

# South Australia

R. Sutherland and C. Breen

**SA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2015**  
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

Australian Drug Trends Series No. 159



# **SOUTH AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2015**



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

**Rachel Sutherland and Dr Courtney Breen**

National Drug and Alcohol Research Centre  
University of New South Wales

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## ABBREVIATIONS

1,4B	1, 4 butanediol
2CB	4-bromo-2, 5-dimethoxyphenethylamine
2CE	2, 5-dimethoxy-4-ethylphenethylamine
2CI	2, 5-dimethoxy-4-iodophenethylamine
2C-x	General name for the family of psychedelic phenethylamines containing methoxy groups on the 2 and 5 positions of a benzene ring (includes 2CB, 2CE and 2CI)
25B-NBOMe	1-(4-Bromo-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl)methyl]ethanamine
25C-NBOMe	1-(4-Chloro-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl)methyl]ethanamine
25I-NBOMe	1-(4-Iodo-2,5-dimethoxyphenyl)-N-[(2-methoxyphenyl)methyl]ethanamine
4-MTA	4-methylthioamphetamine
5MeO-DMT	5-methoxy-dimethyltryptamine
ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AGDH	Australian Government Department of Health
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 Islander
AUDIT	Alcohol Use Disorders Identification Test
BAC	Blood alcohol concentration
BBVI	Blood-borne viral infection(s)
BZP	Benzylpiperizine(s)
CI	Confidence intervals
CME-DIS	Client Management Engine-DASC Information System
DASC	Drug and Alcohol Services Council
DASSA	Drug and Alcohol Services South Australia
DOB	2, 5-dimethoxy-4-bromoamphetamine
DOI	2, 5-dimethoxy-4-iodoamphetamine, 'Death on Impact'
DOM	2, 5-dimethoxy-4-methylamphetamine
DMT	Dimethyltryptamine
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, text revision
DXM	Dextromethorphan
ED	Emergency Department
EDRS	Ecstasy and Related Drugs Reporting System
ERD	Ecstasy and related drug(s)
GBL	Gamma-butyrolactone
GHB	Gamma-hydroxybutyrate
GP	General practitioner
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)
LSA	<i>α</i> -lysergic acid amide
LSD	<i>α</i> -lysergic acid
MDA	3, 4-methylenedioxyamphetamine
MDEA	3, 4-methylenedioxyethylamphetamine
MDMA	3, 4-methylenedioxymethamphetamine/‘ecstasy’
MDPV	Methylenedioxypyrovalerone
ML	(or ml) Millilitres
N	(or n) Number of participants
NBOMe	N-methoxybenzyl
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
NPS	New psychoactive substances
NSP	Needle and Syringe Program
OCD	Obsessive compulsive disorder
OST	Opioid substitution treatment
OTC	Over the counter
PDI	Party Drugs Initiative
PMA	Para-methoxyamphetamine
PPA	Price, purity and availability
RAH	Royal Adelaide Hospital
REU	Regular ecstasy users(s)
ROA	Route of administration
RPU	Regular psychostimulant users(s)
SA	South Australia
SAPOL	South Australia Police
SEN	Simple Expiation Notice
SD	Standard deviation
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
STI	Sexually transmitted infection
TFMPP	3-trifluoromethylphenylpiperazine
WHO	World Health Organization

## GLOSSARY OF TERMS

Binge	Use over 48 hours without sleep
Eightball	3.5 grams
Halfweight	0.5 gram
Illicit	Illicit refers to pharmaceuticals obtained from a prescription in someone else's name, e.g. through buying them from a dealer or obtaining them from a friend or partner
Indicator data	Sources of secondary data used in the EDRS (see <i>Method</i> section 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
Session	A period of continuous use without sleeping in between
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 sixteenth year in which data has been collected in South Australia (SA). 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), ketamine, *d*-lysergic acid (LSD), and 3,4-methylenedioxyamphetamine (MDA). It also examines the demographic characteristics and patterns of drug use among regular psychostimulant users (RPU), 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 psychostimulant users (RPU); (b) surveys with key experts (KE) who have contact with RPU through the nature of their work; and (c) the analysis of existing data sources that contain information on ecstasy and related drugs (ERD). The EDRS surveys are not representative of psychostimulant users in the general population. The RPU 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 RPU in Adelaide and in regional areas.

### Demographic characteristics of regular psychostimulant users

One hundred participants were recruited to the 2015 sample. As in previous years, the RPU interviewed were young, with a median age of 20. Three-fifths (58%) of the participants were male. Seventeen percent of the sample reported being in full-time employment with a mean income of \$505 per week. Most participants were well educated; over two-fifths (44%) of the sample had completed some kind of post school qualification, and about one-third (35%) were current students. The large majority (89%) of the sample identified as heterosexual and 4% were currently undergoing treatment for their drug use. The 2015 sample were generally similar to participants in 2014; however, there was a significant increase in the proportion of participants who had completed a trade/technical course.

### Patterns of drug use among participants

Cannabis remained the main drug of choice nominated by participants, closely followed by ecstasy and then alcohol. Aside from ecstasy, alcohol was the most commonly used drug among RPU, followed by cannabis and tobacco. As in 2014, polydrug use was common among this sample, with participants having tried a mean of ten different drugs in their lifetime, and seven within the preceding six months. In 2015, there were significant increases in the lifetime and recent use of amyl nitrate and benzodiazepines, as well as a significant increase in the recent use of antidepressants.

One-third (32%) of RPU reported recent bingeing on ecstasy or other related drugs in 2015. Among those who had binged for over 48 hours, alcohol emerged as the drug most commonly used in a binge session, closely followed by ecstasy and tobacco.

Injecting drug use remained low in 2015, with only two participants reporting that they injected any drug within the preceding six months.

## **Ecstasy**

The parameters of ecstasy use remained fairly consistent in 2015; the reported median age of first use, 'average' and 'most' amount used in a typical session, and median days of use in a six month period all remained stable from 2014. The proportion of participants who reported using more than one pill in a typical session also remained stable in 2015, as did the proportion of RPU who had consumed ecstasy in a binge session. Swallowing was the main route of administration (ROA) for ecstasy pills, capsules and crystals, while snorting was the main ROA for ecstasy powder. RPU largely reported being at a nightclub the last time they consumed ecstasy.

The proportion of participants who reported using other drugs 'with ecstasy' remained stable in 2015, as did the use of other drugs to 'come down' from ecstasy. Cannabis was the most common drug used to come down from ecstasy, while alcohol was the most common drug used in combination with ecstasy.

Despite the parameters of ecstasy use remaining relatively stable in 2015, there does appear to have been some diversification in the ecstasy market. That is, although the majority of RPU continued to use ecstasy pills, there was a significant increase in the lifetime use of MDMA crystal (62% in 2015 vs. 44% in 2014) and a non-significant increase in the lifetime (74% in 2015 vs. 65% in 2014) and recent (49% in 2015 vs. 37% in 2014) use of ecstasy capsules. In order to accurately capture this diversifying market, in 2015 participants were asked to report on the price, purity and availability (PPA) of ecstasy 'pills, powder and caps' separately to MDMA crystals.

The reported price of ecstasy remained stable in 2015, at \$20 for a pill. This was confirmed by three-fifths of the sample who reported that price had remained stable over the preceding six months. The median price of MDMA crystal was \$170 for a gram. Availability continued to be considered 'easy' or 'very easy' by participants. The largest portion of RPU reported that current purity of ecstasy (pills, powder and caps) was medium, while the purity of MDMA crystal was perceived as high; this was largely reported to have remained stable over the six months preceding interview. In contrast, data from the Australian Crime Commission (ACC) reported that the median purity of South Australian Police (SAPOL) seizures of phenethylamines remained low and stable in 2013/14 at 13.3% (compared to 14.3% in 2012/13).

Ecstasy was generally purchased for both self and others (58%), with RPU reporting that they had purchased ecstasy 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 14% purchasing ecstasy between 13–24 times in that period. RPU obtained a median of six pills on the last occasion of purchase, and mainly purchased ecstasy from friends.

## **Methamphetamine**

In 2015, lifetime and recent use of all three forms of methamphetamine remained stable. The frequency of recent crystal methamphetamine use doubled (to 12 days in the past six months), although this was not statistically significant. Frequency of use for powder and base methamphetamine remained relatively low and stable in 2015. In the six months prior to interview, smoking emerged as the preferred ROA for both base and crystal methamphetamine, while snorting was the preferred method for administering methamphetamine powder.



The reported last median price of a point of powder, base and crystal methamphetamine all remained relatively stable in 2015, at \$50, \$90 and \$65 respectively. The price of all three forms of methamphetamine was largely reported to have remained stable over the preceding six months.

Reports regarding the purity of methamphetamine were mixed; however, the perceived purity of all three forms of methamphetamine was largely considered to be high or medium. In addition, seizures analysed by SAPOL revealed that the median purity of methamphetamine remained relatively stable at 59.7% (compared to 54.6% in 2012/13). All forms of methamphetamine were considered easy to very easy to obtain, and participants reported that this had remained stable within the last six months.

The largest proportion of participants reported that they purchased powder and crystal methamphetamine from friends, while all participants reported purchasing base methamphetamine from a known dealer. All three forms of methamphetamine were most commonly obtained at a private home.

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

## **Cocaine**

In 2015, lifetime and recent use of cocaine remained stable at 65% and 45% respectively. Among those who had used cocaine in the six months preceding interview, frequency of use remained low and stable at a median of three days.

The median price paid for a gram of cocaine increased slightly to \$350, although the majority of those able to answer perceived that the price had remained stable in the six months preceding interview. The purity of cocaine was largely perceived as medium, and this was reported to have remained stable over the past six months. In contrast, seizures analysed by SAPOL revealed that the median purity of cocaine in 2013/14 had almost halved compared to 2012/13. The current availability of cocaine was largely perceived as 'easy', with the majority of participants reporting that this had remained stable in the six months preceding interview.

## **LSD**

Thirty-seven percent of the participant sample in 2015 reported recent use of LSD, which was stable from 2014 (35%). Frequency of LSD use was stable and remained consistently low. The amount of LSD used in a typical and heavy session remained stable, and the majority of participants reported being at a private venue (own/friend's home) at last time of intoxication.

The median price of LSD increased slightly in 2015 to \$20 for a tab. The purity of LSD was perceived as high, and participants largely believed this had remained stable over the past six months. The availability of LSD remained stable in 2015, with almost equal proportions reporting that LSD was easy or difficult to obtain.

## **Cannabis**

The prevalence of cannabis use remained high in 2015, with 99% of the sample reporting lifetime use and 92% reporting use within the preceding six months. The frequency of recent cannabis use by participants remained stable in 2015, at a

median of 48 days within a six month period. Participants reported spending most of their time, while intoxicated, at their own home or at a friend's home.

The reported price for a bag of hydro/bush remained stable in 2015 (\$25), as did the availability (with participants reporting that cannabis was easy or very easy to obtain). The purity of hydro and bush cannabis was largely reported as medium, with the purity of both types of cannabis perceived as stable in the previous six months.

### **New psychoactive substances**

For the sixth year running, participants in 2015 were asked about their use of a range of new psychoactive substances (NPS). Those most recently used were 4-bromo-2, 5-dimethoxyphenethylamine (2CB), N-methoxybenzyl (NBOMe) and dimethyltryptamine (DMT). Recent use of 2CB increased significantly in 2015 (22% vs. 10% in 2014;  $p=0.004$ ), while lifetime and recent of all other NPS remained stable.

It is interesting to note that, despite the resurgence of the ecstasy market over the past few years, over half (52%) of the sample still reported the use of 'any' NPS in the six months preceding interview. This suggests that participants will continue to experiment with a range of different drugs, regardless of what is happening in the ecstasy market.

### **Other drugs**

#### ***Ketamine***

Over a fifth (22%) of the sample reported lifetime use of ketamine and 4% reported use in the six months preceding interview (both stable from 2014).

#### ***GHB***

Seven percent of RPU reported lifetime use of GHB and 4% reported use in the six months preceding interview (both stable from 2014).

#### ***MDA***

Seventeen percent of RPU reported lifetime use of MDA and 8% reported use in the six months preceding interview, both of which remained stable from 2014.

#### ***Mushrooms***

Nineteen percent of participants reported recent use of 'magic mushrooms', although frequency remained low at a median of two days in the preceding six months.

#### ***Alcohol***

In 2015, the entire participant sample (100%) reported recent use of alcohol; frequency declined slightly to a median of 33 days in a six month period ( $p>0.05$ ). A number of KE considered alcohol to be a particularly problematic drug due to its widespread prevalence, availability and social acceptability.

#### ***Tobacco***

Ninety-four percent of RPU reported lifetime use of tobacco and 86% reported use in the six months preceding interview, both of which remained stable from 2014. The proportion of recent tobacco users who reported daily use also remained stable in 2015 (51% versus 49% in 2014), although this continues to greatly exceed the daily smoking prevalence rate in the general South Australian population aged 14 years and over.

### ***E-cigarettes***

Almost three-quarters (74%) of RPU reported they had used electronic cigarettes within their lifetime. Sixty-four percent of the sample reported that they had recently used electronic cigarettes, and they had done so on a median of 5.5 days (range=1–180).

### ***Inhalants***

Recent use of nitrous oxide remained stable in 2015, with 16% of the sample reporting use within the preceding six months. There was a significant increase in the recent use of amyl nitrate use (29% in 2015 versus 7% in 2014;  $p<0.001$ ). Frequency of use remained low for both inhalants.

### ***Pharmaceutical drugs***

There were significant increases in the lifetime and recent use of illicit benzodiazepines in 2015. The lifetime and recent use of other un-prescribed medications (i.e. antidepressants, pharmaceutical stimulants, OTC codeine, OTC stimulants, antipsychotics, OST medications and other opioids) remained stable in 2015.

### ***Steroids***

Four percent of RPU reported lifetime use of steroids, and two participants reported that they had used steroids on a median of 14 days (range=4–24) within the preceding six months.

### **Health-related issues**

The prevalence of recent (past 12 month) stimulant and depressant overdose remained stable in 2015. Overall, 38% of RPU reported that they had overdosed on either a stimulant or depressant drug in the 12 months preceding interview. When analysing this data it is important to keep in mind that this is self-report data, with overdose defined as symptoms that occurred “outside your normal drug experience, or where professional assistance would have been helpful”.

Fifteen participants reported having accessed professional help for a drug and alcohol related issue in the six months prior to interview, and an additional 16 participants reported that they had thought about seeking help for their drug and alcohol use. Ninety-five percent of the sample reported that they had utilised a health service (for any reason) in the preceding six months and this was most commonly a general practitioner.

The proportion of clients attending Drug and Alcohol Services South Australia (DASSA) treatment services, with ecstasy as the primary drug of concern, remained stable in 2015 and accounted for a very small proportion of total attendances. Alcohol dominated as the primary drug of concern for the largest proportion of total clients to DASSA treatment services, followed by amphetamines, cannabis, opioid analgesics and heroin.

Telephone calls made to the SA Alcohol and Drug Information Service (ADIS) remained relatively stable for alcohol, ecstasy, cannabis and cocaine; increased for methamphetamine; and decreased for opioids.

In 2015, 42% of the participants were assessed to be 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. Additionally, 41% of the sample reported that they had experienced a mental health problem (other than drug dependence) in

the six months preceding interview, which was a significant increase from 2014 (25%;  $p=0.02$ ).

## **Risk behaviour**

### ***Injecting risk behaviour***

Five percent of the sample reported that they had ever injected any drug. Two participants reported recently injecting any drug in 2015; no participants reported sharing needles or other injecting equipment in the six months preceding interview.

### ***Sexual risk behaviour***

Evidence of risky sexual behaviour was again apparent among the participant sample in 2015. Of the participants who reported having had penetrative sex with a casual partner in the last six months, large portions reported that they did not use protection during their last sexual encounter, regardless of whether they were sober or intoxicated. In addition, the vast majority of those who reported recent penetrative sex had done so while under the influence of drugs – most commonly alcohol, followed by ecstasy and cannabis. Fifty participants had undergone a sexual health check-up in the preceding year, and of these four had been diagnosed with a sexually transmitted infection (STI).

### ***Driving risk behaviour***

Eighty-nine percent of RPU reported that they had driven a vehicle in the preceding six months, and of these, 36% had driven while over the BAC limit. Three-fifths (60%) of recent drivers reported driving while under the influence of drugs, most commonly cannabis and ecstasy.

### ***Alcohol risk behaviour***

The Alcohol Use Disorders Identification Test (AUDIT) is a brief screening tool which is used to identify individuals with alcohol problems. Eighty-one percent of the sample scored eight or more; indicating hazardous alcohol intake.

### ***Stimulant dependence***

One-third (34%) of RPU scored 3 or above on the ecstasy severity of dependence scale (SDS); these are levels which may be considered indicative of problematic dependent ecstasy use. Among those who answered the methamphetamine SDS, 52% obtained a score of 4 or above; these are levels which may be considered indicative of amphetamine dependence.

### ***Law enforcement-related trends***

The prevalence of past month criminal activity among RPU remained stable in 2015, at 37%. Drug dealing continued to be the most common offence which had been committed, followed by property crime. Fraud and violent crime remained low among RPU. The number of participants reporting past year arrest remained low and stable.

## **Special topics of interest**

### ***Dark web marketplaces***

In 2015, participants were asked about their online purchasing of drugs. Almost two-thirds (65%) of RPU reported having friends that had purchased a drug online in their lifetime; however, the proportion of participants who had bought drugs online themselves was considerably lower. Twelve percent of RPU reported that they had ever purchased a drug online, and 12% reported that they had purchased a drug

online in the year preceding interview. Participants most commonly reported purchasing drugs from dark net marketplaces, from both Australian and international retailers. The most common drugs purchased online were LSD and ecstasy.

### ***NPS health harms***

The majority (61%) of participants who had used NPS reported that they had not experienced any adverse effects when using these substances. Among those who had experienced adverse effects, the most common symptoms were paranoia, being restless or anxious, overheating and nausea/vomiting.

### ***NPS legality***

Knowledge regarding the legality of 2CB, 2CI, DMT, mephedrone and NBOMe was mixed. Although few participants believed that any of these substances were legal, large portions of the sample reported that they were unsure of their legal status.

### ***Cognitive enhancing substances***

Cognitive enhancing substances (CEs) are drugs that have the potential to improve intellectual ability across various cognitive domains. In 2015, 54% of the sample reported using CEs in the last six months, the most common being coffee and energy drinks. Participants most commonly reported using CEs to offset sleep deprivation (37%) and decrease fatigue (35%). Among participants who had used CEs in the preceding six months, just under one third (n=17, 32%) reported experiencing negative side effects on the last occasion of use.

## **Conclusions**

The results reported here describe trends in the use of ecstasy and related drugs (ERD) in 2015 in Adelaide, South Australia, and provide comparisons with the findings of the 2014 study. Many characteristics of ERD in the current study were comparable to previous years and remained stable. Indeed, the main findings from the 2015 EDRS seem to be centred on the diversification of the ecstasy market and the ongoing development of the NPS market. More specifically, although pills continue to be the most dominant form of ecstasy used by RPU, both ecstasy capsules and MDMA crystal appear to be becoming increasingly popular. In addition, the NPS market has established itself as an ongoing and significant part of Australia's recreational drug scene, with 52% of RPU reporting that they had used some form of NPS in the six months preceding interview. It does, however, remain a highly dynamic market, with the popularity of specific NPS changing considerably over time. In 2015, 2C-B, NBOMe and DMT were the commonly used NPS among RPU in Adelaide.

## **Implications**

The findings from the 2015 SA EDRS have policy and research implications, and several recommendations are outlined below.

- There remain concerns about the contents of 'ecstasy' pills, particularly in the context of the growing NPS market. Indeed, a number of suspected 'ecstasy' overdoses in Australia highlight the importance of promoting harm reduction messages among RPU. For example, avoid mixing pills with other substances; keep hydrated (but don't consume more than one pint/two cups per hour); look after your friends and seek help if needed.
- Although pills remain the dominant form of ecstasy being used by RPU, there has been a diversification in the use of other forms of ecstasy. In particular, ecstasy capsules and MDMA crystals appear to be becoming increasingly popular among RPU. The PPA of MDMA crystals was found to be different to

that of pills, powder and capsules and as such it is important that MDMA crystal continues to be monitored separately to the other forms of ecstasy.

- The use of new psychoactive substances remains popular among RPU. Given the unknown health and behavioural consequences of using such drugs, it is essential that we continue to monitor this market and assess the associated risks.
- Alcohol and tobacco use remain highly prevalent among this sample, with the majority of RPU consuming alcohol at levels considered to be hazardous. The high levels of tobacco use suggest that although rates of use have reduced in the general population, current public health campaigns and policies have failed to reduce smoking levels among RPU. There remains a clear need to focus interventions targeting tobacco use among this population.
- Poly drug use remains common among RPU, with the large majority of participants reporting that they used other drugs in combination with ecstasy. Simultaneous consumption of different drugs can have harmful and unpredictable consequences, and it is important that there is continued education regarding the harms associated with this behaviour.
- Two-fifths of the sample reported that they had overdosed on either a stimulant or depressant drug in the 12 months preceding interview. This is a serious public health concern, and it is essential that education and harm reduction be developed to address this issue.
- Increased promotion of 'safe sex' practices, and sexual health testing, is needed within this population of RPU, especially regarding casual sexual experiences.

# 1 INTRODUCTION

The EDRS evolved from the Illicit Drug Reporting System (IDRS), an ongoing annual project which has been conducted in South Australia (SA) since 1997 and in all states and territories of Australia since 2000. The purpose of the IDRS has been to provide a coordinated approach to monitoring the use of illicit drugs, in particular heroin, methamphetamine, cannabis and cocaine. It was intended to serve as an early warning system, identifying emerging trends of local and national concern in various illicit drug markets. It was designed to be sensitive to such trends, providing data in a timely fashion, rather than to describe phenomena in detail, such that it provides direction for more detailed data collection on specific issues.

In June 2000, the National Drug Law Enforcement Research Fund (NDLERF) funded a two-year trial in New South Wales and Queensland on the feasibility of monitoring emerging trends in the ecstasy and related drugs (ERD) market using the extant IDRS methodology. In addition, Drug and Alcohol Services Council (DASC), now known as Drug and Alcohol Services of South Australia (DASSA), agreed to provide funding for two years to allow the trial to proceed in this state. This component of the IDRS was known as the Party Drugs Module and the term 'party drug' was considered to include any drug that was routinely used in the context of entertainment venues such as nightclubs or dance parties, and by a population of users different to those surveyed by the main IDRS. 'Party drugs' included drugs such as 'ecstasy' (3, 4-methylenedioxymethamphetamine, MDMA), methamphetamine, LSD, ketamine, 3, 4-methylenedioxyamphetamine (MDA), and gamma-hydroxybutyrate (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 it 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 (AGDH) and the Ministerial Council on Drug Strategy provided funding, as a project under the cost shared funding arrangement. In 2006, the AGDH 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 2015 South Australian EDRS were to:

- describe the characteristics of a sample of psychostimulant users surveyed in Adelaide in 2015;
- 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;
- identify emerging trends in the ecstasy and related drug markets that require further investigation; and
- where possible, compare findings to the 2014 EDRS.

## 2 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 psychostimulant users (RPU) 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 psychostimulant users (RPU)

From 2003–2012, the sentinel population chosen to monitor trends in ERD markets has consisted of people who engaged in the regular use of the drug sold as ‘ecstasy’. The decision that regular ecstasy use should define the sentinel population of ERD users was underpinned by a couple of important factors. Firstly, ecstasy has historically been the most widely used of the group of drugs referred to as ‘party drugs’ (White, Breen & Degenhardt, 2003), and is currently the most commonly used illicit drug after cannabis (Australian Institute of Health and Welfare, 2011). Secondly, a growing market for ecstasy, i.e. tablets sold purporting to contain MDMA, has existed in Australia for more than a decade. In contrast, other drugs that fall into the class of ERD have either declined in popularity since the appearance of ecstasy in this country (e.g. LSD), fluctuate widely in availability (e.g. MDA), or are relatively new in the market and are not as widely used as ecstasy (e.g. ketamine and GHB).

It has become apparent over the past couple of years that the ecstasy market and the regularity of its consumption may be changing, which, in turn, has led to a subsequent expansion of the new psychoactive substances (NPS) market (see section 4.8 for more information). In response to such changes, the eligibility criterion for the EDRS survey was expanded in 2013 to include the recent use of other illicit psychostimulants including: MDA, methamphetamine, cocaine, ketamine, GHB, LSD, mephedrone or other NPS.

In 2015, a total of 100 regular psychostimulant users (RPU) were interviewed from March to May. Despite the expansion of the eligibility criteria, there were only ten participants who had not used ecstasy regularly in accordance with recent ecstasy use criteria. That is, the 2015 EDRS results still comprise a large amount of data from REU.

#### 2.1.1 Recruitment

Participants were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements in three entertainment-focused street magazines, one sports-based magazine and on university noticeboards. In addition, advertisements were posted on various websites (including facebook) and verbal advertisements were broadcast on one dance music based radio station. 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). On completion of the EDRS survey, participants were



asked to pass on information regarding the study to any friends or associates they believed may have been eligible to participate.

### **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 or other illicit psychoactive stimulants (i.e. MDA, methamphetamine, cocaine, ketamine, GHB, LSD, mephedrone or other stimulant NPS) 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 confidential and anonymous, and that the study would involve a face-to-face interview that would take between 30 and 60 minutes to complete. All participants were volunteers who were reimbursed \$40 for their time and travel expenses. Interviews took place in varied locations convenient to the participants. Trained research interviewers with experience and understanding of how to administer the survey questionnaire conducted all interviews. The nature and purpose of the study was explained to participants before informed consent to participate was obtained, according to ethical guidelines.

### **2.1.3 Measures**

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp et al., 1998; Topp et al., 2000), which incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij, Hall & Lee, 1992) and powder amphetamine/methamphetamine (Darke 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);
- help-seeking behaviour;
- mental and physical health;
- self-reported criminal activity;
- ecstasy and methamphetamine dependence;
- general trends in ERD markets, such as new drug types and new drug users; and
- areas of special interest including online purchasing, health issues associated with NPS use, knowledge of the legal status of NPS, and use of cognitive enhancing substances.

### **2.1.4 Data analysis**

Statistical analyses (descriptive and inferential) were performed using the Statistical Package for the Social Sciences (SPSS) for Windows, Version 22.0. Continuous, normally distributed variables were analysed using *t*-tests and means reported. Where continuous variables were skewed, medians were reported and the Mann-Whitney *U*-test, a non-parametric analogue of the *t*-test (Siegel & Castellan, 1988), was employed. Confidence intervals (CI) were calculated using an Excel spreadsheet available at <http://www.cebm.net/index.aspx?o=1023> (Tandberg). This calculation tool was an implementation of the optimal methods identified by Newcombe (1998).

## 2.2 Survey of key experts (KE)

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

The interview schedule was a semi-structured instrument that included sections on drug use patterns, drug availability, criminal behaviour, health issues and police activity. The majority of interviews took approximately 30 minutes to conduct. Notes were taken during the interview and the responses were analysed and sorted for recurring themes. Interviews were conducted via telephone between June-September 2015. KE were remunerated with a small gift (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 drug diversion, community drug and alcohol work, drug treatment services, mental health services, health promotion/information and emergency treatment. There were also a number of KE from the law enforcement sector.

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, 2007, 2010 and 2013 (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);
- data on consumer and provider arrests by drug type provided by the ACC;
- 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).

## 3 DEMOGRAPHICS

### Key Findings

- A total of 100 participants were interviewed for the EDRS survey in 2015.
- Participants were aged in their early-20s (median age of 20 years), predominantly male (58%), with the majority identifying as heterosexual (89%).
- The RPU interviewed were well educated; over two-fifths (44%) had gained post-secondary qualifications, while 35% were current students.
- Seventeen percent of the sample were currently in full-time employment, with a mean income of \$505 per week. The majority were either living in the parental/family home (52%) or renting/owned their own accommodation (46%).
- Demographic characteristics were largely unchanged from 2014, with the only significant change being in relation to tertiary education. Specifically, there was an increase in the proportion of participants who had completed a trade/technical course

### 3.1 Overview of the RPU participant sample

#### 3.1.1 Demographic characteristics of the RPU sample

In the 2015 EDRS, 100 participants were interviewed in South Australia. Eighteen percent of the EDRS sample reported they had participated in previous years (1% in 2011, 1% in 2012, 3% in 2013 and 16% in 2014). No participants reported participating in a previous SA IDRS survey of people who inject drugs.

In 2015, three-fifths (58%) of the sample interviewed were male. The mean age of the sample was 22 years (SD=4.6, range=17–43) with a median age of 20 years. The majority of participants reported their sexual identity as heterosexual (89%), and nominated English as their main language (96%). Two participants were of Aboriginal and/or Torres Strait Island (A&TSI) descent.

Two-thirds (68%) of the sample reported that they were of single status, one-quarter (27%) had a partner and 5% reported to be married or living in a de facto relationship. Just under half (46%) lived in their own (owned or rented) accommodation and 52% lived in their parents' or family's home.

The median number of years of school education completed by the sample was 12 (range=10–12), with over two-thirds (68%) of participants reporting that they had completed year 12. Over two-fifths (44%) had completed courses after school, with 7% having completed a university degree and 37% a trade/technical qualification. Seventeen percent of participants were employed on a full-time basis, a quarter (28%) were employed on a part-time/casual basis, one-third were currently students (7% full-time, 2% part-time, 26% were employed & studying) and 17% were currently unemployed. The mean weekly income was \$505 (range=\$50–1900).

Table 1, presents key demographic characteristics across time. The demographic characteristics of regular psychostimulant users recruited for the EDRS have remained relatively stable between 2011 and 2015. Demographic comparisons between the 2014 sample and 2015 sample showed a significant increase in participants who had completed a trade/technical course ( $p=0.007$ ; 95% CI: -0.30, -0.06); there were no other significant changes.

**Table 1: Demographic characteristics of RPU sample, SA, 2011–2015**

<b>Characteristic</b>	<b>2011 (N=76)</b>	<b>2012 (N=92)</b>	<b>2013 (N=100)</b>	<b>2014 (N=100)</b>	<b>2015 (N=100)</b>
<b>Age</b> (median in years)	21	22	21	21	<b>20</b>
(range)	(17–45)	(17–48)	(16–44)	(17–53)	<b>(17–43)</b>
<b>Sex</b> (% male)	68	73	75	62	<b>58</b>
<b>Sexual Identity</b> (%)					
Heterosexual	99	90	85	80	<b>89</b>
Gay male	-	3	1	2	<b>0</b>
Lesbian	-	0	6	9	<b>3</b>
Bisexual	1	7	7	7	<b>5</b>
Other	-	0	1	2	<b>3</b>
<b>English main language spoken at home</b> (%)	97	98	98	97	<b>96</b>
<b>A&amp;TSI</b> (%)	1	1	2	1	<b>2</b>
<b>Employment</b> (%)					
Not employed	22	13	13	10	<b>17</b>
Full-time	21	30	23	15	<b>17</b>
Part-time/casual	36	21	28	27	<b>28</b>
Full-time student	8	9	6	10	<b>7</b>
Part-time student	-	3	1	0	<b>2</b>
Both studying & employed <sup>#</sup>	13	23	26	36	<b>26</b>
Home duties	-	0	0	0	<b>0</b>
Other	-	1	3	2	<b>3</b>
<b>School education*</b> (median in years)	12	12	12	12	<b>12</b>
(range)	(9–12)	(8–12)	(10–12)	(9–12)	<b>(9–12)</b>
<b>Tertiary education</b> (%)					
None	45	53	51	69	<b>56</b>
Trade/Technical	28	35	25	19	<b>37**</b>
University/College	28	12	24	12	<b>7</b>
<b>Prison history</b> (%)	Not asked	7	3	4	<b>2</b>
<b>Current drug treatment</b> (%)	4	3	2	1	<b>4</b>

Source: EDRS participant interviews

\*\* $p<0.01$

## 4 CONSUMPTION PATTERN RESULTS

### Key Findings

- Cannabis remained the primary drug of choice among RPU in 2015.
- There were significant increases in the lifetime use of amyl nitrate and benzodiazepines, as well as significant increases in the recent use of amyl nitrate, benzodiazepines and antidepressants.
- Polydrug use remained common, with participants reporting that they had used an average of seven different drugs in the six months preceding interview.
- Five participants reported that they had ever injected a drug, which remained stable from 2014.
- One-third (32%) of RPU reported that they had recently binged on ecstasy and/or related drugs, which was stable from 2014 (26%). The most commonly used drugs in a binge were alcohol, ecstasy, tobacco, crystal methamphetamine and cannabis.

### 4.1 Drug use history and current drug use

In 2015, participants were asked about lifetime (i.e. ever having used) and recent (last six months) use of a broad range of drug types, including alcohol and tobacco. Table 2 presents the proportion of RPU 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 psychostimulant users are often described as polydrug users and the 2015 sample was no exception. Participants were asked about their lifetime and recent use of 23 different drug types.<sup>1</sup> Participants reported using a mean of ten (range=4–18) drug types in their lifetime and a mean of seven (range=2–14) in the preceding six months. Half (52%) of the RPU sample reported the use of ‘new psychoactive substances’ including mephedrone, ivory wave, dimethyltryptamine (DMT – a powerful hallucinogen); synthetic drugs such as 2CI, 2CB and BZP; and naturally occurring drugs, such as salvia. From 2010, the EDRS has included a section investigating the prevalence of use of these substances among this sample. Results can be found in section 4.8: ‘New psychoactive substances (NPS) use’.

Table 2 presents the proportion of RPU reporting lifetime and recent drug use across the past five years. 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. This has remained relatively constant over the years.

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

**Table 2: Lifetime and recent use of drugs among RPU, SA, 2011–2015**

	2011 N=76	2012 N=92	2013 N=100	2014 N=100	2015 N=100
<b>Alcohol</b>					
Ever used (%)	99	99	100	100	<b>100</b>
Used last six months (%)	99	99	97	100	<b>100</b>
<b>Cannabis</b>					
Ever used (%)	97	98	94	98	<b>99</b>
Used last six months (%)	92	88	85	87	<b>92</b>
<b>Tobacco</b>					
Ever used (%)	93	96	84	92	<b>94</b>
Used last six months (%)	86	85	75	82	<b>86</b>
<b>E-cigarettes<sup>#</sup></b>					
Ever used (%)	-	-	-	64	<b>74</b>
Used in last six months (%)	-	-	-	54	<b>50</b>
<b>Meth. powder (speed)</b>					
Ever used (%)	67	59	47	40	<b>30</b>
Used last six months (%)	45	24	21	13	<b>11</b>
<b>Meth. base</b>					
Ever used (%)	41	41	15	18	<b>15</b>
Used last six months (%)	24	24	11	10	<b>6</b>
<b>Crystal meth. (ice/crystal)</b>					
Ever used (%)	50	53	37	35	<b>37</b>
Used last six months (%)	43	32	28	20	<b>26</b>
<b>Cocaine</b>					
Ever used (%)	75	66	58	68	<b>65</b>
Used last six months (%)	45	37	35	45	<b>45</b>
<b>LSD</b>					
Ever used (%)	63	52	51	63	<b>51</b>
Used last six months (%)	30	19	25	35	<b>37</b>
<b>MDA</b>					
Ever used (%)	32	33	9	10	<b>17</b>
Used last six months (%)	15	9	3	3	<b>8</b>
<b>Ketamine</b>					
Ever used (%)	37	37	28	27	<b>22</b>
Used last six months (%)	8	10	6	4	<b>4</b>
<b>GHB/1,4B/GBL</b>					
Ever used (%)	26	25	12	11	<b>7</b>
Used last six months (%)	5	12	5	3	<b>4</b>

<sup>#</sup>first included in 2014

**Table 2: Lifetime and recent use of drugs among RPU, SA, 2011–2015 (continued)**

	2011 N=76	2012 N=92	2013 N=100	2014 N=100	2015 N=100
<b>Amyl nitrate</b>					
Ever used (%)	45	32	30	25	<b>46**</b>
Used last 6 months (%)	17	17	14	7	<b>29***</b>
<b>Nitrous oxide</b>					
Ever used (%)	59	52	48	33	<b>33</b>
Used last 6 months (%)	36	20	17	8	<b>16</b>
<b>Benzodiazepines<sup>#</sup></b>					
Ever used (%)	53	47	59	40	<b>58*</b>
Used last 6 months (%)	42	32	29	22	<b>37*</b>
<b>Antidepressants<sup>#</sup></b>					
Ever used (%)	28	27	20	22	<b>32</b>
Used last 6 months (%)	13	13	9	6	<b>20**</b>
<b>Pharmaceutical stimulants<sup>#</sup></b>					
Ever used (%)	49	52	43	38	<b>45</b>
Used last 6 months (%)	24	19	25	22	<b>26</b>
<b>Mushrooms</b>					
Ever used (%)	62	69	54	57	<b>57</b>
Used last 6 months (%)	24	26	19	22	<b>19</b>
<b>Heroin</b>					
Ever used (%)	16	12	9	5	<b>3</b>
Used last 6 months (%)	7	8	3	2	<b>1</b>
<b>Methadone</b>					
Ever used (%)	11	9	6	3	<b>0</b>
Used last 6 months (%)	4	1	0	1	<b>0</b>
<b>Buprenorphine</b>					
Ever used (%)	5	10	2	5	<b>0</b>
Used last 6 months (%)	5	5	0	3	<b>0</b>
<b>Other Opiates<sup>#</sup></b>					
Ever used (%)	41	29	35	31	<b>37</b>
Used last 6 months (%)	20	14	10	11	<b>21</b>

Source: EDRS interviews

<sup>#</sup> Includes both licit and illicit use

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Compared to 2014, there were a number of significant changes in consumption patterns in 2015. These included:

- higher lifetime (25% in 2014 versus 46% in 2015;  $p = 0.003$ ; 95% CI: -0.33, -0.08) and recent use (7% in 2014 versus 29% in 2015;  $p < 0.001$ ; 95% CI: -0.32, -0.12) of amyl nitrate;
- higher lifetime (40% in 2014 versus 58% in 2015;  $p = 0.02$ ; 95% CI: -0.31, -0.04) and recent use (22% in 2014 versus 37% in 2015;  $p = 0.03$ ; 95% CI: -0.27, -0.02) of benzodiazepines;
- higher recent use of antidepressants (6% in 2014 versus 20% in 2015;  $p = 0.006$ ; 95% CI: -0.23, -0.05).

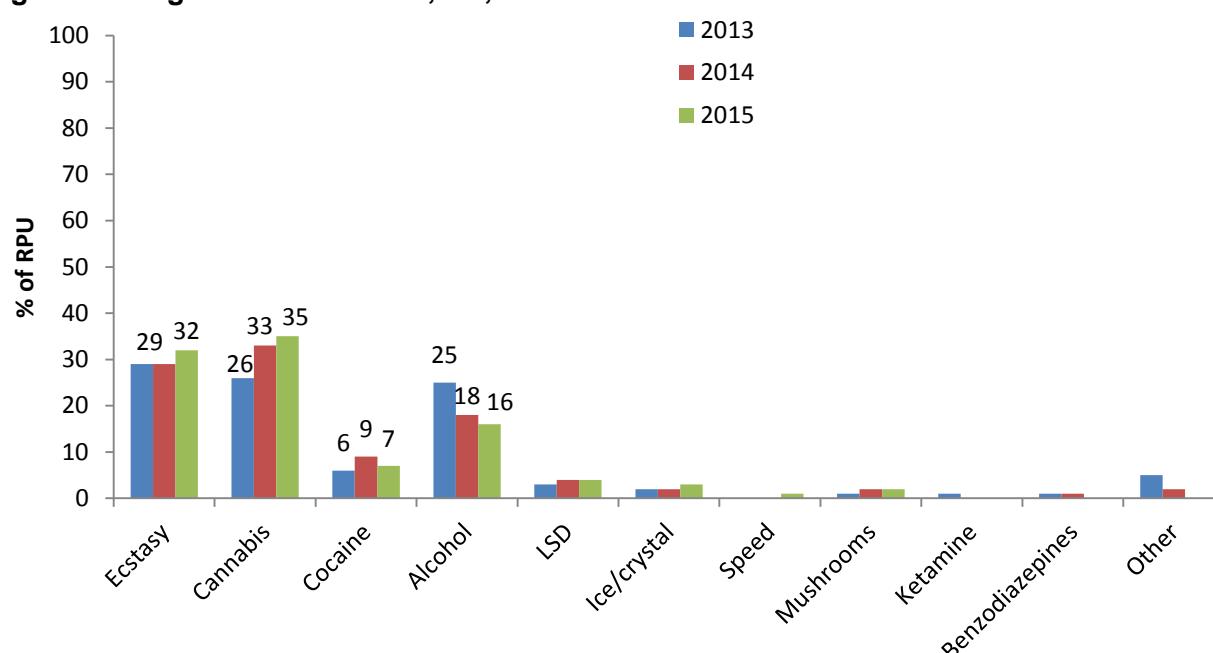
### 4.1.1 Injecting drug use

In 2015, 5% of the sample (n=5) reported having ever injected any drug, and of those two participants reported injecting in the six months prior to interview. This has remained relatively stable from 2014. See section 7.1 'Injecting risk behaviour' for further analyses on injecting and injecting-related risk behaviour.

### 4.1.2 Drug of choice and binge drug use

Figure 1 shows the main drug of choice nominated by participants across 2013–2015. In 2015, cannabis was the preferred drug of choice for 35% of the sample, followed by ecstasy (32%) and alcohol (16%). Although there were no significant changes from 2014, it can be seen that from 2013–2015 there has been an upward trend in the proportion of participants nominating cannabis as their drug of choice, and a downward trend in those nominating alcohol as their preferred drug of choice.

**Figure 1: Drug of choice of RPU, SA, 2013–2015**



**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). One-third (32%) of the sample reported bingeing on ERD within the six months prior to interview, which was stable from 2014 (26%;  $p>0.05$ ). Bingeing occurred on a median of two occasions (range=1–48) with the median length of the longest binge being 57.5 hours (range=48–216); both of which remained stable from 2014.

In 2015, alcohol emerged as the drug most commonly used in a binge session (24%), followed by ecstasy (22%), tobacco (21%), crystal methamphetamine (17%) and cannabis (16%). Other drugs which were used in a binge session are listed in Table 3, and remain relatively stable from 2014.



**Table 3: Proportion of participants reporting use of various drugs during a 'binge'<sup>#</sup> episode in the last six months, SA, 2014–2015**

Drug	Percent of whole sample to include drug in 'binge' episode in the last 6 months	
	2014 (N=100)	2015 (N=100)
Ecstasy	19	22
Meth powder	3	5
Meth base	4	1
Meth crystal	8	17
Pharmaceutical stimulants	1	1
Cocaine	3	7
LSD	5	6
MDA	1	0
Ketamine	0	0
GHB	1	0
Amyl nitrate	0	0
Nitrous oxide	2	0
Cannabis	12	16
Alcohol	20	24
<5 std drinks	5	5
>5 std drinks	15	19
Other	2	4
Benzodiazepines	1	1
Tobacco	15	21
Energy drinks	4	2
Mushrooms	1	0
2C-B	1	1
DMT	0	1

Source: EDRS participant interviews

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

\*p<0.05

### 4.1.3 Frequency of use in RPU

In 2015, participants were asked how often they had used ERD in the month preceding interview. The majority of participants reported between monthly and weekly use, although there was a significant increase in the proportion of participants who reported greater than weekly use of ERD (14% in 2015 vs. 3% in 2014;  $p=0.01$ ; 95% CI: -0.19, -0.03).

**Table 4: Frequency of ERD use in the RPU sample, SA, 2014 & 2015**

	2014	2015
	(N=100) %	(N=100) %
Not in the last month	7	7
Monthly	26	19
Fortnightly	39	41
Weekly	25	19
More than once a week	3	14*
Once a day	0	0
More than once a day	0	0

Source: EDRS interviews

\* $p<0.05$

### 4.1.4 Change in trends of ERD use

EDRS participants were asked to report if they had noticed anything new happening in relation to their drug use or their friends' drug use over the preceding six months (e.g. new drug types, patterns of use etc.). Forty-nine percent of the sample indicated that there had been some recent changes in drug use, with the two primary themes being:

- An increase in drug use ( $n=25$ ). This included an increase in the frequency of use among friends, as well as an overall increase in the number of people using drugs. Participants noted a particular increase in the use of ecstasy (with a shift away from pills and towards caps/crystal), nitrous oxide, amyl nitrate and methamphetamine.
- An increase in the number of 'new drugs' that were available, and a subsequent increase in the experimentation with such drugs ( $n=10$ ). There was considerable variation in the types of 'new drugs' reported by participants, which included 2C-B, DMT, synthetic cocaine and 'new' types of pills.

## 4.2 Ecstasy use

### Key Findings

- The median age of first ecstasy use remained stable at 17 years of age.
- There were no significant gender differences, for either age of first use or age of first regular use.
- Participants reported using ecstasy on a median of 13 days in the preceding six months, remaining stable from 2014.
- The proportion of participants who reported using more than one pill in a typical session remained stable in 2015, as did the proportion of RPU who had consumed ecstasy in a binge session.
- There was a significant increase in the lifetime use of MDMA crystal, while lifetime use of pills, powder and capsules remained relatively stable from 2014.
- Swallowing was the primary route of administration for ecstasy pills, capsules and crystals, while snorting was the main ROA for ecstasy powder.
- The most common location at which participants had last used ecstasy was a nightclub.

### 4.2.1 Ecstasy use among RPU

Table 5 summarises the ecstasy use patterns of the participant sample from 2011 to 2015. The median age at which participants first tried ecstasy was 17 years (range=13–35; n=100), with 81% of the sample being 18 or under. Participants reported that regular (at least monthly) ecstasy use first occurred at the median age of 18 years (range=14–38 years). There were no significant differences in terms of gender, for either age of first use or age of first regular use.

In 2015, participants were asked to provide information on their use of ecstasy pills, powder, capsules and crystal MDMA.<sup>2</sup> Participants reported using ecstasy (pills, powder, capsules or crystal) on a median of 13 days (range=1–96; n=99) within the previous six months; this was stable from 2014.

Forty-seven percent of the sample reported using ecstasy (any form) once a fortnight or less (45% reported such use in 2014). Twenty-eight percent of participants reported using ecstasy between fortnightly and weekly (26% reported such use in 2014). The proportion of participants who reported use of ecstasy more than weekly was 24% (19% in 2014).

Participants reported that the median number of ecstasy tablets used in a typical session was 2.75 tablets (range=1–10; n=94) 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=1–23; n=94) reported by participants in 2014. The majority (81%) of RPU reported that they typically used more than one tablet and just under a half (48%) reported using over two tablets per session. One-fifth (22%) reported having binged on ecstasy in the preceding six months, which was stable from 2014 (19%). Among those who had reported

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<sup>2</sup> This is the third year that we have distinguished MDMA crystals as a form of ecstasy.

bingeing on ecstasy, the longest binge session reported was a mean of 62 hours (range=48–108 hours).

**Table 5: Patterns of ecstasy use among the participants, SA, 2011–2015**

	2011 (N=76)	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)
<b>Median age first used ecstasy (years)</b>	17	17	18	17	<b>17</b>
<b>Median age first used ecstasy regularly (years)</b>	19	18	18	18	<b>18</b>
<b>Median days used ecstasy in the last six months (range)</b>	12 (6–120)	13 (5–74)	12 (1–78)	12 (1–96)	<b>13 (1–96)</b>
<b>Median tablets in typical session<sup>#</sup> (range)</b>	2.5 (1–10)	2.5 (0.75–15)	2 (1–8)	2 (0.5–12.5)	<b>2.75 (1–10)</b>
<b>Typically use &gt;1 tablets (%)</b>	83	92	82	82	<b>81</b>
<b>Recently binged<sup>##</sup> on ecstasy (%)</b>	40	43	33	19	<b>22</b>
<b>Use other drugs with ecstasy (%)</b>	90	98	91	94	<b>95</b>
<b>Use other drugs to come down from ecstasy (%)</b>	67	53	61	55	<b>63</b>

Source: EDRS participant interviews.

<sup>#</sup> A session was defined as a period of continuous drug use

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

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

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

The majority of participants (95%) reported that on their last occasion of use, they had used other drugs in combination with ecstasy; this remained stable from 2014 (94%). The most commonly used drug in this context was alcohol (66%), although this had declined significantly from 2014 (82%;  $p=0.016$ ; 95% CI: 0.04, 0.28).

Just over three-fifths (63%) of the sample reported that, on their last episode of ecstasy use, they had used other drugs to come down from ecstasy. This remained stable from 2014. Cannabis was by far the most common drug used by participants to come down from ecstasy, with a few participants reporting the use of tobacco (6%) and benzodiazepines (5%).

**Table 6: Proportion of participants reporting use of other drugs in combination with, and coming down from, ecstasy: by drug type, SA, 2014 & 2015**

Drug	Used in combination with ecstasy (% of participants)		Coming down from ecstasy (% of participants)	
	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)
Methamphetamine powder	1	3	0	0
Methamphetamine base	0	0	0	0
Methamphetamine crystal	5	12	0	0
Pharmaceutical stimulants	2	0	0	0
Cocaine	5	9	0	0
LSD	1	2	0	0
NPS	0	1	0	0
Mushrooms	0	0	0	0
Ketamine	1	0	0	0
GHB	2	0	0	0
Amyl nitrate	1	2	0	0
Nitrous oxide	0	3	0	0
Cannabis	46	49	45	59
Alcohol	82	66*	4	0
<5 standard drinks	8	0	4	0
>5 standard drinks	74	66	0	0
OTC codeine	0	1	0	2
Benzodiazepines	2	0	6	5
Tobacco	50	61	9	6
Energy drinks	8	10	0	0
Other	4	3	3	1
Any	94	95	55	63

Source: EDRS participant interviews

\* $p < 0.05$

#### 4.2.3 Forms of ecstasy and route of administration

In regards to lifetime use of ecstasy, pills were the commonly used form (97%), followed by capsules (74%), MDMA crystal (62%) and powder (27%). The lifetime use of pills, powder and capsules remained relatively stable from 2014, with a significant increase in the lifetime use of MDMA crystal (44% in 2014 versus 62% in 2015;  $p=0.02$ ; 95% CI: -0.31, -0.04). Similarly, pills were by far the most commonly used form of ecstasy in the six months preceding interview (94%), followed by capsules (49%), MDMA crystal (41%) and powder (14%).

Swallowing and snorting were the most common routes of administration across all forms of ecstasy (see Table 7); very few participants reported that they had smoked or shelved/shafted ecstasy in the six months preceding interview and no participants reported having injected ecstasy in the past six months.

The vast majority of participants (87%) nominated oral ingestion as their main route of ecstasy administration, which remained stable from 2014 (85%). Eleven participants reported snorting as their main ROA (15% in 2014), and no participants reported smoking or injecting as their main ROA.

**Table 7: Prevalence and ROA of ecstasy among RPU, SA, 2014 & 2015**

%	Pills		Powder		Caps		Crystal	
	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)
<b>Lifetime use</b>	100	<b>97</b>	32	<b>27</b>	65	<b>74</b>	44	<b>62*</b>
<b>Recent use</b>	96	<b>94</b>	18	<b>14</b>	37	<b>49</b>	36	<b>41</b>
<b>ROA (recent)</b>								
Swallow	94	<b>92</b>	11	<b>5</b>	33	<b>45</b>	27	<b>32</b>
Snort	51	<b>39</b>	16	<b>11</b>	11	<b>14</b>	22	<b>19</b>
Smoke	2	<b>0</b>	0	<b>0</b>	1	<b>1</b>	0	<b>2</b>
Shelve/Shaft	3	<b>2</b>	0	<b>0</b>	0	<b>1</b>	0	<b>0</b>
Inject	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>	0	<b>0</b>

**Source:** EDRS participant interviews

\* $p < 0.05$

Table 8 presents the types of locations that participants 'last used' ecstasy. It should be noted that participants were asked to consider where they were for the majority of the time they were 'under the influence' of the drug, not where they were when they 'took [administered] the drug'. The most common location of last ecstasy use by participants while intoxicated in the six months prior to interview was at a nightclub, followed by a friend's home and live music event.

**Table 8: Location of last ecstasy use by participants, SA, 2015**

	Where did you spend the most time while intoxicated?	
	Pills, powder, caps % (n=98)	MDMA crystal % (n=32)
<b>Home</b>	<b>7</b>	<b>6</b>
<b>Friend's home</b>	<b>10</b>	<b>19</b>
<b>Car</b>	<b>1</b>	<b>0</b>
<b>Nightclub</b>	<b>60</b>	<b>44</b>
<b>Private party</b>	<b>6</b>	<b>3</b>
<b>Pub</b>	<b>4</b>	<b>0</b>
<b>Rave</b>	<b>1</b>	<b>6</b>
<b>Live music event</b>	<b>7</b>	<b>19</b>
<b>Outdoors</b>	<b>2</b>	<b>3</b>
<b>Other</b>	<b>1</b>	<b>0</b>

**Source:** EDRS participant interviews

## 4.2.5 Use of ecstasy in the general population

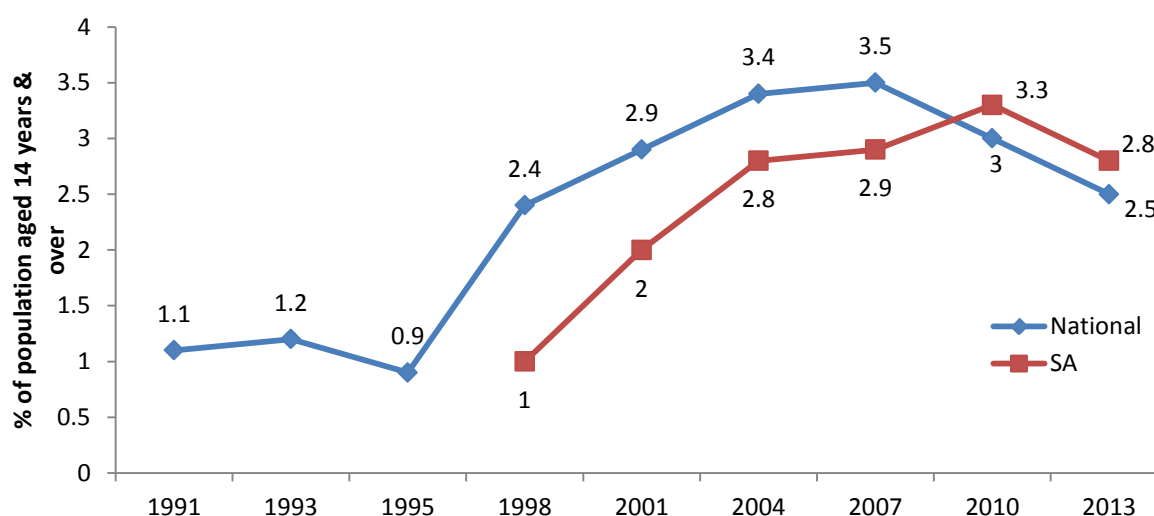
The Australian Institute of Health and Welfare (AIHW) has conducted household surveys over the last couple of decades and collected data on the prevalence of use of various illicit drugs among the general population of Australia.

Figure 2 shows the long-term trend in the prevalence of ecstasy use in Australia from 1991 to 2013 and in South Australia from 1998 to 2013. As can be seen, from 1995–2007 there was a rapid increase in the prevalence of past 12 month ecstasy use. However, in 2010 (for the first time since 1995) there was a statistically significant decline in recent ecstasy use and this downward trend continued in 2013. The decline in ecstasy use in 2013 was only significant for females (from 2.3% to 1.8%) and for people aged 30–39 (3.9% to 2.6%) (AIHW, 2014). Recent use of ecstasy in 2013 remained most prevalent among 20 to 29 year olds (8.6%). In general, males were more likely to be recent users of ecstasy, except among 12 to 17 year olds (males 0.5% versus females 1.3%) (AIHW, 2014).

Figure 2 also shows that in 2013, for the second year running, South Australia had a slightly higher prevalence of recent use of ecstasy than among the national population (2.8% versus 2.5%). The prevalence of recent use of ecstasy in SA declined slightly in 2013.

In 2013, 10.9% of the Australian population aged 14 years and older had ever used ecstasy, which was stable from 10.3% in 2010. Lifetime use of ecstasy was highest among those in the 30–39 (23%) and 20–29 year age group (22%) (AIHW, 2014).

**Figure 2: Prevalence of recent\* ecstasy use in Australia and South Australia, 1991–2013**



**Sources:** National Campaign Against Drug Abuse Household Survey 1991, 1993; National Drug Strategy Household Survey 1995, 1998, 2001, 2004, 2007, 2010 (Australian Institute of Health and Welfare, 2005, 2008, 2011, 2014)

\* 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 2013 reported that they had typically obtained ecstasy from a friend or acquaintance (63%), followed by a dealer (30%). The most common place to use ecstasy was at raves/dance parties (64%), with large proportions also using at private parties (55%), public establishments (49%) and private homes (47%) (AIHW, 2014). This remained relatively stable from 2010.

## 4.3 Methamphetamine use

### Key Findings

- Lifetime and recent use of 'any' methamphetamine remained stable in 2015 (at 53% and 33% respectively).
- Crystal methamphetamine remained the most commonly used form of methamphetamine in the six months preceding interview (26%), followed by powder methamphetamine (11%) and base methamphetamine (6%).
- The frequency of crystal methamphetamine use doubled in 2015 to 12 days of use in the past six months, although this was not statistically significant. Frequency of use for powder and base methamphetamine remained relatively low and stable in 2015.
- Median age of first use remained stable for all three forms of methamphetamine.
- Smoking was the most common ROA for crystal and base methamphetamine, while swallowing was the main route of administration for methamphetamine powder.

### 4.3.1 Methamphetamine use among RPU

Over half (53%) of participants reported having used at least one form of methamphetamine (speed, base and/or ice/crystal) at some stage during their lifetime, while one-third (33%) reported use within the six months preceding interview (both stable from 2014). The median number of days used methamphetamine was 7 (range=1–120).

The EDRS continued to distinguish between three forms of methamphetamine in 2015. For a detailed commentary on the reasons for the differentiation into three distinct types, see White, Breen and Degenhardt (2003). The three forms of methamphetamine discussed are powder, base and crystal methamphetamine.

### 4.3.2 Methamphetamine powder (speed)

Table 9 summarises the patterns of use of methamphetamine powder among the participants in 2015, with 2014 data for comparison. In 2015, participants reported having first used powder at a median of 18 years (range=14–25 years). Thirty percent of participants reported lifetime use, and 11% of participants reported using methamphetamine powder in the six months prior to interview (both relatively stable from 2014).

With respect to the 'average' and 'most' amounts used in a single session, the greatest proportion of participants provided information in terms of points. The median amount of points used in a session was 1.5 (range=1–2), and the 'most' amount of powder methamphetamine used in a single session reported by participants was also a median of 1.5 points (range=1–2). Compared to 2014, the 'average' and 'most' quantities reported remained relatively stable. Readers are reminded, however, that the measure of a 'point' is likely to be variable and unreliable as a measure of quantity actually consumed.

Half of the users of methamphetamine powder reported swallowing (50%) as a route of administration in the six months prior to interview. Forty percent reported having snorted and 20% reported having smoked powder in that same time period. There were no significant changes from 2014. The proportion of participants who reported bingeing on powder methamphetamine remained stable in 2015 (5% versus 3% in 2014).



**Table 9: Patterns of methamphetamine powder use and ROA among RPU, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	18 (15–21)	<b>18 (14–25)</b>
<b>Ever used (lifetime) (%)</b>	40	<b>30</b>
<b>Used in last 6 months (%)</b>	13	<b>11</b>
<b>Days used in last 6 months<sup>#</sup>: median (range)</b>	3 (1–72)	<b>1 (1–24)</b>
<b>Average amount used in a single session<sup>^</sup>:</b>		
Points: median (range; n)	2 (1–6; 6)	<b>1.5 (1–2; 4)</b>
<b>Most amount used in a single session<sup>^</sup>:</b>		
Points: median (range; n)	2 (1–20; 4)	<b>1.5 (1–2; 4)</b>
<b>Routes of administration recent use<sup>#</sup> (%):</b>	<b>(n=13)</b>	<b>(n=10)</b>
Swallowing	39	<b>50</b>
Snorting	54	<b>40</b>
Smoking	39	<b>20</b>
Injecting	0	<b>0</b>

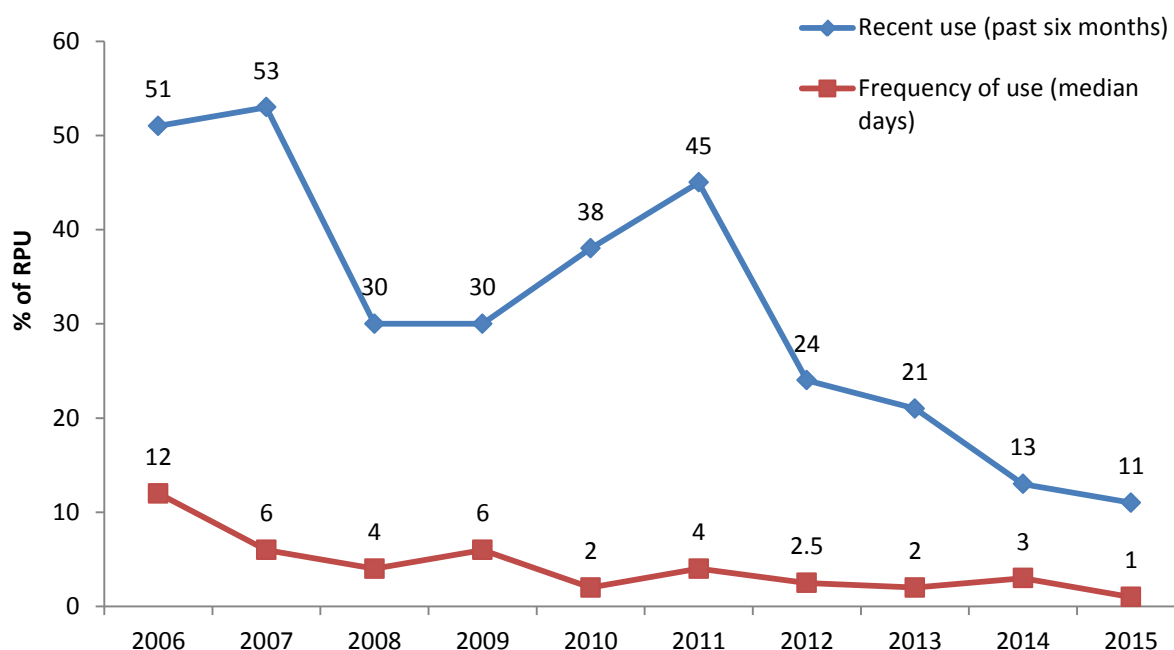
**Source:** EDRS participant interviews

<sup>#</sup> Of those who reported use in the last 6 months

<sup>^</sup> A session was defined as a period of continuous drug use without sleep, in the last 6 months

Looking at trends over time (see Figure 3), it can be seen that there was a sharp drop in the proportion of participants reporting recent use of powder methamphetamine in 2008. From 2009–11, it appeared that the use of methamphetamine powder was on the rise; however, this upward trend has reversed since 2011 with 11% of RPU reporting recent use of methamphetamine powder in 2015 (the lowest prevalence of recent methamphetamine powder use in the history of the SA EDRS). The median number of days used in the last six months has remained relatively stable at one day.

**Figure 3: Methamphetamine powder – trends in recent use and median days used, SA, 2006–2015**



Source: EDRS participant interviews

### 4.3.3 Methamphetamine base

Table 10 summarises the patterns of use of methamphetamine base reported by participants in 2015. The median age of first use was 18 years (range=12–39). Fifteen percent of participants reported lifetime use, and 6% of participants reported using methamphetamine base in the six months prior to interview (both stable from 2014).

With respect to the ‘average’ and ‘most’ amounts used in a session of use, most participants provided information in terms of ‘points’. The ‘average’ amount of base methamphetamine used in a session reported by participants was a median of one point (range=1–3.5) and the median ‘most’ amount of powder methamphetamine used in a session was two points (range=1–3).

Participants who had used methamphetamine base in the last six months reported smoking (100%) and swallowing (17%) base. Readers should note that smoking base methamphetamine overtook snorting in 2007 and remained the second most popular ROA until 2010. In 2011, smoking equalled swallowing as the main ROA for methamphetamine base and in 2012–2015 smoking emerged as the most dominant ROA. Only one participant reported bingeing on base methamphetamine in 2015.

**Table 10: Patterns of methamphetamine base use and ROA among RPU, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	19 (16–26)	<b>18 (12–39)</b>
<b>Ever used (lifetime) (%)</b>	18	<b>15</b>
<b>Used in last 6 months (%)</b>	10	<b>6</b>
<b>Days used in last 6 months<sup>#</sup>: median (range)</b>	5 (2–18)	<b>5 (1–24)</b>
<b>Average amount used in a single session<sup>^</sup>:</b>		
Points: median (range; n)	1 (0.5–2; 5)	<b>1 (1–3.5; 5)</b>
<b>Most amount used in a single session<sup>^</sup>:</b>		
Points: median (range; n)	2.5 (0.5–8; 6)	<b>2 (1–3; 4)</b>
<b>Routes of administration recent use<sup>#</sup> (%):</b>	<b>(n=9)</b>	<b>(n=6)</b>
Swallowing	33	<b>17</b>
Snorting	0	<b>0</b>
Smoking	78	<b>100</b>
Injecting	11	<b>0</b>

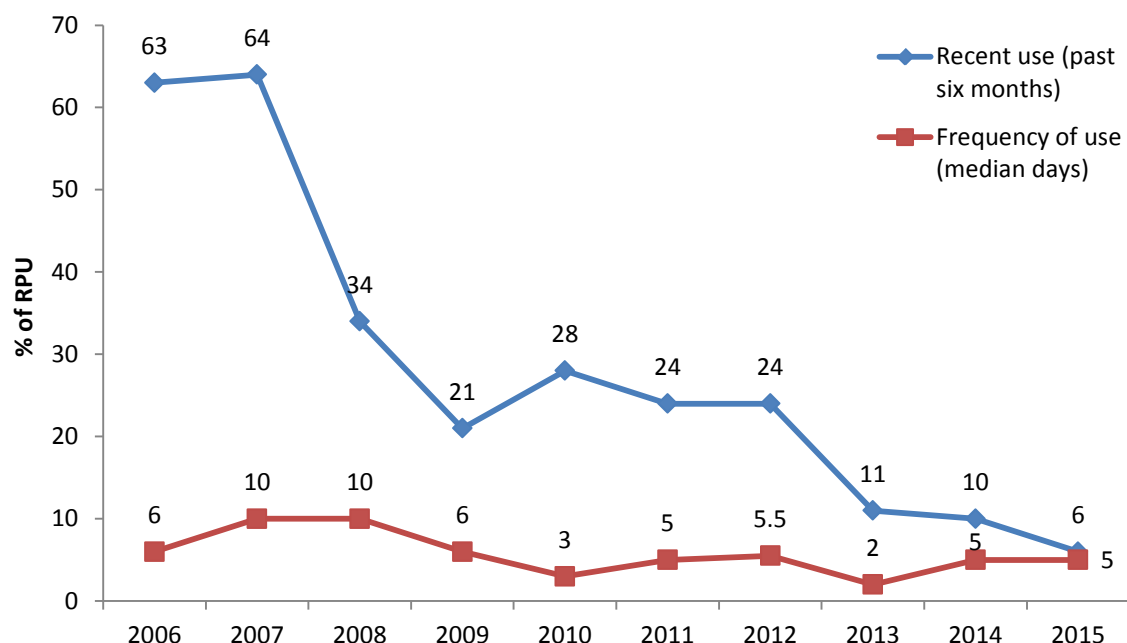
**Source:** EDRS participant interviews

<sup>#</sup> Of those who reported use in the last 6 months

<sup>^</sup> A session was defined as a period of continuous drug use without sleep, in the six months prior to interview

Looking at trends over time (see Figure 4), it can be seen that the recent use of base methamphetamine has fluctuated over time, with a sharp decline being noted from 2007–09. From 2009–12, the prevalence of recent use plateaued, before a significant decline was observed in 2013. In 2015, recent use remained stable at 6% and the median number of days used in the last six months also remained stable at five days.

**Figure 4: Methamphetamine base – trends in recent use and median days used, SA, 2006–2015**



Source: EDRS participant interviews

#### 4.3.4 Crystal methamphetamine

Table 11 presents the patterns of use of crystal methamphetamine by participants in 2015, with 2014 data presented for comparison. In 2015, the median age of first use was 20 years (range=12–39 years). Thirty-seven percent of participants had used crystal in their lifetime, which remained stable from 2014 (35%). Twenty-six percent of participants reported using crystal methamphetamine in the preceding six months, on a median of twelve days (range=1–120).

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. The median number of points used in an ‘average’ single session was two (range=0.25–5) and the median ‘most’ amount used in a single session was also two points (range=0.25–12). Compared to 2014, participant reports in 2015 of ‘average’ and ‘most’ amounts used in a session remained stable.

Participants who had used crystal methamphetamine in the previous six months reported smoking (96%), swallowing (19%) and/or snorting (4%) as the route of administration. Seventeen percent of participants reported bingeing on crystal methamphetamine in 2015.

**Table 11: Patterns of crystal methamphetamine use and ROA among RPU, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	19 (15–31)	20 (12–39)
<b>Ever used (lifetime) (%)</b>	35	37
<b>Used in last 6 months (%)</b>	20	26
<b>Days used in last 6 months<sup>#</sup>: median (range)</b>	6 (1–72)	12 (1–120)
<b>Average amount used in a single session<sup>†</sup>:</b>		
Points: median (range; n)	1 (0.5–6; 15)	2 (0.25–5; 23)
<b>Most amount used in a single session<sup>^</sup>:</b>		
Points: median (range; n)	2 (0.5–20; 15)	2 (0.25–12; 20)
<b>Routes of administration recent use<sup>#</sup> (%):</b>	(n=20)	(n=26)
Swallowing	30	19
Snorting	20	4
Smoking	90	96
Injecting	0	0

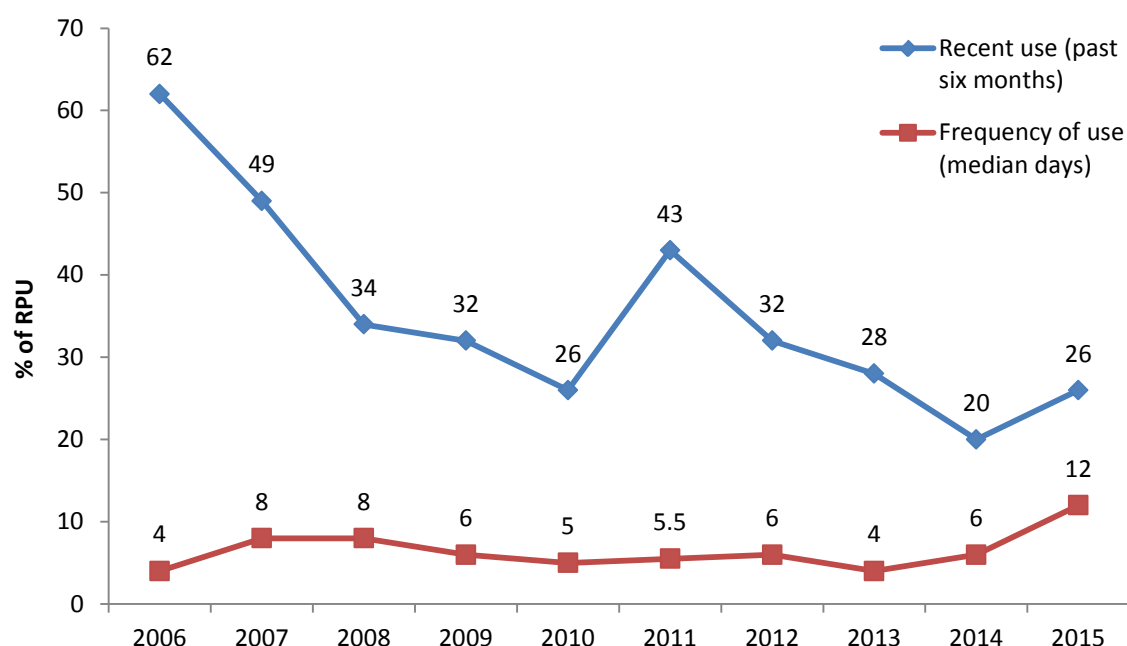
**Source:** EDRS participant interviews

<sup>#</sup> Of those who reported use in the 6 months prior to interview

<sup>^</sup> A session was defined as a period of continuous drug use without sleep, in the last six months

Looking at trends over time (see Figure 5), it can be seen that, after a steady decline of recent use of crystal methamphetamine from 2006–2010, there was a significant increase in 2011 ( $p<0.05$ ; 95% CI: -0.029, -0.31). From 2011–2014 there was a downward trend in the recent use of crystal methamphetamine, with use remaining stable in 2015. The median number of days used in the preceding six months doubled in 2015, although this was not statistically significant.

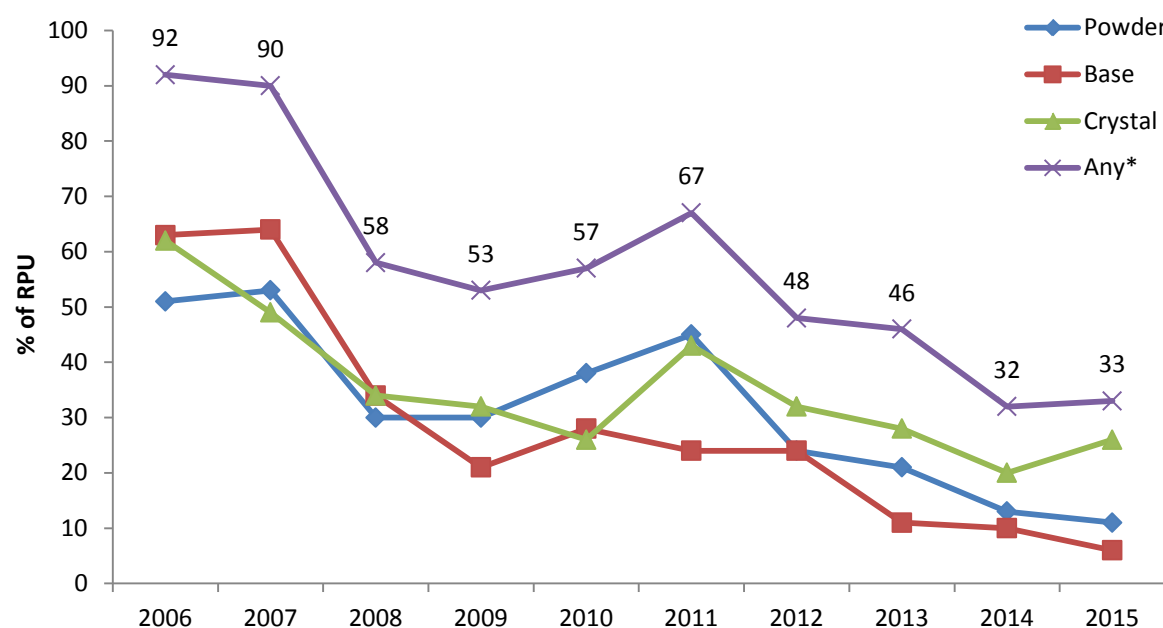
**Figure 5: Methamphetamine crystal – trends in recent use and median days used, SA, 2006–2015**



Source: EDRS participant interviews

Figure 6 presents trends in recent methamphetamine use from 2006 to 2015. In 2015, one-third (33%) of the sample reported recent use of 'any' methamphetamine; this was stable from 2014 and represents the second lowest prevalence of use reported in the history of the SA EDRS. With respect to the individual forms of methamphetamine, recent use of all forms of methamphetamine remained stable in 2015.

**Figure 6: Trends in recent use of the different forms of methamphetamine, SA, 2006–2015**



Source: EDRS participant interviews  
Collapsed powder, base and crystal categories

Information about where methamphetamine users spent the most time while they were intoxicated is presented in Table 12. The most common venue for recent base and crystal methamphetamine users was at a private home (own or friend's home), and the most common venue for recent powder methamphetamine users was at a nightclub.

**Table 12: Venue where participants spent the most time while intoxicated on methamphetamine, SA, 2015**

	Where did you spend the most time while intoxicated?		
	Powder (%) (n=7 <sup>^</sup> )	Base (%) (n=3 <sup>^</sup> )	Crystal (%) (n=20)
Home	14	67	25
Friend's home	14	0	50
Nightclub	43	0	15
Private party	14	33	5
Car	14	0	0
Rave	0	0	5

Source: EDRS participant interviews

<sup>^</sup>n<10; interpret with caution

### Key Expert Comments

- ◆ The majority of KE noted that their clientele didn't distinguish between speed, base and crystal; rather, they just referred to methamphetamines more generally. However, it was generally agreed that crystal is the most popular form of methamphetamine being used.
- ◆ There were mixed reports regarding the prevalence of methamphetamine use: several KE reported that there was a continuing increase in methamphetamine use, while others reported that prevalence remained high, but stable.
- ◆ When asked what drug they considered to be most problematic at the moment, the majority of KE nominated methamphetamine. The reasons for this were varied and ranged from the fact that it was highly prevalent and addictive, to the physical, mental (e.g. aggression; psychosis) and social impacts (e.g. financial problems; relationship problems; criminal activity) it can have on the individual and their family/friends. Several KE also noted that there are limited treatment options for methamphetamine dependence, making it very difficult to successfully treat those who seek help.
- ◆ A number of KE also noted that the media 'hype' around crystal methamphetamine is problematic and unhelpful. That is, crystal methamphetamine use is not at epidemic proportions, as claimed by the media, and the current media portrayal of crystal methamphetamine users heightens the stigma and misinformation faced by people who use methamphetamine.

## 4.4 Cocaine use

### Key Findings

- The median age of first cocaine use was 19 years.
- Lifetime and recent use of cocaine remained stable (at 65% and 45% respectively).
- Frequency of cocaine use remained low and stable.
- Snorting continued to be the main route of administration.

### 4.4.1 Cocaine use among RPU

Participants first used cocaine at a median age of 19 years (range=14–26 years). In 2015, 65% of the sample reported having ever used cocaine, and 45% had used in the preceding six months; these were both stable from 2014. Frequency of use remained low at a median of three days (range=1–12 days) in the six months prior to interview.

The median amount of cocaine used in a typical or average session in the preceding six months was half of a gram (range=0.1–1 gram) and 2 lines (range=0.5–5 lines). The ‘most’ amount of cocaine used in a single session was a median of one gram (range=0.1–5) and 2 lines (range=0.5–12). The reported ‘average’ and ‘most’ amount of grams used in a session was similar to that reported in 2014.

All cocaine users reported recent use of cocaine by snorting (100%) and a small proportion (7%) had also swallowed cocaine in the preceding six months. No participants reported recent use by smoking, injecting or shelving/shafting. Seven participants reported that they had binged on cocaine in the preceding six months.

**Table 13: Patterns of cocaine use and ROA among RPU, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	19 (16–28)	<b>19 (14–26)</b>
<b>Ever used (lifetime) (%)</b>	68	<b>65</b>
<b>Used in last 6 months (%)</b>	45	<b>45</b>
<b>Days used in last 6 months<sup>*</sup>: median (range)</b>	2 (1–48)	<b>3 (1–12)</b>
<b>Average amount used in a single session<sup>**</sup>:</b>		
Grams: median (range; n)	0.5 (0.15–1.5; 26)	<b>0.5 (0.10–1; 15)</b>
Lines: median (range; n)	2 (1–5; 14)	<b>2 (0.5–5; 22)</b>

**Source:** EDRS participant interviews

<sup>\*</sup> Of those who reported use in the last six months

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



**Table 13: Patterns of cocaine use and ROA among RPU, SA, 2014 & 2015 (continued)**

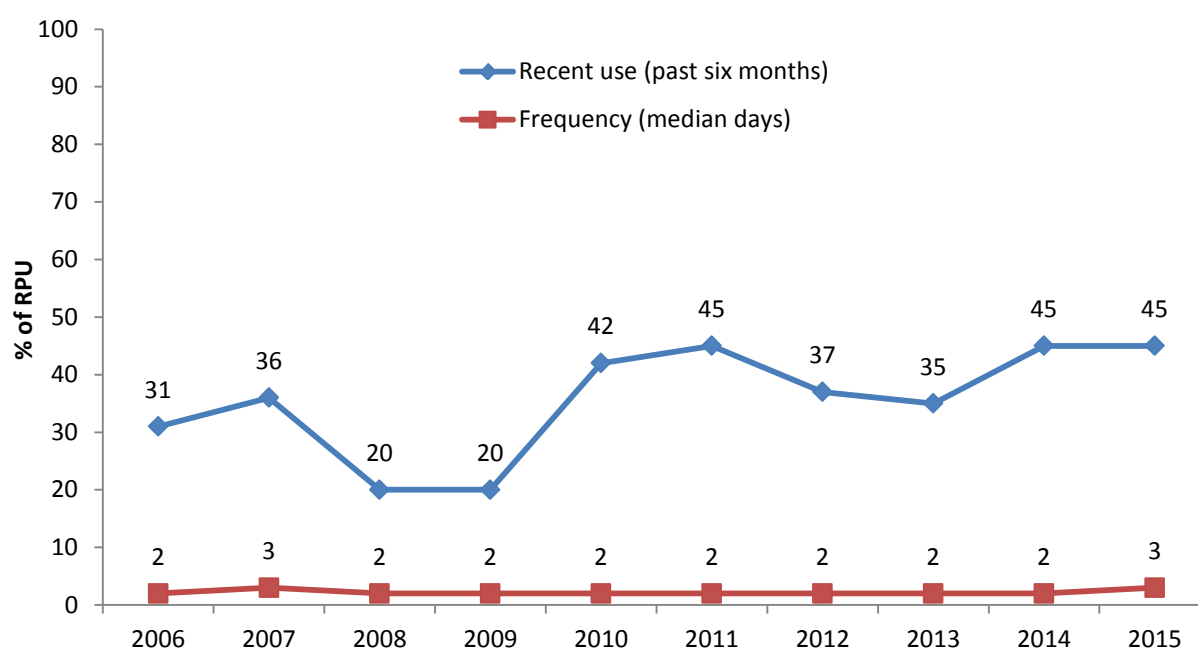
	2014 (N=100)	2015 (N=100)
<b>Most amount used in a single session** :</b>		
Grams: median (range; n)	0.5 (0.15–3; 26)	<b>1 (0.1–5; 16)</b>
Lines: median (range; n)	2.5 (1–6; 14)	<b>2 (0.5–12; 23)</b>
<b>Routes of administration recent use* (%):</b>	(n=45)	(n=45)
Swallowed	7	<b>7</b>
Snorted	98	<b>100</b>
Smoked	0	<b>0</b>
Injected	0	<b>0</b>
Shelved/shafted	0	<b>0</b>

**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

As can be seen in Figure 7, recent use of cocaine has fluctuated considerably over the past decade. Cocaine use doubled from 20% in 2009 to 42% in 2010, and has remained relatively stable from 2010–15. The frequency of use has remained low and stable across the years.

**Figure 7: Cocaine – trends in recent use and median days used, SA, 2006–2015**

**Source:** EDRS participant interviews

Thirty participants commented on the location of last use (i.e. where they spent the most time while intoxicated). The most common venues reported were: nightclub (n=13); friend's home (n=5); pub/bar (n=3); private party (n=3); and live music event (n=3).

### Key Expert Comments

- The majority of KE reported that cocaine use had remained low and stable among their clientele over the preceding 12 months.

## 4.5 LSD use

### Key Findings

- The median age of first use was 17, stable from 2014.
- In 2015, there was a non-significant decrease in the lifetime use of LSD and recent use remained stable at 37%. Frequency of use also remained stable in 2015, at a median of three days in the past six months.
- The amount used in a typical and heavy session remained relatively stable.
- All participants reported swallowing LSD, with no other routes of administration reported.

### 4.5.1 LSD use among RPU

The median age of first LSD use was 17 years (range=13–26 years). Fifty-one percent of participants reported having used LSD in their lifetime, which was a non-significant decrease from 2014 (63%). Thirty-seven percent of participants reported using LSD on a median of three days in the last six months, which was stable from 2014.

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=1–6) used on ‘average’ and 1.75 tabs/trips (range=1–13) used in the heaviest recent session. All LSD users reported recent use by swallowing (100%, n=37), with no other ROA reported. Two participants reported bingeing on LSD in the preceding six months.

**Table 14: Patterns of LSD use among the participant sample, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	18 (13–27)	17 (13–26)
<b>Ever used (lifetime) (%)</b>	63	51
<b>Used in last 6 months (%)</b>	35	37
<b>Days used in last 6 months: * median (range)</b>	2 (1–60; 35)	3 (1–96; 37)
<b>Average amount used in a single session: **</b>		
Tabs: median (range; n)	1 (0.5–3; 33)	1 (1–6; 32)
<b>Most amount used in a single session: **</b>		
Tabs: median (range; n)	1 (0.5–5; 33)	1.75 (1–13; 32)
<b>Routes of Administration * (%):</b>	(n=35)	(n=37)
Swallowed	100	100
Snorted	0	0
Smoked	0	0
Shelved/Shafed	0	0
Injected	0	0

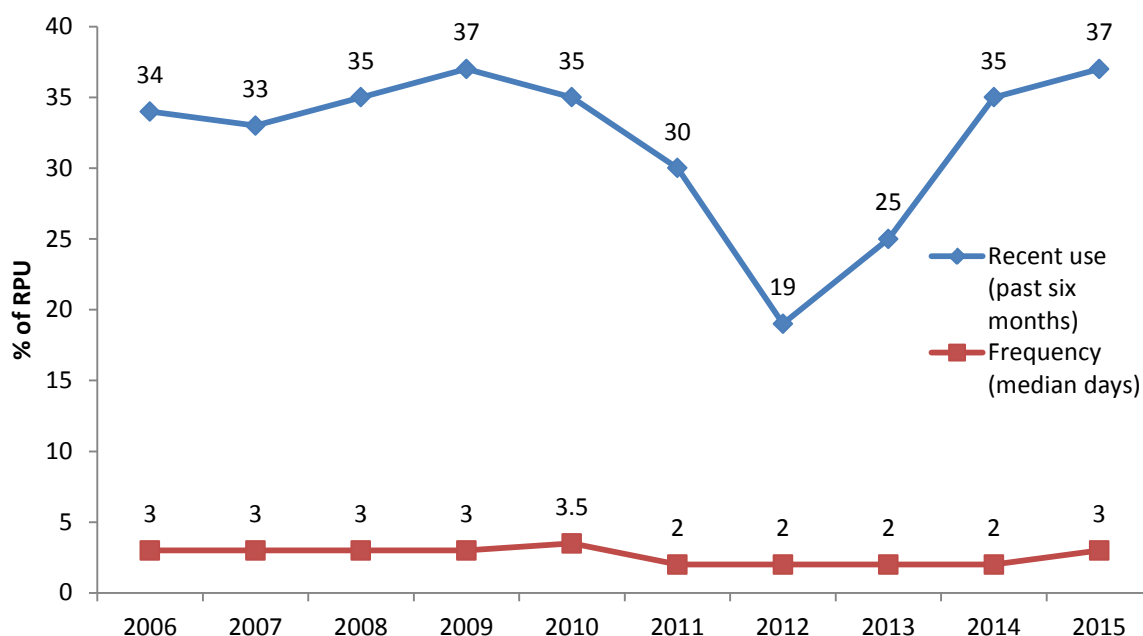
**Source:** EDRS participant interviews

\* 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

Looking at trends over time (see Figure 8), it can be seen that from 2006–11 there was relative stability in the proportion of participants who reported recent use of LSD. The prevalence of recent LSD use declined sharply in 2012 (albeit not significantly), before returning to previous levels of use in 2013–2015. There has been little change in the frequency of use, with this parameter remaining consistently stable and low across the years.

**Figure 8: LSD – trends in recent use and median days used, SA, 2006–2015**



Source: EDRS participant interviews

Of those who were able to comment (n=30), the majority reported that while intoxicated they spent the majority of their time at: a private home (n=14); outdoors (n=7); or at a public place (n=3).

#### Key Expert Comments

- ◆ A couple of KE noted that they had seen an increase in the use of LSD among their clientele, although it was acknowledged that it is still not a widely used drug. In particular, one KE noted that hallucinogens were 'in vogue' (i.e. fashionable) at the moment and another noted an increase in the number of LSD internet sales.

## 4.6 Cannabis use

### Key Findings

- Median age of first use was stable in 2015, with the majority of participants having first used cannabis at 15 years of age.
- Prevalence of cannabis use remained high, with 99% of RPU reporting lifetime use and 92% reporting use in the preceding six months.
- Frequency of use remained stable in 2015, at a median of 48 days (approximately twice a week).
- On the last occasion of use, cannabis users reported using a median of 3 cones or one joint. This was relatively stable from 2014.
- The majority of cannabis users reported using in their own home, or at a friend's home.

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 SA. 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 and the plant will be confiscated and destroyed. 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.

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

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

### 4.6.1 Cannabis use among RPU

In 2015, the median age at which participants first used cannabis was 15 years (range=8–24 years), stable from 2014. Further examination of the age at which participants first used cannabis reveals that 29% reported use by the age of 14 years, 69% by 16 years, and 94% by 18 years. Ninety-nine percent of the sample reported having used cannabis in their lifetime, and 92% had used in the preceding six months.

The frequency of cannabis use reported by participants in 2015 was a median 48 days (range=1–180 days); this was stable from 2014. Among recent cannabis users, 41% (n=38)

reported using cannabis weekly or more and 20% (n=18) had used cannabis on a daily basis in the past six months.

Recent cannabis users were asked how much cannabis they had smoked on the last day of use, as measured by the number of cones or joints used on that occasion. Cannabis had been predominantly smoked in cones (60%) as opposed to joints (19%). Among those who had smoked in cones, the median number used on the last day was 3 'cones' (range=1–20 cones), while the median number of joints smoked was 1 (range=0.5–4 joints). Daily users of cannabis had smoked a median of five cones (range=1–20 cones).

The vast majority (98%) of recent cannabis users reported recent use by smoking, 35% reported use by swallowing and 32% reported use by inhaling (using a vaporiser). Sixteen percent of RPU reported bingeing on cannabis in the preceding six months.

**Table 15: Patterns of hydroponic and bush cannabis use among the participant sample, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Age first used: median in years (range)</b>	15 (8–21)	<b>15 (8–24)</b>
<b>Ever used (lifetime) (%)</b>	98	<b>99</b>
<b>Used in last 6 months (%)</b>	87	<b>92</b>
<b>Days used in last 6 months: median (range)</b>	48 (1–180)	<b>48 (1–180)</b>
<b>Routes of administration* (%):</b>	(n=87)	<b>(n=92)</b>
Smoked	100	<b>98</b>
Swallowed	45	<b>35</b>
Inhaled^	18	<b>32</b>
<b>Cones used last time (range; n)*</b>	4 (1–100; 51)	<b>3 (1–20; 55)</b>
<b>Joints used last time (range; n)*</b>	1 (0.5–10; 31)	<b>1 (0.5–4; 17)</b>

**Source:** EDRS participant interviews

\* Of those who reported use in the last six months

^ Using a vaporiser. Included as a ROA in 2014

Among the participants who commented on hydro, the majority reported spending most of their time while intoxicated in their own home (49%) or at a friend's home (40%). There was a similar pattern for those who commented on bush cannabis: while intoxicated participants spent most of their time at their own home (48%) or at a friend's home (44%).

### Key Expert Comments

- There was a general consensus among KE that cannabis remains popular and is still widely used among their clientele (and among the general population).
- Four KE considered cannabis to be the most problematic drug at the moment, due to its high availability and its association with mental health problems.

## 4.7 Other drug use

### Key Findings

- There were no significant changes in the lifetime or recent use of ketamine, GHB, MDA, nitrous oxide or mushrooms in 2015.
- There was a significant increase in the lifetime and recent use of amyl nitrate.
- The entire sample reported consuming alcohol in the six months preceding interview, and they had done so a median of 33 days. Among these participants, 3% reported drinking on a daily basis.
- Lifetime and recent tobacco use remained stable at 94% and 86% respectively.
- The majority of RPU reported lifetime (74%) and recent (50%) use of electronic cigarettes, although frequency of use was relatively low (about once a month).
- Lifetime and recent use of illicit benzodiazepines increased significantly in 2015. The lifetime and recent use of other unprescribed medications (i.e. antidepressants, pharmaceutical stimulants, OTC codeine, OTC stimulants, antipsychotics, OST medications and other opioids) remained stable in 2015.
- Lifetime and recent use of heroin and steroids remained low and stable in 2015.

### 4.7.1 Ketamine

The median age of first ketamine use was 19 years (range=16–40 years). About a fifth (22%) of the sample reported lifetime use of ketamine and 4% reported use in the six months preceding interview (both stable from 2014). The frequency of use remained low at a median of one day (range=1–3 days) in the six months prior to interview.

Ketamine use was quantified in lines (n=2) and points (n=1). Due to the small numbers, data will not be presented for the 'typical' and 'most' amounts of ketamine used in a session.

Recent use of ketamine was reported to be either snorted (n=2), swallowed (n=1) or smoked (n=1). No participants reported bingeing on ketamine within the past six months.

### 4.7.2 GHB

The median age at which participants reported first using gamma-hydroxybutyrate (GHB) was 22 years (range=14–40 years). Seven percent of RPU reported lifetime use of GHB and 4% reported use in the six months preceding interview (both stable from 2014). Recent users of GHB reported using on a median of 1 days (range=1–2).

GHB use was typically quantified in millilitres (ml). The median amount used in a typical or average episode in the preceding six months was 7.5 ml (range=1–20 ml) and the 'most' amount used in a session was also 7.5 ml (range=1–50 ml).

All GHB users (n=4) reported swallowing GHB in the preceding six months, with no other routes of administration reported. No participants reported using GHB in a binge session in 2015.

### 4.7.3 MDA

In 2015, the median age at which participants reported first use of 3,4-methylenedioxyamphetamine (MDA) was 19 years (range=16–38 years). Seventeen percent of RPU reported lifetime use of MDA and 8% reported use in the six months preceding interview, both of which remained stable from 2014. Frequency of use was low, with participants reporting that they had used MDA on a median of two days (range=1–7).

A median of 2.5 pills (range=1–6 pills) was used in a typical session, and a median of three pills (range=1–8 pills) was also used in the heaviest session of use over the preceding six months. All recent MDA users (n=8) reported swallowing MDA in the preceding six months, with one participant reporting that they had also snorted it. No participants reported including MDA in a binge session in the six months preceding interview.

### 4.7.4 Inhalants use

#### 4.7.4.1 Nitrous oxide

The median age of first use of nitrous oxide was 18 years (range=13–24 years). In 2015, 33% of participants reported that they had ever used nitrous oxide, which was stable from 2014. Sixteen participants reported that they had used nitrous oxide in the six months preceding interview, and they had done so on a median of six days (range=1–72). Recent nitrous oxide users reported using a median of seven bulbs in both a typical (range=1–30 bulbs), and heavy (range=1–50) session of use over the preceding six months. No participants reported having binged on nitrous oxide in the past six months.

#### 4.7.4.2 Amyl nitrite

The median age of first use of amyl nitrite was 18 years (range=12–24 years). Forty-six percent of the sample reported lifetime use of amyl nitrite, which represents a significant increase from 2014 (25%;  $p=0.003$ ; 95% CI: -0.33, -0.08). Twenty-nine percent of the sample reported use of amyl nitrite in the preceding six months, which was also a significant increase from 2014 (7%;  $p<0.001$ ; 95% CI: -0.32, -0.12). Recent users of amyl nitrite reported using on a median of six days (range=1–48) in the six months preceding interview; this was stable from 2014. No participants reported having binged on amyl nitrite in the last six months.

### 4.7.5 Mushrooms

Participants were asked about their use of ‘magic mushrooms’ (hallucinogenic mushrooms). The median reported age of first use of ‘magic mushrooms’ was 18 years (range=14–28 years) and 57% of participants reported having used them in their lifetime. Nineteen percent of participants reported recent use on a median of two days (range=1–5).

### 4.7.6 Alcohol

In 2015, the median age at which participants reported first using alcohol was 14 years (range=6–18 years). The entire sample reported lifetime and recent use of alcohol, with RPU reporting that they had used alcohol on a median of 33 days in the past six months (range=2–180); this represents a non-significant decline from 2014 (48 days;  $p>0.05$ ). Fifty-one percent of recent alcohol users reported using alcohol more than once per week (56% in 2014), and 3% reported drinking on a daily basis (2% in 2014).

Twenty-four percent of participants reported including alcohol in a binge session and 87% reported typically using alcohol in combination with ecstasy, both of which remained stable from 2014 (20% and 82% respectively). No participants reported using alcohol to come down from ecstasy.

In 2015, the Alcohol Use Disorders Identification Test (AUDIT) was administered to participants. Detailed information regarding the AUDIT in the 2015 EDRS can be found in section 7.4: The Alcohol Use Disorders Identification Test (AUDIT).

#### **4.7.7 Tobacco**

The median reported age of first use of tobacco was stable from 2014, at 15 years (range=7–22 years). Ninety-four percent of RPU reported lifetime use of tobacco and 86% reported use in the six months preceding interview, both remaining stable from 2014 (92% and 82% respectively). There was a non-significant increase in the frequency of participants' tobacco use, with RPU reporting that they had used tobacco on a median of 180 days in the previous six months (compared to 150 days in 2014). Over half (51%) of recent tobacco users reported daily use (49% in 2014), which continues to greatly exceed the daily smoking prevalence rate in the general South Australian population aged 14 years and over (12.8%; AIHW, 2014).

#### **4.7.8 Electronic cigarettes**

In 2015, for the second year running, participants were asked about their lifetime and recent use of electronic cigarettes. Almost three-quarters (74%) of RPU reported they had used electronic cigarettes within their lifetime (64% in 2014), and they had initiated use at a median of 19 years (range=16–41 years). Fifty percent of the sample reported that they had recently used these substances, and they had done so on a median of 5.5 days (range=1–180); this remained stable from 2014. Among those who had recently used electronic cigarettes, 28% (n=14) reported using them as a smoking cessation tool and 76% (n=38) had used electronic cigarettes that contained nicotine.

#### **4.7.9 Illicit benzodiazepines**

The median age of first use of illicit benzodiazepines was 18 years (range=14–26 years), which is stable from 2014. Over half (54%) of RPU reported lifetime use of illicit benzodiazepines, which represents a significant increase from 2014 (37%;  $p=0.02$ ; 95% CI: -0.30, -0.03). Thirty-four percent of the sample reported that they had used illicit benzodiazepines in the six months preceding interview (vs. 20% in 2014;  $p=0.04$ ; 95% CI: -0.26, -0.02), and they had done so on a median of 3 days (range=1–24).

#### **4.7.10 Illicit antidepressants**

Nine participants reported lifetime use of illicit antidepressants, and they had initiated use at a median age of 17 years (range=15–20 years). Four participants reported using illicit antidepressants in the preceding six months, and they had done so on a median of 3.5 days (range=1–4).

#### **4.7.11 Illicit pharmaceutical stimulants**

For the past few years, participants have been asked about their use of pharmaceutical stimulants, such as dexamphetamine, pseudoephedrine and methylphenidate (Ritalin).

In 2015, the median reported age of first use of illicit pharmaceutical stimulants was 18 years (range=13–30 years). Forty-three percent of the sample reported use of illicit pharmaceutical stimulants in their lifetime, and 25% reported use within the preceding six months (both stable from 2014). Frequency also remained relatively stable at a median of one day (range=1–180). The ROA of recent use was mainly swallowing (n=22), followed by snorting (n=4).

#### **4.7.12 Over the counter (OTC) codeine**

The median age at which participants reported first using OTC codeine for non-medicinal purposes was 18.5 years (range=15–35 years). Twenty-six percent of participants reported



ever using OTC codeine and 16% reported use in the preceding six months, both of which remained stable from 2014. Frequency also remained relatively stable at a median of two days (range=1–48). Swallowing was the only ROA reported by recent OTC codeine users.

#### **4.7.13 Over the counter (OTC) stimulants**

The median age at which participants reported first using OTC stimulants for non-medical purposes was 17 years (range=12–25 years), stable from 2014. Twelve percent of participants reported ever using OTC stimulants, and four participants reported use of this substance on a median of three days (range=1–10) within the preceding six months.

#### **4.7.14 Illicit antipsychotics**

The median age at which participants reported first using illicit antipsychotics was 19.5 years (range=16–33 years). Six percent of participants reported ever using illicit antipsychotics, and two participants reported use of this substance on a median of 15.5 days (range=1–30) within the preceding six months.

#### **4.7.15 OST medications**

##### *4.7.15.1 Methadone*

No participants reported lifetime or recent use of methadone in 2015.

##### *4.7.15.2 Buprenorphine*

No participants reported lifetime or recent use of buprenorphine in 2015.

#### **4.7.16 Other illicit opioids**

The median age of first use of illicit other opiates was 18 years (range=15–24 years). Twenty percent of the sample reported lifetime use and 14% had used other illicit opiates in the six months prior to interview. The median days of illicit opiate use was three days (range=1–18 days). The main ROA by those who had recently used was swallowing (71%, n=10), followed by snorting (n=3) and smoking (n=2). No participants reported injecting or snorting/shafting.

#### **4.7.17 Heroin**

The median age of first heroin use was 16 years (range=15–19 years), with 3% of the 2015 RPU sample reporting that they had ever used heroin. Consistent with the low levels of recent use among the RPU cohorts in previous years, only one participant had used heroin during the six months preceding the interview and they had done so on 72 days.

#### **4.7.18 Steroid use**

The median age at which participants reported first using steroids was 23.5 years (range=18–25 years). Four percent of RPU reported lifetime use of steroids, and two participants reported that they had used steroids on a median of 14 days (range=4–24) within the preceding six months. Injecting was the only ROA reported by recent steroid users.

### **Key Expert Comments**

- The majority of KE reported that they had seen very little ketamine or GHB use among their clientele over the preceding 12 months. A number KE noted an increase in the prevalence of GHB, as well as an increase in the number of GHB clandestine laboratories.
- Alcohol use was generally reported as stable, and prolific, with no real changes over the preceding 12 months.
- Five KE nominated alcohol as the drug they considered most problematic at the time of interview. Of particular concern was the widespread use and social acceptability of alcohol consumption, as well as bingeing behaviours and the dangers associated with alcohol withdrawals. One KE also noted a lack of treatment options available for those wanting to seek help for their alcohol use.

## 4.8 New psychoactive substances (NPS) use

### Key Findings

- The use of NPS remained common in 2015, with 52% of RPU reporting that they had used 'any' NPS in the six months preceding interview (compared to 40% in 2014;  $p>0.05$ )
- The most commonly used NPS in the six months preceding interview were 2CB, NBOMe and DMT.
- There was a significant increase in the recent use of 2CB (10% in 2014 vs. 22% in 2015).

From 2010 onward, the EDRS has attempted to systematically investigate a group of new or emerging drugs known as 'new psychoactive substances' (also known as research chemicals, analogues, legal highs, herbal highs, party pills).

Table 16 provides a very brief introduction to some these drugs to provide a rough guide for interpreting trends data. Interested readers are directed toward online sources such as Erowid (<http://www.erowid.org/splash.php>) and Drugscope (<http://www.drugscope.org.uk/>) for more comprehensive information on these drugs.

**Table 16: New psychoactive substances**

Street name	Chemical name	Information on drug	Information on use and effects
<b>Phenethylamines</b>			
2CI	2,5-dimethoxy-4-iodophenethylamine	A psychedelic drug with stimulant effects	Recent reports suggest that 2CI is slightly more potent than the closely related 2CB.
2CB	4-bromo-2,5-dimethoxyphenethylamine	A psychedelic drug with stimulant effects	2CB is sold as a white powder sometimes pressed in tablets or gel caps. Commonly taken orally but can also be snorted.
2CE	2,5-dimethoxy-4-ethylphenethyl-amine	A psychedelic drug with stimulant effects	Commonly taken orally and highly dose-sensitive.
NBOMe	N-methoxybenzyl	Psychedelic drugs with stimulant effects	NBOMe includes a series of drugs that contain an N-methoxybenzyl group. The most common NBOMes that are used recreationally are extensions of the 2C family of phenethylamine psychedelics, and include 25B-NBOMe, 25I-NBOMe and 25C-NBOMe. Available in powder, tablet and liquid formulations.
DOI (death on impact)	2,5-dimethoxy-4-iodoamphetamine	A psychedelic phenethylamine	Requires only very small doses to produce full effects. Has been found on blotting paper and may be sold as LSD. <sup>3</sup>
PMA	Paramethoxyamphetamine ; 4-methoxy-amphetamine	A synthetic hallucinogen that has stimulant effects	Ingesting a dose of <50mg (usually one pill or capsule) without other drugs or alcohol induces symptoms reminiscent of MDMA, although PMA is more toxic than MDMA. Doses >50mg are considered potentially lethal (due to the risk of overheating).
<b>Tryptamines</b>			
DMT	Dimethyltryptamine	A hallucinogenic drug in the tryptamine family	Similar to LSD though its effects are said to be more powerful. Pure DMT is usually found in crystal form but has been reportedly sold in powder form. <sup>4</sup>
5-MeO-DMT	5-methoxy-N,N-dimethyltryptamine	A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the <i>Bufo alvarius</i> toad	5-MeO-DMT is comparable in effects to DMT; however, it is substantially more potent. 5-MeO-DMT is mostly seen in crystalline form <sup>5</sup> but has been reportedly sold in powder form.
<b>Synthetic cathinones</b>			
Mephedrone	4-methyl-methcathinone	A stimulant which is closely chemically related to amphetamines	Reportedly produces a similar experience to drugs like amphetamines, ecstasy or cocaine. Mephedrone is a white, off-white or yellowish powder although it may also appear in pill or capsule form.
Methylone	3,4-methylenedioxy-N-methylcathinone	An entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes	Effects are primarily psychostimulant in nature.

<sup>3</sup> Erowid: <http://www.erowid.org/chemicals/doi/doi.shtml>

<sup>4</sup> Drugscope: <http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/dmt>

<sup>5</sup> Erowid: [http://www.erowid.org/chemicals/5meo\\_dmt/5meo\\_dmt.shtml](http://www.erowid.org/chemicals/5meo_dmt/5meo_dmt.shtml)

**Table 16: New psychoactive substances (continued)**

Street name	Chemical name	Information on drug	Information on use and effects
Ivory wave/MDPV	Methylenedioxypropylvalerone (3,4-methylenedioxy)	A cathinone derivative	More potent than other cathinones. Lidocaine (a common local anesthetic) is frequently used as a cutting agent, to give users the numbing sensation in the mouth or nose which is associated with drugs of high purity (e.g. high-purity cocaine). <sup>6</sup>
<b>Piperazines</b>			
BZP	Benzylpiperazine	A piperazine; a CNS stimulant	Gained popularity in some countries in the early 2000s as a legal alternative to amphetamines and ecstasy. One of the more common piperazines, providing stimulant effects which people describe as noticeably different than those of amphetamines. Not particularly popular as many people find that it has more unpleasant side effects than amphetamines.
<b>Dissociative</b>			
DXM	Dextromethorphan	A semisynthetic opiate derivative which is legally available over the counter in the US	Commonly found in cough suppressants, especially those with 'DM' or 'Tuss' in their names. It is a dissociative drug that is almost always used orally, although pure DXM powder is occasionally snorted.
<b>Naturally occurring substances</b>			
Datura	Commonly <i>Datura innoxia</i> and <i>Datura stramonium</i> . Contains Atropine and Scopolamine. Also known as Angel's Trumpet	Atropine is a potent anticholinergic agent. Scopolamine is a CNS depressant and has antimuscarinic properties	The plant's effects make the user feel drowsy, drunk-like and detached from things around them. They can also bring on hallucinations. Doses are difficult to judge and can cause unconsciousness and death. <sup>7</sup>
Salvia	<i>Salvia divinorum</i> (contains Salvinorin A)	Salvia is derived from the American plant <i>Salvia divinorum</i> , a member of the mint family	At low doses (200–500mcg) salvia produces profound hallucinations that last from 30 minutes to an hour or so. In higher doses the hallucinations last longer and are more intense. <sup>8</sup>
LSA	<i>α</i> -lysergic acid amide	A naturally occurring psychedelic found in plants such as Morning Glory and Hawaiian Baby Woodrose seeds	LSA has some similarities in effect to LSD, but is generally considered much less stimulating and can be sedating in larger doses.
Mescaline <sup>#</sup>	3,4,5-trimethoxyphenethylamine	A hallucinogenic alkaloid	First isolated in 1896 from the peyote cactus of northern Mexico.

<sup>6</sup> Drugscope: [http://www.drugscope.org.uk/Media/Press+office/pressreleases/ivory\\_wave\\_MDPV](http://www.drugscope.org.uk/Media/Press+office/pressreleases/ivory_wave_MDPV)

<sup>7</sup> Drugscope: <http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/datura>

<sup>8</sup> Drugscope: <http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/salvia>

<sup>#</sup> Mescaline is a naturally occurring phenethylamine, so could also be classified under the phenethylamine heading

**Table 16: New psychoactive substances (continued)**

Synthetic cannabis			
K2/Spice	Synthetic cannabinoid	Usually sold as loose, generic plant material with a mix of chemicals on it (containing synthetic cannabinoids)	A psychoactive herbal and chemical product that, when consumed, mimics the effects of cannabis.

Over half (52%) of the 2015 SA EDRS sample reported having used an NPS (including synthetic cannabinoids) in the six months preceding interview (compared to 40% in 2014;  $p>0.05$ ). Excluding the use of synthetic cannabinoids, it was found that 51% of the sample had recently used some form of NPS, which was a non-significant increase from 2014 (37%;  $p>0.05$ ).

The most common NPS ever used among Adelaide RPU were 2CB (34%), DMT (21%), unknown capsules (21%), NBOMe (20%), herbal highs (13%), 2CI (11%) and Kronik (10%). The proportions of participants who had used NPS in the last six months were considerably lower: those most commonly used were: 2CB (22% vs. 10% in 2014;  $p=0.04$ ; 95% CI: -0.22, -0.02); NBOMe (18%); and DMT (11%) (see Table 17).

**Table 17: Proportion of participants reporting lifetime and recent use of NPS, SA, 2014–2015**

	Ever used (%)		Used last six months (%)	
	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)
<b>Phenethylamines</b>				
2CB	26	34	10	22*
2CE	6	1	1	0
2CI	18	11	8	8
2C-Other	2	3	0	2
NBOMe <sup>#</sup>	17	20	16	18
Benzo fury (6-APB)	1	1	0	0
DOI	6	1	0	0
PMA	9	6	4	1
<b>Tryptamines</b>				
5MEO-DMT	2	3	0	0
DMT	28	21	10	11
<b>Synthetic cathinones</b>				
Mephedrone	7	2	2	0
Methylone/bk MDMA	5	6	1	4
MDPV/Ivory wave	1	2	0	1
<b>Aminoindanes</b>				
5-IAI	1	0	0	0
MDAI	0	1	0	0
<b>Piperazines</b>				
BZP	1	0	0	0

\* $p<0.05$

**Table 17: Proportion of participants reporting lifetime and recent use of NPS, SA, 2014–2015 (continued)**

	Ever used (%)		Used last six months (%)	
	2014 (N=100)	2015 (N=100)	2014 (N=100)	2015 (N=100)
<b>Dissociative</b>				
MXE		0		0
DXM	5	7	0	1
<b>Plant-based substances</b>				
Salvia divinorum	11	6	0	3
LSA	7	5	0	2
Datura	3	2	0	0
Ayahuasca	-	1	-	0
Mescaline <sup>#</sup>	9	9	5	3
<b>Synthetic cannabis</b>				
Kronic	8	10	3	5
K2/Spice	1	0	0	0
Other	2	4	0	0
<b>Unknown capsule</b>	14	21	6	9
<b>Herbal high</b>	21	13	6	7

Source: EDRS participant interviews

Note: Ayahuasca not asked about in 2014

<sup>#</sup>Mescaline is a naturally occurring phenethylamine, so could also be classified under the phenethylamine heading

In 2015, participants who had used an NPS in the six months preceding interview were asked further questions regarding frequency of use, where they obtained their drugs from, the price of their last purchase, and whether they specifically sought out the drug or were offered it (see Table 18). Data is only presented for NPS which had been used by at least 10% of RPU in the past six months.

**Table 18: Frequency, ROA, source and price of NPS in the six months preceding interview, SA, 2015**

	NBOMe (n=18)	2CB (n=22)	DMT (n=11)
<b>Median days of use (range)</b>	3 (1–72)	1 (1–6)	1 (1–3)
<b>ROA %</b>			
Swallow	100	91	9
Smoke	0	5	91
Snort	0	9	0
Inject	0	0	0
<b>Source %</b>			
Internet	17	19	9
Dealer	17	19	9
Friend	56	52	82
Gift	6	5	0
<b>Median price of last purchase</b>	-	-	-
<b>Offered or sought %</b>			
Offered	39	62	55
Sought	61	38	45

Source: EDRS participant interviews

Note: number of participants answering on price is too small to report

### **Key Expert Comments**

- Most KE noted that the use of NPS was not common among their clientele.
- However, among those who could comment, it was noted that NPS users are generally quite young and part of the ecstasy market.
- The main NPS noted by KEs were: NBOMe, 2C-x and ethylone. To a lesser extent, KE reported seeing BZP, TFMPP, alpha-PVP and synthetic cannabinoids.
- One KE noted that NBOMe is often sold as LSD, possibly due to its cheaper price. NBOMe can be purchased online for \$8-9 and then sold as 'LSD' on the street market for \$25-30.



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

### 5.1 Ecstasy

#### Key Findings

- The price of ecstasy remained stable at \$20 for a pill.
- The majority of the sample reported that the price of ecstasy had remained stable in the six months prior to interview.
- The current purity of ecstasy (pills, powder and caps) was perceived as medium, and the purity of MDMA crystal was perceived as high. This was largely reported to have remained stable over the six months preceding interview.
- Ecstasy pills, powder and caps were largely reported as easy or very easy to obtain; however, 42% of those able to answer reported that MDMA crystal was 'difficult' or 'very difficult' to obtain.
- The median number of ecstasy tablets purchased in the six months prior to interview remained stable in 2015, as did the median number of people that ecstasy was purchased from.
- Most participants reported scoring from a friend, and at a friend's home.

In 2015, participants were asked to report on the PPA of ecstasy 'pills, powder and caps' separately to MDMA crystals. This distinction was made following participant reports in 2013 that MDMA crystals differed quite substantially to pills, powder and caps, particularly in regards to purity and availability.

#### 5.1.1 Price

In 2015, participants were asked about the cost of ecstasy 'at last purchase'. The majority of participants were able to provide an estimate of the price of ecstasy pills at last purchase, with the median 'last' price of a tablet/pill being \$20 (range=\$8.33–30; n=86). This has remained stable over the past several years (Figure 9). Thirty-three participants were also able to answer about the price of a 'cap', with the median price being \$25 (range=\$17–45). The median price for a gram of MDMA crystal was \$170 (range=\$50–450), and the median price for a point was \$27.5 (range=\$15–50). Across all forms of ecstasy, the majority of those who were able to comment reported that the price had remained stable in the six months preceding interview.

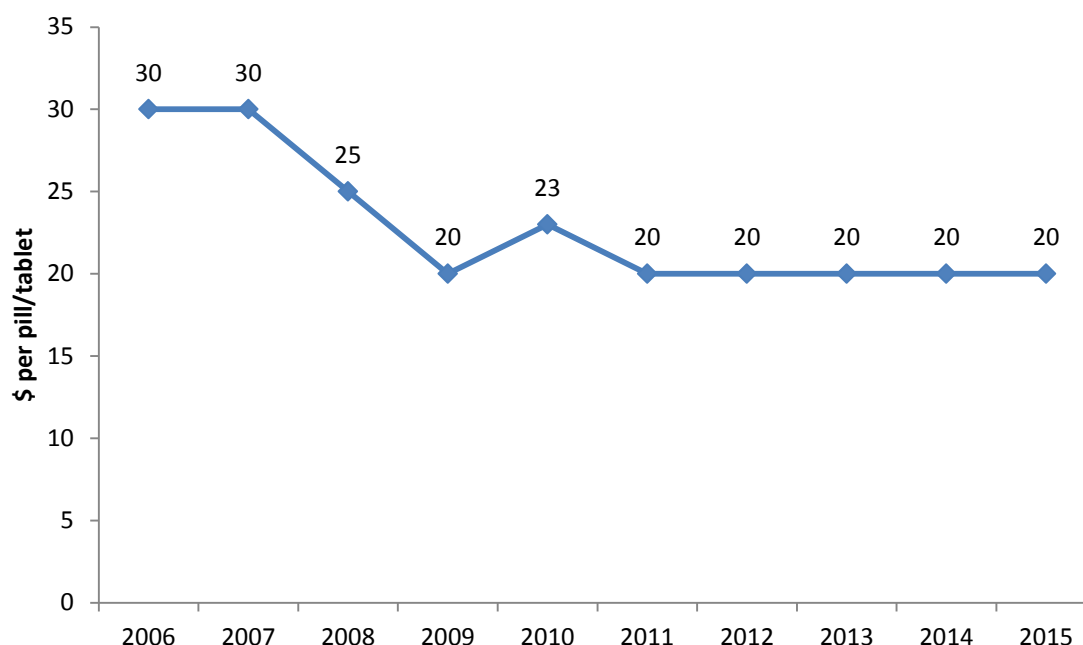
**Table 19: Last price of ecstasy and change in price over the last six months, SA, 2014 & 2015**

	Pills, powder and caps		MDMA crystal	
	2014	2015	2014	2015
<b>Median price of last purchase (range; n)</b>				
Tablet/pill	\$20 (\$8–50; 92)	<b>\$20 (\$8.33–30; 86)</b>	-	<b>\$30 (\$20–35; 7)</b>
Cap	\$25 (\$14–35; 27)	<b>\$25 (\$17–45; 33)</b>		
Powder (point)	\$25 (\$25–40; 7)	<b>\$25 (\$20–40; 4)</b>		
Powder (gram)	\$80 (\$25–350; 8)	<b>\$210 (\$130–350; 6)</b>		
Crystal (point)			\$30 (\$10–110; 8)	<b>\$27.5 (\$15–50; 10)</b>
Crystal (gram)			\$200 (\$50–400; 13)	<b>\$170 (\$50–450; 17)</b>
<b>Price change in last 6 months (%)</b>				
	(n=88)	(n=94)	(n=21)	(n=25)
Increasing	8	<b>6</b>	19	<b>20</b>
Stable	75	<b>61</b>	52	<b>64</b>
Decreasing	6	<b>18</b>	5	<b>4</b>
Fluctuating	11	<b>15</b>	24	<b>12</b>

Source: EDRS participant interviews

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

**Figure 9: Trends in the 'last purchase price' of ecstasy per tablet/pill, SA, 2006–2015**



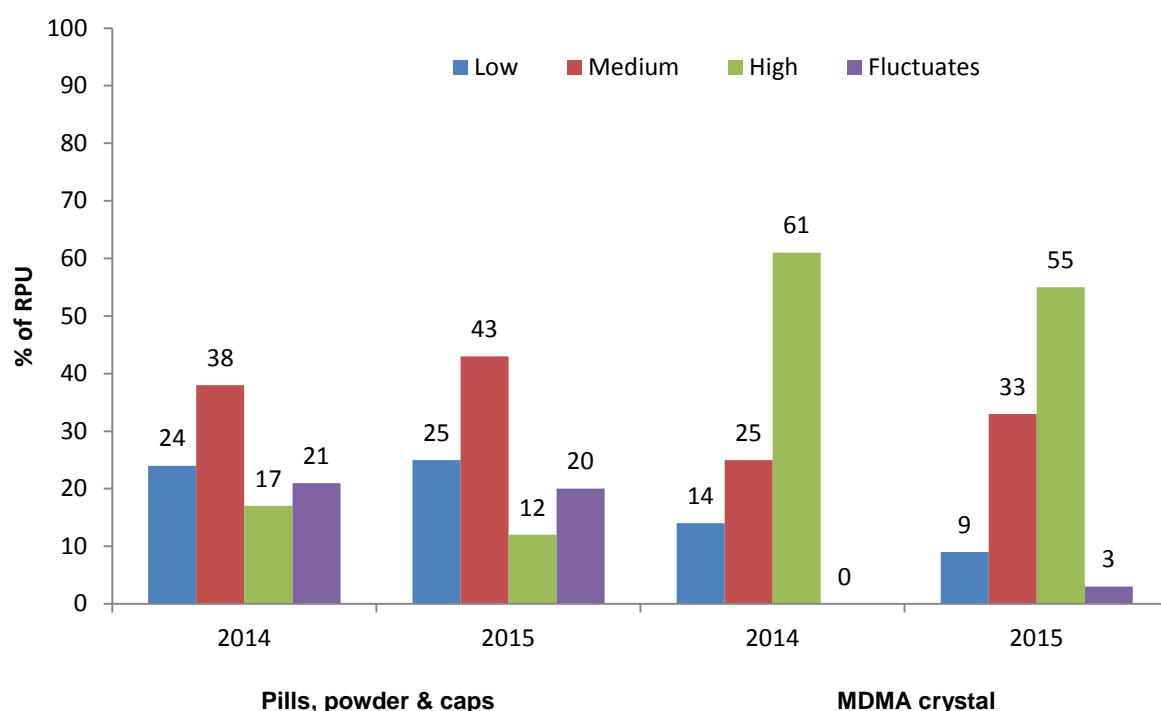
Source: EDRS participant interviews

### 5.1.2 Purity – RPU reports

Figure 10 presents the participants perceived purity of ecstasy and Table 20 summarises the changes in purity in the last six months. It is important to bear in mind that it is difficult to gauge the actual quality of the ecstasy that is being consumed, as participant opinions are based on many factors other than the actual purity of the ecstasy. Factors such as length of use, frequency of use, quality of previous ecstasy and the physical and psychological status of the user all impact upon impressions of quality, and, as such, the figures presented are only perceptions of the participants.

As can be seen in Figure 10, the perceived purity of ecstasy varied considerably across the different forms. Specifically, over half (55%) of those able to comment reported the current purity of MDMA crystals to be high, and the majority (54%) reported that this had remained stable in the six months preceding interview. In contrast, the largest proportion of those answering for ecstasy pills, powder and caps reported current purity to be medium (43%), which was largely reported to have also remained stable in the six months preceding interview (40%).

**Figure 10: Trends in the perceived purity of ecstasy in the last six months, SA, 2014 & 2015**



Source: EDRS participant interviews  
Note: 'Don't know' excluded.

**Table 20: Change in purity over the last six months, SA, 2014 & 2015**

	Pills, powder and caps		MDMA crystal	
	2014	2015	2014	2015
<b>Recent change in purity (%)</b>	(n=87)	(n=95)	(n=24)	(n=26)
Increasing	9	18	17	23
Stable	31	40	58	54
Decreasing	21	25	17	8
Fluctuating	39	17**	8	15

Source: EDRS participant interviews  
Note: 'Don't know' not included. 2013 data refers to the perceived purity of all forms of ecstasy (pills, powder, caps and MDMA crystal).  
\*\* $p < 0.01$

### 5.1.2.1 Purity – seizure data

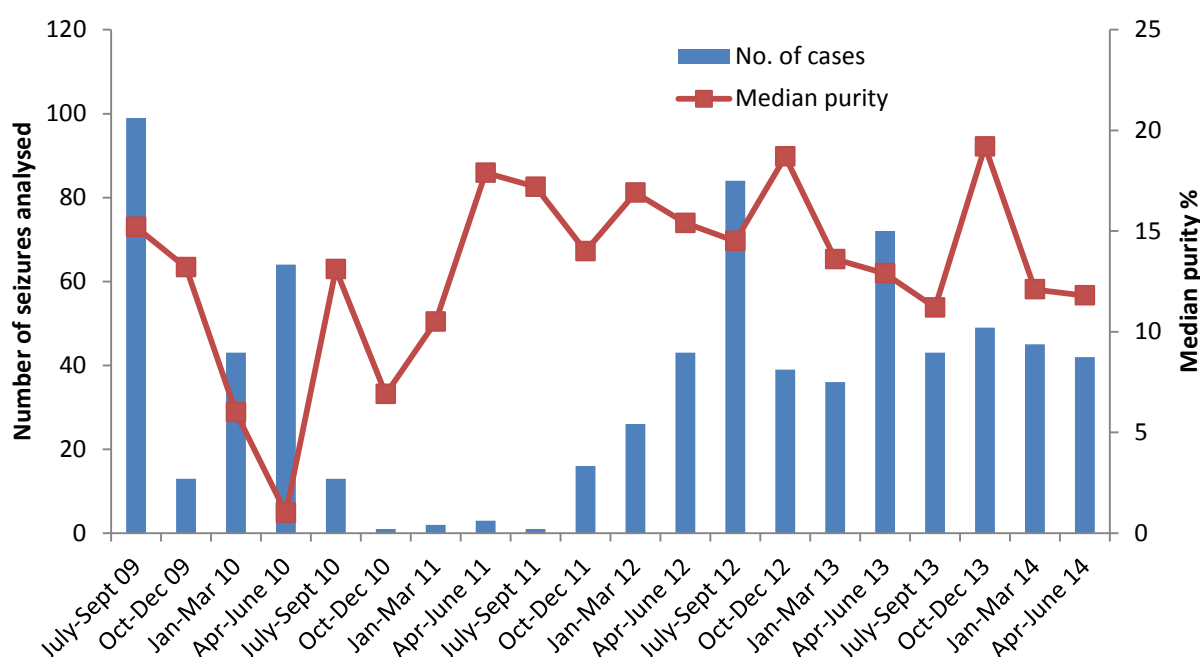
Estimates of purity by users are necessarily subjective and depend, among other factors, on users' tolerance to the drug. Laboratory analyses of the purity of seizures provide more objective evidence regarding purity changes, and therefore should be considered in addition to the subjective reports of users. It is also important to note the limitation of the average purity figures – namely, that **not all illicit drugs seized by Australia's law enforcement agencies are analysed for purity**. In some instances, seized drugs will be analysed only in

a contested court matter. The purity figures, therefore, relate to an unrepresentative sample of the illicit drugs available in Australia. Notwithstanding this limitation, the purity figures provided remain the most objective measure of changes in purity levels available in Australia.

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

The ACC data for 2014/15 were unavailable 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, 2013/14 (Australian Crime Commission, 2015). Figure 11 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 2009/10 to 2013/14. The total number of SAPOL phenethylamines seizures analysed from July 2013 to June 2014 was 179, which is a slight decline from the number of seizures reported in 2012/13 (231). The median purity remained low and stable at 13.3% (compared to 14.3% in 2012/13).

**Figure 11: Number of phenethylamine\* seizures analysed and median purity, SA, 2009/10–2013/14**



**Source:** Australian Crime Commission, 2011, 2012, 2013, 2014, 2015

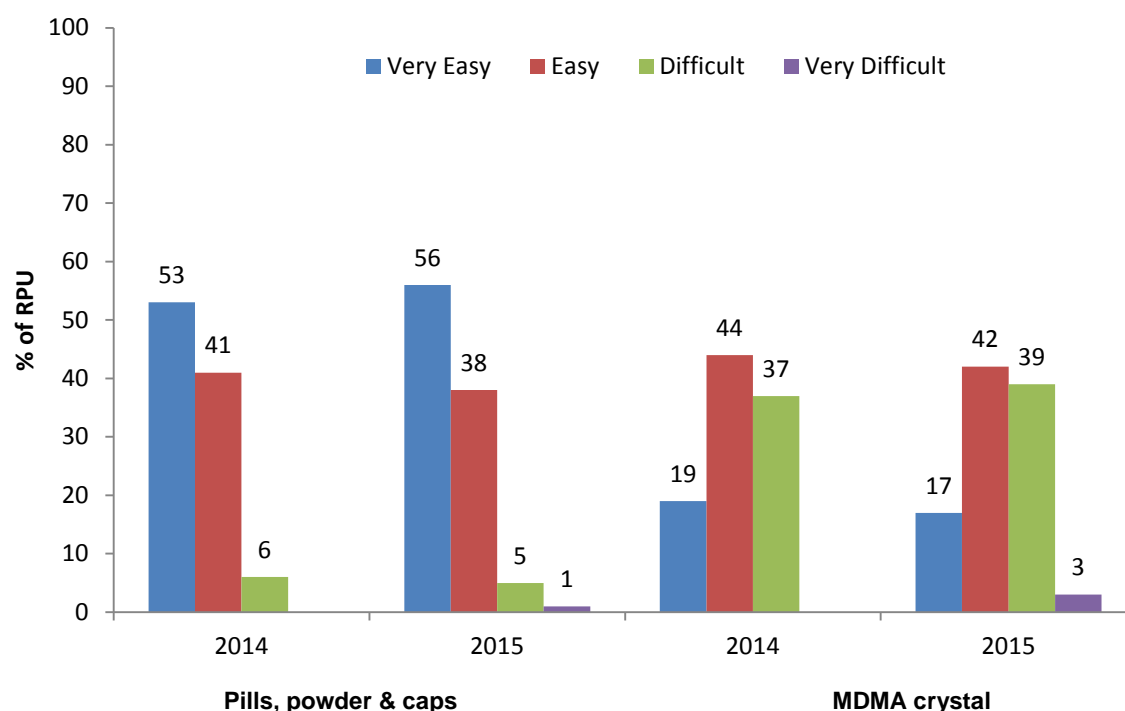
\*Phenethylamines include MDMA ('ecstasy'), MDEA, MDA, PMA and others (see Australian Crime Commission, 2012)

### 5.1.3 Availability

Figure 12 presents the current availability of ecstasy and Table 21 summarises the changes in availability in the last six months, as perceived by participants. As can be seen, the perceived availability of ecstasy varied considerably across the different forms. Although the

majority of participants reported that ecstasy was 'very easy' or 'easy' to obtain (94% for pills, powder and caps; 59% for MDMA crystals), over two-fifths (42%) of those able to answer reported that MDMA crystal was 'difficult' or 'very difficult' to obtain, compared to only 6% of those answering for ecstasy pill, powder and caps. The availability of ecstasy was largely reported to have remained stable over the preceding six months, although one-third (32%) of those able to answer reported that MDMA crystal had become more difficult to obtain.

**Figure 12: Trends in availability of ecstasy in the preceding six months, SA, 2014 & 2015**



**Source:** EDRS participant interviews  
**Note:** 'Don't know' not included from 2009 onwards.

**Table 21: Change in availability over the last six months, SA, 2014 & 2015**

	Pills, powder and caps		MDMA crystal	
	2014	2015	2014	2015
<b>Change in availability in last 6 months (%)</b>	(n=91)	(n=97)	(n=25)	(n=31)
More difficult	10	10	20	32
Stable	66	66	40	32
Easier	14	14	28	16
Fluctuates	10	9	12	19

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

#### 5.1.4 Supply: purchasing patterns and locations of use

Participants were asked to provide information pertaining to the recent purchase of ecstasy and other drugs. The results of those providing information are presented in Table 22, and they relate to all forms of ecstasy (i.e. pills, powder, caps and crystal). The majority of RPU purchased ecstasy for themselves and others (58%), and this represents a non-significant

decline from 2014 (70%;  $p>0.05$ ). The median number of people that ecstasy was purchased from remained stable, as did the median number of tablets purchased. Just under half (47%) of those who answered reported purchasing ecstasy monthly or less in the preceding six months, and over one-third (36%) reported purchasing ecstasy fortnightly or less in that time frame: both of which remained stable from 2014.

**Table 22: Patterns of purchasing ecstasy in the last six months, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>Median no. of people purchased from (range)</b>	3 (1–25)	<b>3 (0–40)</b>
<b>Purchased for (%)</b>	(n=98)	<b>(n=100)</b>
Self only	28	<b>37</b>
Self and others	70	<b>58</b>
Others only	2	<b>2</b>
Did not purchase in last 6 months	0	<b>3</b>
<b>No. of times purchased in the last 6 months (%)</b>	(n=97)	<b>(n=97)</b>
1–6	54	<b>47</b>
7–12	34	<b>36</b>
13–24	11	<b>14</b>
25 +	1	<b>2</b>
<b>Median no. of ecstasy tablets purchased (range)</b>	7 (1–200)	<b>6 (1–250)</b>

**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, followed by known dealers. The largest proportion of participants reported scoring at a friend's home (see Table 23).

**Table 23: Trend in the source and venue of purchase of ecstasy for participants in the last 6 months, SA, 2014 & 2015**

	<b>Pills, powder and caps</b>		<b>MDMA crystal</b>	
	2014	2015	2014	2015
<b>Bought ecstasy from:</b>	(n=97)	(n=98)	(n=29)	(n=35)
Friends	58	61	59	54
Known dealers	23	20	21	14
Workmates	3	0	0	3
Acquaintances	6	8	3	11
Unknown dealers	4	7	0	3
Street dealers	2	0	0	3
Mobile dealer	1	1	0	3
Online	2	1	14	6
Relatives	0	1	0	0
<b>Venues normally scored [ecstasy] at?</b>	(n=97)	(n=97)	(n=29)	(n=35)
Own home	10	11	0	6
Dealer's home	12	8	14	6
Friend's home	25	27	62	31
Acquaintance's home		1		3
Raves/dance parties	2	0	0	3
Nightclubs	22	22	3	11
Pubs	3	1	0	6
Agreed public location	14	14	7	6
Private party	3	5	0	3
Street	1	7	0	11
Live music event	5	1	3	6
Online	1	0	7	6

**Source:** EDRS participant interviews

### **KE Comments**

- ◆ KE largely reported that the ecstasy market had remained stable over the preceding 12 months.
- ◆ There were, however, two KE who noted a slight decline in the price of ecstasy, with a pill reportedly costing \$10–20.
- ◆ Ecstasy was reported to come mainly in pill form.
- ◆ A number of KE raised concerns about the lack of MDMA in ‘ecstasy’ pills, and the presence of other substances such as NPS.
- ◆ One KE noted an increase in the number of ‘user-dealers’ (i.e. people selling to support their own habit, rather than make a profit).



## 5.2 Methamphetamine

### Key Findings

- The reported last median price of a point of powder, base and crystal methamphetamine remained relatively stable at \$50, \$90 and \$65 respectively.
- Reports regarding the purity of methamphetamine were mixed; however, the perceived purity of all three forms of methamphetamine was considered to be high or medium.
- All forms of methamphetamine were considered to be easy or very easy to obtain.
- The largest proportion of participants reported that they purchased powder and crystal methamphetamine from friends, while all participants reported purchasing base methamphetamine from a known dealer.
- Only a small number participants were able to report on the PPA of powder (n=8) and base (n=6) methamphetamine. These findings must therefore be viewed with caution.

### 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 24 presents the prices of methamphetamine and Table 25 presents whether these had changed over the six months preceding interview.

The reported last median price of a point of powder, base and crystal all remained relatively stable in 2015 at \$50, \$90 and \$65 respectively (Table 24). Across all forms of methamphetamine, the largest proportion of those who were able to comment reported that the price had remained stable in the six months preceding interview (see Table 25).

**Table 24: Median price of last purchase of the main forms of methamphetamine, SA, 2014 & 2015**

Amount	Median price per amount \$ (range; n)					
	Powder		Base		Crystal	
	2014	2015	2014	2015	2014	2015
<b>Point</b> Price at last purchase	50 <sup>^</sup> (no range; 1)	50 <sup>^</sup> (25–100; 4)	100 <sup>^</sup> (70–100; 5)	90 <sup>^</sup> (80–100; 2)	90 (50–100; 12)	65 (50–100; 20)
<b>Gram</b> Price at last purchase	-	185 <sup>^</sup> (20–350; 2)	-	425 <sup>^</sup> (350–500; 2)	450 <sup>^</sup> (447–500; 3)	450 <sup>^</sup> (350–500; 4)

Source: EDRS participant interviews

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

**Table 25: Changes in price over the last six months, SA, 2014 & 2015**

Change in price	Powder		Base		Crystal	
	2014 (n=3 <sup>^</sup> )	2015 (n=7 <sup>^</sup> )	2014 (n=5 <sup>^</sup> )	2015 (n=5 <sup>^</sup> )	2014 (n=15)	2015 (n=22)
Increasing	0	29	0	0	27	9
Stable	100	29	100	60	40	41
Decreasing	0	14	0	0	27	32
Fluctuating	0	29	0	40	7	18

Source: EDRS participant interviews

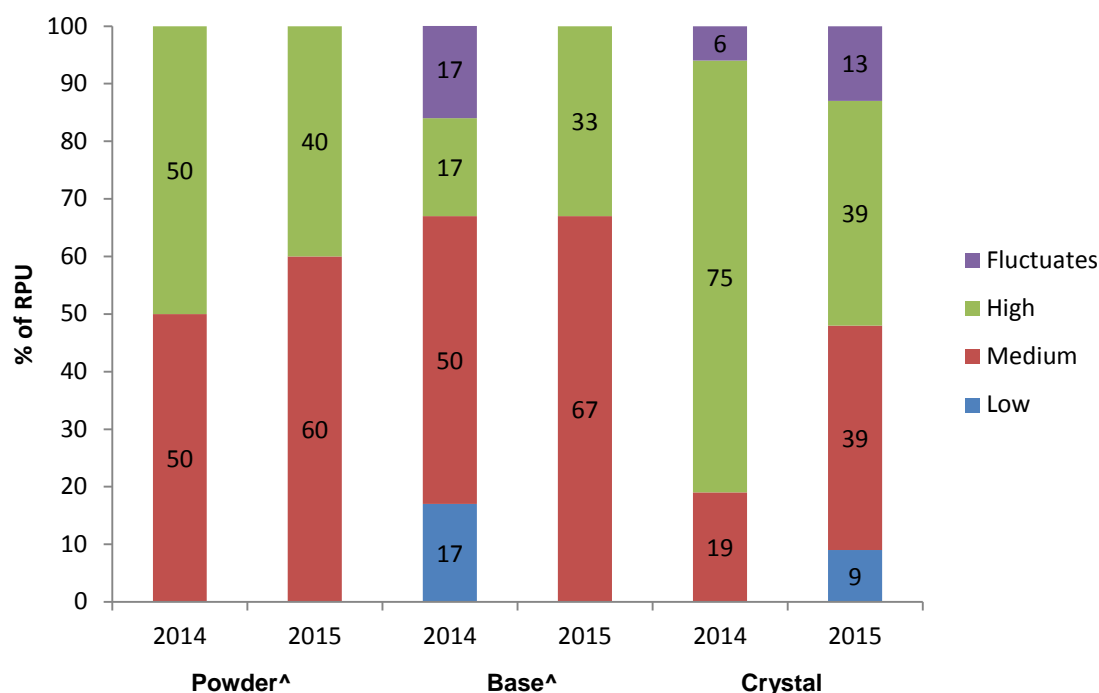
Note: Excludes 'don't know'

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

## 5.2.2 Purity – RPU reports

As can be seen in Figure 13, the perceived purity of methamphetamine was considered to be high or medium. Specifically, three-fifths (60%) of those able to comment reported the current purity of methamphetamine powder to be medium, 67% reported that the purity of base was medium, while equal proportions reported that the purity of crystal methamphetamine was 'medium' and 'high'. It should be noted that only a small number of participants were able to report on the perceived purity of powder and base methamphetamine. Across all forms of methamphetamine, the greatest proportion of participants reported that the purity had remained stable over the preceding six months (see Table 26).

**Figure 13: Purity of the main forms of methamphetamine over the last six months, SA, 2014 & 2015**



Source: EDRS participant interviews

Note: 'Don't know' not included

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

**Table 26: Changes in purity of the main forms of methamphetamine over the last six months, SA, 2014 & 2015**

Change in purity	Powder		Base		Crystal	
	2014 (n=2 <sup>^</sup> )	2015 (n=5 <sup>^</sup> )	2014 (n=6 <sup>^</sup> )	2015 (n=4 <sup>^</sup> )	2014 (n=14)	2015 (n=21)
Increasing	0	20	0	0	14	19
Stable	100	40	50	100	43	48
Decreasing	0	20	17	0	7	24
Fluctuating	0	20	33	0	36	10

Source: EDRS participant interviews

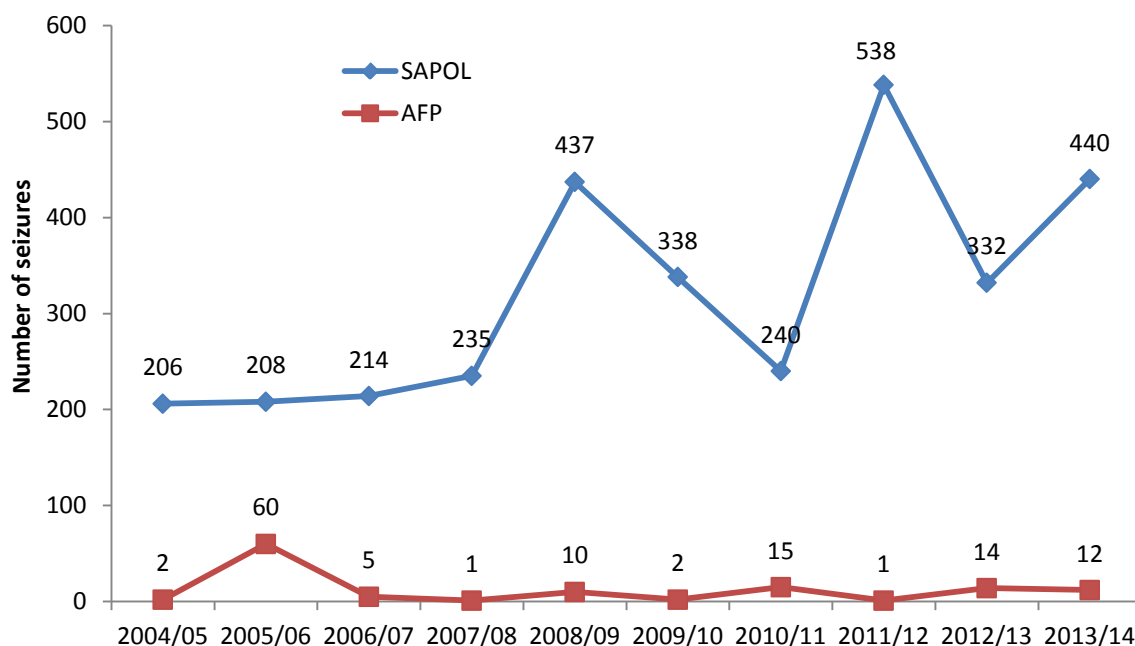
Note: 'Don't know' not included

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

### 5.2.2.1 Purity – seizure data

The ACC data for 2014/15 were unavailable at the time of publication. As a consequence, data provided by the ACC relates to the data on seizures and purity levels during the last financial year, 2013/14 (Australian Crime Commission, 2015). Figure 14 shows the number of seizures for amphetamine-type stimulants, by SAPOL and the AFP. As can be seen, there has been considerable variation in the number of ATS seizures over the past decade. After a sharp drop in 2012/13, the number of ATS seizures increased in 2013/14 - although it is important to note that there was a decline in the weight of the seizures (14,265 in 2013/14 versus 22,281 grams in 2012/13). The number of AFP seizures remained low and stable in 2013/14; however, the weight of the seizures decreased considerably (10,809 grams in 2013/14 versus 31,078 grams in 2012/13).

**Figure 14: Number of seizures: amphetamine-type stimulants, SA, 2004/05–2013/14**

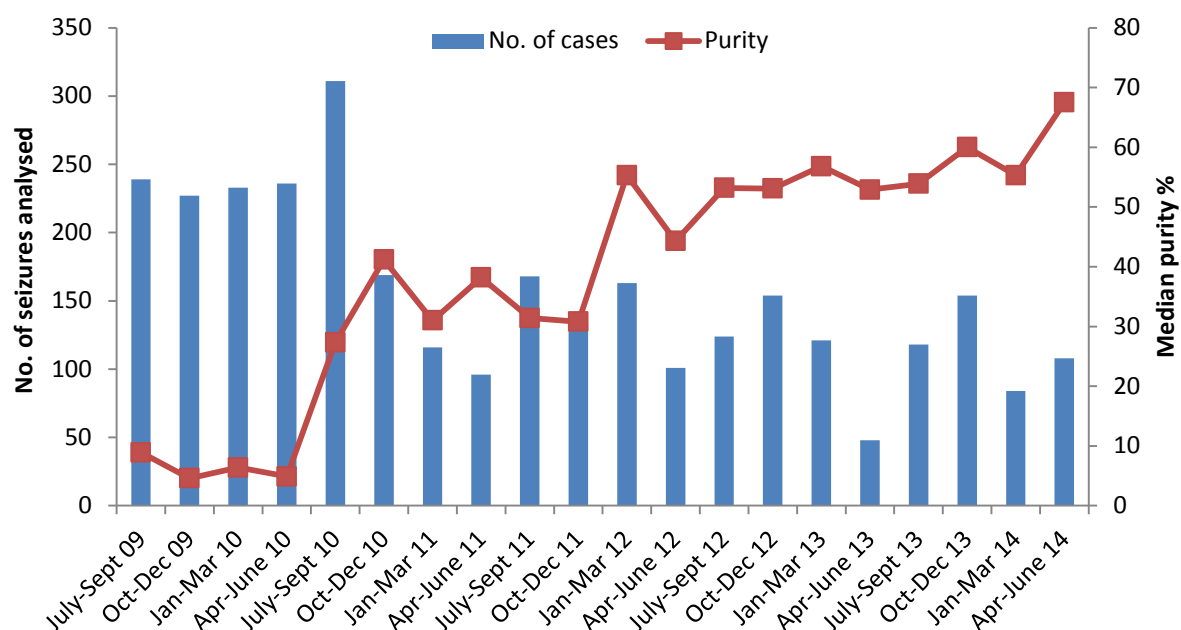


Source: Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Figure 15 shows the number of methylamphetamine seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures from 2009/10 to 2013/14. The total number of SAPOL methylamphetamine seizures analysed from July 2013 to June 2014 was 464, which was stable from the 2012/13 financial year (447). The overall median purity of the seizures analysed also remained

relatively stable at 59.7% (compared to 54.6% in 2012/13). The majority of seizures analysed were more than 2 grams.

**Figure 15: Median purity of methylamphetamine, SA, 2009/10–2013/14**

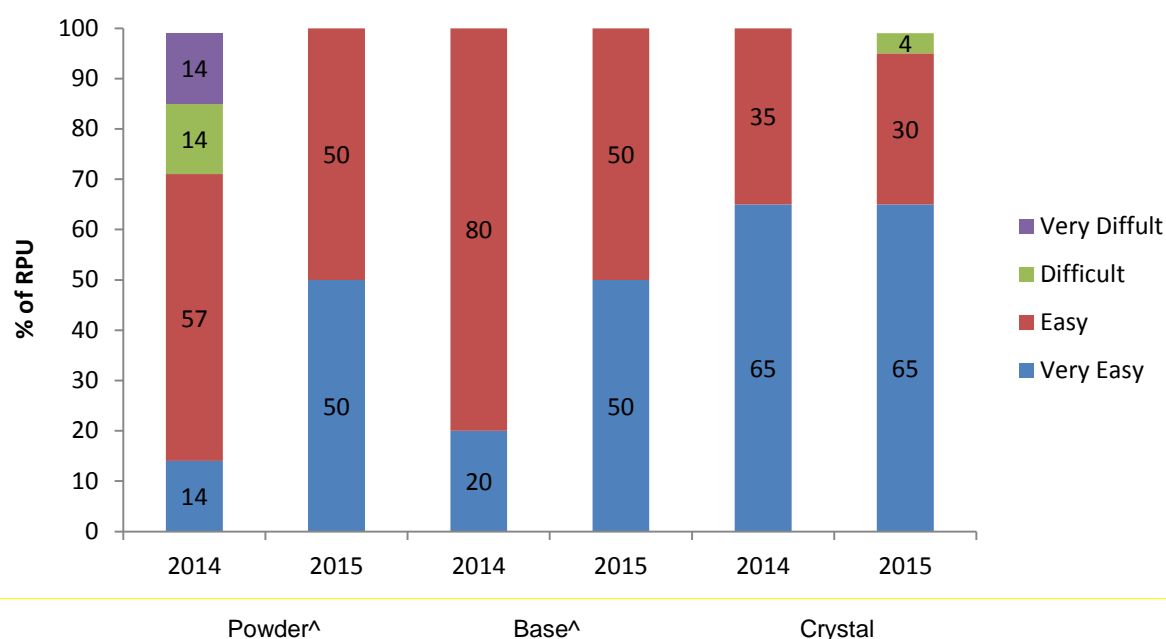


**Source:** Australian Crime Commission, 2011, 2012, 2013, 2014, 2015

### 5.2.3 Availability

All three forms of methamphetamine were considered to be 'easy' or 'very easy' to obtain by the majority of participants (see Figure 16). The majority of participants reported the availability of all forms of methamphetamine as stable in the last six months (see Table 27). It should be noted that few participants were able to report on the perceived purity of powder and base methamphetamine ( $n < 10$ ).

**Figure 16: Availability of the main forms of methamphetamine over the last six months, SA, 2014 & 2015**



Source: EDRS participant interviews

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

**Table 27: Change in availability of the main forms of methamphetamine over the last six months, SA, 2014 & 2015**

Change in availability in last 6 months (%)	Powder		Base		Crystal	
	2014 (n=5 <sup>^</sup> )	2015 (n=7 <sup>^</sup> )	2014 (n=5 <sup>^</sup> )	2015 (n=6 <sup>^</sup> )	2014 (n=14)	2015 (n=22)
More difficult	20	0	20	0	0	0
Stable	60	71	80	83	79	64
Easier	20	14	0	0	14	27
Fluctuates	0	14	0	17	7	9

Source: EDRS participant interviews

Note: 'Don't know' not included

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

## 5.2.4 Supply: purchasing patterns and locations of use

When asked where they had bought the different forms of methamphetamine, participants provided different profiles for each of the three forms (see Table 28). The largest proportion of participants reported that they purchased powder and crystal methamphetamine from friends, while all participants reported purchasing base methamphetamine from a known dealer. All three forms of methamphetamine were most commonly obtained at a private home.

**Table 28: Last person and source venue where participants purchased methamphetamine, SA, 2015**

% commented	Powder (n=7 <sup>^</sup> )	Base (n=4 <sup>^</sup> )	Crystal (n=20)
<b>Who have you bought [meth] from in the last 6 months?</b>			
Friends	86	0	70
Known dealer	0	100	20
Unknown dealer	0	0	10
Mobile dealer	14	0	0
<b>What venues do you normally score [meth] at?</b>			
Own home	29	50	10
Dealer's home	0	25	20
Friend's home	43	0	45
Nightclub	0	0	0
Pub	0	0	5
Private party	14	0	0
Agreed public location	14	25	20

**Source:** EDRS participant interviews

<sup>^</sup> Small numbers reported (n<10). Interpret with caution

### KE Comments

- The price of methamphetamine was reported to range from \$50–100 for a point.
- The purity of methamphetamine was largely reported to have increased over the preceding 12 months, with two law enforcement KE reporting that the purity of their methamphetamine seizures was consistently ≥60%.
- Methamphetamine was considered to be easily accessible, with availability remaining stable over the preceding 12 months.

## 5.3 Cocaine

### Key Findings

- In 2015, the median price of cocaine increased slightly to \$350 per gram.
- The purity of cocaine was perceived as medium.
- The current availability of cocaine was largely perceived as 'easy', with the majority of participants reporting that this had remained stable in the six months preceding interview.
- Among those who could comment, most purchased cocaine from a friend; reports regarding the location from where participants last obtained cocaine were mixed.

### 5.3.1 Price

Cocaine was most commonly purchased in grams and was purchased for a median of \$350 (range=\$100–600). The majority of participants who commented on the price considered it to have remained stable in the last six months (73%).

**Table 29: Price of cocaine, SA, 2014 & 2015**

	2014	2015
<b>Median price of last purchase Gram (range; n)</b>	<b>\$300 (100–500; 20)</b>	<b>\$350 (100–600; 18)</b>
<b>Price change in last month (%)</b>	<b>(n=28)</b>	<b>(n=30)</b>
Increasing	7	13
Stable	71	73
Decreasing	18	10
Fluctuating	4	3

**Source:** EDRS participant interviews

Note: 'Don't know' excluded from analysis

### 5.3.2 Purity– RPU reports

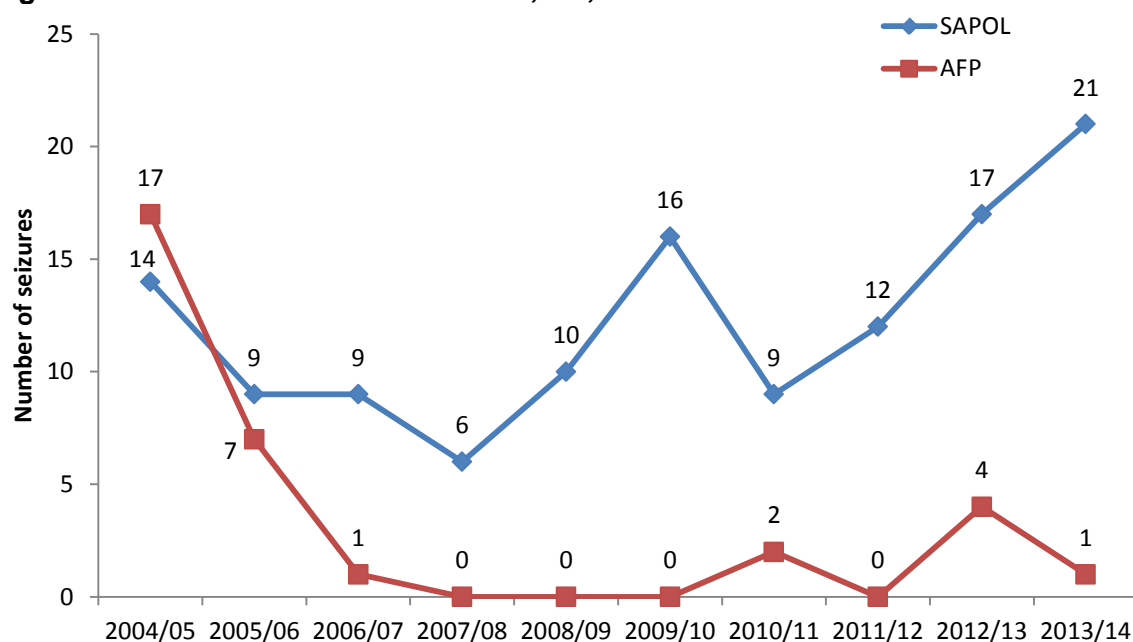
Participants were asked what the current purity or strength of cocaine was, and whether the purity had changed in the six months preceding interview. The purity of cocaine was largely perceived as medium (53%); 18% reported it was low, 15% reported it was high and 15% reported that had fluctuated over the past six months.

The majority of participants who commented (62%) reported that the purity of cocaine had remained stable over the past six months, 24% believed it had decreased, 10% reported it had fluctuated and 3% reported that it had increased.

#### 5.3.2.1 Purity – seizure data

The ACC data for 2014/15 were unavailable at the time of publication. As a consequence, data provided by the ACC relates to the data on seizures and purity levels during the last financial year, 2013/14 (Australian Crime Commission, 2015). Figure 17 shows the number of seizures for cocaine, by SAPOL and the AFP. As can be seen, SAPOL seizures increased slightly in 2013/14 (21 versus 17 in 2012/13), continuing an upward trend that has been observed from 2010/11 onwards. The number of seizures made by the AFP remained low (1 versus 4 in 2012/13).

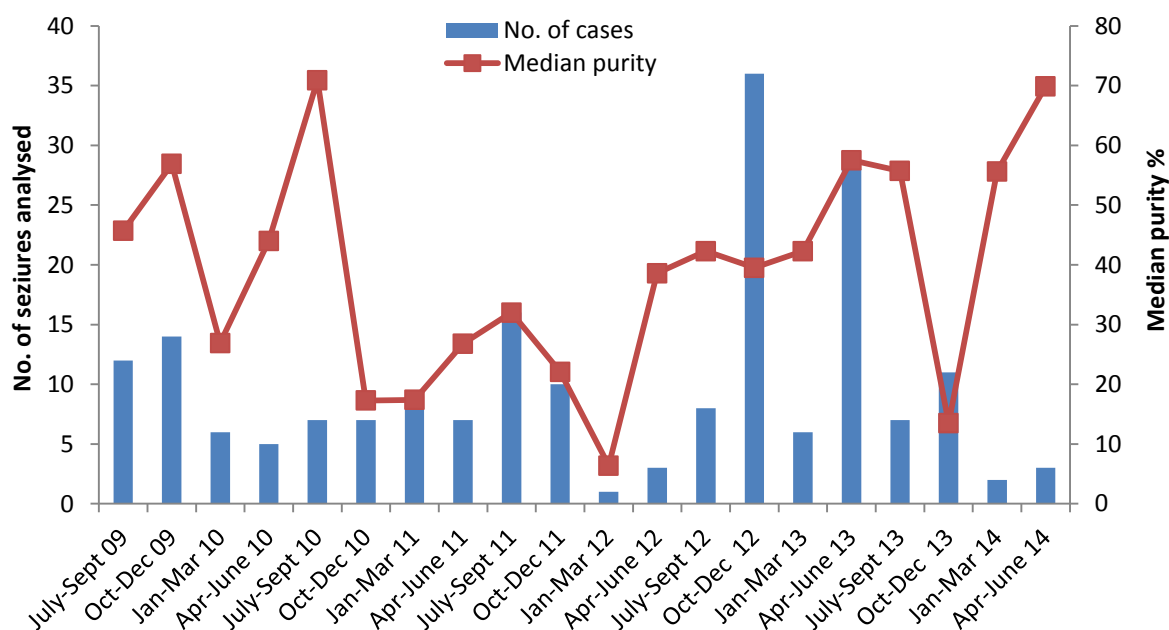
**Figure 17: Number of cocaine seizures, SA, 2004/05–2013/14**



**Source:** Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Figure 18 shows the number of cocaine seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures from 2009/10 to 2013/14. The total number of SAPOL cocaine seizures analysed from July 2013 to June 2014 was 23, which was a substantial decline from the number of seizures reported in the 2012/13 financial year (78). The overall median purity of the seizures analysed was 29.9%, which also a substantial decrease from the median purity reported in 2012/13 (57%).

**Figure 18: Number of cocaine seizures analysed and median purity, SA, 2009/10–2013/14**



**Source:** Australian Crime Commission, 2011, 2012, 2013, 2014, 2015



### 5.3.3 Availability

Reports regarding the current availability of cocaine were quite mixed. Of those able to answer, two-fifths (44%) reported that cocaine was 'easy' to obtain, while 31% reported that it was 'difficult' to obtain. The majority (65%) of participants considered the ease of access to cocaine to have remained stable in the six months preceding interview.

**Table 30: Availability of cocaine and change in availability over the last six months, SA, 2014 & 2015**

	2014 (n=34)	2015 (n=36)
<b>Current availability (%)</b>		
Very easy	9	19
Easy	50	44
Difficult	38	31
Very difficult	3	6
<b>Change in availability in last 6 months (%)</b>		
	(n=29)	(n=34)
More difficult	3	12
Stable	66	65
Easier	17	18
Fluctuates	14	6

**Source:** EDRS participant interviews

Note: 'Don't know' not included

Cocaine was most commonly acquired through friends (69%), and was most commonly obtained in a friend's home (31%), followed by a nightclub or agreed public location (16% respectively; see Table 31).

**Table 31: Last person and source venue where participants purchased cocaine, SA, 2015**

	(n=32) %
<b>Who have you bought cocaine from in the last 6 months?</b>	
Friends	69
Known dealers	13
Workmates	3
Acquaintances	16
<b>What venues do you normally score cocaine at?</b>	
Own home	6
Dealer's home	3
Friend's home	31
Nightclub	16
Pubs	3
Private party	6
Street market	3
Agreed public location	16
Live music event	3
Other	13

**Source:** EDRS participant interviews

#### KE Comments

- Most of the KE reported that they were seeing very little cocaine use and as such were unable to provide information on its current price, purity or availability (PPA). Of those who were able to comment, cocaine was reported to cost \$350-400 for a gram and \$5,000 for an ounce.

## 5.4 LSD

### Key Findings

- The median price of LSD increased slightly to \$20 for a tab.
- The purity of LSD was perceived as high and stable by the majority of participants; reports regarding availability were mixed.
- Participants generally bought LSD from friends and obtained it from a friend's home.

### 5.4.1 Price

In 2015, the median last price paid for a tab of LSD was \$20 (range \$8-40; n=27), which was a slight increase from 2014 (\$15; range=\$1–50; n=27). The majority of those participants able to comment reported that the price of LSD had been stable in the previous six months (52%); the remaining participants believed the price had increased (26%), decreased (13%) or fluctuated (10%).

### 5.4.2 Purity

Table 32 summarises the current purity of LSD and the changes in purity in the last six months, as perceived by the participants in 2015. Almost three-fifths (58%) of the participants who were able to comment reported that the current purity of LSD was high, and the majority (57%) perceived that purity had remained stable in the six months prior to interview.

**Table 32: Purity of LSD and change in purity over the last six months, SA, 2014 & 2015**

	2014 (n=30)	2015 (n=33)
<b>Current purity (%)</b>		
Low	3	3
Medium	37	30
High	50	58
Fluctuates	10	9
<b>Change purity in last 6 months (%)</b>	(n=24)	(n=30)
Increasing	8	13
Stable	58	57
Decreasing	17	17
Fluctuating	17	13

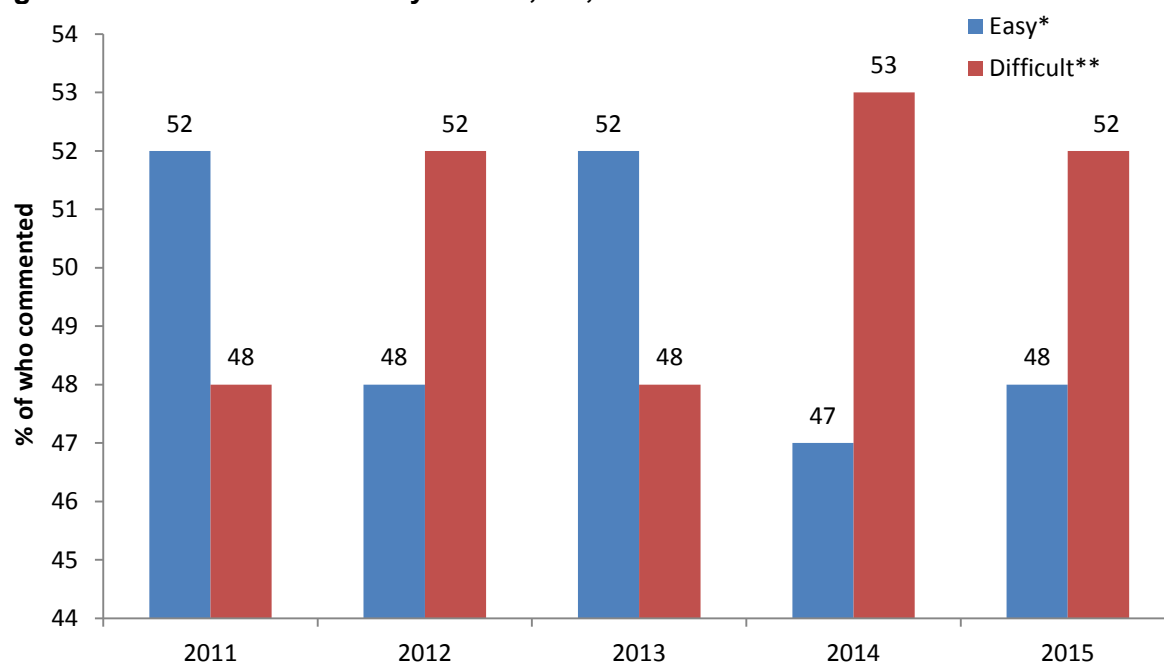
**Source:** EDRS participant interviews

**Note:** 'Don't know' not included

### 5.4.3 Availability

Reports regarding the availability of LSD were mixed: of those able to answer, 52% reported that it was 'difficult' or 'very difficult' to purchase LSD, while 48% reported that it was 'easy' or 'very easy' to obtain (see Figure 19). Sixty-two percent of those able to answer reported that the availability of LSD had been stable in the previous six months, 21% believed it had become more difficult to obtain, 10% reported that availability had fluctuated and 7% reported that it had become easier to obtain LSD over the preceding six months.

**Figure 19: Trends in availability of LSD, SA, 2011–2015**



**Source:** EDRS participant interviews

\*Data for 'easy' contains the collapsed categories 'very easy' and 'easy'

\*\*Data for 'difficult' is the collapsed categories 'difficult' and 'very difficult'

Among those able to comment, the largest proportion of REU reported that they had bought LSD from friends (68%) and that they had 'scored' at their friend's home (39%) (see Table 33).

**Table 33: Usual person and source venue where participants purchased LSD, SA, 2015**

	% of participants
<b>Who have you got LSD from in the last 6 months?</b>	<b>(n=31)</b>
Friends	68
Known dealers	6
Unknown dealers	6
Online	19
<b>What venues do you normally score LSD at?</b>	<b>(n=31)</b>
Own home	16
Friend's home	39
Dealer's home	3
Pub/bar	3
Private party	3
Rave/dance party	6
Agreed public location	10
Online	16
Other	3

**Source:** EDRS participant interviews

### KE Comments

- Most KE reported that they were seeing very little LSD use and were unable to provide information on its current PPA.
- One law enforcement KE noted that NBOMe was being sold as LSD, possibly due to its cheaper price. NBOMe can be purchased online for \$8-9 and then sold as 'LSD' on the street market for \$25-30.

## 5.5 Cannabis

### Key Findings

- The price reported for hydro/bush remained stable at \$25 for a bag.
- The purity of hydro and bush cannabis was largely reported as medium, with the purity of both types of cannabis perceived as stable in the previous six months.
- Availability was reported as easy or very easy, and this had reportedly remained stable over the preceding six months.
- Participants generally bought cannabis from friends and obtained it from a friend's home.

The following sections refer to a 'bag' as a standard measure (particular to the South Australian cannabis market). A detailed investigation of the weight/content of a bag of cannabis was undertaken in 2002 (Longo et al., 2003). Briefly, in the 2002 survey, 33 participants (people who inject drugs) gave a single value of the average weight of cannabis bags sold in SA, 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 2015, participants were also asked if they were able to differentiate between hydro and bush cannabis in terms of price, potency and availability. The majority (56%) of the SA sample reported that they were able to distinguish between the two forms.

### 5.5.1 Price

The reported last median purchase price (by those able to comment) for a 'bag' of hydro (n=31) and bush cannabis (n=31) was \$25 (range=\$20–25 for hydro and \$20–30 for bush), which was stable from 2014. The median purchase prices reported for an ounce of hydro (n=25) and bush (n=17) cannabis were \$220 (range=\$180–370) and \$240 (range=\$180–370) respectively; these were stable from 2014 (\$220 an ounce for both hydro and bush cannabis).

The majority of participants (76%, 34 out of 45 participants) who were able to comment reported that the price of hydro had remained stable, while the remaining participants reported that it had increased (16%) or fluctuated (9%) in the six months prior to interview.

The majority of participants able to comment on the price of bush also reported that the price had remained stable (80%, 37 out of 46 participants), while 11% reported that it had fluctuated and 9% reported that the price had decreased in the last six months.

### 5.5.2 Purity – RPU reports

Table 34 and Table 35 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. In 2015, the purity of hydro and bush cannabis was reported as high or medium by the majority of participants able to comment (hydro 85%; bush 74%). The majority of participants

able to comment reported that the purity of hydro (51%) and bush cannabis (63%) was stable in the last six months.

**Table 34: Purity of hydro and bush cannabis over the last six months, SA, 2014 & 2015**

	% Able to answer			
	2014		2015	
	Hydro (n= 56)	Bush (n=54)	Hydro (n= 46)	Bush (n=49)
High	48	37	54	33
Medium	41	48	22	41
Low	0	6	7	14
Fluctuates	11	9	17	12

**Source:** EDRS participant interviews

Note: 'Don't know' not included

**Table 35: Change in potency/strength of cannabis in last six months, SA, 2014 & 2015**

	% Able to answer			
	2014		2015	
	Hydro (n=55)	Bush (n=48)	Hydro (n=47)	Bush (n=46)
Increasing	7	17	17	7
Stable	62	52	51	63
Decreasing	4	2	11	13
Fluctuating	27	29	21	15

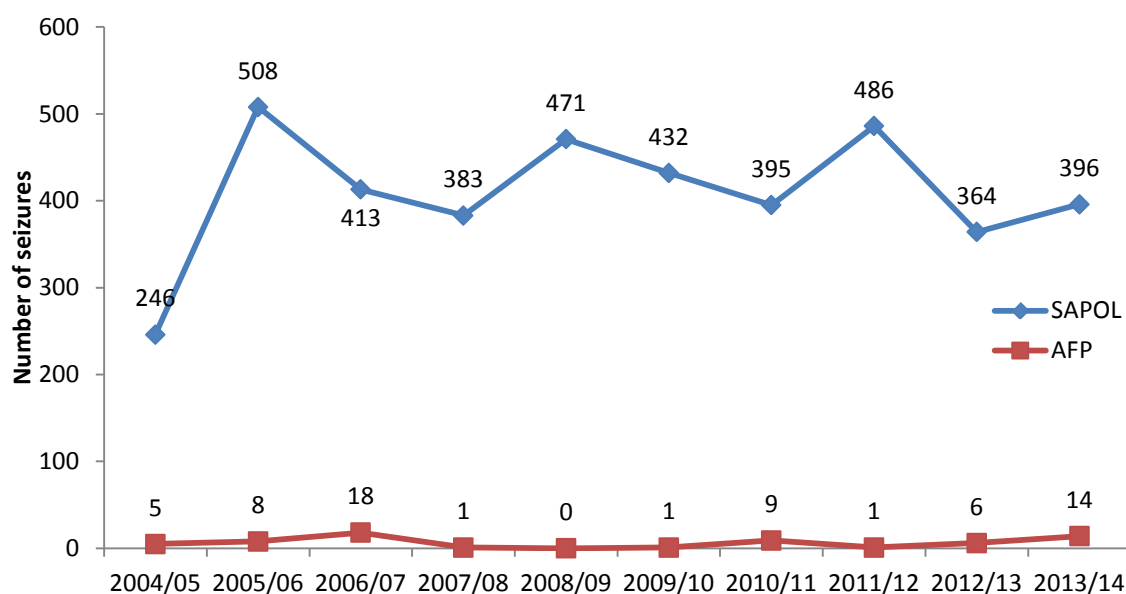
**Source:** EDRS participant interviews

Note: 'Don't know' not included

### 5.5.2.1 Purity – seizure data

The ACC data for 2014/15 were unavailable at the time of publication. As a consequence, data provided by the ACC relates to the data on seizures during the last financial year, 2013/14 (Australian Crime Commission, 2015). Figure 20 shows the number of seizures for cannabis, by SAPOL and the AFP. As can be seen, both SAPOL and AFP cannabis seizures remained stable in 2013/14.

**Figure 20: Number of cannabis seizures, SA, 2004/05–2013/14**



**Source:** Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

### 5.5.3 Availability

Table 36 and Table 37 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 2015, the majority of participants able to comment reported hydro and bush cannabis as 'easy' or 'very easy' to obtain (83% and 80% respectively). Of those able to comment, the majority of RPU reported that the availability of hydro (69%) and bush (63%) had remained stable in the last six months.

**Table 36: Availability of cannabis currently, SA, 2014 & 2015**

How easy is it to get cannabis at the moment?	% Able to answer			
	2014		2015	
	Hydro (n=58)	Bush (n=54)	Hydro (n=48)	Bush (n=49)
Very easy	52	32	60	39
Easy	40	41	23	41
Difficult	9	22	17	18
Very difficult	0	6	0	2

**Source:** EDRS participant interviews

Note: 'Don't know' not included

**Table 37: Change in availability of cannabis over the last 6 months, SA, 2014 & 2015**

Has [availability] changed in the last 6 months?	% Able to answer			
	2014		2015	
	Hydro (n=56)	Bush (n=51)	Hydro (n=48)	Bush (n=49)
More difficult	11	20	17	12
Stable	66	45	69	63
Easier	9	24	13	12
Fluctuates	14	12	2	12

**Source:** EDRS participant interviews

Note: 'Don't know' not included

#### 5.5.4 Usual source of purchase

Table 38 summarises information from participants on the source (both person and venue) from which they had 'usually' obtained cannabis in the preceding six months. In 2015, participants able to comment reported that they had 'usually' obtained cannabis from a friend (52% for hydro; 65% for bush) or a known dealer (33% for hydro; 25% 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 (40% for hydro; 52% for bush), a dealer's home (23% for hydro; 15% for bush) or home delivery (17% for hydro; 15% for bush).

**Table 38: Usual person and source venue where participants purchased hydro and bush cannabis, SA, 2015**

	Hydro (n=48)	Bush (n=48)
<b>Person (%)</b>		
Friends	52	65
Known dealer	33	25
Street dealer	2	0
Unknown dealer	2	2
Acquaintances	8	4
Relative	2	2
Other	0	2
<b>Venue (%)</b>		
Home delivery	17	15
Dealer's home	23	15
Friend's home	40	52
Agreed public location	10	13
Street market	4	2
Work	2	0
Acquaintance's home	2	0
Other	2	4

**Source:** EDRS participant interviews

### **Key Expert Comments**

- The majority of KE agreed that the PPA of cannabis had remained stable in the 12 months preceding interview. The price of cannabis was reported to have remained stable at \$25 for a bag and \$200-350 for an ounce. One KE noted there had been an increase in the price for larger quantities of cannabis, with the price for a pound of cannabis increasing to \$3,200.

## **5.6 Other drugs**

Very few participants were able to answer on benzodiazepines (n=10), steroids (n=3), pharmaceutical stimulants (n=1), GHB (n=1) or ketamine (n=1), and hence data will not be presented for these drugs. No participants were able to answer on MDA, antidepressants or antipsychotics.



## 6 HEALTH-RELATED TRENDS ASSOCIATED WITH ECSTASY & RELATED DRUG USE

### Key Findings

- Almost one-third of the sample (30%) self-reported that they had overdosed on a stimulant drug and 13% reported that they had overdosed on a depressant drug in the past 12 months.

#### *Health service use*

- Fifteen participants reported that they had received professional help for a drug and alcohol related issue, and 16% reported that they had thought about seeking help for their drug and alcohol use.
- Telephone calls to ADIS remained relatively stable for alcohol, ecstasy, cannabis and cocaine; increased for methamphetamine; and decreased for opioids.
- Alcohol dominated as the primary drug of concern for the largest proportion of total clients to DASSA treatment services, followed by amphetamines, cannabis, opioid analgesics and heroin. Ecstasy and cocaine accounted for only a very small fraction of the total attendances.

#### *Mental health*

- Just over two-fifths (42%) of RPU were assessed as having high to very high levels of psychological distress in 2015.
- Two-fifths (41%) of the sample reported that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview, which was a significant increase from 2014 (25%).

### 6.1 Overdose and drug-related fatalities

As in previous years, participants in the 2015 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 in their lifetime and in the last 12 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, 38% of the sample reported that they had experienced a recent overdose.

#### 6.1.1 Stimulant overdose

Lifetime stimulant overdose was reported by 43% of RPU, similar to overdose rates reported in 2014 (35%). Those who had ever experienced a stimulant overdose reported doing so on a median of 2 occasions (range=1–15). The median time since last overdose was five months (range=1–60 months).

Thirty participants reported that they had overdosed on a 'stimulant' drug in the last 12 months, and at the time of their most recent overdose they had been partying for a median of 5.5 hours (range=0–192). Participants predominantly reported being at a nightclub (n=8), a live music event (n=6) or at their own home (n=6) at the time of overdose. Fewer participants reported being at a friend's home (n=4), outdoors (n=3), private party (n=1) or in a vehicle (n=1) at the time of overdose. Among those who had recently overdosed, the main drug involved was ecstasy (n=21), with smaller numbers attributing their last overdose to crystal methamphetamine (n=2), 2C-x (n=2), cocaine (n=1), LSD (n=1) and mushrooms (n=1).

The main symptoms participants reported on their last stimulant overdose (if it occurred within the last 12 months) included vomiting (n=7), extreme anxiety (n=4), increased body temperature (n=3), nausea (n=3) and tremors (n=3). Fewer participants reported symptoms of chest pain, increased heart rate, seizures, extreme agitation, paranoia, muscle twitches, temporary blindness and trouble urinating.

Of those who had overdosed in the past 12 months, only two participants received immediate medical treatment. Larger numbers reported being monitored or watched by friends (n=13) and/or drinking water (n=3). In addition, six participants reported seeking any post-treatment or information as a result of their overdose, most commonly from online sources.

### **6.1.2 Depressant overdose**

Twenty-five participants reported they had 'ever' overdosed on a 'depressant' drug. Those that had experienced a depressant overdose had done so on a median of two occasions (range=1–30). The median time since last overdose was 12 months (range=1–96 months).

Thirteen participants reported overdosing on a 'depressant' drug in the last 12 months, and at the time of their most recent overdose they had been partying for a median of four hours (range=1–8). The main drug involved in these recent depressant overdoses was alcohol (n=12), with one participant reporting that benzodiazepines was the main drug involved. Vomiting was the most common symptom reported by those who had overdosed on a depressant drug in the past year (n=8), followed by losing consciousness (n=3).

The location of last overdose was mixed with most participants reporting that they were at a nightclub (n=7) or at a private party (n=2). Smaller numbers reported being at home (n=1), a pub (n=1), outdoors (n=1) or at work (n=1).

The majority of participants who had overdosed in the past 12 months reported that they had been monitored or watched by friends (n=9) and/or drank water (n=2); only one participant reported that they had received some form of immediate medical treatment. No participants reported seeking any post-treatment or information as a result of their overdose.

## **6.2 Help-seeking behaviour**

In 2015, 15% of RPU reported having sought help from a service or health professional in the last six months for any issue related to their drug and/or alcohol use. In addition, 16% reported that they had thought about seeking help for reasons relating to their drug use. The reasons for not seeking help (even though they had thought about doing so) were diverse and included: couldn't be bothered (n=3), not a priority (n=3), didn't know what services were available (n=2), costs (n=2), social stigma (n=2) and not actually wanting to stop their drug use (n=2). One participant reported that they were unsure why they hadn't sought help. The majority of participants (95%) reported accessing a health service (for any reason) in the preceding six months. The main service accessed was a general practitioner (n=86),

followed by a dentist (n=40). Smaller numbers reported that they had visited an: 'other' health professional (n=29); emergency department (n=17); hospital (n=14); specialist doctor (n=14); psychologist (n=12); medical tent (n=8); psychiatrist (n=8); social/welfare worker (n=8); ambulance (n=5); and drug and alcohol counsellor (n=4).

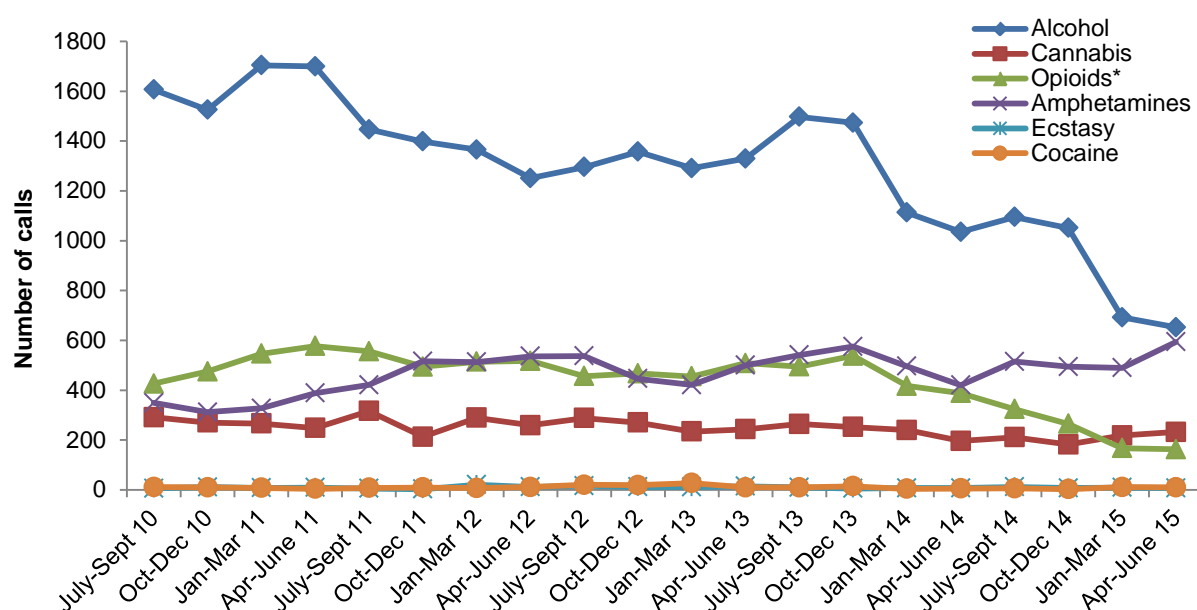
## 6.3 Drug treatment services

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). The 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 Alcohol and Other Drugs Treatment Services report (Australian Institute of Health and Welfare, 2015), which presents findings from DASSA and non-government treatment agencies in SA.

### 6.3.1 Treatment services ADIS

Figure 21 shows the number of drug-related telephone calls to the SA Alcohol and Drug Information Service (ADIS) from the general public, regarding six different substance types across the financial years 2010/11 to 2014/15. It can be seen that the majority of drug-related calls to SA ADIS across the time period depicted have been alcohol-related, although there was a considerable drop in the number of alcohol-related calls in the first two quarters of 2015. Conversely, there was an increase in the number of amphetamine-related calls across 2014/15, such that in April-June 2015 the number of alcohol and amphetamine-related calls were almost equivalent. The number of opioid-related calls declined in 2014/15, while the number of cannabis-related calls remained relatively stable. Calls relating to ecstasy or cocaine have constituted less than 1% of the total coded calls to SA ADIS across all years depicted.

**Figure 21: Number of drug-related calls to ADIS per quarter, by selected drug type, SA, July 2010–June 2015**



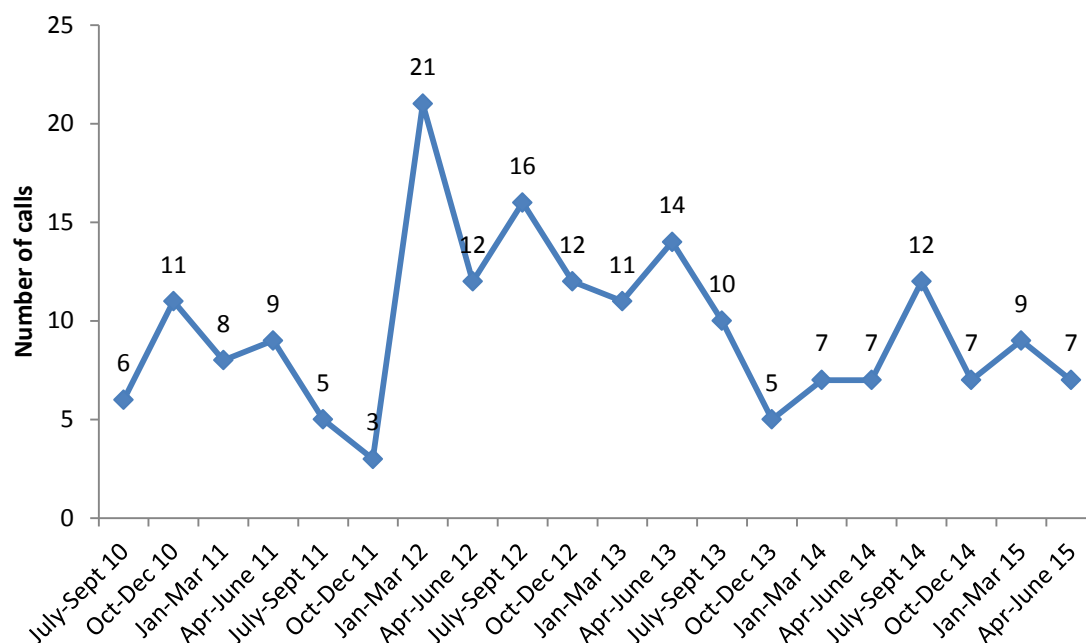
Source: SA ADIS

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

### 6.3.1.1 Ecstasy-related calls

Telephone calls to ADIS regarding ecstasy accounted for just 0.3% (n=35) of the total coded telephone contacts (drug-related) in the 2014/15 financial year (n=10,499); this was stable from 2013/14 (0.2%; n=29). Figure 22 depicts the number of ecstasy-related calls per quarter for the last five financial years. Although the number of calls regarding ecstasy have fluctuated over the years, it can be seen that, overall, they have remained extremely low.

**Figure 22: Number of inquiries to ADIS regarding ecstasy, SA, July 2010–June 2015**



Source: SA ADIS

### 6.3.1.2 Methamphetamine-related calls

Telephone calls to ADIS regarding amphetamines accounted for 19.9% (n=2,093) of the 10,499 total drug-related calls in the 2014/15 financial year. This represents an increase from the previous financial year (13.7% of a total 14,812 calls).

Figure 21 depicts the number of amphetamine-related calls per quarter for the last five financial years compared to calls related to other drug types. As can be seen, in 2014/15 calls related to methamphetamine continued to be higher than those for cannabis and overtook the number of opioid-related calls.

### 6.3.1.3 Cocaine-related calls

Telephone calls to ADIS regarding cocaine accounted for only 0.3% (n=30) of total drug-related telephone calls in 2014/15; this was a slight decrease from 2013/14 (0.2%; n=33).

Figure 21 depicts the number of cocaine-related calls per quarter for the last five financial years compared to calls related to other drug types. As can be seen, the number of calls regarding cocaine have remained consistently low over the years.

### 6.3.1.4 Cannabis-related calls

Telephone calls to ADIS regarding cannabis accounted for 8.0% (n=843) of the total coded telephone contacts (drug-related) in the 2014/15 financial year, and this was relatively stable from 2013/14 (6.4%; n=952).

Figure 21 depicts the number of cannabis-related calls per quarter for the last five financial years compared to calls related to other drug types. As can be seen, the number of cannabis-related calls have remained relatively stable over the past five years.

### 6.3.2 Treatment services DASSA

As can be seen in Table 39, in 2014/15 alcohol continued to dominate as the primary drug of concern for clients to DASSA treatment services, followed by amphetamines, cannabis, opioid analgesics and heroin. Both ecstasy and cocaine accounted for only a very small proportion (<1%) of the total attendances, and this remained stable from 2013/14.

**Table 39: Primary drug of concern nominated by clients of Drug and Alcohol Services South Australia, as a percentage of total number of clients\*, 2010/11–2014/15**

Drug type (%)	2010/11 N=5,430	2011/12 N=5,438	2012/13 N=5,262	2013/14 N=4,932	2014/15 N=4,604
Alcohol	54.7	49.4	47.5	47.1	42.9
Amphetamines	16.0	19.4	19.1	18.5	21.1
Heroin	8.7	7.8	8.6	7.0	8.5
Opioid analgesics	6.9	8.3	8.9	8.2	8.9
Cannabis	11.4	13.9	13.9	13.3	11.6
Benzodiazepines	1.9	1.9	2.0	1.9	1.9
Ecstasy	1.0	0.5	0.3	0.5	0.2
Cocaine	0.2	0.2	0.2	0.2	0.2
Tobacco	0.7	0.5	0.5	0.4	0.5
Unknown	0.1	0.3	0.1	0.4	0.2
Buprenorphine	1.4	1.8	1.9	2.2	2.2
Suboxone	-	-	-	0.4	0.8
Other	2.1	1.2	3.0	0.4	0.9

Source: Drug and Alcohol Services South Australia

\* Total number of clients = total number of individuals who started one or more new episodes of treatment during the period.

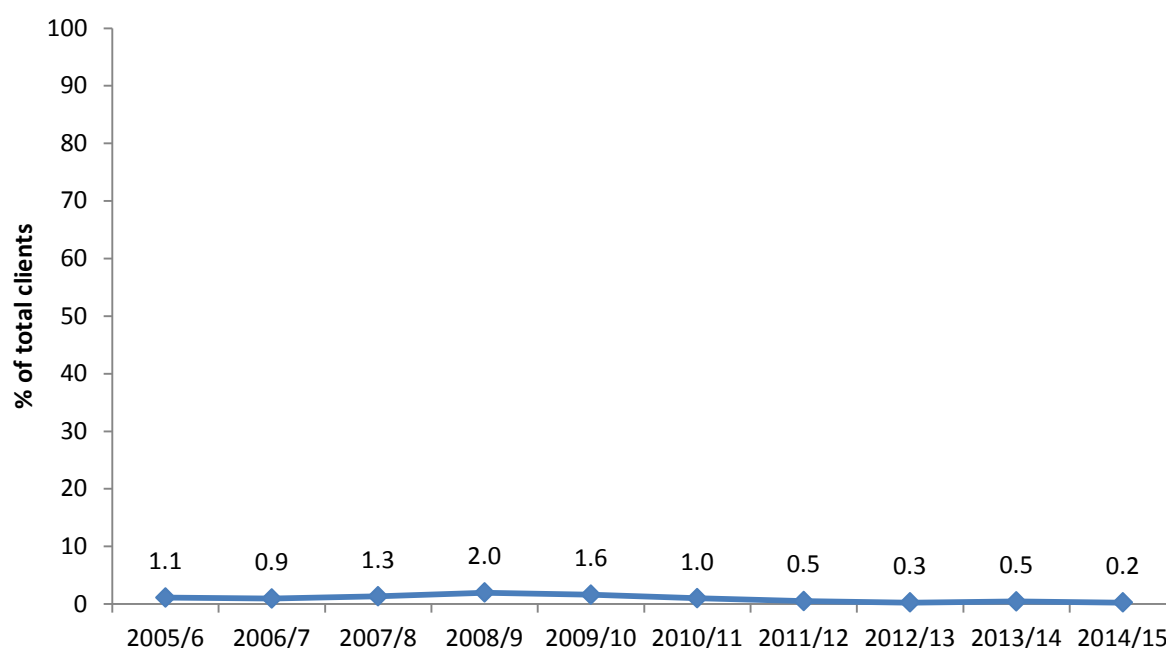
Figures rounded up to one decimal place

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 2014/15 there were 11 clients (individuals) to all DASSA treatment services who nominated ecstasy as their primary drug of concern. This constitutes 0.2% of total clients for that year, and is stable from 2013/14. See also Table 39 for a comparison of ecstasy to other primary drugs of concern among clients of DASSA treatment services.

**Figure 23: Percentage of total DASSA clients with ecstasy as the primary drug of concern, 2005/06–2014/15**

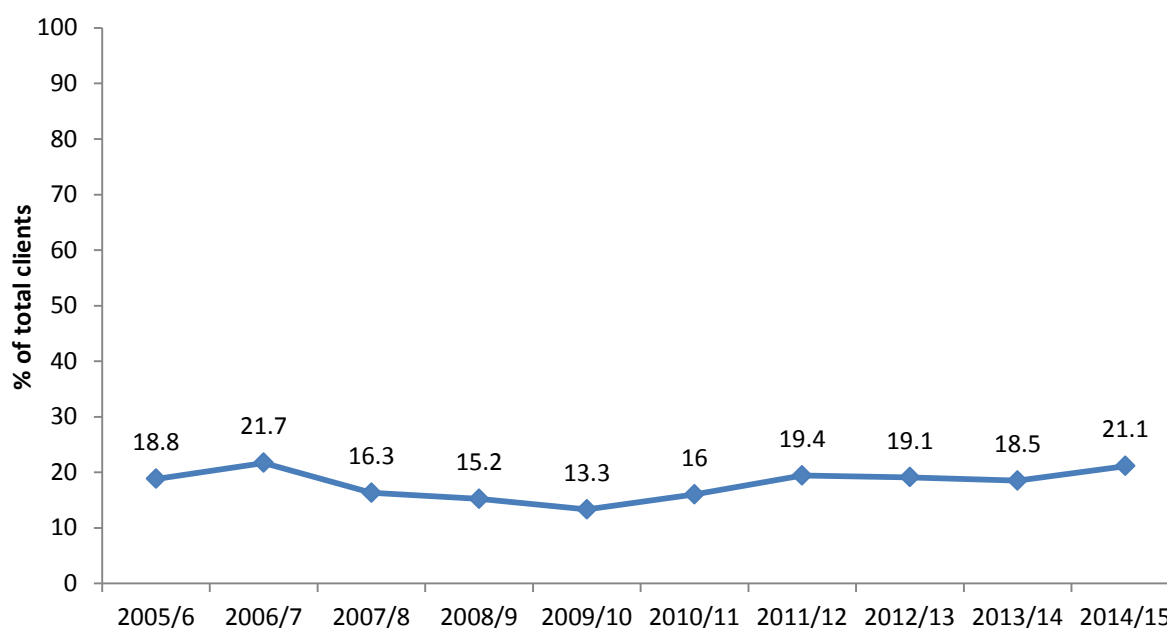


Source: Drug and Alcohol Services South Australia

### 6.3.2.2 Methamphetamine-related attendances

The proportion of clients nominating amphetamines as their primary drug of concern remained relatively stable in 2014/15. Amphetamines (21.1%) continued to dominate as the most common *illicit* drug of concern among DASSA clients, coming second only to alcohol (42.9%).

**Figure 24: Percentage of total DASSA clients with amphetamines as the primary drug of concern, 2005/06–2014/15**

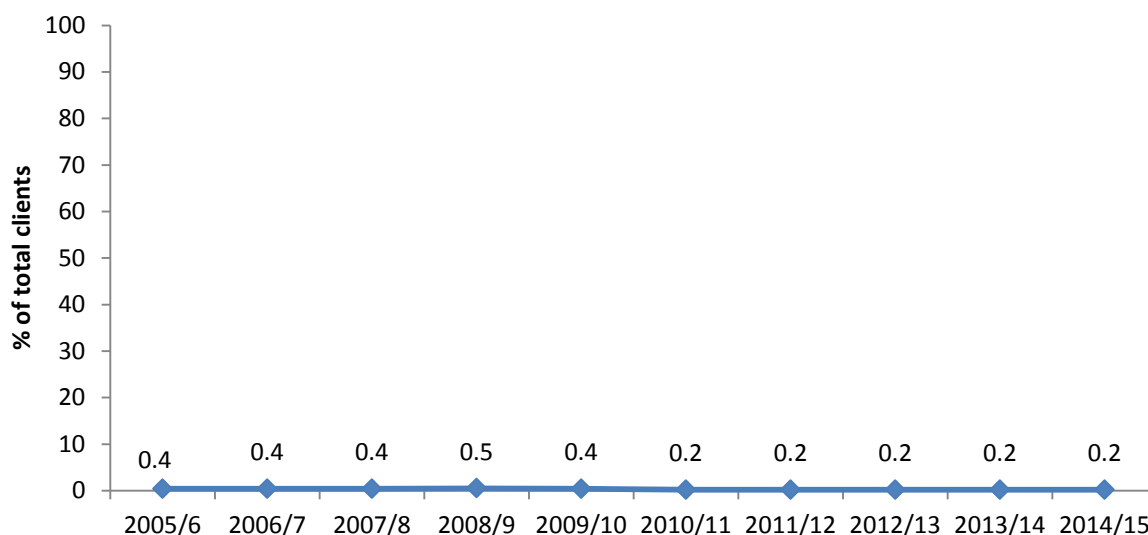


Source: Drug and Alcohol Services South Australia

### 6.3.2.3 Cocaine-related attendances

The proportion of clients nominating cocaine as their primary drug of concern has remained consistently low across all years reported. Of clients to all DASSA treatment services, 0.2% (n=11 of 4,604 individuals) nominated cocaine as their primary drug of concern in 2014/15.

**Figure 25: Percentage of total DASSA clients with cocaine as the primary drug of concern, 2005/06–2014/15**

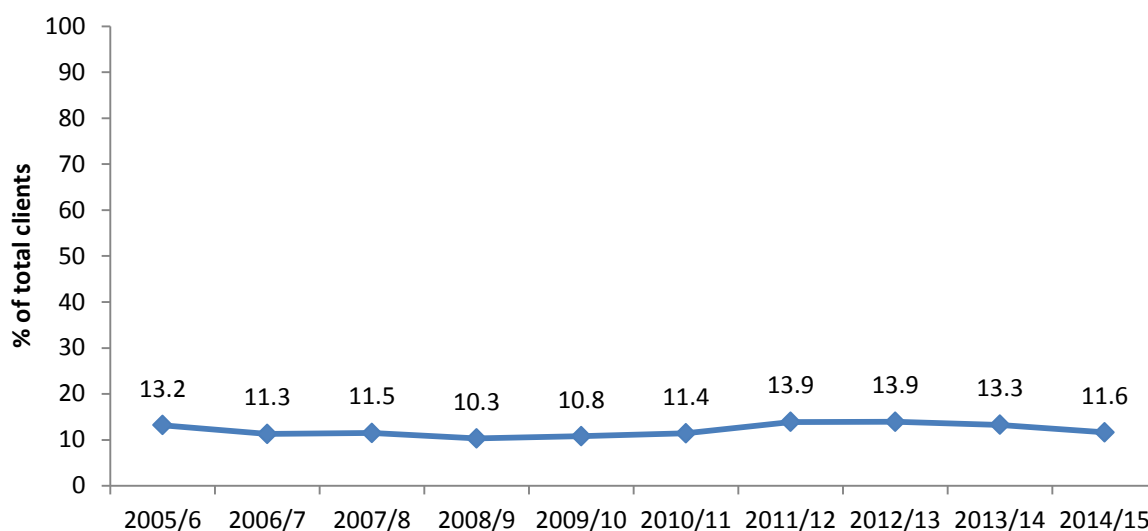


Source: Drug and Alcohol Services South Australia

### 6.3.2.4 Cannabis-related attendances

The proportion of clients nominating cannabis as their primary drug of concern remained relatively stable in 2014/15. Of clients to all DASSA treatment services, 11.6% (n=536 of 4,604 individuals) nominated cannabis as their primary drug of concern in 2014/15.

**Figure 26: Percentage of total DASSA clients with cannabis as the primary drug of concern, 2005/06–2014/15**



Source: Drug and Alcohol Services South Australia

## 6.4 Emergency Department admissions

Information on drug-related attendances to the Emergency Department (Table 40) was provided by the Royal Adelaide Hospital (RAH), the largest central public hospital in Adelaide. It is important to note that these data are likely to be an under-estimate of drug-related Emergency Department presentations. Drug involvement may not always be coded accurately, and coding accuracy is also dependent on accurate self-reporting of those presenting. Data should be interpreted with these caveats in mind. Readers are also warned that these are 'uncleaned' data and should be interpreted with caution. They are included here to give a picture of trends over time, rather than to provide precise numbers.

As seen in Table 40, alcohol continues to account for the majority of attendances to the RAH Emergency Department. Ecstasy-related attendances are not specifically coded. However, of interest in the context of ecstasy and related illicit drug use is the trend in the number of presentations for GHB, amphetamines and cannabis, all of which remained relatively stable in 2014/15. Amphetamine-related attendances remained the most common of the illicit drug-related attendances at the RAH.

**Table 40: Number of attendances\* to the Emergency Department at the Royal Adelaide Hospital, SA, from 2005/06–2014/15 (per drug or diagnosis)**

	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015
<b>Amphetamines</b>	61	82	67	58	61	61	83	109	136	<b>121</b>
<b>Cocaine</b>	6	4	1	4	5	1	2	4	4	<b>3</b>
<b>LSD</b>	3	2	3	7	7	3	2	2	1	<b>6</b>
<b>GHB</b>	38	14	15	15	17	20	20	17	25	<b>10</b>
<b>Alcohol</b>	1,409	1,559	1,554	1,585	2,078	2,119	1,835	1,860	1,739	<b>1,636</b>
<b>Cannabis</b>	13	15	15	13	11	14	22	14	16	<b>19</b>
<b>Heroin</b>	32	39	44	66	51	66	63	55	35	<b>51</b>
<b>Other opioid**</b>	68	59	28	38	36	38	40	47	21	<b>32</b>
<b>Benzodiazepines</b>	122	174	145	151	169	162	147	117	130	<b>135</b>
<b>Antidepressants</b>	55	74	78	67	58	71	73	67	60	<b>51</b>
<b>Drug addiction#</b>	28	17	8	1	0	0	0	0	0	<b>0</b>
<b>Drug-induced psychosis#</b>	31	37	28	0	0	0	0	0	0	<b>0</b>
<b>Drug withdrawal#</b>	19	20	0	0	0	0	0	0	0	<b>0</b>
<b>Other###</b>	360	579	528	464	480	471	439	448	446	<b>447</b>
<b>TOTAL</b>	<b>2,245</b>	<b>2,675</b>	<b>2,514</b>	<b>2,469</b>	<b>2,973</b>	<b>3,026</b>	<b>2,726</b>	<b>2,740</b>	<b>2,613</b>	<b>2,513</b>

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

### 6.4.1 Hospital admissions

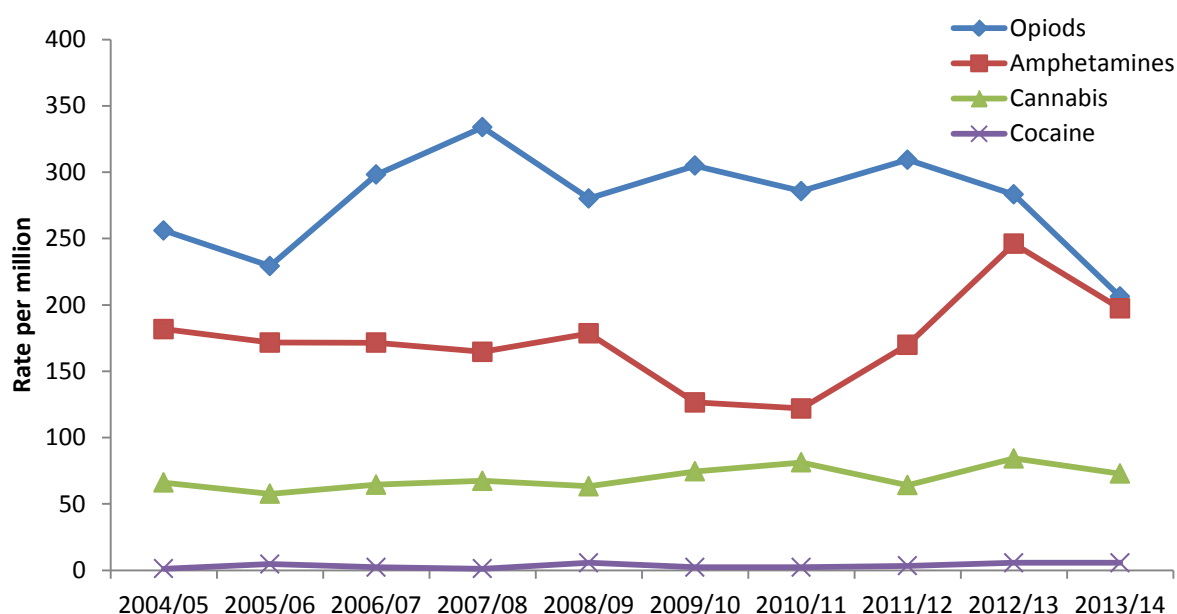
An analysis of data, provided by the Australian Institute of Health and Welfare (AIHW) from the National Hospital Morbidity Dataset (NHMD), for the period 1997/98 to 2013/14 (financial years), was undertaken by NDARC. These data report on both state-specific and national drug-related hospital admissions (for the four main illicit drug types), adjusted so that all



years reflect International Statistical Classification of Diseases and Related Health Problems, Ninth Revision (ICD-9) classifications for comparability across this time period. Readers should note that the major impact of this adjustment is the exclusion of admissions for drug-related psychosis and withdrawal, due to incomparable coding for these conditions between ICD-9 and International Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)<sup>9</sup>. 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 2014/15.

The substances most commonly involved in a primary diagnosis for SA drug-related hospital admissions were opioids (heroin, morphine, methadone etc.), followed by amphetamines, cannabis and cocaine (see Figure 27). Ecstasy-related admissions are not specifically coded.

**Figure 27: Rate per million people of substance-related admissions\* (primary diagnosis) to hospital in South Australia, 2004/05–2013/14**



**Source:** Australian Institute of Health and Welfare; Roxburgh and Breen, 2016

\* For persons aged between 15 and 54 years

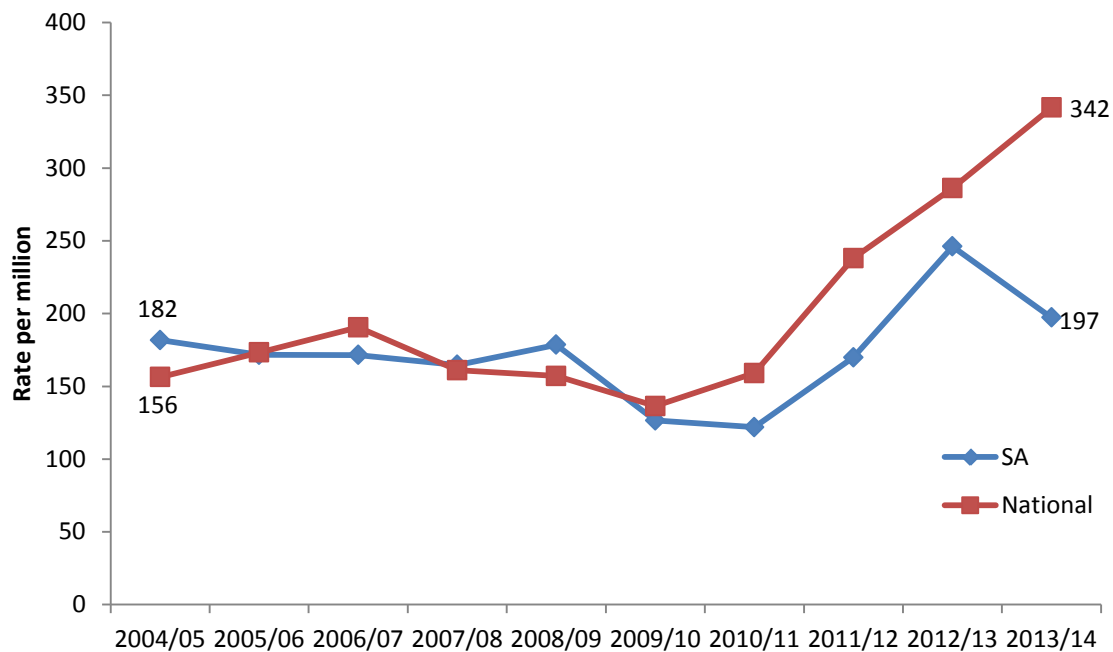
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

#### 6.4.1.1 Amphetamine-related hospital admissions

Figure 28 shows the long-term trend of amphetamine-related hospital admissions, from 2004/05 onwards. Nationally, admissions with amphetamines as a primary diagnosis increased sharply in 2013/14; from 286 per million in 2012/13 to 342 per million; this continues an upward trend that has been observed from 2009/10 onwards. However, in SA, there was a sharp decline in admissions with amphetamines as a primary diagnosis; from 246 per million in 2012/13 to 197 per million in 2013/14. Readers are reminded that this figure does not include amphetamine-related psychosis or withdrawal admissions.

<sup>9</sup> 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 28: Rate of amphetamine-related admissions\* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2004/05–2013/14**



**Source:** Australian Institute of Health and Welfare; Roxburgh and Breen, 2016

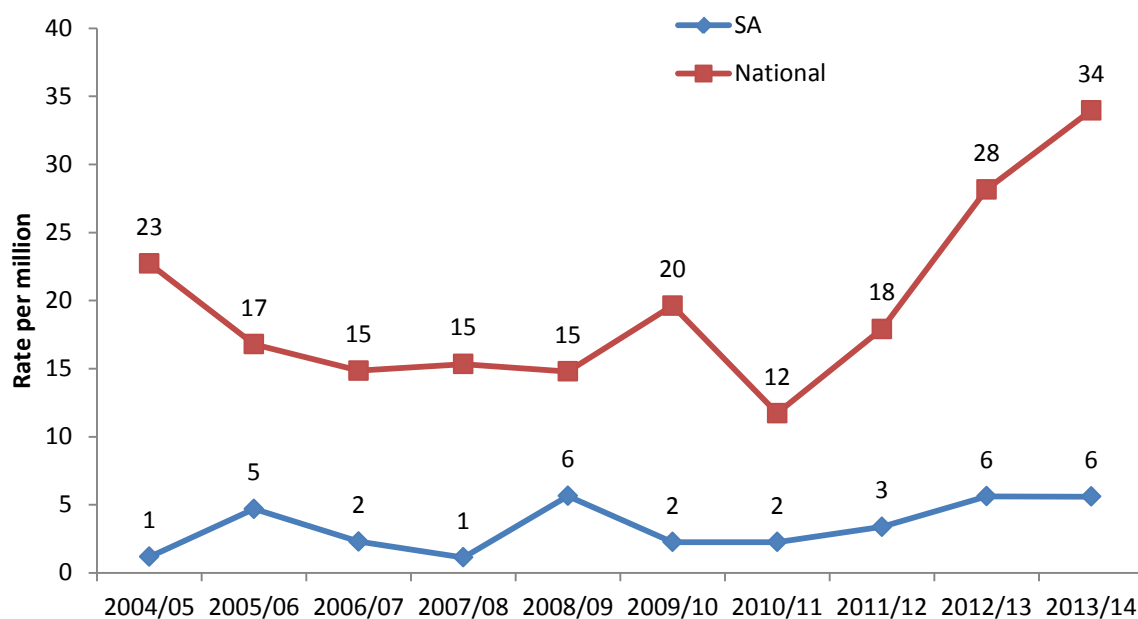
\* For persons aged between 15 and 54 years, excluding amphetamine withdrawal and psychosis admissions

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

#### 6.4.1.2 Cocaine-related hospital admissions

Figure 29 shows that the rates of cocaine-related hospital admissions have fluctuated considerably over the years, both nationally and in South Australia. However, the national rate of cocaine-related admissions has remained consistently higher than observed in SA, and has been trending upwards since 2010/11. In South Australia, admissions with cocaine as a primary diagnosis remained stable in 2013/14 at 6 per million.

**Figure 29: Rate of cocaine-related admissions\* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2004/05–2013/14**



**Source:** Australian Institute of Health and Welfare; Roxburgh and Breen, 2016

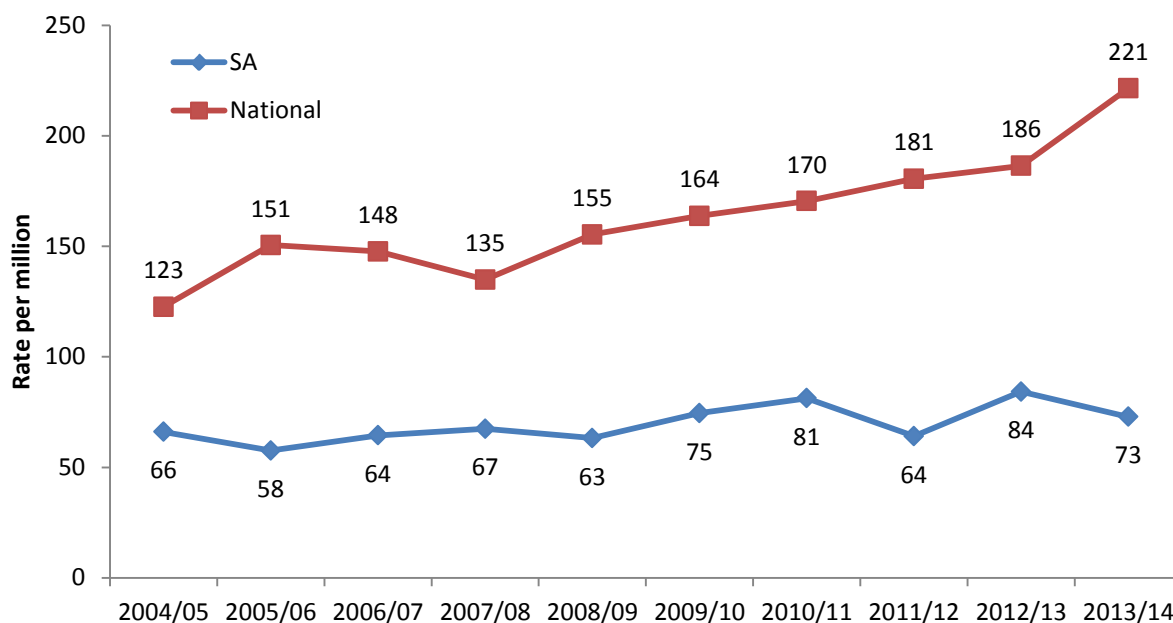
\* For persons aged between 15 and 54 years, excluding cocaine withdrawal and psychosis admissions

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

#### 6.4.1.3 Cannabis-related hospital admissions

Figure 30 depicts the long-term trend in cannabis-related hospital admissions (primary diagnosis), both nationally and in South Australia from 2004/05 onwards. As can be seen, national rates have been trending upwards over the last decade, while SA rates have remained relatively stable. Interestingly, in 2013/14 the rates of admissions observed at the national level increased sharply (from 186 per million in 2012/13 to 221 per million), while in SA, admissions declined slightly (from 84 per million in 2012/13 to 73 per million). Readers are reminded that this figure does not include cannabis-related psychosis or withdrawal admissions.

**Figure 30: Rate of cannabis-related admissions\* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2004/05–2013/14**



**Source:** Australian Institute of Health and Welfare; Roxburgh and Breen, 2016

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

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 Mental and physical health problems

### 6.5.1 Mental health problems and psychological distress (K10)

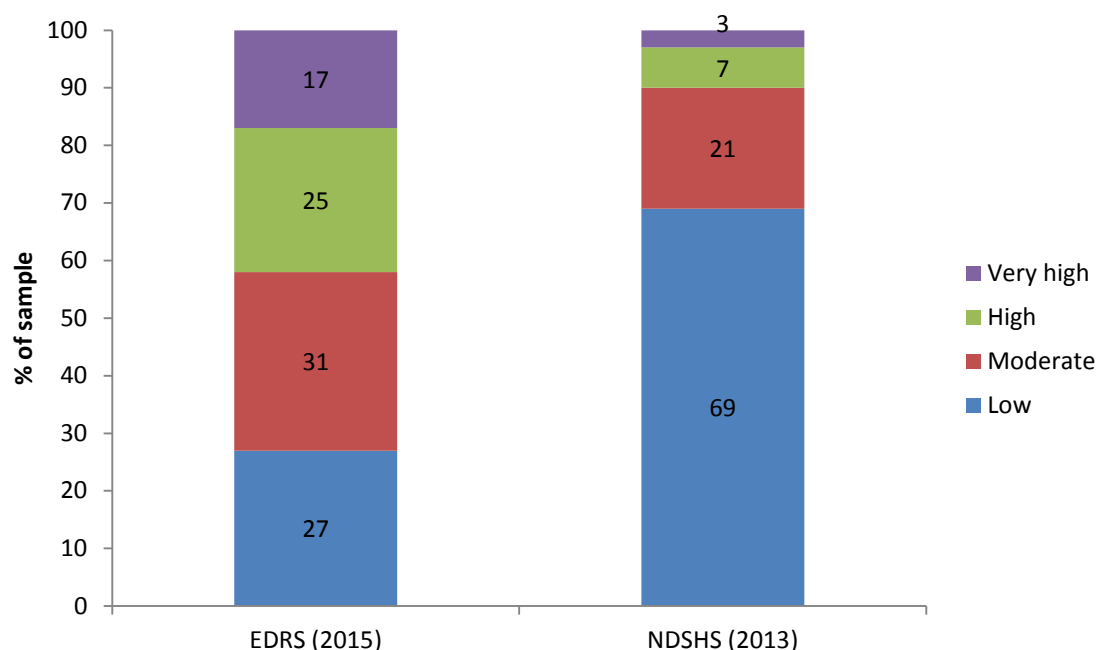
The Kessler Psychological Distress Scale (K10) (Kessler & Mroczek, 1994) was used to give a measure of levels of psychological distress among the participant sample.

The K10 was developed as a screening instrument to measure 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.

Twenty-seven percent of participants had scores between 10 and 15 on the K10 (low risk), which represents a significant decrease from 2014 (47%;  $p=0.005$ ; 95% CI: 0.07, 0.32). Thirty-one percent of participants scored between 16 and 21 (moderate distress), 25% of participants scored from 22 to 29 (high distress), and 17% scored from 30 to 50 (very high distress) (Figure 31). The median total score for participants was 19 (range=10–42), indicating that over half of the sample was at moderate or high/very high risk of psychological distress as measured by the K10.

The 2013 National Drug Strategy Household Survey (AIHW, 2014) 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' (25%) or 'very high' (17%) distress was higher (42%) compared to those in the National Drug Strategy Household Survey (10%: high = 7%, very high = 3%).

**Figure 31: K10 categories among the EDRS sample (2015) and the general population (NDSHS, 2013)**



**Source:** EDRS interviews; Australian Institute of Health & Welfare, 2014

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

### 6.5.2 Self-reported mental health problems

In 2015, 41% of the sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview. This represents a significant increase from 2014 (25%;  $p=0.02$ ; 95% CI: 0.02, 0.28).

Among these participants, the majority reported experiencing anxiety and depression (71%;  $n=29$ ). Smaller numbers reported obsessive compulsive disorder (12%;  $n=5$ ), posttraumatic stress disorder (10%;  $n=4$ ), manic depression (7%;  $n=3$ ), paranoia (7%;  $n=3$ ), panic (7%;  $n=3$ ), ADHD (7%;  $n=3$ ), any personality disorder (5%;  $n=2$ ), phobias (2%;  $n=1$ ) or schizophrenia (2%;  $n=1$ ). Three-fifths (61%;  $n=25$ ) of those who reported suffering from a mental health problem had sought professional help, and 17 participants had been prescribed some form of medication (most commonly antidepressants).

## 7 RISK BEHAVIOUR

### Key Findings

#### *Injecting risk behaviour*

- Five percent of the sample reported having injected at some time in their lives, and 2% reported injecting in the six months preceding interview. The median age of first injection was 16 years.
- No participants reported having shared needles or other injecting equipment in the past six months.

#### *Sexual risk behaviour*

- Sixty-seven percent of RPU reported having had casual sex in the six months preceding interview.
- Of those who reported having casual sex in the past six months, the majority (88%) reported doing so while under the influence of drugs and/or alcohol.
- Just over half (51%) of those who had had casual sex while under the influence of drugs and/or alcohol in the past six months reported that they had not used condoms/dams/gloves during their last sexual encounter.
- Almost two thirds of the sample (64%) had received a sexual health check-up in their lifetime, with four participants reporting that they had been diagnosed with an STI in the past year.

#### *Driving risk behaviour*

- Eighty-nine percent of RPU reported that they had driven a vehicle in the preceding six months, and of these, 36% had driven while over the BAC limit.
- Of those who had driven recently, 60% had done so while under the influence of drugs. The drugs most commonly used while driving were cannabis and ecstasy.

#### *Alcohol risk behaviour*

- Using the Alcohol Use Disorders Identification Test (AUDIT), the majority of the sample (81%) scored eight or more; indicating hazardous alcohol intake. There were no significant difference between males and females.

#### *Stimulant dependence*

- One-third (34%) of RPU scored 3 or above on the ecstasy SDS; these are levels which may be considered indicative of problematic dependent ecstasy use.
- Among those who answered the methamphetamine SDS, 52% obtained a score of 4 or above, indicative of amphetamine dependence.

## 7.1 Injecting risk behaviour

Detail on injecting and injecting-related risk behaviour has been included in the EDRS survey since 2004. In 2015, 5% of the sample (n=5) reported ever injecting any drug and two participants reported having injected in the six months prior to interview. The median age of first injection was 16 years (range=15–23 years; n=5), with heroin (n=2), speed (n=1) and steroids (n=1) reported as the drugs first injected.

### 7.1.1 Sharing of needles/syringes and other injecting equipment

In 2015, there were no participants who had shared needles or any other injecting equipment.

## 7.2 Sexual risk behaviour

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

### 7.2.1 Recent sexual activity

Table 41 summarises the reports of recent sexual activity and condom use with casual partners. Sixty-seven percent of the sample reported having casual sex with at least one casual partner in the six months preceding interview. Sixteen percent reported having one casual sexual partner during the preceding six months and 51% reported having multiple casual partners. Participants were asked about the use of 'protective barriers' (defined as condoms, dams or gloves) with casual partners. As can be seen in

Table 41, the use of protective barriers was mixed, with 50% of the sample reporting that they had not used protection the last time they had sex while sober. The main reasons for not using protection in such encounters were: using a contraceptive pill (n=6), it wasn't mentioned (n=4), agreed not to (n=3), participant did not wish to use (n=3), partner did not wish to use (n=1) or lack of availability (n=1).

**Table 41: Prevalence of sexual activity and number of sexual partners in the preceding six months, SA, 2014 & 2015**

	2014	2015
<b>No. casual sexual partners (%)</b>	<b>(N=100)</b>	<b>(N=100)</b>
No casual partner	41	33
1 person	14	16
2 people	8	13
3–5 people	23	29
6–10 people	10	5
10 or more	4	4
<b>Use of protection during last sexual encounter with casual partner when sober* (%)</b>	<b>(n=59)</b>	<b>(n=66)</b>
Yes	41	50
No	46	30
Not applicable	14	20

Source: EDRS participant interviews

\*Among those who had had casual sex

### 7.2.2 Drug use during sex

Table 42 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 (88%) of those reporting

recent penetrative sex with a casual partner reported that they had done so while under the influence of alcohol and/or drugs, in the six months prior to interview. Interestingly, the large majority (81%) of these participants reported doing so on multiple occasions, with 15% reporting that they had done so on more than ten occasions.

Most commonly, participants nominated alcohol as the drug they were under the influence of when engaging in penetrative sex with a casual sex partner recently (76%), followed by ecstasy (58%) and cannabis (39%) (see Table 42).

About half of participants (49%) who had had recent penetrative sex with a casual partner while under the influence of drugs reported that they had used protection, while the remaining half (51%) reported that they had not used protection. The main reasons for not using protection while on drugs included: agreed not to (n=9), it wasn't mentioned (n=9), using a contraceptive pill (n=5), lack of availability (n=2) or too intoxicated (n=2).

**Table 42: Drug use during sex with a casual partner in the preceding six months, SA, 2014 & 2015**

	2014 n=59	2015 n=67
<b>Penetrative sex with casual partner while on drugs (%)<sup>* #</sup></b>	<b>86</b>	<b>88</b>
<b>No. times had sex while on drugs with casual partner (%)</b>	<b>n=51</b>	<b>n=59</b>
Once	12	19
Twice	22	25
3–5 times	31	27
6–10 times	14	14
Eleven +	22	15
<b>Drugs used during last sexual episode</b>	<b>n=51</b>	<b>n=59</b>
Ecstasy	43	58
Alcohol	75	76
Cannabis	31	39
Methamphetamine – powder	0	2
Methamphetamine – base	0	0
Methamphetamine – crystal	10	14
Cocaine	8	5
LSD	0	3
Ketamine	0	0
Mushrooms	2	0
Amyl nitrate	0	0
Nitrous oxide	0	0
GHB	2	0
Pharmaceutical stimulants	2	0
NBOMe	0	2
Benzodiazepines	0	2
<b>Use of protection during last sexual encounter with casual partner under influence of drugs (%)<sup>#</sup></b>	<b>n=51</b>	<b>n=59</b>
Yes	55	49
No	45	51
Not applicable	0	0

**Source:** EDRS participant interviews

<sup>\*</sup> In the six months preceding interview

<sup>#</sup> Of those who had sex with a casual partner

### 7.2.3 Sexual health

The majority of participants reported having had a sexual health check-up within their lifetime (64%), and of these participants 22% had ever been diagnosed with a sexually transmitted infection (Table 43). Four participants reported being diagnosed with an STI in the past year.



**Table 43: Sexual health check-ups and diagnosis, SA, 2014 & 2015**

	2014	2015
<b>Sexual health check-up (lifetime) %</b>	(n=99)	<b>(n=100)</b>
No	40	<b>36</b>
Yes (last year)	39	<b>50</b>
Yes (>year ago)	20	<b>14</b>
<b>Diagnosed with STI (lifetime)<sup>#</sup> %</b>	(n=59)	<b>(n=64)</b>
No	80	<b>78</b>
Yes, in last year	9	<b>6</b>
Yes, >year ago	12	<b>16</b>
Don't know/didn't get result	0	<b>0</b>

**Source:** EDRS participant interviews

<sup>#</sup> Of those who had ever had a sexual health check up

### 7.3 Driving risk behaviour

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

**Table 44: Recent occurrence of driving following drug use, SA, 2013 & 2015**

	2013	2015
<b>% of recent drivers</b>	(n=86)	<b>(n=89)</b>
<b>Driven over the limit for alcohol<sup>†</sup></b>	37	<b>36</b>
<b>Driven after taking any illicit drug<sup>†</sup></b>	62	<b>60</b>
<b>Driven after illicit use of<sup>#</sup>:</b>	(n=53)	<b>(n=53)</b>
Ecstasy	51	<b>40</b>
Methamphetamine – powder	0	<b>6</b>
Methamphetamine – base	2	<b>2</b>
Methamphetamine – crystal	17	<b>19</b>
Pharmaceutical stimulants	4	<b>4</b>
Cannabis	64	<b>64</b>
LSD	2	<b>4</b>
NBOMe	-	<b>4</b>
Mushrooms	2	<b>0</b>
Cocaine	6	<b>4</b>
Amyl nitrate	2	<b>0</b>
Heroin	2	<b>2</b>
Other opiates	2	<b>0</b>
Benzodiazepines	0	<b>4</b>
Oxycodone	0	<b>2</b>

**Source:** EDRS participant interviews

<sup>†</sup> In the six months preceding interview

<sup>#</sup> Among those who had DUI of illicit drugs

Thirty-six percent of the participants (n=31) who had driven a vehicle in the six months prior to interview reported that they had driven while over the limit of alcohol, and they had done so on a median of two days (range=1–96) during that period. Forty-five percent of recent drivers (n=40) had been random breath tested (for alcohol) in the six months prior to interview; no participants reported registering a positive result for being over the legal limit.

Sixty percent of recent drivers (n=53) also reported that they had driven after consuming an illicit drug, and they had done so on a median of 5 days (range=1–180). The drugs most commonly reported as having been used prior to driving, in the previous six months, were cannabis (64%), ecstasy (40%) and crystal methamphetamine (17%). Participants reported driving a median of 60 minutes after taking any illicit drug (range=0–1800 minutes; n=61).

Twenty-five percent of recent drivers (n=22) had been tested for drug driving in the six months prior to interview, with one participant testing positive to their most recent drug driving test.

## 7.4 The Alcohol Use Disorders Identification Test (AUDIT)

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

Table 45 presents an overview of the AUDIT scores. The overall mean score on the AUDIT was 13.1 (range=3–27; SD=5.3), and there were no significant differences in female and male AUDIT scores. Eighty-one percent of the sample scored eight or more, which are levels at which alcohol intake is considered hazardous. There were no significant differences between male and female participants.

The total AUDIT score places respondents into one of four ‘zones’ or risk levels. In 2015, 19% scored in Zone 1 (low-risk drinking or abstinence), 48% scored in Zone 2 (alcohol use in excess of low-risk guidelines), 23% scored in Zone 3 (harmful or hazardous drinking) and 10% scored in Zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence). This was stable from 2014.

**Table 45: AUDIT total scores and proportion of RPU scoring above recommended levels indicative of hazardous alcohol intake, SA, 2014 & 2015**

	2014	2015
<b>Mean AUDIT total score</b>	14.7	<b>13.1</b>
SD	6.2	<b>5.3</b>
(range)	(3–35)	<b>(3–27)</b>
<b>Score 8 or above (%)</b>	89	<b>81</b>
<b>Zone 1</b>	11	<b>19</b>
<b>Zone 2</b>	44	<b>48</b>
<b>Zone 3</b>	25	<b>23</b>
<b>Zone 4</b>	20	<b>10</b>

**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

## 7.5 Stimulant dependence

The question as to whether it is possible to be dependent on ecstasy is a controversial one. It has been traditionally believed that dependence on MDMA (the active ingredient in ecstasy) is unlikely given the relatively infrequent use patterns exhibited by ecstasy users (i.e. fortnightly or weekly). There are case studies in the literature of people who are dependent on ecstasy, and animal models have demonstrated that dependence on ecstasy is biologically plausible.

To date, internationally, there have been a small number of studies of rates of dependence in ecstasy users. Studies from the US household survey suggest a prevalence rate of past-

year dependence in approximately 3.6–3.8% of ecstasy users in the general population. An early NDARC study suggests a lifetime prevalence rate of 64% in similar types of RPU interviewed in the EDRS. However, findings in relation to ecstasy dependence should be interpreted with caution due to the fact that there has been limited research into this syndrome (Degenhardt, Bruno & Topp, 2010).

From 2011–2015, participants of the EDRS have been asked questions from the Severity of Dependence Scale (SDS) adapted to investigate ecstasy dependence. In 2015, participants were also administered the SDS in relation to methamphetamine use. The SDS is a five-item questionnaire designed to measure the degree of dependence on a variety of drugs. The SDS focuses on the psychological aspects of dependence, including impaired control of drug use, and preoccupation with and anxiety about use. The SDS appears to be a reliable measure of the dependence construct. It has demonstrated good psychometric properties with heroin, cocaine, amphetamine and methadone maintenance patients across five samples in Sydney and London (Dawe et al., 2002). A total score was created by summing responses to each of the five questions. Possible scores range from 0 to 15.

### **7.5.1 Ecstasy dependence**

Two cut-off scores are presented below of 3 or more and 4 or more. A cut-off score of 3 or more was used as these scores have been recently found in the literature to be a good balance between sensitivity and specificity for identifying problematic dependent ecstasy use (Bruno, Gomez & Matthews, 2011). Among those answering the SDS in relation to their ecstasy use, 34% obtained a score of 3 and above. The cut off score of 4 and above is a more conservative estimate which has been used previously in the literature as a validated cut-off for methamphetamine dependence (Topp & Mattick, 1997; Bruno et al., 2009). Eighteen percent of RPU participants scored 4 or above. There were no significant gender differences among those who scored 3 or 4 or above.

The median SDS score was 1 (range=0–11). Two-fifths of the sample (40%) obtained a score of zero on the ecstasy SDS, and 14% obtained a score of 1 on the scale. This indicates that just over half of the sample (54%) reported no or few symptoms of dependence in relation to ecstasy use. These findings are supported by the fact that the majority of participants (65%) reported that they ‘never or almost never’ felt that their use of ecstasy was out of control and 81% reported that they would find it ‘not difficult to stop or miss a prospective dose of ecstasy’.

### **7.5.2 Methamphetamine dependence**

A cut-off score of 4 or more has been shown to be a good indicator of amphetamine dependence as defined by the DSM-IV (Topp & Mattick, 1997).

Among those who answered the SDS in relation to their methamphetamine use (n=29), 52% obtained a score of 4 or above. There were no significant gender differences among those who scored 4 or above. The median SDS score was 4 (range=0–14).

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

### Key Findings

- In 2015, the proportion of participants who had engaged in a criminal offence in the month prior to interview remained stable at 37%.
- Drug dealing remained the most commonly reported crime (32%), followed by property crime (10%).
- Twelve percent of RPU reported that they had been arrested in the past year, which was stable from 2014.
- Arrests made by SA police increased slightly for amphetamine-type stimulants, while remaining stable for cocaine and cannabis. The number of Cannabis Expiation Notices issued in SA increased from 8,677 in 2012/13 to 9,204 in 2013/14.

### 8.1 Reports of criminal activity among RPU

Table 46 summarises participants' reports of criminal activity in the month prior to interview, arrests in the 12 months prior to interview and lifetime prison history from 2011-2015. In 2015, 37% of participants reported involvement in some type of crime in the month prior to interview, which was stable from 2014. Drug dealing was the most commonly reported crime across all years of the survey, followed by property crime. Few participants reported involvement in a fraud or violent crime in the month prior to interview.

**Table 46: Criminal activity in the month prior to interview, as reported by participants, SA, 2011–2015**

	2011 (N=76)	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)
<b>Criminal activity in last month:</b>					
Property crime	20	16	7	19*	10
Drug dealing	33	28	22	29	32
Fraud	4	1	3	1	2
Violent crime	11	7	4	3	5
Any crime	46	45	32	43	37
<b>Arrested in last 12 months</b>	16	15	11	5	12
<b>Ever in prison</b>	Not asked	7	3	4	2

Source: EDRS participant interviews

\* $p < 0.05$

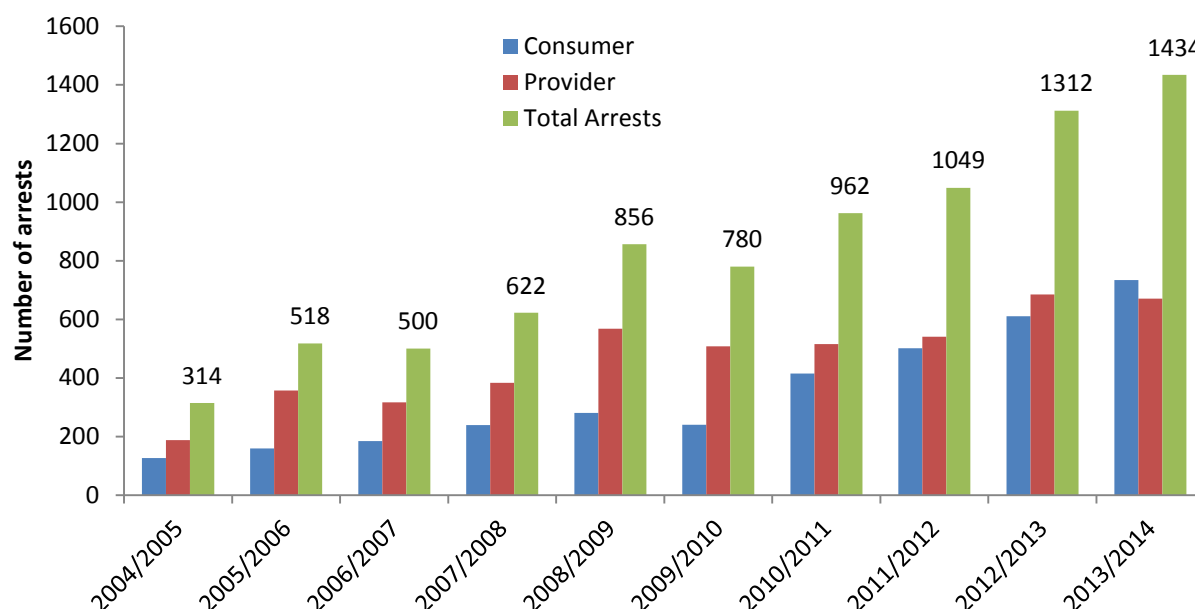
## 8.2 Arrests

Twelve percent of RPU reported that they had been arrested within the last 12 months. The reasons for arrest were varied and included violent crimes (n=4), driving offences (n=2), use/possession of drugs (n=2), dealing/trafficking (n=2), property crime (n=1) and breach of an AVO (n=1).

### 8.2.1 Amphetamine-type stimulants

Figure 32 presents the number of consumer and provider arrests for amphetamine-type stimulants made in SA between 2004/05 and 2013/14. 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 increased slightly in 2013/14 (to 1,434), continuing an overall upward trend that has been observed since 2004/05.

**Figure 32: Number of amphetamine-type stimulants consumer and provider arrests, SA, 2004/05–2013/14**



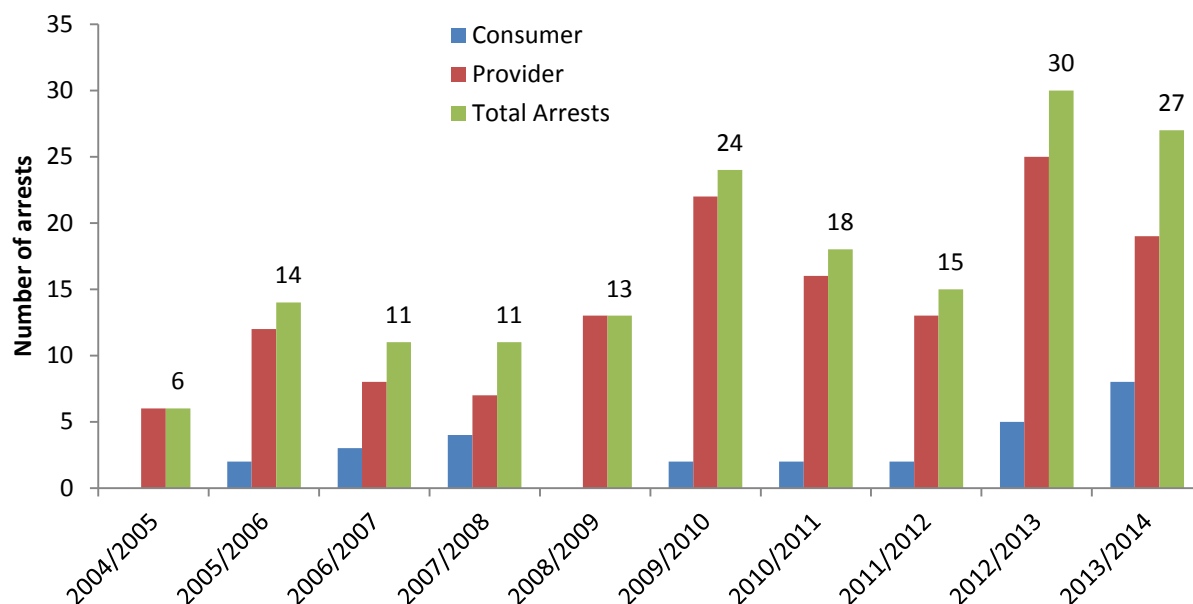
**Source:** Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Note: Data not available for the 2014/15 financial year. Also, total arrests includes those offenders for whom consumer/provider status was not stated and thus may exceed the sum of consumer and provider arrests

### 8.2.2 Cocaine

Figure 33 presents the number of consumer and provider arrests for cocaine made in SA between 2004/05 and 2013/14. As can be seen, total cocaine-related arrests remained low and stable in 2013/14 (27), particularly when compared to other drug-related arrests.

**Figure 33: Number of cocaine consumer and provider arrests, SA, 2004/05–2013/14**



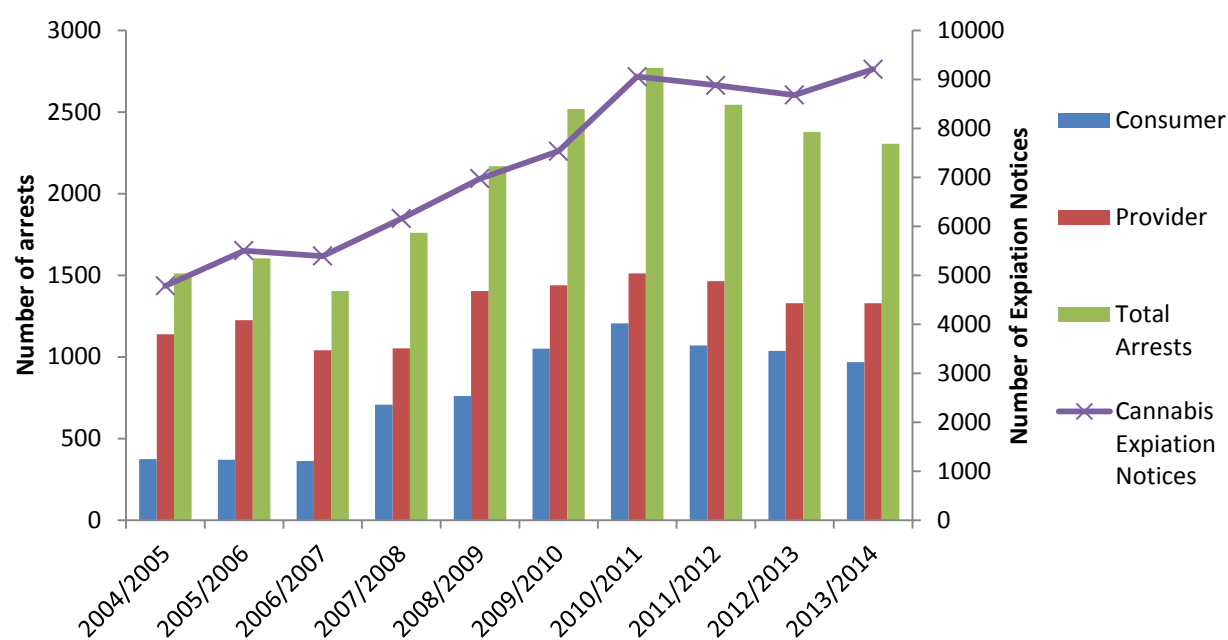
**Source:** Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Note: Data not available for the 2014/15 financial year. Also, total arrests includes those offenders for whom consumer/provider status was not stated and thus may exceed the sum of consumer and provider arrests

### 8.2.3 Cannabis

Figure 34 presents the number of cannabis consumer and provider arrests in SA from 2004/05 to 2013/14. It also presents the total number of Cannabis Expiation Notices, which is a small fine used to deal with minor cannabis offences, whereby the offence is expiated on payment of the fine. In SA, a higher number of drug-specific arrests were due to provider-type cannabis offences. Total cannabis arrests remained relatively stable in 2013/14, although there was an increase in the number of Cannabis Expiation Notices issued, from 8,677 in 2012/13 to 9,204 in 2013/14.

**Figure 34: Number of cannabis consumer and provider arrests, SA, 2004/05–2013/14**



**Source:** Australian Crime Commission, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015

Note: Data not available for the 2014/15 financial year. Also, total arrests includes those offenders for whom consumer/provider status was not stated and thus may exceed the sum of consumer and provider arrests

## 9 SPECIAL TOPICS OF INTEREST

### Key Findings

#### *Online purchasing*

- Almost two-thirds (65%) of RPU reported having friends that had purchased a drug online in their lifetime.
- Twelve percent of RPU reported that they had ever purchased a drug online, and 12% had purchased a drug online in the year preceding interview. Participants most commonly reported purchasing drugs from dark net marketplaces, from both Australian and international retailers.
- The most common drugs purchased online were LSD and ecstasy.

#### *NPS health harms*

- The majority (61%) of participants who had used NPS reported that they had not experienced any adverse effects when using these substances. Among those who had experienced adverse effects, the most common symptoms were paranoia, being restless or anxious, overheating and nausea/vomiting.

#### *NPS legality*

- Knowledge regarding the legality of 2CB, 2CI, DMT, mephedrone and NBOMe was mixed. Although few participants believed that any of these substances were legal, large portions of the sample reported that they were unsure of their legal status.

#### *Cognitive enhancing substances (CEs)*

- Fifty-four percent of the sample reported using CEs in the last six months; the most common CEs used were coffee and energy drinks.
- Participants most commonly reported using CEs to offset sleep deprivation (37%) and decrease fatigue (35%).
- Among participants who had used CEs in the preceding six months, just under one third (n=17, 32%) reported experiencing negative side effects on the last occasion of use.

### 9.1 Online purchasing

In 2015, the EDRS continued to investigate and monitor the practice of purchasing drugs online among recreational drug users in Australia. Of particular interest was the use of 'dark web' market places that are only accessible using a specially routed, anonymous connection, making it possible for people around the world to get illicit drugs like MDMA and cocaine delivered to their door (Burns and Van Buskirk, 2013). There is particular focus, given the changes in legislation and negative effects of particular NPS (such as NBOMe and synthetic cannabis), on the attainment of NPS online. The aim of this module is to investigate: (1) prevalence of online drug purchasing among the 2015 EDRS sample and (2) patterns of online drug purchasing, with a focus on NPS.



In 2015, 65% of RPU reported that their friends had purchased an illicit drug online. Twelve percent of the sample reported that they had personally purchased an illicit drug online in their lifetime, and 12% had also purchased an illicit drug online in the past 12 months. These recent purchases occurred between once and more than five times (see Table 47).

**Table 47: Number of times recently purchased illicit drugs online, SA, 2015**

How many online purchases of illicit drugs in the past 12 months?	% (n=12)
Once	33% (n=4)
Twice	17% (n=2)
3-5 times	25% (n=3)
More than 5 times	25% (n=3)

Source: EDRS participant interviews

Online purchases of illicit drugs were predominantly made from the Silk Road (50%, n=6) or other dark net marketplaces (not specified) (67%, n=8). If participants had purchased from a dark net marketplace, they were asked to specify whether the retailer they purchased from was Australian (9%, n=1), International (36%, n=4) or both (55%, n=6).

Illicit substances recently purchased online were specified, see Table 48. Twelve participants reported buying a traditional illicit substance online, of which most reported purchasing LSD (75%) followed by ecstasy (any form) (67%). Four participants reported purchasing an NPS online.

**Table 48: Illicit substances reportedly purchased online recently, SA, 2015**

Online substance purchased	%
<b>Traditional illicit substances</b>	<b>% (n=12)</b>
LSD	75% (n=9 <sup>^</sup> )
Ecstasy (any form)	67% (n=8 <sup>^</sup> )
Benzodiazepines	17% (n=2 <sup>^</sup> )
Cannabis	8% (n=1 <sup>^</sup> )
Methamphetamine (any form)	8% (n=1 <sup>^</sup> )
Cocaine	8% (n=1 <sup>^</sup> )
Mushrooms	8% (n=1 <sup>^</sup> )
<b>NPS illicit substances</b>	<b>% (n=4<sup>^</sup>)</b>
NBOMe	100% (n=4)
2C-X family	75% (n=3)

Source: EDRS participant interviews

Note: <sup>^</sup> = small numbers interpret with caution

## 9.2 NPS health harms

The health effects of NPS remain poorly understood in Australia and internationally. This module has therefore been included to improve our knowledge and understanding of the use and effects of NPS.

Participants were asked how long ago they had used an NPS and which NPS this was (see Table 49). The NPS most reportedly used were the 2C and NBOMe series (n=14 respectively). Four participants reported that they had personally purchased their last NPS from an online source, while 12 participants reported that the person from whom they had obtained their last NPS had purchased it online.

**Table 49: Last occasion of NPS use, SA, 2015**

	2015
<b>Last NPS use</b>	(n=56)
Methylone	2
PMA	4
2C-x	14
DMT	5
5-Meo-DMT	2
LSA	1
Mescaline	1
Salvia	2
NBOMe	14
Synthetic cannabinoids	3
Other	8
<b>Last used an NPS</b>	
Days ago (median; range; n)	3 (1-7; 6)
Weeks ago (median; range; n)	3 (1-6; 8)
Months ago (median; range; n)	5 (1-84; 41)

Source: EDRS participant interviews

All participants that reported NPS use (n=56) were asked about their last occasion of use and whether any adverse unexpected effects were experienced (see Table 50). The majority (61%) of participants reported that they had not experienced any adverse effects. Among those who had experienced adverse effects, the most common symptoms were paranoia, being restless or anxious, overheating and nausea/vomiting.

**Table 50: Unexpected adverse NPS effects experienced on last occasion of use, SA, 2015**

Unexpected adverse effect	% (n=56)
None	61% (n=34)
Paranoia	9% (n=5 <sup>^</sup> )
Restless or anxious	9% (n=5 <sup>^</sup> )
Overheating	9% (n=5 <sup>^</sup> )
Nausea/vomiting	9% (n=5 <sup>^</sup> )
Panicky	7% (n=4 <sup>^</sup> )
Seeing things that were not there	5% (n=3 <sup>^</sup> )
Hearing things that were not there	5% (n=3 <sup>^</sup> )
Shortness of breath	5% (n=3 <sup>^</sup> )
Heart racing	4% (n=2 <sup>^</sup> )
Shaky hands	2% (n=1 <sup>^</sup> )
Fingers/ toes cold or numb	2% (n=1 <sup>^</sup> )
Chest pain	2% (n=1 <sup>^</sup> )
Skin rash	2% (n=1 <sup>^</sup> )
Skin discoloured (blue/red)	0
Angry or aggressive	0

Source: EDRS participant interviews

Note: <sup>^</sup> = small numbers interpret with caution

## 9.3 Knowledge regarding the legality of NPS

The laws around selling and possessing new psychoactive substances are complex. In 2013, South Australia introduced legislation which prohibits the supply, manufacture or advertisement of any psychoactive substance (subject to appropriate exemptions). This translates to a blanket ban on possessing and supplying any NPS. It is of interest to find out RPU's understanding of the law regarding NPS.

The drugs asked about in the 2015 survey were 2CB, 2CI, DMT, mephedrone and NBOMe, all of which are illegal in SA. These substances were selected as they were the most commonly reported in the 2014 EDRS. Knowledge regarding the legality of these substances was quite mixed (Table 51). Although few participants believed that any of these substances were legal, large portions of the sample reported that they were unsure of their legal status.

**Table 51: Participant knowledge of the legality of NPS, SA, 2014 & 2015**

	2014 (N=100)	2015 (N=100)
<b>2CB</b>		
Legal	2	0
Illegal	52	64
Unsure	47	36
<b>2CI</b>		
Legal	1	0
Illegal	43	57
Unsure	56	43
<b>DMT</b>		
Legal	0	1
Illegal	70	78
Unsure	30	21
<b>Mephedrone</b>		
Legal	1	5
Illegal	47	44
Unsure	53	51
<b>NBOMe</b>		
Legal	-	0
Illegal	-	49
Unsure	-	51

**Source:** EDRS participant interviews  
**Note:** NBOMe not asked about in 2014

## 9.4 Cognitive Enhancing substances (CEs)

Cognitive enhancing substances (CEs) are drugs that have the potential to improve intellectual ability across various cognitive domains (Smith et al., 2014). Whether CEs actually improve cognitive performance remains unclear. There is some evidence that at least some CEs likely improve cognitive performance in limited cognitive domains (Farah et al., 2014); whether these results are applicable to real-world settings remains unknown. Despite mixed evidence of their efficacy, users may perceive them as effective (Ragan et al., 2013).

Only two studies have examined the prevalence of CE use in Australia. Both studies used university samples, with estimates varying from 4% to 8.5% (Joshi, 2011, Mazanov et al., 2013). Despite these varying estimates, it is clear that CE use, at least among Australian university students, is not insignificant.

All CEs are associated with a risk of harm, to varying degrees of severity. Case studies have documented adverse physical and/or psychiatric harms associated with CEs, some of which

may be severe and/or permanent (Berman et al., 2008, Oskooilar, 2005). Harms may also occur when CEs are illicitly obtained online or via others' prescriptions (Ragan et al., 2013).

At present, very little is known about the prevalence of and use of CE in Australia. EDRS participants are a recreational drug using sample, many of whom have performance demands from study or fulltime work placed upon them. There is some evidence that use of CEs may be more prevalent among illicit drug users (Mazanov et al., 2013). This module aimed to investigate the prevalence of CE use in this group, along with their motivations for use and associated potential harms in order to better inform future harm reduction initiatives.

Fifty-four percent of the sample reported using CEs in the last six months. These participants were asked to indicate which CEs they had used in the preceding six months. The majority reported using coffee (85%, n=46), followed by energy drinks (65%, n=35); smaller numbers reported the use of other CEs (see Table 52).

**Table 52: Cognitive Enhancer use in the last six months, among RPU, SA, 2015**

<b>Substance %</b>	<b>(n=54)</b>
<b>Methylphenidate</b>	
Prescribed	0
Non-prescribed	7% (n=4 <sup>^</sup> )
Any methylphenidate (prescribed or non-prescribed)	7% (n=4 <sup>^</sup> )
<b>Modafinil</b>	
Prescribed	0
Non-prescribed	7% (n=4 <sup>^</sup> )
Any modafinil (prescribed or non-prescribed)	7% (n=4 <sup>^</sup> )
<b>Dexamphetamine</b>	
Prescribed	0
Non-prescribed	6% (n=3 <sup>^</sup> )
Any dexamphetamine (prescribed or non-prescribed)	6% (n=3 <sup>^</sup> )
<b>Racetams</b>	
Prescribed	0
Non-prescribed	4% (n=2 <sup>^</sup> )
Any racetams (prescribed or non-prescribed)	4% (n=2 <sup>^</sup> )
<b>Anti-dementia drugs</b>	
Prescribed	0
Non-prescribed	0
Any anti-dementia drugs (prescribed or non-prescribed)	0
<b>Energy drinks</b>	65% (n=35)
<b>Coffee</b>	85% (n=46)
<b>Other caffeine products (caffeine tablets, caffeine sublingual strips)</b>	19% (n=10)
<b>Ginkgo Biloba</b>	2% (n=1 <sup>^</sup> )
<b>Ginseng</b>	0
<b>Omega 3 fish oil</b>	15% (n=8 <sup>^</sup> )
<b>Other</b>	2% (n=1 <sup>^</sup> )

Source: EDRS interviews; <sup>^</sup>n<10. Interpret with caution

Participants who had used CEs in the previous six months (n=54) were also asked to report the last CE that they had used. The most commonly last reported CE used were coffee (n=32, 59%) and energy drinks (n=13, 24%).

Main motivations for using these substances on the last occasion for use were also explored (See Table 53). Participants most commonly reported using CEs to offset sleep deprivation (37%) and decrease fatigue (35%). Smaller proportions reported using them to improve concentration (15%), to improve motivation for study (15%) and to enhance mood (11%).

**Table 53: Main motivations for CE use in the last six months, among RPU, SA, 2015**

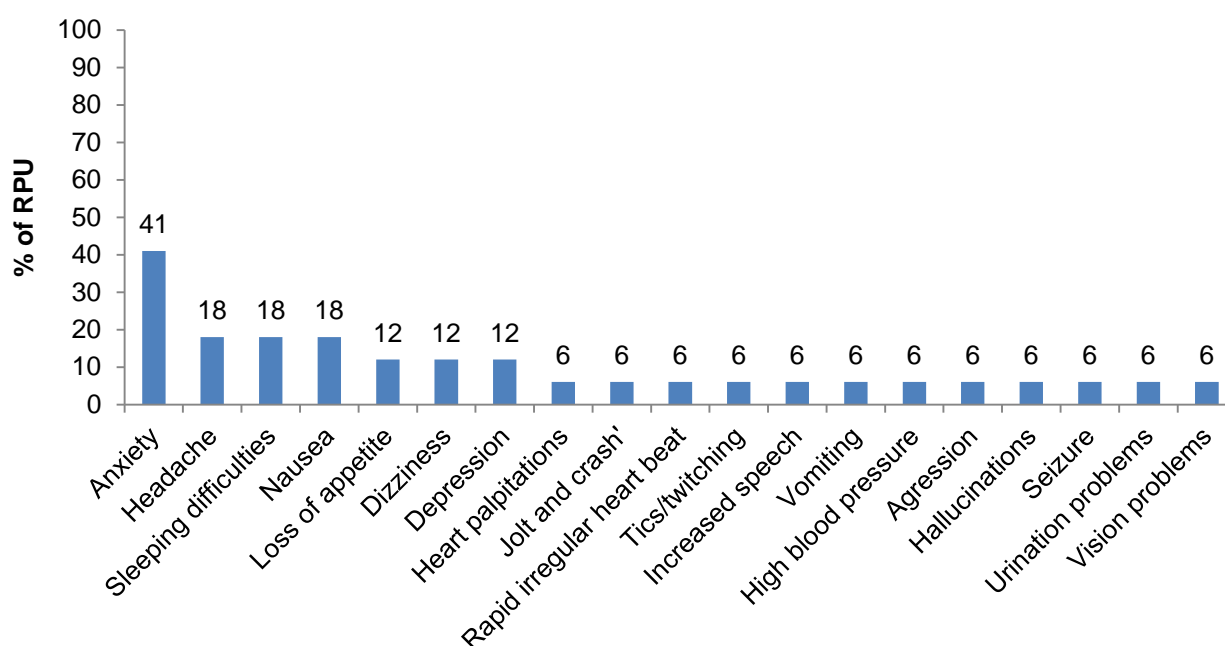
Motivations %	(n=54)
To offset sleep deprivation	37% (n=20)
To decrease fatigue	35% (n=19)
To improve concentration	15% (n=8 <sup>^</sup> )
To improve motivation for study	15% (n=8 <sup>^</sup> )
To enhance mood	11% (n=6 <sup>^</sup> )
To complete an assignment or task on time	9% (n=5 <sup>^</sup> )
To improve academic performance	6% (n=3 <sup>^</sup> )
Curiosity	2% (n=1 <sup>^</sup> )
To improve memory	0
Other reasons	19% (n=10)

Source: EDRS interviews

<sup>^</sup>n<10. Interpret with caution

Of those participants who had used CEs in the preceding six months (n=54), just under one third (n=17, 32%) reported experiencing negative side effects on the last occasion of use. The most commonly reported negative side effect was anxiety (n=7, 41%), followed by headache, sleeping difficulties and nausea (n=3, 18% respectively).

**Figure 35: Negative effects of cognitive enhancers<sup>#</sup>, SA, 2015**



Source: EDRS participants

<sup>#</sup>Among those who reported negative effects as a result of their CE use (n=17)

Of the participants who had used CEs recently, one fifth (20%; n=11) reported using other licit or illicit drugs in conjunction with the CE substance(s) they took on the last occasion. This was most commonly tobacco (n=6) and cannabis (n=5).

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