

South Australia

K Heese and Dr. L. Burns

**SA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2010
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)**

Australian Drug Trends Series No. 69

SOUTH AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2010



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

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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
BBVI	Blood-borne viral infection(s)
BMI	Body Mass Index
BZP	Benzylpiperizine(s)
CI	Confidence Intervals
CME-DIS	Client Management Engine-DASC Information System
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	Dimethyl tryptamine
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
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)
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 dioxyethylamphetamine
MDMA	3, 4-methylenedioxymethamphetamine
ml	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 codeine
OTS	Over the counter stimulants
PDI	Party Drugs Initiative
PMA	Para-methoxyamphetamine
RAH	Royal Adelaide Hospital
REU	Regular ecstasy users(s)
ROA	Route of administration
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
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 Section 3 ' <i>Method</i> ' for further details)
Key expert(s)	Also referred to as KE; persons participating in the Key Expert Survey component of the EDRS (see <i>Method</i> 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 tenth 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 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

Ninety-two participants were recruited to the 2010 sample. As in previous years, the REU interviewed were young, with a median age of 18 and two-thirds of the participants were male (62%). One-third were in full-time employment with a mean income of \$523 per week. Most participants were well educated and over half had completed some kind of post school qualification, while 10% were full-time students. Very few had a history of imprisonment and no participants were currently undergoing treatment for drug use. In comparison to participants in 2009, the 2010 sample were generally similar, however, there was a smaller proportion of participants who reported being unemployed. Key Experts (KE) reports of the demographics of ecstasy users were also generally consistent with the 2010 REU sample.

Patterns of drug use among participants

Ecstasy as the drug of choice remained stable in 2010, however, cannabis decreased in popularity and cocaine increased. The REU sample had used a similar number of drugs both in their lifetime and in the preceding six months of interview to that reported in 2009. In 2010, as in previous years, the majority of the sample reported recent use of some form of methamphetamine, although this year’s use was again not at levels equivalent to ecstasy use. Similar to previous years, participants also used cannabis, alcohol, LSD and tobacco as well as ecstasy. In 2010, there was a dramatic increase in the proportion of participants reporting use of cocaine.

The proportion of participants in 2010 that reported recent bingeing on ecstasy or other related drugs remained stable. However, a larger proportion of participants reported binge use of methamphetamine base, cocaine and LSD, whereas fewer participants reported binge use of ecstasy, cannabis and alcohol in 2010.

The majority of 2010 participants reported use of any drug primarily by swallowing or snorting. Very few participants reported recent injecting, most commonly some form of methamphetamine. No clear long-term trend in prevalence of injecting amongst participants, were discernible.

Ecstasy

In 2010, there had been little change in parameters of ecstasy use, with the reported median age of first use, 'average' or 'most' amount used in a typical session all remaining relatively stable across this period. However, the median number of days participants used ecstasy in the previous 6 months was significantly lower than in 2009. The proportion of participants reporting using more than one tablet in a typical session remained stable at 81%. Furthermore, the use of more than one tablet in a typical session was reported by the majority of the sample compared to less than half the sample in 2000 (for more information see previous PDI editions). Binge use of ecstasy remained relatively stable with approximately a third reporting bingeing on ecstasy in both 2009 and 2010. Participants mainly used ecstasy by swallowing. Ecstasy was used most commonly at nightclubs.

Larger proportions of participants reported using other drugs 'with ecstasy' compared to 2009, while the use of other drugs to come down from ecstasy has continued to decrease. The most commonly used drugs were some form of methamphetamine, tobacco, alcohol, and cannabis.

KE information confirms that REU commonly combine other licit and illicit drug use with ecstasy use, with methamphetamine, alcohol and cannabis particularly common.

The reported price of ecstasy was higher compared to 2009, with almost half the participants reporting the price had remained stable and a third considered it to be increasing in the last six months. Availability continued to be considered 'easy' or 'very easy' by participants, although there was an increase in the number who considered it to be difficult. Participants' opinions of the purity of ecstasy were reported as low compared to more mixed opinions reported in 2009. The Australian Crime Commission (ACC) reported that the median purity of South Australian Police (SAPOL) seizures of phenethylamines in 2008/09 continued to decrease and was reported to be 19.8%.

Ecstasy was generally purchased for both self and others, with no participants 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 one percent purchasing ecstasy over twenty-five times in that period. Ecstasy was mainly purchased from friends or acquaintances and at private residence or agreed location.

Methamphetamine

In 2010, the proportions of the participant sample reporting recent use of powder and base increased whereas recent use of crystal methamphetamine continued to decrease to the lowest level recorded in the last 11 years. The frequency of recent use of all forms of methamphetamine in 2010 was lower than in 2009. In the six months prior to interview, smoking of crystal methamphetamine continued to be the preferred route of administration. Swallowing and snorting as a route of administration has become the primary method of administering base and powder methamphetamine. Fewer participants reported smoking and injecting all forms of methamphetamine compared to participants reports in 2009.

The price of both powder and base remained stable with the price of crystal increasing slightly in 2010.

The purity of powder and base was reported as medium or high and stable within the last six months. The majority of participants reported crystal purity as high and as stable or increasing in purity in the preceding six months of interview. 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. However, the median purity of methamphetamine seized by South Australia Police (SAPOL) decreased compared to the previous year.

Overall, participants mostly reported obtaining all three forms of methamphetamine from friends, and at their own/friend's home.

Many KE reported problems associated with the use of methamphetamine and alcohol, including an increase in aggressive and violent behaviours, and mental health issues.

Cocaine

Cocaine was nominated by 21% of the samples as the preferred drug of choice in 2010, a 20% increase from participants reporting in 2009. A larger proportion of participants in 2010 reported lifetime and recent use of cocaine in comparison to participant reports of use in 2009. Frequency of use remained low and stable among those who reported recent use. Participants reported the purity to be medium or high and considered the purity to be stable or fluctuating. The availability of cocaine was seen by half the sample as easy but as difficult by 42%, and the availability of cocaine was perceived to have remained stable in the previous six months by those who could comment. No comparisons of price, purity and availability were made due to small numbers commenting in 2009.

A few KE reported an increase in the number of REU mentioning cocaine and an increase in the use of this drug.

LSD

One-third of the participant sample in 2010 reported recent use of LSD and prevalence of recent use was stable. Frequency of use of LSD was stable and remained consistently low. KE reports suggested that LSD was more common among older participants but was still low in prevalence. Participants reported 'usually' obtaining LSD from friends, and the 'usual' location for purchasing LSD was a friend's home or raves.

The price of LSD was lower than the price reported in 2009. The purity of LSD was perceived as high, and LSD was reportedly generally easy to obtain and remained stable in the six months prior to interview.

Cannabis

The proportion of participants reporting lifetime use remained stable, but the proportion of participants reporting recent use of cannabis was lower compared to reports in 2009 (84% vs. 96%). The frequency of recent cannabis use by participants in 2010 was lower than reported in 2009 and continued to fluctuate. The proportion reporting binge use of cannabis was lower in 2010 compared to 2009. Participants reported 'usually' obtaining cannabis from a friend in the six months prior to interview. The price, purity and availability of hydro and bush cannabis remained stable in 2010 compared to 2009.

Other drugs

As in previous years, the majority of the participant sample reported recent use of alcohol and tobacco and it had remained relatively high. KE information also suggested that use of these substances was common and that frequency of use of alcohol with drugs was increasing.

Sixteen percent of participants reported recent use of illicit benzodiazepines, at a similar frequency as participant reports in 2009. A very small proportion of participants reported recent use of illicit antidepressants.

Use of inhalants had also remained fairly stable across the years, with twenty percent of the participant sample in 2010 reporting recent use of nitrous oxide, and 8% reporting use of amyl nitrate. This indicated a decrease in 2010 compared to participant reports in 2009 in the use of nitrous oxide (from 33% in 2009 to 20%) and amyl nitrate (from 16% to 8%). Frequency of use of both these substances remained consistently low.

Lifetime use of illicit pharmaceutical stimulants increased in 2010; however, recent use and frequency remained stable. Thirteen percent of participants reported having used ketamine, in the six months prior to interview. Compared to 2009, recent use decreased and the frequency of use remaining relatively stable. The proportion of participants reporting recent use of GHB remained stable and low, with frequency of use also remaining stable and low.

Emerging psychoactive substances

Participants in 2010 were asked about their use of a range of research chemicals (RC). Those most recently used were 4-bromo-2,5-dimethoxyphenethylamine 2CB (11%), mephedrone (9%). Several KE reported an increase in use of these drugs, especially 2CB and commented on the lack of knowledge surrounding these drugs and their related harms.

Health related issues

Few participants reported overdosing on a 'stimulant' drug or 'depressant' drug in the six months prior to interview.

Twenty four percent of participants reported having accessed one or more medical or health services in the six months prior to interview, in relation to their use of ecstasy and related drugs; this was an increase compared to 2009 when only 10% reported accessing these services. The most commonly accessed service in relation to 'any' drug use, by the few participants able to comment, was a drug and alcohol worker.

The proportion of clients attending Drug and Alcohol Services South Australia (DASSA) treatment services, with ecstasy as the primary drug of concern, decreased in 2010 and still remained relatively low compared to other illicit drugs. The proportion of clients nominating amphetamines as the primary drug of concern decreased again in 2010 compared to 2009. Amphetamines were the second most commonly nominated primary drug of concern by clients of DASSA, after alcohol, and dominated as the most common illicit drug of concern. The proportion of clients nominating cannabis as their primary drug of concern decreased in 2010 compared to the previous year.

In 2010, a similar proportion of participants reported experiencing one or more problems related to their drug use compared to participants in 2009, with two-fifths having risk associated problems. Use of some form of alcohol was most commonly held responsible, at least in part, for these problems.

In 2010, twenty-three 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

Eight participants reported recently injecting any drug in 2010, 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. Injecting drug use was reported by around a fifth of the participants this year, although considered generally rare and still taboo among this illicit drug-using group and more likely to occur among primarily methamphetamine users rather than primarily ecstasy users.

In 2010, there was no reported sharing of needles among recent injectors; however, half those who had recently injected reported sharing other injecting equipment.

Sexual risk behaviour

Evidence of risky sexual behaviour was again apparent among the participant sample in 2010. Of the participants who reported having had penetrative sex with a casual partner in the last six months, most did not use a condom on every occasion, and 16% never used a condom with casual partners. In addition, the majority of those who reported recent penetrative sex, reported having done so whilst under the influence of a drug or drugs – most commonly alcohol followed by ecstasy, cannabis, or some form of methamphetamine – and, of those, the majority reported they had not always used a condom with a casual partner.

Driving risk behaviour

Two-thirds of those who had driven in the six months prior to interview had driven under the influence of alcohol, with the majority reporting driving over the legal alcohol limit a median of three times in that period. Two-thirds of participants reported driving within an hour of consuming an illicit drug a median of four times in the six months prior to interview. Ecstasy and cannabis were the most commonly used illicit drugs while driving.

Alcohol risk behaviours

The Alcohol Quantity Frequency and Variability Assessment¹ (AQFV) measures alcohol use over the preceding six months. Females drank on a median of 24 days at high risk levels whilst males drank on a median of 54 days at risky levels, an increase in frequency reported in 2009.

Law enforcement-related trends

Compared to 2009, there was a decrease in criminal offenses reported in the month prior to interview (22% in 2010 vs. 38% in 2009). The number of participants in 2010 reporting past-year arrest remained stable. Nineteen percent of the 2010 REU sample had been involved in drug dealing in the month prior to interview.

Half of participants reported that the level of police activity had remained stable over the preceding six months, while the other half reported an increase in activity. Sixty five percent reported that this activity had not made it harder to score. Three quarters (74%) of REU reported that they had seen sniffer dogs in the six months preceding interview, a median of two times.

¹ Many thanks to Dr. James Lemon, previously of the National Drug and Alcohol Research Centre, for his kind permission to use the AQFV assessment in the 2009 & 2010 EDRS.

Special topics of interest

Energy drink consumption

Two-thirds of participants had recently consumed energy drinks with alcohol consuming a median of three drinks on the last occasion, and 74% of REU had consumed energy drinks in the same episode as ecstasy use.

Body mass index

Two thirds of REU were classified in the healthy range for weight, a larger proportion than the general population (65% vs. 42%). Half of male participants had a body mass index in the healthy range, whilst a fifth of women fell into the healthy range, with more REU females classified as either underweight or obese.

Sexual health

Fifty-four percent of participants had been tested for a sexually transmitted infection and 67% of females had had a Pap smear test in the previous two years.

Conclusions

The results reported here describe trends in the use of ERD in 2010 Adelaide, South Australia, and provide comparisons with the findings of the 2009 study. Many characteristics of ERD in the current study were comparable to previous years and remained stable. The notable changes in 2010 centred on the increase use of drugs other than ecstasy, especially cocaine – 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 low rates of health-seeking behaviour.

Implications

The findings from the 2010 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.
- Methamphetamine continues to be prevalent and was nominated by the majority of KE as a problematic drug of concern, therefore development and dissemination of education and harm reduction strategies, regarding the harms associated with use of methamphetamine need to be directed at young people.
- Given the increase of use of cocaine among REU, close monitoring is required to monitor the harms associated with this drug.
- Monitoring of emerging psychoactive substances and their related harms is needed.
- Continued focus is required on reducing supply of ecstasy and amphetamines, including from local clandestine laboratory manufacture.
- 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.
- 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.
- Considering the prevalence and increase of mental health issues, development and implementation of strategies to address issues associated with drug misuse and dependence.

1.0 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 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 2010 South Australian EDRS were to:

- describe the characteristics of a sample of ecstasy users surveyed in Adelaide in 2010;
- 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 2010 EDRS.

2.0 METHOD

Methodology for this study was conducted as per the methodology trialled in the feasibility study (Breen, Topp & Longo, 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, Breen & Degenhardt (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. A total of 92 regular ecstasy users were interviewed from May to June of 2010. 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 a popular dance music website containing links to a DASSA intranet web-page where potential participants could lodge their interest in taking part. 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, Lenton & Norcross, 1997; Ovendon & Loxley, 1996; Solowij, Hall & Lee, 1992) and international studies (e.g. Dalgarno & Shewan, 1996; Forsyth, 1996; Peters, Davies & Richardson, 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, Hando, & Dengenhardt, et al., 1998; Topp, Hando, & Dillon, 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, Cohen, & Ross, et al., 1994) (Hando & Hall, 1993; Hando, Topp & Hall, 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
- areas of special interest included body mass index (BMI), ecstasy dependence, energy drinks and sexual health testing.

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. (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 45 minutes to one hour to conduct. Notes were taken during the interview and the responses were analysed and sorted for recurring themes. Interviews were conducted via telephone between June and September 2010. KE were remunerated with a small incentive (e.g. box of chocolates) for their time.

There were fifteen KE from various metropolitan regions of Adelaide. The majority of KE worked in the health sector, including in health promotion, community drug and alcohol work, drug treatment services, mental health services and emergency treatment. Three KE worked within, or had in-depth knowledge of, the dance scene. There was one KE from law enforcement, and two from forensic science.

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., and 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.

3.0 DEMOGRAPHICS

Key Findings

- A total of 92 participants were interviewed for the EDRS survey in 2010.
- Participants were aged in their mid-20s (median age of 24 years), predominantly male (62%), with the majority identifying as heterosexual (87%).
- The REU interviewed were well educated: half had gained post-secondary qualifications, while 10% were full-time students.
- Roughly one-third of the sample was currently in full-time employment with a mean income of \$523 per week. The majority were renting/owned (61%) or living in the parental/family home (39%).
- Six participants reported contact with the criminal justice system and one was currently in drug treatment.
- Demographic characteristics of the sample remained stable across time.

3.1 Overview of the REU participant sample

3.1.1 Demographic characteristics of the REU sample

In the 2010 EDRS, 92 participants were interviewed in South Australia. Ten percent of the EDRS sample had participated in previous years, 3% in 2009, 2% in 2008, one percent in 2006, 2003 and 2001, and 2% were unsure of which year they participated. Five participants had participated in a previous SA IDRS survey of injecting drug users with two unsure of the year. One participant had participated in all surveys between 2004 and 2009; a further participant took part in 2005 and one in 2008.

In 2010, three-fifths (62%) of the sample interviewed were male. The mean age of the sample was 26 years (SD=6.81, range=18-51) with a median age of 24 years. The majority of participants reported their sexual identity as heterosexual (87%), and nominated English as their main language (99%). One participant was of Aboriginal and/or Torres Strait Island (A&TSI) descent.

Half (56%) of the sample reported that they were of single status and a one-third (33%) had a partner and 11% reported to be married or living in a de facto relationship. Three-fifths lived in their own (owned or rented) accommodation (61%) or in their parents' or family's home (39%).

The median number of years of school education completed by the sample was 12 (range 7-13) and two-thirds (63%) of the participants had completed year 12. Half (53%) had completed courses after school, with 23% having completed a university degree and 30% a trade/technical qualification. Just under a third of participants were employed on a full-time basis (30%), one fifth were currently students (10% full-time, 1% part-time), a third were employed on a part-time/casual basis (34%), and one-fifth were currently unemployed (20%). The mean weekly income was \$523.

No REU were receiving drug treatment at the time of interview and 6% had received a custodial sentence for a previous criminal conviction.

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 2010. Demographic comparison between the 2010 sample and 2009 sample showed a significant decrease in age ($p < 0.05$) and in unemployment status (30% in 2009 vs. 20% in 2010; 95% CI: 0.26- 0.01).

Table 1: Demographic characteristics of REU sample, 2003-2010

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)
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)
Sex (% male)	63	62	58	63	53	53	65	62
Sexual Identity (%)								
<i>Heterosexual</i>	91	84	89	89	84	80	83	87
<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
<i>Other</i>	-	-	-	1	1	4	1	-
English main language spoken at home (%)	95	98	99	98	99	99	99	99
A&TSI (%)	1	0	1	7	2	3	4	1
Employment* (%)								
<i>Not employed</i>	20	18	18	14	18	23	33	20
<i>Full-time*</i>	29	34	39	28	38	29	29	30
<i>Part-time/ casual</i>	21	23	24	27	24	26	25	34
<i>Full-time student</i>	31	25	19	26	3	3	4	10
<i>Both studying & employed[#]</i>	-	-	-	-	12	18	8	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)
Tertiary education (%)								
<i>None</i>	54	54	46	50	42	43	48	47
<i>Trade/ Technical</i>	24	26	38	28	40	31	36	30
<i>University/ College</i>	22	20	16	22	18	26	16	23
Prison history (%)	1	5	1	5	10	7	8	6
Current drug treatment (%)	1	1	2	2	1	0	1	0

Source: EDRS interviews

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

[#]Question changed to 'both studying and employed'

KE Comments

- KE descriptions of the ecstasy users with whom they had regular recent contact were generally consistent with the characteristics of the REU sample. The majority of ecstasy users were Caucasian-Australian, or of English speaking background, with very few indigenous Australians observed using this drug.
- KE described groups as being of both sexes, with most being in their late-teens to mid-20s. KE noted contact with individuals from a wide range of backgrounds. The majority of KE who commented on the sexual orientation of ecstasy users stated that they were predominantly heterosexual.
- The majority of ecstasy users that KE were familiar with were generally well educated and either employed or currently studying.
- Few KE were aware of any drug treatment among the groups that they were familiar with. KE reported that those who did access treatment services (telephone advice) did so as a result of ongoing adverse acute effects of drugs (anxiety, panic attacks, poor sleep, were taking a 'bad' pill or having a bad reaction to pills), but are not in treatment for these problems. Health KE also commented that ecstasy users attended emergency departments for accidental overdose, KE's had mentioned that although patients thought they had taken ecstasy they did not usually present with symptoms consistent with this and this may be due to others drugs being sold as ecstasy. A few KE also commented the REU attended ED for help with psychological symptoms during comedown periods such as anxiety, agitation and sleeping problems.
- The majority of KE indicated low levels of criminal activity among the group that they were familiar with, with some KE (with roles in health services) noting that some proportion of the groups that they were familiar with had come into contact with the criminal justice system.

4.0 CONSUMPTION PATTERN RESULT

Key Findings

- Approximately two-fifths (37%) reported that their drug of choice was ecstasy.
- Cocaine had increased in popularity as second drug of choice and had both increased in lifetime use and recent use compared to 2009. Frequency of cocaine use had remained stable.
- One-third of the sample had recently binged on ecstasy and/or related drugs. Those most commonly used were ecstasy, alcohol and cannabis.
- Key experts noted that many REU were beginning to look to other drugs in response to a widespread perception that the purity of ecstasy has declined recently.
- The number reporting that they had ever injected a drug remained similar to reports in 2009.
- Thirty eight percent of the sample reported binging on EDR in the preceding six months, with ecstasy the most commonly reported drug involved in a binge session, followed by alcohol, cannabis and methamphetamine.

4.1 Drug use history and current drug use

In 2010, 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. 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 2010 sample was no exception. Participants were asked about their lifetime and recent use of 23 different drug types². Participants reported using a median of ten (range 4-17; n = 91) drug types in their lifetime and a median of six (range 2-11; n = 90) in the preceding six months. A small 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, DMT (a powerful hallucinogen); synthetic drugs such as 2CI, 2CB and benzyloperazines (BZP); and naturally occurring drugs, such as kava (data not shown). In 2010, the EDRS included a section investigating the prevalence of use of these substances in this sample. Results can be found in Section 5.10 ‘Research Chemical drug 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 months were, alcohol, followed by cannabis and tobacco and has remained relatively constant over the past years.

² 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 GBL), amyl nitrate, nitrous oxide, alcohol, cannabis, benzodiazepines, antidepressants, tobacco, heroin, methadone, buprenorphinen, OTC stimulants, steroids, OTC codeine and other opiates

Increasing and decreasing trends are evident across time in relation to lifetime and recent use of ecstasy and related substances. In 2010, of interest is the increase in recent use of cocaine.

Compared to 2009, significant changes in consumption patterns for 2010 were:

- higher lifetime use of cocaine (45% in 2009 vs. 69% in 2010; 95% CI: (-0.09 - -0.36);
- higher recent use of cocaine (20% in 2009 vs. 42% in 2010; 95% CI: -0.09- -0.35);
- higher lifetime use of MDA (8% in 2009 vs. 27% in 2010; 95% CI: -0.09- -0.30);
- higher lifetime use of ketamine (31% in 2009 vs. 49% in 2010; 95% CI: -0.04- -0.31);
- higher lifetime use of illicit pharmaceutical stimulants (26% in 2009 vs. 42% in 2010; 95% CI: -0.03 - -0.29);

4.1.1 Injecting drug use

In 2010, twenty per cent of the sample reported having ever injected any drug, of those 44% reported injecting in the last 6 months prior to interview. This proportion has remained stable from 2009 (19%). See Section 8.1 'Injecting Risk Behaviour' for further analyses on injecting and injecting-related risk behaviour.

Table 2: Lifetime and recent (last six months) use of REU, 2010

	2003	2004	2005	2006	2007	2008	2009	2010
Alcohol								
Ever used (%)	100	100	100	99	98	99	96	99
Used last six months (%)	98	96	99	97	94	97	93	92
Cannabis								
Ever used (%)	100	97	97	98	97	95	98	100
Used last six months (%)	87	81	87	83	80	74	96	84
Tobacco								
Ever used (%)	81	76	90	87	86	84	90	80
Used last six months (%)	72	65	78	73	73	70	80	69
Meth. powder (speed)								
Ever used (%)	82	86	83	75	81	55	60	71
Used last six months (%)	65	62	66	51	53	30	30	38
Meth. base								
Ever used (%)	75	84	88	72	81	46	46	49
Used last six months (%)	70	72	82	63	64	34	21	28
Crystal meth. (ice/crystal)								
Ever used (%)	60	60	62	73	66	47	52	55
Used last six months (%)	48	47	41	62	49	34	32	26
Cocaine								
Ever used (%)	57	59	67	49	71	53	45	69
Used last six months (%)	37	26	49	31	36	20	20	42

Table 2: Lifetime and recent (last six months) use of REU, 2010 Cont

	2003	2004	2005	2006	2007	2008	2009	2010
LSD								
Ever used (%)	73	77	82	71	75	64	71	66
Used last six months (%)	30	36	48	34	33	35	37	35
MDA								
Ever used (%)	31	30	19	21	30	16	8	27
Used last six months (%)	21	14	9	9	7	1	2	7
Ketamine								
Ever used (%)	47	51	44	35	49	37	31	49
Used last six months (%)	36	39	24	11	26	20	19	13
GHB/1,4B/GBL ⁺								
Ever used (%)	38	35	33	31	32	19	9	24
Used last six months (%)	12	12	18	8	11	4	2	8
Amyl nitrate								
Ever used (%)	40	43	31	30	41	27	30	40
Used last 6 months (%)	13	16	9	9	13	7	16	8
Nitrous oxide								
Ever used (%)	82	74	74	67	61	50	53	59
Used last 6 months (%)	55	47	46	33	30	26	33	20
Benzodiazepines [#]								
Ever used (%)	49	57	54	50	49	32	34	42
Used last 6 months (%)	30	40	26	33	32	18	19	25
Antidepressants [#]								
Ever used (%)	24	31	31	33	39	32	25	28
Used last 6 months (%)	12	14	10	16	14	7	5	12
Pharmaceutical Stimulants [*]								
Ever used (%)		54	60	49	46	28	30	45
Used last 6 months (%)		21	24	20	15	4	5	10
Mushrooms								
Ever used (%)	-	-	55	50	60	47	45	52
Used last 6 months (%)	-	-	14	18	12	5	18	14
Heroin								
Ever used (%)	10	19	9	9	22	19	17	12
Used last 6 months (%)	2	3	3	1	4	8	6	2
Methadone								
Ever used (%)	0	8	6	6	5	8	11	5
Used last 6 months (%)	-	0	0	2	1	1	1	0
Buprenorphine								
Ever used (%)	0	8	2	3	5	7	4	1
Used last 6 months (%)	-	6	1	2	1	4	1	0

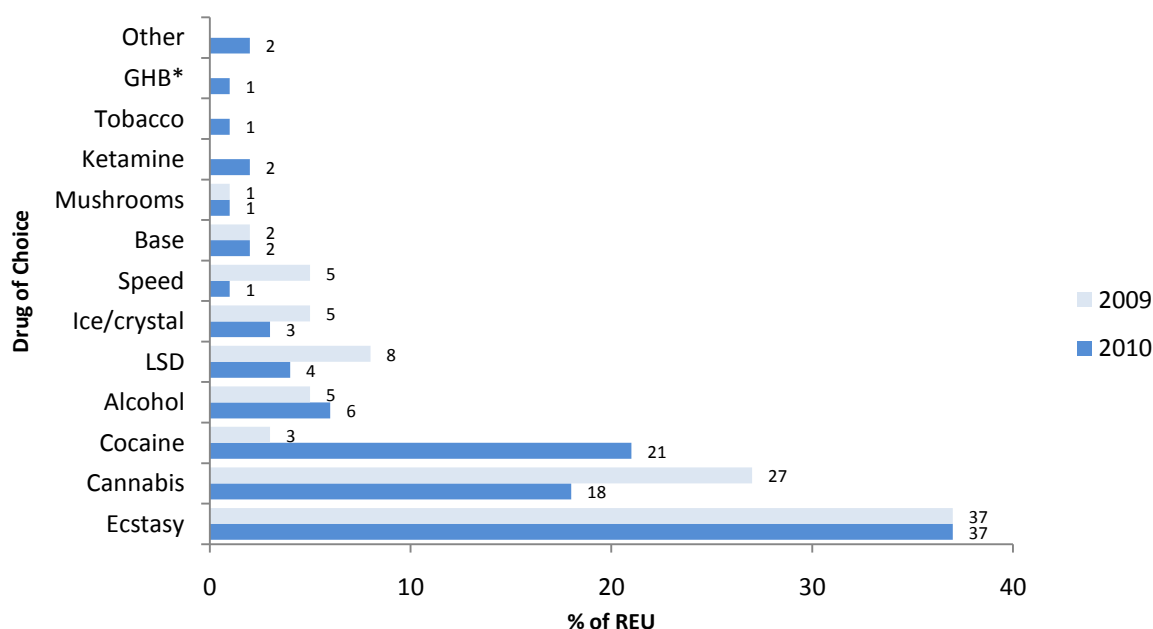
Table 2: Lifetime and recent (last six months) use of REU, 2010 Cont

	2003	2004	2005	2006	2007	2008	2009	2010
Other opiates								
Ever used (%)	22	24	20	21	22	19	30	15
Used last 6 months (%)	7	10	8	4	12	10	15	9

Source: EDRS interviews

4.1.2 Drug of choice and binge drug use

Figure 1 shows the main drug of choice nominated by participants in 2010. Ecstasy was the preferred drug of choice by nearly two-fifths (37%) of participants, the same proportion who nominated ecstasy in 2009. The next most preferred drug was cocaine 21% which was a greater proportion than reported in 2009. Cannabis was the third drug of choice although this had decreased from 27% in 2009 to 18% in 2010.

Figure 1: Drug of choice of REU, 2009 & 2010

Source: EDRS participant interviews

Participants were asked whether they had binged on ERD in the six months preceding 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 38% and remained stable from 2009. Binge occurred on a median of two occasions (range 1-90) with the median length of the longest binge being almost three days (72 hours, range 48-164). The frequency and duration of binge use was lower compared to 2009 which reported four times (range 1-48 times) with the median longest binge of six days (144 hours; range 36-288).

Amongst those who had binged for over 48 hours, ecstasy (32%) was the drug most commonly reported being used in a binge session. Alcohol more than five standard drinks (23%), tobacco (22%), cannabis (17%), energy drinks (16%), ice/crystal methamphetamine (12%), and speed (11%) were also commonly reported as being used in a binge session. Other drugs reported included cocaine (10%), base (10%), LSD (8%), nitrous oxide (2%), and GHB (2%), MDA (1%), pharmaceutical stimulants (1%) and mushrooms (1%). The type of drugs that participants reported

as being used in a binge session differed somewhat to those in 2009. Larger proportions of participants reported binge use of cocaine (3% vs. 10%), LSD (5% vs. 8%), and methamphetamine base (6% vs. 10%). Binge use of cannabis (26% vs. 17%) and alcohol (31% vs. 24%) both decreased in 2010.

Table 3: Proportion of participants reporting use of various drugs during a ‘binge’* episode in the last six months, 2009 & 2010

Drug	Percent of whole sample to include drug in ‘binge’ episode in the last 6 months	
	2009 (n=100)	2010 (n=92)
Ecstasy	38	32
Meth powder	10	11
Meth base	6	10
Meth crystal	13	12
Pharmaceutical stimulants	0	3
Cocaine	3	10
LSD	5	8
Mushrooms	2	1
MDA	0	1
Ketamine	5	0
GHB	1	2
Amyl nitrate	4	0
Nitrous oxide	7	2
Cannabis	26	17
Alcohol	31	24
<5 std drinks	5	1
>5 std drinks	26	23
Other	1	2
Tobacco	27	22
Energy drinks	N/A	16

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 Polydrug use in REU

In 2010, participants were asked how often they used ERD. The majority of responses reported between monthly and weekly use. In comparison to 2009, there has been a decrease in fortnightly use and an increase in monthly use. Only a small proportion reported using ecstasy and related drugs daily or more than once a week.

Table 4 : Polydrug use in the REU sample, 2010

	2009	2010
	(n=100) %	(n=89) %
Not in the last month	6	9
Monthly	18	25
Fortnightly	38	30
Weekly	24	27
More than once a week	13	9
Once a day	1	0

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. Forty-four percent of the participants indicated that there had been some recent change in drug use.

Most commonly reported by participants were:

It was reported that there was less use of ecstasy due to poor quality and people were substituting with other drugs n= 13. These included an increase use of mephadrone n= 6, methamphetamines n=6, cocaine n = 4 and 2CB n=2.

A few participants reported less use of ecstasy due to getting older and having more responsibilities.

An increase in smoking as Route of Administration (ROA).

Most commonly reported by KE were:

Increase of mephadrone, 2CB, MDPV
use accessed via the internet.

A trend that is moving away from MDMA to
research chemicals as they are cheaper,
higher in purity and easier to access.

Decrease in purity of ecstasy may
have increased the use of
cocaine.

KE Comments

- KE information supported the view that polydrug use was common among the REU, with alcohol, tobacco, and cannabis use repeatedly mentioned as prevalent among this group.
- Some KE also mentioned that the use of pharmaceuticals was increasing.
- Six KE commented that alcohol, energy drinks and drug use combined was becoming more problematic, especially when combined with ecstasy use and methamphetamine use.

4.2 ECSTASY USE

Key Findings

- The median age of first use was 18 years of age.
- Males were significantly more likely to first use and regularly use ecstasy than females.
- Frequency of recent use was significantly lower in 2010 compared to 2009.
- The proportions of participants in 2010 reporting using more than one pill in a typical session and including ecstasy in a binge session remained relatively stable.
- Swallowing was the primary route of administration both across lifetime and in the last six months.
- Half the sample (48%) reported using ecstasy at nightclubs.

4.2.1 Ecstasy use among REU

Table 5 summarises the ecstasy use patterns of the participant sample across 2004 to 2010. The mean age at which participants first tried ecstasy was 19 years (SD=5.32) with the median age being 18 years (range 13- 40; $n=92$), 67% of the sample were 18 or under. It is also worth noting that 9% of the participants were 30 years of age or older when they first tried ecstasy. Participants reported that regular (at least monthly) ecstasy use occurred at a mean age of 20 years (SD =4.98) with the median age of 19 years (range 14-48 years). When separated by gender, males were significantly more likely to have tried ecstasy at a younger age than females (18 years vs. 20 years) and started using ecstasy regularly at a younger age than females (19 years vs. 20 years) ($p < 0.05$).

In 2010, participants were asked to provide information on their use of ecstasy pills, powder and capsules³. The median number of days participants reported using any ecstasy (pills, powder or capsules) within the previous six months was 12 (range 6-120; $n=92$) and was significantly lower than the median number of days reported in 2009, 16 days ($p < 0.05$).

Fifty-three percent of the sample reported using ecstasy (any form) once a fortnight or less (40% reported such use in 2009). Thirty-two percent of participants reported using ecstasy between fortnightly and weekly (33% reported such use in 2009). The proportion of participants reporting use of ecstasy more than weekly was 15% (26% in 2009). 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 tablets (range 0.5-24; $n=92$) 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; $n=92$) reported by participants in 2010. Over three-quarters (82%) of REU reported that they typically used more than one tablet and two-fifths (41%) reported using over two tablets per session. Thirty-two percent reported having binged on ecstasy in the preceding six months and amongst those who had reported binging on ecstasy, the longest binge session reported was a median of 72

³ This is the third year we have distinguished capsules from pills as a form of ecstasy.

hours (range 48-168 hours). The proportion of participants who reported use of ecstasy within a binge episode was 32% which is a decrease from 2009 where 38 % of participants reported a binge session (see Table 5).

Table 5: Patterns of ecstasy use among the participants, 2004 – 2010

	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)
Median age first used ecstasy (years)	18	18	18	18	18	17	18
Median age first used ecstasy regularly (years)	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)
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)
Typically use >1 tablets (%)	84	73	80	80	70	81	81
Recently binged** on ecstasy (%)	47	57	55	59	27	38	32
Ever injected# ecstasy (%)	18	9	10	14	18	6	8
Use other drugs with ecstasy (%)	94	87	93	95	99	77	91
Use other drugs to come down from ecstasy (%)	79	83	85	85	81	60	54

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

Participants were also asked what proportion of their friends used ecstasy. Ecstasy use was common among the social networks of the 2010 REU sample. Approximately half (46%) of the participants reported that 'most to all' of their friends used ecstasy and 24% reported that roughly half of their friends used ecstasy. A third (29%) had reported that only a few of their friends used ecstasy. In 2010, a higher proportion reported that only a few of their friends used ecstasy compared to 2009 (15%).

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

Participants were asked to provide detail on the other substances they had typically used, in the last six months, either ‘with ecstasy’, or when ‘coming down’ from ecstasy. The results are presented in Table 6.

A significantly higher proportion of participants reported typically using at least one other substance with ecstasy compared to the REU sample in 2009 (77% in 2009 vs. 91% in 2010; 95% CI: -0.04- -0.25). As in previous years, the substances most commonly reported as being typically used ‘with ecstasy’ were alcohol, tobacco, cannabis or some form of methamphetamine. There was an increase in the use of cocaine with ecstasy (2% in 2009 vs. 11% in 2010) and combined use of LSD and ecstasy (0% in 2009 vs. 7% in 2010). Energy drinks were also consumed with ecstasy at a similar level that REU reported using any form of methamphetamine with ecstasy. Few participants reported using GHB, ketamine, nitrous oxide or amyl nitrate with ecstasy. One participant reported that they used mephedrone whilst using ecstasy. There were no reports of combined MDA, Pharmaceutical stimulants, Antidepressants or benzodiazepine use with ecstasy

In 2010, 54% of the sample reported using other drugs to come down from ecstasy and is the lowest reported figure to date. The substances most commonly reported as being typically used when ‘coming down’ from ecstasy were tobacco and cannabis, although these proportions were lower than in 2009 (See Table 6).

Table 6: Proportion of participants reporting typical* use of other drugs in combination with ecstasy, by drug type, 2009 & 2010

Drug	Typically use with ecstasy		Typically use	
	(% of participants)		(% of participants)	
	2009 (n=100)	2010 (n=92)	2009 (n=100)	2010 (n=92)
Methamphetamine powder	7	5	2	0
Methamphetamine base	4	7	1	1
Methamphetamine crystal	10	11	2	0
Pharmaceutical stimulants	0	0	0	0
Cocaine	2	11	0	0
LSD	0	7	0	0
MDA	0	0	0	0

Table 6: Proportion of participants reporting typical* use of other drugs in combination with ecstasy, by drug type, 2009 & 2010 Cont.

Drug	Typically use with ecstasy		Typically use	
	(% of participants)		(% of participants)	
	2009 (n=100)	2010 (n=92)	2009 (n=100)	2010 (n=92)
Nitrous oxide	2	4	2	2
Cannabis	46	41	50	36
Alcohol: >5 standard drinks**	73	80	12	7
Anti-depressants	0	0	0	0
Benzodiazepines	0	0	0	2
Tobacco	47	48	31	26
Energy Drinks		21		2
Other	2	1	4	4
% that typically* use one or more other drug(s) in combination with ecstasy	77	91	60	54

Source: EDRS participant interviews

*‘Typically’ was specified as use on two-thirds or more occasions of ecstasy use

** Of those who drank alcohol

In 2010, participants were also asked about the effects taking ecstasy had on their typical alcohol consumption behaviour. Most participants (40%) believed they actually consumed less alcohol, whilst a third (32%) of participants believed that it had no effect on the number of alcoholic drinks consumed with similar proportions (28%) reporting that they consumed more alcohol than they normally would (Table 7).

Table 7: Drinking behaviour on last occasion of ecstasy use, of those who used ecstasy and alcohol, 2010

	2010 (n=78)
More alcohol than would normally consume	28
No change (same number of drinks)	32
Less alcohol than would normally consume	40

Source: EDRS REU interviews

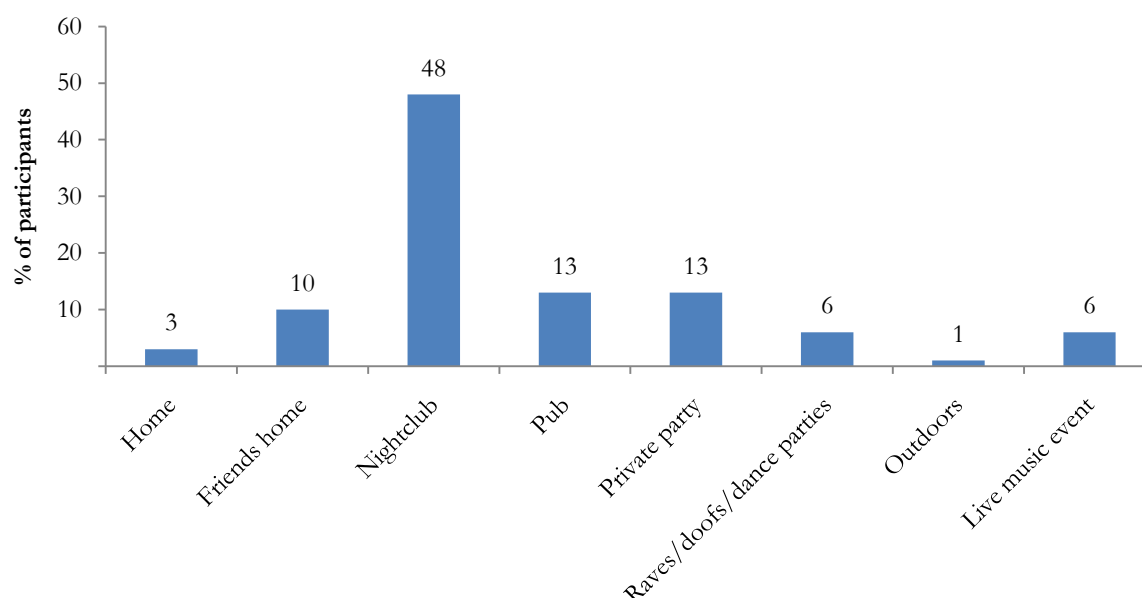
4.2.3 Route of administration

In the six months preceding the interview, 97% of participants had swallowed *ecstasy pills* (96% in 2009), 59% had snorted them (61% in 2009), 4% had shelved/shafted (10% in 2010) (refers to vaginal/anal administration respectively), 3% had smoked (9% in 2009) and 4% had injected ecstasy pills (2% in 2009). *Ecstasy capsules* were predominantly swallowed by 34% of the entire sample (8% in 2009), 14% had snorted (6% in 2009), 1% had smoked and one participants had injected ecstasy capsules recently (n=0 in 2009). *Ecstasy powder* was swallowed by 7% of the sample in the preceding six months (8% in 2009), snorted by 13% (6% in 2009), smoked by one participant and injected by one participants (n=0 in 2009). One participant reported having shelved or shafted ecstasy powder during that time (no reports in 2009). The vast majority of participants (92%) nominated oral ingestion as their main route of ecstasy administration, 7% mainly snorted the drug, and 1% mainly injected it. No participants' reported smoking as their main route of administration.

Reported routes of administration for both recent and lifetime use have remained relatively unchanged over the last few years. Larger proportions of the sample reported snorting ecstasy powder and capsules, both across lifetime and in the last six months. Prevalence of use, particularly recent use, by other routes of administration (smoking or injecting) remains low.

Figure 2 presents the type of location 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 on ecstasy in the six months prior to interview was at a nightclub (48%), followed by home (13%) (own home, a friend's home), pub or private party (13% respectively), with fewer numbers reporting a rave (6%), a live music event (6%) or outdoors (1%).

Figure 2: Location of last ecstasy use by participants, 2010



Source: EDRS participant interviews

4.2.4 Perceived benefits associated with ecstasy use, 2010

Ninety two percent of participants reported that there were benefits to using ecstasy; these are presented in Table 8. The most common perceived benefit was to ‘to feel great’ (42%) followed by ‘for fun’ (36%), ‘the high, rush or buzz’ (29%) associated with the drug. One-quarter of the sample had used it for the ‘enhanced closeness, bonding and empathy with others’ it creates, ‘enhanced appreciation of music’ and ‘to make it easier to talk to people’ (26% each). Many of the reasons reported generally focus on gaining positive effects rather than avoiding any problems such as to forget negative issues.

Table 8: Benefits associated with using ecstasy, 2010

	2010 (n=92)
To feel great	42
The high/rush/buzz	29
Enhanced appreciation of music	26
Drug effects (e.g. hallucinations/insight/creativity)	10
To be able to dance all night	15
Enhanced closeness/bonding/empathy with others	26
To enhance sexual experiences	8
Relax, escape, release	14
To make it easier to talk/flirt with people	26
Fun	36
Confidence	13
Different experience	13
Control/focus	3
Cheap	10
Other	9

Source: EDRS participant interviews

Note: Can answer more than one, does not add up to 100

4.2.1 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).

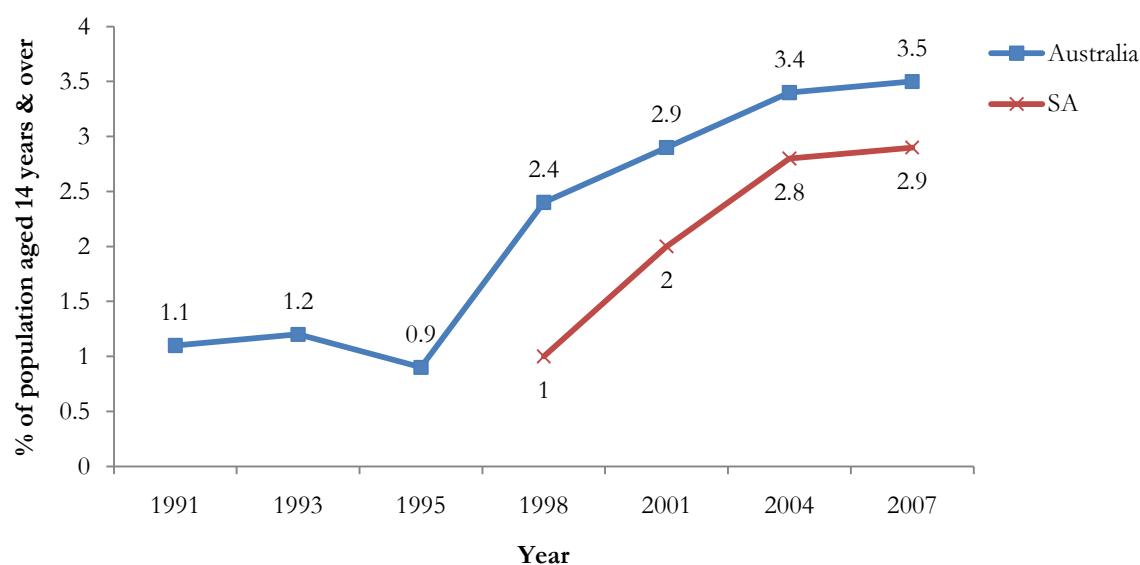
Figure 3 shows the long-term trend in the prevalence of ecstasy use in Australia from 1991 to 2007 and in South Australia from 1998 to 2007. As can be seen, there has been a rapid increase in the prevalence of use in this category of drug from 1995 onward. Recent use of ecstasy was most prevalent among the 20 to 29 year olds, but a decline in prevalence of recent use was noted in 2007 compared to 2004 (AIH&W, 2005). In general, males were more likely to be recent users of ecstasy except among 14 to 19 year olds, where females were more likely to be recent users (6% vs. 4%) and the difference between the number of males and females recent use is widening (AIH&W, 2008). Of those that had used ecstasy in the last 12 months, half reported using once or twice a year (46%) or every few months (28.9%), with 8.3% reporting daily or weekly use during that period (AIH&W, 2008).

Figure 3 also shows that South Australia had a slightly lower prevalence of recent use of ecstasy than among the national population (2.9% vs. 3.5% in 2007), and the gap between the state and national figures had decreased since 1998 (Drug and Alcohol Services internal document, 2008) and remained

stable in 2007. The prevalence of recent use of ecstasy reported in 2007 was the highest recorded since data collection began for this survey.

In 2007, 8.9% of the Australian population aged 14 years and older had ever used ecstasy, a significant increase from 7.5% in 2004. Again, the highest proportion of the population reporting they had ever used ecstasy was in the 20 to 29 year age group (24%) (AIH&W, 2008).

Figure 3: Prevalence of recent* ecstasy use in Australia and South Australia, 1991 – 2007



Sources: National Campaign Against Drug Abuse Household Survey 1991, 1993; National Drug Strategy Household Survey 1995, 1998, 2001, 2004, 2007 (Australian Institute of Health and Welfare, 2005, 2008); 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 2007 (AIH&W, 2008) reported that they had used other drugs, on at least one occasion, at the same time as using ecstasy. Most commonly this was use of alcohol (85.4%), cannabis (49.2%) or some form of amphetamine (28.7%).

Key Expert Comments

- ▶ KE reported that REU took ecstasy largely in pill form.
- ▶ As in previous years, the majority of KE's who were able to comment on patterns of use among the ecstasy users with whom they had contact, stated that large proportions of REU, especially among younger users, used every weekend.
- ▶ Most KE observed that people who used ecstasy tended to 'dose themselves up' before going to a party or going out.
- ▶ Several KE commented on the widespread use and 'main-stream' nature of ecstasy use, and observed that this was becoming more embedded in society in general.

4.3 Methamphetamine Use

Key Findings

- Participants reports of crystal methamphetamine are the lowest recorded since commencement of data collection.
- Recent use of methamphetamine powder and base increased.
- Median age of first use for all forms of methamphetamine was older than age of first use reported in 2009.
- Swallowing as a route of administration was the primary route for all forms of methamphetamine.
- Frequency of use for all forms of methamphetamine decreased.

4.3.1 Methamphetamine use among REU

While majority (83%) participants reported having used one or more forms of methamphetamine (speed, base and/or ice/crystal) at some stage during their lifetimes, recent use of any form of methamphetamine seems to have stabilised at a lower level (56%). These results are consistent with 2009 data. Twenty percent of participants reported having ever injected methamphetamine. The median number of days used was 6 (range 1-150).

The distinction between three forms of methamphetamine continued in the 2010 survey. For a detailed commentary on the reasons for the differentiation into three distinct types, see White et al. (2003). The three forms of methamphetamine discussed are powder, base and ice/crystal methamphetamine.

4.3.2 Methamphetamine powder (speed)

Table 9 summarises the patterns of use of methamphetamine powder among the participants in 2010, with 2009 data for comparison. In 2010, participants reported having first used powder at a median 18 years (range 14- 45 years). Seventy-one percent of participants reported lifetime use, and 38% of participants reported using methamphetamine powder a median of two days (range 1 to 90), in the six months prior to interview. A closer analysis of frequency of use revealed that 65% (n=22) of methamphetamine powder users had used once a month or less. A further 23% (n=8) reported using between monthly and fortnightly, 6% (n=2) reported using between fortnightly and weekly and 6% (n=2) used on a weekly basis. This sees a decrease in the number of participants reporting greater than weekly use of powder methamphetamine from eight participants in 2009 to two in 2010.

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 1 (range 0.10-3), the median amount of points was 1.5 (0.5-3) and the median amount for lines was 2 (range 1-3). The 'most' amount of powder methamphetamine used in a single session reported by participants was a median of 1 gram (range 0.25 - 4.00). The median number of points was 2 (0.50-6) and the median number of lines was 2 (range 1-3). Compared to 2009, the 'average' 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 (68%) or snorting (53%) as a route of administration in the six months prior to interview. Twenty-six percent reported having smoked and 11% reported having injected powder, in that time. In comparison to 2009, in 2010 there was a shift in the various routes of administration, with smoking of powder methamphetamine decreasing whilst swallowing and snorting as a route of administration of this form of methamphetamine increased. In 2010, over one half of participants reported snorting as a route of administration (53%) compared to 20% in 2009. There was also a decrease in the proportion of participants reporting smoking as a route of administration in 2010 from 67% in 2009 to 27% in 2010. The proportion of participants reporting bingeing on powder methamphetamine in 2010 (11%) remained stable compared to 2009 (10%).

Table 9: Patterns of methamphetamine powder use and route of administration of methamphetamine powder among the participant sample, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Age first used: median in years (range)	17 (14-42)	18 (14-45)
Ever used (lifetime) (%)	60	71
Used in last 6 months (%)	30	38
Days used in last 6 months#: median (range)	6 (1-180)	2 (1-90)
Average amount used in a single session*: grams: median (range; n) points: median (range; n) lines: median (range; n)	0.5 (0.1-3; 14) 2 (1-5; 10) -	1 (0.10-3.00;17) 1.5 (0.5-3.00; 8) 2 (1-3; 5)
Most amount used in a single session*: grams: median (range; n) points: median (range; n) lines: median (range; n)	0.5 (0.1-5; 17) 1 (0.5-1; 3) -	1 (0.25-4.00;14) 2(0.50-6; 8) 2 (1-3; 3)
Routes of Administration recent use (%) #	(n=30)	(n=34/ 35**)
Swallowing	60	68
Snorting	20	53
Smoking	67	26
Injecting	17	11**

Source: EDRS participant interviews

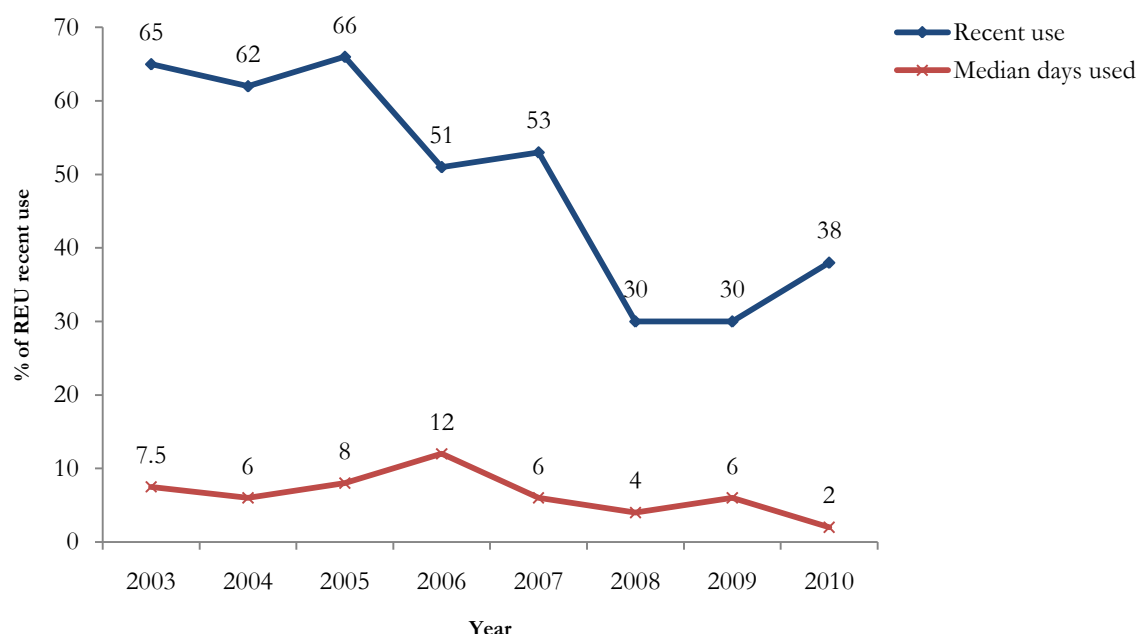
Of those who reported use in the last 6 months

* A session was defined as a period of continuous drug use without sleep in a 48 hour period, in the last 6 months

An analysis of trends over time (see Figure 4) revealed that between 2003 and 2010 there has been a steady decline in the proportion of participants reporting recent use of powder methamphetamine, from a high of 66% in 2005 to a low of 30% in 2009. However in 2010, the use has increased by 8%

to 38%, although the median number of days used in the last 6 months decreased from 6 days to 2 days.

Figure 4: Methamphetamine powder – trends in recent use and median days used, 2003 – 2010



Source: EDRS participant interviews

4.3.3 Methamphetamine base

Table 10 summarises the patterns of use of methamphetamine base reported by participants in 2010. The median age of first use was 19 years (range 14-45). Forty-nine percent of the sample had used in their lifetime with 28% of participants reported using methamphetamine base for a median of three days (range 1-150), in the six months prior to interview. Analysis of the frequency of use over the previous 6 months revealed that 58% (n=15) of base users had used once a month or less, 19% (n=5) reported using greater than monthly and up to once per fortnight, and the remaining 23% (n=6) reported using greater 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 0.10-5). The median ‘most’ amount of points and grams of powder methamphetamine used in a session was two (range 0.25-20) Compared to 2009, there has been little change in the ‘average’ or ‘most’ amounts of points or grams reported as consumed.

Participants who had used methamphetamine base in the last six months reported having used by swallowing (65%), smoking (50%), snorting (19%), and/or injecting (12%). Readers should note that smoking base methamphetamine overtook snorting in 2007 and continued to 2009, however in 2010 smoking as a route of administration decreased.

Table 10: Patterns of methamphetamine base use and route of administration of methamphetamine base among the participant sample, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Age first used: median in years (range)	18 (14-42)	19 (14-45)
Ever used (lifetime) (%)	46	49
Used in last 6 months (%)	21	28
Days used in last 6 months#: median (range)	6 (1-100)	3 (1-150)
Average amount used in a single session*: Grams: median (range; n) Points: median (range; n)	- 2 (0.25-5; 17)	- 2 (0.10-5;19)
Most amount used in a single session*: Grams: median (range; n) Points: median (range; n)	0.5 (0.5-3; 3) 4 (0.25-13; 15)	1.25 (1-4; 4) 2 (0.25-20.00; 15)
Routes of Administration recent use (%) #	(n=21)	(n=26)
Swallowing	43	65
Snorting	0	19
Smoking	71	50
Injecting	24	12

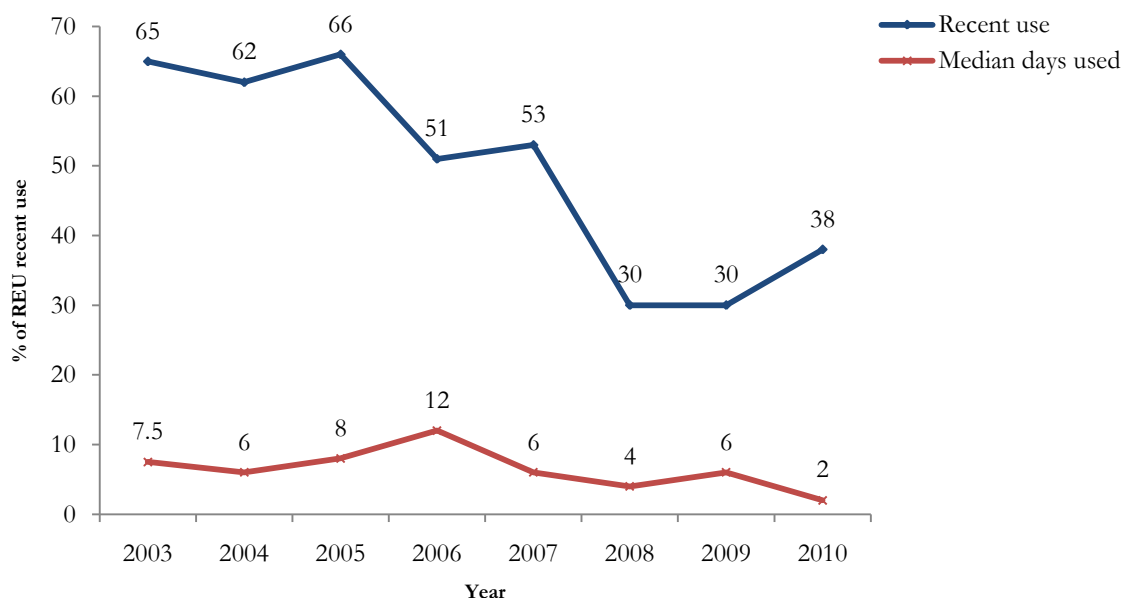
Source: EDRS participant interviews

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 continued to fluctuate since 2003 and has increased by 7% since 2009. However, the median number of days used has continued to decrease to 3 days in the last 6 months, the lowest since data collection commenced.

Figure 5: Methamphetamine base – trends in recent use and median days used, 2003 – 2010



Source: EDRS participant interviews

4.3.4 Crystal methamphetamine

Table 11 presents the patterns of use of ice/crystal methamphetamine by participants in 2010, with 2009 data for comparison. In 2010, the median age of first use was 22 years (range 15-40 years), older than in 2009 (18 years, range 15-42 years). Fifty-five percent of participants had used ice/crystal in their lifetime. Twenty-six percent of participants reported using crystal methamphetamine for a median of five days (range 1-40) in the six months prior to interview, a decrease from that reported in 2009 (32%) and the lowest recorded to date.

Fifty-two percent (n=12) of crystal users had used once a month or less, 35% (n=8) reported using greater than monthly and up to once per fortnight, and 21% (n=5) 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 two (range 0.10-10) and the median ‘most’ amount used in a single session was three points (range 0.25-20). Compared to 2009, participant reports in 2010 of ‘average’ and ‘most’ amounts used in a sessions of use remained stable.

Participants who had used ice/crystal methamphetamine in the previous six months reported smoking (71%), swallowing (42%), snorting (13%) and/or injecting (13%) as the route of administration in that time. Use of crystal methamphetamine by injection continued to decrease in 2010 (from 16% in 2009 to 13% in 2010). However, snorting doubled from 6% in 2009 to 13% in 2010). Smoking of crystal methamphetamine continued to be the preferred route of administration by participants but did decrease in 2010 to 71% from 94% in 2009. Swallowing remained stable.

Table 11: Patterns of crystal methamphetamine use and route of administration of crystal methamphetamine among the participant sample, 2009 & 2010

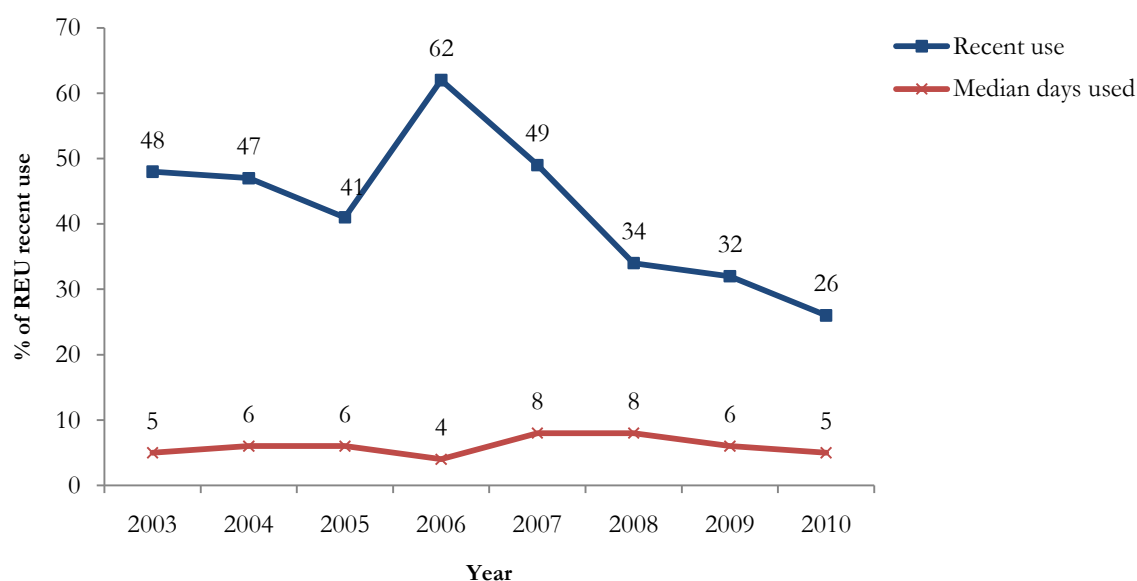
	2009 (n=100)	2010 (n=92)
Age first used: median in years (range)	18 (14-42)	22 (15-40)
Ever used (lifetime) (%)	52	55
Used in last 6 months (%)	32	26
Days used in last 6 months#: median (range)	6 (1-72)	5 (1-40)
Average amount used in a single session*:		
Grams: median (range; n)	0.5 (0.5-5; 4)	-
Points: median (range; n)	2 (0.1-4; 24)	2 (0.10-10.00; 19)
Most amount used in a single session*:		
Grams: median (range; n)	0.5 (0.5-6; 7)	1(1; 1)
Points: median (range; n)	2 (0.1-10; 21)	3 (0.25-20.00; 16)
Routes of Administration recent use# (%)	(n=32)	(n=24)
Swallowing	47	42
Snorting	6	13
Smoking	94	71
Injecting	16	13

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

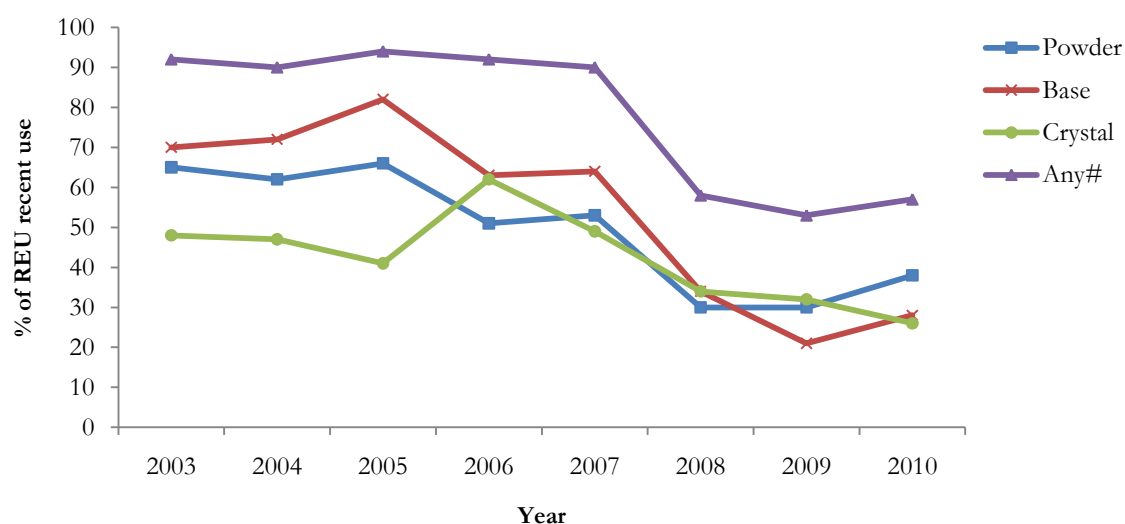
Figure 6: Methamphetamine crystal – trends in recent use and median days used, 2003 – 2010



Source: EDRS participant interviews

Figure 7 presents trends in recent methamphetamine (all forms) use from 2001 to 2010. Overall, prevalence of recent use of ‘any’ methamphetamine (collapsed data) by participants has remained high and relatively stable across the last three years. The most interesting aspect is the decline and stabilisation of the prevalence of use since 2007.

Figure 7: Trends in recent use of the main forms of methamphetamine, 2003– 2010



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 12. 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 12: Last venue where methamphetamine was used by participants in the six months prior to interview, 2010

	Where did you last use methamphetamine?		
	Powder (n=14)	Base (n=15)	Crystal (n=11)
Home	36	27	9
Friend's home	0	33	18
Dealers home	0	7	0
Nightclub	21	27	46
Private party	7	0	0
Pub	0	0	27
Rave	21	0	0
Live music event	14	7	0

Source: EDRS participant interviews

Key Expert Comments

- The majority of KE reported that methamphetamine was seen as one of the most problematic drugs they encountered.
- The majority of KE who commented on the use of methamphetamine by REU stated that the use of ice/crystal methamphetamine was most commonly presented to them.
- In contrast to participant reports, KE reported a decrease in use of base and speed.
- Methamphetamine was reported to be primarily snorted or smoked.

4.4 Cocaine use

Key Findings

- The median age of first use was 21 years.
- Significantly more participants reported using cocaine recently compared to 2009 (42% in 2010 vs. 20% in 2009).
- Frequency of use remained low and stable.
- The main route of administration reported was snorting.

4.4.1 Cocaine use among REU

The median age of first use of cocaine by participants was 21 years (range 16- 50 years). In 2010, 69% reported having ever used cocaine, significantly higher than in 2009 (45%) ($p < 0.05$). This was also the case for reported cocaine use in the last 6 months, significantly more participants reported recent use of cocaine (42%) than in 2009 (20%) ($p < 0.05$). However the frequency of use remained stable with a median of two days (range 1-40 days) in the six months prior to interview, the parameters being larger than in 2009 (range 1-8) (see Table 13). The majority (79%) had used less than monthly (80% in 2009); 10% had used between monthly (12% in 2009) and fortnightly; 5% reported using between fortnightly and weekly (5% in 2009) and 3% ($n=1$) had used cocaine once a week or more ($n=6$ in 2009). No participants reported daily use of cocaine.

The median amount of cocaine used in a typical or average session in the preceding six months was three-quarters of a gram (range 0.25-2 grams) and 2 lines (range 1-4 lines) The 'most' amount of cocaine used in a single session was a median of one gram (range 0.25-2.50) and 2 lines (1-10). The reported 'average' amount of grams and lines were similar to that reported in 2009.

The majority of cocaine users ($n=39$) reported recent use of cocaine by snorting (95%), followed by swallowing (15%), in the six months prior to interview. No participants in 2010 reported recent use by smoking or injecting.

Table 13: Patterns of cocaine use and route of administration among the participant sample, 2009 & 2010

	2009 ($n=100$)	2010 ($n=92$)
Age first used: median in years (range)	21 (16-34)	21 (16-50)
Ever used (lifetime) (%)	45	69
Used in last 6 months (%)	20	42
Days used in last 6 months*: median (range)	2(1-8)	2 (1-40)
Average amount used in a single session** Grams: median (range; n) Lines: median (range; n)	0.80 (0.20-2; 10) 1(1-10; 10)	0.75 (0.25-2.00; 18) 2 (1-4; 18)

Table 13: Patterns of cocaine use and route of administration among the participant sample, 2009 & 2010 Cont

	2009 (n=100)	2010 (n=92)
Grams: median (range; n)	1(0.50-4; 10)	1 (0.25-2.50; 16)
Lines: median (range; n)	1 (1-10; 8)	2 (1-10; 14)
Routes of Administration recent use* (%):	(n=20)	(n=39)
Swallowed	20	15
Snorted	85	95
Smoked	10	0
Injected	5	0

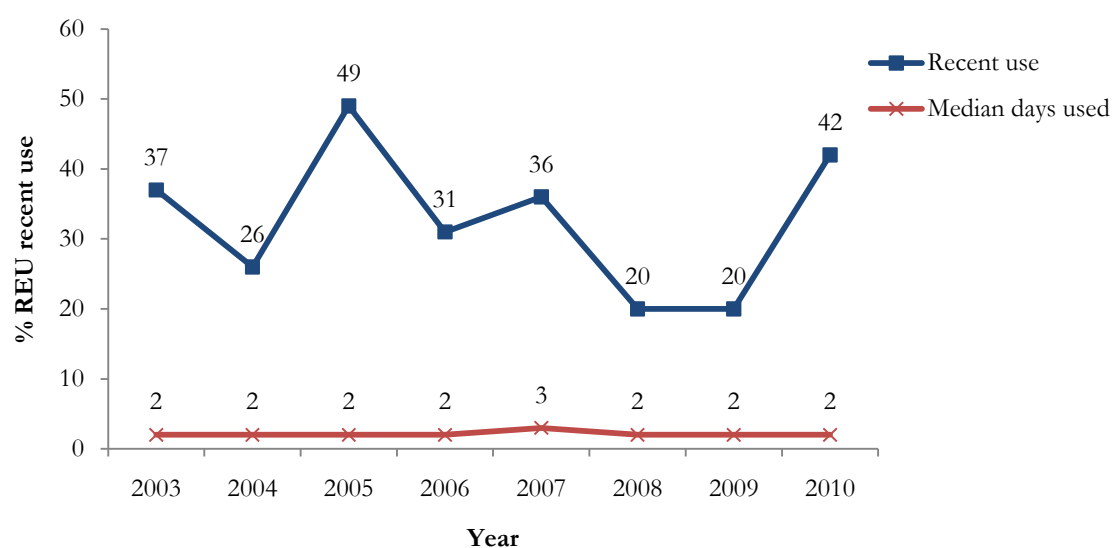
Source: EDRS REU interviews, 2009-2010

* 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 has doubled, from 20% to 42% in 2010, similar proportions 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 – 2010



Source: EDRS participant interviews

Nineteen participants commented on location of last use. The most common venues reported were: pub (n=5); nightclub (n=4); and home (n=4).

Key Expert Comments

- ▣ KE reported an increase in the use of cocaine and that it has become more widespread.
- ▣ KE thought that cocaine users see it as a less serious and dirty drug compared to other drugs.
- ▣ A few feel this increase maybe due to the drop in ecstasy use and purity. One health KE reported that cocaine was being used more during weekdays than at weekends.

4.5 LSD use

Key Findings

- The median age of first use was similar to that reported in 2009.
- Recent use and frequency remained stable in 2010 and the majority of participants used less than monthly.
- The amount used in a typical and heavy session remained stable.
- All participants reported swallowing as the ROA.
- The majority who commented last used LSD in a friend's home.

4.5.1 LSD use among REU

The median age of first use was 17.5 years (range 12-36 years). Sixty-six percent of participants reported having used LSD in their lifetime and 37% had used it in the last six months. Recent users reported having used LSD a median of three and a half days (range 1-24 days) in the six months prior to interview. The majority (95%) had used less than monthly (90% in 2009); 4% used between monthly and fortnightly (6% in 2009); 1% used between fortnightly and weekly (4% in 2009).

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 0.5-2) used on 'average' and two tabs/trips (range 0.5-7) used in the heaviest recent session. All LSD users reported recent use by swallowing (100%, n=32). No other route of administration was reported.

Table 14: Patterns of LSD use among the participant sample, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Age first used: median in years (range)	17 (13-25)	17.5 (12-36)
Ever used (lifetime) (%)	71	66
Used in last 6 months (%)	37	35
Days used in last 6 months:* median (range)	3 (1-20;35)	3.5(1-24;32)
Average amount used in a single session:** Tabs: median (range; n)	1 (0.25-4; 35)	1(0.5-2; 27)
Most amount used in a single session:** Tabs: median (range; n)	2 (0.25-5; 35)	2(0.5-7; 21)
Routes of Administration recent use* (%):	(n=38)	(n=32)
Swallowed	95	100

Table 14: Patterns of LSD use among the participant sample, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Snorted	2	0
Smoked	2	0
Shelved/Shafted	2	0
Injected	0	0

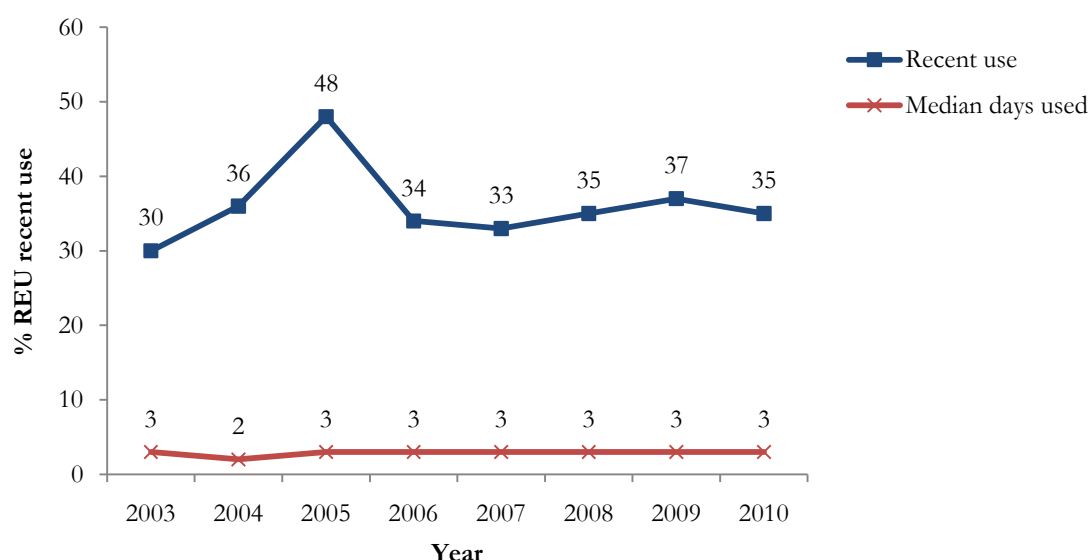
Source: EDRS participant interviews

* 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

An analysis of trends over time (see Figure 9) reveals that between 2006 and 2010 the proportion of participants who reported recent use of LSD has remained stable. There has been no 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 – 2010



Source: EDRS participant interviews

Those providing information about where LSD was 'last' used reported its use across a wide range of locations. The most commonly reported locations of 'last' use of LSD were friend's home (25%, n=4) and raves (19 %, n=3), followed by own home, private party and outdoors (12.5% each, n=2). Other venues reported were nightclub, live music event and rooftop.

Key Expert Comments

- Only two KE were able to comment on REU LSD use, and commented that LSD was often seen with older users but generally had remained stable.

4.6 Cannabis use

Key Findings

- Median age of first use was relatively stable in 2010 compared to 2009, with the majority of participants having first used cannabis at 15 years of age.
- All participants reported lifetime use of cannabis.
- A similar proportion of participants reported recent use of cannabis, however, at a lower frequency of use compared to participant reports in 2009.
- The predominant route of administration was smoking with two-thirds reporting smoking cones.
- Both hydro and bush cannabis users last used in their home.

To ensure more detailed information was collected on the different forms of cannabis, 'Section 5.5 'drug markets' was separated, due to reports of different market characteristics of 'hydro' (hydroponically grown) and 'bush' (grown outdoors) (Breen, Degenhardt & Roxburgh, 2004; Stafford, Degenhardt & Dunn, 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

The median age at which participants first used cannabis was 15 years (range 7- 20 years) in 2010, slightly older than reported in 2009 (14 years, range 6-21). Further examination of the age at which participants first used cannabis reveals that: 47% reported use by the age of 14 years; 78% by 16 years; and 92% by 18 years. One hundred percent reported having used cannabis in their lifetime, and 84% reported recent use.

The frequency of use of cannabis reported by participants in 2010 was a median 60 days (range 1-180 days); this was lower compared to the frequency of use reported by participants in 2009 (96 days, range 1 to 180 days). The frequency of use of cannabis has fluctuated widely across the ten years the EDRS has been conducted. Amongst recent users, that 34% (n=31) used once a month or less 6%

(n=5) reported used between monthly and fortnightly, 2% (n=2) reported using between fortnightly and weekly and the remaining 48% (n=43) reported using greater than weekly and 20% (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, either themselves or shared with others. Cannabis had been predominantly smoked in cones (66%) as opposed to joints (26%). Among those who had smoked in cones, the median number used on the last day was three ‘cones’ (range 1-180 cones), while the number of joints smoked was one joint, range 0.50-4 joints). Daily users of cannabis had smoked a median of three and half cones (range 1-180 cones) or one joints (range 1) on the last day of use. Four participants reported smoking in grams (1.75, range 1-2.50), one participant reported smoking 3 pipes and one participant reported using cannabis in puffs.

All of those who had used cannabis reported recent use by smoking 100 % (n=77), and 33% (n=25) also reported use by swallowing.

Table 15: Patterns of hydroponic and bush cannabis use among the participant sample, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Age first used: median in years (range)	14 (6-21)	15 (7-20)
Ever used (lifetime) (%)	98	100
Used in last 6 months (%)	86	84
Days used in last 6 months: median (range)	96 (1-180)	60 (1-180)
Smoked*	100	100
Swallowed*	50	33
Cones used last time (range)*	4 (0.1-50)	3 (1-180)
Joints used last time (range)*	1 (0.25-10)	1 (0.5-4)

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 (70%) followed by a friend’s home (19%). This was a similar pattern for those who used bush cannabis (72%) in own home and (33%) at a friend’s home.

Key Expert Comments

- Most KE reports regarding REU cannabis use stated it was common and ranged from casual to regular use, with daily use seen mainly in methamphetamine users.
- Eight KE commented that REU cannabis use had remained stable.

4.7 Other drug use

Key Findings

- Recent use of ketamine, GHB and MDA was lower compared to 2009 and frequency of use remained stable and low.
- The use of alcohol in the preceding six months of interview remained high at 92%. A higher proportion of participants reported daily drinking (14%) compared to nine percent in 2009.
- Recent tobacco use declined in 2010 to 69% from 80% in 2009.
- The use of lifetime and recent use of illicit pharmaceutical stimulants increased in 2010.

4.7.1 Ketamine

The median age of first use of ketamine by participants was 22 years (range 16-51 years). Ketamine was the main drug of choice for 2% of the sample. In 2010, a higher proportion reported lifetime use (49%) compared to 2009 (31%). However, fewer participants reported recent use of ketamine (13%) than in 2009 (19%) although this proportion is substantially greater than that reported in the 2007 NDSHS (0.2%) recent use for participants aged 12 years and over. The frequency of use increased by one day, with a median of three days (range 1-15 days) in the six months prior to interview.

The majority (79% or 15/19) of participants had used less than monthly (88% in 2009); 11% (2/19) had used between monthly and fortnightly (9% in 2009); 11% (2/19) used between fortnightly and weekly (3% in 2009). No participants reported more than weekly use.

Ketamine use was commonly reported in 'lines'. The median amount of ketamine used for both an average session and a heavy session was one line (range 1-5 lines). Ketamine use was also quantified in bumps, caps, grams, pills and points with one participant reporting each kind.

Recent use of ketamine was reported to be either snorted (58%, n= 7) or swallowed (50%, n=6) in the six months prior to interview. No participants reported recent bingeing on ketamine.

4.7.2 GHB

The median age at which participants reported first using gamma-hydroxy butyrate (GHB) was 20 years (range 15-36 years) in 2010. A fifth (24%) of the sample reported having ever used GHB and 8% has used it in the preceding 6 months of interview, higher than that reported by participants in 2009 (9% and 2% respectively). The median number of days used was low at one day (range 1-4). Two participants commented on frequency of use and reported that they used GHB less than monthly.

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 2-5 ml). Recent GHB users reported using a median of 5 ml (range 2-6 ml) during the heaviest recent use episode.

GHB users reported swallowing GHB, with one participant reporting recent injection. There were no other ROA reported. Two percent of the REU reported including GHB in a binge session in 2010.

4.7.3 MDA

In 2010, the median age at which participants reported first use of 3,4-methylenedioxyamphetamine (MDA) was 20 years (range 17-28 years), and remained stable compared to 2008 (20 years). Twenty-seven percent of the sample reported lifetime use of MDA. The proportion of participants reporting recent use of MDA remained low in 2010 with six participants reporting recent use on a median number of one day (range 1-3 days).

A median of one and a half capsules (range 1-2 capsules) was used in both a typical session and a heaviest session of use over the preceding six months. Five participants reported swallowing, with one participant reported snorting and one shelving as the ROA. There were no reports of injecting or smoking MDA. One participant reported including MDA in a binge session.

4.7.4 Alcohol

The median age at which participants reported first using alcohol was 14 years (range 7-20 years) in 2010. Forty-three percent of participants (n=39) had used alcohol prior to 14 years of age. The proportion of participants reporting recent use of alcohol remains high in 2010 at 92%. Among those who had used alcohol, use had occurred on a median of 60 days (approximately between two and three times a week) in the past six months (range 2-180) an increase from 48 days (range 1-180) in 2009. There was no significant difference in median days consumed alcohol in 2010 compared to 2009 ($p>0.05$). Seventy-two percent of recent alcohol users reported using alcohol more than once per week. Fourteen percent of recent users reported daily drinking (6% were daily drinkers in 2009).

Twenty-four percent of participants reported including alcohol in a binge session in 2010, which was lower than the proportion in 2009 (31%), however, the proportion of participants who reported typically using alcohol (> 5 standard drinks) with ecstasy was higher (80% in 2010 compared to 73% in 2009). Fewer participants reported using alcohol to come down from ecstasy (12% in 2009 vs. 7% in 2010).

In 2010, the Alcohol Quantity, Frequency and Variability Questionnaire (AQFV) and the Alcohol Use Disorders Identification Test (AUDIT) were administered to participants. Detailed information regarding the AQFV in the 2010 EDRS can be found in Section 8.5 'Risky alcohol use among REU'.

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 9-28 years). The proportion of participants reporting recent use of tobacco was lower in 2010, with (69%) reporting recent use compared to 80% in 2009. The frequency of participants' tobacco use had remained at peak levels across the ten years of the survey at a median of 180 days in the previous six months (equivalent to daily use), with 61% reporting daily use. This far exceeded the 2007 daily smoking prevalence rate in the South Australian population aged 14 years and over, of less than one in five (Australian Institute of Health & Welfare, 2008).

4.7.6 Benzodiazepines

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

The median age of first use of illicit benzodiazepines was 19 years (range 14-34 years), which is higher than the median age of first use reported by participants in 2009 (18 years, range 14-25). In 2010, 16% of participants reported recent use of illicit benzodiazepines for a median of three days (range 1-160), with a similar proportion reporting such use in 2009 (14%), 2 days. (1-180).

4.7.7 Antidepressants

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

The median age of first use of illicit antidepressants was 18 years (range 14-35 years), which is higher than the median age of first use reported by participants in 2009 (17 years, range 14-31). In 2010, two percent of participants reported recent use of illicit antidepressants on a median 4 days (range 2-180). In 2009, the parameters were smaller 6 (range, 1-10) 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 19 years (range 13-50 years). In 2010, 20% of participants reported recent use of nitrous oxide for a median of five days (range 1-48 days). Recent use was higher in 2009 (33%) although the frequency of use remained stable (5 days). Two percent of participants reported having binged on nitrous oxide, four percent reported having typically used nitrous oxide 'with' ecstasy and two percent 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 20 years (range 12-35 years), 40% had reported lifetime use of amyl nitrate while 8% of participants reported recent use of amyl nitrate for a median of three days (range 1-30), which is a lower proportion than reported in 2009 (16%). No participants reported having binged on amyl nitrate, two participants 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 2009.

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 19 years (range 12-26 years) and 52% of participants reported having used them in their lifetime. Fourteen percent of participants reported use of 'magic mushrooms' a median of three days (range 1 to 8 days) in the last six months and remained stable from 2009.

4.7.10 Heroin and other opioids

The median age of first heroin use was 20 years (range 12-25 years). Approximately one-tenth (12%) of the 2010 REU sample had ever used heroin. Consistent with the low levels of recent use among the REU cohorts in previous years, two male participants had used heroin during the six months preceding the interview (having snorted or smoked the drug) and there was no recent injection of heroin.

4.7.11 Other opiates

The median age of first use of illicit other opiates was 21 years (range 15-29 years). Fourteen percent of the sample had reported lifetime use and eight percent had used other illicit opiates in the previous six months prior to interview. The median days of licit opiate use was ten days (range 1-48 days). The main ROA by those who had recently used was swallowing (71%, n=5), one participant reported injecting (14%), one smoking (14%), and one participant reported shelving/shafting.

4.7.12 Pharmaceutical stimulants

For the past five 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 2010, the median reported age of first use of illicit pharmaceutical stimulants was 17 years (range 13-34 years), slightly older than the median age reported in 2009 (at 16 years). Forty-two percent of the sample reported use of illicit pharmaceutical stimulants in their lifetime, a significantly greater proportion than participant reports in 2009 (26%) ($p < 0.05$). Ten percent of participants reported recent use of illicit pharmaceutical stimulants on a median of one day (range 1-5 days). The ROA of recent use was mainly swallowing (n=8) and one participant reported smoking. Recent use of illicit pharmaceutical stimulants increased in 2010 compared to 2009 (3%). However, the frequency of participant's recent use of illicit pharmaceutical stimulants remained low.

4.7.13 Over the counter codeine (OTC)

The median age at which participants reported first using OTC was 17 years (range 7-41 years), with 35% reporting use of this substance prior to 18-years. Forty-nine percent of participants reported ever using OTC, with 35% reporting recent use for a median of 6 days (range 1-72 days) among those that had used it for pain. Eleven participants (24% of recent users) reported that they had used OTC codeine for purposes unrelated to pain (i.e. recreational use) for a median of two days (range 1-4). Two participants reported that they had experienced harm from this type of recreational use. Swallowing was reported by all participants with two also reporting snorting as ROA.

4.7.14 Over the counter stimulants (OTS)

The median age at which participants reported first using OTS was 16 years (range 10- 22 years). Twenty-eight percent of participants reported ever using OTS, with 71% reporting use of this substance prior to 18-years. Fourteen participants reporting recent use for a median of 5 days (range 2-20 days). All participants reported swallowing as the route of administration with one participant also reporting snorting of OTS. These parameters were similar to those reported in 2009. The main brand specified was Codral (54%) followed by Sudafed (23%).

4.7.15 Steroid use

Two participants in the 2010 sample reported the lifetime use of steroids, but there were no reports of recent use. The median age of the two participants was 22 years, and of the two participants who had ever used, one injected and one swallowed steroids.

Key Expert Comments

- ▣ Three KE reported that ketamine use had decreased and was possibly due to stricter controls. However, it was mentioned that health services still received calls from women about drink spiking.
- ▣ Two KE commented on GHB and reported its use as fluctuating over time but seemed to have remained stable.
- ▣ The majority of KE able to comment reported REU alcohol use was a big concern and had increased in the previous 12 months with many more REU drinking alcohol with ecstasy.
- ▣ Several KE expressed concern with the increase in alcohol use being combined with REU consuming methamphetamines which in turn increased levels of violence and aggression. KE also reported an increase in mixing alcohol, energy drinks and other drugs and accidental overdoses.
- ▣ Three KE reported concern with the use of illicit prescription drugs.

4.8 Emerging psychoactive substances (EPS) use

Key Findings

- The most commonly reported research chemical drugs recently used were 2CB and Mephadrone.
- The main route of administration reported for all types of RC was swallowing.

The use of EPS amongst REU in the SA remained low in 2010. Small proportions reported recently using 2CI, 2CB and 2CE; all psychedelic phenethylamine chemicals that have stimulant effects. Mescaline is also a psychoactive phenethylamine chemical and comes from the peyote cactus. Two percent of participants reported recent use of mescaline and a small proportion (4%) reported lifetime use.

DOI (“Death on impact”; 2,5-dimethoxy-4-iodoamphetamine) is also a psychedelic phenethylamine. It is uncommon as a substance for human ingestion but common in research. It has been found on blotter and may be sold as LSD (Erowid: <http://www.erowid.org/chemicals/doi/doi.shtml>). Nine percent of participants had reported using DOI in the lifetime and four percent reported recent use.

Use of psychedelic tryptamines (5-MEO-DMT and DMT) was also low amongst all REU. One percent of REU reported lifetime use and one participant reported recent use of 5-MEO DMT. Eleven percent of REU reported lifetime use and three percent reported recent use of DMT.

The proportion of SA REU reporting the use of synthetic stimulant chemicals was also low. Nine percent of participants reported the recent use of mephedrone, no participants reported recent use of BZP and one percent of participants 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. Eleven percent of respondents reported lifetime use of DXM, with only three percent of participants reporting using DXM in the previous six months.

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. Eight percent of respondents reported lifetime use of PMA and no participants reported recent use of PMA.

Datura is a naturally occurring substance and the two most well-known are the devil's weed (*Datura innoxia*) 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. Seven percent of the sample reported having ever used this substance with only one percent reporting recent use of Datura (see Table 16).

Table 16: Proportion of participants reporting lifetime and recent use of emerging psychoactive substances

Research Chemicals	Ever used (%) (n=92)	Used last 6 months (%) (n=92)
2CB	15	11
Mephedrone	10	9
Other Analogue1	8	8
DOI	9	4
2CE	2	3
2CI	4	3
DMT	11	3
Mescaline	4	2
5MEO-DMT	1	1
Datura	7	1
Ivory wave	1	1
Other analogue 2	1	1
BZP	1	0
DXM	0	0
PMA	8	0

Source: EDRS REU interviews, 2010

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

5.1 Ecstasy

Key Findings

- Participants reported a slight increase in the price of ecstasy.
- A third of the sample reported that the price of ecstasy had increased in the six months prior to interview.
- The current purity of ecstasy according to participant reports in 2010 was low with the majority of participants reporting recent changes in purity as decreasing.
- Three-quarters reported that ecstasy was easy or very easy to obtain, although there was an increase in reports of it being difficult to purchase.
- The majority of participants reported purchasing a median of 10 ecstasy pills for themselves and others in the six months prior to interview, double the reports found in 2009.
- Most participants reported scoring from friends at an agreed location.

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 2010, participants were only asked about the cost of ecstasy ‘at last purchase’ (this data has been collected for the previous 6 years). In 2010, most participants were able to provide an estimate of the price of ecstasy ‘at last purchase’, as detailed in Table 17. The median ‘last’ price of a tablet/pill of ecstasy reported by users in 2010 was \$23 (range \$1-\$60; n = 84). This is a slight increase from 2009 (\$20, range \$10-\$30; n = 98). Nearly half of participants reported that the price of ecstasy had been stable (46%) which is similar to that reported in 2009 (50%). However a notably larger proportion reported that the price had increased in the last 6 months (30% in 2010 vs. 10% in 2009) and with only 8 % reporting a decrease compared 28% in 2009.

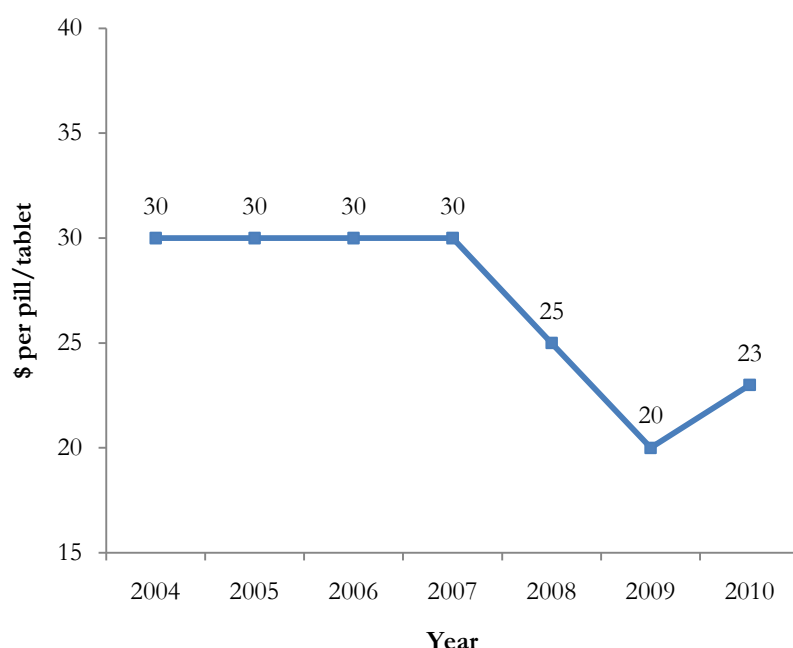
Table 17: Last price of ecstasy and change in price over the last six months, 2009 & 2010

	2009	2010
Tablet/pill		
Median price of last purchase (range; n)	\$20 (\$10 - \$30; 98)	\$23 (\$1 - \$60; 84)
Price change in last 6 months (%)	(n=95)	(n=92)
Increasing	10	30
Stable	50	46
Decreasing	28	8
Fluctuating	12	17

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 – 2010



Source: EDRS participant interviews

In 2010, participants were asked specifically about the median ‘current’ price of ecstasy ‘bulk’ purchases, where ‘bulk’ referred to ten or more tablets/pills (see Table 18). It was generally considered that purchasing in bulk resulted in lower prices, and as can be seen in Table 18, as participants purchased increased amounts of ecstasy in bulk the price decreased accordingly, with a purchase of ‘100’ pills costing \$14.50 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 18: Current median price of ecstasy bought in bulk amounts, 2010

Qty of pills	Median price per pill (range; n)	Median price total (range; n)
10	20 (10-25;31)	200 (100-250;41)
20	15 (14-20;7)	375 (150-500;8)
50	16 (10-18;8)	-
100	14.5 (8-17;11)	1200 (1000-1400;3)

Source: EDRS participant interviews

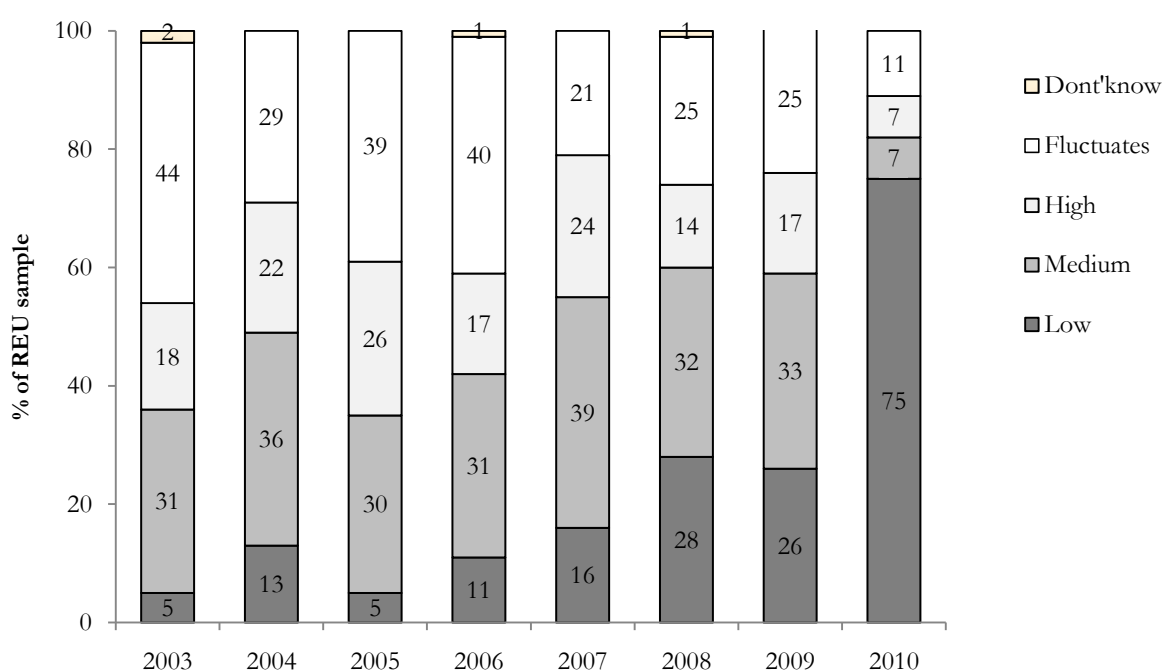
5.1.2 Purity

Figure 11 presents the current purity of ecstasy and Table 19 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 users are consuming, as participant opinions are based on many factors, the least of which is 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, also impact on impressions of quality, and, as such, the figures presented are purely perceptions of the participants.

The proportions of participants reporting that current purity of ecstasy was low (75%) medium and high (7% each) and fluctuating (11%) in 2010 and were considerably different to the purity reported in 2009. In 2009, 26% of participants reported the purity as low, 33% medium, 17% high and 25% fluctuates. The purity of ecstasy, as perceived by participants, has changed dramatically in 2010 compared to previous years (as shown in Figure 11). A clear trend can be seen of ecstasy purity decreasing in purity over the last few years. Participants opinion of recent change in purity also reported that the purity had decreased in the last 6 months (51%), stable (30%), or fluctuating (16%), and smaller proportions reporting purity to be increasing (3%).

Figure 11: Trend in the perceived purity of ecstasy in the last six months, 2003 – 2010



Source: EDRS participant interviews

Note: Don't know not included in 2009 onwards

Table 19: Perceived purity of ecstasy tablets/pills and change in purity over the last six months, 2009 & 2010

	2009 (n=100)	2010 (n=91)
Recent change in purity (%)	(n=94)	(n=90)
Increasing	10	3
Stable	36	30
Decreasing	21	51
Fluctuating	33	16

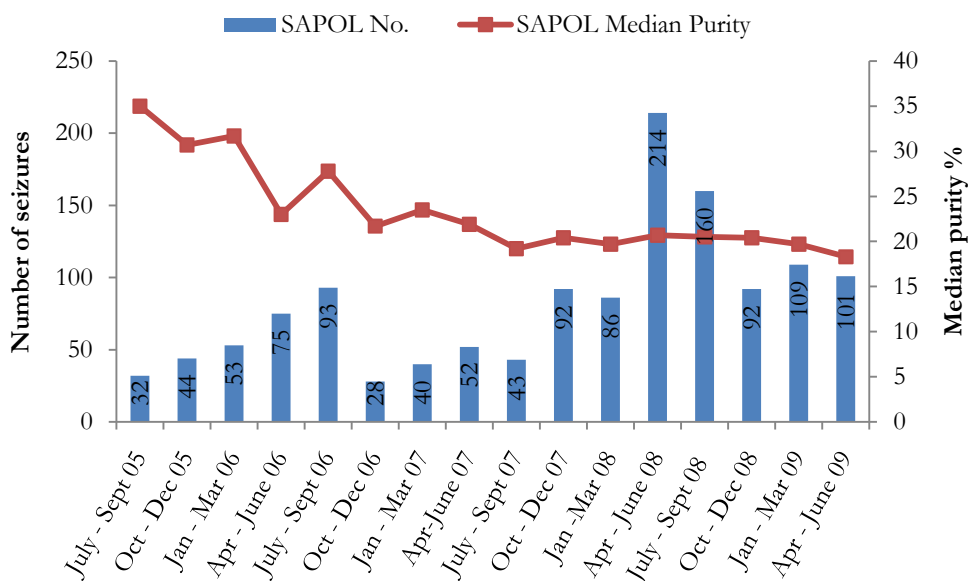
Source: EDRS participant interviews

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), 2,5-dimethoxy-4-methylamphetamine (DOM), MDA, 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 2009/10 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 2008/2009 (Australian Crime Commission, 2009). Figure 5.3 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 2008/09. The total number of SAPOL phenethylamines seizures analysed for July 2007 to June 2008 was 435 and the median purity was 20.3%. These parameters indicate that the number of seizures increased compared to the previous year (213 seizures in 2006/07 to 462 in 2008/09), whereas the median purity had decreased slightly (from 20.3% in 2007/08 to 19.8% in 2008/09). No seizures by the Australian Federal Police (AFP) in SA were analysed previous to 2007/08. No comparison to previous years was possible as no AFP seizures have been analysed since 2001/02.

Figure 12: Number of phenethylamine* seizures analysed and median purity, 2005/06 – 2008/09



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

*Phenethylamines include MDMA ('ecstasy'), MDEA, MDA, PMA and others (see Australian Crime Commission, 2009)

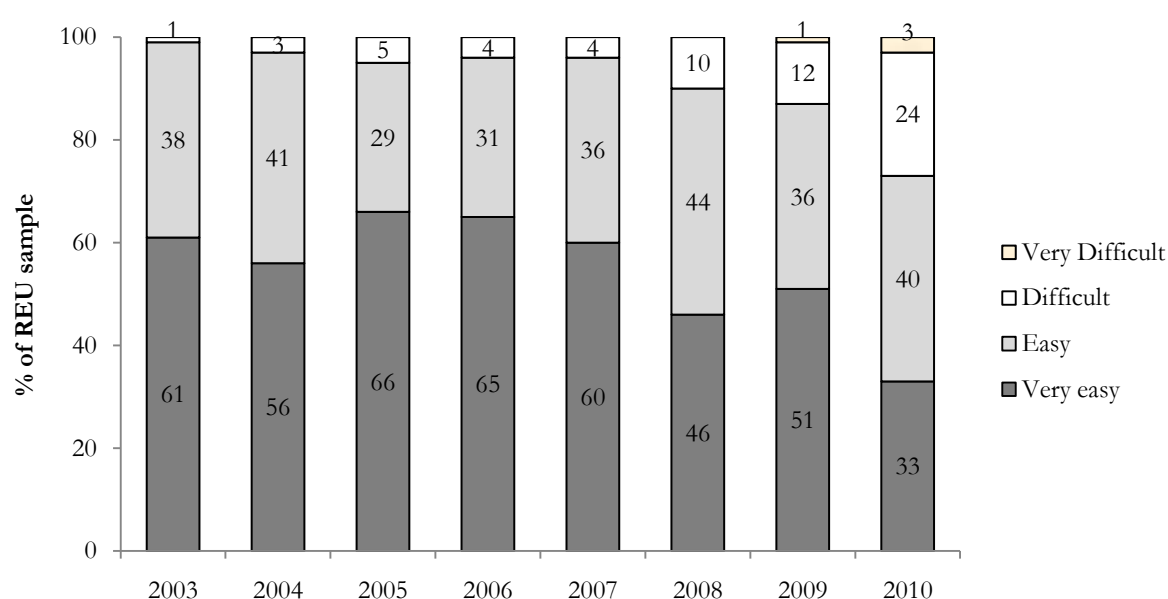
A South Australian study confirmed that pills sold as ecstasy contained a variety of substances other than ecstasy, including MDA, methamphetamine, ketamine and caffeine, in a variety of combinations (Camilleri & Caldicott, 2005). The findings also indicated that users commonly (in at least half the '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, Breen & White, 2004).

5.1.3 Availability

Figure 13 presents the current availability of ecstasy and Table 20 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 2010, and that this availability had been stable, although 24% of participants reported it had become more difficult to purchase in the preceding six months. 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 – 2010



Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 20: Availability of ecstasy and change in availability over the last six months, 2009 & 2010

	2009 (n=98)	2010 (n=92)
Change in availability in last 6 months (%)		
More difficult	20	24
Stable	68	64
Easier	8	7
Fluctuates	4	5

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

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=92) are presented in Table 21. The vast majority purchased ecstasy for themselves and others (85%) and purchased from a median of three people (range 1-24), in the six months prior to interview. The remaining participants (14%) purchased for themselves only. Participants reported purchasing a median of ten ecstasy tablets (range 1-2500) in that period and, was significantly higher than that reported in 2009 ($p<0.05$).

Table 21: Patterns of purchasing ecstasy in the last six months, 2009 & 2010

	2009 (n=100)	2010 (n=92)
Median no. of people purchased from (range)	3 (1-30)	3 (1-24)
Purchased for (%)		
Self only	33	14
Self and others	67	85
Others only	0	0
Did not purchase in last 6 months	0	1
No. of times purchased in the last 6 months (%)		
1 - 6	35	58
7 - 12	36	25
13 - 24	24	15
25 +	4	1
Did not purchase in last 6 months	0	1
Median no. of ecstasy tablets purchased (range)	5 (1-200)	10 (1-2500)

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 acquaintances (26%). Smaller proportions reported purchasing from known dealers (12%), work (5%). Other score venue included mobile dealers (3%) and 1% from strangers (see Table 22).

A fifth (21%) of participants reported scoring at a friend's home or at an agreed location (20%), followed by 'own home' (16%). Smaller proportions nominated a number of other venues (see Table 22).

It is clear from the data across the years, depicted in Table 22, that users consistently purchased their ecstasy most commonly from friends. Scoring from known dealers has decreased since 2008. In 2010, participants were more likely to score at an agreed public location compared to those in 2009. There was also a decrease in participants scoring in their own home than in 2009, this was also the case for raves.

Table 22: Trend in the source and venue of purchase of ecstasy for participants in the last 6 months, 2004 – 2010

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

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

- ▼ Four KE provided information on the cost of ecstasy. Estimates ranged from \$20 to \$30 with an average price \$25 being most common, similar to that reported by the users themselves.
- ▼ KE believed that the price of ecstasy per pill was stable but decreased when 'buying in bulk'; that is, when buying ten or more tablets at a time and that this was increasingly common. According to one KE most buy in 10 packs now and purchase pills at \$15 per pill.
- ▼ The majority of KE reports reflect REU perception of ecstasy purity as being low. Both health and forensic KE reported that there had been an increase in 'bunk' pills, containing pharmaceuticals (paracetamol, caffeine, ibuprofen, codeine, etc.).
- ▼ All KE able to comment also considered ecstasy to be getting harder to obtain and that availability had recently decreased.
- ▼ One KE observed that there had been a slight increase in middle class females obtaining pills for friends/peers (buying ecstasy pills in bulk).

5.2 Methamphetamine

Key Findings

- The price of both powder and base remained stable with the price of crystal increasing in 2010.
- The purity of powder and base was reported as medium or high and stable within the last six months. The majority of participant reported crystal as high and as stable or increasing in purity in the preceding six months of interview.
- All forms of methamphetamine were reported as easy or very easy to obtain.
- Participants reported scoring all forms from friends either in their own home or at a friend's home.

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 23 presents the prices and whether these had changed over the six months preceding interview of the three forms of methamphetamine provided by participants who were able to comment (sample sizes given per category).

The reported last median price of a point of powder and base remained the same in 2010 at \$50 per point, crystal was reported to be higher at \$75 than the price reported in 2009. The reported last median price of a gram of powder methamphetamine was lower in 2010 at \$200 (range \$20-\$400) compared to participant reports in 2009, \$400 (range \$100-\$500). Readers should note the small numbers of participants who commented. The majority of participants reported the price of all forms of methamphetamine as stable in the six months prior to interview in 2010.

Table 23: Median price of last purchase of the main forms of methamphetamine and change in price over the last six months, 2009# & 2010

Amount	Median price per amount		
	\$ (range; n)		
	Powder	Base	Crystal
Point Price at last purchase	50(25-50; 7) <i>50 (1-100; 13)</i>	50[^] (50-350; 5) <i>50 (40-80; 9)</i>	75(20-300; 6) <i>50 (25-100; 18)</i>
Gram Price at last purchase	200[^](20-400; 5) <i>400 (100-500; 5)</i>	250 (17-400; 8) [^]	240[^] (80-300; 3) [^]

Table 23: Median price of last purchase of the main forms of methamphetamine and change in price over the last six months, 2009# & 2010 Cont.

Change in price						
	2009 Powder	2010 Base	2009 Crystal	2010 (n=14)	2009 (n=21)	2010 (n=10)
Increasing	22	30	40	14	24	20
Stable	67	60	50	79	62	70
Decreasing	11	10	10	0	5	0
Fluctuating	0	0	0	7	9	10

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

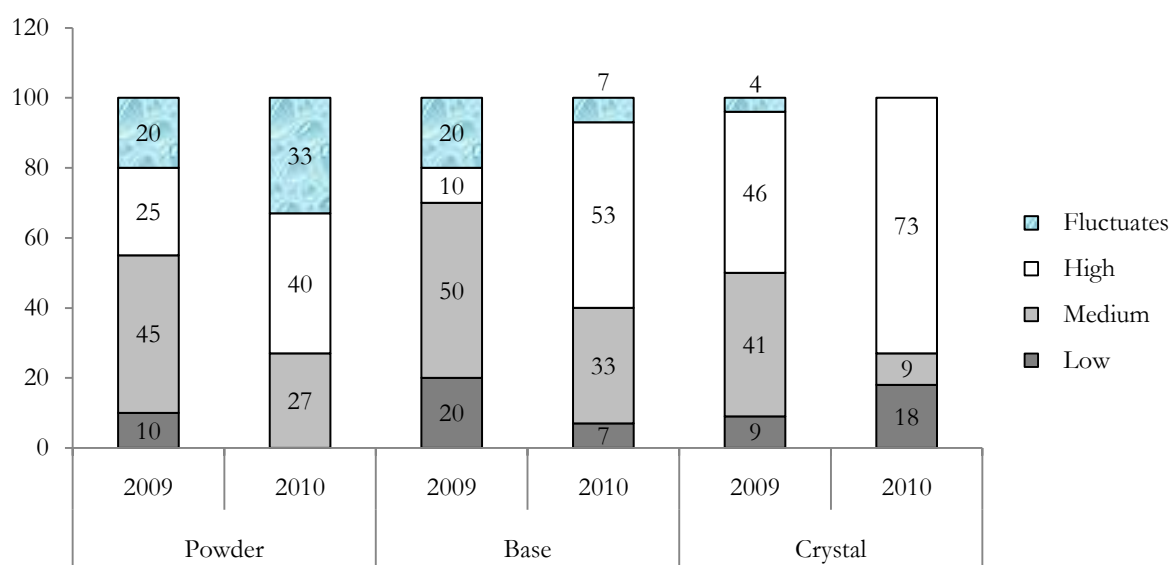
2009 data in italics

^ Small numbers reported (n<5)

5.2.2 Purity

In 2010, the reported purity of all the forms of methamphetamine appeared relatively similar according to participants able to answer (see Table 24 and Figure 14). Readers should note that only 11 participants in 2010 commented on the purity of crystal/ice methamphetamine compared to 21 participants in 2009. The majority of participants reported the purity of all forms of methamphetamine as being of medium or high purity with 82% of participants reporting crystal methamphetamine as medium/high, followed by powder (67%) and base methamphetamine (67%). With regard to recent changes in purity, the majority of participants reported all forms of methamphetamine to be stable in 2010.

Figure 14: Purity of the main forms of methamphetamine over the last six months, 2009 & 2010



Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 24: Changes in purity of the main forms of methamphetamine over the last six

	Powder		Base		Crystal	
Change in purity	(n=19)	(n = 15)	(n=10)	(n = 15)	(n=21)	(n = 11)
	2009	2010	2009	2010	2009	2010
Increasing	5	-	-	13	14	30
Stable	58	46	40	67	53	40
Decreasing	26	8	40	-	14	10
Fluctuating	11	46	20	20	19	20

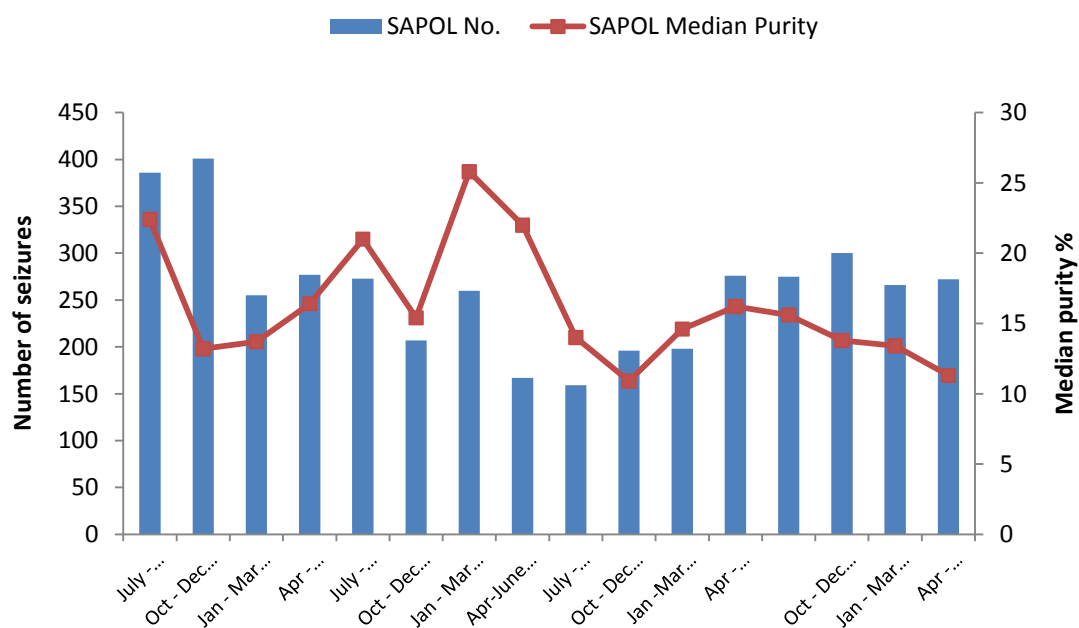
months, 2009 & 2010

Source: EDRS participant interviews

Note: Don't know excluded from 2009 onwards

The Australian Crime Commission (ACC) data were unavailable for 2009/10 at the time of publication. As a consequence, data provided by the ACC relates to the purity data on methamphetamine seized in SA during the last financial year 2008/09 (Australian Crime Commission, 2009). Figure 15 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 2008/09. The total number of SAPOL methamphetamine seizures analysed from July 2008 to June 2009 was 1113 and the median purity was 13.3%. The majority of seizures analysed (n=843) were less than or equal to 2 grams. Overall, the number of seizures of methamphetamine by SAPOL in SA for 2008/09 increased slightly compared to the previous year which reported 829. The median purity decreased from 14.7% in 2007/08 to 13.3% in 2008/09.

Figure 15: Number of methamphetamine seizures analysed and median methamphetamine purity in SA, 2005/06 – 2008/09

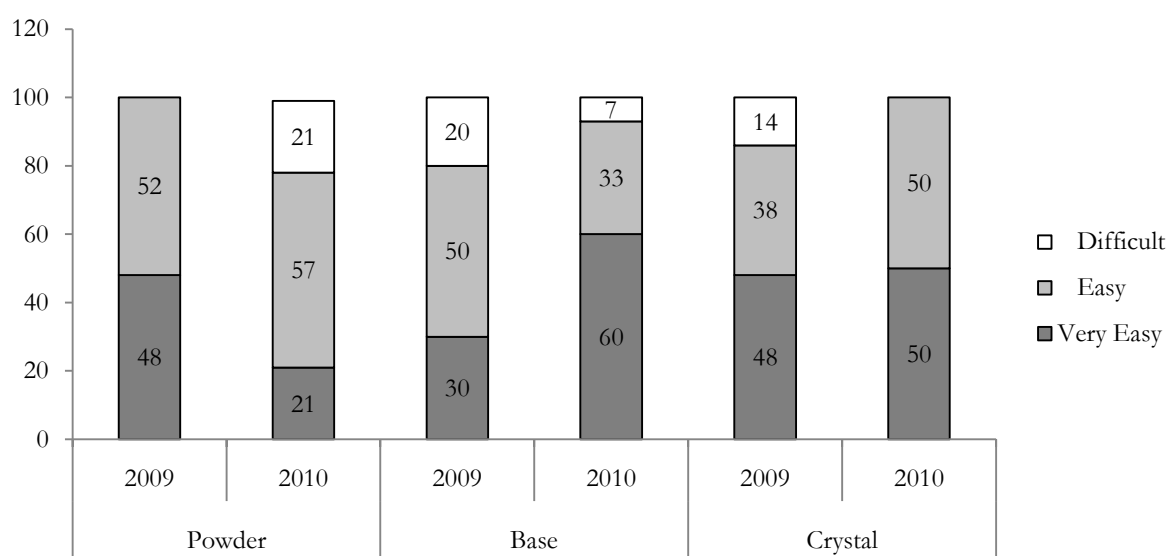


Source: Australian Crime Commission, 2006, 2007, 2008, 2009

5.2.3 Availability

Overall, all three forms were considered to be ‘easy’ or ‘very easy’ to obtain by the majority of participants (see Figure 16). All participants reported crystal (100%) as ‘very easy’ or ‘easy’ to obtain, 93% for base and 78% for powder. A fifth of participants reported that powder was difficult to obtain in 2010 compared to no reports in 2009. The majority of participants reported the availability of all forms of methamphetamine as stable in the last six months.

Figure 16: Availability of the main forms of methamphetamine over the last six months, 2009 & 2010



Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 25: Change in availability of the main forms of methamphetamine over the last six months, 2009 & 2010

	Powder		Base		Crystal	
	2009 (n=21)	2010 (n=14)	2009 (n=9)	2010 (n=14)	2009 (n=21)	2010 (n=10)
Change in availability in last 6 months (%)						
More difficult	5	21	22	0	5	10
Stable	71	79	78	86	67	60
Easier	19	0	0	14	19	10
Fluctuates	5	0	0	0	9	20

Source: EDRS participant interviews

Note: Don't know excluded from 2009 onwards

Information supplied by the South Australian Police indicated that the detection of clandestine laboratories in South Australia had decreased in 2010 to 65 labs, from 69 laboratories detected in 2009 (South Australia Police Annual Report, 2010).

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 26). The majority reported that they purchased all forms of methamphetamine from friends.

An analysis of the location at which methamphetamine was reportedly purchased reveals that participants most commonly obtained all three forms of methamphetamine from their friend's home or at their own home, although similar numbers reported purchasing crystal methamphetamine from dealers home and nightclub (20% respectively).

Table 26: Last person and source venue where participants purchased methamphetamine, 2010

% commented	Powder (n=14)	Base (n=15)	Crystal (n=11)
Used, not scored	7	0	0
Who have you bought [meth] from in the last 6 months?			
Friends	50	73	82
Known dealers	14	13	9
Acquaintances	14	13	9
Strangers/unknown	7	0	0
Mobile	7	0	0
What venues do you normally score [meth] at?			
Own home	29	27	30
Dealer's home	0	7	20
Friend's home	29	40	20
Nightclub	7	7	20
Work	7	7	10
Agreed public location	21	13	0
Other	7	0	0

Source: EDRS participant interviews

KE Comments

- ➡ Four KE provided information on the price of crystal/ice and was similar to that reported by participants of \$50-\$100 per point.
- ➡ Six KE provided information on the purity of methamphetamine, three commented that the purity of methamphetamine was fluctuating or decreasing for all forms. Three KE commented that the purity of crystal/ice was fluctuating or decreasing due to experimentation with new precursors resulting from the ban on pseudoephedrine. However, a few KE reported that smaller clandestine laboratories were increasing and supplying in smaller amounts, with higher purity.
- ➡ KE able to provide information on methamphetamine availability commented that in general methamphetamine availability was either stable or decreasing.

5.3 Cocaine

Key Findings

- The median price of cocaine was \$350 per gram.
- Purity was reported as either medium or high and remained stable in the preceding six months of interview.
- Availability was divided with half reporting it was easy or very 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 (own home/friend's home).

5.3.1 Price

Cocaine was most commonly purchased in grams and ranged from a median of \$350 (range \$150-\$500). Participants who commented on the price considered it to have fluctuated in the last 6 months. Comparisons with 2009 data were not analysed due to low numbers reporting on the price, purity and availability of cocaine (n=<5).

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 medium by 47%, with just over a quarter (27%), commenting it was high, and the remaining 7% reported it was low.

Two-thirds (62%) of participants who commented reported that the purity of cocaine had remained stable, with a third (31%) considering it to fluctuate.

5.3.3 Availability

Reports of availability were mixed, with the slight majority of those commenting considering it to be easy or very easy to obtain (53%) and half (47%) reporting it to be difficult to obtain. The majority of participants considered the ease of access to cocaine to have remained stable in the last six months prior to interview.

Table 27: Availability of cocaine and change in availability over the last six months, 2009 & 2010

	2009 (n=3)	2010 (n=19)
Current availability (%)		
Very Easy	0	16
Easy	67	37
Difficult	33	42
Very difficult	0	5

Table 27: Availability of cocaine and change in availability over the last six months, 2009 & 2010 Cont

	2009 (n=3)	2010 (n=17)
Change in availability in last 6 months (%)		
More difficult	0	0
Stable	67	88
Easier	0	6
Fluctuates	33	6

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Cocaine was most commonly acquired through friends (68%). Small numbers n<5 reported sourcing cocaine through acquaintances, known dealers or mobile dealers. It was most commonly obtained in a friend's home, and/or participant's own homes (29% and 23% respectively - see Table 28).

Table 28: Last person and source venue where participants purchased cocaine, 2010

	(n=19) %
Who have you bought cocaine from in the last 6 months?	
Friends	68
Known dealers	11
Acquaintances	16
Mobile	5
What venues do you normally score cocaine at?	(n=17)
Own home	23
Dealer's home	12
Friend's home	29
Nightclub	6
Agreed public location	18
Other	6

Source: EDRS participant interviews

KE Comments

- One KE was able to comment on price, reporting \$400 per gram, equivalent to REU reports.
- Only two KE were able to comment on the purity of cocaine. Both reported that purity had increased and there was some incredibly pure cocaine in SA, perhaps being imported straight to SA.
- The two KE able to provide information on cocaine availability, one considering it easy and one perceived it as difficult to obtain.

5.4 LSD

Key Findings

- The price reported for a tab was lower in 2010 compared to 2009 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 \$10 (\$10-\$25; n=13) in 2010, lower than the median reported price at 'last' purchase in 2009 at \$15 (range \$10-\$20; n=23). The majority of those participants able to comment reported that the price of LSD had been stable in the previous six months.

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 2010, with 2009 data for comparison. Two-thirds of the participants, who were able to comment on the purity of LSD, perceived that current purity was high (63%), with more participants reporting the purity was high compared to 2009 (46%). With regard to recent changes in purity, results indicated that of those able to comment 67% reported the purity as stable, followed by fluctuating (20%), in the six months prior to interview.

Table 29: Purity of LSD and change in purity over the last six months, 2009 & 2010

	2009 (n=22)	2010 (n=16)
Current purity* (%)		
Low	18	6
Medium	27	31
High	46	63
Fluctuates	9	0
Change purity in last 6 months (%)	(n=17)	(n=15)
Increasing	29	7
Stable	47	67
Decreasing	12	7
Fluctuating	12	20

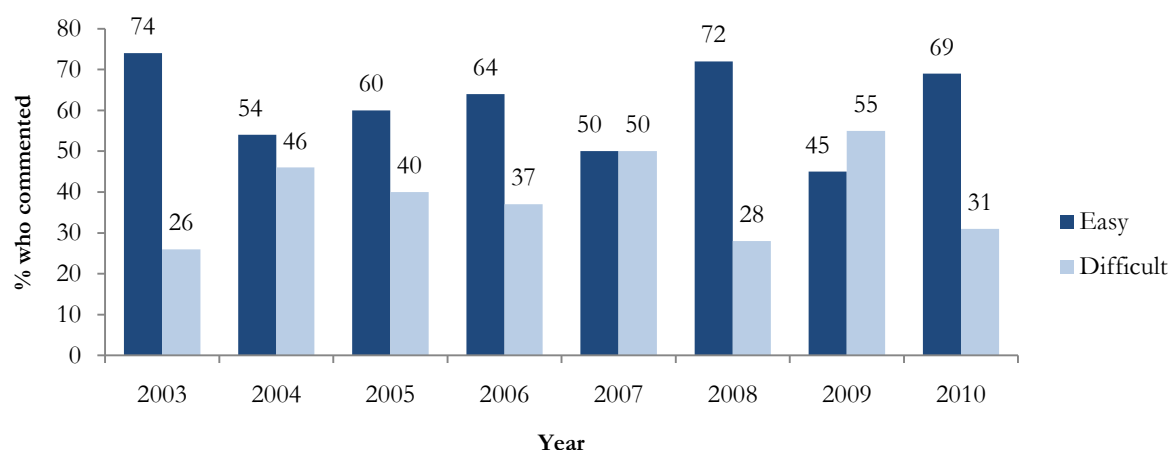
Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

5.4.3 Availability

The majority of participants reported that it was 'easy' or 'very easy' (69%) to purchase LSD, in the six months prior to interview, an increase from 2009. Two-thirds of the participants (67%) reported that the availability of LSD had been stable in the previous six months. Figure 17 shows clearly that participants' perception regarding the availability of LSD has fluctuated over the previous years.

Figure 17: Trends in availability of LSD, 2003 - 2010



Source: EDRS participant interviews

Note: Data for 'easy' contains the collapsed categories 'very easy' and 'easy' (for 2004 and 2005) and 'moderately easy' for 2000 to 2003, where '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, 2010

	% of participants (n=16)
Who have you got LSD from in the last 6 months?	
Friends	69
Known dealers	6
Acquaintances	19
Strangers/unknown dealers/mobile	6
What venues do you normally score LSD at?	
Own home	38
Friend's home	19
Private party	6
Pub	6
Nightclub	6
Raves	12
Agreed public location	13

Source: EDRS participant interviews

5.5 Cannabis

Key Findings

- The price reported for a bag or gram of hydro /bush remained stable in 2010.
- The purity of hydro was reported as high and for bush the purity was 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, Humenik, Paul & Ali, 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 2010, participants completing the section were also asked if they were able to differentiate between hydro and bush cannabis in terms of price, potency and availability. Just over half (55%) of the national sample reported that they were able to distinguish between the forms.

5.5.1 Price

The reported last median purchase price (by those able to comment) for a 'bag' of hydro (n=19) and bush cannabis (n=12) was \$25 (range \$20-\$50 for hydro and no range for bush). The last median purchase price reported for an ounce of hydro was \$230 (range \$200-\$280; n=21) and bush cannabis was \$220 (range \$100-\$200; n=18). These were similar to prices reported in 2009.

Half of the participants (47%, 20/43 participants) who were able to comment reported that the price of hydro had remained stable and 40% (17/43 participants) reported it had increased in the six months prior to interview. The majority of participants able to comment on price of bush reported the price had remained stable (77%, 26/34 participants) with 11% each (4/34 participants) reporting it to be increasing or fluctuating in the last six months.

5.5.2 Purity

Tables 31 and 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 and change in purity over the last six months, 2009 & 2010

	% Able to answer			
	2009		2010	
	Hydro (n=58)	Bush (n=45)	Hydro (n= 46)	Bush (n=37)
High	57	37	52	30
Medium	30	43	26	51
Low	5	8	2	3
Fluctuates	8	12	20	10

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 32: Change in potency/strength of cannabis in last six months, 2009 & 2010

	% Able to answer			
	2009		2010	
	Hydro (n=58)	Bush (n=45)	Hydro (n=47)	Bush (n=36)
Increasing	14	9	8	3
Stable	55	60	56	72
Decreasing	10	13	2	0
Fluctuating	21	18	30	25

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

In 2010, the purity of hydro and bush cannabis was reported as high or medium by 78% or more of the participants able to comment (hydro 78%; bush 81%). The majority of participants able to comment reported that the purity of hydro (56%) and bush cannabis (72%) was stable in the last six months.

5.5.3 Availability

Tables 33 and 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 2010, the majority of participants able to comment reported hydro and bush cannabis as easy or very easy to obtain, with 77% for hydro, and 63% for bush. Large proportions of those able to comment reported that the availability of hydro (65%) and bush (78%) had remained stable in the last six months.

Table 33: Availability of cannabis currently, 2009 & 2010

How easy is it to get cannabis at the moment?	% Able to answer			
	2009		2010	
	Hydro (n=59)	Bush (n=49)	Hydro (n=47)	Bush (n=38)
Very easy	46	27	28	21
Easy	34	37	49	42
Difficult	17	35	23	29
Very difficult	3	2	0	8

Source: EDRS participant interviews

Note: Don't know not included from 2009 onwards

Table 34: Change in availability of cannabis over the last 6 months, 2009 & 2010

Has [availability] changed in the last 6 months?	% Able to answer			
	2009		2010	
	Hydro (n=58)	Bush (n=47)	Hydro (n=46)	Bush (n=37)
More difficult	21	23	20	8
Stable	55	51	65	78
Easier	17	15	6	11
Fluctuates	7	11	9	3

Source: EDRS participant interviews

Note: Don't know' not included from 2009 onwards

5.4.4 Usual source of purchase

Table 35 summarises information from participants on the usual source (both person and venue) from which they had 'usually' obtained the cannabis they had recently used. In 2010, participants able to comment reported that they had 'usually' obtained cannabis from a friend (64% for hydro, 66% for bush), an acquaintance (15% for hydro, 16% for bush), or a known dealer (11% for hydro, 13% for 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 (hydro 49%; bush 47%), home delivery (hydro 23%; bush 21%), a dealer's home (hydro 9%; bush 11%), or an agreed public location (hydro 6%; bush 11%). One percent of the sample reported they had grown their own bush cannabis.

Table 35: Usual person and source venue where participants purchased hydro and bush cannabis, 2010

	Hydro (n=58)	Bush (n=48)
Person (%)		
Friends	64	66
Known dealer	11	13
Workmates	0	0
Street dealer	9	3
Acquaintances	15	16
Unknown dealer/strangers	0	0
Grew own	0	1
Family member	0	0
Haven't obtained	2	2
Venue (%)		
Home delivery	23	21
Dealers' home	9	11
Friends' home	49	47
Acquaintance's home	6	8
Agreed public location	6	11
Work	2	0
Street Market	2	0
Haven't obtained	2	0

Source: EDRS participant interviews

6.0 HEALTH- RELATED TRENDS ASSOCIATED WITH DRUG USE

Key Findings

- The proportion of participants who reported recent experience of overdose decreased in 2010, from sixteen in 2009 to eight in 2010.

Health service use

- Telephone calls to ADIS decreased for methamphetamine and cannabis, whereas cocaine remained stable, and increased for ecstasy.
- 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. Amphetamines were the second most commonly nominated primary drug of concern by clients of DASSA after alcohol, and dominated as the most common illicit drug of concern.
- Nearly half of participants reporting experience risk problems related to their drug use in 2010. Alcohol was nominated as main drug associated to 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 2010, with forty percent of the participant sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview.

6.1 Overdose and drug-related fatalities

As in 2009, participants in the 2010 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, the proportion of participants who reported recent experience of overdose decreased to eight in 2010 from sixteen in 2009.

6.1.1 Stimulant Overdose

Nine participants reported that they had ‘ever’ overdosed on ‘stimulant’ drugs a median of once (range 1-2). The median time since last overdose, for those who reported ‘ever’ overdosing on a ‘stimulant’ drug was 13 months (range 1-72 months).

Four participants reported that they had overdosed on a ‘stimulant’ drug in the last twelve months: two at raves; one at home; and one at a pub. Of those who had recently overdosed, two reported the main drug involved was ecstasy, another reported powder methamphetamine as the main drug, and the other reported 2CI/2CB was the main drug involved.

6.1.2 Depressant Overdose

Eight participants reported they had ‘ever’ overdosed on ‘depressant’ drugs a median of 1 time (range 1-25). Four participants reported overdosing on a ‘depressant’ drug a median of three times (range 1-25), in the last twelve months. Alcohol (n=3) and heroin (n=1) were the main drugs involved in the overdose experience of these four participants. Participants reported recently overdosing at their friend’s home (n=1), at their own home (n=1), with one each reporting doing so at a pub and in the street.

The median time since last overdose, for those who reported ‘ever’ overdosing on a ‘depressant’ drug, was fourteen months (range 1 week-86 months).

6.1.3 Methamphetamine-related deaths ⁴

The 2008 data includes deaths where methamphetamine was determined to be either the underlying cause (n=13) – the primary factor responsible for the person’s death – as well as where methamphetamine was noted but another drug was thought to be primarily responsible for the death (mentions). The underlying cause data are a subset of the total mentions data.

The total number of deaths Australia-wide in which methamphetamine was mentioned was 55. In 2007 the number was 69 and in 2006 it was 66.

6.1.4 Cocaine related deaths ⁴

The data includes deaths where cocaine was determined to be either the underlying cause (n=2) – the primary factor responsible for the person’s death – as well as where cocaine was noted but another drug was thought to be primarily responsible for the death (mentions). The underlying cause data are a subset of the total mentions data.

The total number of deaths Australia-wide in which cocaine was mentioned was 11 in 2008. In 2007 the number was 18 and in 2006 it was 13.

6.2 Help-seeking behaviour

In 2010, 24% (21/89) participants reported having accessed one or more medical or other health services in the last six months, in relation to their ERD use. This was a significant difference in the proportion of participants who sought health services, (10% in 2009 vs. 24% in 2010: 95% CI: -0.03 - -0.24).

The most commonly accessed services, in relation to ‘any’ drug use, was a drug and alcohol worker (attended by 7 participants), a first aid (n=5), Emergency Department (n=5), ambulance (n=2) and a counsellor (n=2). The main issue for which participants accessed services was overdose (n=3) relating to ecstasy use.

6.3 Drug Treatment Services

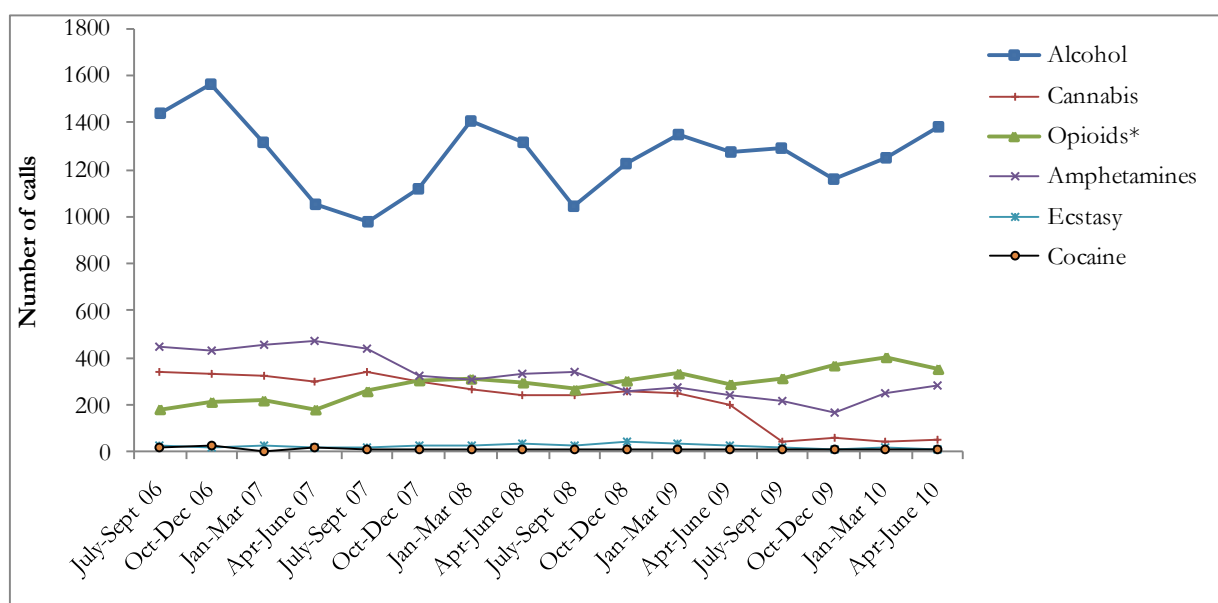
The following drug treatment data for South Australia comes from two sources: Telephone calls to the SA Alcohol and Drug Information Service (ADIS); and Drug and Alcohol Services South Australia (DASSA). This and further ‘Treatment Services DASSA’ sections below will present data in terms of clients (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 18 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 2006/07 and 2009/10. It can be seen that the majority of drug-related calls to SA ADIS across the time period depicted have been alcohol-related (36.64%, or 4901 of 13,375 calls), followed by opioids and amphetamines (in approximately equal numbers), then cannabis. In 2008/2009 opioid related calls surpassed 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 18: Number of drug-related calls to ADIS per quarter, by selected drug type, Jul 2006 – June 2010



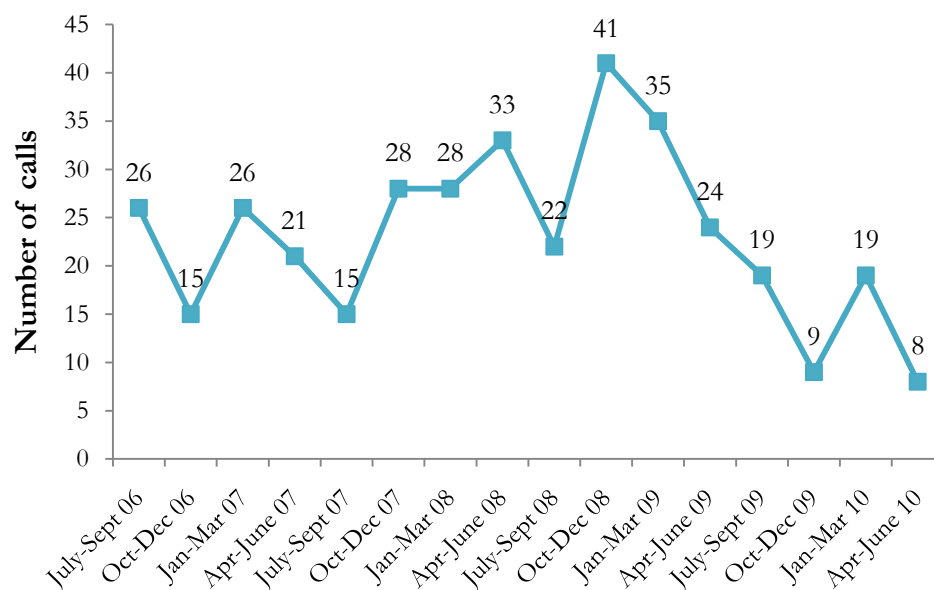
Source: SA ADIS

* '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 0.41% (n=55) of the total coded telephone contacts (drug-related), in the 2009/10 financial years (n=13,120). Figure 19 depicts the number of ecstasy-related calls per quarter for the last three financial years. As can be seen there was a fall in calls regarding ecstasy in 2009/10 compared to 2008/09. The last quarter is the lowest number of calls recoded since 2006.

Figure 19: Number of inquiries to ADIS regarding ecstasy July 2006 – June 2010



Source: SA ADIS

6.3.1.2 Methamphetamine related calls

Telephone calls to ADIS regarding amphetamines accounted for 6.87% (n=902) of the 13120 total coded telephone contacts (drug related) in the 2009/10 financial year, lower than that for previous years: 8.27% in 2008/09 (of a total 13,375), 9.5% in 2007/08 (of a total 14,068); 12.69 in 2006/07 (of a total 14,349), 10.7% in 2005/06 (of a total 13,231), 12.5% in 2004/05 (of a total 12,639), 12% in 2003/04 (of a total 13,336) and 11.6% in 2002/03 (of a total 13,825). Figure 18 depicts the number of amphetamine-related calls per quarter for the last three financial years compared to calls related to other drug types. As can be seen in Figure 18 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 0.25 (n=34) of total drug related telephone calls in 2009/10. Numbers of calls to SA ADIS concerning cocaine have been consistently low across the past few years, and remained stable in 2009/10; specifically, 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 18 depicts the number of cocaine-related calls per quarter for the last three financial years compared to calls related to other drug types.

6.3.1.4 Cannabis related calls

Telephone calls to ADIS regarding cannabis accounted for 7.26 (n=953) of the total coded telephone contacts (drug-related) in the 2009/10 financial years, and this is relatively stable compared to calls coded in 2008/09 (7.03% (n=940) and is still lower compared to previous years. Specifically, of the total coded telephone contacts (drug-related) in the 2007/08 that was 8.13% (n=1,145) in 2007/08;

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 2008/09, the number of enquiries regarding cannabis (7.26% of total) was higher than for amphetamines (6.87% of total) and less than a quarter of the number of enquiries regarding alcohol (38.74% of total, or n=5083 calls). Figure 18 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 2009/10 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 2009/10.

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 – 2009/10

Drug type (%)	2001/ 02	2002/ 03 [#]	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10
Alcohol	42.0	44.6	47.7	48.3	51.8	52.09	55.91	57.46	57.10
Amphetamines	14.5	19.3	18.5	20.0	18.8	21.71	16.28	15.15	13.30
Heroin	10.3	18.5	14.3	12.3	9.7	7.58	8.20	7.79	8.57
Opioid analgesics	7.1	7.6	8.0	7.5	6.7	6.23	7.02	7.31	7.03
Cannabis	10.7	10.6	13.1	12.8	13.2	11.28	11.48	10.30	10.81
Benzodiazepines	1.9	2.6	2.3	2.4	2.3	2.02	2.25	2.01	1.92
Ecstasy	0.12	0.38	0.74	0.63	1.1	0.94	1.33	1.98	1.61
Cocaine	0.3	0.3	0.1	0.4	0.4	0.41	0.35	0.48	0.42
Tobacco	0.2	0	0.2	0.2	0.3	0.31	0.53	0.43	0.63
Unknown	6.1	0	0.1	0.2	0.2	0.39	0.30	0.17	0.07
Buprenorphine	-	0.4	1.2	1.0	1.06	1.21	1.34	1.10	1.28
Other	6.8	1.6	1.5	1.8	1.3	2.46	2.20	1.70	2.48

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

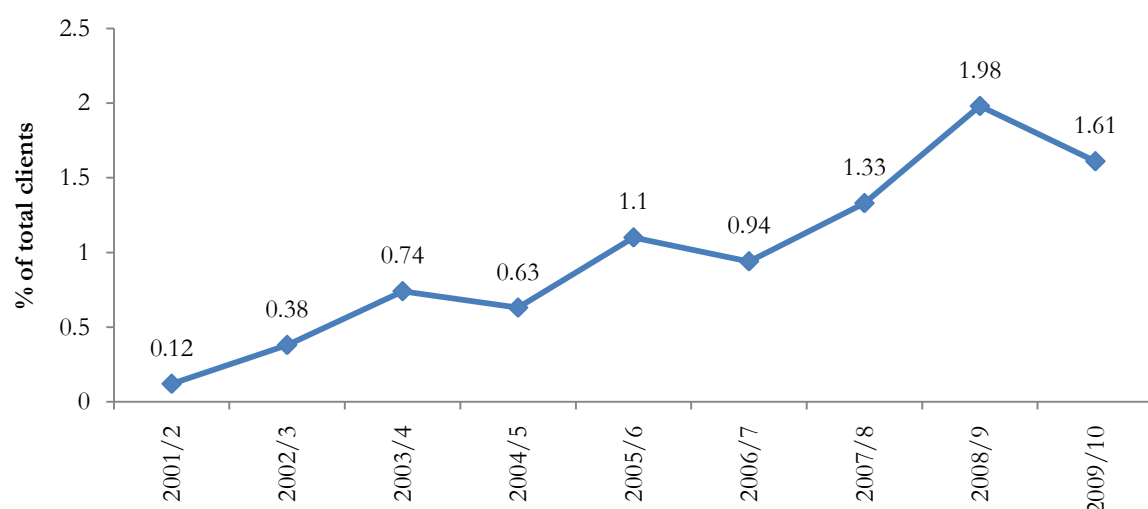
[#] During this period a new data collection system (Client Management Engine-DASC Information System or CME-DIS) was employed to meet the requirements of the National Minimum Data Set for Alcohol and Other Drug Treatment Services (NMDS-AODTS).

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 2009/10 there were 92 clients (individuals) to all DASSA treatment services who nominated ecstasy as the primary drug of concern. This constitutes 1.61% of total clients for that year and indicates a decrease from 2008/09. See also Table 36 for a comparison of ecstasy to other primary drugs of concern among clients of DASSA treatment services.

Figure 20: Percentage of total DASSA clients with ecstasy as the primary drug of concern, 2001/02 – 2009/10*



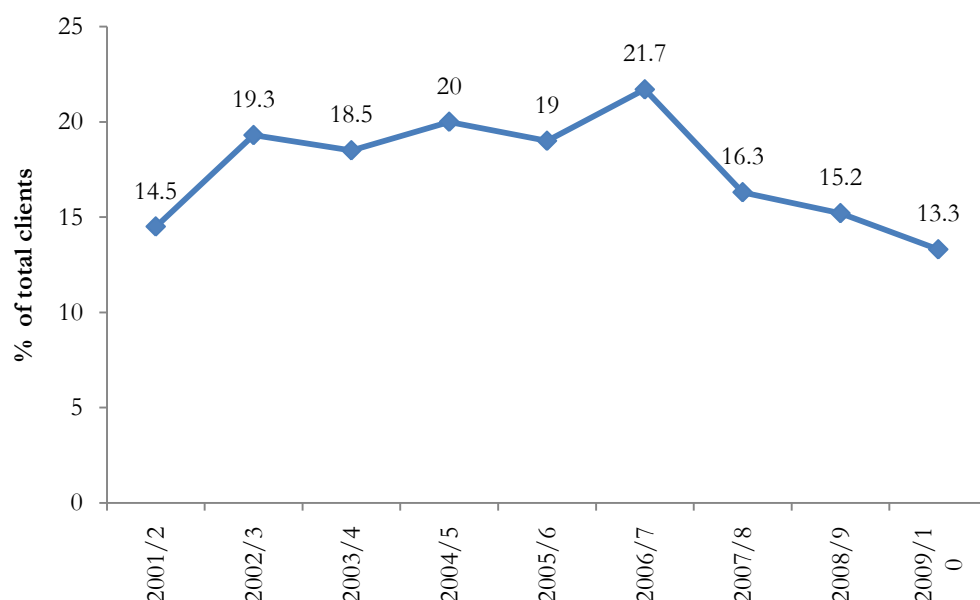
Source: Drug and Alcohol Services South Australia

* 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 (NMDS-AODTS)

6.3.2.2 *Methamphetamine related attendances*

The proportion of clients nominating amphetamines as their primary drug of concern, had remained relatively stable for the last few years (see Table 36 and Figure 21), but decreased in 2009/10 to 13.30% (n=760 of 5,716 individuals) from 15.15% (n=881 of 5,816 individuals). In 2009/10, amphetamines 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 heroin (8.57%).

Figure 21: Percentage of total DASSA clients with amphetamines as the primary drug of concern, 2001/02 – 2009/10*



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 (NMDS-AODTS)

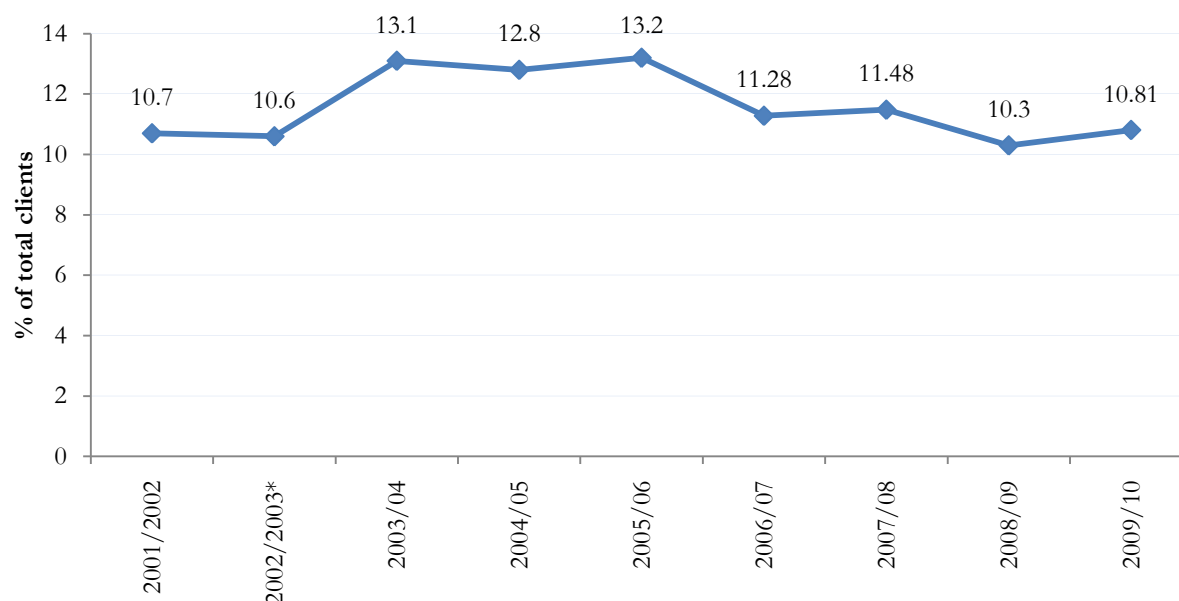
6.3.2.3 Cocaine related attendances

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, 0.42% (n=24 of 5,716 individuals) nominated cocaine as their primary drug of concern in 2009/10.

6.3.2.4 Cannabis related attendances

The proportion of clients nominating cannabis as their primary drug of concern increased slightly in 2009/10 compared to the previous year (10.81% and 10.30%, respectively) (see Table 36 and Figure 22).

Figure 22: Percentage of total DASSA clients with cannabis as the primary drug of concern, 2001/02 – 2009/10*



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 (NMDS-AODTS)

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 2010, more participants reported experiencing problems related to risk/injury problems (38%) (where participants could have been hurt or others hurt, for example driving or operating machinery while intoxicated), followed by some aspect of their personal responsibility (23%) (either at work, home or school, for example, neglect of household/children, repeated absences from work/school/university etc), then relationship or social life problems (21%). Few participants (8%) reported having legal/police problems related to their ecstasy and related drug use. These figures are similar to those reported in 2009.

Table 37: Self-reported problems associated with ecstasy and related drug use.

	2009 (n =100)	2010 (n=92)
Relationship/Social problems (%)	22	21
Legal/Police problems (%)	5	8
Risk problems (%)	30	38
Responsibility problems (%)	27	23

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 commonly held responsible for all problems. This has changed since 2009 when ecstasy was attributed to social, risk and responsibility problems. Harms attributed to cannabis also declined in all categories in 2010. Of

note, there were a few participants who reported Benzodiazepines as the drug associated with all harms except legal problems.

Table 38: Proportion of participants reporting other harms associated with main drug in the last six months, 2009 & 2010

	Relationship/Social problems		Legal/Police problems		Risk problems		Responsibility problems	
(%)	2009 n=100	2010 n=92	2009 n=100	2010 n=92	2009 n=100	2010 n=92	2009 n=100	2010 n=92
Ecstasy	50	22	0	14	37	20	41	15
Cannabis	18	11	60	0	10	0	26	20
Alcohol	14	39	40	43	40	66	15	45
Speed	14	0	0	0	0	0	7	5
Base	0	17	0	29	0	0	0	5
Crystal	0	6	0	14	7	3	4	5
LSD	4	0	0	0	7	0	4	0
Benzodiazepines	0	6	0	0	0	3	0	5
Other	0	0	0	0	0	9	4	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. Readers are 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. At the time of printing, data was not available for 2009/2010.

It is noteworthy that alcohol, benzodiazepines and anti-depressants accounted for the most attendances by far across all years. 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 stable in 2008/09, following a decrease seen in 2006/07. It can be seen that attendances regarding heroin have continued to rise somewhat across the years depicted, and in 2008/09 attendances for heroin related

issues increased from 44 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. The number of attendances in relation to cannabis have remained stable and low across the years depicted.

Table 39: Number of attendances* to the emergency department at the Royal Adelaide Hospital, SA, from 2001/02 – 2008/09 (per drug or diagnosis)

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

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

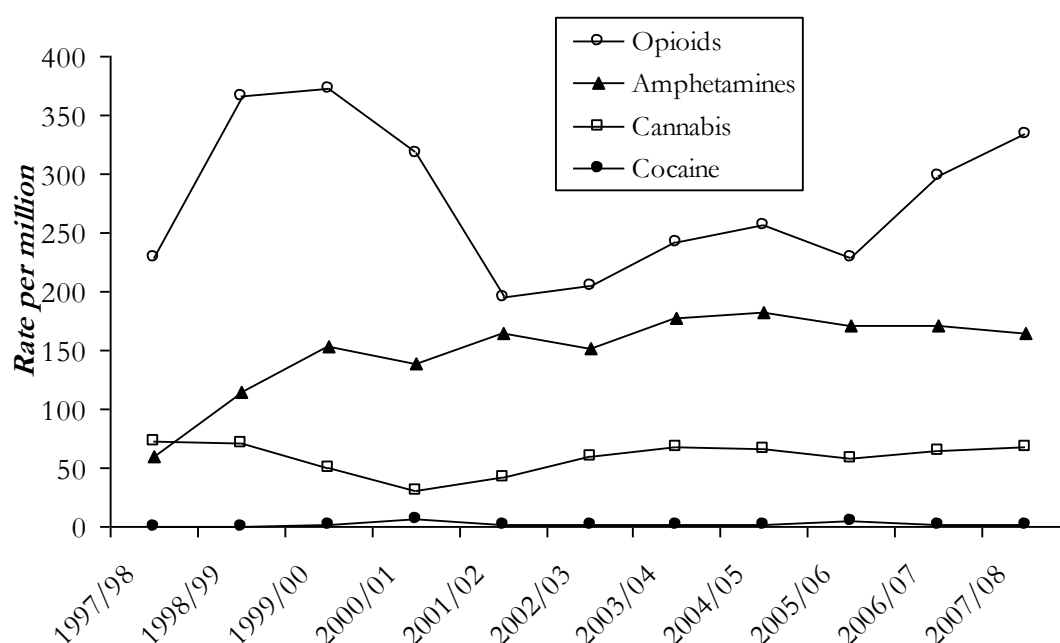
6.5.1 Hospital admissions

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 2 for National data), adjusted so that all years reflect International Classification of Diseases, 9th 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, 10th Revision (ICD-10) coding for these conditions⁴. 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 2008/2009.

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 23). 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: 333.92 v. National 440.73) cocaine-related admissions (SA: 1.14 v. National: 15.34), and cannabis – related admissions (SA: 67.47 v. National: 134.89). Amphetamine-related admissions were at a similar rate per million (SA: 164.67 v. National: 161.09).

Figure 23: Rate per million people of substance-related admissions* (primary diagnosis) to hospital in South Australia, 1997/98 – 2007/08



Source: Australian Institute of Health and Welfare

* For persons aged between 15 and 54 years

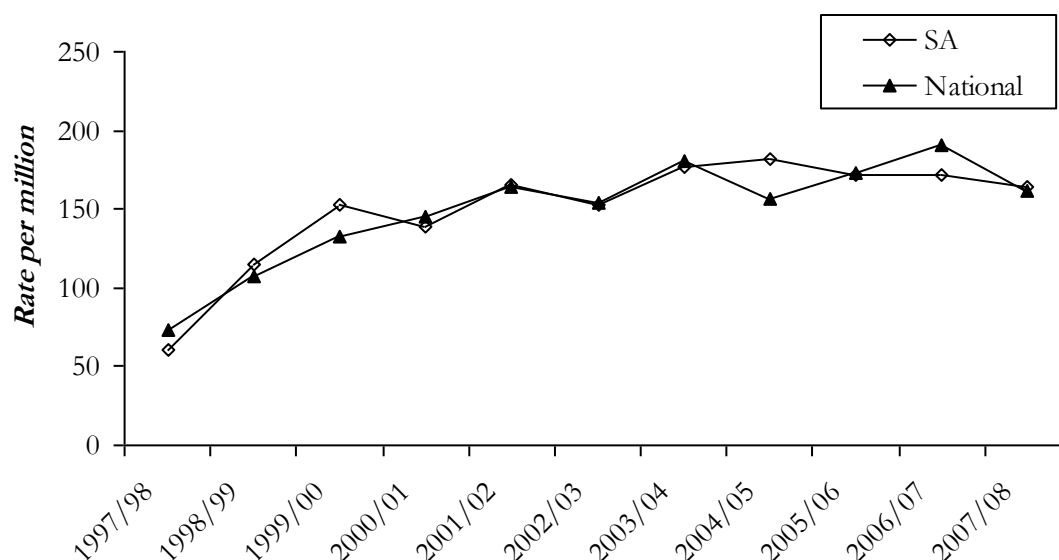
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

6.5.1.1 Amphetamine-related hospital admissions

Figure 24 (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 2004/05 (182 per million), 2005/06 (172 per million), 2006/07 (172 per million), which continued in 2007/08 (165 per million), whereas nationally these figures increased in the same period, with a decrease in 2007/08. Readers are reminded that this figure does not include amphetamine-related psychosis or withdrawal admissions.

⁴ ICD-9 coding for drug-related psychosis and withdrawal was non-specific for drug type, where ICD-10 coding is specific for drug type.

Figure 24: Rate of amphetamine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98 – 2007/08



Source: Australian Institute of Health and Welfare

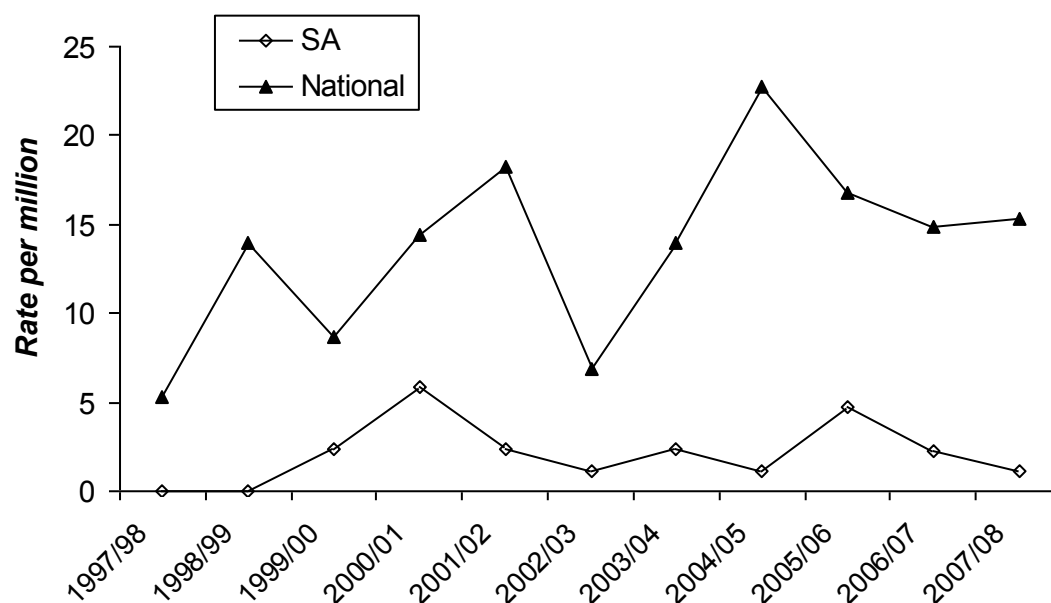
* For persons aged between 15 and 54 years, excluding amphetamine withdrawal and psychosis admissions

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 25 (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. In SA the rate of admissions to hospital per million people with a cocaine-related primary diagnosis were recorded over the time period depicted and in 2007/08 this rate per million was 1.14.

Figure 25: Rate of cocaine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98 – 2007/08



Source: Australian Institute of Health and Welfare

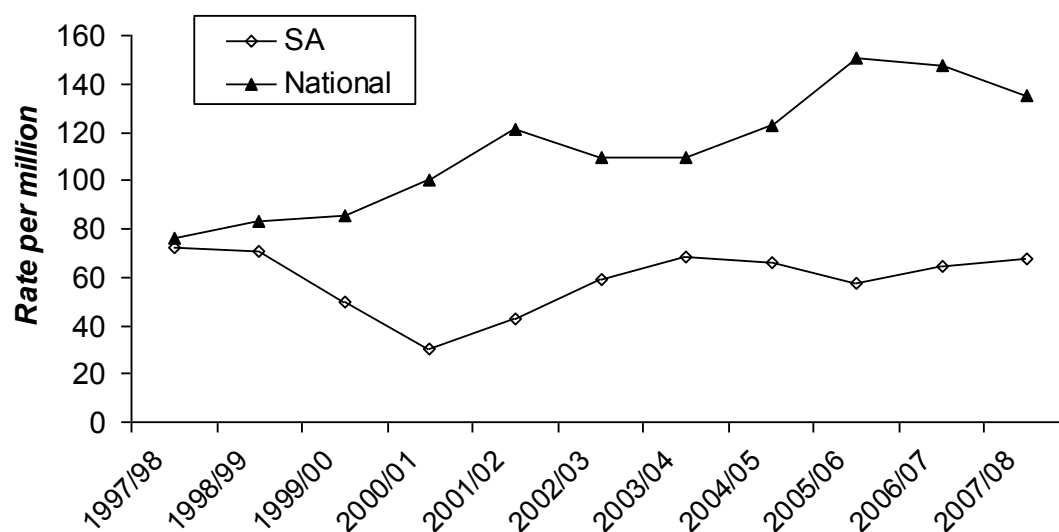
* For persons aged between 15 and 54 years, excluding cocaine withdrawal and psychosis admissions

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 26 (includes rates from 1997/98 onwards) shows 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 2007/08. 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 per million was sixty-seven to SA hospitals with a cannabis-related primary diagnosis in 2007/08 in comparison to 2003/04 (68 per million). Readers are reminded that this figure does not include cannabis-related psychosis or withdrawal admissions.

Figure 26: Rate of cannabis-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 1997/98 – 2007/08



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)

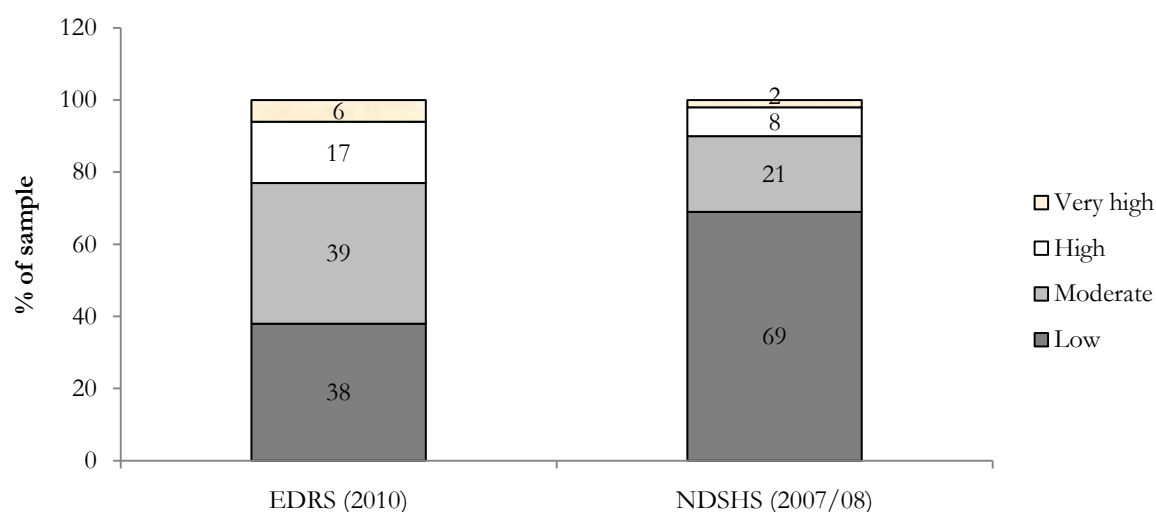
In 2010, the Kessler Psychological Distress Scale (K10) (Kessler & Mroczek, 1994) was used to give a measure of levels of psychological distress among the participant sample.

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-eight percent of the participants had scores between 10 and 15 on the K10 (low risk), 39% of participants scored between 16 and 21 (moderate distress), 17% of participants scored from 22 to 29 (high distress), and 6% scored from 30 to 50 or very high distress. The median total score for participants was 17 (10 to 40) indicating that over half of the sample were at moderate or high/very high risk of psychological distress as measured by the K10.

The 2007 National Drug Strategy Household Survey (AIHW, 2008) 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' (17%) or 'very high' (6%) distress was higher (23%) compared to those in the National Drug Strategy Household Survey (10% i.e. high = 8%; very high = 2%).

Figure 27: Proportion of population (NDSHS, 2007) and sample of K10 categories, 2010



Source: EDRS REU interviews; National Drug Strategy Household Survey, 2007

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 2010, forty percent (36/91) of the participant sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview. This was significantly higher than the proportion experiencing a mental health problem in 2009, (21% in 2009 vs. 40% in 2010, 95% CI -0.06 - -0.31)

The majority of participants reported experiencing depression (64%, n=23), anxiety (67%, n=24), panic (17%, n=) or paranoia (14%, n=5). Smaller numbers reported Obsessive Compulsive Disorder (OCD), (11%), manic depression (6%), drug induced psychosis (3%) and schizophrenia (3%). The proportion of the sample who reported actually attending a professional (21%, or 54% of those experiencing a mental health problem) was half the proportion reporting having experienced a problem (40%).

7.0 RISK BEHAVIOUR

Key Findings

Injecting risk behaviour

- Twenty percent of the sample reported having injected at some time in their lives; 8% of the sample reported injecting in the six months preceding interview. The median age of first injection was 19 years (range=15-40 years).
- Among those who had injected in the preceding six months (n=8), the last drug most commonly reported to have been injected was base (38%). Half (50%) of the sample of recent injectors reported injecting while under the influence and while coming down.
- Syringes were typically obtained from a needle & syringe program (NSP) (50%) and/or a pharmacy (50%). Of those who had injected in the preceding six months, four respondents reported sharing water or spoons with someone else in the month preceding interview.

Sexual risk behaviour

- Twelve per cent of the sample had been diagnosed with a sexually transmitted infection (STI) in the past year; with Chlamydia and Gonorrhoea the most commonly reported STI.
- Two thirds (62%) of REU reported having had a casual sex in the six months preceding interview. When having sex with a casual partner whilst not under the influence of alcohol or drugs, 16% reported never using protection.
- Of those who reported having casual sex in the past six months, 86% reported doing so whilst under the influence of drugs, with 19% reporting they never used a protective barrier.

Driving risk behaviour

- Among those who had driven a car in the past six months, 66% reported they had done so whilst under the influence of alcohol and of those, 75% had driven whilst over the alcohol limit.
- Of those who had driven recently, 64% 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 Quantity Frequency and Variability Assessment (AQFV) scale, males drank at a high risk level on a median of 54 days in a year. And females drank at a high risk level on a median of 24 days in a year. Males drank an average of nine standard drinks in a session, while females drank an average of six standard drinks in a session.

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 19 years (range 15-40 years, n=18). In 2010, 20% (18/92) of the sample reported ever injecting any drug, 44% 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 a median of 15 times in that time (range=1-500 times), approximately once per fortnight. Methamphetamine powder and base were the most commonly last injected drugs in the preceding six months (25% and 38% respectively). Thirteen percent (each) of the sample reported ecstasy or pharmaceutical stimulants with one (6%) participant reporting injecting ecstasy and LSD.

Fifty percent (n=4) of recent injectors had injected under the influence of ERD in the past six months, 25% (n=2) had injected while coming down, and 25% (n=2) had injected both while under the influence and while coming down during that time.

Table 40: Injecting drug use history among injectors, 2010

	Ever injected % (n=18)	First drug injected % (n=18)	Injected in last 6 months % (n=8)	Median days injected in last 6 months (Range; n) (n=8)	Last drug injected % (n=8)
Ecstasy – pills	39	17	22	2 (1-6; 3)	13
Meth – powder	83	50	22	4.5 (3-48; 3)	25
Meth – base	50	22	17	6 (6-150; 3)	38
Meth – crystal	33	6	16	6 (4-40; 3)	12
Pharm. Stimulants*	17	0	0	0	0
Cocaine	11	0	0	0	0
LSD	11	0	0	0	0
Ketamine	6	0	0	0	0
GHB	11	0	6	2 (no range)	0
Heroin	28	0	0	0	0
Alcohol	6	0	0	0	0
Other opiates**	22	6	0	5 (no range)	0
Methadone*	17	0	0	0	0
Buprenorphine*	6	0	0	0	0
Mushrooms	6	0	0	0	0
Steroids	6	0	0	0	0
Other	0	0	0	0	12

Source: EDRS participant interviews

** Includes codeine, morphine, and pethidine

* Illicit use only

7.1.2 Context of injecting

The most common sources of needles were reported as a Clean Needle Program (50%) or a pharmacist (50%), friend (25%), vending machine and partner (13% each), with participants able to nominate more than one source.

The majority of participants who had injected usually did so with close friends (63%) and/or a regular sex partner (50%). Those who had recently injected reported having injected at home (62%) or at a friend's home (38%).

7.1.2 Sharing of needles/syringes and other injecting equipment

With regard to the frequency of risk behaviour among the 8 recent injectors of the participant sample, there was no reported sharing of needles. Four (50% of those who had recently injected) injectors reported they had shared equipment other than needles during that time, with two participants sharing the spoon, and two sharing the water.

7.2 Blood-borne viral infections (BBVI)

Thirty-seven percent of the participants reported that they had never been vaccinated for hepatitis B virus (HBV), 55% reported that they had completed the vaccination schedule and 8% did not finish the vaccination schedule. Reasons for seeking HBV vaccination included going overseas (23%), being vaccinated as a child (36%), for work (9%), at risk due to injecting drug use (4%) and at risk due to sexual practices (2%).

Participants were asked if they have been tested for hepatitis C virus (HCV). Forty-nine percent reported that they had never been tested for HCV, while 36% had been tested in the last year, 15% were tested more than a year ago. Among those who had ever injected, 31% (n= 5) had never been tested, 38% (n=6) had been tested in the last year, and 31% (n=5) had been tested more than a year ago. One participant who had ever injected reported that they were positive for HCV.

Participants were asked if they had been tested for human immunodeficiency virus (HIV). Fifty-two percent had never been tested for HIV, 38% had been tested in the past year, and 10% had been tested more than one year ago. No participants reported that they were HIV positive.

Forty-two percent reported having a sexual health check-up (such as a swab, urine or other blood test) in the past year, while 10% reported having had their last sexual health check-up more than one year ago. Thirty-eight percent had never had a sexual health check-up.

The majority (88%) reported that they had never been diagnosed with a sexually transmitted infection (STI); 4% had been diagnosed with an STI in the past year, 2 participants had been diagnosed with Chlamydia and one participant had been diagnosed with Gonorrhoea.

Table 41: Blood-borne virus vaccination and testing among REU, 2010

	2010 n=92
Vaccinated for Hepatitis B (%)	n=78
No	37
Yes, didn't complete	8
Yes, completed	55
Main reason or Hepatitis B vaccination (%)*	
At risk (IDU)	4
At risk (sexual)	2
Going overseas	23
Vaccinated as a child	36
Work	9
Don't know/can't remember	9
Other	17
Tested for Hepatitis C (%)	n=81
No	49
Yes, in last year	36
Yes, > year ago	15
Hepatitis C positive (%)**	2
Tested for HIV (%)	n=82
No	52
Yes, in last year	38
Yes, > year ago	10
HIV positive (%) #	0
Other sexual health checkups (%)	n=84
No	38
Yes, in last year	42
Yes, > year ago	20
Sexually transmitted infection (STI) positive (%)	n=82
	12
STI diagnosis (%)##	
Gonorrhoea	33
Chlamydia	67
Syphilis	0
HPV (genital warts)	0
Other	0

Source: EDRS participant interviews

^Caution small numbers n<10

* Among those who had been vaccinated for Hepatitis B

** Among those tested for hepatitis C

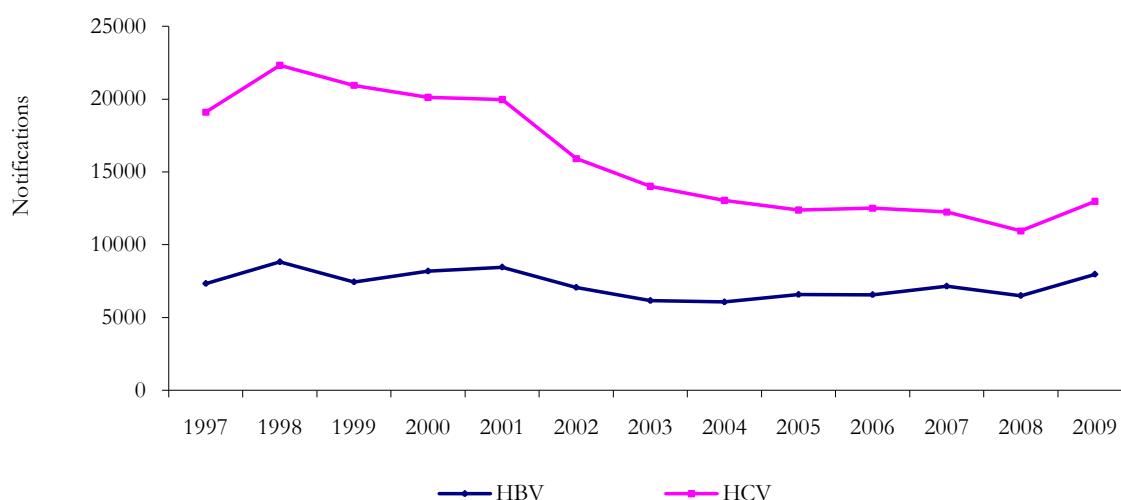
Among those tested for HIV

Among those who tested positive for STI in the last year

7.2.1 The National Notifiable Diseases Surveillance System

Figure 28 presents the total number of notifications for the hepatitis B virus (HBV) and the hepatitis C virus (HCV) in Australia from the National Notifiable Diseases Surveillance System, 2011 (NNDSS). Incident or newly acquired infections, and unspecified infections (i.e. where the timing of the disease acquisition is unknown) are presented. HCV continued to be more commonly notified than HBV, with a gradual decreasing trend in notifications of HCV from 2001-2008. HBV notifications have remained relatively stable over the past five years. Although there was a slight increase in HCV notifications in 2009 compared to 2008.

Figure 28: Total notifications for HBV and HCV (unspecified and incident) infections, Australia, 1997-2009



Source: National Notifiable Diseases Surveillance System – NNDSS⁵

Note: Figures are updated on an ongoing basis

7.3 Sexual risk behaviour

Participants were asked to provide detail with regard to 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. Three-fifths (62%) of the sample reported having casual sex with at least one casual partner in the six months preceding interview. Twenty percent reported having three to five casual sexual partners during the preceding six months and 16% reported having one partner. Participants were asked about the use of ‘protective barriers’ which were defined as ‘condoms, dams or gloves’, with a casual partners. Nearly two fifths (37%) reported they used these every time whilst sober, however, 16% reported that they never use protection.

⁵ 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.

Table 42: Prevalence of sexual activity and number of sexual partners in the preceding six months, 2010

	2010
No. casual sexual partners (%)	(n=79)
No casual partner	38
1 person	19
2 people	10
3-5 people	22
6-10 people	8
10 or more	4
Use of protection during sex with casual partner when sober (%)	(n=49)
Every time	37
Often	6
Sometimes	12
Rarely	18
Never	16
Not applicable	10

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 (83%) 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 a drug or drugs, in the six months prior to interview. Two participants reported the number of times sex had occurred with a casual partner in the previous 6 months, one reported twice and the other 6-10 times.

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 (80%), followed by ecstasy (63%) and cannabis (38%) (see Table 43). In 2009, ecstasy was nominated as the drug that most participants nominated being under the influence of during sex with a casual partner.

Twenty-three percent of participants who reported having had recent penetrative sex with a casual partner whilst under the influence of drugs used a protective barrier every time, and 19% reported never using protection. This was a similar proportion to those never using protective barriers when sober

Table 43: Drug use during sex with a casual partner in the preceding six months, 2010

	2010 n=92
Penetrative sex with casual partner while on drugs (%)*	83
No. times had sex while on drugs with casual partner (%)	(n=2)
Once	0
Twice	50
3-5 times	0
6-10 times	50
Eleven +	0

Table 43: Drug use during sex with a casual partner in the preceding six months, 2010 Cont

	2010 n=92
Ecstasy	63
Alcohol	80
Cannabis	38
Methamphetamine – powder	5
Methamphetamine – base	13
Methamphetamine – crystal	8
Cocaine	18
LSD	5
Ketamine	0
Amyl Nitrate	3
Nitrous oxide	5
GHB	5
Use of protection during sex with casual partner under influence of drugs (%)**	n=31
Every time	23
Often	10
Sometimes	32
Rarely	16
Never	19

Source: EDRS participant interviews

* In the six months preceding interview

** Of those who had sex with a casual partner

7.4 Driving risk behaviour

Participants were asked whether they had driven within an hour of having taken any drugs, 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, 2009 & 2010

% of recent drivers	2009 (n=74)	2010 (n=73)
Driven under the influence of alcohol	43	66
Driven over the limit for alcohol	59	75
Driven soon after [#] taking any illicit drug	70	64
Driven soon after[#] illicit use of:		
Ecstasy	65	55
Methamphetamine– powder	14	4
Methamphetamine – base	8	9
Methamphetamine – crystal	21	15
Pharmaceutical stimulants	0	0
Cannabis	65	60

Table 44: Recent occurrence of driving following drug use, 2009 & 2010 Cont

% of recent drivers	2009 (n=74)	2010 (n=73)
LSD	8	2
MDA	0	0
'Magic mushrooms'	2	0
Ketamine	6	2
Nitrous oxide	4	0
Heroin	2	0
Other opiates	0	0
Benzodiazepines	2	0
Other	0	2

Source: EDRS participant interviews

* In the six months preceding interview

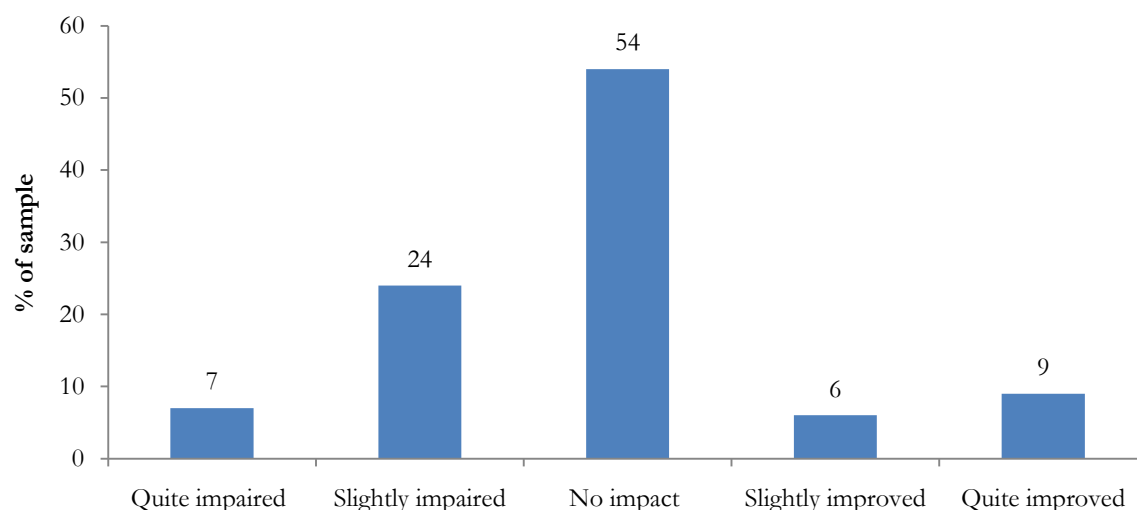
Within one hour of driving

Two-thirds of the participants (66%, n=48) who had driven a vehicle in the six months prior to interview reported that they had driven under the influence of alcohol. Three quarters (75%, n=36) 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, a median three times (range 1-180) during that period. Nearly half of the drivers (45%, n=33) had been random breath tested (for alcohol) in the six months prior to interview, with 24% (n=8) of those registering a positive result for being over the legal limit.

Two-thirds of recent drivers also reported that they had driven within an hour of using any illicit drug (64%), a median of four times (range: 1-180; n=46). The drugs most commonly reported as having been used within an hour prior to driving, in the previous six months, were ecstasy (55%), cannabis (60%), ice/crystal methamphetamine (15%), and cocaine (13%). The 'last' time participants drove they did so under the influence of cannabis (60%), ecstasy (34%), cocaine (9%), methamphetamine base (9%), ice/crystal (6%), and LSD (2%) Participants reported driving within a median of two hours after taking any illicit drug (range 0. 12-10; n=41), with 46% reporting driving almost immediately (within one hour). Five participants had been tested for drug driving in the six months prior to interview, with one reported testing positive for drugs.

Half the sample perceived that the last time they used illicit drugs it had no impact on their driving (54%), with a quarter (24%) reporting that it was slightly impaired. Interestingly, 15% of participants perceived that their driving ability improved (see Figure 29).

Figure 29: Perceived impairment on driving ability last time after taking illicit drugs, 2010



Source: EDRS participant interviews

7.5 Risky alcohol use among REU

From 2009, a new measure of alcohol consumption was included in the EDRS as a way of more accurately measuring the quantity and frequency of alcohol use while taking into account variability of this over the course of the past year. The Alcohol Quantity Frequency and Variability Assessment⁶ (AQFV) is a self-report measure which examines alcohol use over the preceding six months. It has three categories: a) typical drinking; b) regular changes e.g. weekends; and c) occasional changes e.g. festivals, parties. Respondents are able to indicate a range for the number of drinks they consume for each section and then indicate on how many days per week, month or year they drink this amount. For example, a participant may report for the 'typical drinking' section that they consume '2-3 standard drinks, 3 days per week' or '5-6 standard drinks, 2 days per month' etc.

Using the information gleaned from the AQFV assessment, the number of days that each participant consumed alcohol over the course of a year and the amount of alcohol consumed on each drinking day was computed. Each drinking day was then defined as either: a) low risk (up to 6 drinks for males or 4 for females); b) risky (from 7 to 10 drinks for males or 5 to 6 for females); or c) high risk (11 drinks and above for males or 7 and above for females) (National Health and Medical Research Council 2001).

Table 45 presents the frequency and quantity of alcohol consumption for REU in 2010. Compared with results of 2009, both males and females reported a higher median number of days drinking at risky levels (females: 12 in 2009 vs. 24 in 2010; males: 18 in 2009 vs. 54 in 2010).

The average number of drinks per session for males had increased from 8 drinks to 9 drinks in 2010 and remained stable for females at 6 drinks per session. Furthermore, males were found to report a significantly higher number of average drinks per session than females ($p < 0.05$) in 2010.

⁶ Many thanks to Dr. James Lemon, previously of the National Drug and Alcohol Research Centre, for his kind permission to use the AQFV assessment in the 2009 EDRS.

Table 45: Frequency and quantity of alcohol consumption for REU, 2010

Median number of drinking days/year (range; number of participants)	2009	2009	2010	2010
	Men	Women	Men	Women
Low Risk	49	26	62	24
Risky	10	6	7	3
High Risk	18	12	54	24
Average no. Drinks per session	8	6	9	6

Source: EDRS interviews 2010

7.6 The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT (Saunders, Aasland, Babor, et al., 1993) was completed by REU participants in the EDRS for the third 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 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, de la Flunte, Saunders 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 & Higgins-Biddle 2000).

Table 46 presents an overview of AUDIT scores. The overall sample mean score on the AUDIT was 14.9 (SD=6.8, range 2-29). There was a significant difference in female and male AUDIT scores, with males having significantly higher scores (10.38 vs. 16.60; $p<0.05$). Eighty-six percent of the sample scored eight or more; these are levels at which alcohol intake may be considered hazardous. Males were also significantly more likely to drink at risky levels than females (10% vs. 34%, 95% CI: -0.05 - -0.39).

The total AUDIT score places respondents into one of four 'zones' or risk levels. Fourteen percent in 2010 (27% in 2008) scored in Zone 1 (low-risk drinking or abstinence), 42% (43% in 2008) scored in Zone 2 (alcohol use in excess of low-risk guidelines), a fifth (19%; 18% in 2008) scored in Zone 3 (harmful or hazardous drinking) and 25% (compared with 12% in 2008) scored in Zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence).

Table 46: AUDIT total scores and proportion of REU scoring above recommended levels indicative of hazardous alcohol intake, 2010

	2008	2010
Mean AUDIT total score,	12.1	14.9
SD	6.5	6.8
(range)	(0-28)	(2-29)
Score 8 or above (%)	73	86
Zone 1	27	14
Zone 2	43	42
Zone 3	18	19
Zone 4	12	25

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.

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

Key Findings

- The proportion of participants who had engaged in a criminal offense in the month prior to interview decreased compared to 2009.
- Half of the participants perceived an increase in police activity with the remaining half reporting it as stable.
- The proportion of participants reporting witnessing a sniffer dog in the six months proper to interview increased in 2010 compared to 2009.
- The proportion of participants arrested for a crime remained stable.
- Arrests made by SA police increased for amphetamine and cannabis and remained stable for cocaine.

8.1 Reports of criminal activity among REU

Table 47 summarises participants' reports of criminal activity in the month prior to interview, and arrests in the 12 months prior to interview, since 2004. In 2010, twenty-two percent of participants reported involvement in some type of crime in the month prior to interview, which was lower than the proportion of participants doing so in 2009 (38%). Drug dealing was the most commonly reported crime again 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.

With regard to how participants reported paying for ecstasy in the last six months, participants were asked to differentiate between whether they gained an 'ecstasy profit' through drug dealing or made a 'cash profit' which then paid for ecstasy. In 2010, a smaller proportion of participants reported that they dealt drugs for a 'cash profit' (19%) compared to 2009 (29%). Further examination of participants' dealing patterns indicate that three participants did so less than once per week; two participants did so once per week and one dealt more than once per week.

Table 47: Criminal activity in the month prior to interview, as reported by participants, 2004 – 2010

	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)
Criminal activity in last month:							
Property crime	6	3	3	10	7	19	4
Drug dealing	21	25	26	23	19	29	19
Fraud	1	3	4	3	1	2	4
Violent crime	0	2	3	4	0	5	4
Any crime	25	27	30	29	23	38	22

Table 47: Criminal activity in the month prior to interview, as reported by participants, 2004 – 2010 Cont

	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)
Arrested in last 12 months	5	8	11	8	11	13	12
Ever in prison	5	1	5	10	7	8	6

Source: EDRS participant interviews

8.2 Perception of police activity towards REU and drug detection ‘sniffer’ dogs

Table 48 presents data on participant perceptions of police activity in the six months leading up to the survey, since 2004. In 2010, half (53%) of the participants reported that police activity had either remained stable or increased (46%), and one participant suggesting that police activity had decreased. REU were also asked if police activity had made it more difficult for them to obtain drugs, 35% reported that police activity did make scoring drugs more difficult.

Table 48: Perception of police activity in the six months prior to interview, as reported by participants, 2004 – 2010

% of participants	2004 (n=100)	2005 (n=100)	2006 (n=101)	2007 (n=100)	2008 (n=74)	2009 (n=100)	2010 (n=92)
Perception of police activity in last 6 months							
More activity	27	26	34	27	26	60	46
Stable	27	55	44	35	32	36	53
Less activity	3	3	1	3	1	4	1
Don't know	43	16	22	35	41	-	-
More difficult to obtain drugs recently?							
Yes	14	3	5	13	21	22	35
No	86	97	95	87	80	78	65

Source: EDRS participant interviews

Of those who reported having observed drug detection dogs recently

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

8.2.1 Interactions with sniffer dogs

Participants were asked about their experiences with drug detection ‘sniffer’ dogs in the six months prior to interview. Three-quarters (74%) of the participants reported they had seen a sniffer dog. Compared to participant reports in 2009, this indicates a large increase in the proportion of participants observing sniffer dogs. The median number of times participants reported witnessing sniffer dogs was twice (range 1-10), with 39% (n=7) of those who had seen sniffer dogs doing so once, 33% (n=6) doing so twice, and the remainder having done so three or more times (28%, n=5). Although the median number of times participants had witnessed sniffer dogs remained stable

compared to 2009, there was a change in the frequency of such observations, with the majority of participants in 2009 reporting observing a sniffer dog at an event three or more times (46%).

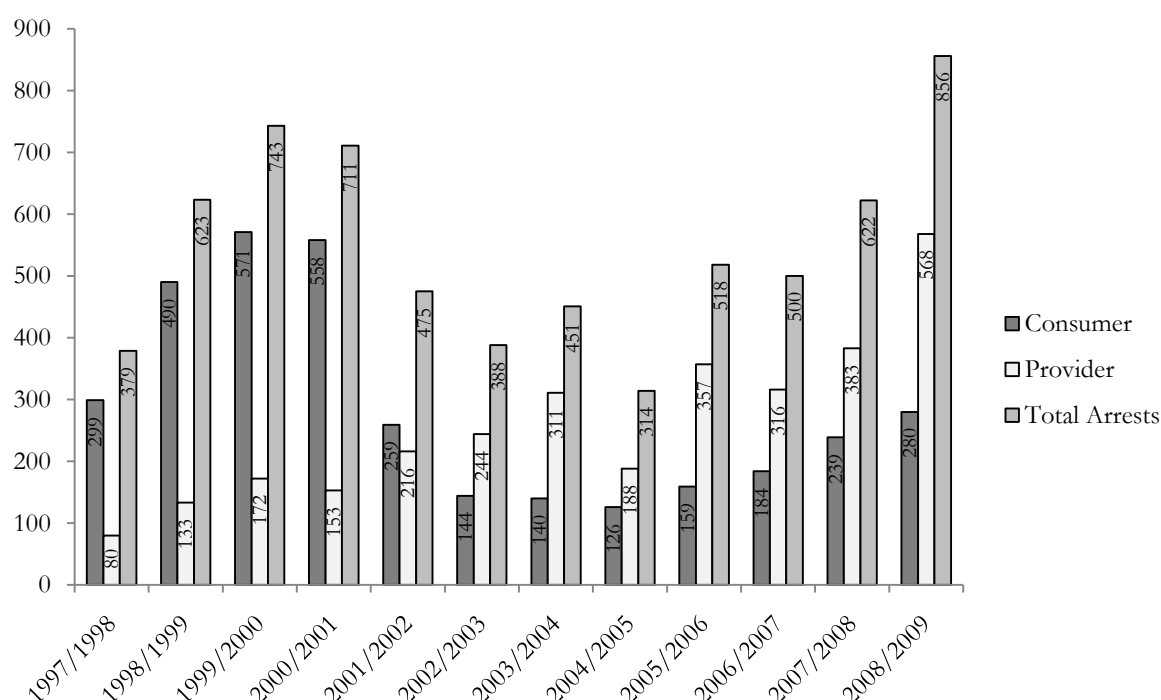
8.3 Arrests

Twelve percent (n=11) of participants reported that they had been arrested within the last 12 months, similar to previous years. Participants had been arrested for some form of property offence (n=2), alcohol (n=2), possession (n=2), other driving offences (n=2), drunk and disorderly (n=2), trespassing (n=2), property damage (n=1) and breach/bail resist (n=1). Two participants had been arrested for two offences in the previous 12 months. The charges reportedly incurred were similar to those reported in 2009 with the most notable difference being a decrease in property crime charges and an increase in alcohol and driving charges from 2009 to 2010.

8.3.1 Amphetamine-type stimulants

Figure 30 presents the number of consumer and provider arrests for amphetamine-type stimulants made in the SA between 1997/98 and 2008/09. 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 has been increasing from 2004/05, from a total of 314 arrests to a total of 856 arrests in 2008/09.

Figure 30: Number of amphetamine-type stimulants consumer and provider arrests, SA, 1997-2009



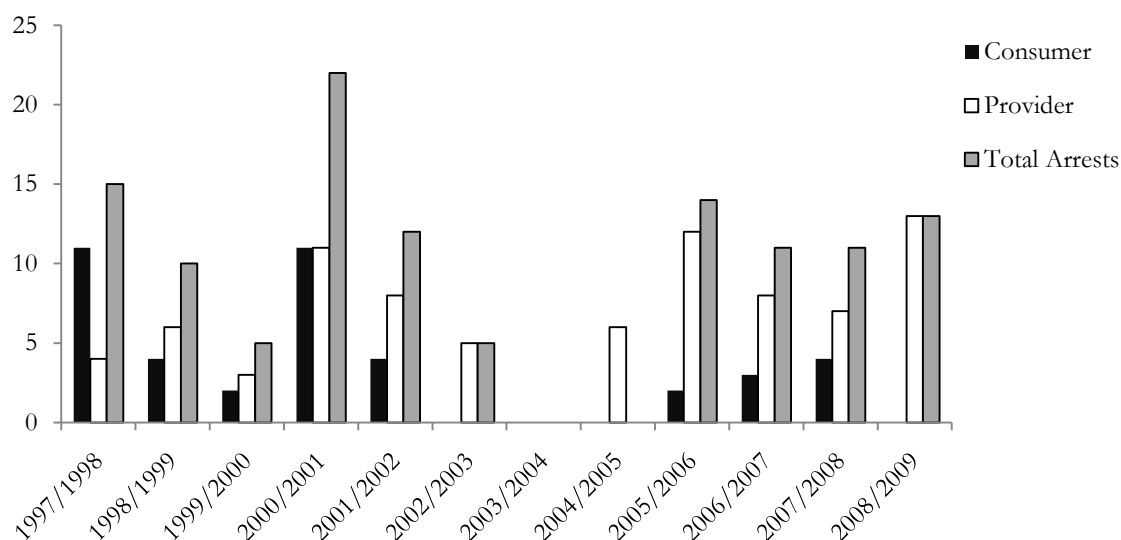
Source: ABCI (1997-2002); ACC (2003-2009)

Note: Data not available for the 2009/2010 financial year

8.3.2 Cocaine

In 2008/2009 both consumer and provider arrests remained low for cocaine in SA (see Figure 31).

Figure 31: Number of cocaine consumer and provider arrests, SA, 1997/98-2008/09



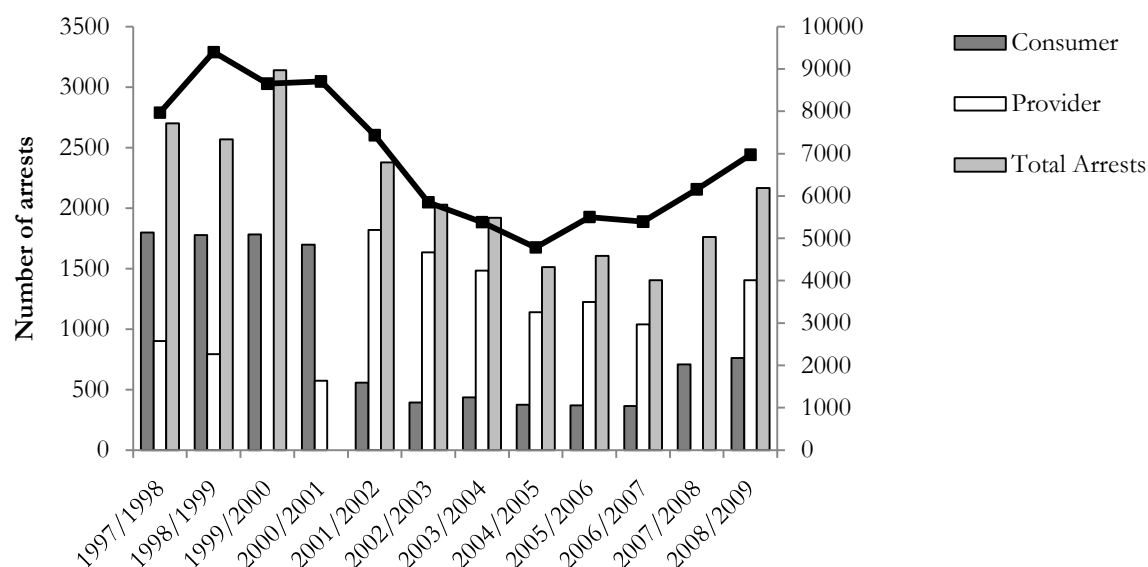
Source: ABCI (2000-2002); ACC (2003-2009)

Note: Data not available for the 2009/2010 financial year

8.3.3 Cannabis

Figure 32 presents the number of cannabis consumer and provider arrests in the SA from 1997/98 to 2008/09. It also presents the total number of Simple Expiation Notice (SEN) 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 2008/2009. The number of SEN issued in the SA increased in 2008/09, the highest number issued since 2001/02.

Figure 32: Number of cannabis consumer and provider arrests, SA, 1997/98-2008/09



Source: ABCI (1997-2002); ACC (2003-2009)

Note: Data not available for the 2009/2010 financial year

KE Comments

- ▶ As in previous years, KE reported that criminal activity was rare among REU, and that contact with the criminal justice system was uncommon among this group.
- ▶ However, there were reports that dealing drugs to friends being the most prevalent method of obtaining ecstasy and related drugs, with some KE, reporting an increase in this activity in the previous 12 months. KE noted that many REU did not perceive supplying drugs to friends as 'drug dealing'.

9.0 SPECIAL TOPICS OF INTEREST

Key Findings

- Two-thirds (63%) of participants had recently consumed energy drinks with alcohol, consuming a median of three drinks on the last occasion.
- Seventy-four percent reported recently consuming energy drinks with ecstasy.
- Half of the male participants had a body mass index in the healthy range, whilst a fifth of women fell into the healthy range.
- Fifty-four percent of the sample had been tested for an STI in the previous two years.
- Sixty-seven percent of females had had a pap smear in the previous two years.

9.1 Ecstasy dependence

In 2010, participants were asked questions regarding dependence on ecstasy. For further information, please contact: Dr Raimondo Bruno (raimondo.bruno@utas.edu.au).

9.2 Energy drink consumption

Caffeinated energy drinks came onto the world market in 1997 with the introduction of Red Bull. The drinks are marketed at the 18-35 age group claiming to deliver a jolt of energy, through the combination of stimulant ingredients primarily caffeine, herbal extracts (such as guarana and ginseng) and amino acids (such as taurine). Sugar or artificial flavouring is added for taste as caffeine is a bitter ingredient.

Research suggests energy drinks do deliver on their promise of more ‘energy’ with the strongest energising effects being 30 to 60 minutes after consumption and lasting at least 90 minutes. However, while caffeine in smaller doses has been shown to improve cognitive performance and mood (Beyrer, Razak et al. 2004), it can also have detrimental health consequences. Acute caffeine consumption reduces insulin sensitivity (Kalyoncu, Tan et al. 2005) and increases mean arterial blood pressure (Bichler, Swenson et al. 2006). High caffeine consumption is associated with chronic daily headaches particularly in women aged less than 40 years, and has been known to be associated with central nervous system dysfunction, cardiovascular, gastrointestinal and renal dysfunction (Carillo & Benitez 2000). Caffeine intake more generally can promote diuresis⁷ and natriuresis⁸ (Riesenhuber, Boehm et al. 2006). Daily caffeine intake remains safe at under 600mg per day, however doctors recommend during times of stress, anxiety or pregnancy that caffeine intake be limited to less than 200mg per day. Energy drinks on average can now contain between 80-160mg per serving.

Of particular concern is the recently reported ‘partying practice’ of mixing energy drinks with alcohol and/ or other substances such as ecstasy or prescribed medications such as stilnox or benzodiazepines. The aim of this mixing is to enhance the ‘high’ associated with these substances.

As in 2009, the 2010 EDRS included questions examining the use of energy drinks (e.g. ‘V’ and ‘Red Bull’) in the context of alcohol and/or ecstasy use. Sixty-three percent of the REU sample consumed

⁷ *Diuresis* is the increased production of urine by the kidney.

⁸ *Natriuresis* is the process of excretion of sodium in the urine via action of the kidneys.

energy drinks with alcohol, with 38% doing so every fortnight. Twenty-two percent did on a monthly basis, 17% less than monthly, 16% weekly and 7% more than weekly. The median number of drinks consumed on the last occasion reported was 3 (range 1-10).

Table 49: Consumption patterns of energy drinks, alcohol and other substances among REU, 2010

	2010 (n=58)
Recent consumption of energy drinks and alcohol (%)	63
How often consume energy drink with alcohol*	
More than weekly	7
weekly	16
Fortnightly	38
Monthly	22
Less than monthly	17
Median drinks consumed last occasion (n)	3 (1-10)
Main reason for mixing energy drink with alcohol (%)*	
Taste	21
Combined effete	16
Helps party longer	26
Lessens hangover	2
Keep me straight	3
Other	24
Recent consumption of energy drinks and another substance (not including alcohol) (%)*	
None	17
Ecstasy	74
Speed	14
Base	14
Ice	9
Cocaine	9
Cannabis	31
LSD	10
Other	3
Use of energy drinks and another substance and alcohol (%) **	(n=46)
All of the time	24
Most of the time	17
Some of the time	28
A little of the time	17
None of the time	16

Source: EDRS participants interviews

* Among those who had consumed energy drinks mixed with alcohol in the last 6 months

**Among those who had consumed energy drink with another substance.

The studies that have been conducted would suggest that consumers hold beliefs that consuming energy drinks will reduce the fatigue, cognitive and motor impairments of alcohol, and as a result they may be more likely to engage in risky behaviours such as operating a car or a motorcycle, in the erroneous belief that they are alert (Ferreira, Mello & Souza-Formigoni 2004a; Ferreira, Mello & Rossi et al., 2004b). The main reason participants in the sample consumed energy drinks and alcohol was to party longer (26%), the taste (21%) and the combined effect (16%).

In the REU sample of recent energy drink and alcohol consumers, the majority reported they mixed energy drinks with ecstasy (74%) followed by cannabis (31%), speed and base (14% each), cocaine and crystal methamphetamine (9% each) and LSD (10%). Of those participants who had consumed energy drinks with another substance, 28% also used alcohol some of the time, and a quarter reported mixing both energy drinks, another substance and alcohol all the time. Just under a fifth reported using all most of the time (17%), a little of the time (17%) or none of the time (16%).

Table 50: Lifetime negative effects experienced related to energy drink consumption among REU, 2010

	2010 (n=92)
Energy drinks mixed with alcohol (%)	
Headaches	28
Heart palpitations	12
Nausea	19
Vomiting	19
On edge	12
Heart burn	7
Stressed out	9
Other	5
Energy drinks mixed with ecstasy (%)	
Headaches	14
Heart palpitations	16
Nausea	14
Vomiting	5
On edge	5
Heart burn	5
Stressed out	9
Other	0
Energy drinks mixed with ecstasy and alcohol (%)	
Headaches	26
Heart palpitations	28
Nausea	22
Vomiting	16
On edge	21
Heart burn	9
Stressed out	16
Other	3

Source: EDRS participant interviews

As can be seen in Table 50, the negative effects of mixing energy drinks with both ecstasy and alcohol are greater than for either alcohol or ecstasy alone. This is especially so for heart palpitations, being on edge and getting stressed out. More negative effects were reported when energy drinks were mixed with alcohol compared to energy drinks mixed with ecstasy.

9.3 Body Mass Index

Eating disorders and drug use disorders are significant public health problems. However, epidemiologic research examining their associations yields ambiguous results. Evidence on a relationship between obesity and alcohol use is found in some studies (Wannamethee, Shaper & Whincup 2005). As to the relationships between overweight/obesity and nicotine dependence, some studies have found overweight and obese men, but not women, were more likely to be former daily smokers than non-smokers (John, Meyer, & Rumpf, et al., 2006; Zimlichman, Kochba, & Mimouni, et al., 2005). In a nationally representative sample, overweight, obesity and extreme obesity were associated with lower risk for past-year nicotine dependence in men but not in women (Pickering, Grant, & Chou, et al., 2007).

Relationships between body mass index (BMI) and illicit drug use disorders are also unclear. For instance, marijuana can stimulate appetite whereas cocaine is a stimulant and appetite suppressant, but one study found similar prevalence of overweight in individuals with illicit drug use disorders as that found in the general population (Rajs, Petersson & Thiblin et al., 2004) and another study found both positive and negative associations of BMI with various substance use disorders, and significant gender differences in those relationships (Barry & Petry 2009). Finally, BMI and drug use are both associated with mental health problems (Kemp, Gao, & Ganocy, et al., 2009).

For the first time in 2010, participants were asked their height and weight. With this information BMI was calculated among the national sample to determine the relationship between BMI, drug use and the risk of disease. BMI is calculated from height and weight information, using the formula weight (kg) divided by the square of height (m). BMI is divided into 4 groups: (1) ‘underweight’ less than 18.5; (2) ‘normal weight’ 18.5 to less than 25.0; (3) ‘overweight’ 25.0 to less than 30.0; or (4) ‘obesity’ 30.0 and greater, in adults to measure prevalence. BMI values are grouped according to the groups reported by the World Health Organization (WHO, http://apps.who.int/bmi/index.jsp?introPage=intro_3.html).

Among the REU sample the mean height was 1.74 metres and weight 73.4 kilograms. The mean BMI was 24.1 (see Table 51). Of those who commented, 6 % had a BMI which was considered ‘underweight’ (<18.5), this compares to 3% of the general population aged 18-64 years (Australian Bureau of Statistics, 2009).

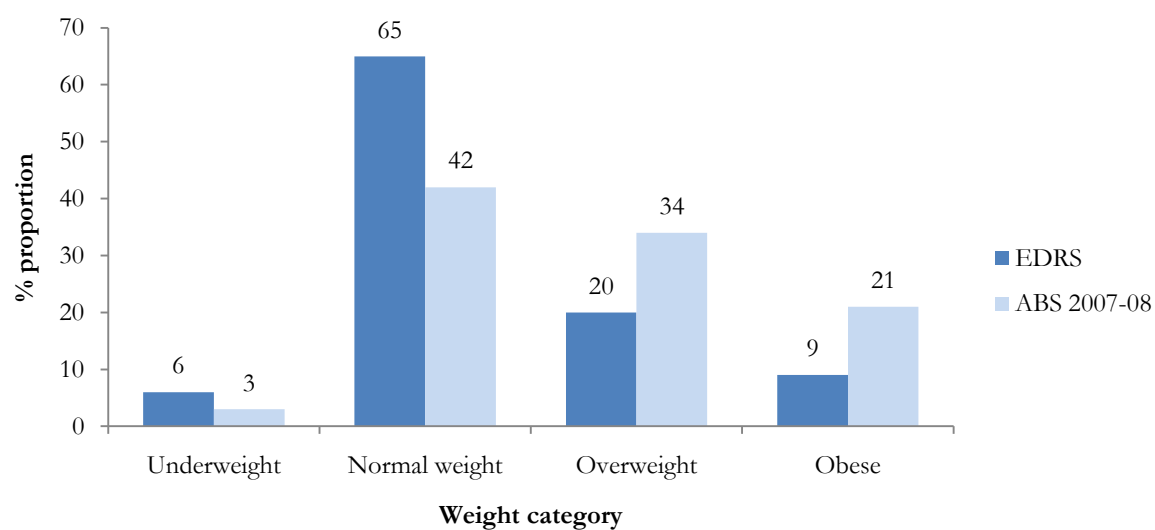
Table 51: Self-reported height, weight and body mass index, 2010

	2010
Mean Height (metres)	(n=91) 1.74
Mean Weight (kilograms)	(n=91) 73.4
Mean Body Mass Index (BMI)	(n=90) 24.1

Source: EDRS participant interviews, (Australian Bureau of Statistics, 2009)

As illustrated in Figure 33, a higher proportion of REU participants were classified as normal weight compared to the general population, with less REUs classified as overweight or obese. However there was a higher proportion of participants in the EDRS who were underweight.

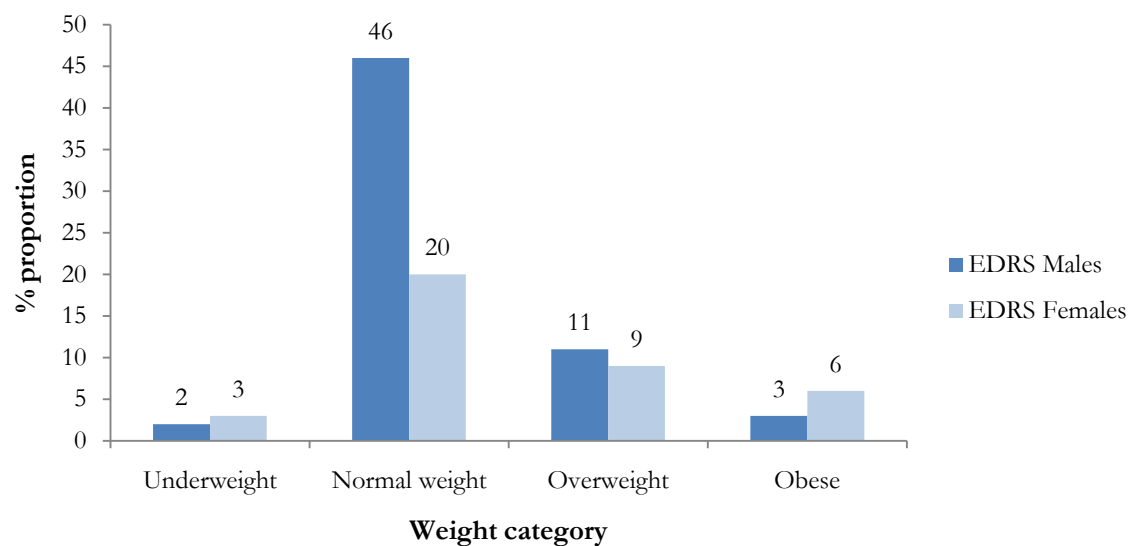
Figure 33: Weight status of SA REU, 2010 and general population, ABS, 2007/08



Source: EDRS participant interviews

When broken down by gender, a higher proportion of males (46% vs. 20%) were classified as a healthy weight. Whereas, there was a higher proportion of females who were either underweight or obese (see Figure 34).

Figure 34: Weight status of SA REU by gender, 2010



Source: EDRS participant interviews

9.4 Sexual Health

Population studies have shown that younger age groups engage in sexual relationships with more partners in their lifetime than older age groups (Johnson, Mercer, Ernes et al. 2001). Amongst the regular ecstasy user sample participants of a younger age have been found to be more likely to engage in risky behaviours (Cogger & Kinner 2008). Furthermore, studies have shown that younger individuals who frequent night clubs are likely to report multiple sexual partners and incidence of STIs (Wells, Kelly & Golub, et al., 2010).

In Australia, approximately ten percent of young women and three percent of young men (aged under 30 years) report having been tested for Chlamydia (Kong, Hocking & Link et al., 2010). The issues surrounding sexual health prompted questions to be developed for the EDRS survey to investigate reasons why or why not participants choose to have STI screening. The responses to these questions were formulated by considering results of previous research (Dixon-Woods, Stokes & Young et al., 2001; Tilson, Sanchez & Ford et al., 2004; Balfe & Brugha 2009).

In 2010, REU participants were asked if they had been tested for a sexually transmitted infection (STI) in the last two years. Over half (54%) reported that they had been tested in the last two years for an STI by means of a blood test, urine sample or swab, while 27% reported that they had not thought about taking a sexual health test.

The main reasons given for being tested were to be clear of infection after a relationship (25%); due to unprotected sex (23%), and other reasons (20%). Half of the participants were tested at a sexual health clinic (48%) or a General Practitioner (GP) (48%).

Table 52: Sexual health testing among REU, 2010

	2010 (n=92)
Tested for a sexually transmitted infection (STI) last two years?	(n=81)
No, don't think about it	27
No, I didn't want to be tested	3
No, another reason	16
Yes, I was tested by means of a blood test, urine sample or swab	54
Reason for test*	(n=44)
Clear of infection after relationship	25
Clear of infection before new relationship	11
Unprotected sex	23
Symptoms of infection	5
Health provider suggested	5
Friend suggested	5
Partner suggested	0
Partner had symptoms	5
Ex-partner told me to get tested	2
Access to clinic was easy	9
Routine/general check up	2
Other †	20
Place last tested for STI*	
GP	48
Sexual Health Clinic	48
Hospital	0
Other	5

Source: EDRS interviews

* Among those who were tested for a sexually transmitted infections in the last 2 years

† Other includes: peace of mind, immigration, occupational or prison requirement

Over two-thirds (67%) of the female sample reported a pap smear test in the last two years. The main reasons given for 'no' pap smear test were 'didn't think of it' or an 'other' reason e.g. 'could not be bothered'. The most common reason participants had a pap smear test was because they were due for a test (45%) followed by receiving a 'reminder letter' (25%). The majority of participants (90%) were tested by a GP (Table 53).

Table 53: Pap smear testing among REU, 2010

	2010 (n=92) %
Had a pap smear test last two years**	n=30 67
Reasons for no pap smear test last two years#	
Wasn't sexually active	10
No symptoms	0
Don't like them	0
Didn't think of it	30
Embarrassed/uncomfortable	10
Financial cost	0
Other	40
Reasons for having a pap smear test##	
Symptoms	0
Reminder letters	25
Health provider suggested	15
Friend suggested	0
Partner suggested	0
Due for a test	45
Family history of cervical cancer	5
Other	15
Place last tested for pap smear###	
Sexual Health Clinic	5
GP	90
Hospital	0
Other	5

Source: EDRS interviews

** Among females only

Among those who had not had a pap smear test in the last 2 years

KE Comments

- ➡ Two KE commented that there was an increase in people mixing energy drinks with alcohol and illicit drugs, and that this was becoming problematic due to accidental overdoses.

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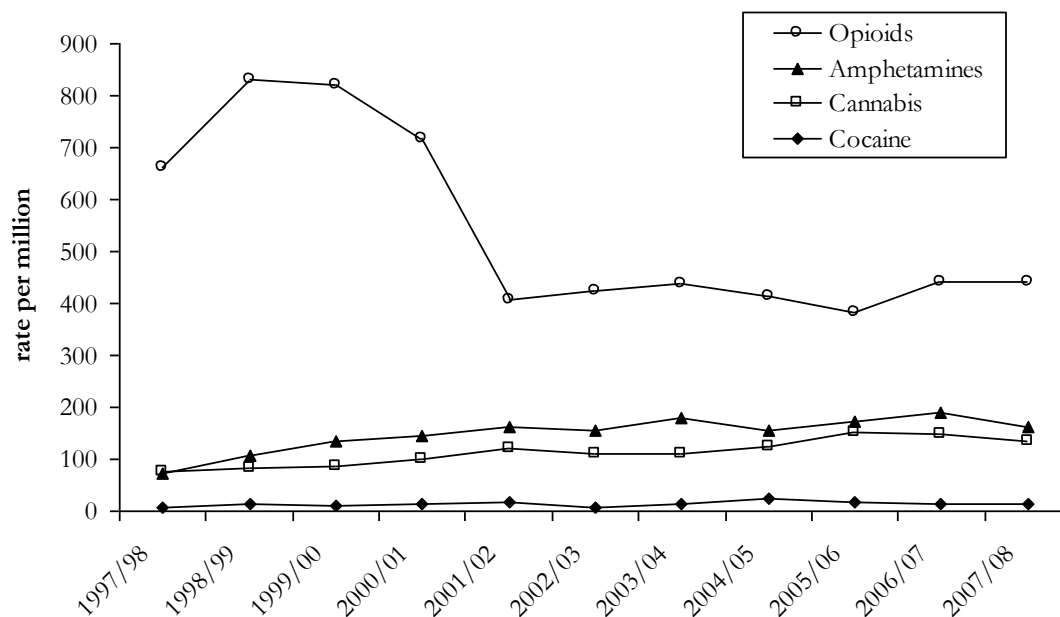
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APPENDIX A: RATE OF SUBSTANCE-RELATED ADMISSIONS* (PRIMARY DIAGNOSIS) TO HOSPITAL IN AUSTRALIA, 1997/1998 – 2007/08



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