oxide during an ecstasy 'comedown' in the last six months.

4.7.8.2 Amyl nitrate

The median age of first use of amyl nitrate was 19 years (range 15-28 years). Almost half of the sample (45%) reported lifetime use of amyl nitrate and 17% use in the preceding six months (double 2010 figures). Recent users of amyl nitrate reported using for a median of one day (range 1-30). One participant reported having binged on amyl nitrate, one participant reported typically using amyl nitrate 'with' ecstasy, and no participants reported use of amyl nitrate 'at comedown' from ecstasy, in the last six months. This remained unchanged from 2010.

4.7.9 Magic mushrooms

Participants were asked about their use of 'magic mushrooms' (hallucinogenic mushrooms). The median reported age of first use of 'magic mushrooms' was 18 years (range 13-28 years) and 62% of participants reported having used them in their lifetime. Twenty four percent of participants reported recent use of 'magic mushrooms', an increase from 2010

(14%). Those who had recently used magic mushrooms reported doing so on a median of three days (range 1-15) which remained stable from 2010.

4.7.10 Heroin

The median age of first heroin use was 20 years (range 15-22 years). Approximately one-sixth (16%) of the 2011 REU sample had ever used heroin. Consistent with the low levels of recent use among the REU cohorts in previous years, five participants (4 male; 1 female) had used heroin during the six months preceding the interview and they used heroin on a median of 2 days (range 1-180). Smoking was the most common route of administration (n=3), followed by snorting (n=2) and injecting (n=2).

4.7.11 Other opioids

The median age of first use of illicit other opiates was 19 years (range 16-39 years). Twenty eight percent of the sample reported lifetime use (up from 14% in 2010; $p=0.048$; 95% CI: -0.012 – -0.26) and fifteen percent had used other illicit opiates in the six months prior to interview (up from 8% in 2010). The median days of illicit opiate use was three days (range 1-14 days). The main route of administration (ROA) by those who had recently used was swallowing (100%, n=11), followed by snorting (n=4), injection (n=2) and smoking (n=1). No participants reported shelving/shafting.

4.7.12 Pharmaceutical stimulants

For the past few years, participants have been asked about their use of pharmaceutical stimulants, such as dexamphetamine, pseudoephedrine and methylphenidate (Ritalin), and in 2007 participants were asked to distinguish between licit and illicit use.

In 2011, the median reported age of first use of illicit pharmaceutical stimulants was 18 years (range 13-38 years), slightly older than the median age reported in 2010 (at 17 years). Forty-six percent of the sample reported use of illicit pharmaceutical stimulants in their lifetime, stable from 2010 (42%). Twenty-four percent of participants reported recent use of illicit pharmaceutical stimulants, which was a significant increase from 2010 (10%; $p=0.026$; 95% CI: -0.026 – -0.26). Frequency also increased from a median of one day in 2010 to six days in 2011 (range 1-30). The ROA of recent use was mainly swallowing (n=15), followed by snorting (n=8) and smoking (n=1).

4.7.13 Over the counter (OTC) codeine

The median age at which participants reported first using OTC codeine was 16 years (range 10-25 years), with 29% of the sample reporting use of this substance prior to 18 years. Forty-seven percent of participants reported ever using OTC codeine, and 36% reported use in the preceding six months. Nine participants (33% of recent users) reported that they had used OTC codeine for purposes unrelated to pain (i.e. recreational use) on a median of four days (range 1-48); and 24 participants (89% of recent users) reported that they had used OTC codeine for pain relief on a median of 7 days (range 2-72). Swallowing was reported by all participants, with five participants reporting that they had snorted OTC codeine in the preceding six months. Only one participant reported injection as an ROA.

4.7.14 Over the counter (OTC) stimulants

The median age at which participants reported first using OTC stimulants was 16 years (range 5-21 years). Forty percent of participants reported ever using OTC stimulants, with

22% reporting use of this substance within the preceding six months. Frequency of use ranged from 1-48 days, with a median of seven days. All participants reported swallowing as a route of administration and two participants also reported that they had snorted OTC stimulants in the preceding six months. These parameters were similar to those reported in 2010. The main brand specified was Codral (47%) followed by Sudafed (18%).

4.7.15 Steroid use

Four participants (5%) in the 2011 sample reported lifetime use of steroids, and three of those (4%) reported use in the past six months. The median age of first use was 21 years (range 18-29). Swallowing was the main route of administration (n=2) and one participant reported that they had injected steroids in the preceding six months. Recent steroid users reported using on median of twenty one days (range 7-24).

Key Expert Comments

- ➡ All KE noted that they had seen very little ketamine or GHB within the preceding 12 months.
- ➡ The majority of KE able to comment reported that binge drinking was a major concern among their clientele. Some believed that the prevalence of binge drinking had increased, whilst others believed that it was a stable, albeit ongoing, concern that needed to be addressed.
- ➡ Indeed, when asked what they considered to be the most problematic drug at the moment, the majority nominated alcohol (and methamphetamine equally). This was usually due to the widespread prevalence, availability and social acceptability of alcohol consumption. Again, the issue of binge drinking was considered to be an issue of particular concern. One KE was particularly concerned about the impact that alcohol had on the adolescent brain, and its association with violence and head injuries.
- ➡ In terms of the characteristics of alcohol users, two KE noted that there had been an increase in associated psychiatric problems and two reported that polydrug use was high among this population.

4.8 Emerging psychoactive substances (EPS) use

Key Findings

- The most commonly reported EPS recently used were 2CB and 2CI, both of which increased significantly from 2010.
- The main route of administration reported for all types of EPS was swallowing (except for DMT and ivory wave in which smoking and snorting were the most popular ROA respectively).

The use of 2CI and 2CB increased significantly amongst REU, both in terms of lifetime and past six month use. These two substances, as well as 5-dimethoxy-4-ethylphenethylamine (2CE), are psychedelic phenethylamine chemicals that have stimulant effects. There was a slight increase in lifetime ($p < 0.05$) and recent use of 2CE. Mescaline is also a psychoactive phenethylamine chemical and comes from the peyote cactus. Recent use of mescaline remained low (1%), whilst lifetime use increased to 12%.

DOI ('Death on impact') is also a psychedelic phenethylamine. It is uncommon as a substance for human ingestion but is commonly used in research. It has been found on blotter and may be sold as LSD (Erowid: <http://www.erowid.org/chemicals/doi/doi.shtml>). This was confirmed by two KE who reported that they believed that LSD was being replaced with DOI. Fifteen percent of participants had reported using DOI in their lifetime and seven percent reported recent use.

Recent use of psychedelic tryptamines (5-methoxy-dimethyltryptamine (5MEO-DMT) and DMT) remained low amongst REU in SA. Lifetime use of DMT almost doubled in 2011, whilst lifetime use of 5MEO-DMT increased slightly to seven percent.

The proportion of SA REU reporting the use of synthetic stimulant chemicals was also low. Eight percent of participants reported the recent use of mephedrone, one participant reported recent use of BZP and one participant reported the recent use of ivory wave.

Dextromethorphan (DXM) is a semisynthetic opiate derivative which is legally available over-the-counter in the United States. It is most commonly found in cough suppressants, especially those with 'DM' or 'Tuss' in their names. Four percent of respondents reported lifetime use of DXM, and all of those participants reported having used DXM in the preceding six months.

Para-methoxyamphetamine (PMA) has been used as a recreational psychoactive drug, primarily in the 1970s, and in Australia since late 1994. The effects of PMA include increased energy, visual distortions and a general change in consciousness. Seven percent of respondents reported lifetime use of PMA and four percent reported recent use of PMA.

Datura is a naturally occurring substance and the two most well-known are the devil's weed (*Datura inoxia*) and the thornapple or jimson weed (*Datura stramonium*). The plant's effects make the user feel drowsy, drunk-like and detached from things around them. They can also bring on hallucinations. Five percent of the sample reported having ever used this substance with only one percent reporting recent use of Datura (see Table 14).

Table 14: Proportion of participants reporting lifetime and recent use of emerging psychoactive substances

Research Chemicals	Ever used (%)		Used last 6 months (%)	
	2010 (n=92)	2011 (n=76)	2010 (n=92)	2011 (n=76)
2CB	15	41 ^{***}	11	29 ^{**}
Mephedrone	10	13	9	8
DOI	9	15	4	7
2CE	2	13 [*]	3	8
2CI	4	28 ^{***}	3	16 [*]
DMT	11	21	3	8
Mescaline	4	12	2	1
5MEO-DMT	1	7	1	3
Datura	7	5	1	1
Ivory wave	1	4	1	1
BZP	1	4	0	1
DXM	0	4	0	4
PMA	8	7	0	4

Source: EDRS REU interviews

*p<0.05

**p<0.01

***p<0.001

Key Expert Comments

- Reports regarding emerging psychoactive substances were mixed. A number noted that although they had heard of these, they had not seen them among their clientele. Others reported that there had indeed been an increase in the use of such drugs. The most commonly noted drugs were BZP combined with TFMPP (which produce an effect very similar to MDMA), with one KE noting a dramatic increase in seizures. An increase in 2CI (seizures and prevalence) was also noted.
- In addition, several KE noted that because ecstasy is unavailable manufacturers seem to be experimenting with new mixes. This has spooked the market because now, more than ever before, people really have no idea what is in their pill. People often buy pills that are sold as ecstasy, but seizures have revealed that they contain no (or very little) MDMA.
- As noted above, two KE reported that LSD had dropped off and appeared to have been replaced with DOI.
- Interestingly, when asked what they considered to be the most problematic drug at the moment, only one KE nominated analogue drugs. The reason given was that, since these drugs were new to the market, the doses were not well established and the health effects were unknown.

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

5.1 Ecstasy

Key Findings

- Participants reported a slight decrease in the price of ecstasy.
- Half of the sample reported that the price of ecstasy had remained stable in the six months prior to interview.
- The current purity of ecstasy was perceived as low in 2011, with 41% of REU reporting that purity has been decreasing over the preceding six months.
- Ecstasy remained easy or very easy to obtain.
- The median number of ecstasy tablets purchased in the six months prior to interview decreased significantly in 2011, with the majority of REU purchasing for themselves or others.
- Most participants reported scoring from a friend.

5.1.1 Price

In past years participants have been asked 'How much does ecstasy cost at the moment?' to enable us to report an estimation of the 'current' price of ecstasy. In 2011, participants were only asked about the cost of ecstasy 'at last purchase' (these data have been collected for the previous 7 years). In 2011, most participants were able to provide an estimate of the price of ecstasy 'at last purchase', as detailed in Table 15. The median 'last' price of a tablet/pill of ecstasy reported by users in 2011 was \$20 (range \$10-40; n = 72). This is a slight decrease from 2010 (\$23, range \$1-60; n = 84). Twenty three participants were also able to answer about the price of a 'cap', with the median price being \$25 (range 10-50). Over half of the sample (52%) reported that the price of ecstasy had been stable over the preceding six months, which is similar to that reported in 2010 (46%). However a notably larger proportion reported that the price had decreased in the last 6 months (16% in 2011 versus 8% in 2010) and only 20% reported an increase – compared to 30% in 2010.

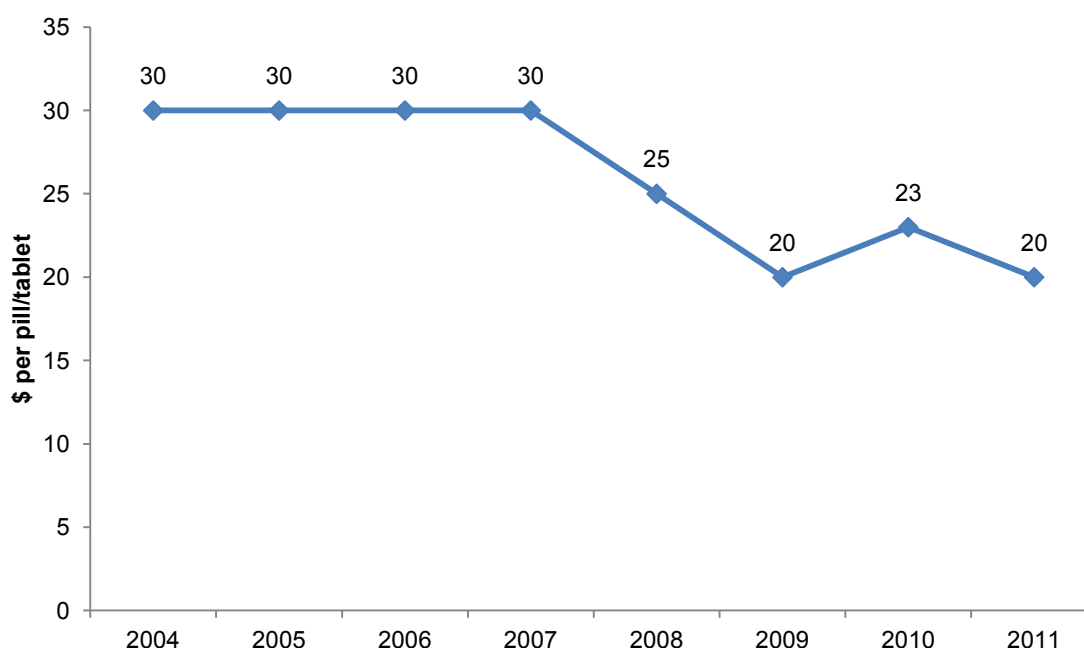
Table 15: Last price of ecstasy and change in price over the last six months, 2010 & 2011

	2010	2011
Tablet/pill		
Median price of last purchase (range; n)	\$23 (\$1-60; 84)	\$20 (\$10-40; 72)
Price change in last 6 months (%)	(n=92)	(n=71)
Increasing	30	20
Stable	46	52
Decreasing	8	16
Fluctuating	17	13

Source: EDRS participant interviews

Note: Don't know excluded from 2009 onwards

Figure 10: Trend in the ‘last purchase price’ of ecstasy per tablet/pill, 2004–2011



Source: EDRS participant interviews

In 2011, participants were asked specifically about the median ‘current’ price of ecstasy ‘bulk’ purchases, where ‘bulk’ referred to ten or more tablets/pills (see Table 16). It was generally considered that purchasing in bulk resulted in lower prices. However, as can be seen in Table 16, the price per pill only started to decrease when bought in quantities of 50 or more. A purchase of ‘100’ pills costed \$15 per pill compared to \$20 per pill when bought in a 10 pack.

It should also be noted that the use of ecstasy powder was rarely reported by REU participants ($n < 10$) in 2010, therefore further details are not reported.

Table 16: Current median price of ecstasy bought in bulk amounts, 2011

Qty of pills	Median price per pill (range; n)	Median price total (range; n)
10	20 (18-25;14)	200 (100-250;44)
20	20 (15-21;8)	380 (200-500;16)
50	16 (10-20;8)	750 (350-1000; 9)
100	15 (5-18;12)	1400 (650-1600;14)

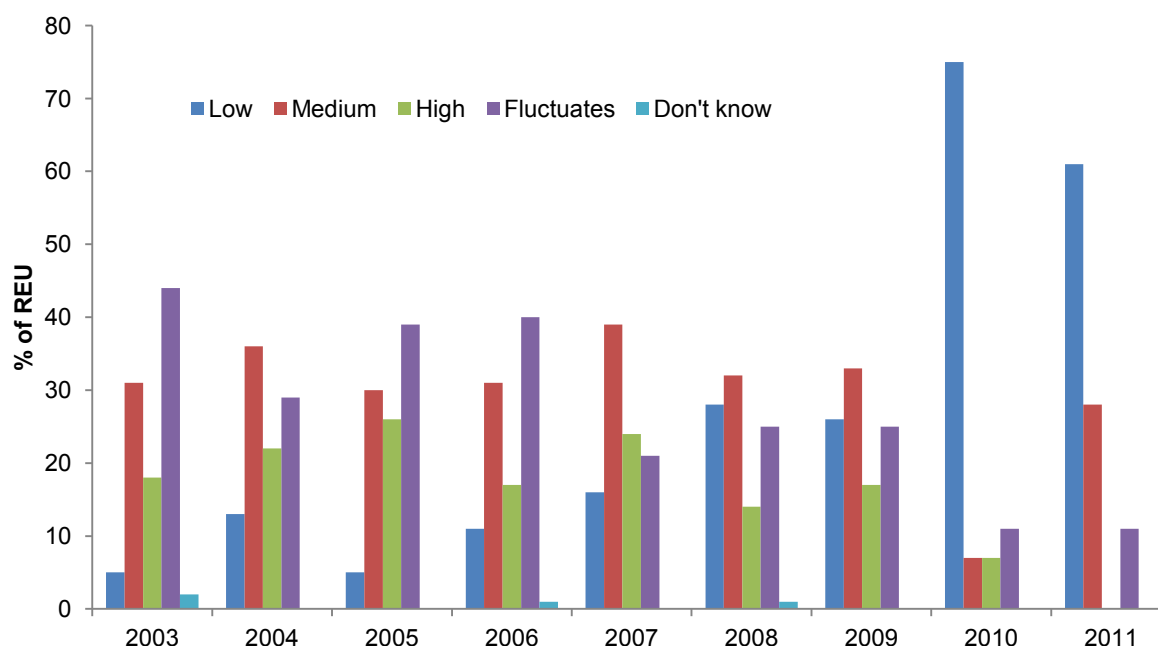
Source: EDRS participant interviews

5.1.2 Purity

Figure 11 presents the current purity of ecstasy and Table 17 summarises the changes in purity in the last six months, as perceived by the participants. It is important to bear in mind that it is difficult to gauge the actual quality of the ecstasy that is being consumed, as participant opinions are based on many factors other than the actual purity of the ecstasy they are using. Factors such as length of use, frequency of use, quality of previous ecstasy and the physical and psychological status of the user, all impact upon impressions of quality, and, as such, the figures presented are purely perceptions of the participants.

The majority of participants continued to report that the current purity of ecstasy was low (61%). This was a decrease from 2010 (75%), however, the perception of low purity remains substantially higher than reported in the years preceding 2010. There was a significant increase in the proportion of participants who reported that the purity of ecstasy was medium (28% versus 7%; $p=0.0005$) and in 2011, no participants perceived the purity of ecstasy to be high. Perceptions of fluctuating purity remained stable in 2011. Participants' opinion of recent change in purity also reported that the purity had decreased in the last 6 months (41%), whilst 26% of the sample believed it had remained stable, 19% believed it fluctuated and 14% believed it to be increasing (Table 17).

Figure 11: Trend in the perceived purity of ecstasy in the last six months, 2003–2011



Source: EDRS participant interviews

Note: Don't know not included in 2009 onwards

Table 17: Perceived purity of ecstasy tablets/pills and change in purity over the last six months, 2010 & 2011

	2010 (n=91)	2011 (n=76)
Recent change in purity (%)	(n=90)	(n=70)
Increasing	3	14
Stable	30	26
Decreasing	51	41
Fluctuating	16	19

Source: EDRS participant interviews

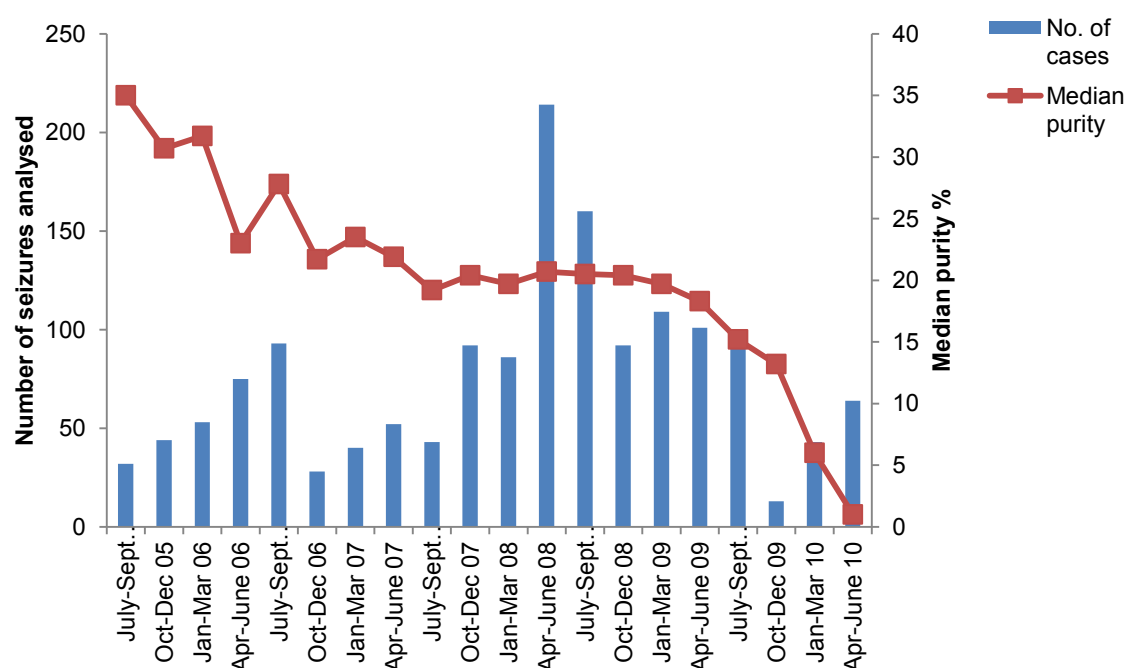
Note: Don't know not included

The purity data presented in this report are provided by the ACC and the former Australian Bureau of Criminal Intelligence (ABCI). The ACC provided data on state/territory police and Australian Federal Police (AFP) seizure data, including the number and weight of seizures. Since 2000/01, ecstasy seizures have been reported under 'phenethylamines'. Ecstasy belongs to the phenethylamine family of drugs. Other drugs such as 2,5-dimethoxy-4-bromoamphetamine (DOB), MDA, 2,5-dimethoxy-4-methylamphetamine (DOM), 3,4- methylenedioxyethylamphetamine (MDEA), paramethoxyamphetamine (PMA), and 4-methylthioamphetamine (4-MTA) also

belong to the phenethylamine family, and seizures of these drugs are included in the seizure data.

The Australian Crime Commission (ACC) data were unavailable for 2010/11 at the time of publication. As a consequence, the data provided by the ACC relates to the purity data on phenethylamines (including MDMA) seized in SA during the last financial year 2009/2010 (Australian Crime Commission, 2011). Figure 12 shows the number of seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures, from 2005/06 to 2009/10. The total number of SAPOL phenethylamines seizures analysed for July 2009 to June 2010 was 219, which is half of the number reported in 2008/09 (462). The median purity almost halved from 14.9% in 2008/09 to 6.8% in 2009/10. In the most recent quarter (April-June 2010) the median phenethylamine purity level was 1%, the lowest ever reported.

Figure 12: Number of phenethylamine* seizures analysed and median purity, 2005/06–2009/10



Source: Australian Crime Commission 2006, 2007, 2008, 2009, 2010, 2011

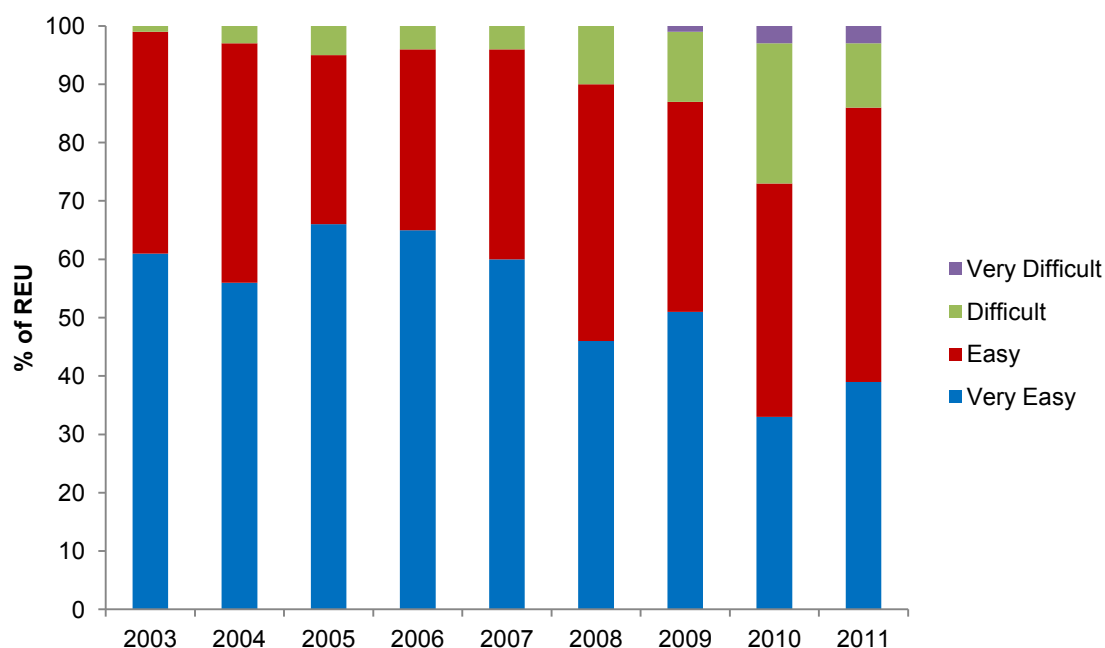
*Phenethylamines include MDMA ('ecstasy'), MDEA, MDA, PMA and others (see Australian Crime Commission, 2011)

A South Australian study confirmed that pills sold as ecstasy contained a variety of substances other than ecstasy, including MDA, methamphetamine, ketamine and caffeine, in a variety of combinations (Camilleri & Caldicott, 2005). The findings also indicated that users commonly (in at least half the 'cases' tested) did not know (or did not even think they knew) what the pill contained prior to any testing. Another investigation of pill content by the Victoria Police Forensic Services Department, also showed that pills increasingly contained substances other than MDMA, including methamphetamine and ketamine, in both single-drug and multi-drug combinations, with varying drug content or purity (Quinn et al., 2004).

5.1.3 Availability

Figure 13 presents the current availability of ecstasy and Table 18 summarises the changes in availability in the last six months, as perceived by the participants. The majority of participants reported that ecstasy was 'very easy' or 'easy' to obtain in 2011, and that this availability had been stable over the past six months (see Table 18). A graph of the long-term trend of ecstasy availability (Figure 13) also shows that, despite fluctuating proportions within the 'easy' categories, ecstasy has consistently been perceived as easy to obtain in SA across this time period.

Figure 13: Trend in availability of ecstasy in the preceding six months, 2003–2011



Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 18: Availability of ecstasy and change in availability over the last six months, 2010 & 2011

	2010 (n=92)	2011 (n=72)
Change in availability in last 6 months (%)		
More difficult	24	17
Stable	64	58
Easier	7	15
Fluctuates	5	10

Source: EDRS participant interviews

Note: Don't know not included

5.1.4 Supply: purchasing patterns and locations of use

Participants were asked to provide information pertaining to the recent purchase of ecstasy and other drugs. The results of those providing information (n=76) are presented in Table 19. The majority of REU purchased ecstasy for themselves and others (60%), although this did decrease significantly from 2010 (p=0.0007). Inversely, there was a significant increase in the proportion of REU who bought ecstasy for themselves only (35% versus 14%, p=0.002). The median number of people that ecstasy was purchased from remained stable at 3 (range 0-7), although there was a significant decrease in the median number of tablets purchased (from 10 in 2010 to 4 in 2011; p<0.001).

Table 19: Patterns of purchasing ecstasy in the last six months, 2010 & 2011

	2010 (n=92)	2011 (n=76)
Median no. of people purchased from (range)	3 (1-24)	3 (0-7)
Purchased for (%)		
Self only	14	35
Self and others	85	60
Others only	0	1
Did not purchase in last 6 months	1	4
No. of times purchased in the last 6 months (%)		
1 - 6	58	49
7 - 12	25	35
13 - 24	15	17
25 +	1	0
Did not purchase in last 6 months	1	0
Median no. of ecstasy tablets purchased (range)	10 (1-2,500)	4 (1-300)

Source: EDRS participant interviews

Ecstasy was purchased from a range of sources and from a variety of public and private locations, with the most common being from friends (53%) followed by known dealers (21%). Smaller proportions reported purchasing from known acquaintances (17%), workmates (1%), strangers (1%) and street dealers (1%) (see Table 20).

Almost a third (31%) of participants reported scoring at a friend's home, followed by a nightclub (17%), 'own home' (13%) or dealer's home (13%). Smaller proportions nominated a number of other venues (see Table 20).

It is clear from the data depicted in Table 20, that users have consistently purchased their ecstasy most commonly from friends, although there has been an overall downward trend over the years. In 2011, there was an increase in scoring from known dealers and a decrease in scoring from acquaintances.

Table 20: Trend in the source and venue of purchase of ecstasy for participants in the last 6 months, 2004–2011

	2004 (n = 99)	2005 (n = 98)	2006 (n = 101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)	2011 (n=76)
Bought ecstasy from:								
Friends	84	89	88	76	68	60	53	53
Known dealers	46	48	56	33	31	11	12	21
Workmates	8	10	20	14	14	3	5	1
Acquaintances	29	36	39	32	24	20	26	17
Strangers/unknown*	14	10	25	16	10	3	1	1
Street dealers	-	-	-	-	-	1	-	1
Other	-	-	-	4	1	2	3	1
Venues normally scored [ecstasy] at?								
Own home	40	31	38	27	26	24	16	13
Dealer's home	32	36	37	27	27	7	11	13
Friend's home	63	70	69	58	51	25	21	31
Raves/dance parties**	27	26	29	21	18	1	1	-
Nightclubs	33	33	41	33	28	12	11	17
Pubs	13	19	24	20	14	9	8	4
Agreed public location	44	48	42	35	27	8	20	9
Private party	-	29	36	22	15	2	6	1
Street	0	4	8	8	8	4	3	3
Work	-	-	-	-	11	1	1	-
Acquaintance's home	-	-	-	-	8	3	2	1

Source: EDRS participant interviews

* Includes 'unknown dealer' category from 2004

** Combined categories in 2004

- Indicates the data were not collected for the variable in that year

Note: Participants were allowed to nominate more than one response

KE Comments

- ▣ Whilst a couple of KE reported that ecstasy had remained stable in the preceding 12 months, the majority reported that there was very little ecstasy around at the moment. This is supported by a recent study which analysed untreated wastewater samples (from three metropolitan treatment plants in Adelaide) for the presence of MDMA and related illicit stimulants. It was found that from 2009 to 2010, weekly consumption of MDMA decreased from a mean of 4.52 doses/week per 1,000 people to 0.08 doses/week per 1,000 people ($p < 0.001$); this represented a 50-fold decrease in consumed doses. Inversely, methamphetamine consumption increased ($p < 0.05$) and cocaine consumption remained stable (Chen et al., 2011).
- ▣ As mentioned previously, KE from the law enforcement sector noted that analysis of seizures revealed that whilst consumers might have believed they were buying ecstasy, 'ecstasy' pills actually contained no (or very little) MDMA. However, one KE did report that, very recently, there had been few small seizures of MDMA which may indicate that it was about to make a return.

5.2 Methamphetamine

Key Findings

- The price for a point of both powder and base remained stable in 2011, whilst the price for a point of crystal increased to \$95. There were fairly substantial increases in the prices for a gram of the different forms of methamphetamine, however, due to small numbers these figures should be viewed with caution.
- The purity of powder and base were perceived as medium, and had remained stable over the last six months. The majority of participants reported that the purity of crystal was high, and again this remained stable over the preceding six months.
- All forms of methamphetamine were reported as easy or very easy to obtain.
- Participants reported scoring all forms of methamphetamine from friends.

5.2.1 Price

Not all participants were able to comment on the price of all three, or any, of the forms of methamphetamine. Table 21 presents the prices of methamphetamine and Table 22 presents whether these had changed over the six months preceding interview (sample sizes given per category).

The reported last median price of a point of powder and base remained the same in 2011 at \$50 per point, whilst the price of crystal was reported to be higher at \$95 per point. The reported last median prices of a gram of powder, base and crystal methamphetamine were all higher in 2011 at \$300, \$625 and \$400 respectively. However, readers should note the small numbers of participants who commented. Across all forms of methamphetamine, there was an increase in the proportion of participants who reported that the price had increased or fluctuated in the six months preceding interview (see Table 22).

Table 21: Median price of last purchase of the main forms of methamphetamine, 2010 & 2011

Amount	Median price per amount \$ (range; n)					
	Powder		Base		Crystal	
	2010	2011	2010	2011	2010	2011
Point						
Price at last purchase	50 (25-50; 7)	50 (20-100; 17)	50 [^] (50-350; 5)	50[^] (50-100; 9)	75 (20-300; 6)	95 (50-100; 18)
Gram						
Price at last purchase	200 [^] (20-400; 5)	300[^] (50-800; 8)	250 (17-400; 8)	625[^] (450-800; 4)	240 [^] (80-300; 3)	400 (100-1000; 10)

Source: EDRS participant interviews

[^] Small numbers reported (n<5)

Table 22: Changes in price over the last six months, 2010 & 2011

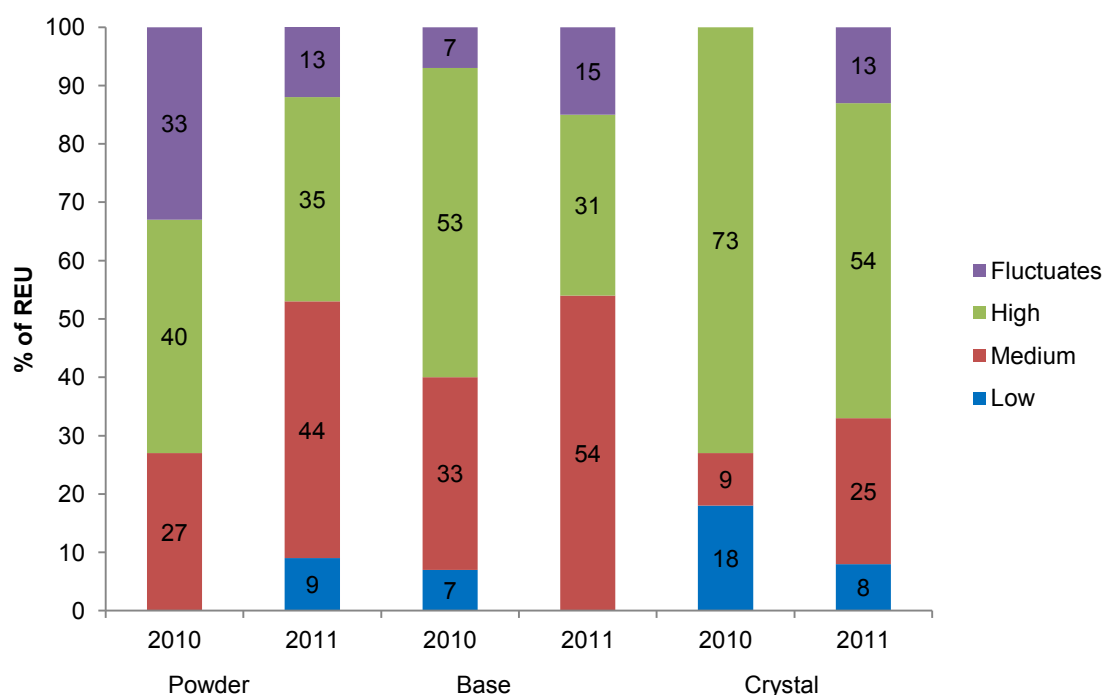
Change in price	Powder		Base		Crystal	
	2010	2011	2010	2011	2010	2011
Don't know	33	-	7	-	9	-
Increasing	20	33	13	30	18	47
Stable	40	48	73	50	64	42
Decreasing	7	5	0	0	0	0
Fluctuating	0	14	7	20	9	11

Source: EDRS participant interviews

5.2.2 Purity

As can be seen in Figure 14, there were some considerable changes in 2011 in regards to the perceived purity of methamphetamine. Across all forms of methamphetamine there was an increase in the proportion of participants who reported that the purity was medium and a decrease in those who reported in to be high. However, when asked whether the purity of methamphetamine had changed in the preceding six months, the majority of REU reported that purity had remained stable (see Table 23).

Figure 14: Purity of the main forms of methamphetamine over the last six months, 2010 & 2011



Source: EDRS participant interviews

Note: Don't know not included

Table 23: Changes in purity of the main forms of methamphetamine over the last six months, 2010 & 2011

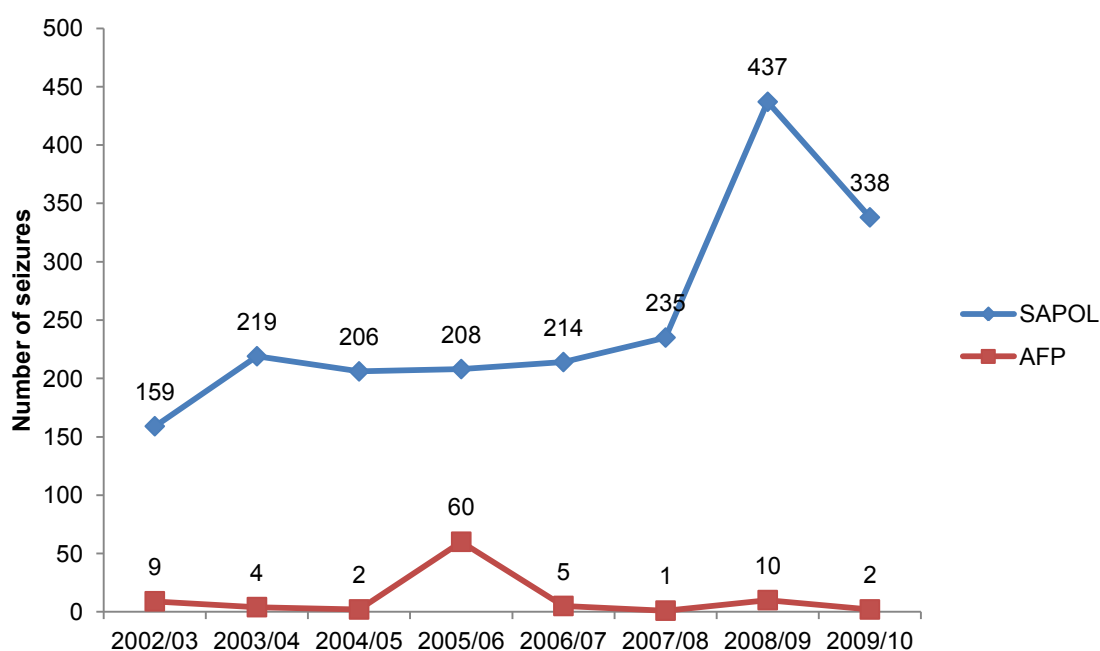
Change in purity	Powder		Base		Crystal	
	(n = 15)	(n=20)	(n = 15)	(n=10)	(n = 11)	(n=21)
	2010	2011	2010	2011	2010	2011
Increasing	-	10	13	0	30	24
Stable	46	55	67	80	40	57
Decreasing	8	5	-	0	10	5
Fluctuating	46	30	20	20	20	14

Source: EDRS participant interviews

Note: Don't know not included

The Australian Crime Commission (ACC) data were unavailable for 2010/11 at the time of publication. As a consequence, data provided by the ACC relates to the data on seizures and purity levels during the last financial year 2009/10 (Australian Crime Commission, 2011). Figure 15 shows the number seizures for amphetamine-type stimulants, by South Australia Police (SAPOL) and the Australian Federal Police (AFP). As can be seen, SAPOL seizures dropped in 2009-10, although the number of seizures for this year remain higher than seen in 2002/03-2007/08.

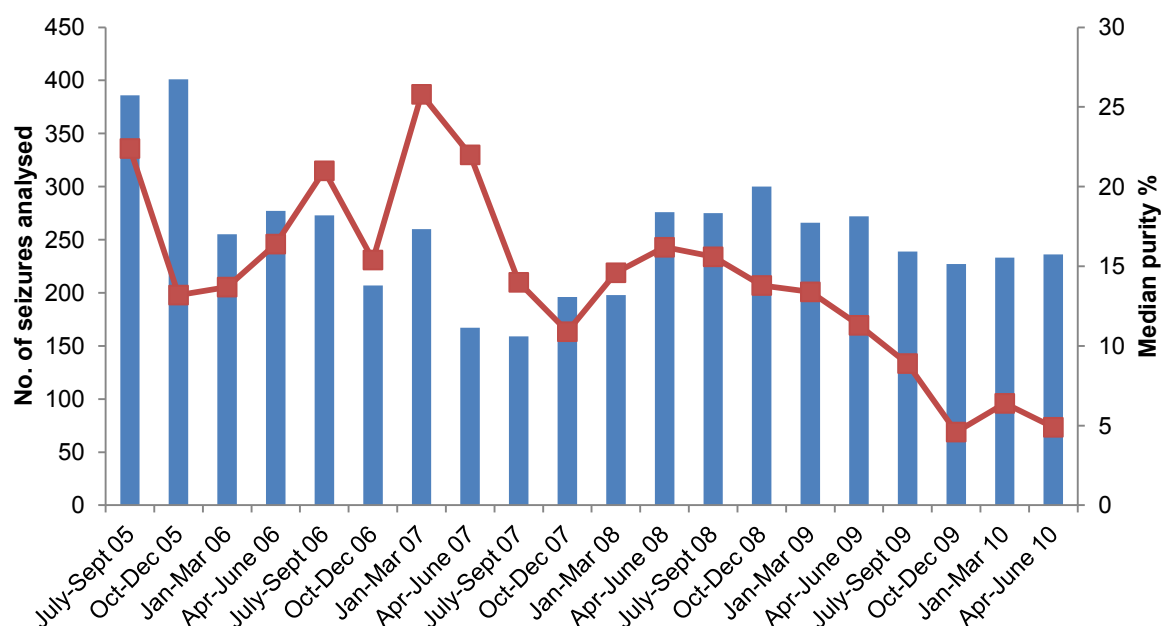
Figure 15: Number of seizures: amphetamine-type stimulants, 2002/03–2009/10



Source: Australian Crime Commission, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011

Figure 16 shows the number of methamphetamine seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures from 2005/06 to 2009/10. The total number of SAPOL methamphetamine seizures analysed from July 2009 to June 2010 was 935, which was a slight decrease from the 2008/09 financial year (1,113). The overall median purity of the seizures analysed was 6.9%, which was almost half of that reported in 2008/09 (13.3%). The majority of seizures analysed were less than or equal to 2 grams.

Figure 16: Median purity of methylamphetamine, 2005/06–2009/10

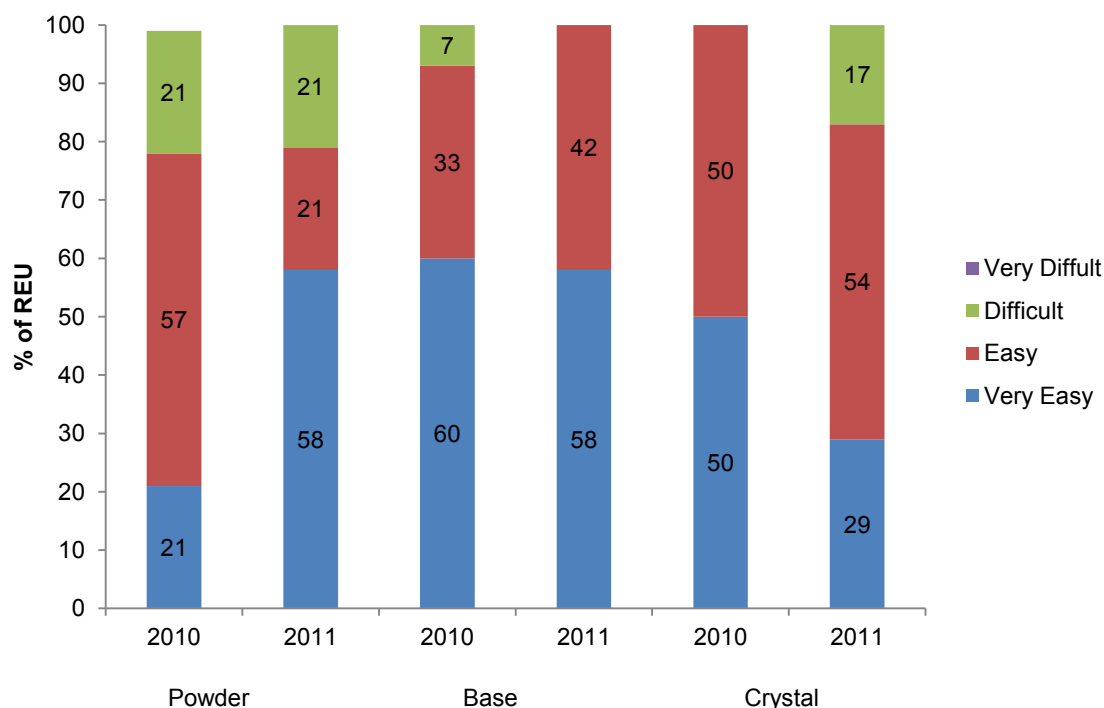


Source: Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011

5.2.3 Availability

Overall, all three forms of methamphetamine were considered to be ‘easy’ or ‘very easy’ to obtain by the majority of participants (see Figure 17). All participants reported base as ‘very easy’ or ‘easy’ to obtain, whilst for powder and crystal the figures were 79% and 83% respectively. The majority of participants reported the availability of all forms of methamphetamine as stable in the last six months (see Table 24).

Figure 17: Availability of the main forms of methamphetamine over the last six months, 2010 & 2011



Source: EDRS participant interviews

Table 24: Change in availability of the main forms of methamphetamine over the last six months, 2010 & 2011

Change in availability in last 6 months (%)	Powder		Base		Crystal	
	2010 (n=14)	2011 (n=20)	2010 (n=14)	2011 (n=11)	2010 (n=10)	2011 (n=21)
More difficult	21	15	0	9	10	5
Stable	79	70	86	55	60	67
Easier	0	10	14	27	10	14
Fluctuates	0	5	0	9	20	14

Source: EDRS participant interviews

Note: Don't know not included

5.2.4 Supply: purchasing patterns and locations of use

When asked where they had bought the different forms of methamphetamine, participants provided similar profiles for each of the three forms (see Table 25). The majority reported that they purchased all forms of methamphetamine from friends.

An analysis of the location at which methamphetamine was reportedly purchased revealed that participants most commonly obtained all three forms of methamphetamine from their friend's home.

Table 25: Last person and source venue where participants purchased methamphetamine, 2011

% commented	Powder (n=25)	Base (n=13)	Crystal (n=23)
Used, not scored	12	8	4
Who have you bought [meth] from in the last 6 months?			
Friends	44	46	44
Known dealers	20	39	39
Acquaintances	24	8	13
Strangers/unknown	-	-	-
Mobile	-	-	-
What venues do you normally score [meth] at?	(n=19)	(n=12)	(n=22)
Own home	16	17	-
Dealer's home	-	8	23
Friend's home	32	31	41
Nightclub	5	-	5
Pub	16	-	-
Private party	21	-	-
Raves	5	8	9
Live music event	5	-	-
Agreed public location	-	25	18
Acquaintances home	-	8	5

Source: EDRS participant interviews

KE Comments

- ➡ Three KE noted that the price of methamphetamine had increased in the preceding 12 months, and the current price for a point ranged from \$50-150 with an ounce costing \$1,500. One KE reported that the price of speed had fluctuated over the past year.
- ➡ One KE reported, more specifically, that the price of crystal methamphetamine had increased and that this could be due to the regulations that have been imposed on pseudo/ephedrine thus making it harder to manufacture locally.

5.3 Cocaine

Key Findings

- The median price of cocaine increased in 2011 to \$375 per gram.
- Purity was reported as low or medium, with most participants believing that purity had remained stable in the six months preceding interview.
- Perceptions of availability were divided with half reporting it was easy to obtain and the other half reporting it was difficult.
- Among those who could comment, most purchased cocaine from a friend and at a private residence (friend's home).

5.3.1 Price

Cocaine was most commonly purchased in grams and was purchased for a median of \$375 (range \$80-800). Participants who commented on the price considered it to have remained stable in the last 6 months (52%), whilst almost a quarter believed it had increased (24%).

Table 26: Price of cocaine, 2010 & 2011

	2010	2011
Median price of last purchase Gram (range; n)	\$350 (150-500; 15)	\$375 (80-800; 20)
Price change in last month (%)	(n=13)	(n=21)
Increasing	15	24
Stable	62	52
Decreasing	-	10
Fluctuating	23	14

Source: EDRS participant interviews

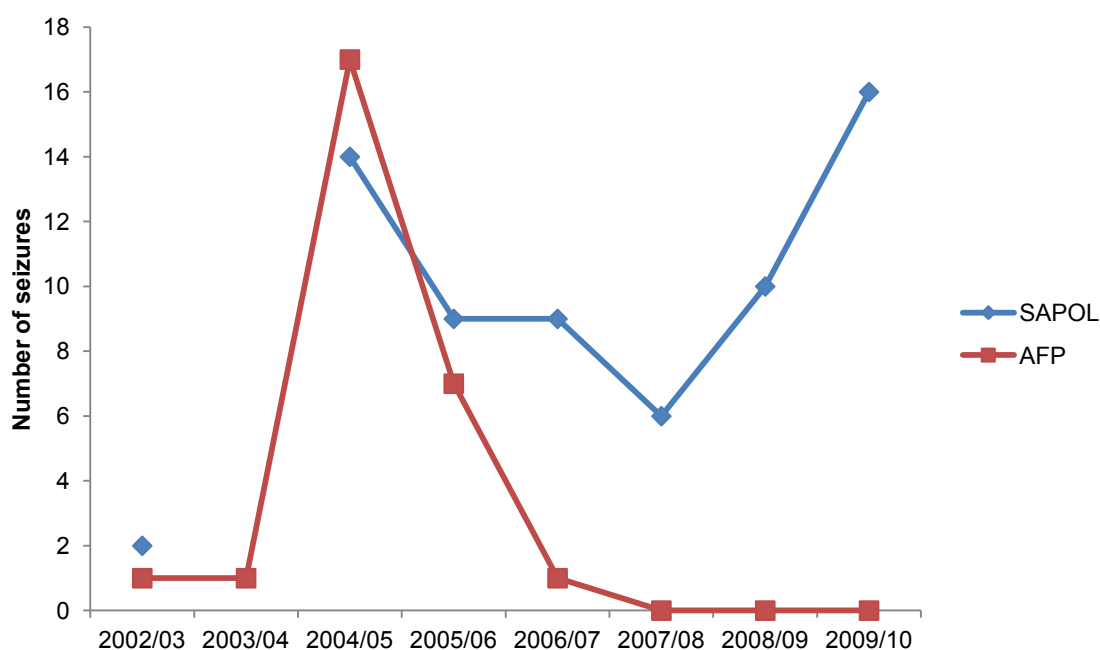
5.3.2 Purity

Participants were asked what the current purity or strength of cocaine was, and whether the purity had changed in the six months preceding interview. The current purity of cocaine was reported as low by 44% by REU and over a third (37%) commented that it was medium. The remaining participants believed it to be high (15%) or fluctuating (4%).

Almost a half of participants who commented (45%) reported that the purity of cocaine had remained stable over the past six months, whilst an additional 40% believed that it had fluctuated.

The Australian Crime Commission (ACC) data were unavailable for 2010/11 at the time of publication. As a consequence, data provided by the ACC relates to the data on seizures and purity levels during the last financial year, 2009/10 (Australian Crime Commission, 2011). Figure 18 shows the number seizures for cocaine, by South Australia Police (SAPOL) and the Australian Federal Police (AFP). As can be seen, SAPOL seizures increased in 2009/10 although the total number of seizures remain low (<20). Seizures by the AFP have been non-existent over the past three financial years.

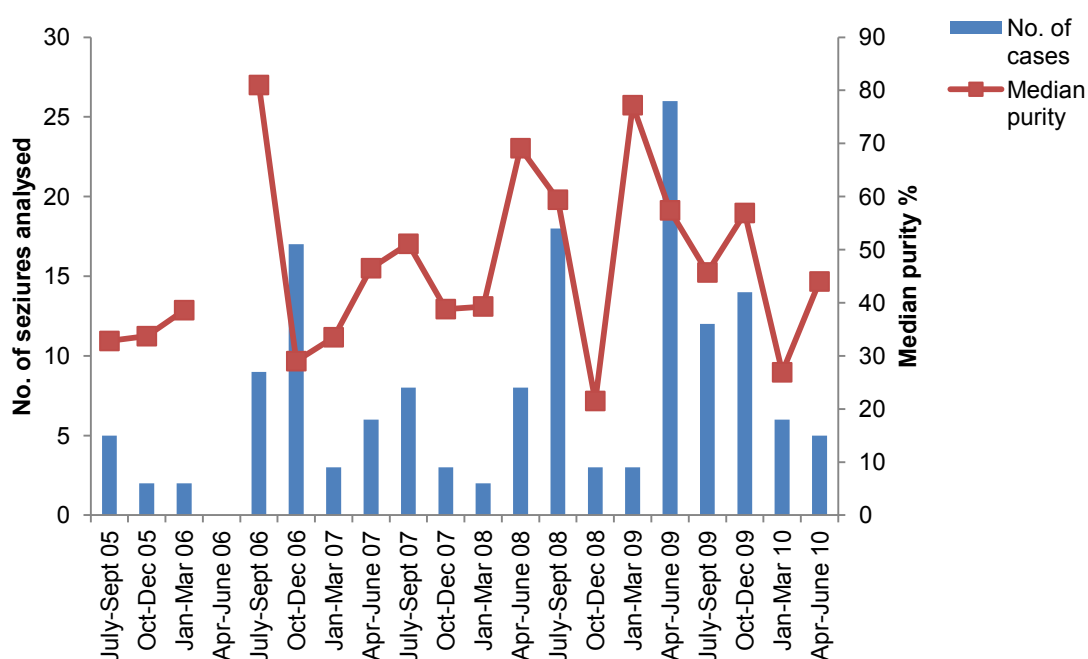
Figure 18: Number of cocaine seizures, 2002/03–2009/10



Source: Australian Crime Commission, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011

Figure 19 shows the number of cocaine seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures from 2005/06 to 2009/10. The total number of SAPOL methamphetamine seizures analysed from July 2009 to June 2010 was 37, which was a slight decrease from the 2008/09 financial year (50). The overall median purity of the seizures analysed was 46.6%, which again was a slight decrease from 2008/09 (53.3%). The majority of seizures analysed were less than or equal to 2 grams.

Figure 19: Number of cocaine seizures analysed and median purity, 2005/06–2009/10



Source: Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011

5.3.3 Availability

Reports regarding the availability of cocaine were mixed, with equal proportions believing that cocaine was easy and difficult to obtain (44% each). The majority of participants considered the ease of access to cocaine to have remained stable in the six months preceding interview, although this proportion did decrease from 2010 (although not significantly, $p=0.056$).

Table 27: Availability of cocaine and change in availability over the last six months, 2010 & 2011

	2010 (n=19)	2011 (n=19)
Current availability (%)		
Very Easy	16	7
Easy	37	44
Difficult	42	44
Very difficult	5	4
Change in availability in last 6 months (%)		
	(n=17)	(n=22)
More difficult	0	14
Stable	88	55
Easier	6	18
Fluctuates	6	14

Source: EDRS participant interviews
Note: Don't know not included

Cocaine was most commonly acquired through friends (67%). Small numbers ($n<5$) reported sourcing cocaine through acquaintances, known dealers, workmates or unknown dealers. It was most commonly obtained in a friend's home, or at an agreed public location (42% and 17% respectively; see Table 28).

Table 28: Last person and source venue where participants purchased cocaine, 2011

	(n=24) %
Who have you bought cocaine from in the last 6 months?	
Friends	67
Known dealers	17
Workmates	4
Acquaintances	8
Unknown dealers	4
What venues do you normally score cocaine at?	
Own home	4
Dealer's home	8
Friend's home	42
Nightclub	8
Agreed public location	17
Pubs	4
Private party	4
Work	4
Live music even	8

Source: EDRS participant interviews

KE Comments

- Most of the KE reported that they were seeing very little cocaine use and as such were unable to provide information on its current price, purity or availability.
- One KE noted that analysis of seized cocaine had revealed that levamisole was starting to be added to cocaine at the point of manufacture. This was a trend that had been noted in other Australian jurisdictions, and internationally, and a number of cocaine related deaths have been attributed to this adulterant. This is an issue which needs to be monitored closely.

5.4 LSD

Key Findings

- The price reported for a tab of LSD was slightly higher in 2011 (\$15) and had remained stable in the six months before interview.
- The purity was seen as high and stable by the majority of participants and easy to obtain.
- Participants generally bought LSD from friends in their own home.

5.4.1 Price

The median last price paid for a tab of LSD was \$15 (\$5-35; n=23) in 2011, higher than the median reported price at 'last' purchase in 2010 (\$10; range \$10-25; n=13). Fifty percent of those participants able to comment reported that the price of LSD had been stable in the previous six months, whilst almost a third (29%) believed it had increased. The remaining participants believed the price had fluctuated (17%) or decreased (4%).

5.4.2 Purity

Table 29 summarises the current purity of LSD and the changes in purity in the last six months, as perceived by the participants in 2011. Just under half of the participants, who were able to comment on the purity of LSD, reported that current purity was high (46%), although this had decreased from 2010 (63%). With regard to recent changes in purity, results indicated that of those able to comment 42% reported the purity as stable, and 33% believed it had fluctuated, in the six months prior to interview.

Table 29: Purity of LSD and change in purity over the last six months, 2010 & 2011

	2010 (n=16)	2011 (n=26)
Current purity (%)		
Low	6	8
Medium	31	23
High	63	46
Fluctuates	0	23
Change purity in last 6 months (%)	(n=15)	(n=24)
Increasing	7	13
Stable	67	42
Decreasing	7	13
Fluctuating	20	33

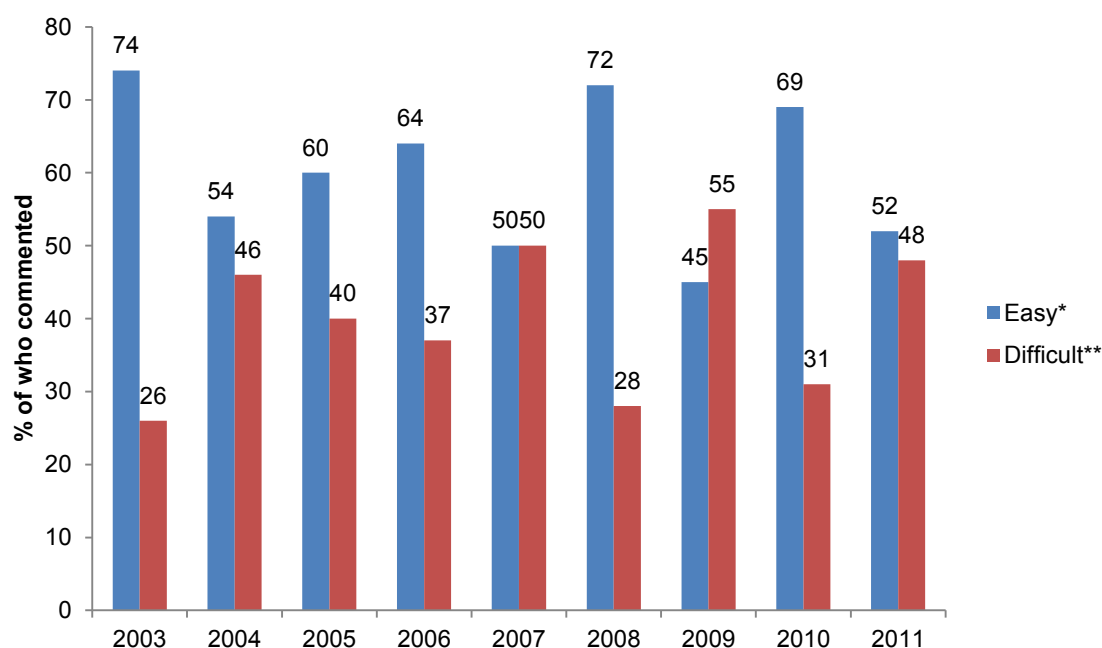
Source: EDRS participant interviews

Note: Don't know not included

5.4.3 Availability

The majority of participants (52%) reported that it was 'easy' or 'very easy' to purchase LSD in the six months prior to interview, although this was a substantial decrease from 2010. Figure 20 clearly shows that participants' perception regarding the availability of LSD has fluctuated over the years. Fifty percent of the participants reported that the availability of LSD had been stable in the previous six months, whilst 19% believed it had become more difficult to obtain LSD.

Figure 20: Trends in availability of LSD, 2003–2011



Source: EDRS participant interviews

*Data for 'easy' contains the collapsed categories 'very easy' and 'easy' for 2004-2011 and 'moderately easy' for 2003

**Data for 'difficult' is the collapsed categories 'difficult' and 'very difficult' for all years

Note: Don't know not included from 2009 onwards

The participants able to provide information reported that they had bought LSD most commonly from friends and at their own home (see Table 30).

Table 30: Usual person and source venue where participants purchased LSD, 2011

	% of participants (n=23)
Who have you got LSD from in the last 6 months?	
Friends	65
Known dealers	26
Acquaintances	9
What venues do you normally score LSD at?	(n=16)
Own home	44
Friend's home	31
Private party	6
Nightclub	6
Other	13

Source: EDRS participant interviews

5.5 Cannabis

Key Findings

- The price reported for a bag of hydro/bush remained stable in 2011.
- The purity of hydro was reported as high and bush as medium, with the purity of both types of cannabis perceived as stable in the previous six months.
- Availability was reported as easy or very easy to obtain, with the availability of both hydro and bush perceived as stable in the last six months.

The following sections refer to a 'bag' as a standard measure (particular to the South Australian cannabis market). A detailed investigation of the weight/content of a bag of cannabis was undertaken in 2002 (Longo et al., 2003). Briefly, in the 2002 survey, 33 participants (injecting drug users) gave a single value of the average weight of cannabis bags sold in South Australia, with a median of two grams and a mean of 2.5 grams. A further 19 participants gave both a lower and upper weight range for cannabis bags. The median lower range was two grams (mean 2.1 grams) and the median upper range was three grams (mean 2.9 grams). It can be understood, therefore, that the amount of cannabis in a 'bag' may fluctuate, but that a 'bag' in SA generally conveys a weight of cannabis between two and three grams.

In 2011, participants completing this section were also asked if they were able to differentiate between hydro and bush cannabis in terms of price, potency and availability. Almost three-quarters (72%) of the SA sample reported that they were able to distinguish between the two forms.

5.5.1 Price

The reported last median purchase price (by those able to comment) for a 'bag' of hydro (n=28) and bush cannabis (n=29) was \$25 (no range for hydro and range \$20-30 for bush). The median purchase prices reported for an ounce of hydro (n=18) and bush (n=20) were also the same, at \$200 an ounce (range \$160-270 for hydro and \$160-260 for bush). These were similar to the prices reported in 2010.

Two-thirds of the participants (68%, 34 out of 50 participants) who were able to comment reported that the price of hydro had remained stable, 18% (9 out of 50 participants) reported it had increased and 12% (6 out of 50 participants) reported that it had fluctuated in the six months prior to interview. Only one participant reported that the price had decreased. The majority of participants able to comment on the price of bush reported the price had remained stable (68%, 33 out of 48 participants), with 13% each (6 out of 48 participants) reporting it that the price had increased or fluctuated in the last six months. Three participants reported that the price of bush had decreased in the preceding six months.

5.5.2 Purity

Table 31 and Table 32 summarise the current purity of hydro and bush cannabis and the changes in the potency of cannabis over the last six months, according to participant reports.

Table 31: Purity of hydro and bush cannabis over the last six months, 2010 & 2011

	% Able to answer			
	2010		2011	
	Hydro (n= 46)	Bush (n=37)	Hydro (n= 50)	Bush (n=49)
High	52	30	70	33
Medium	26	51	18	53
Low	2	3	2	4
Fluctuates	20	16	10	10

Source: EDRS participant interviews

Note: Don't know not included

Table 32: Change in potency/strength of cannabis in last six months, 2010 & 2011

	% Able to answer			
	2010		2011	
	Hydro (n=47)	Bush (n=36)	Hydro (n=49)	Bush (n=47)
Increasing	9	3	16	17
Stable	60	72	63	57
Decreasing	2	0	4	9
Fluctuating	30	25	16	17

Source: EDRS participant interviews

Note: Don't know not included

In 2011, the purity of hydro and bush cannabis was reported as high or medium by the majority of participants able to comment (hydro 88%; bush 86%). The majority of participants able to comment reported that the purity of hydro (63%) and bush cannabis (57%) was stable in the last six months.

5.5.3 Availability

Table 33 and Table 34 summarise the current availability of hydro and bush cannabis and the changes in the availability of cannabis over the last six months, according to participant reports. In 2011, the majority of participants able to comment reported hydro (92%) and bush (86%) cannabis as easy or very easy to obtain. Large proportions of those able to comment reported that the availability of hydro (74%) and bush (50%) had remained stable in the last six months.

Table 33: Availability of cannabis currently, 2010 & 2011

How easy is it to get cannabis at the moment?	% Able to answer			
	2010		2011	
	Hydro (n=47)	Bush (n=38)	Hydro (n=50)	Bush (n=50)
Very easy	28	21	54	44
Easy	49	42	38	42
Difficult	23	29	8	14
Very difficult	0	8	0	0

Source: EDRS participant interviews

Note: Don't know not included

Table 34: Change in availability of cannabis over the last 6 months, 2010 & 2011

Has [availability] changed in the last 6 months?	% Able to answer			
	2010		2011	
	Hydro (n=46)	Bush (n=37)	Hydro (n=50)	Bush (n=48)
More difficult	20	8	10	13
Stable	65	78	74	50
Easier	6	11	10	23
Fluctuates	9	3	6	15

Source: EDRS participant interviews

Note: Don't know not included

5.4.4 Usual source of purchase

Table 35 summarises information from participants on the source (both person and venue) from which they had 'usually' obtained cannabis in the preceding six months. In 2011, participants able to comment reported that they had 'usually' obtained cannabis from a friend (47% for hydro, 46% for bush), a known dealer (28% for hydro, 24% for bush) or an acquaintance (10% each for both hydro and bush), in the six months prior to interview. The majority of participants able to comment reported that the venue they had 'usually' obtained cannabis from was a friend's home (41% for hydro, 36% for bush), a dealer's home (16% for hydro; 14% for bush), an agreed public location (14% for hydro; 12% for bush) or home delivery (10% for hydro; 12% for bush).

Table 35: Usual person and source venue where participants purchased hydro and bush cannabis, 2011

	Hydro (n=51)	Bush (n=50)
Person (%)		
Friends	47	46
Known dealer	28	24
Workmates	0	0
Street dealer	2	2
Acquaintances	10	10
Unknown dealer/strangers	0	0
Grew own	0	0
Family member	0	0
Haven't obtained	14	18
Venue (%)		
Home delivery	10	12
Dealer's home	16	14
Friend's home	41	36
Acquaintance's home	2	2
Agreed public location	14	12
Work	0	2
Street Market	0	0
Live music event	0	2
Other	4	2
Haven't obtained	14	18

Source: EDRS participant interviews

Key Expert Comments

-  All KE reported that there was no real change in the cannabis market. Two KE reported that a bag of cannabis cost \$25 (consistent with participant reports), and one reported that it cost between \$2,200-3,600 for a pound of cannabis.
-  Two KE noted that outdoor crops were not very common, with hydro being the preferred form of cannabis.

5.6 Other Drugs

Very few participants were able to answer on ketamine (n=4) or GHB (n=2) and hence data will not be presented for these drugs.

6 HEALTH- RELATED TRENDS ASSOCIATED WITH DRUG USE

Key Findings

- There were significant increases in lifetime and recent (past 12 month) overdoses, for both stimulants and depressants.

Health service use

- Almost one in five participants reported that they had received professional help for a drug and alcohol related issue.
- Telephone calls to ADIS decreased for cannabis, and increased for opioids and amphetamines. Calls relating to alcohol remained stable, whilst cocaine and ecstasy related calls continued to remain very low.
- Alcohol dominated as the primary drug of concern for the largest proportion of total clients to DASSA treatment services, followed by amphetamines, cannabis and heroin. Both ecstasy and cocaine accounted for only a very small fraction of the total attendances.
- There were increases in the prevalence of REU who reported experiencing problems as a result of their drug use. Alcohol was nominated as the main drug associated with all types of harms.

Mental health

- Just under a quarter of the participants were assessed as having high to very high levels of psychological distress in 2011, with 26% of the sample reporting that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview.

6.1 Overdose and drug-related fatalities

As in previous years, participants in the 2011 sample were asked about 'stimulant' and 'depressant' drug overdose experiences separately. Stimulant drugs include ecstasy, methamphetamine base, powder or crystal, pharmaceutical stimulants, cocaine, MDA and PMA. Depressant drugs include alcohol, GHB, heroin, methadone, benzodiazepines and other opiates. Participants were asked if they had experienced overdose on a 'stimulant' and/or 'depressant' drug ever and in the last six months. The location where participants had overdosed was also investigated, as was the main drug participants believed was involved. Overall, when recent (in the 12 months prior to interview) 'stimulant' and 'depressant' overdoses were combined thirty-five participants (46%) reported that they had had a recent overdose experience.

6.1.1 Stimulant overdose

Twenty-one participants (28%) reported that they had 'ever' overdosed on 'stimulant' drugs, representing a significant increase from 2010 (10%; $p=0.005$; 95% CI: -0.061 – -0.3). Those who had experienced a stimulant overdose reported doing so on a median of 2 occasions

(range 1-50). The median time since last overdose, for those who reported 'ever' overdosing on a 'stimulant' drug was 6 months (range 1-120 months), and they reported that at the time of overdose they had been partying for a median of 6.25 hours (range 0-96).

Sixteen participants reported that they had overdosed on a 'stimulant' drug in the last twelve months, again representing a significant increase from 2010 ($p=0.002$; 95% CI: -0.068 – 0.27). Participants predominantly reported being at their own home ($n=6$), a friend's home ($n=3$) or at a live music event ($n=3$) at the time of overdose. Two participants reported being in a car at the time of overdose, one participant was at a nightclub and one at a pub. Of those who had recently overdosed, the main drug involved was ecstasy ($n=9$), whilst three participants reported that methamphetamine was the main drug involved (powder=2; base=1). Two participants reported cannabis was the main drug involved, one reported cocaine and another reported that ecstasy soaked in acid was the main drug involved. 'Other' drugs involved were alcohol ($n=8$), cannabis ($n=4$), crystal methamphetamine ($n=1$) and amyl nitrate ($n=1$).

6.1.2 Depressant overdose

Thirty participants (49%) reported they had 'ever' overdosed on 'depressant' drugs, again representing a significant increase from 2010 ($n=8$, $p<0.001$). Those that had experienced a depressant overdose had done so on a median of 10 occasions (range 1-365). Twenty-eight participants (37%) reported overdosing on a 'depressant' drug in the last twelve months, again representing a significant increase from 2010 ($n=4$; $p<0.001$). The main drug involved in these recent depressant overdoses was predominantly alcohol ($n=24$), with much smaller numbers reporting heroin ($n=1$), benzodiazepines ($n=1$), antidepressants ($n=1$) and oxycodone ($n=1$). The location of last overdose was quite mixed with most participants reporting that they were at home ($n=7$), at a pub ($n=6$), nightclub ($n=5$) or a friend's home ($n=5$) at the time of overdose. Smaller numbers reported being in a public place ($n=2$), at a private party ($n=1$), in a car ($n=1$) or outdoors ($n=1$) at the time of overdose.

The median time since last overdose, for those who reported 'ever' overdosing on a 'depressant' drug, was three months (range 2 weeks-120 months).

6.2 Help-seeking behaviour

In 2011, sixteen percent of participants reported having sought help from a service or health professional in the last six months for any issue related to their drug and/or alcohol use. The reasons for seeking help were varied, but most commonly participants were seeking help for dependence/addiction ($n=3$) or to cut down on their drug use ($n=3$). The main sources of help were a general practitioner ($n=4$), followed by a counsellor ($n=2$), drug and alcohol worker ($n=2$) or psychologist ($n=2$). Alcohol was the most common drug that participants were seeking help for ($n=4$), followed by cannabis ($n=2$). Four participants reported seeking help on multiple occasions.

6.3 Drug Treatment Services

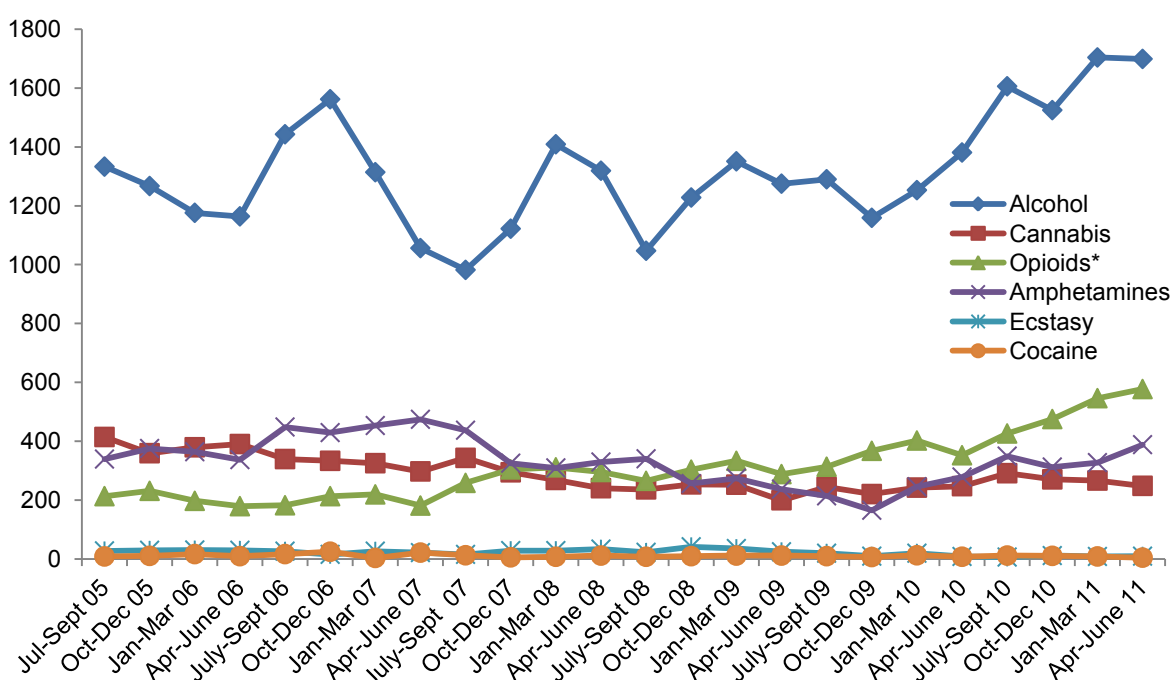
The following drug treatment data for South Australia comes from two sources: telephone calls to the SA Alcohol and Drug Information Service (ADIS); and Drug and Alcohol Services South Australia (DASSA). This and further 'Treatment Services DASSA' sections below will present data in terms of clients (per drug type) to these services, to provide a clearer picture of the trends in the number of individuals seeking treatment for the various illicit substances. For information in terms of episodes of treatment (per drug type) – that gives a more accurate measure of demand, or total load, on treatment services – the reader is directed to the Report on the National Minimum Data Set (Australian Institute of Health and Welfare,

2008), which details findings from DASSA and other non-government treatment agencies in SA.

6.3.1 Treatment services ADIS

Figure 21 shows the number of drug related telephone calls to the SA Alcohol and Drug Information Service (ADIS) from the general public, regarding six different substance types across the financial years 2005/06 to 2010/11. It can be seen that the majority of drug-related calls to SA ADIS across the time period depicted have been alcohol-related, and there has been a steady increase in such calls since October-December 2009. In relation to cannabis, opioids and amphetamines the numbers have fluctuated considerably over the years. Across time, there seems to have been a steady decrease in the number of cannabis-related calls; a steady increase in the number of opioid-related calls and amphetamine-related calls have remained relatively steady. In 2010/2011, opioid-related calls continued to surpass amphetamine-related calls. Calls relating to ecstasy or cocaine have constituted less than one percent of the total coded calls to SA ADIS across all years depicted.

Figure 21: Number of drug-related calls to ADIS per quarter, by selected drug type, July 2005–June 2011



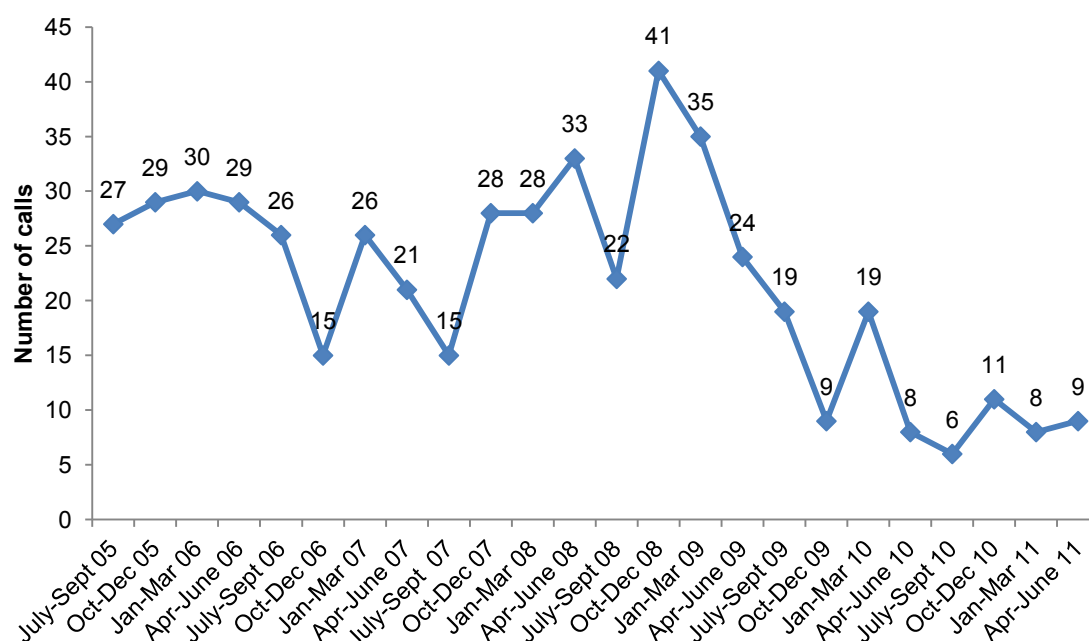
Source: SA ADIS

* 'Opioids' includes all calls coded under the categories heroin, methadone, buprenorphine, naltrexone, opioid pharmacotherapies and other opioids

6.3.1.1 Ecstasy-related calls

Telephone calls to ADIS regarding ecstasy accounted for just 0.20% (n=34) of the total coded telephone contacts (drug-related) in the 2010/11 financial years (n=16,191). Figure 22 depicts the number of ecstasy-related calls per quarter for the last five financial years. As can be seen the number of calls regarding ecstasy remained extremely low in the last few quarters. In fact, the last financial year witnessed the lowest number of calls recorded thus far.

Figure 22: Number of inquiries to ADIS regarding ecstasy July 2005–June 2011



Source: SA ADIS

6.3.1.2 Methamphetamine-related calls

Telephone calls to ADIS regarding amphetamines accounted for 8.50% (n=1,376) of the 16,191 total drug related calls in the 2010/11 financial year. This was higher than recorded in the previous financial year (6.87% of a total 13,120 calls), and represents a continuing upward trend since October-December 2009. Figure 21 depicts the number of amphetamine-related calls per quarter for the last five financial years compared to calls related to other drug types. As can be seen in Figure 21 calls related to methamphetamine have overtaken those for cannabis.

6.3.1.3 Cocaine-related calls

Telephone calls to ADIS regarding cocaine accounted for only 0.20% (n=33) of total drug related telephone calls in 2010/11. The numbers of calls to SA ADIS concerning cocaine have been consistently low across the past few years, and remained stable in 2010/11. More specifically, in 2009/10 cocaine accounted for 0.25% (n=34) of coded drug related calls; 0.28% (n=38) of coded drug related calls in 2008/09; 0.24% (n=35) in the 2007/08 financial year; 0.45% (n=64) in 2006/07; 0.32% (n=43) in 2005/06; 0.32% (n=41) in 2004/05; 0.20% (n=27) 2003/04; 0.25% (n=35) in 2002/03; and 0.4% (n=50) in 2001/02. Figure 21 depicts the number of cocaine-related calls per quarter for the last five financial years compared to calls related to other drug types. The number of cocaine related calls reported in the last quarter is the lowest since January-March 2007.

6.3.1.4 Cannabis-related calls

Telephone calls to ADIS regarding cannabis accounted for 6.6% (n=1,075) of the total coded telephone contacts (drug-related) in the 2010/11 financial year, and this represented a slight decrease from 2009/10 (7.26%; n=953). Indeed, it appears that across the years there has been an overall downward trend in the number of cannabis-related calls. More specifically, in the 2008/09 financial year, cannabis accounted for 7.03% (n=940) of all drug-related calls; in

2007/08 that was 8.13% (n=1,145); 9% in 2006/07; 11.7% in 2005/06; 12% in 2004/05; 10.3% in 2003/04; 12% in 2002/03; and 14% in 2001/02. In 2010/11, the number of enquiries regarding cannabis (6.6% of total) was lower than for both amphetamines (8.5% of total) and opioids (12.50% of total). Figure 21 depicts the number of cannabis-related calls per quarter for the last three financial years compared to calls related to other drug types.

6.3.2 Treatment services DASSA

As can be seen in Table 36, in 2010/11 alcohol dominated as the primary drug of concern for clients to DASSA treatment services, followed by amphetamines, cannabis and heroin. Both ecstasy and cocaine accounted for only a very small fraction (<2%) of the total attendances, with the proportion of total clients nominating ecstasy or cocaine as the primary drug of concern both decreasing in 2010/11.

Table 36: Primary drug of concern nominated by clients of Drug and Alcohol Services South Australia, as a percentage of total number of clients*, 2001/02–2010/11

Drug type (%)	2001/ 02	2002/ 03 [#]	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/11 (n=5,430)
Alcohol	42.0	44.6	47.7	48.3	51.8	52.1	55.9	57.5	57.1	54.7
Amphetamines	14.5	19.3	18.5	20.0	18.8	21.7	16.3	15.2	13.3	16.0
Heroin	10.3	18.5	14.3	12.3	9.7	7.6	8.2	7.8	8.6	8.7
Opioid analgesics	7.1	7.6	8.0	7.5	6.7	6.2	7.0	7.3	7.0	6.9
Cannabis	10.7	10.6	13.1	12.8	13.2	11.3	11.5	10.3	10.8	11.4
Benzodiazepines	1.9	2.6	2.3	2.4	2.3	2.0	2.3	2.0	1.9	1.9
Ecstasy	0.12	0.38	0.74	0.63	1.1	0.9	1.3	2.0	1.6	1.0
Cocaine	0.3	0.3	0.1	0.4	0.4	0.4	0.4	0.5	0.4	0.2
Tobacco	0.2	0	0.2	0.2	0.3	0.3	0.5	0.4	0.6	0.7
Unknown	6.1	0	0.1	0.2	0.2	0.4	0.3	0.2	0.1	0.1
Buprenorphine	-	0.4	1.2	1.0	1.06	1.2	1.3	1.1	1.3	1.4
Other	6.8	1.6	1.5	1.8	1.3	2.5	2.2	1.7	2.5	2.1

Source: Drug and Alcohol Services South Australia

* Total number of clients = total number of individuals who started one or more new episodes of treatment during the period. Figures rounded up to one decimal place

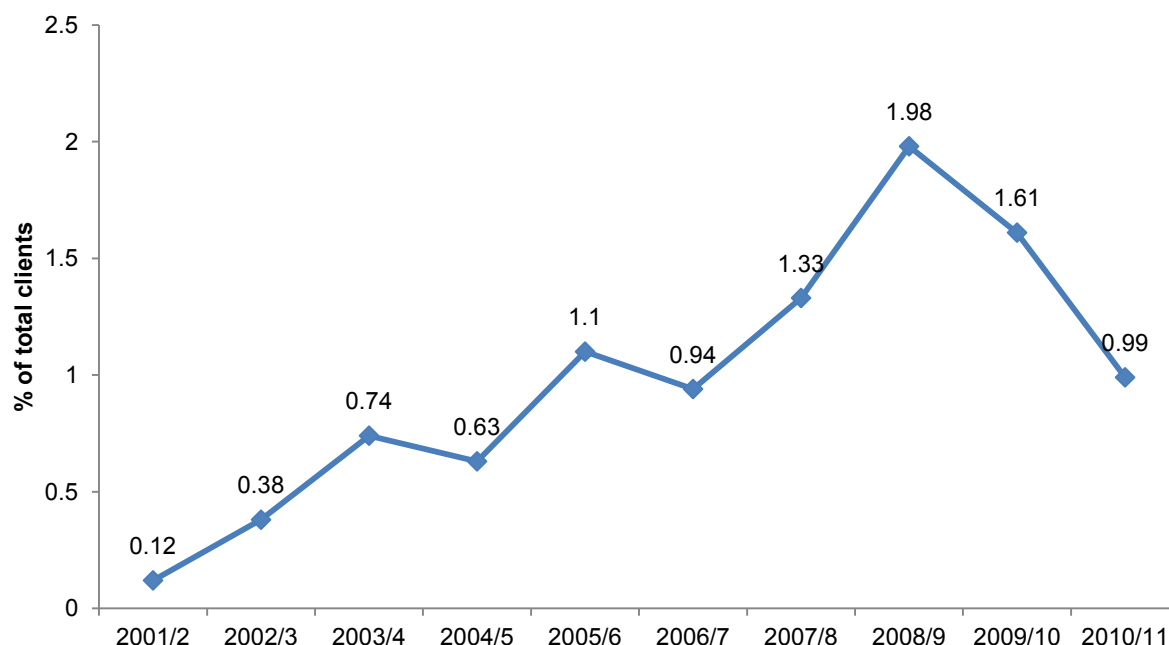
[#] During this period a new data collection system (Client Management Engine-DASC Information System or CME-DIS) was employed to meet the requirements of the National Minimum Data Set for Alcohol and Other Drug Treatment Services (AODTS-NMDS)

Note: Total percentages for each year may not equal 100% as clients may have presented with more than one primary drug of concern within that time

6.3.2.1 Ecstasy-related attendances

DASSA treatment data revealed that in 2010/11 there were 54 clients (individuals) to all DASSA treatment services who nominated ecstasy as the primary drug of concern. This constitutes 0.99% of total clients for that year and indicates a decrease from 2009/10. See also Table 36 for a comparison of ecstasy to other primary drugs of concern among clients of DASSA treatment services.

Figure 23: Percentage of total DASSA clients with ecstasy as the primary drug of concern, 2001/02–2010/11*



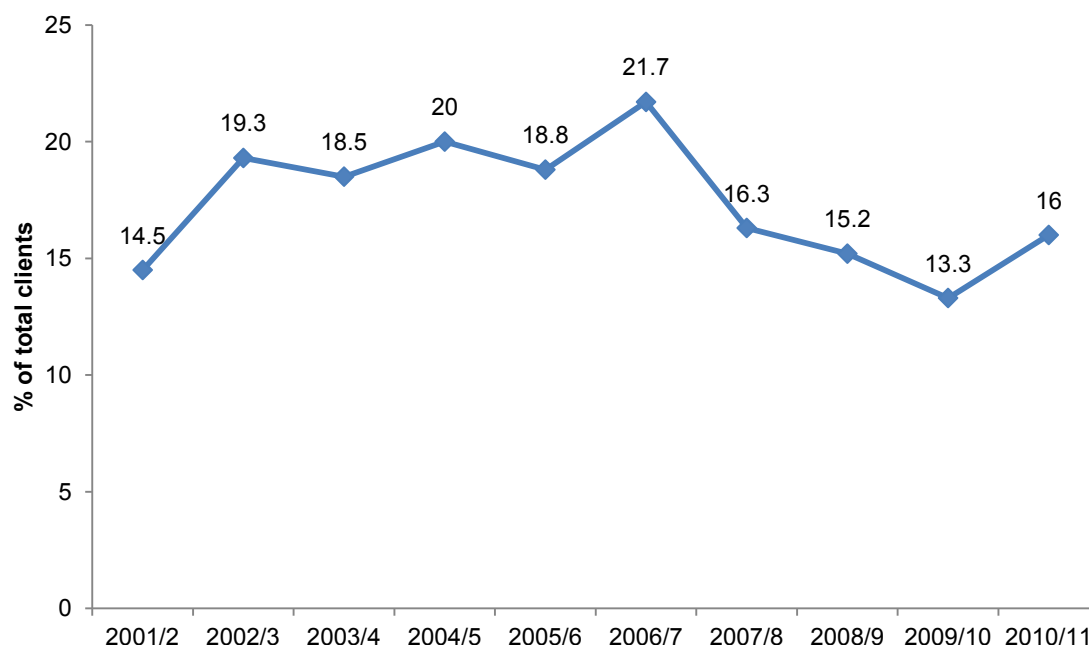
Source: Drug and Alcohol Services South Australia

* During 2002/03 a new data collection system was employed to meet the requirements of the National Minimum Data Set for Alcohol and Other Drug Treatment Services (AODTS- NMDS)

6.3.2.2 Methamphetamine-related attendances

The proportion of clients nominating amphetamines as their primary drug of concern increased in 2010/11, returning to similar levels observed in 2008/09. In 2010/11, amphetamines (15.95%) were the second most commonly nominated primary drug of concern by clients of DASSA after alcohol (57.10%), and dominated as the most common illicit drug of concern, well above cannabis (11.42%).

Figure 24: Percentage of total DASSA clients with amphetamines as the primary drug of concern, 2001/02–2010/11*



Source: Drug and Alcohol Services South Australia

* During 2002/03 a new data collection system was employed to meet the requirements of the National Minimum Data Set for Alcohol and Other Drug Treatment Services (AODTS- NMDS)

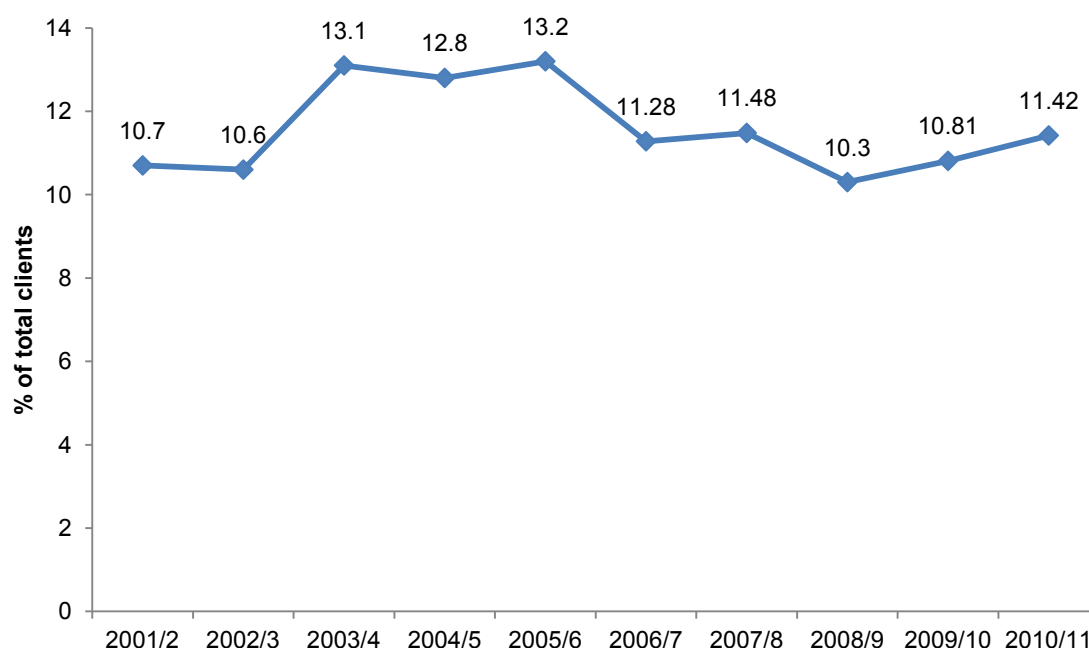
6.3.2.3 Cocaine-related attendances

The proportion of clients nominating cocaine as their primary drug of concern has remained relatively stable and low across all years reported (see Table 36). Of clients to all DASSA treatment services, 0.2% (n=11 of 5,430 individuals) nominated cocaine as their primary drug of concern in 2010/11.

6.3.2.4 Cannabis-related attendances

The proportion of clients nominating cannabis as their primary drug of concern increased slightly in 2010/11 compared to the previous year (11.42% and 10.81%, respectively) (see Table 36 and Figure 25).

Figure 25: Percentage of total DASSA clients with cannabis as the primary drug of concern, 2001/02–2010/11*



Source: Drug and Alcohol Services South Australia

* During 2002/03 a new data collection system was employed to meet the requirements of the National Minimum Data Set for Alcohol and Other Drug Treatment Services (AODTS- NMDS)

6.4 Other self-reported problems associated with ecstasy and related drug use

The participant survey also asked users about their experience of other problems related to their ecstasy or other drug use during the last six months, in the categories of social/relationship, risk/injury, legal/police, and responsibility (see Table 37). In 2011, there was an increase in all self-reported problems, although this was only significant for problems related to risk/injury problems (where participants could have been hurt or hurt others, for example driving or operating machinery while intoxicated) (55% versus 38%; $p=0.047$; 95% CI: -0.015 – -0.31). The next most common problem associated with ERD use related to personal responsibility (36%) (either at work, home or school, for example, neglect of household/children, repeated absences from work/school/university etc.), followed by relationship or social life problems (33%) and legal problems (12%).

Table 37: Self-reported problems associated with ecstasy and related drug use, 2010 & 2011

	2010 (n=92)	2011 (n=73)
Relationship/Social problems (%)	21	33
Legal/Police problems (%)	8	12
Risk problems (%)	38	55
Responsibility problems (%)	23	36

Source: EDRS participant interviews

Participants were also asked to nominate which drug or drugs they attributed the problem to. A summary of these data is given in Table 38. As can be seen, alcohol was most the common drug held responsible for all problems, although there was a decrease across all categories from 2010. Harms attributed to ecstasy have also declined across all categories in 2011, which is probably linked to the decline in ecstasy use. Inversely, the harms attributed to cannabis increased across all categories in 2011.

Table 38: Proportion of participants reporting other harms associated with main drug in the last six months, 2010 & 2011

	Relationship/social problems		Legal/police problems		Risk problems		Responsibility problems	
(%)	2010 n=18	2011 n=24	2010 n=7	2011 n=9	2010 n=35	2011 n=40	2010 n=20	2011 n=26
Ecstasy	22	4	14	11	20	18	15	8
Cannabis	11	25	0	22	0	8	20	35
Alcohol	39	33	43	33	66	55	45	35
Speed	0	4	0	0	0	0	5	0
Base	17	8	29	11	0	8	5	8
Crystal	6	13	14	0	3	5	5	8
LSD	0	0	0	0	0	3	0	0
Benzodiazepines	6	0	0	0	3	0	5	0
Heroin & other opiates	-	8	-	11	-	3	-	8
Other	0	4	0	11	9	3	0	0

Source: EDRS participant interviews

6.5 Emergency Department admissions

Information on drug-related attendances to the emergency department was provided by the Royal Adelaide Hospital (RAH), the largest central public hospital in Adelaide, and is presented in Table 39. It is important to note that these data are likely to be an underestimate of drug-related emergency department presentations. Drug involvement may not always be coded accurately, and coding accuracy is also dependent on accurate self-report of those presenting. Data should be interpreted with these caveats in mind. Readers

are also warned that these are 'uncleaned' data and should be interpreted with caution; however, they are included here to give a picture of trends over time, rather than to provide precise numbers.

It is noteworthy that alcohol accounted for the most attendances by far across all years, followed by benzodiazepines and antidepressants. Ecstasy-related attendances are not specifically coded. However, of interest in the context of ecstasy and related drug use, is the trend in the number of presentations for GHB, amphetamines and cannabis. The number of GHB-related attendances remained relatively stable in 2010/11, as did amphetamine and cannabis-related attendances. It can be seen that attendances regarding heroin have continued to rise somewhat across the years depicted, and in 2010/11 attendances for heroin related issues increased from 51 to 66 attendances. Heroin accounts for the most common illicit drug-related attendances, with amphetamines now the second most common illicit drug-related attendances at the RAH. In addition, if the diagnosis 'drug-induced psychosis' (which includes amphetamine-induced psychosis) is examined, it can be seen that the number of attendances with this diagnosis had decreased in 2005/2006 (from 89 to 31), increased slightly in 2006/07 to 37, and again decreased in 2007/08 with no attendances recorded for 2008/09-2010/11.

Table 39: Number of attendances* to the emergency department at the Royal Adelaide Hospital, SA, from 2001/02–2010/11 (per drug or diagnosis)

	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
Amphetamines	76	65	81	91	61	82	67	58	61	61
Cocaine	2	0	1	4	6	4	1	4	5	1
LSD	2	1	2	6	3	2	3	7	7	3
GHB	48	28	28	48	38	14	15	15	17	20
Alcohol	1,118	994	1,106	1,465	1,409	1,559	1,554	1,585	2,078	2,119
Cannabis	16	9	11	15	13	15	15	13	11	14
Heroin	30	38	25	30	32	39	44	66	51	66
Other opioid**	45	64	57	70	68	59	28	38	36	38
Benzodiazepines	170	138	138	141	122	174	145	151	169	162
Antidepressants	104	79	80	87	55	74	78	67	58	71
Drug addiction [#]	27	38	20	37	28	17	8	1	0	0
Drug-induced psychosis [#]	67	52	44	89	31	37	28	0	0	0
Drug withdrawal [#]	35	26	24	26	19	20	0	0	0	0
Other ^{###}	533	434	442	434	360	579	528	464	480	471
TOTAL	2,273	1,966	2,059	2,543	2,245	2,675	2,514	2,469	2,973	3,026

Source: Royal Adelaide Hospital Emergency Department

* Coded as drug or poisoning-related

** Includes opium, methadone, other narcotics (morphine, codeine, pethidine etc.), and opioid withdrawal

[#] Not otherwise specified, excluding alcohol

^{###} Includes all other poisonings related to food, drug (medical & non-medical), chemical and other toxins

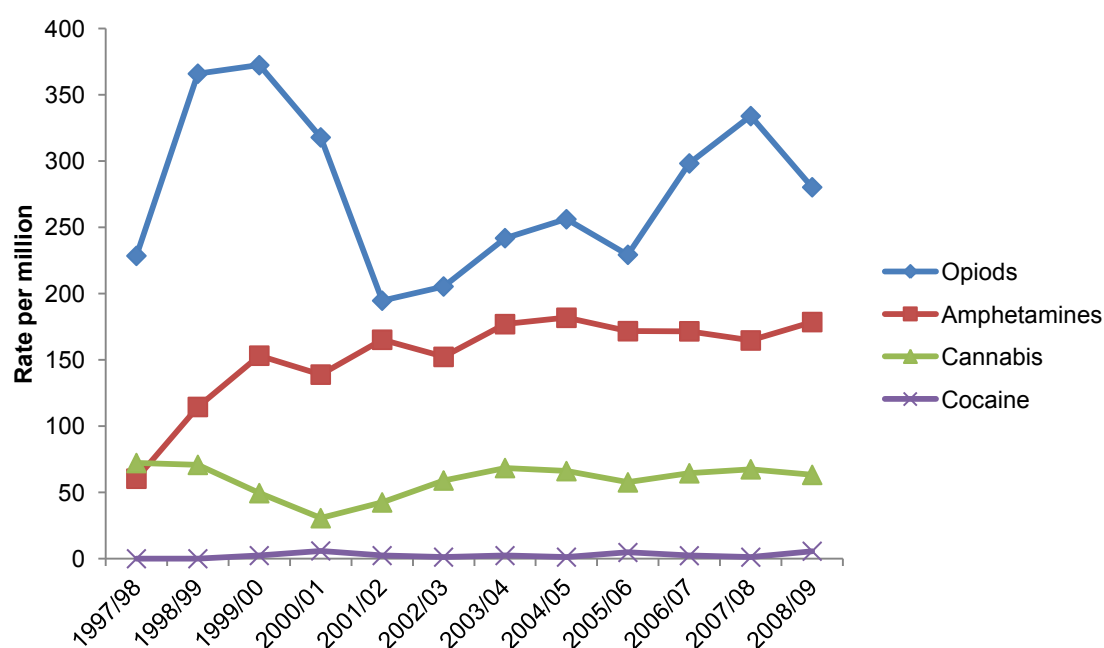
6.5.1 Hospital admissions

An analysis of data, provided by the Australian Institute of Health and Welfare from the National Hospital Morbidity Dataset, for the period 1997/98 to 2008/09 (financial years) was

undertaken by NDARC. These data report on both state-specific and national drug-related hospital admissions (for the four main illicit drug classes; See Appendix 1 for National data), adjusted so that all years reflect International Statistical Classification of Diseases and Related Health Problems, Ninth Revision (ICD-9) classifications for comparability across this time period. Readers should note that the major impact of this adjustment is the exclusion of admissions for drug-related psychosis and withdrawal, due to incomparability between ICD-9 and International Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) coding for these conditions³. It should also be noted that these data lag behind other indicators by one year. At the time of printing, data was not available for 2009/2010.

The substances most commonly involved in a primary diagnosis for South Australian drug-related hospital admissions were opioids (heroin, morphine, methadone etc.), followed by amphetamines, cannabis and cocaine (see Figure 26). Ecstasy-related admissions are not specifically coded. South Australian data followed a similar pattern to national data (see Appendix 1), but differed in the rates of admissions per drug type. In particular, SA, in comparison to the national figure, had a lower rate per million for opioid-related admissions (SA: 280.24 versus National 441.62), cocaine-related admissions (SA: 5.65 versus National: 14.79), and cannabis-related admissions (SA: 63.28 versus National: 155.37). Amphetamine-related admissions in SA were at a higher rate per million (SA: 178.54 versus National: 157.06).

Figure 26: Rate per million people of substance-related admissions* (primary diagnosis) to hospital in South Australia, 1997/98–2008/09



Source: Australian Institute of Health and Welfare

* For persons aged between 15 and 54 years

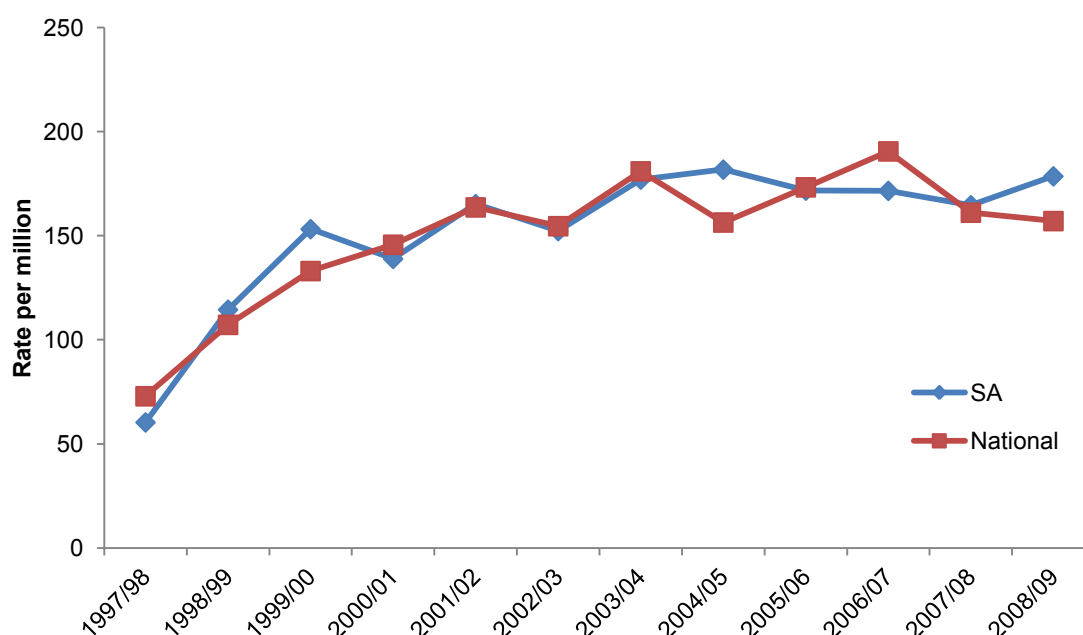
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

³ ICD-9 coding for drug-related psychosis and withdrawal was non-specific for drug type, where ICD-10 coding is specific for drug type.

6.5.1.1 Amphetamine-related hospital admissions

Figure 27 (includes rates from 1997/98 onwards) shows the long-term trend and indicates that the rates of admissions to hospital for amphetamines (primary diagnosis) per million people in SA have been increasing. However, it should be noted that there has been some stabilisation in the rates of admission in SA since 2003/04, with a slight increase occurring in 2008/09 (179 per million). Nationally, these figures have been more varied with a downward trend being observed from 2006/07. Readers are reminded that this figure does not include amphetamine-related psychosis or withdrawal admissions.

Figure 27: Rate of amphetamine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98–2008/09



Source: Australian Institute of Health and Welfare

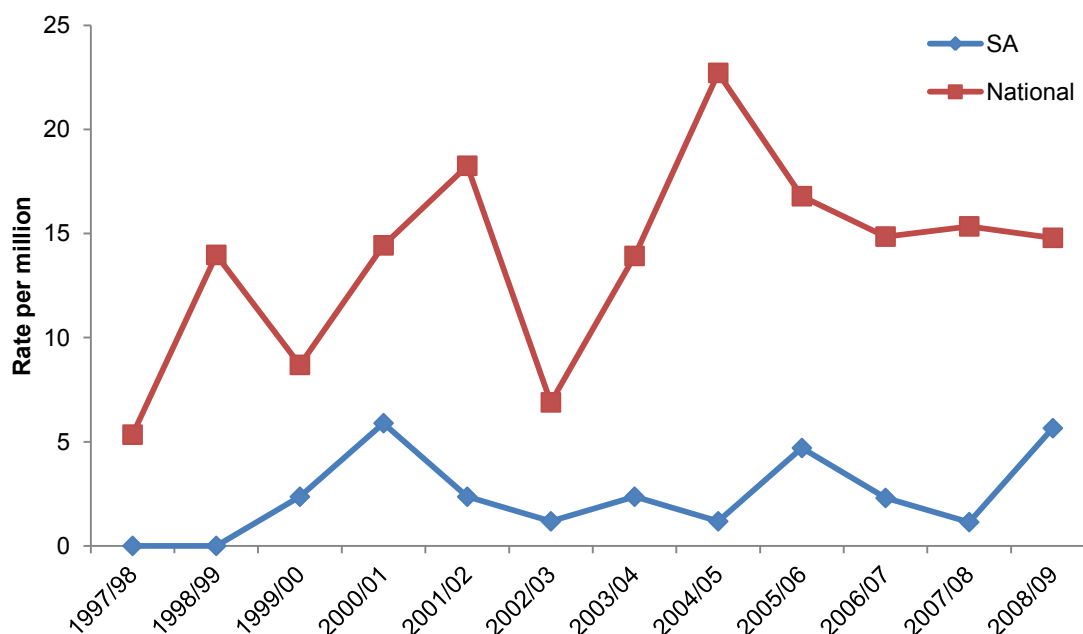
* For persons aged between 15 and 54 years, excluding amphetamine withdrawal and psychosis admissions

Note: A 'primary diagnosis' was given when amphetamines were considered chiefly responsible for the patient's episode of care in hospital

6.5.1.2 Cocaine-related hospital admissions

Figure 28 (includes rates from 1997/98 onwards) shows that the rates of admissions to hospital in South Australia and nationally have fluctuated over the years, but that the national rate has been consistently higher than the SA rate since 1997/1998. At the national level, the rate of admission to hospital per million people with a cocaine-related primary diagnosis has been relatively stable since 2006/07, whilst in SA there was a notable increase in 2008/09 from 1.14 per million to 5.65 per million.

Figure 28: Rate of cocaine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98–2008/09



Source: Australian Institute of Health and Welfare

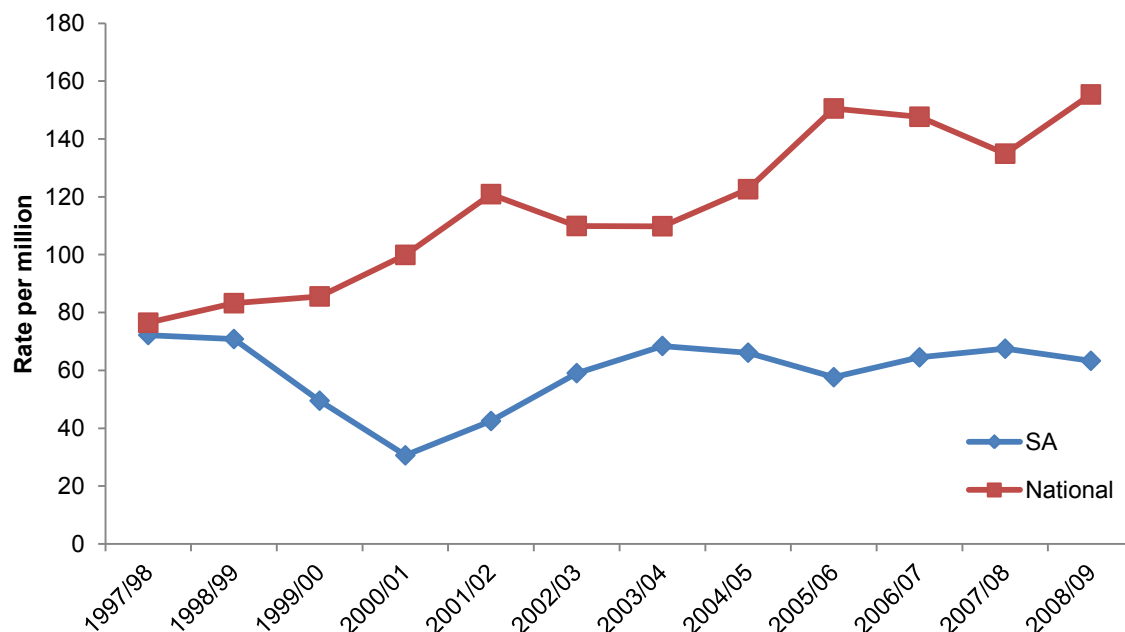
* For persons aged between 15 and 54 years, excluding cocaine withdrawal and psychosis admissions

Note: A 'primary diagnosis' was given when cocaine was considered chiefly responsible for the patient's episode of care in hospital

6.5.1.3 Cannabis-related hospital admissions

Data in Figure 29 (includes rates from 1997/98 onwards) shows that the long-term trend in rate of cannabis-related admissions (primary diagnosis) to hospitals in SA differs from the national trend over the years from 1997/98 to 2008/09. Both SA and national rates were similar until a divergence in 1999/00, with the national rate continuing to rise and the SA rate declining for two years. However, the SA rate of cannabis-related admissions per million people to hospital increased for the three years to 2003/04, but has remained relatively stable since that period. The admission rate to SA hospitals with a cannabis-related primary diagnosis was sixty-three per million in 2008/09 in comparison to 2003/04 (68 per million). Readers are reminded that this figure does not include cannabis-related psychosis or withdrawal admissions.

Figure 29: Rate of cannabis-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98–2008/09



Source: Australian Institute of Health and Welfare

* For persons aged between 15 and 54 years, excluding cocaine withdrawal and psychosis admissions

Note: A 'primary diagnosis' was given when cannabis was considered chiefly responsible for the patient's episode of care in hospital

6.6 Mental and physical health problems

6.6.1 Mental health problems and psychological distress (K10)

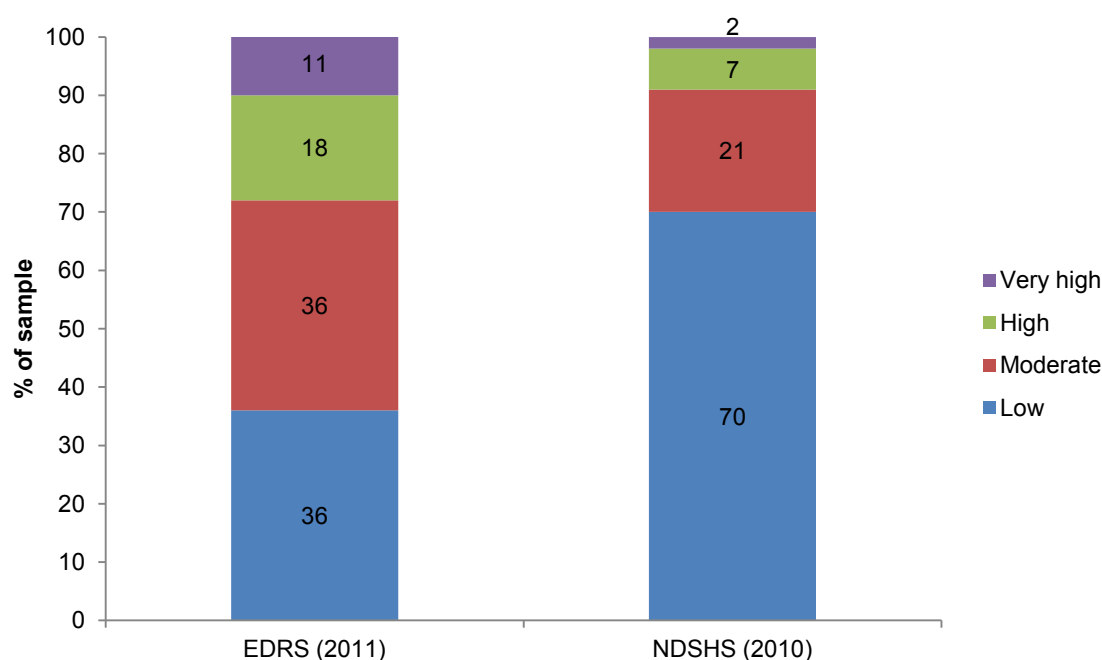
In 2011, the Kessler Psychological Distress Scale (K10) (Kessler & Mroczek, 1994) was used to give a measure of levels of psychological distress among the participant sample.

The Kessler Psychological Distress Scale was developed as a screening instrument to measure for negative emotional states, referred to as psychological distress. It is described as a simple, brief, valid and reliable instrument used to detect mental health conditions in the population. The scale consists of 10 questions on non-specific psychological distress, and measures the level of anxiety and depressive symptoms a person may have experienced in the past four-weeks; so it asks specifically about recent levels of distress.

Thirty-six percent of participants had scores between 10 and 15 on the K10 (low risk), 36% of participants scored between 16 and 21 (moderate distress), 18% of participants scored from 22 to 29 (high distress), and 11% scored from 30 to 50 (very high distress) (Figure 30). The median total score for participants was 16 (range 10-43) indicating that over half of the sample was at moderate or high/very high risk of psychological distress as measured by the K10.

The 2010 National Drug Strategy Household Survey (Australian Institute of Health & Welfare, 2011) provided the most recent Australian population norms available for the K10, and used four categories to describe degree of distress as used in the EDRS. Using these categories, the proportion of EDRS participants reporting 'high' (18%) or 'very high' (11%) distress was higher (29%) compared to those in the National Drug Strategy Household Survey (9%; i.e. high = 7%; very high = 2%).

Figure 30: Proportion of population (NDSHS, 2010) and sample of K10 categories, 2011



Source: EDRS REU interviews; Australian Institute of Health & Welfare, 2011

Note: The extent to which cut-offs derived from population samples can be applied to the REU population is yet to be established and, therefore, these findings should be taken as a guide only

6.6.2 Self-reported mental health problems

In 2011, twenty-six percent (20 out of 76) of the participant sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview. This was lower than the proportion experiencing a mental health problem in 2010, although there was no significant difference.

The majority of participants reported experiencing depression (90%, n=18), anxiety (75%, n=15), panic (15%, n=3), paranoia (15%, n=3) or drug induced psychosis (15%, n=3). Smaller numbers reported manic depression (10%; n=2), personality disorder (10%; n=2), Obsessive Compulsive Disorder (OCD) (5%, n=1) and hypochondria (5%, n=1). Three-quarters of those who reported suffering from a mental health problem had sought professional help for such problems, and eight participants had been prescribed some form of medication.

7 RISK BEHAVIOUR

Key Findings

Injecting risk behaviour

- Sixteen percent of the sample reported having injected at some time in their lives; 7% of the sample reported injecting in the six months preceding interview. The median age of first injection was 21 years (range 16-40 years).
- Among those who had injected in the preceding six months (n=5), the last drug most commonly reported to have been injected was methamphetamine powder (40%). One participant reported injecting while under the influence and while coming down.
- Syringes were typically obtained from a chemist (80%) and/or a Clean Needle Program (40%). Of those who had injected in the preceding six months, only one participant reported having shared needles or injecting equipment.

Sexual risk behaviour

- Thirteen per cent of the sample had been diagnosed with a sexually transmitted infection (STI) in the past year; with Chlamydia being the most commonly reported STI.
- Two thirds (66%) of REU reported having had casual sex in the six months preceding interview. Interestingly, being sober did not seem to improve the use of protection, with about half of the sample reporting they had not used any protection during their last sexual encounter (regardless of whether they were sober or under the influence of drugs and/or alcohol at the time).
- Of those who reported having casual sex in the past six months, the vast majority (94%) reported doing so whilst under the influence of drugs and/or alcohol.

Driving risk behaviour

- Among those who had driven a car in the past six months, 65% reported they had done so whilst under the influence of alcohol and of those, 63% had driven whilst over the BAC limit.
- Of those who had driven recently, 60% had done so whilst under the influence of drugs. The drugs most commonly used whilst driving were cannabis and ecstasy.

Risky alcohol use

- Using the Alcohol Use Disorders Identification Test (AUDIT), participants scored a mean of 15.8, with males having significantly higher scores than females. Ninety percent of the sample scored eight or more; these are levels at which alcohol intake may be considered hazardous.

7.1 Injecting Risk Behaviour

Detail on injecting and injecting-related risk behaviour has been included in the EDRS survey since 2004. The median age of first injecting any drug was 21 years (range 16-40 years, n=12). In 2011, sixteen percent (12 out of 76) of the sample reported ever injecting any drug; 42% (n=5) of those who had ever injected reported having injected any drug in the six months prior to interview.

7.1.1 Recent injectors

Participants who had injected in the last six months reported injecting on a median of 50 occasions in that period (range 12-360), which equates to approximately twice per week. Methamphetamine powder was the most common last injected drug in the preceding six months (40%), followed by methamphetamine base (20%), methamphetamine crystal (20%) and heroin (20%).

Twenty percent (n=1) of recent injectors had injected under the influence of ERD in the past six months, 20% (n=1) had injected while coming down and 20% (n=1) had injected both while under the influence and while coming down during that time. Those who had injected whilst under the influence of, or coming down from, drugs in the past six months reported doing so on a median of 24 occasions (range 20-40; n=3)

Table 40: Injecting drug use history among injectors, 2011

	Ever injected %	First drug injected %	Injected in last 6 months %	Median days injected in last 6 months (range; n)	Last drug injected %
	(n=12)	(n=12)	(n=5)	(n=5)	(n=5)
Ecstasy – pills	42	0	20	5 (no range)	0
Ecstasy – powder	8	0	20	1 (no range)	0
Ecstasy – capsules	17	0	0	-	0
Meth – powder	50	25	60	10 (1-12; 3)	40
Meth – base	50	25	60	85 (6-150; 3)	20
Meth – crystal	67	33	80	9.5 (3-150; 4)	20
Pharm. stimulants *	17	0	0	-	0
Cocaine	33	0	0	-	0
LSD	17	0	0	-	0
MDA	8	0	0	-	0
Ketamine	8	0	0	-	0
GHB	8	0	0	-	0
Heroin	42	8	40	90.5(1-180; 2)	20
Alcohol	8	0	0	-	0
Other opiates * #	42	8	40	7 (4-10; 2)	0
Benzodiazepines *	8	0	0	-	0
Methadone	17	0	0	-	0
Buprenorphine	17	0	20	2 (no range)	0
Mushrooms	0	0	0	-	0
Steroids	8	0	20	7 (no range)	0
Other	0	0	0	-	0

Source: EDRS participant interviews

* Illicit use only

Includes codeine, morphine, and pethidine

7.1.2 Context of injecting

The most common sources of needles were reported as a chemist (80%; n=4), a Clean Needle Program (40%; n=2), a vending machine (20%; n=1), a partner (20%; n=1) or a friend (20%; n=1). Participants were able to nominate more than one source.

The majority of participants who had injected usually did so with close friends (40%; n=2). One participant reported typically injecting with his/her regular sex partner, one with a casual sex partner, one with an acquaintance and one participant reported that he/she usually injected alone. Those who had recently injected reported having injected at home (80%; n=4) or at a friend's home (20; n=1%).

7.1.3 Sharing of needles/syringes and other injecting equipment

With regard to the frequency of risk behaviour among the five recent injectors in the sample, only one participant reported that he/she had shared needles. This participant had done so 3-5 times and had shared with just the one person, who was a close friend. Again, there was only one participant who had shared injecting equipment (other than needles), and this included spoons, filters, tourniquets, water and swabs.

7.2 Blood-borne viral infections (BBVI)

Twenty-four percent of the sample reported that they had never been vaccinated for hepatitis B virus (HBV), 50% reported that they had completed the vaccination schedule, 7% did not finish the vaccination schedule and 20% couldn't remember if they had ever been vaccinated. Reasons for seeking HBV vaccination included being vaccinated as a child (70%), going overseas (19%), for work (5%) and at risk due to injecting drug use (3%).

Participants were asked if they had been tested for the hepatitis C virus (HCV). Fifty-four percent reported that they had never been tested for HCV, while 25% had been tested in the last year, 15% were tested more than a year ago and 7% couldn't remember. Only one participant reported that they were positive for HCV and one didn't know/didn't get their result. Among those who had ever injected, only 8% (n= 1) had never been tested, 42% (n=5) had been tested in the last year, and 50% (n=6) had been tested more than a year ago. All participants who had ever injected reported that they had tested negative to HCV.

Participants were asked if they had been tested for the human immunodeficiency virus (HIV). Fifty-three percent had never been tested for HIV, 32% had been tested in the past year and 16% had been tested more than one year ago. No participants reported that they were HIV positive.

Thirty-eight percent of REU reported having had a sexual health check-up (such as a swab, urine or other blood test) in the past year, while 25% reported having had their last sexual health check-up more than one year ago. Thirty-seven percent had never had a sexual health check-up.

The majority (87%) of those who had been tested reported that they had never been diagnosed with a sexually transmitted infection (STI); 7% (n=5) had been diagnosed with an STI in the past year and 7% (n=5) had been diagnosed with an STI more than a year ago. Six participants had been diagnosed with Chlamydia, two participants had been diagnosed with human papillomavirus (HPV) (genital warts) and one participant had been diagnosed with Molluscum contagiosum (a viral skin infection).

Table 41: Blood-borne virus vaccination and testing among REU, 2011

	2011
Vaccinated for Hepatitis B (%)	n=76
No	24
Yes, didn't complete	7
Yes, completed	50
Don't know	20
Main reason or Hepatitis B vaccination (%)[*]	n=37
At risk (IDU)	3
At risk (sexual)	0
Going overseas	19
Vaccinated as a child	70
Work	5
Don't know/can't remember	0
Other	3
Tested for Hepatitis C (%)	n=76
No	54
Yes, in last year	25
Yes, > year ago	15
Don't know/didn't get result	7
Hepatitis C positive (%)^{**}	3
Tested for HIV (%)	n=76
No	53
Yes, in last year	32
Yes, > year ago	16
HIV positive (%)[#]	0
Other sexual health checkups (%)	n=76
No	37
Yes, in last year	38
Yes, > year ago	25
Sexually transmitted infection (STI) (%)	n=76
Positive	13
STI diagnosis (%)^{##}	n=10
Gonorrhoea	0
Chlamydia	60 [^]
Syphilis	0
HPV (genital warts)	20 [^]
Other	20 [^]

Source: EDRS participant interviews

[^] Caution small numbers n<10

^{*} Among those who had been vaccinated for Hepatitis B

^{**} Among those tested for hepatitis C

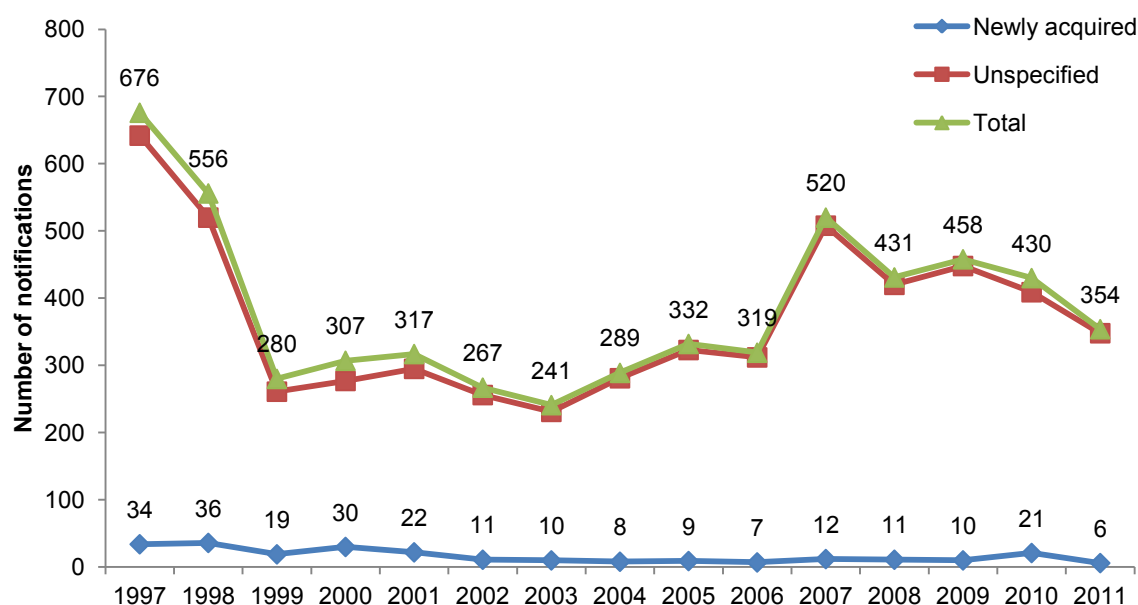
[#] Among those tested for HIV

^{##} Among those who tested positive for STI in the last year

7.2.1 The National Notifiable Diseases Surveillance System

Figure 31 and Figure 32 present the number of notifications for the hepatitis B virus (HBV) and the hepatitis C virus (HCV) in South Australia from the National Notifiable Diseases Surveillance System, 2012 (NNDSS). Incident or newly acquired infections, unspecified infections (i.e. where the timing of the disease acquisition is unknown) and the total number of infections are presented. HCV continued to be more commonly notified than HBV, with a gradual decreasing trend in notifications of HBV from 2007-2011. HCV notifications have remained relatively stable over the past few years, although again there has been a gradual downward trend from 2007-2011.

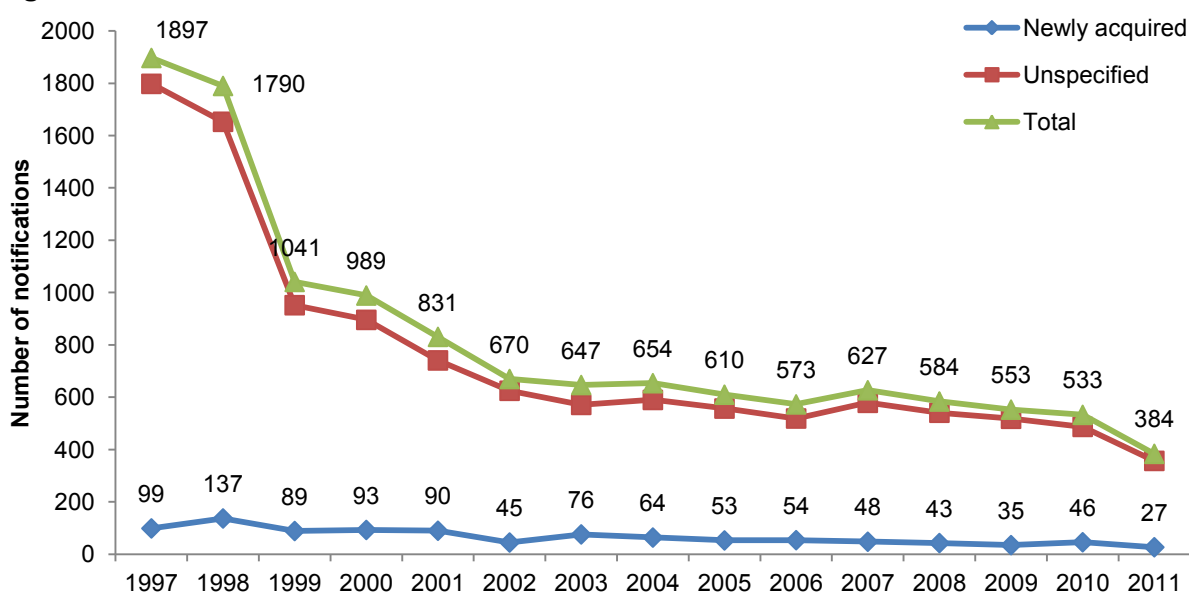
Figure 31: Notifications for HBV infections, South Australia 1997–2011



Source: National Notifiable Diseases Surveillance System – NNDSS⁴

Note: Figures are updated on an ongoing basis

Figure 32: Notifications for HCV infections, South Australia 1997–2011



Source: National Notifiable Diseases Surveillance System – NNDSS⁴

Note: Figures are updated on an ongoing basis

⁴ Notes on interpretation.

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 only represent a proportion of the total number of cases that occur, and this proportion may vary between diseases, between jurisdictions and over time.

7.3 Sexual risk behaviour

Participants were asked to provide information regarding their sexual behaviour and the risks associated with it. Participants were given the opportunity to self-administer this section of the questionnaire if they preferred to. 'Sex' was defined as penetrative sex; that is, the penetration of the vagina or anus with the penis or fist.

7.3.1 Recent sexual activity

Table 42 summarises the reports of recent sexual activity and condom use with casual partners. Two-thirds (66%) of the sample reported having casual sex with at least one casual partner in the six months preceding interview. Twenty-one percent reported having one casual sexual partner during the preceding six months and 44% reported having multiple casual partners. Participants were asked about the use of 'protective barriers' which were defined as 'condoms, dams or gloves', with casual partners. As can be seen in Table 42, equal proportions of REU reported the use of protection or no protection when having sex while sober. The main reason for not using protection in such encounters was because either the participant (n=9) or their partner (n=6) did not wish to use, or because it wasn't mentioned (n=7).

Table 42: Prevalence of sexual activity and number of sexual partners in the preceding six months, 2011

	2011
No. casual sexual partners (%)	(n=76)
No casual partner	34
1 person	21
2 people	18
3-5 people	18
6-10 people	8
10 or more	0
Use of protection during sex with casual partner when sober (%)	(n=50)
Yes	48
No	48
Not applicable	4

Source: EDRS participant interviews

7.3.2 Drug use during sex

Table 43 summarises the reports of recent sexual activity and condom use while under the influence of a drug or drugs, in the last six months. The majority (94%) of those reporting recent penetrative sex with a casual partner reported that they had had penetrative sex with a casual partner whilst under the influence of alcohol and/or drugs, in the six months prior to interview. Interestingly, the large majority (89%) of these participants reported doing so on multiple occasions, with 30% reporting that they had done so on more than ten occasions.

Most commonly, participants nominated alcohol as the drug they were under the influence of when engaging in penetrative sex with a casual sex partner recently (89%), followed by cannabis (62%) and ecstasy (60%) (see Table 43). There was a significant increase in the use of cannabis when engaging in casual sex (62% versus 38%; $p=0.04$; 95% CI: -0.03 – -0.42).

Forty-nine percent of participants who had had recent penetrative sex with a casual partner whilst under the influence of drugs reported that they had used protection, whilst the remaining 51% reported that they had not used protection. These were very similar

proportions to those who had used protective barriers when sober. The reasons for not using protection whilst on drugs were also very similar with the main reasons being that either the participant (n=9) or their partner (n=7) did not wish to use, or it wasn't mentioned (n=5). One participant reported lack of availability and one reported it was because they were too intoxicated.

Table 43: Drug use during sex with a casual partner in the preceding six months, 2011

	2011 n=50
Penetrative sex with casual partner while on drugs (%)^{*#}	94
No. times had sex while on drugs with casual partner (%)	n=47
Once	11
Twice	23
3-5 times	21
6-10 times	15
Eleven +	30
Drugs used during last sexual episode	n=47
Ecstasy	60
Alcohol	89
Cannabis	62
Methamphetamine – powder	13
Methamphetamine – base	15
Methamphetamine – crystal	19
Cocaine	13
LSD	2
Ketamine	0
MDA	0
Amyl nitrate	0
Nitrous oxide	2
GHB	2
Pharmaceutical stimulants	2
Use of protection during sex with casual partner under influence of drugs (%)[#]	n=47
Yes	49
No	51
Not applicable	0

Source: EDRS participant interviews

^{*} In the six months preceding interview

[#] Of those who had sex with a casual partner

7.4 Driving risk behaviour

Eighty-two percent of REU reported that they had driven a vehicle in the preceding six months (n=62). These participants were asked whether they had driven after consuming any illicit drug(s), in the six months prior to interview, and if so, which drugs were involved. They were also asked if they had driven whilst under the influence of alcohol and over the limit for alcohol. The results are detailed in Table 44.

Table 44: Recent occurrence of driving following drug use, 2010 & 2011

% of recent drivers	2010 (n=73)	2011 (n=62)
Driven under the influence of alcohol[*]	66	65
Driven over the limit for alcohol^{**}	75	63
Driven after taking any illicit drug[†]	64	60
Driven after illicit use of[#]:	(n=47)	(n=37)
Ecstasy	55	41
Methamphetamine— powder	4	22
Methamphetamine – base	9	16
Methamphetamine – crystal	15	19
Pharmaceutical stimulants	0	0
Cannabis	60	78
LSD	2	5
MDA	0	0
'Magic mushrooms'	0	-
Cocaine	13	5
Ketamine	2	0
Nitrous oxide	0	3
Heroin	0	3
Other opiates	0	0
Benzodiazepines	0	3
Other	2	0

Source: EDRS participant interviews

^{*} In the six months preceding interview

^{**} Of those who had DUI of alcohol

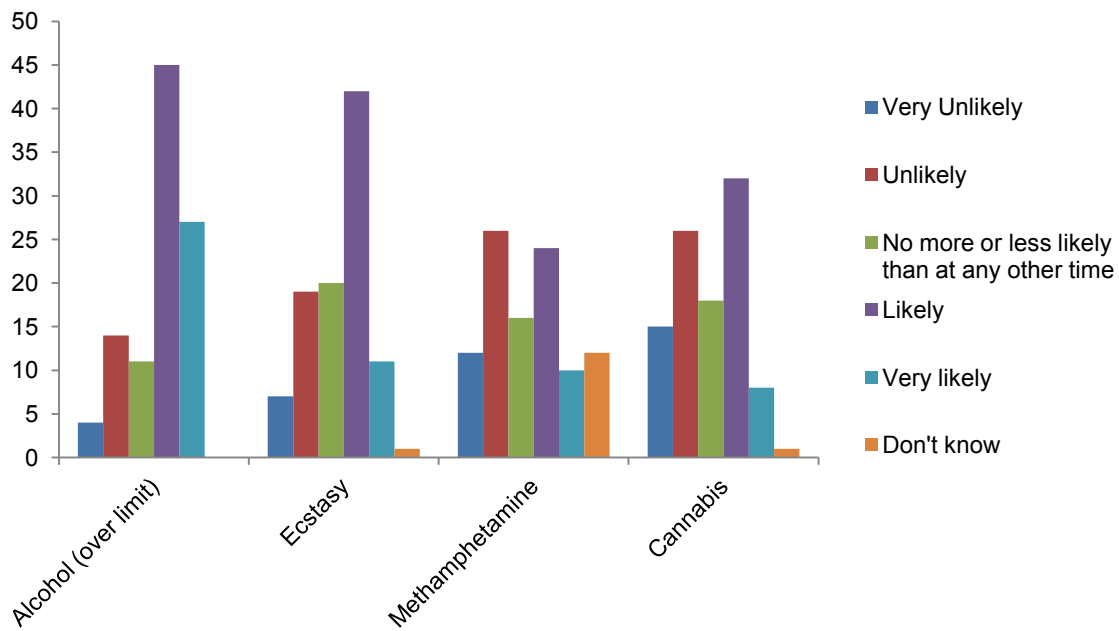
[#] Of those who had DUI of illicit drugs

Two-thirds of the participants (65%, n=40) who had driven a vehicle in the six months prior to interview reported that they had driven under the influence of alcohol. Forty percent (n=25) of the participants who had driven a vehicle in the six months prior to interview reported that they had driven whilst over the limit for alcohol, and they had done so on a median of two occasions (range 1-7) during that period. Forty-two percent of recent drivers (n=26) had been random breath tested (for alcohol) in the six months prior to interview, of which 8% (n=2) registered a positive result for being over the legal limit.

Sixty percent of recent drivers (n=37) also reported that they had driven after consuming an illicit drug, and they had done so on a median of eight occasions (range: 1-180). The drugs most commonly reported as having been used prior to driving, in the previous six months, were cannabis (78%), ecstasy (41%), methamphetamine powder (22%) and crystal methamphetamine (19%). The 'last' time participants drove they did so under the influence of cannabis (68%), ecstasy (30%), methamphetamine powder (16%) and methamphetamine crystal and base (14% each). Participants reported driving a median of one hour after taking any illicit drug (range 0-10; n=37). Twenty-nine percent of recent drivers (n=18) had ever been tested for drug driving, with eight participants reporting that they had been tested for drug driving in the six months prior to interview. Four participants reported that they had tested positive to their most recent drug driving test. Cannabis (n=2) and amphetamines (n=2) were the most common drugs detected.

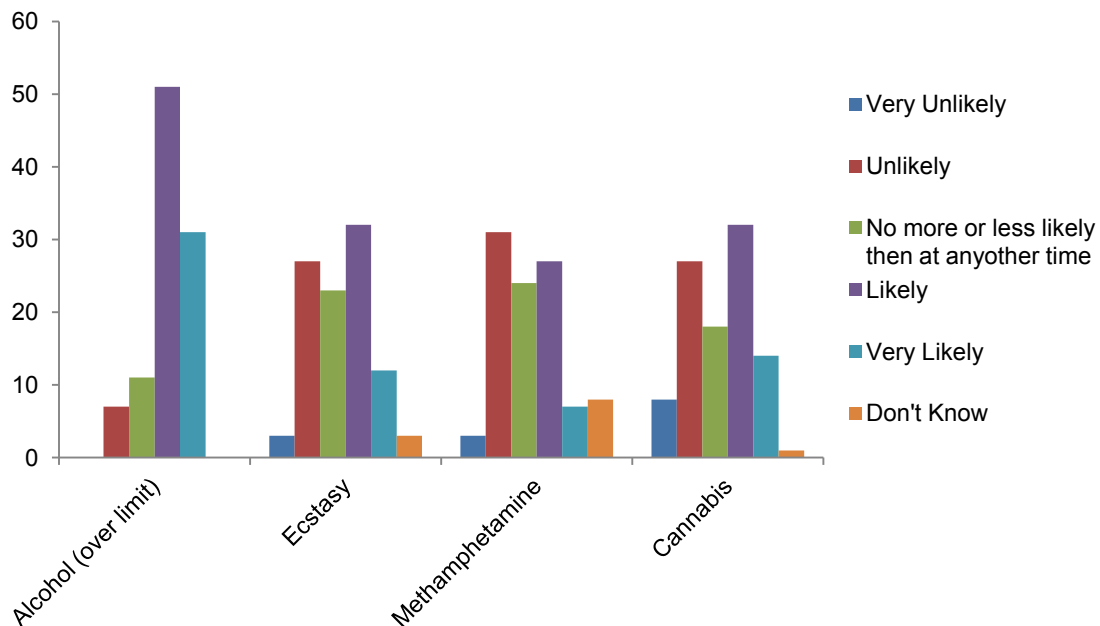
In 2011, all participants were asked how likely they think they would be to have an accident while driving after consuming certain drugs and how likely they would be to be caught by police. The data from these questions is detailed in Figure 33 and Figure 34.

Figure 33: Perceived accident risk after consuming drugs, 2011



Source: EDRS participant interviews

Figure 34: Perceived likelihood of getting caught DUI after consuming drugs, 2011



Source: EDRS participant interviews

Interestingly, the majority of participants believed that driving over the limit of alcohol or under the influence of ecstasy would likely result in an accident; and that they would likely be caught by the police for doing so. However, perceptions regarding the use of methamphetamine and cannabis prior to driving (both in terms of accident risk and getting caught) were much more divided.

7.5 The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT (Saunders et al., 1993) was completed by REU participants in the EDRS for the fourth year running. The AUDIT was designed by the World Health Organisation (WHO) as a brief screening scale to identify individuals with alcohol problems, including those in the early stages. It is a 10-item scale, designed to assess three conceptual domains: alcohol intake; dependence; and adverse consequences (Reinert & Allen, 2002). Total scores of eight or more are recommended as indicators of hazardous and harmful alcohol use and may also indicate alcohol dependence (Babor et al., 1992). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor et al., 2000).

Table 45 presents an overview of the AUDIT scores. The overall mean score on the AUDIT was 15.8 (SD=7.2, range 0-30). There was a significant difference in female and male AUDIT scores, with males having significantly higher scores (17.15 versus 12.92; $p < 0.05$). Ninety percent of the sample scored eight or more, which are levels at which alcohol intake may be considered hazardous. Males were also significantly more likely to drink at risky levels than females (79% versus 94%, $p = 0.047$).

The total AUDIT score places respondents into one of four 'zones' or risk levels. In 2011, eleven percent (14% in 2010) scored in Zone 1 (low-risk drinking or abstinence), 42% (42% in 2010) scored in Zone 2 (alcohol use in excess of low-risk guidelines), a fifth (18%; 19% in 2010) scored in Zone 3 (harmful or hazardous drinking) and 29% (compared with 25% in 2010) scored in Zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence). This was stable from 2010.

Table 45: AUDIT total scores and proportion of REU scoring above recommended levels indicative of hazardous alcohol intake, 2010 & 2011

	2010	2011
Mean AUDIT total score	14.9	15.8
SD	6.8	7.2
(range)	(2-29)	(0-30)
Score 8 or above (%)	86	90
Zone 1	14	11
Zone 2	42	42
Zone 3	19	18
Zone 4	25	29

Source: EDRS participant interviews

Note: Zone 1 refers to low risk drinking or abstinence; Zone 2 consists of alcohol use in excess of low-risk guidelines; Zone 3 may refer to harmful or hazardous drinking; and Zone 4 may be indicative of those warranting evaluation or treatment for alcohol dependence

8 LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH ECSTASY RELATED DRUG USE

Key Findings

- The proportion of participants who had engaged in a criminal offence in the month prior to interview more than doubled in 2011.
- The majority of the sample perceived that police activity towards REU had remained stable in the previous six months, whilst a third believed that it had increased.
- The proportion of participants arrested for a crime remained relatively stable in 2011, at 16%.
- Arrests made by SA police increased for cannabis and cocaine, and decreased for amphetamines.

8.1 Reports of criminal activity among REU

Table 46 summarises participants' reports of criminal activity in the month prior to interview, and arrests in the 12 months prior to interview, since 2004. In 2011, forty-six percent of participants reported involvement in some type of crime in the month prior to interview, which was a significant increase from 2010 ($p=0.001$; 95% CI: -0.099 – -0.338). Drug dealing was the most commonly reported crime across all years of the survey. Smaller proportions of participants also reported involvement in a property crime, fraud and violent crime in the month prior to interview.

Participants who had committed a property crime, or a crime involving violence, in the past month were asked whether they were under the influence of drugs and/or alcohol at the time. Of those who had committed a property crime ($n=15$), seven participants (47%) reported that they were under the influence of drugs and/or alcohol at the time: most commonly cannabis (71%; $n=5$) and alcohol (57%; $n=4$). One participant reported being under the influence of magic mushrooms at the time. Shoplifting was the most common property crime committed. Of those who had committed a violent crime ($n=8$), 89% ($n=7$) reported that they were under the influence of drugs and/or alcohol at the time. This was most commonly alcohol (100%; $n=7$) and ecstasy ($n=2$; 29%). One participant reported being under the influence of cannabis and one under the influence of methamphetamine base. All participants reported that the last violent crime they committed was assault.

Table 46: Criminal activity in the month prior to interview, as reported by participants, 2004–2011

	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)	2011 (n=76)
Criminal activity in last month:								
Property crime	6	3	3	10	7	19	4	20
Drug dealing	21	25	26	23	19	29	19	33
Fraud	1	3	4	3	1	2	4	4
Violent crime	0	2	3	4	0	5	4	11
Any crime	25	27	30	29	23	38	22	46
Arrested in last 12 months	5	8	11	8	11	13	12	16
Ever in prison	5	1	5	10	7	8	6	Not asked

Source: EDRS participant interviews

8.2 Perception of police activity towards REU

Table 47 presents data since 2004 on participant's perception of police activity in the six months leading up to the survey. In 2011, the majority of the participants (63%) reported that police activity had remained stable and a third (33%) reported that it had increased. Only two participants suggested that police activity towards regular ecstasy users had decreased in the preceding six months.

Table 47: Perception of police activity in the six months prior to interview, as reported by participants, 2004–2011

% of participants	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)	2011 (n=76)
Perception of police activity in last 6 months								n=40
More activity	27	26	34	27	26	60	46	33
Stable	27	55	44	35	32	36	53	63
Less activity	3	3	1	3	1	4	1	5
Don't know	43	16	22	35	41	-	-	-

Source: EDRS participant interviews

* This figure excludes participants who answered 'don't know'

Note: Don't know was excluded from analysis from 2009 onwards

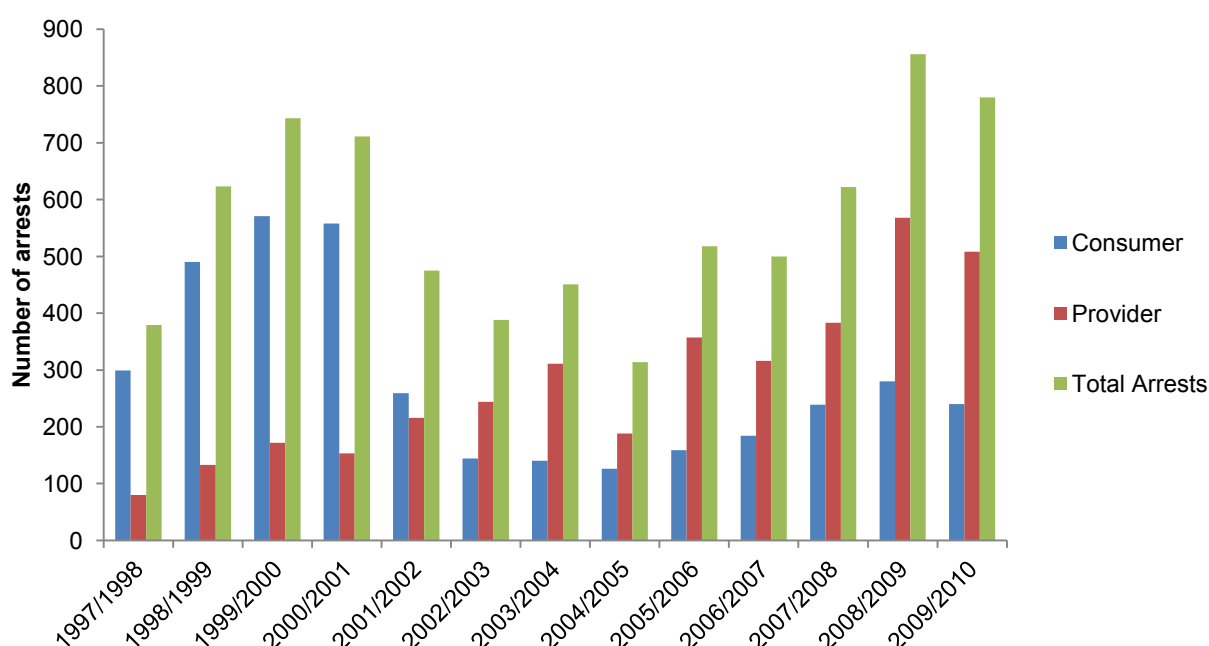
8.3 Arrests

Sixteen percent of REU (n=12) reported that they had been arrested within the last 12 months, similar to previous years. The most common reasons for arrest were use/possession of drugs (n=5; 42%), violent crime (n=4; 33%), dealing/trafficking (n=3; 25%) and alcohol and driving (n=3; 25%). Due to the very small numbers presented here, it is not possible to make any meaningful comparisons with the 2010 data.

8.3.1 Amphetamine-type stimulants

Figure 35 presents the number of consumer and provider arrests for amphetamine-type stimulants made in SA between 1997/98 and 2009/10. Amphetamine-type stimulants include amphetamine, methamphetamine and phenethylamines. The ACC classifies consumers as offenders who are charged with user-type offences (e.g. possession and use of illicit drugs), whereas providers are offenders who are charged with supply-type offences (e.g. trafficking, selling, manufacture or cultivation). The number of total arrests decreased in 2009/10, although as Figure 35 shows, there has still been an increasing upward trend from 2004/05.

Figure 35: Number of amphetamine-type stimulants consumer and provider arrests, 1997–2010

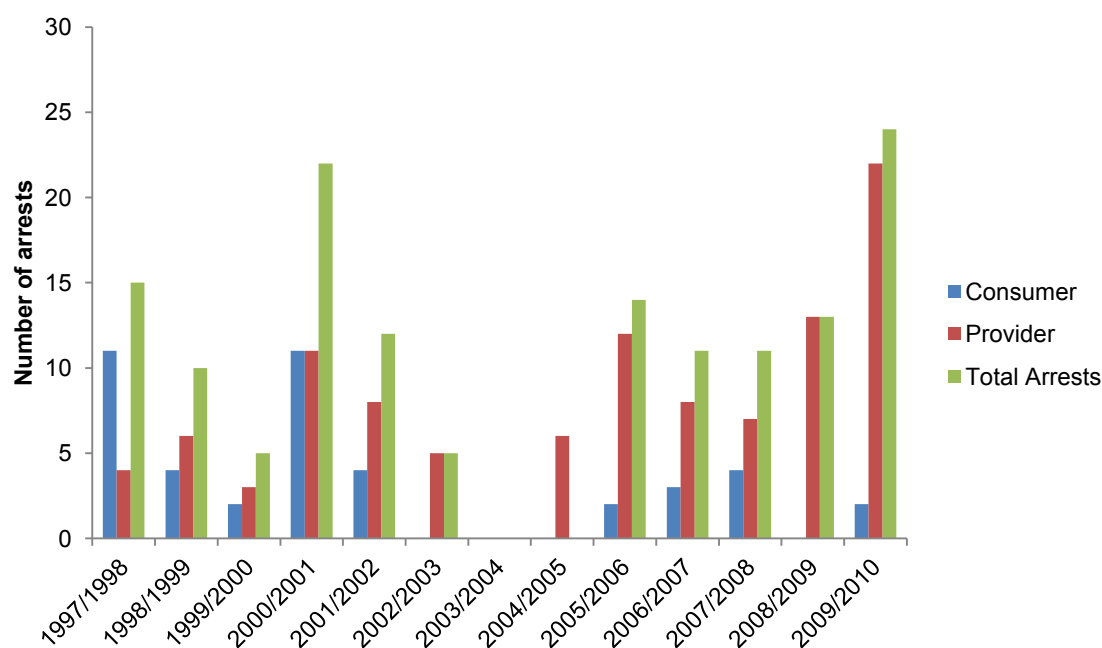


Source: Australian Bureau of Criminal Intelligence, 1999, 2000, 2001, 2002; Australian Crime Commission, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011
Note: Data not available for the 2010/2011 financial year

8.3.2 Cocaine

In 2009/2010, provider arrests increased in SA, with the highest number of arrests being recorded since data collection started. However, numbers are still low with a total of 24 cocaine-related arrests being reported.

Figure 36: Number of cocaine consumer and provider arrests, 1997/98–2009/10



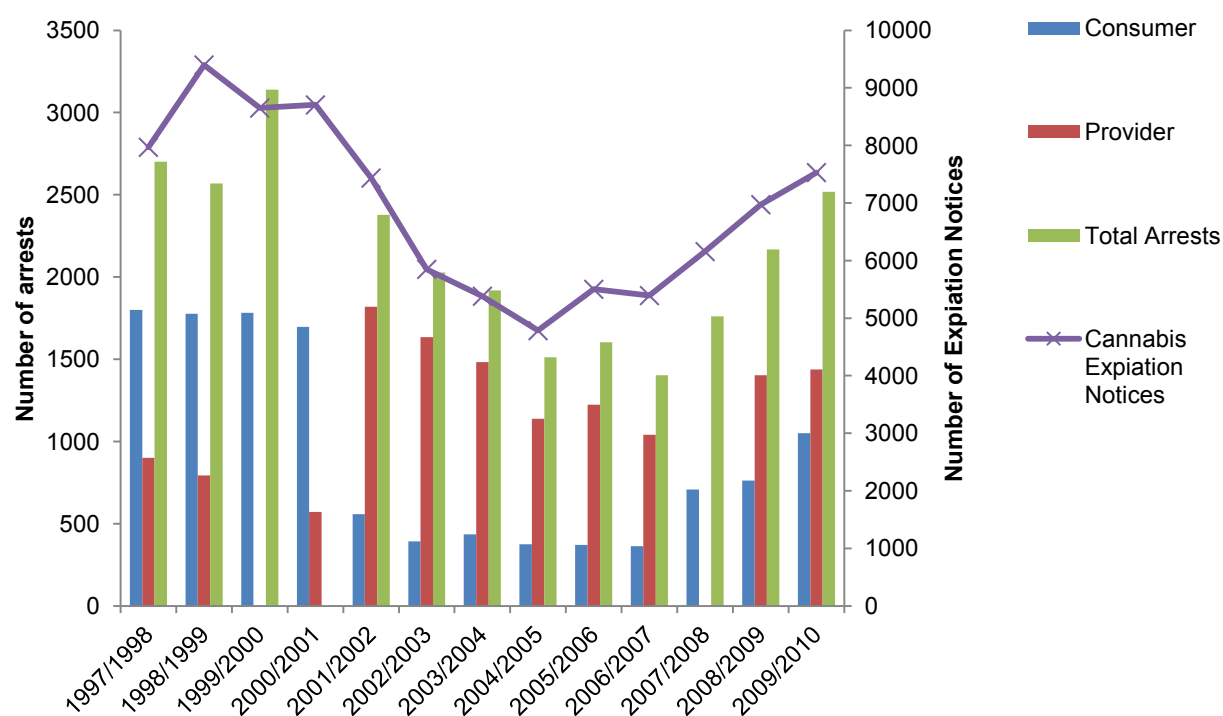
Source: Australian Bureau of Criminal Intelligence, 1999, 2000, 2001, 2002; Australian Crime Commission, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011

Note: Data not available for the 2010/2011 financial year

8.3.3 Cannabis

Figure 37 presents the number of cannabis consumer and provider arrests in SA from 1997/98 to 2009/10. It also presents the total number of Cannabis Expiation Notices, which is a small fine used to deal with minor cannabis offences, whereby the offence is expiated on payment of the fine. In SA, a higher number of drug-specific arrests were due to provider-type cannabis offences. Total cannabis arrests increased slightly for 2009/10. The number of Cannabis Expiation Notices issued in SA also increased in 2009/10, representing the highest number of notices issued since 2000/01.

Figure 37: Number of cannabis consumer and provider arrests, 1997/98–2009/10



Source: Australian Bureau of Criminal Intelligence, 1999, 2000, 2001, 2002; Australian Crime Commission, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011
 Note: Data not available for the 2010/2011 financial year

9 SPECIAL TOPICS OF INTEREST

Key Findings

Heavy Smoking Index nicotine dependence

- Among those who smoked daily, over one-third reported waiting 60 minutes or longer before smoking their first cigarette for the day.
- Forty-nine percent of daily smokers reported smoking 10 or less cigarettes per day.
- Of daily smokers, the mean HSI score was 2.2.
- Approximately one-quarter of daily smokers scored 4 or above indicating moderate-high nicotine dependence.

Online drug-related activity

- Over three-quarters of the sample reported going online on a daily basis.
- Of those who had used the internet in the last month, 59% reported going online to get information about drugs – predominantly ecstasy.
- Websites were the most commonly used medium for online drug related activity, with Pillreports and Wikipedia being the most popular sites.
- Among those who commented, 63% reported that text messaging was their preferred method of obtaining drugs.

Sleep patterns and practices associated with drug use

- Over a third of the sample reported that the quality of their sleep in the month preceding interview was 'good'.
- However the quality, and amount, of sleep declined on weekends.
- Thirty-seven percent of participants reported experiencing some form of sleep problem, and 42% reported that drug use had had a negative impact upon their quality of sleep.
- Almost a third of the sample reporting using sleep medications in the preceding month, the most common being Valium (diazepam).

Pleasure, happiness & quality of life

- Quality of life seems to be quite high among ecstasy users in SA, with participants scoring a mean of seven on the quality of life scale.
- REU reported that taking drugs contributed to feelings of pleasure quite considerably, but less so to their quality of life.

Ecstasy dependence

- REU scored a median of 1 on the ecstasy SDS.
- Almost half of the sample obtained a score of zero on the ecstasy SDS, and just under a quarter obtained a score of 1 on the scale. This indicates that the majority of respondents reported no or few symptoms of dependence in relation to ecstasy use.

9.1 Heavy Smoking Index nicotine dependence

For the first time in 2011, EDRS participants who smoked daily were asked two questions from the Fagerstrom test for nicotine dependence, known as the Heavy Smoking Index (HSI) (n=33). These questions included 'How soon after waking do you smoke your first cigarette?' and 'How many cigarettes a day do you smoke?'. The responses were then scored between

zero and six. A score of zero is 'no dependence', 1-2 is 'very low dependence', 3 is 'low to moderate dependence', 4 is 'moderate dependence' and 5 or above is 'high dependence' (Heatherton et al., 1989).

As seen in Table 48, a quarter (27%) of the SA sample who commented reported smoking their first cigarette within five minutes of waking and one-fifth between five to 30 mins of waking. Almost one-third of daily smokers reported smoking between 11-20 cigarettes a day and 49% reported smoking 10 cigarettes, or less, a day. The mean HSI score was 2.2 (SD 1.82). A quarter (24%) of daily smokers scored 4 or above indicating moderate-high nicotine dependence. These figures are generally similar to what was found at the national level.

Table 48: Heavy Smoking Index for nicotine dependence, 2011

	National	SA
Time till first cigarette	n=275	n=33
Within 5 minutes (%)	21	27
5-30 mins (%)	34	21
31-60 mins (%)	16	15
60+ mins (%)	30	36
Number of cigarettes smoked a day	n=275	n=33
10 or less cigarettes (%)	51	49
11-20 cigarettes (%)	33	30
21-30 cigarettes (%)	14	18
31 or more cigarettes (%)	3	3
High dependence	n=275	n=33
(%)	24	24
Mean score	2.14	2.2

Source: EDRS participant interviews

* Score of 4 or above

9.2 Online drug related activity

For many of us, use of the internet has become part of everyday life. It is routinely used to find out information, communicate with others, and to undertake commercial transactions. It is inevitable that such practices extend to people who use illicit drugs, and there is growing concern over how the internet is being used to facilitate drug use:

'In recent years, the volume of illicit sales of narcotic drugs and psychotropic substances through websites has risen, making the internet a major source of drugs for drug abusers.'

(The international Narcotics Control Board quoted in submission to the Parliamentary Joint Select Committee on Cyber-Safety by the Australian Customs and Border Protection Service, July 2010)

However, despite this, little is known about the extent to which illicit drug users in Australia use the internet to find out information about illicit drugs, share information and buy drugs and ingredients. Understanding the use of online marketing and knowledge sharing has become more pressing with the increasing trend towards so called 'designer drugs' or research chemicals and drugs marketed as 'legal highs'. Uninformed users may incur health and legal consequences (Schmidt et al., 2011).

With this in mind, it is evident that 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.

In 2011, REU were asked about online drug-related activity. To place this activity in context, participants were first asked how often they got drugs and how often they went online (i.e. generally and not specifically about drugs). It was found that the largest portion of the sample obtained drugs at least weekly (40%), with approximately a quarter reporting that they had obtained drugs at least fortnightly (26%) and at least monthly (25%). Only seven participants reported obtaining drugs daily and this was consistent with what was found at the national level.

As can be seen in Table 49, the vast majority of participants (78%) reported using the internet daily in the six months preceding the interview.

Table 49: Frequency of going online in the previous six months, 2011

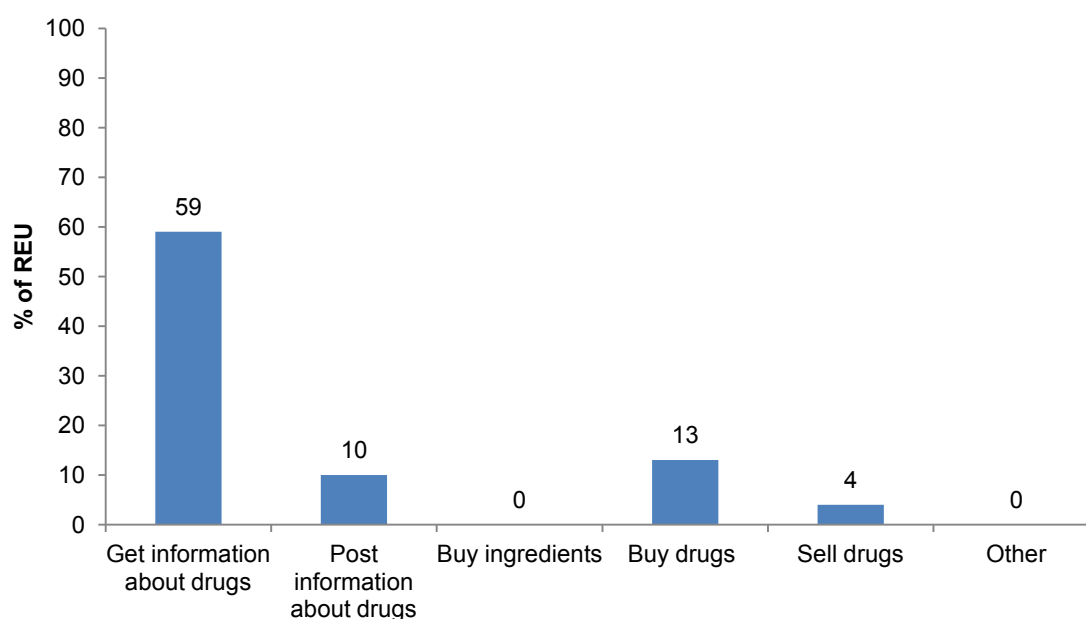
	National n=570	SA n=76
How often did you go online last month (%)		
Daily	80	78
At least weekly	9	9
At least fortnightly	3	3
At least monthly	3	1
Never	6	9

Source: EDRS participant interviews

Sixty-four percent of participants reported that they had gone online for drug-related activities in the six months preceding interview. As can be seen in Figure 38, the most common drug-related activity was in relation to obtaining information about drugs. The frequency at which this was reported to occur was less than monthly (46%), with a quarter (24%) reporting that they went online at least fortnightly in order to obtain drug-related information. The drug most commonly investigated was ecstasy (50%), followed by methamphetamine (18%) and cannabis (11%).

Only small portions of the sample reported going online to either buy (13%) or sell (4%) drugs (Figure 38).

Figure 38: Drug related activities reported by REU in the previous six months, 2011



Source: EDRS participant interviews

Note: Multiple responses permitted if internet was used for drug-related activities

Websites were the most commonly used medium for online drug related activity (69%), followed by Facebook (50%), search engines (44%) and online forums (27%). Those who used websites were asked what their favourite website was for finding information about drugs and why. Pillreports (www.pillreports.com) was the most commonly used website, closely followed by Wikipedia. The most commonly reported reasons for using a particular website were that they were easy to use (55%), credible (26%) and comprehensive (26%).

Of those who commented (n=62), 63% reported using text messaging as the preferred medium to obtain drugs.

Forty-three participants reported that they had ever purchased legal highs, and 21 participants reported that they had done so in the six months preceding interview. This would indicate that the use of legal highs is relatively common among this population.

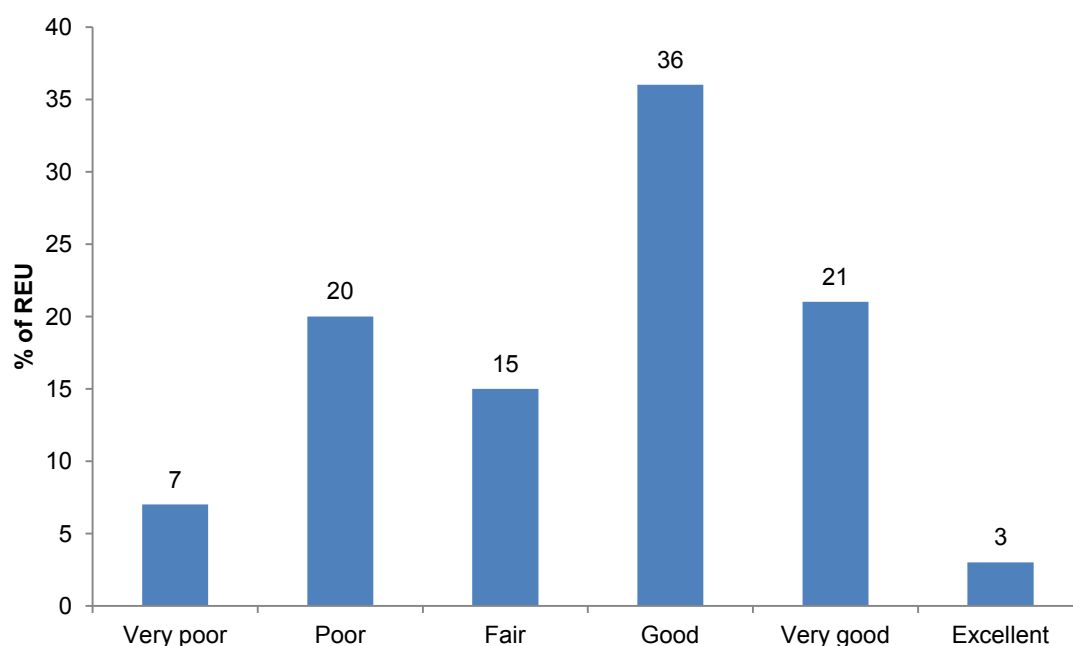
Participants in the IDRS were also asked questions about online activity related to drug use. For a comparison please refer to the SA IDRS report 2011 (Sutherland & Burns, 2012) available through the NDARC website (www.ndarc.med.unsw.edu.au/).

9.3 Sleep patterns and practices associated with drug use

Any drug that passes the blood-brain barrier has the potential to alter the quality and/or architecture of sleep. It has been well documented that ecstasy users hold different sleep patterns to controls (Allen et al., 1993; McCann & Ricaurte, 2007; Parrott 2000, 2006; Dughiero et al., 2001; Morgan et al. 2002; Carhart- Harris et al., 2009), with the areas of impact including: decreased stage 2 sleep (Allen et al., 1993; McCann et al., 2007), decreased total sleep time (Allen et al., 1993) and trends towards decreased REM onset latency (ROL) (Allen et al., 1993; McCann et al., 2007). In the 2011 questionnaire, participants were asked a range of questions which related to their sleep patterns. These questions aimed to assess the type of sleep problems experienced within this sample, the extent to which different areas of their life were being affected by sleep problems and to examine which medications or substances were being used to treat sleep problems.

The largest portion of REU in SA reported that their overall quality of sleep was good (36%), with approximately one-fifth reporting that it was very good (21%) or poor (20%) (see Figure 39).

Figure 39: Quality of sleep, as reported by REU, 2011



Source: EDRS REU interviews, 2011

Furthermore, REU reported a median satisfaction score of 7 out of 10 for weeknights and 6 out of 10 for weekends (with 10 being very satisfied). What this seems to suggest is that, although REU are generally quite satisfied with the quality of sleep they are getting, this decreases on weekends – which is when REU are more likely to consume ecstasy and related drugs. This is supported by the data in Table 50, which shows that REU get less sleep on the weekend.

Table 50: Quality of sleep, and sleep satisfaction rating, as reported by REU, 2011

	National n=545	SA n=76
Satisfaction of sleep (median out of 10)[#]		
Weekdays	7	7
Weekends	6	6
Number of hours sleep generally (median; range)		
Weeknights	7.5 (1.5-20)	7.3 (2.5-11)
Weekends	6 (3-10)	6 (0-12)
Number of hours needed not to feel sleepy (median; range)	8 (2-12)	8 (4-12)

Source: EDRS participant interviews

[#] 1 is very dissatisfied to 10 very satisfied

Over one-third (37%) of the SA sample reported experiencing some form of sleep problem, which is very similar to what was reported at the national level. The areas which were most affected by such problems were life satisfaction; followed by energy level, mood, relationships and memory (see Table 51).

Table 51: Self reported problem with sleep and ratings of areas affected by sleep problems (median out of 10) as reported by REU, 2011

	National N=552	SA n=76
Problem with your sleep (%)	39	37
If yes, how much has it affected (median out of 10[#])	N=214	n=28
Life Satisfaction	6	7
Energy level	6	6
Mood	5	6
Concentration	5	5
Relationships	5	6
Memory	4	6
Overall wellbeing	4	5

Source: EDRS participant interviews

1 (not at all) through to 10 (to a great extent)

Forty-two percent of the sample reported that drugs have had a negative impact on their quality of sleep. Possibly as a consequence of this, 32% of REU reported taking sleep medication in the month prior to interview – predominantly Valium (diazepam). However, the use of such medication appears to be relatively infrequent with the majority reporting that they used sleep medication less than once a week.

Table 52: Self reported negative impact of drug use on sleep in REU, 2011

	National n=539	SA n=76
Drug use impacted negatively on sleep quality (%)	44	42

Source: EDRS participant interviews

Table 53: Use of sleep medication in REU in the past month, 2011

How often taken sleep medication in past month (%)	National n=537	SA n=76
Not in past month	70	68
Less than once a week	16	21
Once or twice a week	7	4
Three or more times a week	7	7
Medication used last time (%)	n=152	n=23
Valium (diazepam)	29	39
Other	20	22
Xanax (alprazolam)	16	9
Temazepam (generic)	7	9

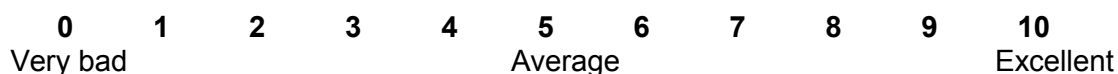
Source: EDRS participant interviews

9.4 Pleasure, happiness and quality of life scale

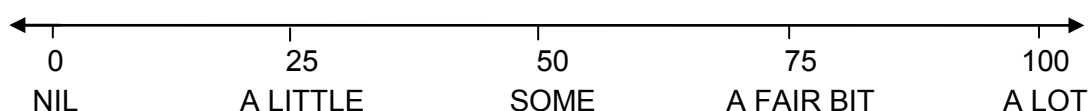
There is a need to understand more about the extent to which drug use fits into the broader life experiences of individuals who use drugs. Repeated studies of community samples suggest that family life, close personal relationships and social networks are important factors which are associated with a better or worse quality of life (QOL) (e.g. Myers & Diener, 1996). Little is known about how a person's quality of life might be influenced by their drug use, although there is reason to suspect the effect may be negative (Ventegodt & Merrick, 2003) – possibly because drug use has a negative impact on family life and social networks.

Drugs are used to enhance the pleasure of the user. The type of pleasure may vary with the drug involved but it would seem evident that using drugs is intended to achieve a particular desired experience (relaxation, stimulation, a feeling of warmth and disinhibition). However, there have been few studies which have documented the extent to which actual use is associated with greater pleasure. Pleasure itself is associated with some related concepts. Thus experiences of pleasure should lead to greater happiness which, in turn, should lead to a better quality of life. Of course, it is possible that some activities which lead to pleasure may reduce happiness (happiness being a longer term experience) and even the quality of life. It is possible that drug use enhances the experience of pleasure, but has little impact on happiness and a negative impact on the quality of life.

The following scales were constructed from interview data with university students and involved respondents disclosing the most important things that influence their pleasure, happiness and quality of life. Participants were first asked to rate their quality of life as a whole on the scale below.



Using the scale below, participants were then asked about the contribution of 15 life aspects to each of the three concepts: pleasure, happiness, and QOL.



Using the 0-10 scale outlined above, it appears that REU in SA have a fairly good quality of life, with participants scoring a mean of 7 out of 10 (n=74). This was fairly consistent across all jurisdictions in Australia

Table 54, Table 55 and Table 56 show the ranking and participants' mean rating score for the contribution of 15 life aspects to pleasure, happiness and QOL. In regards to taking drugs, the mean contribution to pleasure was 72, to happiness 66 and to QOL 50. This downward trend across the three concepts was also reported for the normative sample of university students, however, all three of the mean scores for taking drugs were considerably lower than for the EDRS participants (i.e. pleasure 28, happiness 14, and QOL 11).

Table 54: Self-reported ranking* of life aspects that contribute to pleasure (0 = nil and 100 = a lot), 2011

Pleasure Ranking (mean score)	SA n=76
Listening to music	1 (86)
Being with friends	2 (84)
Having sex	3 (82)
Travel to new places	4 (82)
Eating a good meal	6 (80)
Having lots of money	9 (78)
Good sleep	5 (77)
Being with my partner	7 (75)
Personal achievements	8 (74)
Taking drugs	11 (72)
Drinking alcohol	13 (67)
Doing physical activity/exercise	12 (66)
Being with my family	10 (66)
Cooking	15 (62)
Work/education/ study	14 (56)

Source: EDRS participant interviews

* Ranking is based on 2 decimal places

Table 55: Self-reported rankings* on life aspects that contribute to happiness (0 = nil and 100 = a lot), 2011

Happiness Ranking (mean score)	SA n=76
Being with friends	1 (86)
Having sex	2 (81)
Listening to music	3 (81)
Travel to new places	4 (79)
Good sleep	5 (78)
Eating a good meal	6 (77)
Being with my partner	7 (77)
Personal achievements	8 (75)
Having lots of money	9 (75)
Being with family	10 (70)
Doing exercise/ physical exercise activity	11 (67)
Taking drugs	12 (66)
Drinking alcohol	13 (63)
Work/education/ study	14 (57)
Cooking	15 (57)

Source: EDRS participant interviews

* Ranking is based on 2 decimal places

Table 56: Self-reported rankings* on life aspects that contribute to quality of life (0 = nil and 100 = a lot), 2011

Quality of Life Ranking (mean score)	SA n=97
Being with friends	1 (83)
Good sleep	2 (79)
Being with my partner	3 (79)
Listening to music	4 (76)
Having lots of money	5 (76)
Eating a good meal	6 (76)
Personal achievements	7 (75)
Having sex	8 (75)
Being with my family	9 (73)
Doing exercise/physical activity	10 (72)
Travel to new places	11 (72)
Work/education/ study	12 (70)
Cooking	13 (56)
Drinking alcohol	14 (51)
Taking drugs	15 (50)

Source: EDRS participant interviews

* Ranking is based on 2 decimal places

9.5 Ecstasy dependence

The question as to whether it is possible to be dependent on ecstasy is a controversial one. Currently, in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, text revision (DSM-IV-TR), it is possible to be diagnosed with ecstasy dependence (coded as either amphetamine dependence or hallucinogen dependence), and there are clear case studies in the literature of people who are dependent on ecstasy. In addition, animal models have demonstrated that dependence on ecstasy is biologically plausible. However, findings in relation to ecstasy dependence should be interpreted with caution due to the fact that there has been limited research into this syndrome (see Topp et al., 1997; Degenhardt et al., 2010).

To date, internationally, there have been a small number of studies of rates of dependence in ecstasy users. Studies from the US household survey suggest a prevalence rate of past-year dependence in approximately 3.6-3.8% of ecstasy users in the general population. An early NDARC study suggests a lifetime prevalence rate of 64% in similar types of REU interviewed in the EDRS.

In 2011, participants of the EDRS were asked questions from the Severity of Dependence Scale (SDS) adapted to investigate ecstasy dependence. The SDS is a five-item questionnaire designed to measure the degree of dependence on a variety of drugs. The SDS focuses on the psychological aspects of dependence, including impaired control of drug

use, and preoccupation with and anxiety about use. The SDS appears to be a reliable measure of the dependence construct. It has demonstrated good psychometric properties with heroin, cocaine, amphetamine, and methadone maintenance patients across five samples in Sydney and London (Dawe et al., 2002). A total score was created by summing responses to each of the five questions. Possible scores range from 0 to 15.

Two cut-off scores are presented below of three or more and four or more. A cut-off score of 3 or more was used as these scores have been recently found in the literature to be a good balance between sensitivity and specificity for identifying problematic dependent ecstasy use (Bruno et al., 2011). Sixteen percent of REU obtained a score of three and above. The cut off score of four and above is a more conservative estimate which has been used previously in the literature as a validated cut-off for methamphetamine dependence (Topp & Mattick, 1997; Bruno et al., 2009). Nine percent of REU participants scored four or above. There was no significant gender differences regarding mean stimulant SDS score and those who scored three or four or above.

The median SDS score was 1 (range: 0-8). Almost half of the sample (48%) obtained a score of zero on the ecstasy SDS, and just under a quarter (23%) obtained a score of 1 on the scale. This indicates that the majority of respondents reported no or few symptoms of dependence in relation to ecstasy use. These findings are supported by the fact that the majority of participants (69%) reported that they 'never or almost never' felt that their use of ecstasy was out of control and 89% reported that they would find it 'not difficult to stop or miss a prospective dose of ecstasy'.

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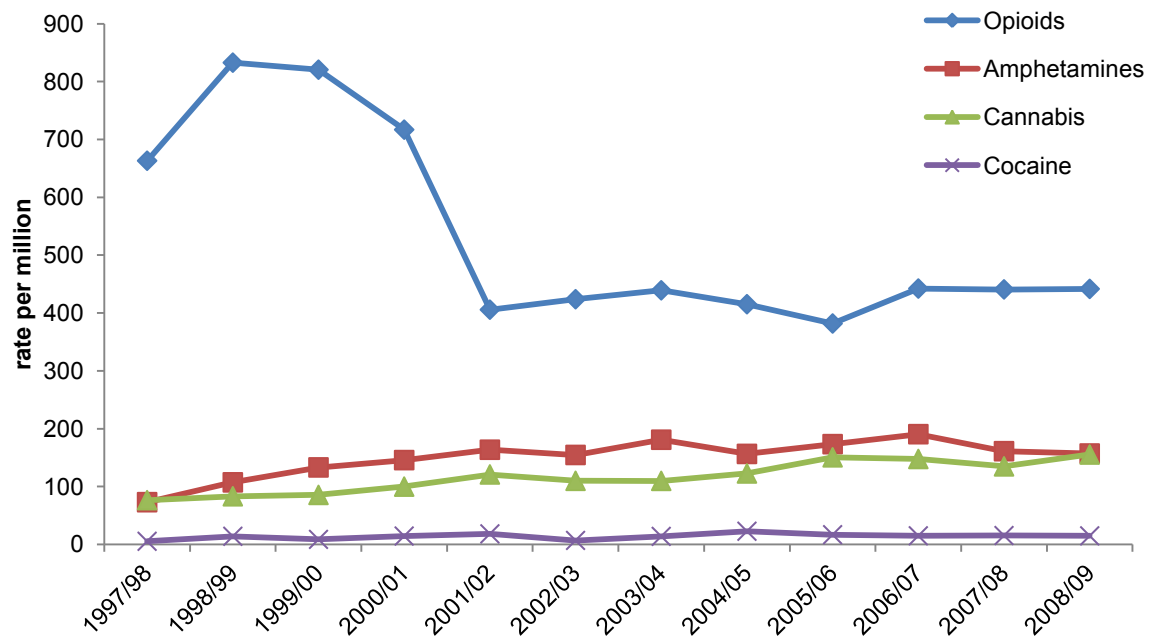
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Appendix 1: Rate of substance-related admissions* (primary diagnosis) to hospital in Australia, 1997/1998–2008/09



Source: Australian Institute of Health and Welfare

* For persons aged between 15 and 54 years

Note: 'primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care