South Australia

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SA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2016
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

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SOUTH AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2016

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ABBREVIATIONS

1,4B	1,4 butanediol
2C-B	4-bromo-2, 5-dimethoxyphenethylamine
2C-E	2,5-dimethoxy-4-ethylphenethylamine
2C-I	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 2C-B, 2C-E and 2C-I)
25B-NBOMe	1-(4-Bromo-2,5-dimethoxyphenyl)-N-[(2methoxyphenyl)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
ACIC	Australian Criminal Intelligence Commission (formerly ACC)
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	1-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	Dimethyl tryptamine
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	*d*-lysergic acid amide
LSD	*d*-lysergic acid
MDA	3,4-methylenedioxyamphetamine
MDEA	3,4-methylenedioxyethylamphetamine
MDMA	3,4-methylenedioxymethamphetamine / 'ecstasy'
MDPV	Methylenedioxypyrovalerone (Ivory Wave)
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 *Method* section for further details)
Key expert(s)	Also referred to as KE; persons participating in the Key Expert Survey component of the EDRS (see *Method* section for further details)
Licit	Licit refers to pharmaceuticals (e.g. benzodiazepines, antidepressants and opioids such as methadone, buprenorphine, morphine and oxycodone) obtained by a prescription in the user's name. This definition does not take account of 'doctor shopping' practices; however, it differentiates between prescriptions for self as opposed to pharmaceuticals bought on the street or those prescribed to a friend or partner
Lifetime injection	Injection (typically intravenous) on at least one occasion in the participant's lifetime
Lifetime use	Use on at least one occasion in the participant's lifetime via one or more of the following routes of administration: injecting; smoking; snorting shelving/shafting; and/or swallowing
Opiates	Opiates are derived directly from the opium poppy by departing and purifying the various chemicals in the poppy
Opioids	Opioids include all opiates but also include chemicals that have been synthesised in some way; e.g. heroin is an opioid but not an opiate, morphine is both an opiate and opioid
Point	0.1 gram although may also be used as a term referring to an amount for one injection
Recent injection	Injection (typically intravenous) in the six months preceding interview
Recent use	Use in the six months preceding interview via one or more of the following routes of administration: injecting; smoking; snorting; and/or swallowing
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

180 days	Daily use over preceding six months
90 days	Use every second day
24 days	Weekly use
12 days	Fortnightly use
6 days	Monthly use

EXECUTIVE SUMMARY

This report presents the findings from the seventeenth year in which data has been collected in South Australia (SA). The Ecstasy and Related Drugs Reporting System (EDRS) 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-methylendioxyamphetamine (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 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 they help to provide an evidence base for policy decisions, help inform harm reduction messages and provide directions for further investigation when issues of concern are detected. Continued monitoring of the ERD markets in Australia 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 2016 sample. As in previous years, the RPU interviewed were young, with a median age of 19. Three-fifths (61%) of the participants were male. Twenty-three percent of the sample reported being in full-time employment with a median income of $400 per week. Most participants were well educated; 44% of the sample had completed some kind of post school qualification, and 39% were current students. The majority (80%) of the sample identified as heterosexual. Four percent were currently undergoing treatment for their drug use. The demographic characteristics of the 2016 sample were unchanged from 2015.

Patterns of drug use among participants

Ecstasy re-emerged as the main drug of choice nominated by participants, followed by cannabis and then alcohol. Aside from ecstasy, cannabis was the most commonly used drug among RPU, followed by alcohol and tobacco. As in 2015, polydrug use was common among this sample, with participants having tried a mean of ten different drugs in their lifetime, and eight within the preceding six months. In 2016, there was a significant increase in the lifetime use of amyl nitrite, as well as significant increases in the recent use of amyl nitrite and ketamine. Conversely, there was a significant decrease in the lifetime use of mushrooms, as well as significant decreases in the recent use of mushrooms and e-cigarettes.

Two-fifths (43%) of RPU reported recent bingeing on ecstasy or other related drugs in 2016. Among those who had binged for over 48 hours, ecstasy emerged as the drug most commonly used in a binge session, closely followed by alcohol (26%), tobacco (26%), cannabis (26%), and crystal methamphetamine (24%).

Injecting drug use remained low in 2016, with only one participant reporting that they injected any drug within the preceding month.

Ecstasy

There were some changes in the parameters of ecstasy use in 2016. Specifically, the proportion of participants who reported using more than one pill in a typical session increased in 2016, as did the median and 'most' number of pills used in a typical session. There was also a significant increase in the median days of use in a six month period. Swallowing was the main 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 diversification of the ecstasy market continued in 2016. That is, although the majority of RPU continued to use ecstasy pills, there was a significant increase in the recent use of MDMA crystal (63% in 2016 versus 41% in 2015). The use of ecstasy capsules continues to be common, with 55% of the sample reporting use in the preceding six months. In order to accurately capture this diversifying market, 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 declined in 2016, to $15 for a pill. The median price for a cap was $25, and the median price for a gram of MDMA crystal was $220, both of which remained stable from 2015. The availability of all forms of ecstasy was considered 'easy' or 'very easy'. The current purity of ecstasy pills was perceived as low–medium, the current purity of ecstasy capsules was perceived as fluctuating and the purity of MDMA crystal was perceived as medium–high. Data from the Australian Criminal Intelligence Commission (ACIC) reported that the median purity of South Australian Police (SAPOL) seizures of phenethylamines remained low and stable in 2014/15 at 11.4% (compared to 13.3% in 2013/14).

Methamphetamine

In 2016, lifetime and recent use of all three forms of methamphetamine remained stable. The frequency of recent crystal methamphetamine use declined (to four 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 2016. In the six months prior to interview, smoking emerged as the preferred ROA for both base and crystal methamphetamine, while snorting and smoking were the preferred methods for administering methamphetamine powder.

The reported last median price of a point of crystal methamphetamine declined significantly, from $65 in 2015 to $50 in 2016. The median price for a point of powder and base methamphetamine remained relatively stable at $30 and $70 respectively.

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. Seizures analysed by SAPOL revealed that the median purity of methamphetamine increased to 75.7% (compared to 59.7% in 2013/14). All forms of methamphetamine were considered 'easy' to 'very easy' to obtain.

The largest proportion of participants reported obtaining methamphetamine from friends or a known dealer. All three forms of methamphetamine were most commonly obtained at a private home.

Of the illicit drugs, all 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) on both the individual using the drug and their family/friends.

Cocaine

In 2016, there were non-significant increases in the lifetime and recent use of cocaine (to 77% and 57% 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 remained stable at $350, with the majority of those able to answer (74%) reporting 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 2014/15 had almost doubled compared to 2013/14. The current availability of cocaine was largely perceived as 'difficult', with the majority of participants reporting that this had remained stable in the six months preceding interview.

LSD

Thirty percent of the participant sample in 2016 reported recent use of LSD, which was stable from 2015 (37%). 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 remained stable in 2016 at $17.50 for a tab. Reports regarding the perceived purity of LSD were mixed; equal proportions of those able to comment reported that the current purity of LSD was medium or high (36% respectively), and 24% reported that purity was variable. The majority of those able to answer (81%) reported that it was 'easy' or 'very easy' to obtain LSD; this was a significant increase from 2015.

Cannabis

The prevalence of cannabis use remained high in 2016, with 100% of the sample reporting lifetime use and 97% reporting use within the preceding six months. There was a non-significant increase in the frequency of recent cannabis use, to a median of 72 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 2016 ($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–high, with the purity of both types perceived as stable in the previous six months.

New psychoactive substances (NPS)

For the seventh year running, participants in 2016 were asked about their use of a range of NPS). One-third (32%) of the sample reported 'any' NPS use in the six months preceding interview, which was a significant decrease from 2015 (52%). The

most commonly used NPS in the six months preceding interview were dimethyltryptamine (DMT), N-methoxybenzyl (NBOMe) and 4-bromo-2,5-dimethoxyphenethylamine (2C-B). Lifetime and recent use of 2C-B decreased significantly in 2016 (to 20% and 8% respectively), while lifetime and recent use of all other NPS remained stable.

Among past year NPS consumers, 51% (n=23) reported that they had experienced an unexpected adverse effect on their last occasion of use, most commonly nausea/vomiting (39%), paranoia (35%), and shaky hands/fingers (30%).

Other drugs

Ketamine

Lifetime use of ketamine remained stable in 2016 (20%). There was a significant increase in the proportion of RPU who reported that they had used ketamine in the six months preceding interview (15%; 4% in 2015).

GHB

Sixteen percent of RPU reported lifetime use of GHB and 9% reported use in the six months preceding interview (both stable from 2015).

MDA

Seventeen percent of RPU reported lifetime use of MDA and 12% reported use in the six months preceding interview (both of which remained stable from 2015).

Inhalants

Recent use of nitrous oxide remained stable in 2016, with 26% of the sample reporting use within the preceding six months. There was a significant increase in the recent use of amyl nitrite (54%; 29% in 2015; $p<0.001$), continuing the upward trend from 2014 (7%). Frequency of use remained low for both inhalants.

Mushrooms

Seven percent of participants reported recent use of 'magic mushrooms', which was a significant decrease from 2015 (19%). Frequency remained low at a median of two days in the preceding six months.

Capsule (contents unknown)

Twenty-four percent of RPU reported lifetime use of a capsule with unknown contents and 15% reported use in the six months preceding interview, both of which remained stable from 2015. Frequency remained low at a median of one day in the preceding six months.

Alcohol

In 2016, almost the entire participant sample (98%) reported recent use of alcohol; frequency remained stable at 24 days in a six month period.

Tobacco

Ninety-five percent of RPU reported lifetime use of tobacco and 84% reported use in the six months preceding interview, both of which remained stable from 2015. The proportion of recent tobacco users who reported daily use also remained stable in 2016 (58%; 51% in 2015), although this continues to greatly exceed the daily smoking prevalence rate in the general SA population aged 14 years and over.

E-cigarettes

Almost two-thirds (62%) of RPU reported they had used electronic cigarettes within their lifetime. One-third (34%) of the sample reported that they had recently used electronic cigarettes, which was a significant decline from 2015 (50%). Frequency of use remained stable at a median of five days.

Dextromethorphan (DXM)

Thirteen percent of the sample reported lifetime use of DXM and 7% reported recent use (both of which remained stable from 2015). Frequency of use was low at a median of one day in the preceding six months.

Pharmaceutical drugs

The lifetime and recent use of un-prescribed medications (i.e. benzodiazepines, pharmaceutical stimulants, OTC codeine, OTC stimulants, antipsychotics, OST medications and other opioids) remained stable in 2016.

Steroids

No participants reported lifetime or recent use of steroids in 2016.

Health-related issues

The prevalence of recent (past 12 month) stimulant and depressant overdose remained stable in 2016. Overall, 30% 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”.

Ninety 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 (GP). Almost one-fifth of the sample (17%) reported that they had thought about seeking help for their drug and alcohol use.

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 2016 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 ecstasy, cannabis and cocaine; increased for methamphetamine; and decreased for alcohol and opioids.

In 2016, 36% 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, 35% of the sample reported that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview, which was stable from 2015.

Risk behaviour

Injecting risk behaviour

Seven percent of the sample reported that they had ever injected any drug. One participant reported injecting any drug in the month preceding interview; no

participants reported sharing needles or other injecting equipment in the month preceding interview.

Sexual risk behaviour

Evidence of risky sexual behaviour was again apparent among the participant sample in 2016. Of the participants who reported having had penetrative sex with a casual partner in the last six months, a large minority 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-three participants had undergone a sexual health check-up in the preceding year, with six participants reporting that they had been diagnosed with an STI in the past year.

Driving risk behaviour

Eighty-two percent of RPU reported that they had driven a vehicle in the preceding six months, and of these, 28% had driven while over the BAC limit. Half (50%) of recent drivers reported driving within three hours of consuming an illicit substance.

Alcohol risk behaviour

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

Stimulant dependence

One-quarter (27%) of RPU scored 3 or above on the ecstasy severity of dependence scale (SDS) which may be considered indicative of problematic dependent ecstasy use. Among those who answered the methamphetamine SDS, 31% obtained a score of 4 or above which may be considered indicative of amphetamine dependence.

Law enforcement-related trends

The prevalence of past month criminal activity among RPU remained stable in 2016, at 44%. Drug dealing continued to be the most common offence that 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

NPS supply and purchasing patterns

In 2016, past-year NPS consumers were asked a series of questions about the purchasing and supply of NPS. Forty-five percent of the sample reported using a NPS in the last 12 months, most commonly NBOMe and DMT. Past year NPS consumers largely reported purchasing these substances (74%) and a sizeable minority (37%) had been given them for free. The majority (55%) of those who had used a NPS in the last 12 months nominated a friend as their main source, and almost half (48%) reported that they had provided any NPS to others in the preceding year. Among those who had supplied NPS to others, the majority reported supplying these substances to friends (81%) for free (65%).

Online marketplaces

In 2016, participants were asked about their online purchasing of drugs. Twenty-two percent of RPU reported that they had ever purchased a drug online, and 16% 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 ecstasy, LSD and NBOMe.

Gaming/Gambling

Three-quarters (76%) of RPU reported playing video games in the last six months on a median of 48 days. The median amount of time spent playing video games on a typical day was 60 minutes. Over half (55%) of the sample had gambled on a median of four days in the last six months (range 1–90 days).

Conclusions

The results reported here describe trends in the use of ecstasy and related drugs (ERD) in 2016 in Adelaide, SA, and provide comparisons with the findings of the 2015 study. The main findings from the 2016 EDRS seem to be centred on the re-emergence and diversification of the ecstasy market. More specifically, although pills continue to be the dominant form of ecstasy used by RPU, in 2016 there was a significant increase in the use of MDMA crystal, with 63% of the sample reporting use in the preceding six months. There were also significant increases in the frequency of ecstasy use, and the quantities used in a typical and heavy session.

Conversely, there was a significant decrease in the recent use of 'any' NPS. Specifically, past six month use of 2C-B declined in 2016, whilst the use of all other NPS remained stable. It is unclear if this is associated with the re-emergence and diversification of the ecstasy market, or it is being driven by other factors. Regardless, one-third of the sample continued to use NPS, indicating that the NPS market continues to be an ongoing and significant (yet highly dynamic) part of Australia's recreational drug scene. In 2016, DMT, NBOMe and 2C-B were the commonly used NPS among RPU in Adelaide.

Implications

The findings from the 2016 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 ongoing and dynamic 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) and 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, there was a significant increase in the use of MDMA crystal, and the use of ecstasy capsules remains popular among RPU. The purity of MDMA crystal appears to be substantially higher than the purity of ecstasy pills, and it is important that we continue to monitor the different forms of ecstasy separately.
- Despite a significant decrease in 2016, the use of NPS remains relatively common 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.

- The recent use of amyl nitrite has increased substantially over the past three years (7% in 2014; 29% in 2015; 54% in 2016). It is unclear what is driving this trend and it is important that we continue to monitor use of this substance.
- Poly drug use remains common among RPU, with the large majority of participants reporting that they used other drugs in combination with psychostimulants. 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 RPU reported that they had recently binged on ecstasy and/or related drugs, and almost one-third reported that they had overdosed on either a stimulant or depressant drug in the 12 months preceding interview. These are serious public health concerns, 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 the Ecstasy and Related Drugs Reporting System (EDRS) and has been conducted annually across capital cities in Australia since.

1.1 Study aims

The specific aims of the 2016 South Australian EDRS were to:

- describe the characteristics of a sample of psychostimulant users surveyed in Adelaide in 2016;
- 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 2015 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 RPU living in the Adelaide metropolitan area;
- telephone interviews with 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 2003−12, 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 (e.g. 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 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 2016, a total of 100 RPU were interviewed from March to May. Despite the expansion of the eligibility criteria, there were only four participants who had not used ecstasy regularly in accordance with recent ecstasy use criteria. That is, the 2016 EDRS results still comprise a large amount of data from regular ecstasy users (REU).

2.1.1 Recruitment

Participants were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements on various websites (primarily Facebook) and university noticeboards. 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 & Norcoss, 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 website 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 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 ROA;
- 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 NPS supply and purchasing patterns, online purchasing and gaming/gambling activities.

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, and 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 online or via telephone between August–September 2016.

There were ten KE from various metropolitan regions of Adelaide. Half of the KE (n=5) worked in the health sector (including in drug diversion, community drug and alcohol work, drug treatment services and mental health services) and half (n=5) were 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 Criminal Intelligence Commission (ACIC) (formerly known as the Australian Crime Commission; ACC);
- data on consumer and provider arrests by drug type provided by the ACIC;
- drug-related admissions to the Emergency Department (ED) of the Royal Adelaide Hospital (RAH), provided by the Emergency Department;
- 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 2016.
- Participants reported a median age of 19 years, and were predominantly male (61%) and heterosexual (80%).
- The RPU interviewed were well educated; over two-fifths (44%) had gained post-secondary qualifications, and 39% were current students.
- Twenty-three percent of the sample were currently in full-time employment, with a median income of $400 per week. The majority were either living in the parental/family home (64%) or renting/owned their own accommodation (35%).
- Demographic characteristics were unchanged from 2015.

3.1 Overview of the RPU participant sample

3.1.1 Demographic characteristics of the RPU sample

In the 2016 EDRS, 100 participants were interviewed in South Australia. Eight percent of the EDRS sample reported they had participated in previous years (1% in 2013; 3% in 2014; 6% in 2015). No participants reported participating in a previous SA IDRS survey of people who inject drugs.

In 2016, three-fifths (61%) of the sample interviewed were male. The median age of the sample was 19 years (range=17−47). The majority of participants reported their sexual identity as heterosexual (80%), and nominated English as their main language (96%). One participant was of Aboriginal and/or Torres Strait Island (A&TSI) descent.

Three-fifths (60%) of the sample reported that they were of single status, two-fifths (38%) had a partner, one participant reported to be married or living in a de facto relationship and one participant was separated. About two-thirds (64%) lived in their parent's or family's home, one-third (35%) lived in their own (owned or rented) accommodation and one participant reported no fixed address.

The median number of years of school education completed by the sample was 12 (range=9−12), with over two-thirds (70%) of participants reporting that they had completed year 12. Over two-fifths (44%) had completed courses after school, with 17% having completed a university degree and 27% a trade/technical qualification. Twenty-three percent of participants were employed on a full-time basis, one-quarter (24%) were employed on a part-time/casual basis, two-fifths were currently students (12% full-time, 1% part-time, 26% were employed and studying) and 10% were currently unemployed. The median weekly income was $400.

Table 1 presents key demographic characteristics across time. The demographic characteristics of RPU recruited for the EDRS have remained relatively stable between 2012 and 2016, although there has been a downward trend in the median age of participants and

in the proportion of the sample who identified as male. Demographic comparisons between the 2015 sample and 2016 sample showed no significant changes.

Table 1: Demographic characteristics of RPU sample, SA, 2012–2016

Characteristic	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Age (median in years)	22	21	21	20	**19**
(range)	(17−48)	(16−44)	(17−53)	(17−43)	**(17–47)**
Sex (% male)	73	75	62	58	**61**
Sexual Identity (%)					
Heterosexual	90	85	80	89	**80**
Gay male	3	1	2	0	**4**
Lesbian	0	6	9	3	**1**
Bisexual	7	7	7	5	**13**
Other	0	1	2	3	**2**
English main language spoken at home (%)	98	98	97	96	**96**
A&TSI (%)	1	2	1	2	**1**
Employment (%)					
Not employed	13	13	10	17	**10**
Full-time	30	23	15	17	**23**
Part-time/casual	21	28	27	28	**24**
Full-time student	9	6	10	7	**12**
Part-time student	3	1	0	2	**1**
Both studying & employed[#]	23	26	36	26	**26**
Home duties	0	0	0	0	**0**
Other	1	3	2	3	**3**
School education* (median in years)	12	12	12	12	**12**
(range)	(8−12)	(10−12)	(9−12)	(9−12)	**(9−12)**
Tertiary education (%)					
None	53	51	69	56	**56**
Trade/Technical	35	25	19	37**	**27**
University/College	12	24	12	7	**17**
Current drug treatment (%)	3	2	1	4	**4**

Source: EDRS participant interviews
**p<0.01

4 CONSUMPTION PATTERN RESULTS

Key Findings

- Ecstasy re-emerged as the primary drug of choice among RPU in 2016.
- There was a significant increase in the lifetime use of amyl nitrite, as well as significant increases in the recent use of amyl nitrite and ketamine.
- There was a significant decrease in the lifetime use of mushrooms, as well as significant decreases in the recent use of mushrooms and e-cigarettes.
- Poly drug use remained common, with participants reporting that they had used an average of eight different drugs in the six months preceding interview.
- Seven participants reported that they had ever injected a drug, which remained stable from 2015.
- Two-fifths (43%) of RPU reported that they had recently binged on ecstasy and/or related drugs, which was a non-significant increase from 2015 (32%). The most commonly used drugs in a binge session were ecstasy, alcohol, cannabis, tobacco and crystal methamphetamine.

4.1 Drug use history and current drug use

In 2016, 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.

RPU are often described as poly drug users and the 2016 sample was no exception. Participants were asked about their lifetime and recent use of 27 different drug types (excluding new psychoactive substances).[1] Participants reported using a mean of ten drug types in their lifetime (range=4–21) and a mean of eight in the preceding six months (range=3–18). From 2010, the EDRS has included a section investigating the prevalence of use of new psychoactive substances (NPS) 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 (excluding ecstasy) were alcohol and cannabis, followed by tobacco. This has remained relatively constant over the years.

[1] Drug types were ecstasy (pills, powder, crystals & capsules), methamphetamine (powder, base & crystal), pharmaceutical stimulants (licit and illicit), cocaine, LSD, MDA, 'magic mushrooms', ketamine, GHB (includes 1,4-butanediol and gamma-butyrolactone (GBL)), amyl nitrite, nitrous oxide, alcohol, cannabis, benzodiazepines (licit and illicit), antidepressants (illicit only), antipsychotics (licit and illicit), tobacco, e–cigarettes, heroin, methadone (licit and illicit), buprenorphine (licit and illicit), DXM, over the counter (OTC) stimulants (illicit only), steroids (illicit only), unknown capsules, OTC codeine (illicit only), and other opiates (licit and illicit).

Table 2: Lifetime and recent use of drugs among RPU, SA, 2012–2016

	2012 N=92	2013 N=100	2014 N=100	2015 N=100	**2016 N=100**
Alcohol					
Ever used (%)	99	100	100	100	**99**
Used last six months (%)	99	97	100	100	**98**
Cannabis					
Ever used (%)	98	94	98	99	**100**
Used last six months (%)	88	85	87	92	**97**
Tobacco					
Ever used (%)	96	84	92	94	**95**
Used last six months (%)	85	75	82	86	**84**
E-cigarettes[#]					
Ever used (%)	–	–	64	74	**62**
Used in last six months (%)	–	–	54	50	**34***
Meth. powder (speed)					
Ever used (%)	59	47	40	30	**23**
Used last six months (%)	24	21	13	11	**12**
Meth. base					
Ever used (%)	41	15	18	15	**15**
Used last six months (%)	24	11	10	6	**3**
Crystal meth. (ice/crystal)					
Ever used (%)	53	37	35	37	**42**
Used last six months (%)	32	28	20	26	**33**
Cocaine					
Ever used (%)	66	58	68	65	**77**
Used last six months (%)	37	35	45	45	**57**
LSD					
Ever used (%)	52	51	63	51	**49**
Used last six months (%)	19	25	35	37	**30**
MDA					
Ever used (%)	33	9	10	17	**17**
Used last six months (%)	9	3	3	8	**12**
Ketamine					
Ever used (%)	37	28	27	22	**20**
Used last six months (%)	10	6	4	4	**15***
GHB/1,4B/GBL					
Ever used (%)	25	12	11	7	**16**
Used last six months (%)	12	5	3	4	**9**

[#] first included in 2014

Table 2: Lifetime and recent use of drugs among RPU, SA, 2012–2016 (continued)

	2012 N=92	2013 N=100	2014 N=100	2015 N=100	**2016 N=100**
Amyl nitrite					
Ever used (%)	32	30	25	46	**68*** **
Used last 6 months (%)	17	14	7	29	**54*** **
Nitrous oxide					
Ever used (%)	52	48	33	33	**40**
Used last 6 months (%)	20	17	8	16	**26**
Benzodiazepines[#]					
Ever used (%)	47	59	40	58	**60**
Used last 6 months (%)	32	29	22	37	**44**
Antidepressants[^]					
Ever used (%)	27	20	22	32	**11**
Used last 6 months (%)	13	9	6	20	**5**
Pharmaceutical stimulants[#]					
Ever used (%)	52	43	38	45	**38**
Used last 6 months (%)	19	25	22	26	**29**
Mushrooms					
Ever used (%)	69	54	57	57	**36** **
Used last 6 months (%)	26	19	22	19	**7***
Heroin					
Ever used (%)	12	9	5	3	**5**
Used last 6 months (%)	8	3	2	1	**2**
Methadone					
Ever used (%)	9	6	3	0	**3**
Used last 6 months (%)	1	0	1	0	**1**
Buprenorphine					
Ever used (%)	10	2	5	0	**0**
Used last 6 months (%)	5	0	3	0	**0**
Other Opiates[#]					
Ever used (%)	29	35	31	37	**45**
Used last 6 months (%)	14	10	11	21	**27**

Source: EDRS participant interviews

[#] Includes both licit and illicit use

^ From 2012–2015, figures include both licit and illicit use. In 2016, we asked out illicit use *only*. No comparisons made across 2015–2016 data due to these differences in data collection

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

Compared to 2015, there were a number of significant changes in consumption patterns in 2016. These included:

- lower lifetime (36%; 57% in 2015; $p=0.005$; 95% CI: 0.07, 0.34) and recent use (7%; 19% in 2015; $p=0.021$; 95% CI: 0.03, 0.21) of mushrooms;
- higher lifetime (68%; 46% in 2015; $p=0.003$; 95% CI: -0.35, -0.08) and recent use (54%; 29% in 2015; $p<0.001$; 95% CI: -0.37, -0.11) of amyl nitrite;
- lower recent use of e-cigarettes (34%; 50% in 2015; $p=0.032$; 95% CI: 0.02, 0.29);
- higher recent use of ketamine (15%; 4% in 2015; $p=0.016$; 95% CI: -0.20, -0.03).

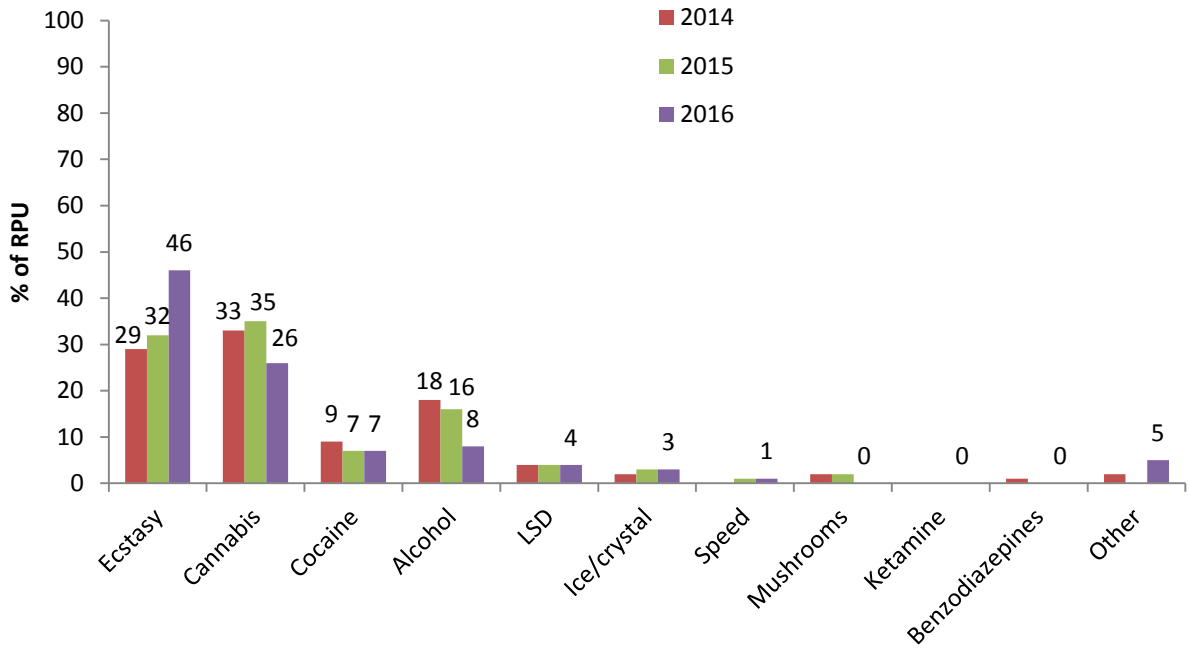
4.1.1 Injecting drug use

In 2016, 7% of the sample reported having ever injected any drug, and of those one participant reported injecting in the month prior to interview. This has remained relatively stable from 2015. 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 2014−16. In 2016, ecstasy re-emerged as the most common drug of choice (46%), followed by cannabis (26%) and alcohol (8%). Although there were no significant changes from 2015, it can be seen that in 2016 there was a substantial increase in the proportion of participants nominating ecstasy as their drug of choice, and a non-significant decrease in those nominating cannabis and alcohol as their preferred drug of choice.

Figure 1: Drug of choice of RPU, SA, 2014−2016



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). Two-fifths (43%) of the sample reported bingeing on ERD within the six months prior to interview, which was a non-significant increase from 2015 (32%; $p>0.05$). Bingeing occurred on a median of three occasions (range =1−24) with the median length of the longest binge being 66 hours (range=48−216); both of which remained stable from 2015.

In 2016, ecstasy emerged as the drug most commonly used in a binge session (33%), followed by alcohol (26%), tobacco (26%), cannabis (26%), and crystal methamphetamine (24%). Other drugs that were used in a binge session are listed in Table 3, and remain relatively stable from 2015.

Table 3: Proportion of participants reporting use of various drugs during a 'binge'[#] episode in the last six months, SA, 2015 & 2016

Drug	Percent of whole sample to include drug in 'binge' episode in the last 6 months	
	2015 (N=100)	**2016 (N=100)**
Ecstasy	22	**33**
Meth powder	5	**2**
Meth base	1	**1**
Meth crystal	17	**24**
Pharmaceutical stimulants	1	**1**
Cocaine	7	**12**
LSD	6	**3**
MDA	0	**0**
Ketamine	0	**3**
GHB	0	**0**
Amyl nitrite	0	**1**
Nitrous oxide	0	**1**
Cannabis	16	**26**
Alcohol	24	**26**
<5 std drinks	5	**8**
>5 std drinks	19	**18**
Other	4	**1**
Benzodiazepines	1	**2**
Tobacco	21	**26**
Energy drinks	2	**2**
NBOMe	0	**1**
2C-B	1	**0**
DMT	1	**0**

Source: EDRS participant interviews
[#]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 2016, participants were asked how often they had used ERD in the month preceding interview. The majority of participants reported between monthly and weekly use, with a significant decrease in the proportion of participants who reported no ERD use in the preceding month (0%; 7% in 2015; p=0.02; 95% CI: 0.02, 0.14).

Table 4: Frequency of ERD use in the RPU sample, SA, 2015 & 2016

	2015	2016
	(N=100) %	N=100 %
Not in the last month	7	0*
Monthly	19	16
Fortnightly	41	36
Weekly	19	30
More than once a week	14	15
Once a day	0	2
More than once a day	0	1

Source: EDRS participant interviews
*p<0.05

4.1.4 Change in trends of ERD use

EDRS participants were asked 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.). Fifty-three percent of the sample indicated that there had been some recent changes in drug use, with the three primary themes being:

- An increase in drug use (n=27). 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 capsules), crystal methamphetamine and nitrous oxide.
- An increase in the number of 'new drugs' that were available, and a subsequent increase in the experimentation with such drugs (n=15). DMT was the most common 'new drug' reported by participants, with a couple of participants reporting use of 2C-B and 6-CAT.
- A number of participants also commented on low purity ecstasy pills, and the fact that pills often contain other substances (e.g. methamphetamine, PMA).

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 in terms of age of first use for any of the forms of ecstasy.
- Participants reported using ecstasy on a median of 20 days in the preceding six months, which was a significant increase from 2015 (13 days).
- The proportion of participants who reported using more than one pill in a typical session also increased in 2016, as did the median and 'most' number of pills used in a typical session.
- Lifetime and recent use of pills, powder and capsules remained stable in 2016. There was a non-significant increase in lifetime use and a significant increase in the recent use of MDMA crystal.
- Swallowing was the primary ROA 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

The entire sample reported having used ecstasy in the six months preceding interview. Participants reported using ecstasy (pills, powder, capsules or crystal[2]) on a median of 20 days (range=3−84; n=100) within the previous six months, which was a significant increase from 2015 (13 days; p=0.025).

Thirty percent of the sample reported using ecstasy (any form) once a fortnight or less, 30% reported using ecstasy more than fortnightly but less than weekly and 40% reported weekly or more use. One-third (33%) reported having binged on ecstasy in the preceding six months, which was relatively stable from 2015 (22%).

[2] Participants were asked about their use of ecstasy pills (pills sold purporting to contain MDMA); ecstasy capsules (capsules sold purporting to contain MDMA); ecstasy powder (often sold in sachets) and crystal ecstasy. In addition participants were asked about their use of capsules of unknown content; figures for use of unknown capsules are presented in section 4.7.6.

Table 5: Ecstasy use (any form) among RPU, SA, 2012–2016

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Median days used ecstasy in the last six months (range)	13 (5–74)	12 (1–78)	12 (1–96)	13 (1–96)	**20* (3–84)**
Recently binged[#] on ecstasy (%)	43	33	19	22	**33**
Use other drugs with psychostimulants^ (%)	98	91	94	95	**99**

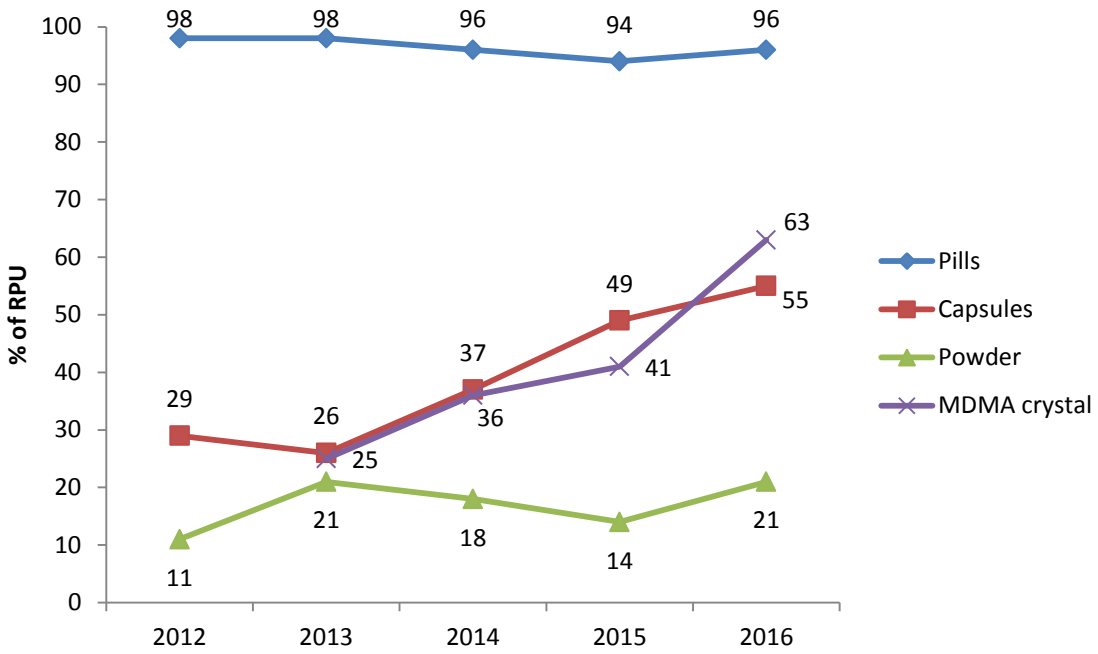
Source: EDRS participant interviews

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

^ In 2016, the wording changed from "the last time you used ecstasy (in the past six months) did you use other drugs with ecstasy?" to "the last time you used a psychostimulant, what drugs did you use at the same time?"

In 2016, the EDRS continued to distinguish between four forms of ecstasy: pills, powder, capsules and crystal MDMA.[3] Although the majority of RPU continued to use ecstasy pills, there was a significant increase in the recent use of MDMA crystal (63%; 41% in 2015; *p*=0.003; 95% CI: -0.35, -0.08) (Figure 2).

Figure 2: Recent use of ecstasy forms among RPU, SA, 2012–2016



Source: EDRS participant interviews

4.2.2 Ecstasy pills

Table 6 summarises the use of ecstasy pills among the participant sample from 2012–16. Almost the entire sample (99%) reported lifetime use of ecstasy pills. The median age at which participants first tried ecstasy pills was 17 years (range=13−35; n=99), with 87% of the sample being 18 years or under. There were no significant differences in terms of gender and age of first use. Ninety-six percent of the sample reported recent use of ecstasy pills, on a median of 12 days.

[3] This is the fourth year that we have distinguished MDMA crystals as a form of ecstasy.

Participants reported using a median of four ecstasy pills in a typical session (range=1−17; n=96), which was a significant increase from 2015 (two and three quarter pills, *p*=0.014). The median 'most' amount used in a single session in the past six months was seven pills (range=1.5−30); again, this was a significant increase from 2015 (five pills; *p*=0.047). The majority (92%) of RPU reported that they typically used more than one pill (versus 81% in 2015; *p*=0.039; 95% CI: -0.21, -0.01) and almost two-thirds (65%) reported using over pills tablets per session (versus 48% in 2015; *p*=0.02; 95% CI: -0.30, -0.03).

Table 6: Patterns of ecstasy use (pills) among RPU, SA, 2012–2016

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Lifetime use (%)	99	99	100	97	**99**
Median age first used ecstasy (years)	17 (13−40)	18 (13−29)	17 (13−31)	17 (14−35)	**17 (13−35)**
Recent use (%)	98	98	96	94	**96**
Median days used in the last six months (range)	12 (1−72)	12 (3−72)	12 (1−72)	12 (1−96)	**12 (1−72)**
Median pills in typical session[#] (range)	2.5 (0.75−15)	2 (1−8)	2 (0.5−12.5)	2.75 (1−10)	**4* (1−17)**
Typically use >1 pills (%)	92	82	82	81	**92***
Median pills in heavy session[#] (range)	5 (1−40)	5 (1−19)	5 (1−19)	5 (1−23)	**7* (1.5−30)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
**p*<0.05

4.2.3 Ecstasy capsules

Table 7 summarises the use of ecstasy capsules among the participant sample from 2012–16. Seventy percent of the sample reported lifetime use of ecstasy capsules, which was stable from 2015. The median age at which participants first tried ecstasy capsules was 18 years (range=14−38; n=70), with no significant differences in terms of gender and age of first use. Over half (55%) of the sample reported recent use of ecstasy capsules, on a median of five days. The median 'typical' and 'most' amounts used in a single session in the past six months were two and three capsules respectively.

Table 7: Patterns of ecstasy use (capsules) among RPU, SA, 2012–2016

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Lifetime use (%)	70	49	65	74	**70**
Median age first used ecstasy (years)	19 (15−44)	19 (14−30)	19 (13−41)	18 (15−38)	**18 (14−38)**
Recent use (%)	29	26	37	49	**55**
Median days used in the last six months (range)	2 (1−24)	1.5 (1−6)	2 (1−12)	3 (1−48)	**5 (1−72)**
Median caps in typical session[#] (range)	1 (1−10)	1 (0.5−4)	1.5 (0.5−6)	2 (1−6)	**2 (1−6)**
Median lines in heavy session[#] (range)	2 (1−20)	2 (0.5−5)	2 (0.5−12)	2 (1−6)	**3 (1−10)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use

4.2.4 Ecstasy powder

Table 8 summarises the use of ecstasy powder among the participant sample from 2012–16. One-third (32%) of the sample reported lifetime use of ecstasy powder, which was stable from 2015. The median age at which participants first tried ecstasy powder was 18 years (range=14−37; n=32), with no significant differences in terms of gender and age of first use. One-fifth (21%) of the sample reported recent use of ecstasy powder, on a median of four days. The median 'typical' and 'most' amount used in a single session in the past six months was four lines respectively.

Table 8: Patterns of ecstasy use (powder) among RPU, SA, 2012–2016

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Lifetime use (%)	30	28	32	27	**32**
Median age first used ecstasy (years)	19 (16−44)	20 (14−30)	18.5 (15−27)	18 (15−42)	**18 (14−37)**
Recent use (%)	10	16	18	14	**21**
Median days used in the last six months (range)	3 (1−24)	1 (1−24)	4.5 (1−18)	2 (1−12)	**4 (1−24)**
Median lines in typical session[#] (range)	–	–	–	–	**4 (1−7)**
Median lines in heavy session[#] (range)	–	–	–	–	**4 (1−9)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
– Data not presented due to small numbers (n<10)

4.2.5 MDMA crystal

Table 9 summarises the use of MDMA crystal among the participant sample from 2013 to 2016. Three-quarters (75%) of the sample reported lifetime use of MDMA crystal, which was relatively stable from 2015.The median age at which participants first tried MDMA crystal was 18 years (range=13−44; n=75), with no significant differences in terms of gender and age of first use. Three-fifths (63%) of the sample reported recent use of MDMA crystal, which was a significant increase from 2015 (41%; *p*=0.003; 95% CI: -0.35, -0.08). Frequency of use remained stable at a median of six days. The median 'typical' and 'most' amounts used in a single session in the past six months were two capsules and 0.5 gram respectively.

Table 9: Patterns of ecstasy use (MDMA crystal) among RPU, SA, 2013–2016

	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Lifetime use (%)	36	44	62	**75**
Median age first used ecstasy (years)	20 (14−30)	19 (15−36)	19 (14−40)	**18 (13−44)**
Recent use (%)	25	36	41	**63****
Median days used ecstasy in the last six months (range)	1 (1−12)	2 (1−12)	4 (1−24)	**6 (1−72)**
Median amount used in typical session[#] (range)				
Caps	1 (0.5−6; 11)	2 (0.5−7; 10)	2 (1−5; 11)	**2 (1−8; 22)**
Grams	–	–	–	**0.5 (0.15−5; 10)**
Median amount used in heavy session[#] (range)				
Caps	1 (0.5−6; 11)	–	4 (1−12; 11)	**2 (1−14; 21)**
Grams	–	–	0.9 (0.3−4; 10)	**0.5 (0.15−5; 14)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
** $p<0.01$
– Data not presented due to small numbers (n<10)

4.2.6 Route of administration and location of last use

Swallowing and snorting were the most common ROA across all forms of ecstasy (see Table 10). 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.

Table 10: Route of administration (ROA) among past six month ecstasy users, SA, 2015 & 2016

%	Pills		Powder		Caps		Crystal	
	2015 (N=94)	**2016 (N=96)**	2015 (N=14)	**2016 (N=21)**	2015 (N=49)	**2016 (N=55)**	2015 (N=41)	**2016 (N=63)**
ROA[#]								
Swallow	98	**100**	36	**38**	92	**96**	78	**87**
Snort	42	**50**	79	**67**	29	**33**	46	**60**
Smoke	0	**2**	0	**0**	2	**0**	5	**5**
Shelve/Shaft	2	**5**	0	**0**	2	**0**	0	**0**
Inject	0	**0**	0	**0**	0	**0**	0	**0**

Source: EDRS participant interviews
[#] Among those who had used in the past six months.

Table 11 presents the 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.

Table 11: Location of last ecstasy use by participants, SA, 2016

	Where did you spend the most time while intoxicated?			
	Pills % (n=84)	Caps % (n=12)	Powder % (n=2)	MDMA crystal % (n=54)
Home	2	17	0	7
Friend's home	6	0	0	4
Acquaintance's home	2	0	0	4
Nightclub	75	42	50	59
Private party	6	0	0	4
Pub	4	0	0	6
Rave	2	8	50	6
Live music event	0	17	0	7
Public place	0	8	0	0
Other	2	8	0	4

Source: EDRS participant interviews

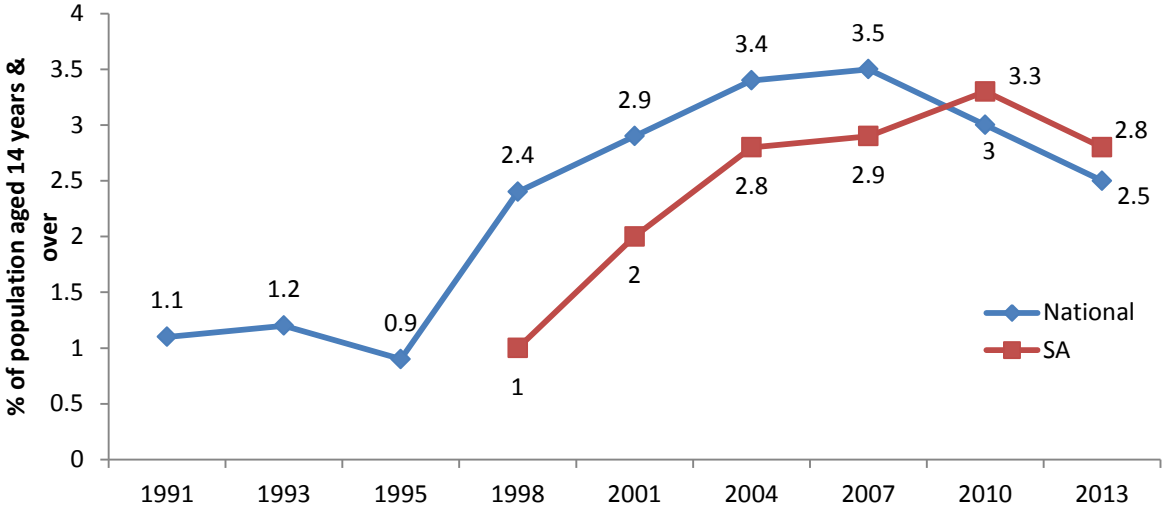
4.2.4 Use of ecstasy in the general population

The Australian Institute of Health and Welfare (AIHW) has conducted the National Drug Strategy Household Survey (NDSHS) over the last couple of decades to collect data on the prevalence of use of various illicit drugs among the general Australian population.

Figure 3 shows the long-term trend in the prevalence of past year ecstasy use in Australia from 1991–2013 and in SA from 1998–2013. 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 20–29 year olds (8.6%). In general, males were more likely to be recent users of ecstasy, except among 12–17 year olds (males 0.5% versus females 1.3%) (AIHW, 2014).

Figure 3 also shows that in 2013, for the second consecutive survey, SA 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.

Figure 3: 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 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.

Key Expert Comments

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

4.3 Methamphetamine use

Key Findings

- Lifetime and recent use of 'any' methamphetamine remained stable in 2016 (46% and 36% respectively).
- Crystal methamphetamine remained the most commonly used form of methamphetamine in the six months preceding interview (33%), followed by powder methamphetamine (12%) and base methamphetamine (3%).
- The frequency of crystal methamphetamine use dropped from 12 days of use in the past six months in 2015 to four days of use in 2016, although this was not statistically significant. Frequency of use for powder and base methamphetamine remained relatively low and stable in 2016.
- Median age of first use remained stable for all three forms of methamphetamine.
- Smoking was the most common ROA for crystal and base methamphetamine. Snorting and smoking were the main ROA for methamphetamine powder.

4.3.1 Methamphetamine use among RPU

Almost half (46%) of participants reported having used at least one form of methamphetamine (speed, base, and/or ice/crystal) at some stage during their lifetime, and over one-third (36%) reported use within the six months preceding interview (both stable from 2015). The median number of days used methamphetamine was four (range=1−120).

The EDRS continued to distinguish between three forms of methamphetamine in 2016. 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 12 summarises the patterns of use of methamphetamine powder among the participants in 2016, with 2015 data for comparison. In 2016, participants reported having first used methamphetamine powder at a median of 18 years (range=14−35 years). Twenty-three percent of participants reported lifetime use, and 12% of participants reported using methamphetamine powder in the six months prior to interview (both relatively stable from 2015).

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 two (range=0.5−4), and the 'most' amount of powder methamphetamine used in a single session reported by participants was also a median of two points (range=1−5). Compared to 2015, 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.

Two-fifths (42%) of the users of methamphetamine powder reported snorting and swallowing as a ROA in the six months prior to interview, and one-third (33%) reported having swallowed powder in that same time period. There were no significant changes from 2015 in

ROA. The proportion of participants who reported bingeing on powder methamphetamine remained stable in 2016 (2%; 5% in 2015; Table 3).

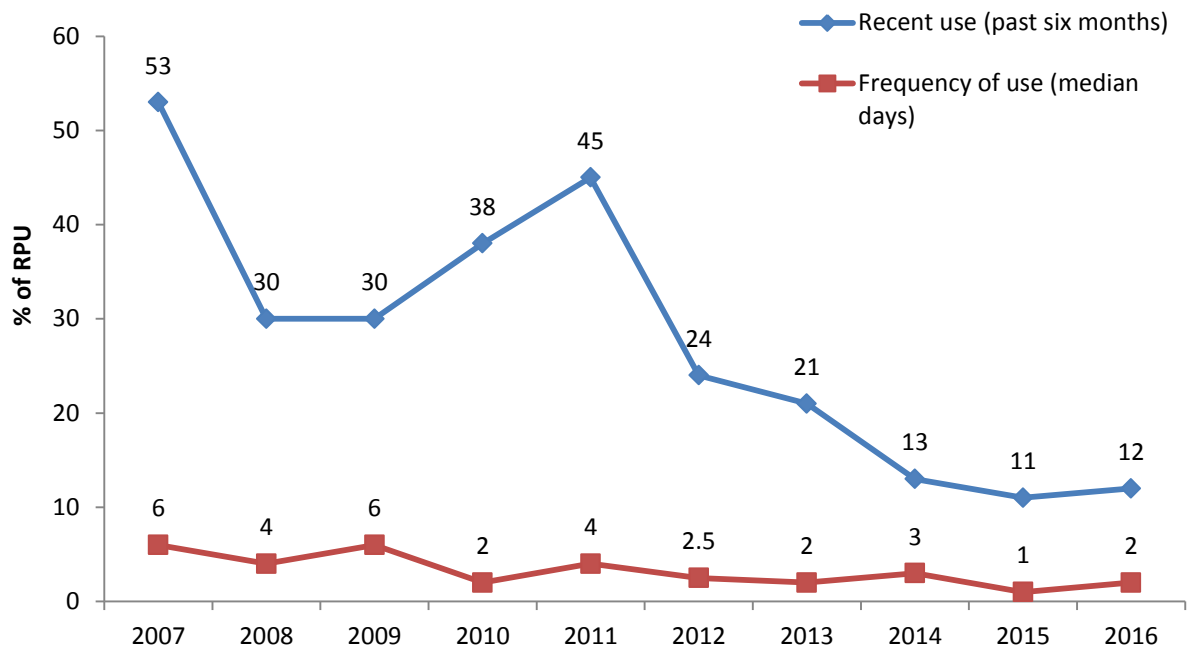
Table 12: Patterns of methamphetamine powder use and ROA among RPU, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	18 (14−25)	**18 (14−35)**
Ever used (lifetime) (%)	30	**23**
Used in last 6 months (%)	11	**12**
Days used in last 6 months[#]: median (range)	1 (1−24)	**2 (1−12)**
Average amount used in a single session[^]: Points: median (range; n)	1.5 (1−2; 4)	**2 (0.5−4; 7)**
Most amount used in a single session[^]: Points: median (range; n)	1.5 (1−2; 4)	**2 (1−5; 7)**
Routes of administration recent use[#] (%):	(n=10)	**(n=12)**
Swallowing	50	**33**
Snorting	40	**42**
Smoking	20	**42**
Injecting	0	**0**

Source: EDRS participant interviews
[#] Of those who reported use in the last 6 months
[^] A session was defined as a period of continuous drug use without sleep, in the last 6 months

Looking at trends over time (see Figure 4), 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 12% of RPU reporting recent use of methamphetamine powder in 2016. The median number of days used in the last six months has remained relatively stable at two days.

Figure 4: Methamphetamine powder – trends in recent use and median days used, SA, 2007–2016



Source: EDRS participant interviews

4.3.3 Methamphetamine base

Table 13 summarises the patterns of use of methamphetamine base reported by participants in 2016. The median age of first use was 17 years (range=14−24). Fifteen percent of participants reported lifetime use, and 3% of participants reported using methamphetamine base in the six months prior to interview (both stable from 2015).

With respect to the 'average' and 'most' amounts used in a session of use, most participants provided information in terms of 'points'. The median 'average' and 'most' amount of base methamphetamine used in a session reported by participants was half a point respectively.

Participants who had used methamphetamine base in the last six months reported smoking (100%) and injecting (33%). 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 2012−16 smoking emerged as the most dominant ROA. Only one participant reported bingeing on base methamphetamine in 2016 (Table 3).

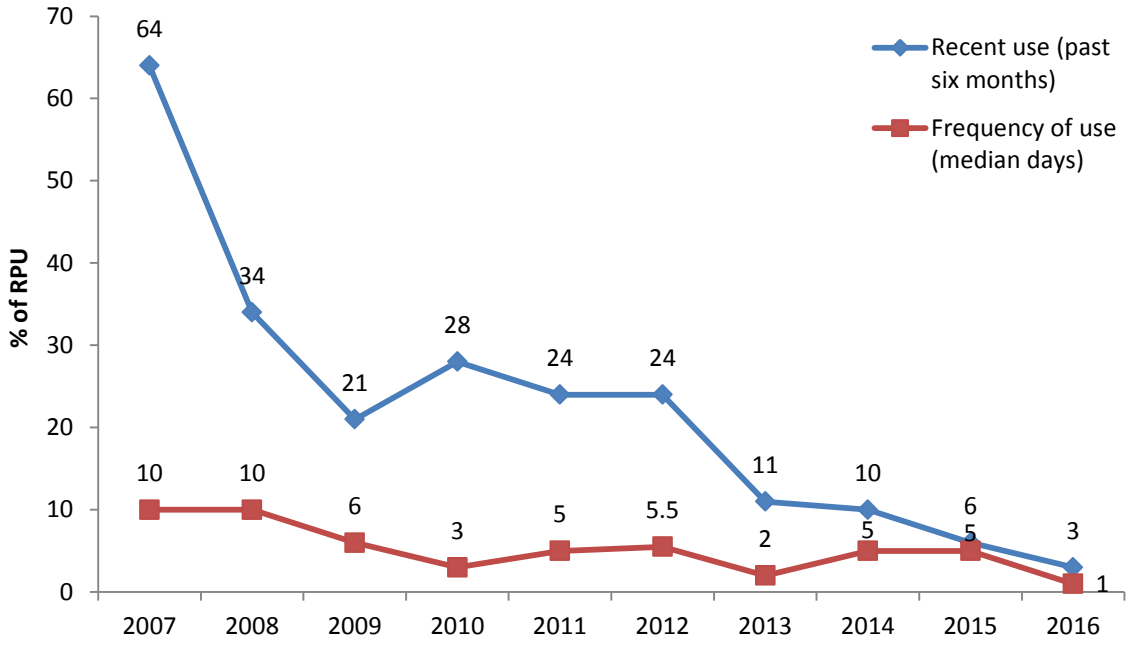
Table 13: Patterns of methamphetamine base use and ROA among RPU, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	18 (12−39)	**17 (14−24)**
Ever used (lifetime) (%)	15	**15**
Used in last 6 months (%)	6	**3**
Days used in last 6 months[#]: median (range)	5 (1−24)	**1 (1−96)**
Average amount used in a single session[^]: Points: median (range; n)	1 (1−3.5; 5)	**0.5 (no range; 2)**
Most amount used in a single session[^]: Points: median (range; n)	2 (1−3; 4)	**0.5 (no range; 2)**
Routes of administration recent use[#] (%):	(n=6)	**(n=3)**
Swallowing	17	**0**
Snorting	0	**0**
Smoking	100	**100**
Injecting	0	**33**

Source: EDRS participant interviews
[#] Of those who reported use in the last 6 months
[^] A session was defined as a period of continuous drug use without sleep, in the six months prior to interview

Looking at trends over time (see Figure 5), 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. From 2013 onwards there has been a further downward trend in the recent use of base methamphetamine, with only three participants reporting recent use in 2016. The median number of days used in the last six months remained relatively stable at one day.

Figure 5: Methamphetamine base – trends in recent use and median days used, SA, 2007–2016



Source: EDRS participant interviews

4.3.4 Crystal methamphetamine

Table 14 presents the patterns of use of crystal methamphetamine by participants in 2016, with 2015 data presented for comparison. In 2016, the median age of first use was 18.5 years (range=13−44 years). Forty-two percent of participants had used crystal in their lifetime, which remained stable from 2015 (37%). One-third (33%) of participants reported using crystal methamphetamine in the preceding six months, on a median of four days (12 days in 2015; p>0.05).

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=0.5−5) and the median 'most' amount used in a single session was also two points (range=0.5−10). Compared to 2015, participant reports in 2016 of 'average' and 'most' amounts used in a session remained stable.

Participants who had used crystal methamphetamine in the previous six months reported smoking (82%), snorting (36%; 4% in 2015; p=0.007; 95% CI: -0.50, -0.12) and/or swallowing (30%) as the ROA. One participant reported that they had injected crystal methamphetamine in the six months preceding interview. Twenty-four percent of participants reported bingeing on crystal methamphetamine in 2016 (Table 3).

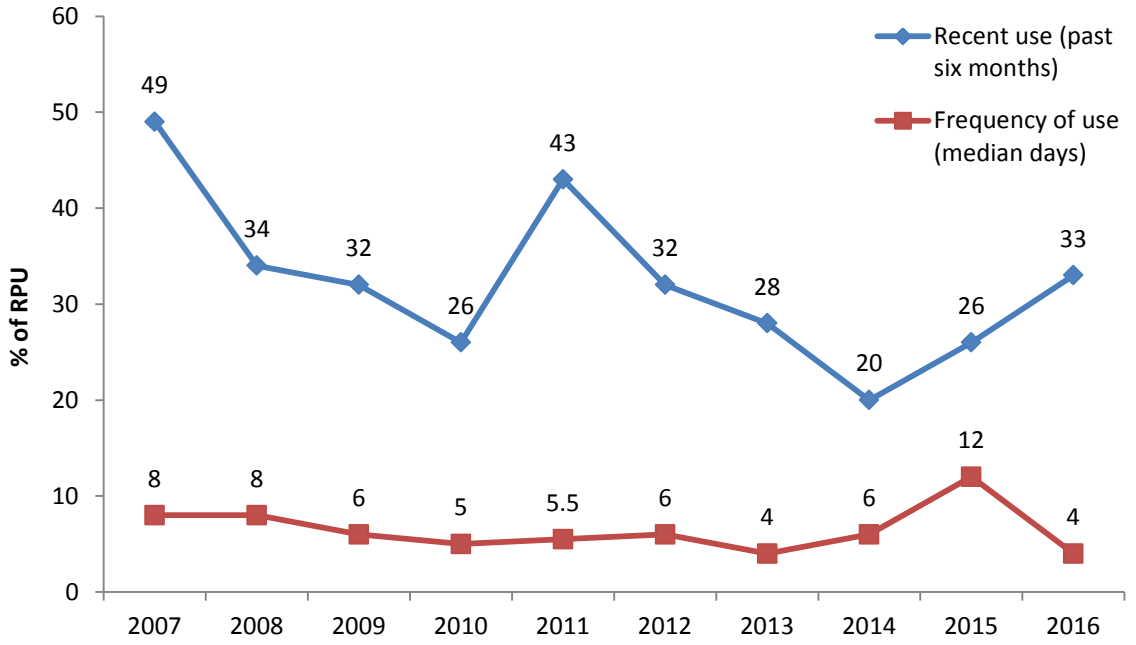
Table 14: Patterns of crystal methamphetamine use and ROA among RPU, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	20 (12−39)	**18.5 (13−44)**
Ever used (lifetime) (%)	37	**42**
Used in last 6 months (%)	26	**33**
Days used in last 6 months[#]: median (range)	12 (1−120)	**4 (1−96)**
Average amount used in a single session[*]: Points: median (range; n)	2 (0.25−5; 23)	**2 (0.5−5; 26)**
Most amount used in a single session^: Points: median (range; n)	2 (0.25−12; 20)	**2 (0.5−10; 22)**
Routes of administration recent use[#] (%):	(n=26)	**(n=33)**
Swallowing	19	**30**
Snorting	4	**36****
Smoking	96	**82**
Injecting	0	**3**

Source: EDRS participant interviews
[#] Of those who reported use in the 6 months prior to interview
^ A session was defined as a period of continuous drug use without sleep, in the last six months
***p*<0.01

Looking at trends over time (see Figure 6), it can be seen that, after a steady decline of recent use of crystal methamphetamine from 2007−10, there was a significant increase in 2011 ($p<0.05$; 95% CI: -0.029, -0.31). From 2011–14 there was a downward trend in the recent use of crystal methamphetamine; however, from 2014 onwards this trend seems to have reversed with one-third of participants reporting recent crystal methamphetamine use in 2016. The median number of days used in the preceding six months dropped in 2016, although this was not statistically significant.

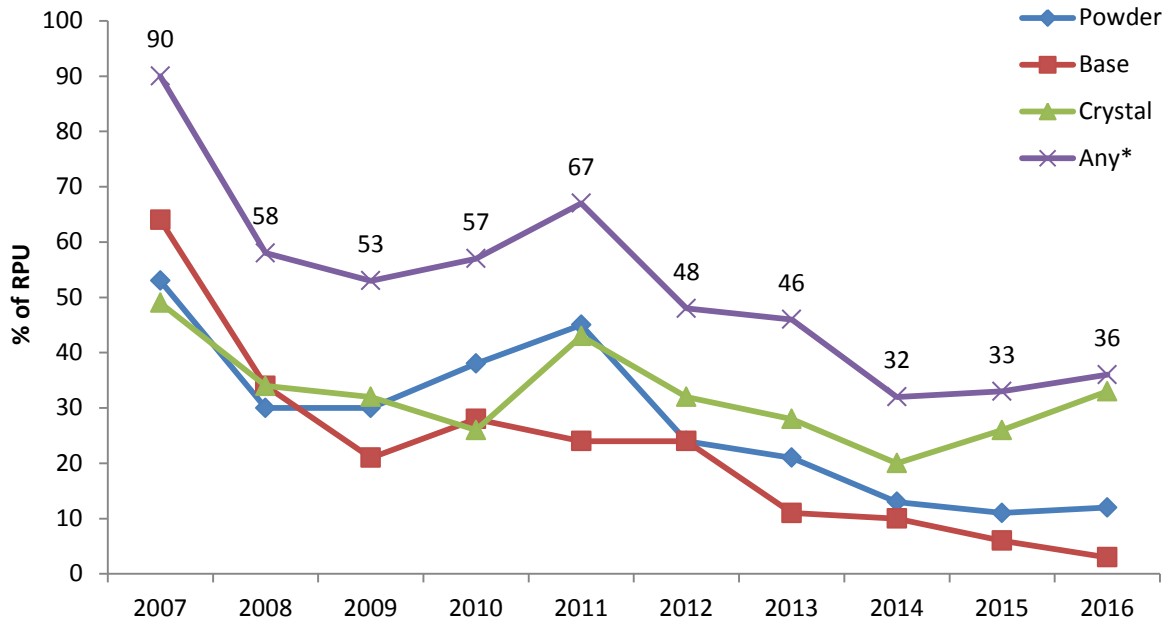
Figure 6: Methamphetamine crystal – trends in recent use and median days used, SA, 2007–2016



Source: EDRS participant interviews

Figure 7 presents trends in recent methamphetamine use from 2007–16. In 2016, over one-third (36%) of the sample reported recent use of 'any' methamphetamine; this was stable from 2015. With respect to the individual forms of methamphetamine, recent use of all forms of methamphetamine remained stable in 2016.

Figure 7: Trends in recent use of the different forms of methamphetamine, SA, 2007–2016



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 15. 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 15: Venue where participants spent the most time while intoxicated on methamphetamine, SA, 2016

	Where did you spend the most time while intoxicated?		
	Powder (%) (n=6^)	Base (%) (n=5^)	Crystal (%) (n=24)
Home	**0**	**40**	**29**
Friend's home	**17**	**40**	**29**
Acquaintance's home	**0**	**0**	**13**
Dealer's home	**0**	**0**	**4**
Nightclub	**67**	**0**	**13**
Private party	**0**	**0**	**4**
Car	**0**	**0**	**4**
Rave	**17**	**0**	**0**
Other	**0**	**20**	**4**

Source: EDRS participant interviews
^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.
- All KE nominated methamphetamine as the drug they considered to be most problematic at the moment. 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.

4.4 Cocaine use

Key Findings

- The median age of first cocaine use was 18 years.
- There were non-significant increases in lifetime and recent use of cocaine (77% and 57% respectively).
- Frequency of cocaine use remained low and stable.
- Snorting continued to be the main ROA.

4.4.1 Cocaine use among RPU

Participants first used cocaine at a median age of 18 years (range=15−44 years). In 2016, 77% of the sample reported having ever used cocaine, and 57% had used in the preceding six months; these were both non-significant increases from 2015. Frequency of use remained low at a median of three days (range=1−24 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 one gram (range=0.1−1.75 grams) and three lines (range=1−8 lines). The 'most' amount of cocaine used in a single session was a median of one gram (range=0.1−4) and four lines (range=1−10). The reported 'average' and 'most' amount of grams used in a session was similar to that reported in 2015.

Almost all cocaine users reported recent use of cocaine by snorting (98%) and a small proportion (5%) had also swallowed cocaine in the preceding six months. No participants reported recent use by smoking, injecting or shelving/shafting. Twelve participants reported that they had binged on cocaine in the preceding six months (Table 3).

Table 16: Patterns of cocaine use and ROA among RPU, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	19 (14−26)	**18 (15−44)**
Ever used (lifetime) (%)	65	**77**
Used in last 6 months (%)	45	**57**
Days used in last 6 months*: median (range)	3 (1−12)	**3 (1−24)**
Average amount used in a single session:**		
Grams: median (range; n)	0.5 (0.10−1; 15)	**1 (0.10−1.75; 16)**
Lines: median (range; n)	2 (0.5−5; 22)	**3 (1−8; 31)**

Source: EDRS participant interviews

* Of those who reported use in the last six months

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

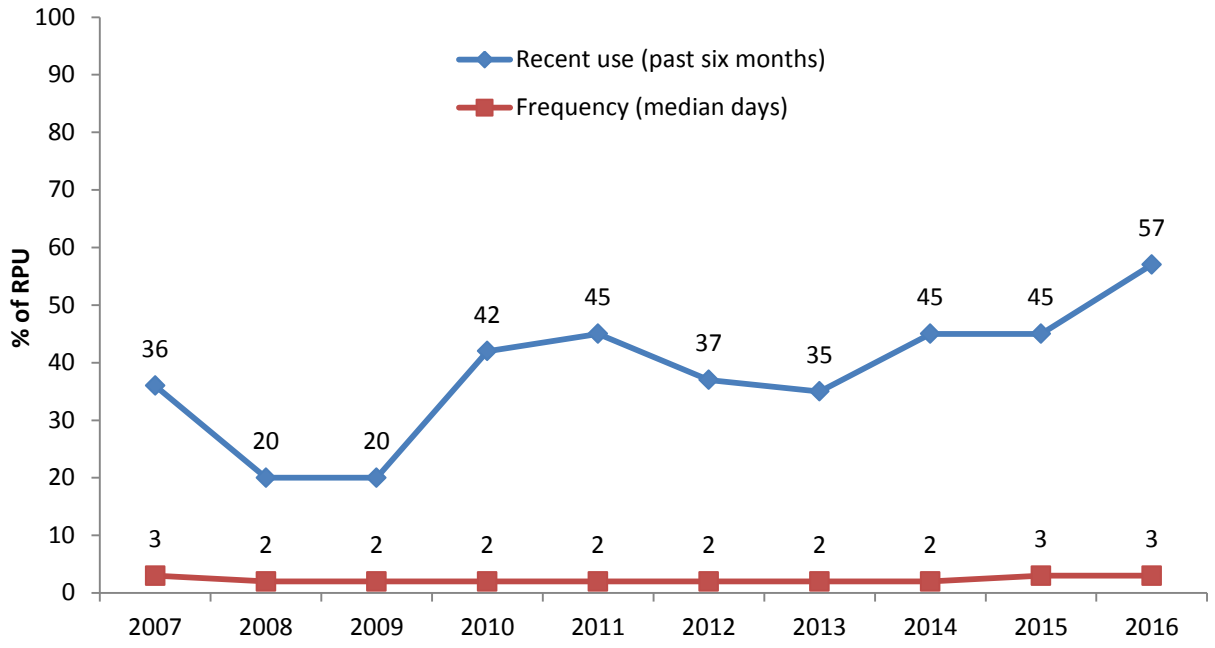
Table 16: Patterns of cocaine use and ROA among RPU, SA, 2015 & 2016 (continued)

	2015 (N=100)	2016 (N=100)
Most amount used in a single session[**]**:**		
Grams: median (range; n)	**1 (0.1−5; 16)**	**1 (0.1−4; 17)**
Lines: median (range; n)	**2 (0.5−12; 23)**	**4 (1−10; 31)**
Routes of administration recent use[*] **(%):**	**(n=45)**	**(n=57)**
Swallowed	**7**	**5**
Snorted	**100**	**98**
Smoked	**0**	**0**
Injected	**0**	**0**
Shelved/shafted	**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

As can be seen in Figure 8, recent use of cocaine has fluctuated considerably over the past decade. Cocaine use doubled from 20% in 2009 to 42% in 2010; this remained relatively stable across 2010−15, before a non-significant increase was observed in 2016. The frequency of use has remained low and stable across the years.

Figure 8: Trends in recent use of cocaine and median days used, SA, 2007–2016



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=10); friend's home (n=6); private party (n=4); and their own home (n=4).

Key Expert Comments

- The majority of KE reported that cocaine use had remained low and stable among their clientele over the preceding 12 months. However, one KE did note that some people were shifting from methamphetamine to cocaine use.

4.5 LSD use

Key Findings

- The median age of first LSD use was 17, stable from 2015.
- Lifetime and recent use of LSD remained stable at 49% and 30% respectively. Frequency of use also remained stable in 2016, at a median of 2.5 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 ROA reported.

4.5.1 LSD use among RPU

The median age of first LSD use was 17 years (range=14−45 years). Forty-nine percent of participants reported having used LSD in their lifetime, which was stable from 2015 (51%). Thirty percent of participants reported using LSD on a median of 2.5 days (range=1−24) in the last six months, which was stable from 2015.

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=1−5) used on 'average' and 1.5 tabs/trips (range=1−11) used in the heaviest recent session. All LSD users reported recent use by swallowing (100%, n=30), with no other ROA reported. Three participants reported bingeing on LSD in the preceding six months (Table 3).

Table 17: Patterns of LSD use among the participant sample, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	17 (13−26)	**17 (14−45)**
Ever used (lifetime) (%)	51	**49**
Used in last 6 months (%)	37	**30**
Days used in last 6 months:* median (range)	3 (1−96; 37)	**2.5 (1−24; 30)**
Average amount used in a single session:**		
Tabs: median (range; n)	1 (1−6; 32)	**1 (1−5; 23)**
Most amount used in a single session:**		
Tabs: median (range; n)	1.75 (1−13; 32)	**1.5 (1−11; 22)**
Routes of Administration* (%):	(n=37)	**(n=30)**
Swallowed	100	**100**
Snorted	0	**0**
Smoked	0	**0**
Shelved/Shafted	0	**0**
Injected	0	**0**

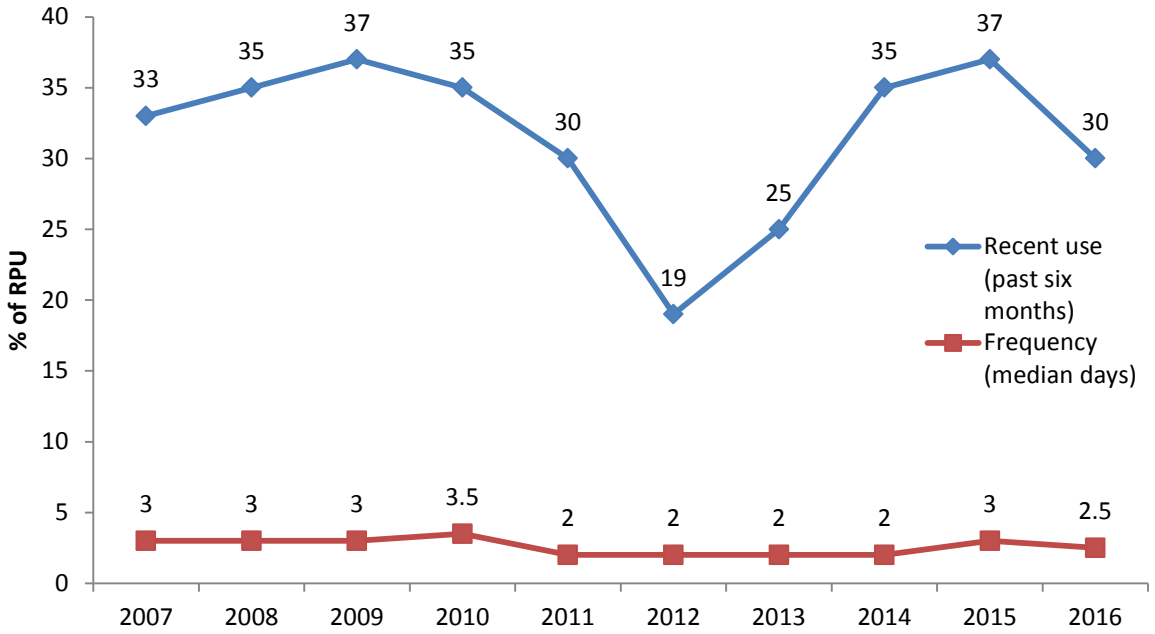
Source: EDRS participant interviews

* 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 9), it can be seen that from 2007−11 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 2013–16. There has been little change in the frequency of use, with this parameter remaining consistently stable and low across the years.

Figure 9: LSD – trends in recent use and median days used, SA, 2007–2016



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=13), outdoors (n=4) or at a nightclub (n=4).

Key Expert Comments

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

4.6 Cannabis use

Key Findings

- Median age of first use was stable in 2016, with the majority of participants having first used cannabis at 15 years of age.
- Prevalence of cannabis use remained high, with 100% of RPU reporting lifetime use and 97% reporting use in the preceding six months.
- There was a non-significant increase in the frequency of use in 2016, to a median of 72 days (approximately three times a week).
- On the last occasion of use, cannabis users reported using a median of 3 cones or one joint. This was stable from 2015.
- 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 SA 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), 100 grams of plant material or 20 grams of resin will attract an expiation fee and the plant will be confiscated and destroyed. More than these amounts 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. 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 2016, the median age at which participants first used cannabis was 15 years (range=11−23 years), stable from 2015. Further examination of the age at which participants first used cannabis reveals that 28% reported use by the age of 14 years, 78% by 16 years, and 96% by 18 years. The entire sample (100%) reported having used cannabis in their lifetime, and 97% had used in the preceding six months.

The frequency of cannabis use reported by participants in 2016 was a median 72 days (range=1−180 days); this was a non-significant increase from 2015. Among recent cannabis

users, 68% (n=66) reported using cannabis weekly or more and 32% (n=31) had used cannabis on a daily basis in the past six months.

Recent cannabis users were asked how much cannabis they had consumed on the last day of use. Cannabis had been predominantly consumed in cones (64%) and joints (16%). Among those who had consumed in cones, the median number used on the last day was three 'cones' (range=1−20 cones). The median number of joints consumed was one (range=0.5−8 joints). Daily users of cannabis had consumed a median of two cones (range=1−20 cones).

The vast majority (99%) of recent cannabis users reported recent use by smoking, 22% reported use by swallowing and 16% reported use by inhaling (using a vaporiser) (versus 32% in 2015; p=0.01; 95% CI: 0.04, 0.28). Twenty-six percent of RPU reported bingeing on cannabis in the preceding six months (Table 3).

Table 18: Patterns of hydroponic and bush cannabis use among the participant sample, SA, 2015 & 2016

	2015 (N=100)	**2016 (N=100)**
Age first used: median in years (range)	15 (8−24)	**15 (11−23)**
Ever used (lifetime) (%)	99	**100**
Used in last 6 months (%)	92	**97**
Days used in last 6 months: median (range)	48 (1−180)	**72 (1−180)**
Routes of administration[#] (%):	(n=92)	**(n=97)**
Smoked	98	**99**
Swallowed	35	**22**
Inhaled^	32	**16***
Cones used last time (range; n)[*]	3 (1−20; 55)	**3 (1−20; 62)**
Joints used last time (range; n)[*]	1 (0.5−4; 17)	**1 (0.5−8; 15)**

Source: EDRS participant interviews
[#] Of those who reported use in the last six months
^ Using a vaporiser included as a ROA in 2014
* $p<0.05$

Among the participants who commented on hydro, the majority reported spending most of their time while intoxicated in their own home (55%) or at a friend's home (41%). There was a similar pattern for those who commented on bush cannabis: while intoxicated participants spent most of their time at their own home (66%) or at a friend's home (32%).

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).
- One KE considered cannabis to be the most problematic drug at the moment, largely due to its widespread availability and affordability.

4.7 Other drug use

Key Findings

- Lifetime use of ketamine remained stable in 2016; however, there was a significant increase in the proportion of RPU who reported that they had used ketamine in the six months preceding interview.
- There were no significant changes in the lifetime or recent use of GHB, nitrous oxide, MDA or capsules of unknown content in 2016.
- There were significant increases in the lifetime and recent use of amyl nitrite.
- There were significant decreases in the lifetime and recent use of magic mushrooms.
- Almost all participants (98%) reported consuming alcohol in the six months preceding interview, and they had done so a median of 24 days indicating weekly use. Among these participants, 3% reported drinking on a daily basis.
- Lifetime and recent tobacco use remained stable at 95% and 84% respectively.
- Lifetime e-cigarette use remained stable at 62%, whilst there was a significant decline in recent use to 34%.
- Lifetime and recent use of illicit benzodiazepines, pharmaceutical stimulants and OTC codeine remained relatively common (and stable) in 2016. Use of opioids and other illicit pharmaceutical drugs remained low.

4.7.1 Ketamine

One-fifth (20%) of the sample reported lifetime use of ketamine and 15% reported use in the six months preceding interview represents a significant increase from 4% in 2015 (p=0.016; 95% CI: -0.20, -0.03). The frequency of use remained low at a median of one day (range=1−6 days) in the six months prior to interview.

Due to small numbers (n<10), 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=10), swallowed (n=4) or smoked (n=1). Three participants reported bingeing on ketamine within the past six months.

4.7.2 GHB

Sixteen percent of RPU reported lifetime use of GHB and 9% reported use in the six months preceding interview (both stable from 2015). Recent users of GHB reported using on a median of two days (range=1−5 days).

Due to small numbers (n<10), data will not be presented for the ‘typical’ and ‘most’ amounts of GHB used in a session.

All GHB users (n=9) reported swallowing GHB in the preceding six months, with no other ROA reported. No participants reported using GHB in a binge session in 2016.

4.7.3 MDA

Seventeen percent of RPU reported lifetime use of 3,4-methylenedioxyamphetamine (MDA) and 12% reported use in the six months preceding interview, both of which remained stable from 2015. Frequency of use was low, with participants reporting that they had used MDA on a median of two days (range=1−12).

Due to small numbers (n<10), data will not be presented for the 'typical' and 'most' amounts of MDA used in a session.

Most recent MDA users (n=11; 92%) reported swallowing MDA in the preceding six months, with two participants 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

In 2016, 40% of participants reported that they had ever used nitrous oxide, which was stable from 2015. Twenty-six participants reported that they had used nitrous oxide in the six months preceding interview, and they had done so on a median of four days (range=1−96). Recent nitrous oxide users reported using a median of ten bulbs in both a typical (range=1−50 bulbs), and heavy (range=1−120) session of use over the preceding six months. One participant reported having binged on nitrous oxide in the past six months.

4.7.4.2 Amyl nitrite

Sixty-eight percent of the sample reported lifetime use of amyl nitrite, which represents a significant increase from 2015 (46%; p=0.003; 95% CI: -0.35, -0.08). Fifty-four percent of the sample reported use of amyl nitrite in the preceding six months, which was also a significant increase from 2015 (29%; p<0.001; 95% CI: -0.37, -0.11). Recent users of amyl nitrite reported use on a median of five days (range=1−72) in the six months preceding interview; this was stable from 2015. One participant reported having binged on amyl nitrite in the last six months.

4.7.5 Mushrooms

Participants were asked about their use of 'magic mushrooms' (i.e. hallucinogenic mushrooms). Thirty-six percent of the sample reported having used them in their lifetime, which was a significant decrease from 2015 (57%; p=0.005; 95% CI: 0.07, 0.34). Seven percent of the sample reported use of mushrooms in the six months preceding interview, which was also a significant decrease from 2015 (19%; p=0.021; 95% CI: 0.03, 0.21). Recent users of magic mushrooms reported use on a median of two days (range=1−5) in the six months preceding interview; this was stable from 2015. No participants reported including magic mushrooms in a binge session in the six months preceding interview.

4.7.6 Capsule (contents unknown)

Twenty-four percent of RPU reported lifetime use of a capsule with unknown contents and 15% reported use in the six months preceding interview, both of which remained stable from 2015. Frequency of use was low, with participants reporting that they had used a capsule with unknown contents on a median of one day (range=1−5) in the preceding six months. Swallowing (n=15) was the main ROA reported by recent users and one participant reporting snorting.

The median amount used in a typical or average episode in the preceding six months was one cap (range=1−6); the 'most' amount used in a session was also one capsule (range=1−8).

4.7.7 Alcohol

In 2016, the median age at which participants reported first using alcohol was 14 years (range=6−18 years). Almost the entire sample reported lifetime (99%) and recent use (98%) of alcohol, with RPU reporting that they had used alcohol on a median of 24 days in the past six months (range=1−180). Forty-three percent of recent alcohol users reported using alcohol more than once per week (51% in 2015), and 3% reported drinking on a daily basis (3% in 2015). Twenty-six percent of participants reported including alcohol in a binge session in the six months preceding interview.

In 2016, the Alcohol Use Disorders Identification Test (AUDIT) was administered to participants. Detailed information regarding the AUDIT in the 2016 EDRS can be found in section 7.4: The Alcohol Use Disorders Identification Test (AUDIT).

4.7.8 Tobacco

The median reported age of first use of tobacco was stable from 2016, at 15 years (range=7−19 years). Ninety-five percent of RPU reported lifetime use of tobacco and 84% reported use in the six months preceding interview, both remaining stable from 2015 (94% and 86% respectively). Recent users of tobacco reported use on a median of 180 days in the previous six months (range=1−180); this was stable from 2015. Almost three-fifths (58%) of recent tobacco users reported daily use (51% in 2015), 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).

4.7.9 Electronic cigarettes (e-cigarettes)

In 2016, for the third year running, participants were asked about their lifetime and recent use of electronic cigarettes. Over three-fifths (62%) of RPU reported they had used electronic cigarettes within their lifetime (74% in 2015), and they had initiated use at a median of 18 years (range=14−25 years). One-third (34%) of the sample reported recent e-cigarette use (50% in 2015; p=0.032; 95% CI: 0.02, 0.29), and they had done so on a median of five days (range=1−180). Among those who had recently used e-cigarettes, 35% (n=12) reported using them as a smoking cessation tool and 82% (n=27) had used electronic cigarettes that contained nicotine.

4.7.10 Dextromethorphan (DXM)

Thirteen percent of the sample reported lifetime use of DXM and 7% reported recent use, both of which remained stable from 2015. Frequency of use was low at a median of one day (range=1−2) in the preceding six months. Swallowing was the only ROA reported by recent users.

4.7.11 Illicit benzodiazepines

Over half (55%) of RPU reported lifetime use of illicit benzodiazepines, which was stable from 2015 (54%). Forty-two percent of the sample reported that they had used illicit benzodiazepines in the six months preceding interview (34% in 2015) and they had done so on a median of three days (range=1−80).

4.7.12 Illicit antidepressants

Eleven participants reported lifetime use of illicit antidepressants. Five participants reported using illicit antidepressants in the preceding six months, and they had done so on a median of two days (range=1−3).

4.7.13 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).

Thirty-five percent of the sample reported use of illicit pharmaceutical stimulants in their lifetime, and 27% reported use within the preceding six months (both stable from 2015). Frequency also remained stable at a median of two days (range=1−60). The ROA of recent use was mainly swallowing (n=25), with small numbers snorting (n=3) and shelving/shafting (n=2).

4.7.14 Over the counter (OTC) codeine (non-medicinal use)

Twenty-five percent of participants reported ever using OTC codeine and 18% reported use in the preceding six months, both of which remained stable from 2015. Frequency also remained stable at a median of two days (range=1−24). Swallowing was the only ROA reported by recent OTC codeine users.

4.7.15 Over the counter (OTC) stimulants (non-medicinal use)

Nine percent of participants reported ever using OTC stimulants, and four participants reported use of this substance on a median of three days (range=1−5) within the preceding six months. This remained stable from 2015. Swallowing (n=3) was the main ROA reported by recent OTC stimulant users, and one participant reported smoking.

4.7.16 Illicit antipsychotics

Four percent of participants reported ever using illicit antipsychotics, and three participants reported use of this substance on a median of six days (range=2−40) within the preceding six months. Swallowing was the only ROA reported by recent users.

4.7.17 OST medications

4.7.17.1 Methadone

Three participants reported lifetime use of methadone, and one participant reported using methadone on two days in the preceding six months. Swallowing was the only ROA reported.

4.7.17.2 Buprenorphine

No participants reported lifetime or recent use of buprenorphine in 2016.

4.7.18 Other illicit opioids

Thirty percent of the sample reported lifetime use and 18% had used other illicit opioids in the six months prior to interview. The median days of illicit opioid use was five days (range=1−48 days). The main ROA by those who had recently used was swallowing (83%, n=15), followed by snorting (n=5) and smoking (n=1). No participants reported injecting or shelving/shafting.

4.7.19 Heroin

Five percent of the sample reported lifetime use of heroin. Consistent with the low levels of recent use among the RPU cohorts in previous years, only two participants had used heroin during the six months preceding the interview and they had done so on a median of 80.5 days. Swallowing (n=1), injecting (n=1) and snorting (n=1) were the ROA reported.

4.7.20 Steroid use

No participants reported lifetime or recent use of steroids in 2016.

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. One KE noted that GHB continues to be a problem, with large amounts imported into SA).
- Alcohol use was generally reported as stable, and prolific, with no real changes over the preceding 12 months.
- Two KE noted that there was an increasing market for Lyrica® and both raised concerns about its abuse potential noting tit is a drug that needs to be closely monitored.

4.8 New psychoactive substances (NPS) use

Key Findings

- There were significant decreases in the lifetime and recent of 'any' NPS in 2016, to 54% and 32% respectively.
- There were significant decreases in the lifetime and recent use of 2C-B, to 20% and 8% respectively.
- The most commonly used NPS in the six months preceding interview were DMT, NBOMe and 2CB.
- Among past year NPS consumers, 51% (n=23) reported that they had experienced an unexpected adverse effect on their last occasion of use, most commonly nausea/vomiting (39%), paranoia (35%) and shaky hands/fingers (30%).

From 2010 onward, the EDRS systematically investigated 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 19 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 19: New psychoactive substances

Street name	Chemical name	Information on drug	Information on use and effects
Phenethylamines			
2C-I	2,5-dimethoxy-4-iodophenethylamine	A psychedelic drug with stimulant effects	Recent reports suggest that 2C-I is slightly more potent than the closely related 2C-B.
2C-B	4-bromo-2,5-dimethoxyphenethylamine	A psychedelic drug with stimulant effects	2C-B is sold as a white powder sometimes pressed in tablets or gel caps. Commonly taken orally but can also be snorted.
2C-E	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.[4]
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).
Tryptamines			
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.[5]
5-MeO-DMT	5-methoxy-N,N-dimethyltryptamine	A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the *Bufo alvarius* 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[6] but has been reportedly sold in powder form.
Synthetic cathinones			
Mephedrone	4-methyl-methcathin-one	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.

[4] Erowid: http://www.erowid.org/chemicals/doi/doi.shtml
[5] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/dmt
[6] Erowid: http://www.erowid.org/chemicals/5meo_dmt/5meo_dmt.shtml

Table 19: New psychoactive substances (continued)

Street name	Chemical name	Information on drug	Information on use and effects
Ivory wave/MDPV	Methylenedioxypyrovalerone (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).[7]
Piperazines			
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.
Dissociative			
Methoxetamine (MXE)	2-(3-methoxyphenyl)-2-(ethylamino)cyclohexanone; 3-MeO-2-Oxo-PCE	A dissociative and sedative, which is a near chemical analog of ketamine and PCP.	Effects are described by some as similar to ketamine or high-dose DXM, while others report not finding it similar to those substances. A number of accounts describe compulsive redosing and unintentional consumption of more than was initially planned.
Naturally occurring substances			
Datura	Commonly *Datura inoxia* and *Datura strammonium.* 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.[8]
Salvia	*Salvia divinorum* (contains Salvinorin A)	Salvia is derived from the American plant *Salvia divinorum*, 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.[9]
LSA	*d*-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[#]	3,4,5-trimethoxyphene-thylamine	A hallucinogenic alkaloid	First isolated in 1896 from the peyote cactus of northern Mexico.

[#] Mescaline is a naturally occurring phenethylamine, so could also be classified under the phenethylamine heading

[7] Drugscope: http://www.drugscope.org.uk/Media/Press+office/pressreleases/ivory_wave_MDPV
[8] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/datura
[9] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/salvia

Table 19: 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.

4.8.1 Lifetime and recent (past six month) NPS use

Over half (54%) of the 2016 SA EDRS sample reported lifetime use of 'any' NPS, which was a significant decrease from 2015 (72%; *p*=0.01; 95% CI: 0.05, 0.31). One-third (32%) of the sample reported 'any' NPS use in the six months preceding interview, which was also a significant decrease from 2015 (52%; *p*=0.006; 95% CI: 0.06, 0.33).

The most common NPS ever used among Adelaide RPU were NBOMe (31%), DMT (20%) and 2C-B (20%); however, there was a significant decline in the lifetime use of 2C-B (*p*=0.04; 95% CI: 0.02, 0.26) (Table 20). DMT (10%), NBOMe (9%) and 2C-B (8%) were also the commonly used NPS in the past six months. There was a significant decrease in the recent use of 2C-B (*p*=0.01; 95% CI: 0.04, 0.24).

Table 20: Proportion of participants reporting lifetime and recent use of NPS, SA, 2015 & 2016

	Ever used (%)		**Used last six months (%)**	
	2015 (N=100)	**2016 (N=100)**	2015 (N=100)	**2016 (N=100)**
Phenethylamines				
2C-B	34	**20***	22	**8***
2C-E	1	**3**	0	**0**
2C-I	11	**9**	8	**1**
2C-Other	3	**2**	2	**0**
NBOMe	20	**31**	18	**9**
Benzo fury (6-APB)	1	**0**	0	**0**
DOI	1	**4**	0	**0**
PMA	6	**12**	1	**5**
4-FA[#]	–	**0**	–	**0**
Tryptamines				
5MEO-DMT	3	**2**	0	**0**
4-AcO-DMT[#]	–	**2**	–	**0**
DMT	21	**20**	11	**10**
Synthetic cathinones				
Mephedrone	2	**2**	0	**0**
Methylone/bk MDMA	6	**3**	4	**2**
MDPV/Ivory wave	2	**0**	1	**0**
4-MEC[#]	–	**0**	–	**0**
Alpha-PVP[#]	–	**0**	–	**0**
Other substituted cathinone	0	**0**	0	**0**

Source: EDRS participant interviews
*$p<0.05$
[#] not specifically asked about in 2015

Table 20: Proportion of participants reporting lifetime and recent use of NPS, SA, 2015−2016 (continued)

	Ever used (%)		Used last six months (%)	
	2015 (N=100)	**2016 (N=100)**	2015 (N=100)	**2016 (N=100)**
Aminoindanes				
5-IAI	0	**0**	0	**0**
MDAI	1	**0**	0	**0**
Piperazines				
BZP	0	**0**	0	**0**
Benzodiazepines				
Etizolam[#]	–	**0**	–	**0**
Dissociative				
MXE	0	**0**	0	**0**
Plant-based substances				
Salvia divinorium	6	**6**	3	**2**
LSA	5	**6**	2	**3**
Datura	2	**0**	0	**0**
Ayahuasca	1	**4**	0	**2**
Mescaline[^]	9	**9**	3	**6**
Synthetic cannabinoid				
Kronic[#]	10	**–**	5	**–**
K2/Spice[#]	0	**–**	0	**–**
Other[#]	4	**–**	0	**–**
Any synthetic cannabinoid[##]	13	**6**	5	**4**
Herbal high	13	**8**	7	**4**

Source: EDRS participant interviews
[^] Mescaline is a naturally occurring phenethylamine, so could also be classified under the phenethylamine heading
[#] not specifically asked about in 2015
[##] in 2015, participants were specifically asked about their use of Kronic, K2/Spice and 'other' synthetic cannabinoids. In 2016, these were collapsed together and participants were asked if they had used 'any' synthetic cannabinoid.

4.8.2 NPS adverse effects

Forty-five percent of the RPU sample reported that they had used an NPS in the past year. When asked to nominate the 'last' NPS used, participants most commonly reported NBOMe (n=11) and DMT (n=9), followed by 2C-x, PMA and synthetic cannabinoids (n=5 respectively). Among past year NPS consumers, 51% (n=23) reported that they had experienced an unexpected adverse effect on their last occasion of use. The most common adverse effects reported were nausea/vomiting (39%), paranoia (35%) and shaky hands/fingers (30%) (Table 21). No participants reported that they had sought emergency medical help for an NPS in the past year.

Table 21: Unexpected adverse effects among past-year NPS consumers, 2016

	SA n=45
Unexpected adverse effect %	51
Type of adverse effect %	(n=23)
Paranoia	35
Nausea/vomiting	39
Restless/anxious	13
Heart racing or erratic	17
Visual hallucinations	9
Panic	9
Shaky hands/fingers	30
Auditory hallucinations	13
Overheating	17
Chest pain	9
Shortness of breath	9
Fingers/toes cold or numb	4
Angry or aggressive	4
Skin discoloured (blue/red)	0
Skin rash	0
Other	48

Source: EDRS participant interviews
Note: 'other' reasons included things like 'felt dirty' (n=4), migraine (n=2), mild depression (n=1), lower body temperature (n=1) and priapism (n=1).

Key Expert Comments

- Most KE noted that the use of NPS was not common among their clientele.
- Two law enforcement KE reported that, based on analysis of seized drugs, ethylone was one of the most common substances detected in 'ecstasy' pills in the preceding year.

5 Drug Market: Price, Purity, Availability and Purchasing Patterns

5.1 Ecstasy

Key Findings

- The price of an ecstasy pill decreased significantly to $15 and the price for a capsule remained stable at $25.
- The current purity of ecstasy pills was perceived as low–medium, the current purity of ecstasy capsules was perceived as fluctuating and the purity of MDMA crystal was perceived as medium–high.
- All forms of ecstasy were reported as 'easy' or 'very easy' to obtain, and this was largely reported to have remained 'stable' over the preceding six months.
- Most participants reported scoring from a friend, and at a nightclub or friend's home.

In 2016, participants were asked to report on the price, purity and availability (PPA) of ecstasy pills, powder, capsules and MDMA crystals separately. Only two participants were able to report on the PPA of ecstasy powder and hence results are not presented for this form of ecstasy.

5.1.1 Price

In 2016, 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 pill being $15 (range=$6−$30). This represents a significant decline from 2015 (p<0.001; Figure 10). Forty-six participants were also able to answer about the price of a capsule, with the median price being $25 (range=$10−$35). The median price for a gram of MDMA crystal was $220 (range=$50–$370), and the median price for a cap was $25 (range=$15–$80). 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 22: Last price of ecstasy in the past six months, SA, 2015 & 2016

	Pills, powder and caps		MDMA crystal	
	2015	**2016**	2015	**2016**
Median price of last purchase (range; n)				
Tablet/pill	$20 ($8.33−30; 86)	**$15*** ($6−30; 82)**		
Capsule	$25 ($17−45; 33)	**$25 ($10−35; 46)**	$30 ($20−35; 7)	**$25 ($15−40; 44)**
Powder (point)	$25 ($20−40; 4)	**$30 (no range; 1)**		
Powder (gram)	$210 ($130−350; 6)	**$195 ($48−250; 4)**		
Crystal (point)			$27.5 ($15−50; 10)	**$25 ($15−80; 11)**
Crystal (gram)			$170 ($50−450; 17)	**$220 ($50−370; 25)**

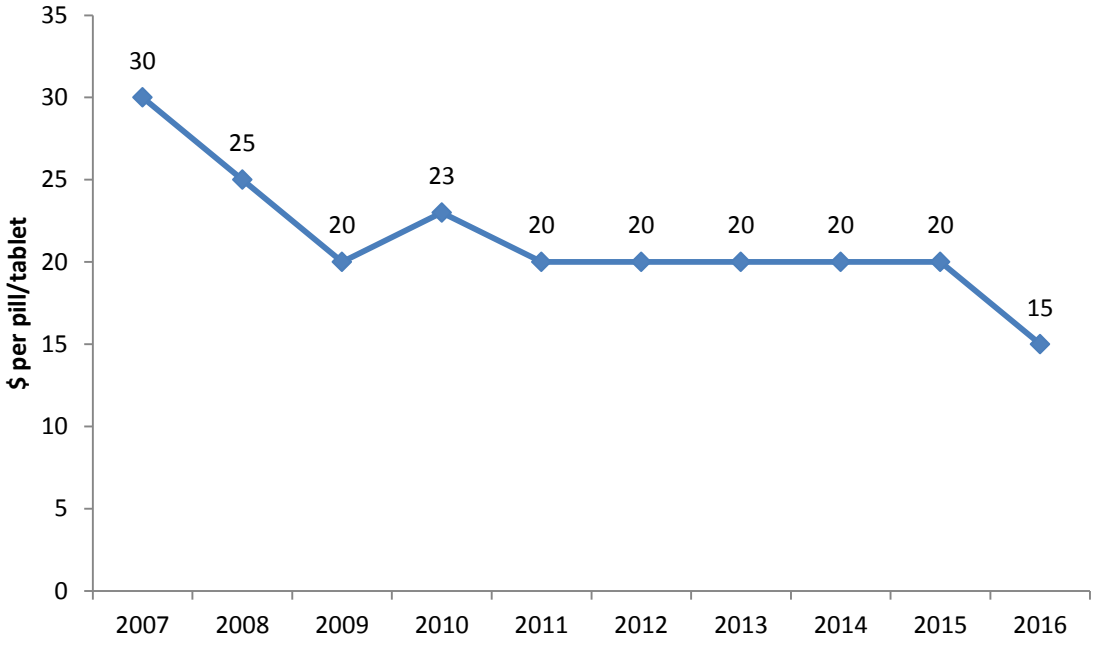
Source: EDRS participant interviews
***p<0.001
Note: 'Don't know' excluded from 2009 onwards

Table 23: Change in price over the last six months, SA, 2016

Price change in last 6 months (%)	Pills (n=82)	Capsules (n=12)	MDMA crystal (n=42)
Increasing	1	8	14
Stable	59	75	60
Decreasing	27	17	21
Fluctuating	13	0	5

Source: EDRS participant interviews
Note: 'Don't know' excluded from 2009 onwards

Figure 10: Trends in the 'last purchase price' of ecstasy per pill, SA, 2007–2016



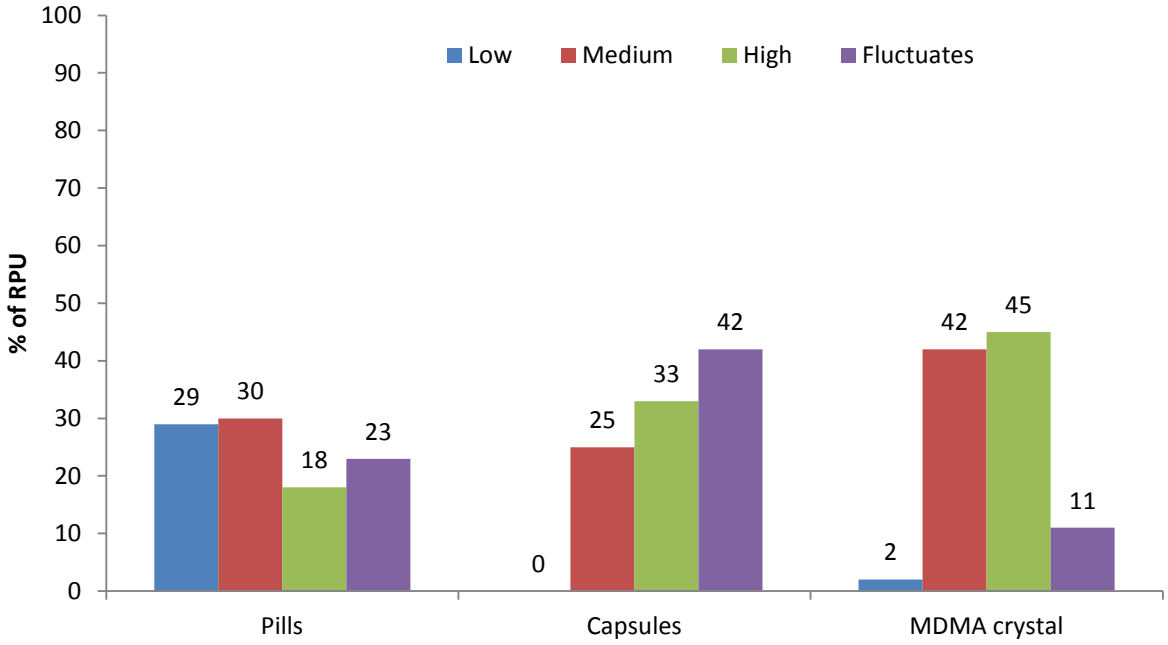
Source: EDRS participant interviews

5.1.2 Purity – RPU reports

Figure 11 presents the participants perceived purity of ecstasy and Table 24 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 self-reports of purity 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 11, the perceived purity of ecstasy varied considerably across the different forms. Specifically, the majority of those able to comment reported the current purity of MDMA crystals to be medium (42%) to high (45%), and the majority (55%) reported that this had remained stable in the six months preceding interview. In contrast, the largest proportion of those answering for ecstasy pills reported current purity to be low (29%) to medium (30%), and the largest proportion of those answering for capsules reported current purity to be variable (42%).

Figure 11: Trends in the perceived purity of ecstasy in the last six months, SA, 2016



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

Table 24: Change in purity over the last six months, SA, 2016

	Pills (n=82)	Capsules (n=12)	MDMA crystal (n=49)
Recent change in purity (%)			
Increasing	15	8	8
Stable	32	42	55
Decreasing	21	0	14
Fluctuating	39	50	22

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

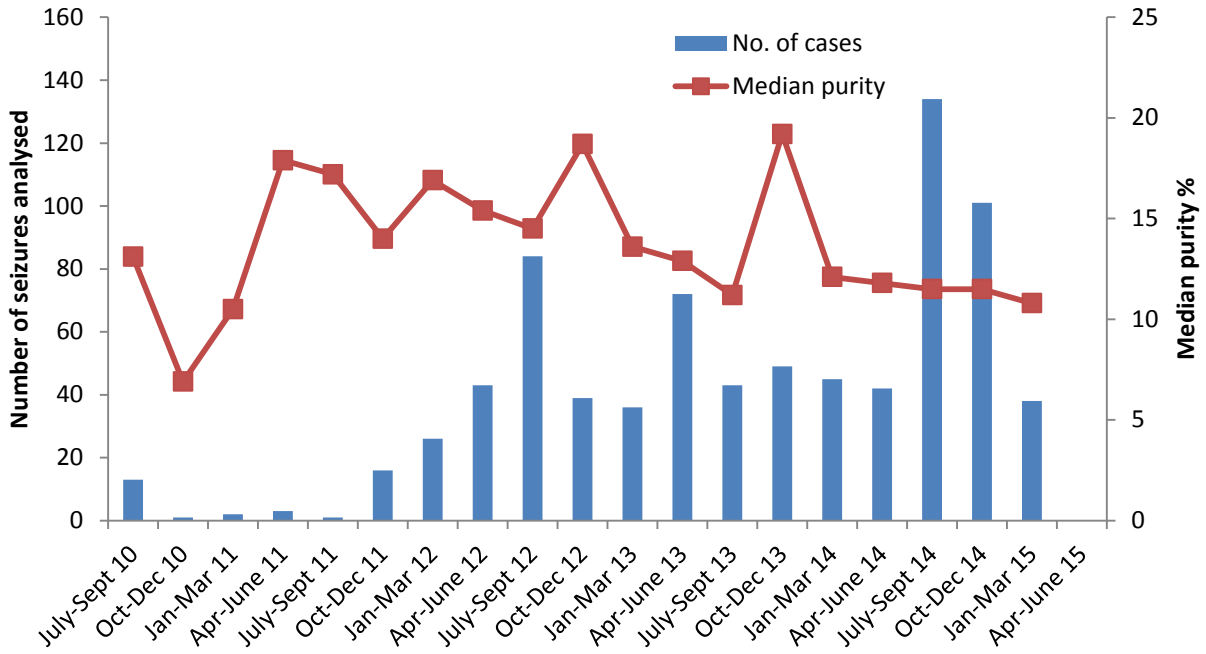
5.1.2.1 Purity – seizure data

As noted above, estimates of purity by users of a drug 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 ACIC. The ACIC provide data on state/territory police and 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 ACIC data for 2015/16 were unavailable at the time of publication. As a consequence, the data provided by the ACIC relates to the purity data on phenethylamines (including MDMA) seized in SA during the last financial year, 2014/15 (Australian Criminal Intelligence Commission, 2016). Figure 12 shows the number of seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures, from 2010/11 to 2014/15. The total number of SAPOL phenethylamines seizures analysed from July 2014 to June 2015 was 273, which is a slight increase from the number of seizures reported in 2013/14 (179). The median purity remained low and stable at 11.4% (compared to 13.3% in 2013/14).

Figure 12: Number of phenethylamine* seizures analysed and median purity, SA, 2010/11–2014/15

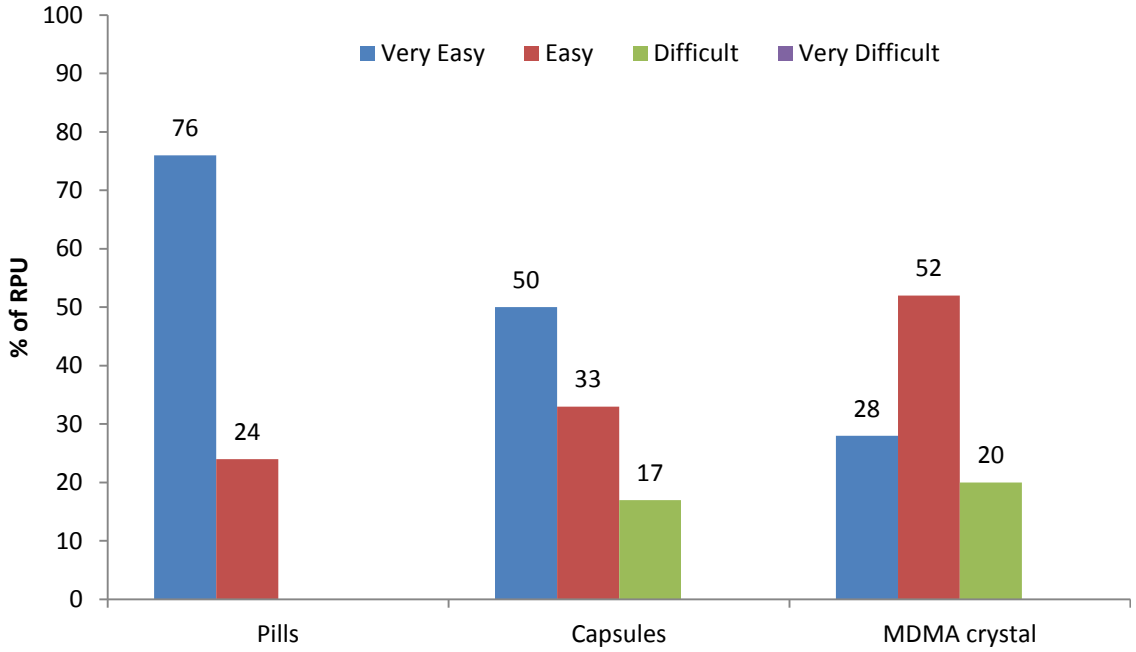


Source: Australian Crime Commission, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016
*Phenethylamines include MDMA ('ecstasy'), MDEA, MDA, PMA and others (see Australian Crime Commission, 2012)

5.1.3 Availability

Figure 13 presents the current availability of ecstasy and Table 25 summarises the changes in availability in the last six months, as perceived by participants. As can be seen, there was some variation in perceived availability of ecstasy across the different forms. Although the majority of participants reported that ecstasy was 'very easy' or 'easy' to obtain (100% for pills; 83% for capsules; 80% for MDMA crystals), approximately one-fifth of those able to answer reported that ecstasy capsules (17%) and MDMA crystal (20%) were 'difficult' to obtain. The availability of ecstasy was largely reported to have remained stable over the preceding six months.

Figure 13: Trends in availability of ecstasy in the preceding six months, SA, 2016



Source: EDRS participant interviews
Note: Don't know' excluded from 2009 onwards

Table 25: Change in availability over the last six months, SA, 2016

	Pills (n=81)	Capsules (n=12)	MDMA crystal (n=52)
Change in availability in last 6 months (%)			
More difficult	1	**17**	15
Stable	67	**58**	58
Easier	31	**25**	19
Fluctuates	1	**0**	8

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

5.1.4 Source of ecstasy

Ecstasy was purchased from a range of sources and from a variety of public and private locations, with the most common being from friends. In regards to pills and capsules, the largest proportion of participants reported scoring at a nightclub, and the largest proportion reported scoring MDMA crystal from a friend's home (see Table 26).

Table 26: Trend in the source and venue of purchase of ecstasy for participants in the last 6 months, SA, 2016

	Pills	Capsules	MDMA crystal
Bought ecstasy from:	(n=84)	(n=12)	(n=54)
Friends	61	75	52
Known dealers	21	0	28
Workmates	0	0	2
Acquaintances	11	0	9
Unknown dealers	2	0	4
Street dealers	4	0	2
Mobile dealer	1	0	2
Online (dark net)	0	17	2
Online (social media)	0	8	0
Relatives	0	0	0
Venues normally scored [ecstasy] at?	(n=84)	(n=12)	(n=54)
Own home	14	8	17
Dealer's home	8	8	14
Friend's home	25	17	24
Acquaintance's home	1	0	6
Raves/dance parties	1	8	2
Nightclubs	31	33	13
Pubs	1	0	2
Agreed public location	12	0	7
Private party	0	0	2
Street	6	17	9
Live music event	0	0	0
Online	0	8	2
Other	0	0	2

Source: EDRS participant interviews

KE Comments

- KE largely reported that the ecstasy market had remained stable over the preceding 12 months.
- The price for an ecstasy pill was reported by KE to be between $20–$30. Reported prices decreased when buying in larger quantities (e.g. $18 per pill for 10, and as low as $8 per pill for larger quantities).
- Analysis of ‘ecstasy’ seizures found that the main substances detected in ecstasy pills were MDMA, MDA, ethylone and caffeine.

5.2 Methamphetamine

Key Findings

- The reported last median price of a point of crystal methamphetamine declined significantly from $65 in 2015 to $50 in 2016.
- 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 obtaining methamphetamine from friends or a known dealer. All three forms of methamphetamine were most commonly obtained at a private home.
- Only a small number participants were able to report on the PPA of powder (n=6) 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 27 presents the prices of methamphetamine and Table 28 presents whether these had changed over the six months preceding interview.

Few participants were able to report on the price of powder and base methamphetamine. The reported last median price of a point of crystal methamphetamine declined significantly, from $65 in 2015 to $50 in 2016 ($p$=0.02; Table 27). This is consistent with participant reports of changes in price, with the largest proportion of those who were able to comment (43%) reporting that the price of crystal methamphetamine had decreased in the six months preceding interview (see Table 28).

Table 27: Median price of last purchase of the main forms of methamphetamine, SA, 2015 & 2016

	Median price per amount $ (range; n)					
Amount	**Powder**		**Base**		**Crystal**	
	2015	**2016**	2015	**2016**	2015	**2016**
Point Price at last purchase	–	**–**	–	**–**	65 (50−100; 20)	**50* (20−100; 21)**

Source: EDRS participant interviews
– Results not presented due to small numbers (n<10)
*p<0.05

Table 28: Changes in price over the last six months, SA, 2015 & 2016

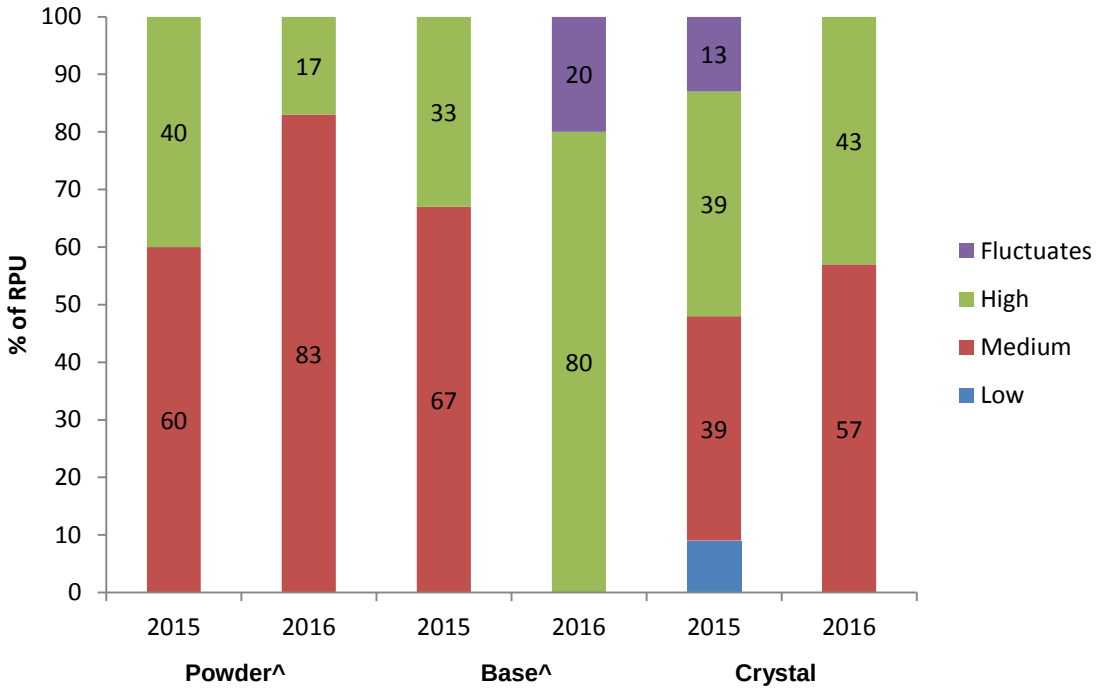
Change in price	Powder		Base		Crystal	
	2015 (n=7^)	**2016 (n=7^)**	2015 (n=5^)	**2016 (n=5^)**	2015 (n=22)	**2016 (n=21)**
Increasing	29	**40**	0	**0**	9	**10**
Stable	29	**20**	60	**60**	41	**38**
Decreasing	14	**40**	0	**20**	32	**43**
Fluctuating	29	**0**	40	**20**	18	**10**

Source: EDRS participant interviews
Note: Excludes 'don't know'
^ Small numbers reported (n<10). Interpret with caution

5.2.2 Purity – RPU reports

Few participant (n<10) we able to comment on the perceived purity of powder and base methamphetamine. As can be seen in Figure 14, the perceived purity of methamphetamine was considered to be high or medium. Specifically, four-fifths (83%) of those able to comment reported the current purity of methamphetamine powder to be 'medium', 80% reported that the purity of base was 'high', while almost 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. In regards to crystal methamphetamine, the greatest proportion of participants (50%) reported that the purity had remained stable over the preceding six months (see Table 29).

Figure 14: Purity of the main forms of methamphetamine over the last six months, SA, 2015 & 2016



Source: EDRS participant interviews
Note: 'Don't know' not included
^ Small numbers reported (n<10). Interpret with caution

Table 29: Changes in purity of the main forms of methamphetamine over the last six months, SA, 2015 & 2016

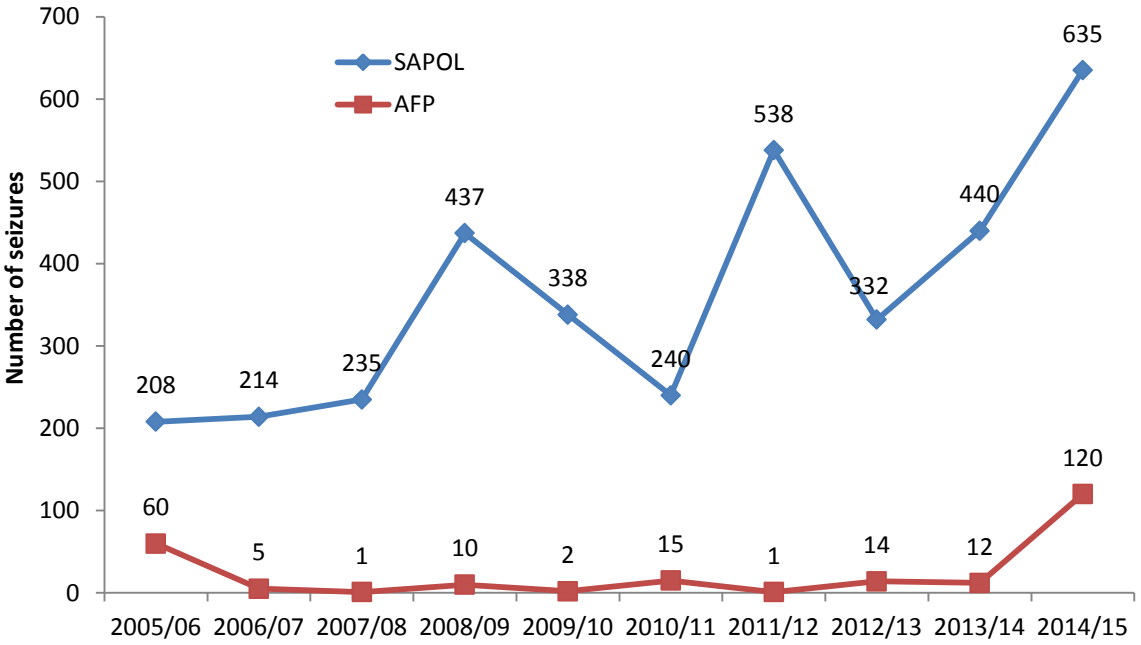
Change in purity	Powder		Base		Crystal	
	2015 (n=5^)	**2016 (n=5^)**	2015 (n=4^)	**2016 (n=4^)**	2015 (n=21)	**2016 (n=20)**
Increasing	20	**0**	0	**75**	19	**20**
Stable	40	**80**	100	**25**	48	**50**
Decreasing	20	**0**	0	**0**	24	**5**
Fluctuating	20	**20**	0	**0**	10	**25**

Source: EDRS participant interviews
Note: 'Don't know' not included
^ Small numbers reported (n<10). Interpret with caution

5.2.2.1 Purity – seizure data

The ACIC data for 2015/16 were unavailable at the time of publication. As a consequence, data provided by the ACIC relates to the data on seizures and purity levels during the last financial year, 2014/15 (Australian Criminal Intelligence Commission, 2016). Figure 15 shows the number of seizures for amphetamine-type stimulants[10] 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 and again in 2014/15. Furthermore, the weight of SAPOL seizures also increased in 2014/15 (127,197 grams versus 14,265 grams in 2013/14). The number of AFP seizures also increased sharply in 2014/15, and there was a slight increase in the weight of the seizures (17,722 grams in 2014/15 versus 10,809 grams in 2013/14).

Figure 15: Number of seizures: amphetamine–type stimulants, SA, 2005/06–2014/15



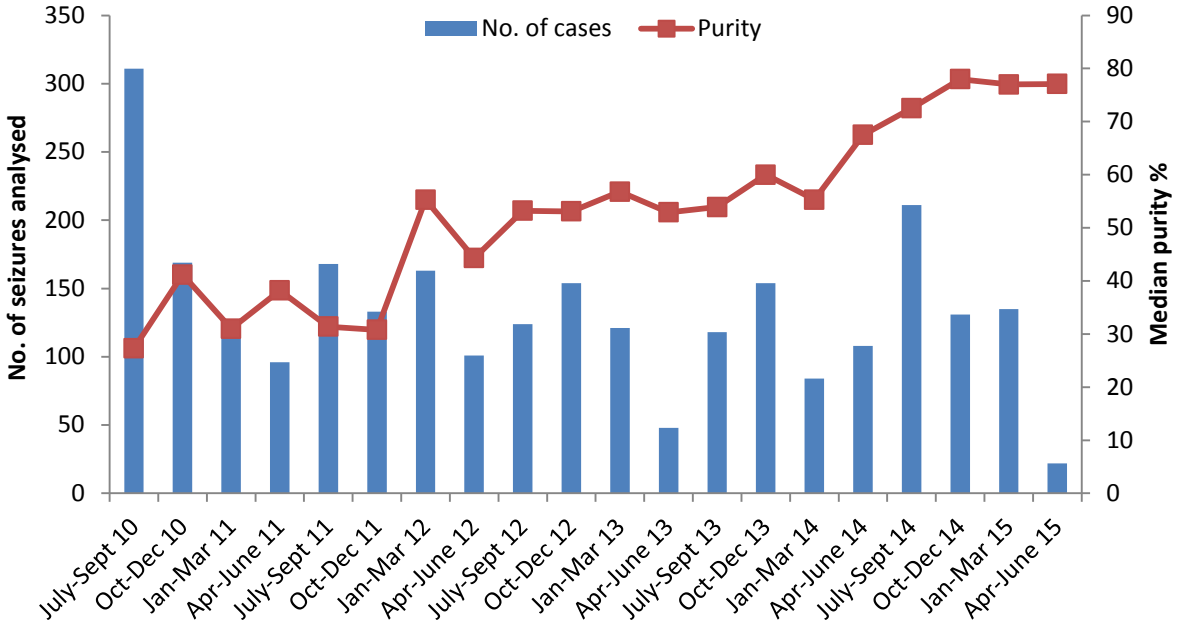
Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016

Figure 16 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 2010/11 to 2014/15. The total number of SAPOL methamphetamine seizures analysed from July 2014 to June 2015 was 499, which was stable from the 2013/14

[10] This includes amphetamine, methylamphetamine and phenethylamines.

financial year (464). However, the overall median purity of the seizures analysed increased to 75.7% (compared to 59.7% in 2013/14). The majority of seizures analysed were more than 2 grams.

Figure 16: Median purity of methylamphetamine, SA, 2010/11–2014/15

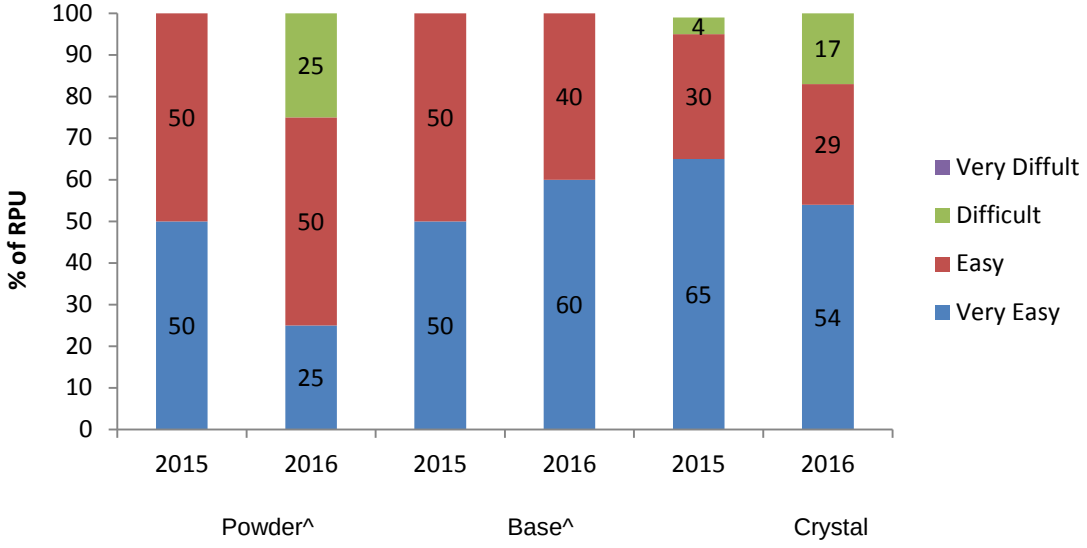


Source: Australian Crime Commission, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016

5.2.3 Availability

It should be noted that few participants were able to report on the perceived purity of powder and base methamphetamine (n<10). All three forms of methamphetamine were considered to be 'easy' or 'very easy' to obtain by the majority of participants (see Figure 17). The majority of participants reported the availability of powder and base methamphetamine as stable in the last six months; in regards to crystal methamphetamine equal proportions of those able to answer reported availability as stable or easier (see Table 30).

Figure 17: Availability of the main forms of methamphetamine over the last six months, SA, 2015 & 2016



Source: EDRS participant interviews

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

Table 30: Change in availability of the main forms of methamphetamine over the last six months, SA, 2015 & 2016

Change in availability in last 6 months (%)	Powder		Base		Crystal	
	2015 (n=7^)	**2016 (n=3^)**	2015 (n=6^)	**2016 (n=5^)**	2015 (n=22)	**2016 (n=24)**
More difficult	0	**33**	0	**0**	0	**4**
Stable	71	**67**	83	**80**	64	**42**
Easier	14	**0**	0	**20**	27	**42**
Fluctuates	14	**0**	17	**0**	9	**13**

Source: EDRS participant interviews
Note: 'Don't know' not included
^ Small numbers reported (n<10). Interpret with caution

5.2.4 Supply: purchasing patterns and locations of use

Few participants were able to report on the sourcing of powder and base methamphetamine (n<10). When asked where they had bought the different forms of methamphetamine, participants provided different profiles for each of the three forms (see Table 31). The largest proportion of participants reported obtaining methamphetamine from friends or a known dealer. All three forms of methamphetamine were most commonly obtained at a private home.

Table 31: Last person and source venue where participants purchased methamphetamine, SA, 2016

% commented	Powder (n=6^)	Base (n=5^)	Crystal (n=24)
Who have you bought [meth] from in the last 6 months?			
Friends	**33**	**40**	**42**
Acquaintance	**17**	**0**	**8**
Known dealer	**17**	**60**	**42**
Unknown dealer	**17**	**0**	**0**
Mobile dealer	**17**	**0**	**0**
Other	**0**	**0**	**8**
What venues do you normally score [meth] at?			
Own home	**50**	**40**	**29**
Dealer's home	**0**	**20**	**33**
Friend's home	**33**	**40**	**25**
Nightclub	**0**	**0**	**8**
Agreed public location	**17**	**0**	**4**

Source: EDRS participant interviews
^ Small numbers reported (n<10). Interpret with caution

KE Comments

- The price of methamphetamine was reported to range from $50−$100 for a point, although one KE noted that this could drop to as low as $30–$40 for a point. Most KE who were able to comment believed that the price of methamphetamine had decreased in the preceding year, although there were a couple of KE who reported that prices had remained stable.

- The purity of methamphetamine was largely reported to be ‘high’ and to have remained stable over the preceding 12 months (although it was noted that purity varied across geographic regions).

- Methamphetamine was considered to be easily available and accessible.

5.3 Cocaine

Key Findings

- In 2016, the median price of cocaine remained stable at $350 per gram.
- The purity of cocaine was perceived as medium.
- The current availability of cocaine was largely perceived as 'difficult', 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=$250−$400). The majority of participants who commented on the price considered it to have remained stable in the last six months (74%) (Table 32).

Table 32: Price of cocaine, SA, 2015 & 2016

	2015	**2016**
Median price of last purchase Gram (range; n)	$350 (100−600; 18)	**$350 (250−400; 17)**
Price change in last month (%)	(n=30)	**(n=23)**
Increasing	13	**4**
Stable	73	**74**
Decreasing	10	**0**
Fluctuating	3	**22**

Source: EDRS participant interviews
Note: 'Don't know' excluded from analysis

5.3.2 Purity– RPU reports

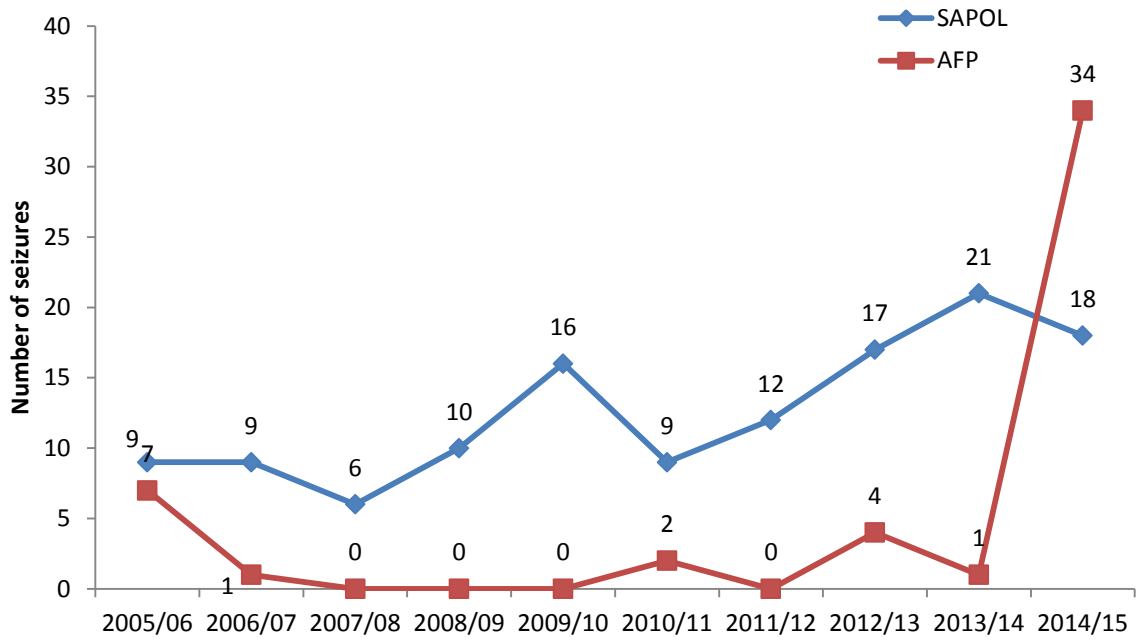
Participants were asked what the current purity or strength of cocaine was, and whether the purity had changed in the six months preceding interview. The purity of cocaine was largely perceived as medium (56%); 19% reported it was low, 15% reported it was high and 11% reported that had fluctuated over the past six months.

The majority of participants who commented (50%) reported that the purity of cocaine had remained stable over the past six months, 29% believed it had decreased, 18% reported it had fluctuated and 4% reported that it had increased.

5.3.2.1 Purity – seizure data

The ACIC data for 2015/16 were unavailable at the time of publication. As a consequence, data provided by the ACIC relates to the data on seizures and purity levels during the last financial year, 2014/15 (Australian Criminal Intelligence Commission, 2016). Figure 18 shows the number of seizures for cocaine, by SAPOL and the AFP. As can be seen, SAPOL seizures remained relatively stable in 2014/15 (18 versus 21 in 2012/13); this represents a plateauing of the upward trend observed from 2010/11 to 2013/14. The number of seizures made by the AFP increased sharply in 2014/15, although it is important to note that the weight of these seizures was lower than the one seizure reported in 2013/14 (1,509 grams in 2014/15 versus 2,833 grams in 2013/14).

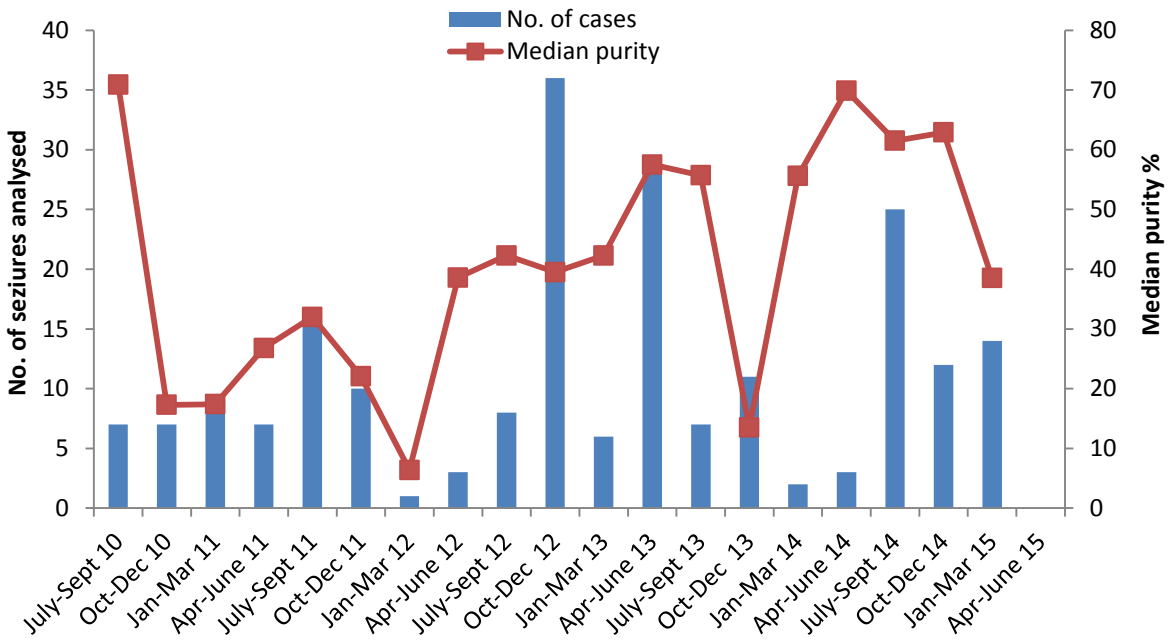
Figure 18: Number of cocaine seizures, SA, 2005/06–2014/15



Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016

Figure 19 shows the number of cocaine seizures received and analysed by the state forensic laboratory (within the quarter depicted) and the median purity per quarter of those seizures from 2010/11 to 2014/15. The total number of SAPOL cocaine seizures analysed from July 2014 to June 2015 was 51, which was double the number of seizures reported in the 2013/14 financial year (23). The overall median purity of the seizures analysed was 55.4%, which was also a substantial increase from the median purity reported in 2013/14 (29.9%).

Figure 19: Number of cocaine seizures analysed and median purity, SA, 2010/11–2014/15



Source: Australian Crime Commission, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016

5.3.3 Availability

Reports regarding the current availability of cocaine were quite mixed. Of those able to answer, half (50%) reported that cocaine was 'difficult' to obtain, and 33% reported that it was 'easy' to obtain. Half (50%) of those able to answer considered the ease of access to cocaine to have remained stable in the six months preceding interview.

Table 33: Availability of cocaine and change in availability over the last six months, SA, 2015 & 2016

	2015 (n=36)	**2016 (n=30)**
Current availability (%)		
Very easy	19	**10**
Easy	44	**33**
Difficult	31	**50**
Very difficult	6	**7**
Change in availability in last 6 months (%)	(n=34)	**(n=28)**
More difficult	12	**21**
Stable	65	**50**
Easier	18	**25**
Fluctuates	6	**4**

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

Cocaine was most commonly acquired through friends (66%), and was most commonly obtained in a friend's home (28%), followed by a nightclub or dealer's home (17% respectively) (see Table 34).

Table 34: Last person and source venue where participants purchased cocaine, SA, 2016

	(n=29) %
Who have you bought cocaine from in the last 6 months?	
Friends	**66**
Acquaintances	**3**
Known dealers	**21**
Unknown dealer	**3**
Mobile dealer	**3**
Online (dark net)	**3**
What venues do you normally score cocaine at?	
Own home	**14**
Dealer's home	**17**
Friend's home	**28**
Nightclub	**17**
Pubs	**3**
Online	**3**
Agreed public location	**7**
Live music event	**3**
Other	**7**

Source: EDRS participant interviews

KE Comments

- Most of the KE reported that they were seeing very little cocaine use and were unable to provide information on its current price, purity or availability (PPA). One KE had heard of some people paying up to $500–$600 for a gram.

5.4 LSD

Key Findings

- The median price of LSD remained stable at $17.50 for a tab.
- Reports regarding the perceived purity of LSD were mixed; equal proportions of those able to comment reported that the current purity of LSD was medium or high (36% respectively), and 24% reported that purity was variable.
- The majority of those able to answer (81%) reported that it was 'easy' or 'very easy' to obtain LSD; this was a significant increase from 2015.
- Participants generally bought LSD from friends and obtained it from a friend's home.

5.4.1 Price

In 2016, the median last price paid for a tab of LSD was $17.50 (range $8–30; n=26), which was stable from 2015 ($20; range $8–40; n=27). The majority of those participants able to comment reported that the price of LSD had been stable in the previous six months (65%). The remaining participants believed the price had decreased (17%), increased (9%) or fluctuated (9%).

5.4.2 Purity – RPU reports

Table 35 summarises the current perceived purity of LSD and the changes in purity in the last six months, as perceived by the participants in 2016. As can be seen, reports regarding the purity of LSD were mixed; equal proportions of those able to comment reported that the current purity of LSD was medium or high (36% respectively), and 24% reported that purity was variable. Two-fifths (38%) perceived that purity had remained stable in the six months prior to interview, and one-third (33%) reported that purity had fluctuated over the preceding six months.

Table 35: Purity of LSD and change in purity over the last six months, SA, 2015 & 2016

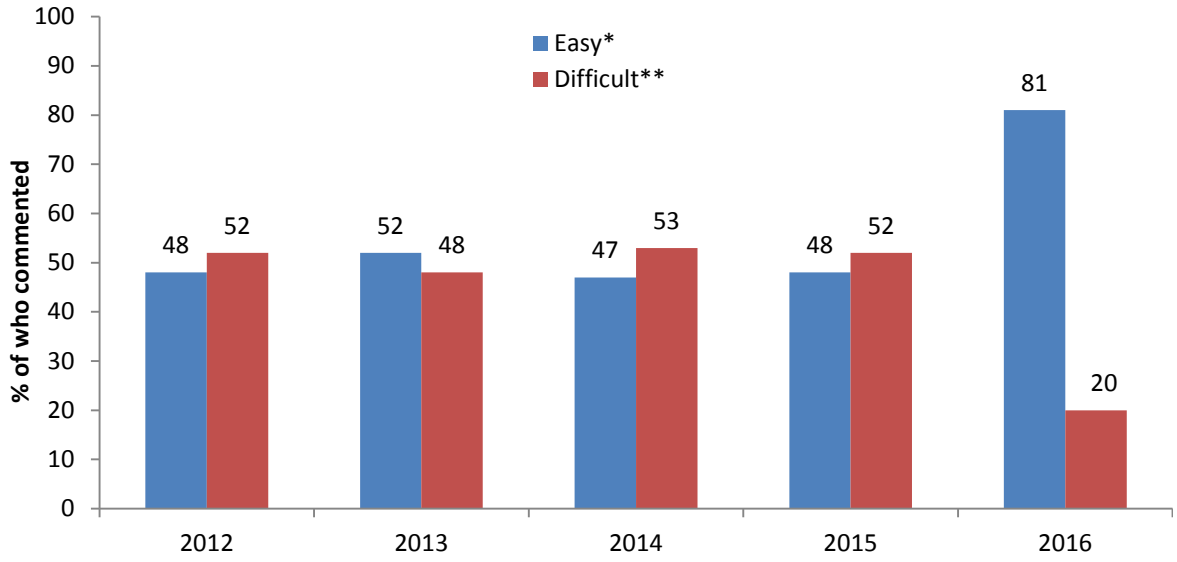
	2015 (n=33)	**2016 (n=25)**
Current purity (%)		
Low	3	**4**
Medium	30	**36**
High	58	**36**
Fluctuates	9	**24**
Change purity in last 6 months (%)	(n=30)	**(n=24)**
Increasing	13	**21**
Stable	57	**38**
Decreasing	17	**8**
Fluctuating	13	**33**

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

5.4.3 Availability

The majority of those able to answer (81%) reported that it was 'easy' or 'very easy' to obtain LSD (see Figure 20); this was a significant increase from 2015 (48%; p=0.02; 95% CI: -0.52, -0.08). Forty-six percent of those able to answer reported that the availability of LSD had been stable in the previous six months, 42% believed it was easier to obtain, 8% reported that it was more difficult to obtain and 4% reported that availability had fluctuated over the preceding six months.

Figure 20: Trends in availability of LSD, SA, 2012–2016



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 (58%) and that they had 'scored' at their friend's home (31%) (Table 36).

Table 36: Usual person and source venue where participants purchased LSD, SA, 2016

	% of participants
Who have you got LSD from in the last 6 months?	**(n=26)**
Friends	**58**
Acquaintances	**12**
Known dealers	**23**
Online (dark net)	**4**
Online (social media)	**4**
What venues do you normally score LSD at?	**(n=26)**
Own home	**12**
Friend's home	**31**
Acquaintance's home	**8**
Dealer's home	**15**
Pub/bar	**8**
Private party	**4**
Street market	**4**
Agreed public location	**8**
Online	**8**
Other	**4**

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.

5.5 Cannabis

Key Findings

- The price reported for hydro and bush cannabis remained stable at $25 for a bag.
- The purity of hydro and bush cannabis was largely reported as medium to high, 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 private home.

The following sections refer to a 'bag' as a standard measure (particular to the SA 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 2016, participants were also asked if they were able to differentiate between hydro and bush cannabis in terms of price, potency and availability. The majority (57%) 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=23) and bush cannabis (n=28) was $25 (no range for hydro; range=$20−$30 for bush), which was stable from 2015. The median purchase prices reported for an ounce of hydro (n=20) and bush (n=18) cannabis were $215 (range=$180−$250) and $200 (range=$150−$260) respectively; these were stable from 2015 ($220 an ounce for hydro; $240 an ounce for bush). The reported last median purchase price for a gram of hash was $47.50 (range=$25−$150; 10).

The majority of participants (74%; 29 out of 39 participants) who were able to comment reported that the price of hydro had remained stable, while the remaining participants reported that it had fluctuated (15%) or increased (10%) 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 (81%; 34 out of 42 participants), while 14% reported that it had increased, 2% reported that it has decreased and 2% reported that the price had fluctuated in the last six months.

5.5.2 Potency– RPU reports

Table 37 and Table 38 summarise the current potency of hydro and bush cannabis and the changes in the potency of cannabis over the last six months, according to participant reports. In 2016, the purity of hydro and bush cannabis was reported as high or medium by the majority of participants able to comment (hydro 80%; bush 85%). The majority of participants

able to comment reported that the purity of hydro (62%) and bush cannabis (63%) was stable in the last six months.

Table 37: Potency of hydro and bush cannabis over the last six months, SA, 2015 & 2016

	% Able to answer			
	2015		2016	
	Hydro (n= 46)	Bush (n=49)	**Hydro (n= 39)**	**Bush (n=42)**
High	54	33	**44**	**33**
Medium	22	41	**36**	**52**
Low	7	14	**3**	**7**
Fluctuates	17	12	**18**	**7**

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

Table 38: Change in potency/strength of cannabis in last six months, SA, 2015 & 2016

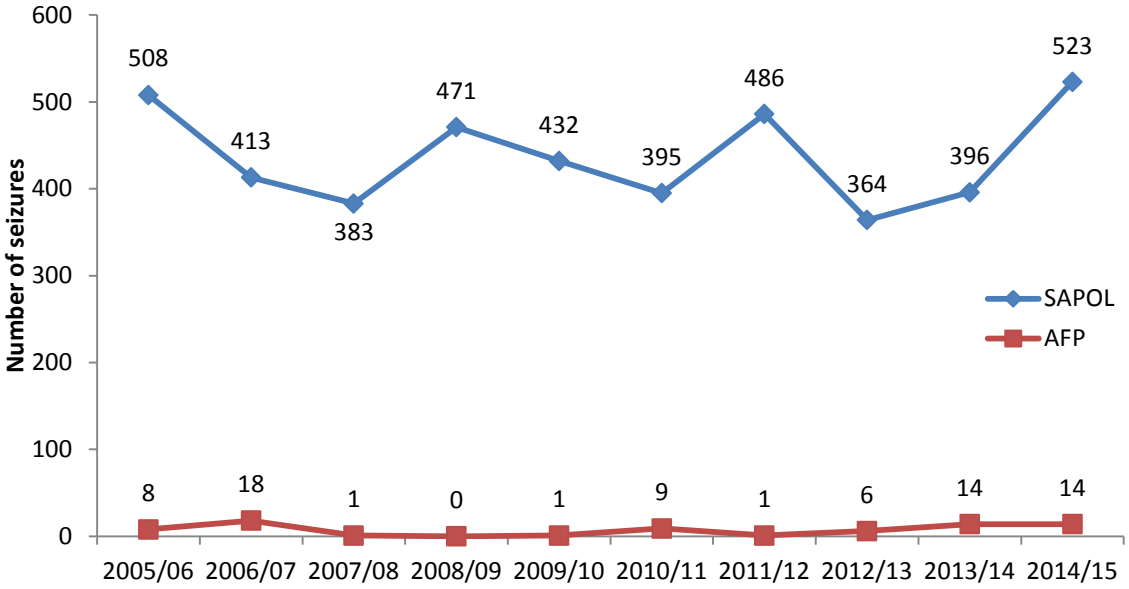
	% Able to answer			
	2015		2016	
	Hydro (n=47)	Bush (n=46)	**Hydro (n=39)**	**Bush (n=40)**
Increasing	17	7	**10**	**13**
Stable	51	63	**62**	**63**
Decreasing	11	13	**10**	**8**
Fluctuating	21	15	**18**	**18**

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

5.5.2.1 Purity – seizure data

The ACIC data for 2015/16 were unavailable at the time of publication. As a consequence, data provided by the ACIC relates to the data on seizures during the last financial year, 2014/15 (Australian Criminal Intelligence Commission, 2016). Figure 21 shows the number of seizures for cannabis, by SAPOL and the AFP. As can be seen, SAPOL cannabis seizures increased sharply in 2014/15, as did the weight of these seizures (1,305,973 grams in 2014/15 versus 749,677 grams in 2015/16). AFP cannabis seizures remained stable in 2014/15, although there was a decline in the weight of these seizures (1,268 grams versus 6,996 grams in 2013/14).

Figure 21: Number of cannabis seizures, SA, 2005/06−2014/15



Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016

5.5.3 Availability

Table 39 and Table 40 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 2016, the majority of participants able to comment reported hydro and bush cannabis as 'easy' or 'very easy' to obtain (95% and 83% respectively). Of those able to comment, the majority of RPU reported that the availability of hydro (80%) and bush (79%) had remained stable in the last six months.

Table 39: Availability of cannabis currently, SA, 2015 & 2016

How easy is it to get cannabis at the moment?	% Able to answer			
	2015		**2016**	
	Hydro (n=48)	Bush (n=49)	**Hydro (n=39)**	**Bush (n=42)**
Very easy	60	39	**64**	**52**
Easy	23	41	**31**	**31**
Difficult	17	18	**5**	**17**
Very difficult	0	2	**0**	**0**

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

Table 40: Change in availability of cannabis over the last 6 months, SA, 2015 & 2016

Has [availability] changed in the last 6 months?	% Able to answer			
	2015		2016	
	Hydro (n=48)	Bush (n=49)	**Hydro (n=39)**	**Bush (n=42)**
More difficult	17	12	**3**	**12**
Stable	69	63	**80**	**79**
Easier	13	12	**10**	**2**
Fluctuates	2	12	**8**	**7**

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

5.5.4 Usual source of purchase

Table 41 summarises information from participants on the source (both person and venue) from which they had 'usually' obtained cannabis in the preceding six months. In 2016, participants able to comment reported that they had 'usually' obtained cannabis from a friend (51% for hydro; 48% for bush) or a known dealer (36% for hydro; 31% 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 (33% for hydro; 39% for bush), a dealer's home (23% for hydro; 24% for bush) or home delivery (26% for hydro; 22% for bush).

Table 41: Usual person and source venue where participants purchased hydro and bush cannabis, SA, 2016

	Hydro (n=39)	**Bush (n=42)**
Person (%)		
Friends	**51**	**48**
Known dealer	**36**	**31**
Mobile dealer	**3**	**2**
Unknown dealer	**0**	**2**
Street dealer	**0**	**2**
Acquaintances	**10**	**7**
Relative	**0**	**2**
Online (dark net)	**0**	**2**
Other	**0**	**2**
Venue (%)	**(n=39)**	**(n=41)**
Home delivery	**26**	**22**
Dealer's home	**23**	**24**
Friend's home	**33**	**39**
Agreed public location	**8**	**10**
Street market	**3**	**0**
Online	**0**	**2**
Acquaintance's home	**8**	**2**
Other	**0**	**0**

Source: EDRS participant interviews

Key Expert Comments

- Similar to RPU reports, 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, $250 for an ounce and $2,200–$3,500 for a pound. One KE noted that “honey oil cannabis extractions” had increased.

5.6 Other drugs

Very few participants were able to answer on ketamine (n=7), benzodiazepines (n=6), GHB (n=5), pharmaceutical stimulants (n=3) or antipsychotics (n=1) and hence data will not be presented for these drugs. No participants were able to answer on MDA, antidepressants or steroids.

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 17% reported that they had overdosed on a depressant drug in the past 12 months.

Health service use

- The majority of participants (90%) reported accessing a health service (for any reason) in the preceding six months and 17% reported that they had thought about seeking help for their drug and alcohol use.
- Telephone calls to ADIS remained relatively stable for ecstasy, cannabis and cocaine; increased for methamphetamine; and decreased for alcohol and 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

- Over one-third (36%) of RPU were assessed as having high to very high levels of psychological distress in 2016.
- Thirty-five percent of the sample reported that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview, most commonly depression and anxiety.

6.1 Overdose and drug-related fatalities

As in previous years, participants in the 2016 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, 41% of the sample reported that they had experienced a recent overdose.

6.1.1 Stimulant overdose

Lifetime stimulant overdose was reported by 39% of RPU, similar to overdose rates reported in 2015 (43%). Those who had ever experienced a stimulant overdose reported doing so on a median of 2 occasions (range=1−50). The median time since last overdose was four months (range=1−36 months).

Thirty participants reported that they had overdosed on a 'stimulant' drug in the last 12 months. Participants predominantly reported being at a nightclub (n=12) or at their own home (n=7) at the time of overdose. Fewer participants reported being at a live music event (n=4), a friend's home (n=2), outdoors (n=2), a private party (n=1), or at a hotel (n=1) at the time of overdose. Among those who had recently overdosed, the main drug involved was ecstasy (n=25), with small numbers attributing their last overdose to methamphetamine (n=2), LSD (n=1) and one participant reporting the psychedelic 4-HO-Met .

The main symptoms participants reported on their last stimulant overdose (if it occurred within the last 12 months) included vomiting (n=11), increased body temperature (n=3), increased heart rate (n=3), visual hallucinations (n=3), nausea (n=2), and chest pain (n=2). Fewer participants reported symptoms of tremors, extreme anxiety, auditory hallucinations, delirium/confusion, and nose/mouth foaming (n=1 respectively).

Of those who had overdosed in the past 12 months, only one participant received immediate medical treatment. Larger numbers reported being monitored or watched by friends (n=16) and/or drinking water (n=7). Nineteen participants reported that there was a sober person present at the time of their last stimulant overdose.

6.1.2 Depressant overdose

Twenty participants reported they had 'ever' overdosed on a 'depressant' drug. Those who had experienced a depressant overdose had done so on a median of five occasions (range=1−100). The median time since last overdose was 3.5 months (range=1−36 months).

Seventeen participants reported overdosing on a 'depressant' drug in the last 12 months. The main drug involved in these recent depressant overdoses was alcohol (n=14), with vomiting being the most common symptom reported by those who had overdosed on a depressant drug in the past year (n=11).

The location of last overdose was mixed with most participants reporting that they were at their own home (n=8) or at friend's home (n=4). Smaller numbers reported being at a nightclub (n=3), a pub (n=1), or outdoors (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=1); only three participants reported that they had received some form of immediate medical treatment. Ten participants reported that there was a sober person present at the time of their last depressant overdose.

6.2 Help-seeking behaviour

The majority of participants (90%) reported accessing a health service (for any reason) in the preceding six months. The main service accessed was a GP (n=79), followed by a dentist (n=32). Smaller numbers reported that they had visited a: psychologist (n=15); hospital (n=14); emergency department (n=13); specialist doctor (n=10); 'other' health professional (n=10); medical tent (n=4); ambulance (n=4); drug and alcohol counsellor (n=4); psychiatrist (n=3); and social/welfare worker (n=1).

In 2016, 17% of RPU reported that they had thought about seeking help from a service or health professional in the last six months for any issue related to their drug and/or alcohol use.

6.3 Drug treatment services

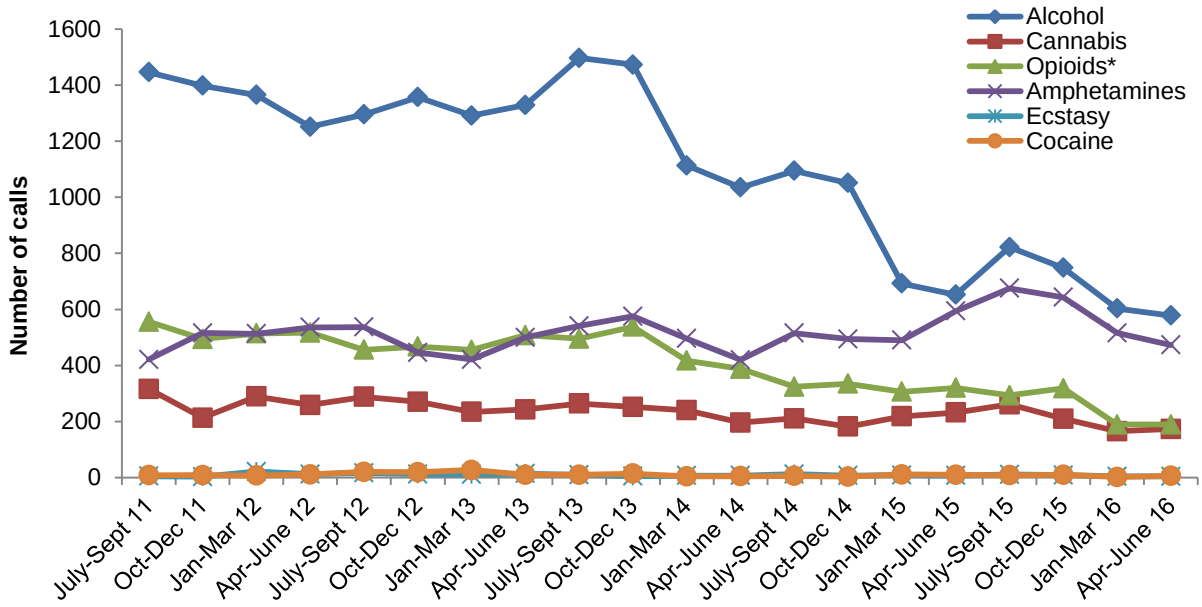
The following drug treatment data for SA comes from two sources: telephone calls to the SA Alcohol and Drug Information Service (ADIS); and Drug and Alcohol Services South Australia (DASSA). The sections below present data in terms of clients (per drug type) to

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) to 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 these findings from DASSA and non-government treatment agencies in SA.

6.3.1 Treatment services ADIS

Figure 22 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 2011/12 to 2015/16. 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 has been a considerable drop in the number of alcohol-related calls from Jan–March 2014 onwards. Conversely, there was an increase in the number of amphetamine-related calls across 2015/16, such that the number of alcohol and amphetamine-related calls were approaching comparability. The number of opioid-related calls declined in 2015/16, and 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 22: Number of drug-related calls to ADIS per quarter, by selected drug type, SA, July 2011–June 2016

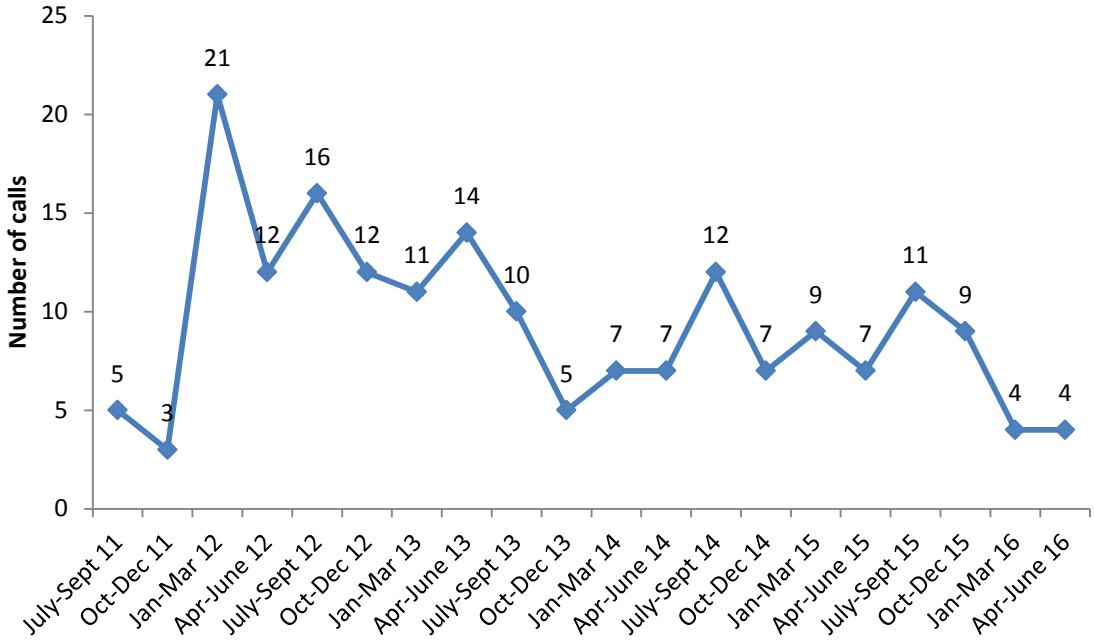


Source: SA ADIS
* In 2014/15 the 'opioids' category was expanded to include all calls coded under the categories heroin, methadone, buprenorphine, naltrexone, opioid pharmacotherapies, alcohol opioid pharmacotherapies, codeine, fentanyl, morphine, opioids (general), organic opiate analgesics (n.e.c), oxycodone, pethidine, synthetic opioid analgesics (ndf), opiate antagonists (ndf), suboxone and other opioids.

6.3.1.1 Ecstasy-related calls

Telephone calls to ADIS regarding ecstasy accounted for just 0.3% (n=28) of the total coded telephone contacts (drug-related) in the 2015/16 financial year (n=10,564); this was stable from 2014/15 (0.3%; n=35). Figure 23 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 23: Number of inquiries to ADIS regarding ecstasy, SA, July 2011–June 2016



Source: SA ADIS

6.3.1.2 Amphetamine-related calls

Telephone calls to ADIS regarding amphetamines accounted for 21.8% (n=2,307) of the 10,564 total drug-related calls in the 2015/16 financial year. This represents a slight increase from the previous financial year (19.9% of a total 10,499 calls).

Figure 22 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 2015/16 calls related to amphetamines continued to be higher than all other drugs except alcohol including cannabis and opioids.

Looking specifically at methamphetamine-related calls, the number of telephone calls to ADIS more than doubled, from 794 in 2014/15 to 1,731 in 2015/16.

6.3.1.3 Cocaine-related calls

Telephone calls to ADIS regarding cocaine accounted for only 0.2% (n=26) of total drug-related telephone calls in 2015/16; this was stable from 2014/15 (0.3%; n=30).

Figure 22 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 has remained consistently low over the years.

6.3.1.4 Cannabis-related calls

Telephone calls to ADIS regarding cannabis accounted for 7.8% (n=809) of the total coded telephone contacts (drug-related) in the 2015/16 financial year (including two calls in relation to synthetic cannabinoids); this was relatively stable from 2014/15 (8.0%; n=843).

Figure 22 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 42, in 2015/16 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 2014/15.

Table 42: Primary drug of concern nominated by clients of Drug and Alcohol Services South Australia, as a percentage of total number of clients*, 2011/12–2015/16

Drug type (%)	2011/12 N=5,438	2012/13 N=5,262	2013/14 N=4,932	2014/15 N=4,604	**2015/16 N=4,495**
Alcohol	49.4	47.5	47.1	42.9	**42.0**
Amphetamines	19.4	19.1	18.5	21.1	**25.1**
Heroin	7.8	8.6	7.0	8.5	**5.7**
Opioid analgesics	8.3	8.9	8.2	8.9	**9.2**
Cannabis	13.9	13.9	13.3	11.6	**11.9**
Benzodiazepines	1.9	2.0	1.9	1.9	**1.8**
Ecstasy	0.5	0.3	0.5	0.2	**0.2**
Cocaine	0.2	0.2	0.2	0.2	**0.1**
Tobacco	0.5	0.5	0.4	0.5	**0.7**
Unknown	0.3	0.1	0.4	0.2	**0.3**
Buprenorphine	1.8	1.9	2.2	2.2	**1.1**
Suboxone	–	–	0.4	0.8	**1.0**
Other	1.2	3.0	0.4	0.9	**0.9**

Source: Drug and Alcohol Services South Australia

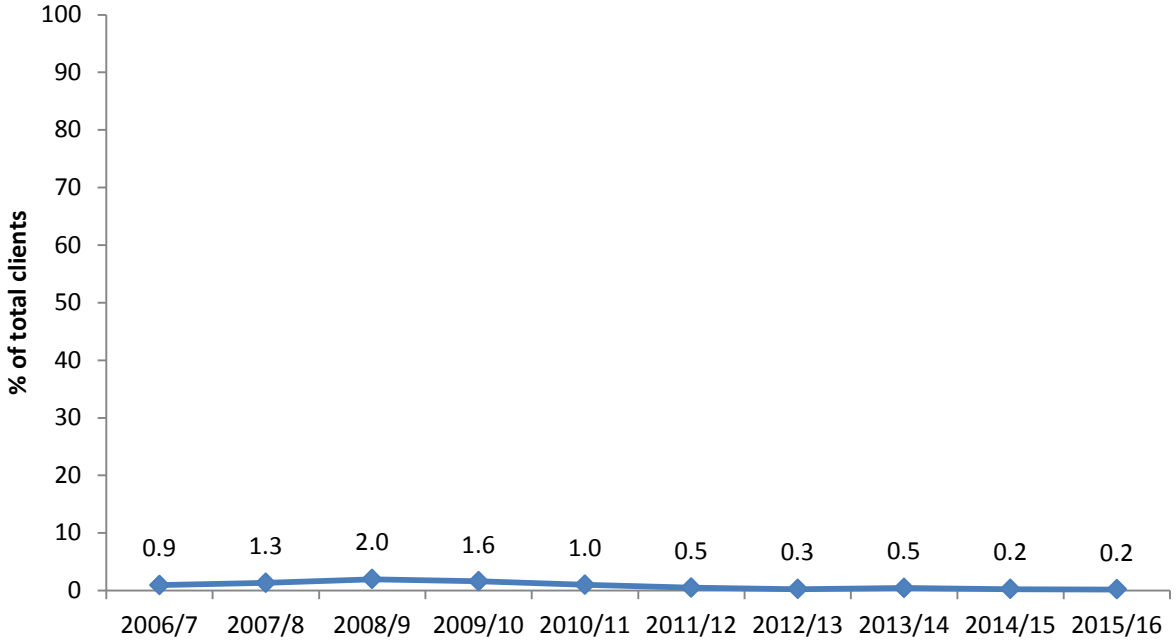
* Total number of clients = total number of individuals who started one or more new episodes of treatment during the period. Figures rounded up to one decimal place

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 2015/16 there were nine 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 2014/15. See also Table 42 for a comparison of ecstasy to other primary drugs of concern among clients of DASSA treatment services.

Figure 24: Percentage of total DASSA clients with ecstasy as the primary drug of concern, 2006/07–2015/16



Source: Drug and Alcohol Services South Australia

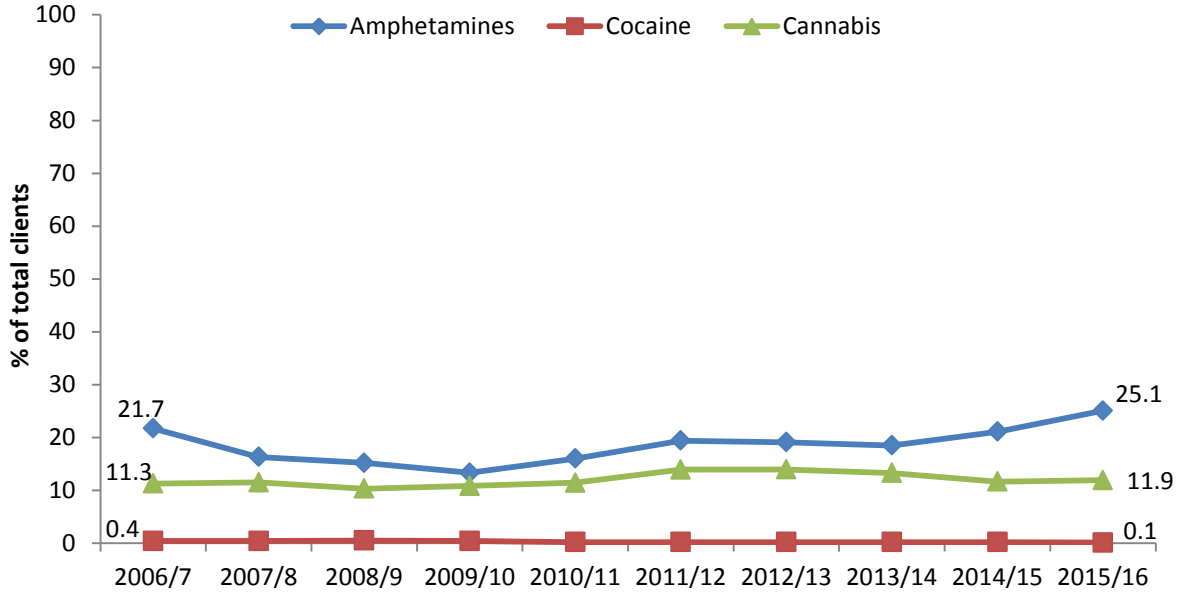
6.3.2.2 Methamphetamine, cocaine and cannabis-related attendances

The proportion of clients nominating amphetamines as their primary drug of concern increased slightly in 2015/16. Amphetamines (25.1%) continued to dominate as the most common *illicit* drug of concern among DASSA clients, coming second only to alcohol (42.0%).

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, 0.1% (n=4 of 4,495 individuals) nominated cocaine as their primary drug of concern in 2015/16.

The proportion of clients nominating cannabis as their primary drug of concern remained stable in 2015/16. Of clients to all DASSA treatment services, 11.9% (n=536 of 4,495 individuals) nominated cannabis as their primary drug of concern in 2015/16.

Figure 25: Percentage of total DASSA clients with amphetamines, cocaine or cannabis as the primary drug of concern, 2006/07–2015/16



Source: Drug and Alcohol Services South Australia

6.4 Emergency Department admissions

Information on drug-related attendances to the Emergency Department (ED) (Table 43) 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 ED 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 43, alcohol continues to account for the majority of attendances to the RAH ED. 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 2015/16. Amphetamine-related attendances remained the most common of the illicit drug-related attendances at the RAH.

Table 43: Number of attendances* to the Emergency Department at the Royal Adelaide Hospital, SA, from 2006/07–2015/16 (per drug or diagnosis)

	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	**2015/ 2016**
Amphetamines	82	67	58	61	61	83	109	136	121	**170**
Cocaine	4	1	4	5	1	2	4	4	3	**8**
LSD	2	3	7	7	3	2	2	1	6	**4**
GHB	14	15	15	17	20	20	17	25	10	**26**
Alcohol	1,559	1,554	1,585	2,078	2,119	1,835	1,860	1,739	1,636	**1,795**
Cannabis	15	15	13	11	14	22	14	16	19	**28**
Heroin	39	44	66	51	66	63	55	35	51	**50**
Other opioid**	59	28	38	36	38	40	47	21	32	**28**
Benzodiazepines	174	145	151	169	162	147	117	130	135	**109**
Antidepressants	74	78	67	58	71	73	67	60	51	**36**
Other#	579	528	464	480	471	439	448	446	447	**450**
TOTAL	*2,675*	*2,514*	*2,469*	*2,973*	*3,026*	*2,726*	*2,740*	*2,613*	*2,513*	***2,704***

Source: Royal Adelaide Hospital Emergency Department

* Coded as drug- or poisoning-related

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

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

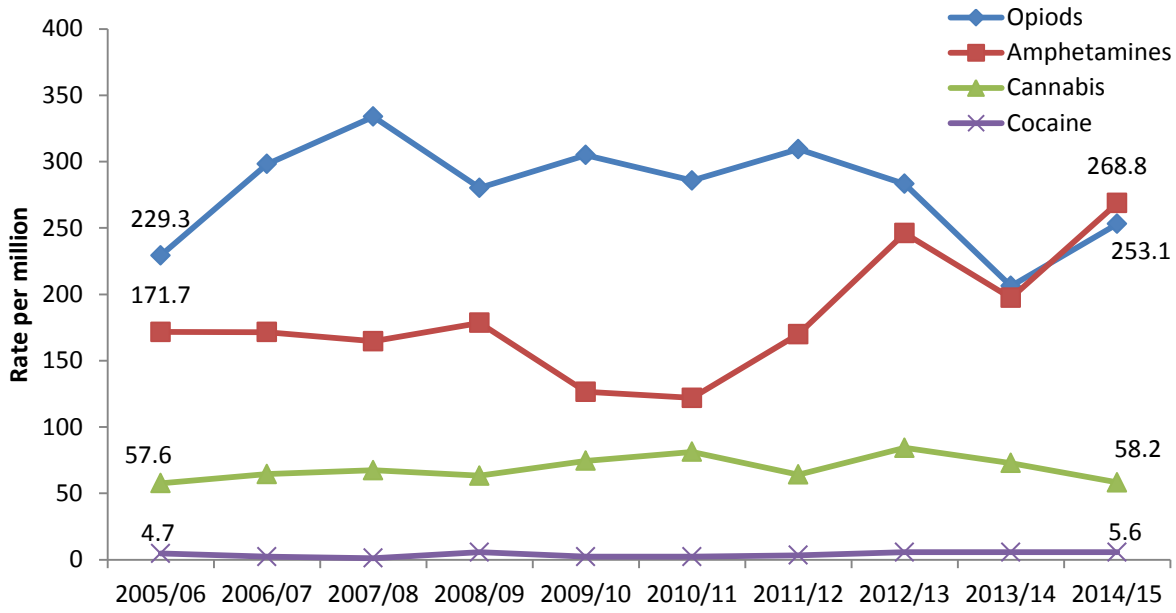
6.4.1 Hospital admissions

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 2014/15 (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)[11]. 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 2015/16.

The substances most commonly involved in a primary diagnosis for SA drug-related hospital admissions were amphetamines and opioids (heroin, morphine, methadone etc.), followed by cannabis and cocaine (see Figure 28). Ecstasy-related admissions are not specifically coded.

[11] 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 26: Rate per million people of substance-related admissions* (primary diagnosis) to hospital in South Australia, 2005/06–2014/15

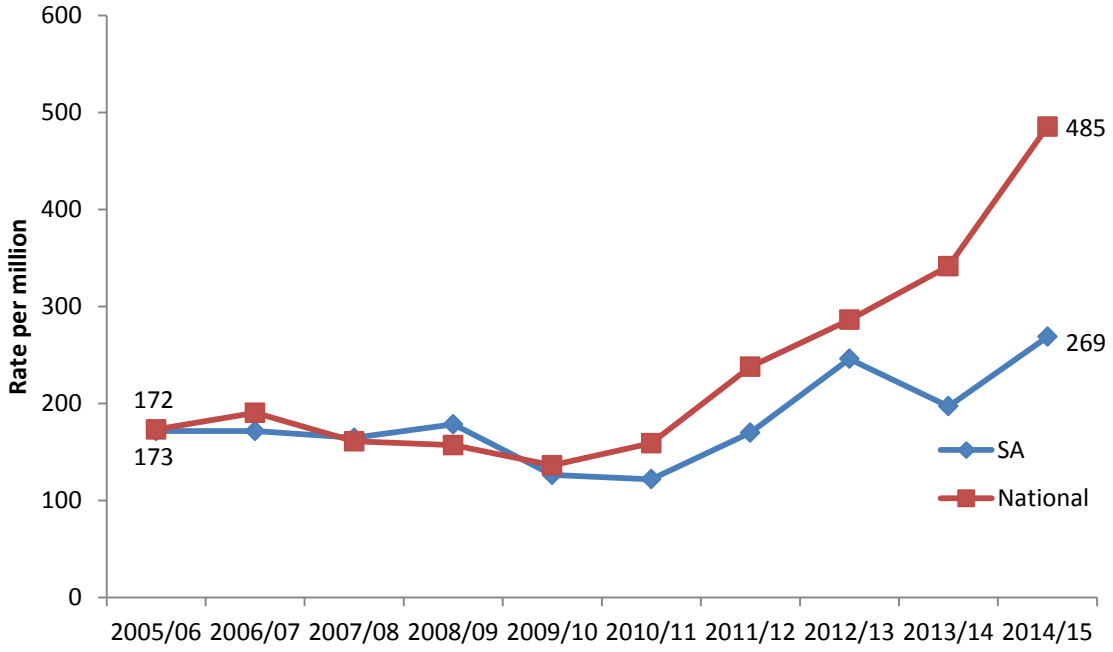


Source: Australian Institute of Health and Welfare; Roxburgh and Breen, 2017
* For persons aged between 15 and 54 years
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

6.4.1.1 Amphetamine-related hospital admissions

Figure 29 shows the long-term trend of amphetamine-related hospital admissions, from 2005/06 onwards. Nationally, admissions with amphetamines as a primary diagnosis increased sharply in 2014/15; from 342 per million in 2013/14 to 485 per million; this continues an upward trend that has been observed from 2009/10 onwards. Similarly, in SA, there was a sharp increase in admissions with amphetamines as a primary diagnosis; from 197 per million in 2013/14 to 269 per million in 2014/15. Readers are reminded that this figure does not include amphetamine-related psychosis or withdrawal admissions.

Figure 27: Rate of amphetamine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2005/06–2014/15

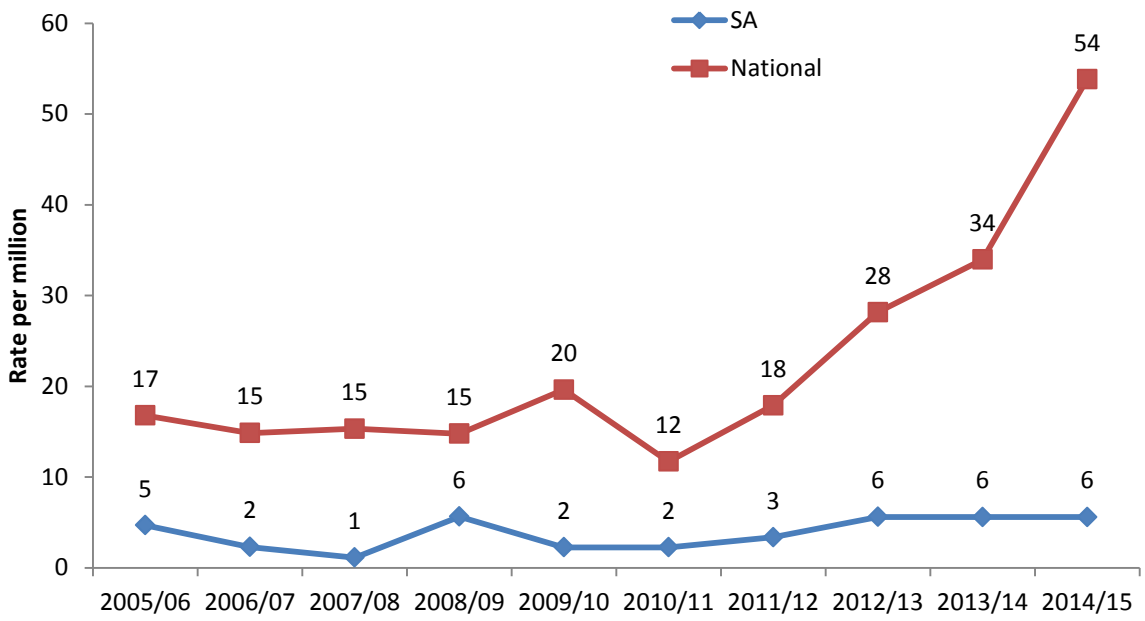


Source: Australian Institute of Health and Welfare; Roxburgh and Breen, 2017
* For persons aged between 15 and 54 years, excluding amphetamine withdrawal and psychosis admissions
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

6.4.1.2 Cocaine-related hospital admissions

Figure 30 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 2014/15 at 6 per million.

Figure 28: Rate of cocaine-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2005/06–2014/15

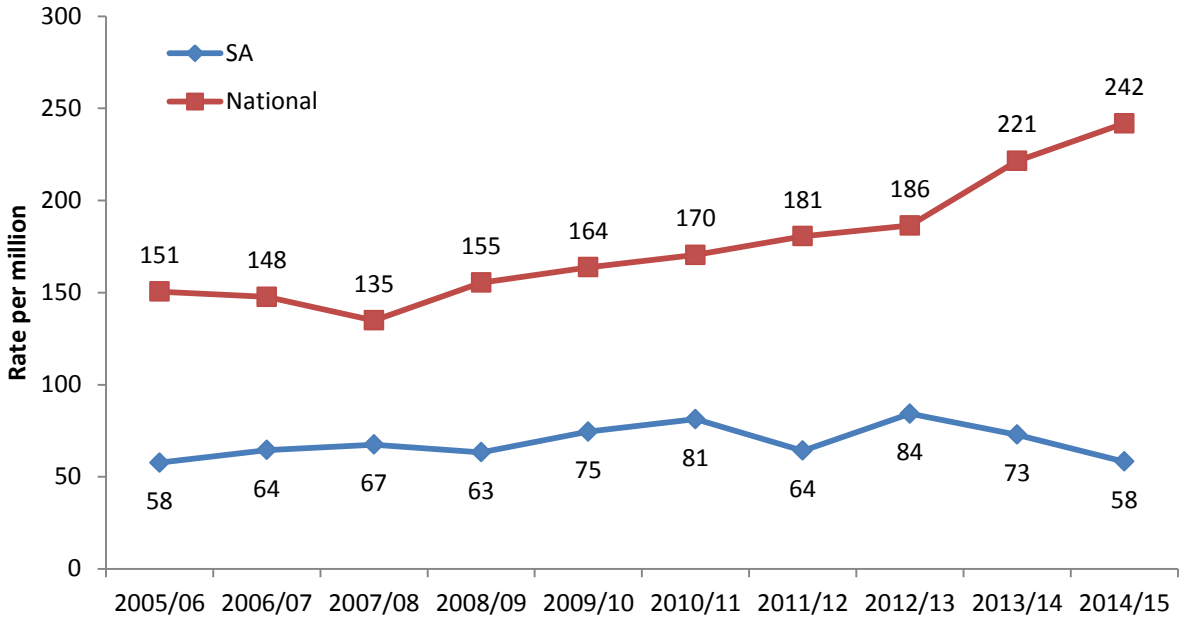


Source: Australian Institute of Health and Welfare; Roxburgh and Breen, 2017
* For persons aged between 15 and 54 years, excluding cocaine withdrawal and psychosis admissions
Note: 'Primary diagnosis' was given to those admissions where the substance was considered the primary reason for the patient's episode of care

6.4.1.3 Cannabis-related hospital admissions

Figure 31 depicts the long-term trend in cannabis-related hospital admissions (primary diagnosis), both nationally and in South Australia from 2005/06 onwards. As can be seen, national rates have been trending upwards over the last decade, while SA rates have remained relatively stable. Interestingly, in 2014/15 the rates of admissions observed at the national level increased slightly (from 221 per million in 2013/14 to 242 per million), while in SA, admissions declined slightly (from 73 per million in 2013/14 to 58 per million). Readers are reminded that this figure does not include cannabis-related psychosis or withdrawal admissions.

Figure 29: Rate of cannabis-related admissions* (primary diagnosis) to hospital in South Australia and nationally, per million people, 2005/06–2014/15



Source: Australian Institute of Health and Welfare; Roxburgh and Breen, 2017
* 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)

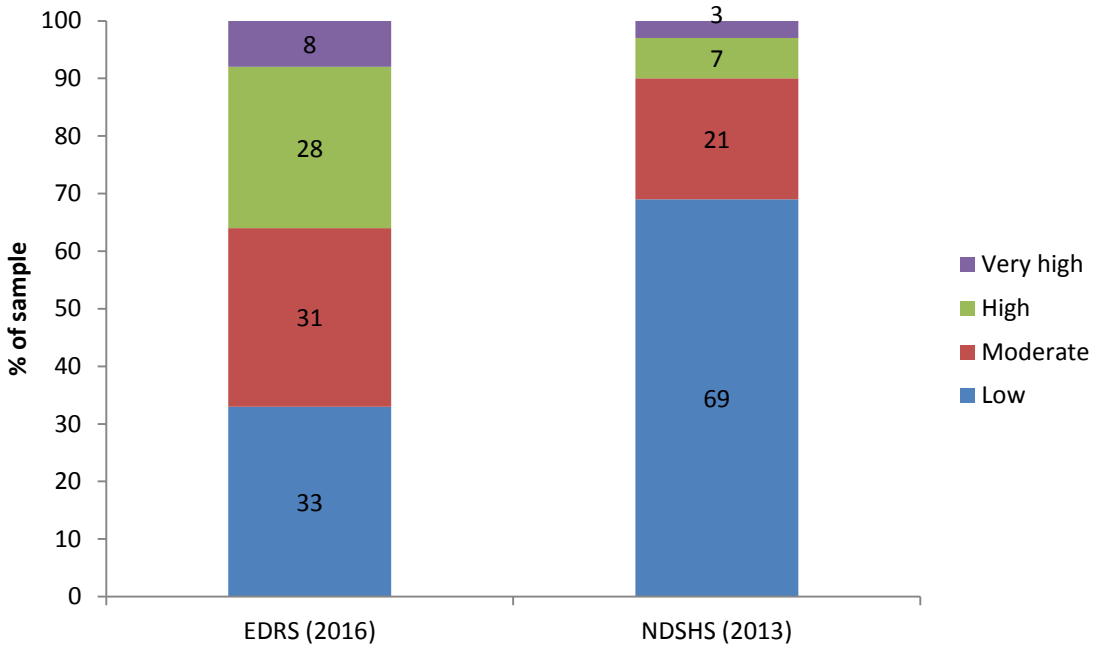
The Kessler Psychological Distress Scale (K10) (Kessler & Mroczek, 1994) was used to give a measure of levels of psychological distress among the participant sample.

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, reflecting recent levels of distress.

Thirty-three participants had scores between 10–15 (low distress) on the K10, which was stable from 2015 (27%). Thirty-one percent of participants scored between 16–21 (moderate distress) (31% in 2015), 28% of participants scored between 22–29 (high distress) (25% in 2015), and 8% scored between 30–50 (very high distress) (17% in 2015) (Figure 30). The median total score for participants was 18 (range=11−44), 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' (28%) or 'very high' (8%) distress was higher (36%) compared to those in the National Drug Strategy Household Survey (10%: high = 7%, very high = 3%).

Figure 30: K10 categories among the EDRS sample (2016) 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 2016, 35% of the sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview; this was stable from 2015 (41%).

Among these participants, the majority reported experiencing depression (69%; n=24) and anxiety (63%; n=22). Smaller numbers reported paranoia (14%; n=5), ADHD (14%; n=5), depression (9%; n=3), panic (9%; n=3), posttraumatic stress disorder (6%; n=2), obsessive compulsive disorder (3%; n=1), any personality disorder (3%; n=1), drug-induced psychosis (3%; n=1), other psychosis (3%; n=1), mania (3%; n=1), or an eating disorder (3%; n=1). Half (51%; n=18) of those who reported suffering from a mental health problem had sought professional help, and 10 participants had been prescribed some form of medication (most commonly antidepressants).

7 RISK BEHAVIOUR

Key Findings

Injecting risk behaviour

- Seven percent of the sample reported having injected at some time in their lives, and one participant reported injecting in the month preceding interview. The median age of first injection was 17 years.
- No participants reported having shared needles or other injecting equipment in the month preceding interview.

Sexual risk behaviour

- Seventy-four 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 (85%) reported doing so while under the influence of drugs and/or alcohol.
- Just over one-third (38%) 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 protection during their last sexual encounter.
- Half of the sample (53%) had received a sexual health check-up in their lifetime, with six participants reporting that they had been diagnosed with an STI in the past year.

Driving risk behaviour

- Eighty-two percent of RPU reported that they had driven a vehicle in the preceding six months, and of these, 28% had driven while over the BAC limit.
- Of those who had driven recently, 50% had done so within three hours of consuming an illicit substance.

Alcohol risk behaviour

- Using the Alcohol Use Disorders Identification Test (AUDIT), the majority of the sample (74%) scored eight or more; indicating hazardous alcohol intake. There were no significant difference between males and females.

Stimulant dependence

- One-quarter (27%) of RPU scored 3 or above on the ecstasy SDS, indicative of problematic dependent ecstasy use.
- Among those who answered the methamphetamine SDS, 31% 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 2016, 7% of the sample (n=7) reported ever injecting any drug and one participant reported having injected in the month prior to interview. The median age of first injection was 17 years (range=14−46 years; n=7), with speed (n=3), crystal methamphetamine (n=2), heroin (n=1) and DMT (n=1) reported as the drugs first injected.

7.1.1 Sharing of needles/syringes and other injecting equipment

In 2016, there were no participants who had shared needles or any other injecting equipment. One participant reported injecting a friend in the past month (with a new/clean needle).

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. '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 44 summarises the reports of recent sexual activity and condom use with casual partners. Seventy-four percent of the sample reported having casual sex with at least one casual partner in the six months preceding interview. Twenty percent reported having one casual sexual partner during the preceding six months and 54% 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 44, the majority of the sample reported that they had 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=12), participant did not wish to use (n=6), it wasn't mentioned (n=3), agreed not to (n=3), partner did not wish to use (n=1) or lack of availability (n=1).

Table 44: **Prevalence of sexual activity and number of sexual partners in the preceding six months, SA, 2015 & 2016**

	2015	**2016**
No. casual sexual partners (%)	(N=100)	**(N=100)**
No casual partner	33	**26**
1 person	16	**20**
2 people	13	**16**
3−5 people	29	**28**
6−10 people	5	**8**
10 or more	4	**2**
Use of protection during last sexual encounter with casual partner when sober* (%)	(n=66)	**(n=74)**
Yes	50	**60**
No	30	**35**
Not applicable	20	**5**

Source: EDRS participant interviews
*Among those who had had casual sex

7.2.2 Drug use during sex

Table 45 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 (85%) 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 (86%) of these participants reported doing so on multiple occasions, with 21% 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 (75%), followed by ecstasy (64%), and cannabis (35%) (see Table 45).

About two-thirds of participants (62%) 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 one-third (38%) reported that they had not used protection. The main reasons for *not* using protection while on drugs included: using a contraceptive pill (n=7), participant did not wish to (n=5), partner did not wish to (n=3), agreed not to (n=3), it wasn't mentioned (n=3), or too intoxicated (n=1).

Table 45: Drug use during sex with a casual partner in the preceding six months, SA, 2015 & 2016

	2015 n=67	**2016** **n=74**
Penetrative sex with casual partner while on drugs (%)[*,#]	88	**85**
No. times had sex while on drugs with casual partner (%)	n=59	**n=63**
Once	19	**14**
Twice	25	**10**
3−5 times	27	**38**
6−10 times	14	**18**
Eleven +	15	**21**
Drugs used during last sexual episode	n=59	**n=63**
Ecstasy	58	**64**
Alcohol	76	**75**
Cannabis	39	**35**
Methamphetamine – powder	2	**2**
Methamphetamine – base	0	**2**
Methamphetamine – crystal	14	**6**
Cocaine	5	**14**
LSD	3	**5**
Ketamine	0	**0**
MDA	0	**5**
Amyl nitrite	0	**8**
Nitrous oxide	0	**0**
GHB	0	**2**
Pharmaceutical stimulants	0	**2**
NBOMe	2	**0**
Benzodiazepines	2	**2**
Use of protection during last sexual encounter with casual partner under influence of drugs (%)[#]	n=59	**n=63**
Yes	49	**62**
No	51	**38**

Source: EDRS participant interviews

[*] In the six months preceding interview

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

7.2.3 Sexual health

Half of the sample (53%) reported having had a sexual health check-up within their lifetime, and of these participants 21% had ever been diagnosed with an STI (Table 46). Six participants reported being diagnosed with an STI in the past year.

Table 46: Sexual health check-ups and diagnosis, SA, 2015 & 2016

	2015	2016
Sexual health check-up (lifetime) %	**(n=100)**	**(n=100)**
No	**36**	**47**
Yes (last year)	**50**	**41**
Yes (>year ago)	**14**	**12**
Diagnosed with STI[#] %	**(n=64)**	**(n=53)**
No	**78**	**79**
Yes, in last year	**6**	**11**
Yes, >year ago	**16**	**9**
Don't know/didn't get result	**0**	**0**

Source: EDRS participant interviews
[#] Of those who had ever had a sexual health check up

7.3 Driving risk behaviour

Eighty-two percent of RPU reported that they had driven a vehicle in the preceding six months. Among those who had driven in the past six months, 28% reported that they had driven while over the legal limit of alcohol and 50% had driven within three hours of taking an illicit substance (Table 47).

Table 47: Recent occurrence of driving following drug use, SA, 2015 & 2016

% of recent drivers	2015 (n=89)	2016 (n=82)
Driven over the limit for alcohol[*]	**36**	**28**
Driven after taking any illicit drug[*#]	**60**	**50**

Source: EDRS participant interviews
[*] In the six months preceding interview
[#] In 2016, the wording of this question was changed to 'have you driven within three hours of taking illicit drug(s) in the last six months'?

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 ninth 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 48 presents an overview of the AUDIT scores. The overall mean score on the AUDIT was 11.2 (range=0−26; SD=5.7), and there were no significant differences in AUDIT scores for male and female participants. Seventy-four 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 2016, 26% scored in Zone 1 (low-risk drinking or abstinence), 51% scored in Zone 2 (alcohol use in excess of low-risk guidelines), 13% 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 2015.

Table 48: AUDIT total scores and proportion of RPU scoring above recommended levels indicative of hazardous alcohol intake, SA, 2015 & 2016

	2015	**2016**
Mean AUDIT total score	13.1	**11.2**
SD	5.3	**5.7**
(range)	(3−27)	**(0−26)**
Score 8 or above (%)	81	**74**
Zone 1	19	**26**
Zone 2	48	**51**
Zone 3	23	**13**
Zone 4	10	**10**

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 (Degenhardt, Bruno & Topp, 2010).

To date, internationally, there have been a small number of studies of rates of dependence in ecstasy users. Studies from the US household survey suggest a prevalence rate of past-year dependence in approximately 3.6−3.8% of ecstasy users in the general population. An early NDARC study suggests a lifetime prevalence rate of 64% in similar types of 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 2011−16, participants of the EDRS have been asked questions from the Severity of Dependence Scale (SDS) adapted to investigate ecstasy dependence. In 2015−16, 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 were used to examine dependence. . 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, 27% 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). Sixteen percent of RPU participants scored 4 or above. There were no significant gender differences among those who scored 3 or above; however females were significantly more likely to score 4 or above (26% versus 10% for males; p=0.035).

The median SDS score was 1 (range=0−9). One-third of the sample (34%) obtained a score of zero on the ecstasy SDS, and 20% 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.

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=36), 31% 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 1.5 (range=0−10).

8 Law Enforcement-Related Trends Associated with Ecstasy Related Drug Use

Key Findings

- In 2016, the proportion of participants who had engaged in a criminal offence in the month prior to interview remained stable at 44%.
- Drug dealing remained the most commonly reported crime (38%), followed by property crime (10%).
- Nine percent of RPU reported that they had been arrested in the past year, which was stable from 2015.
- In 2014/15, arrests made by SA police increased slightly for amphetamine-type stimulants, decreased slightly for cannabis and remained stable for cocaine. The number of Cannabis Expiation Notices issued in SA remained stable at 9,191.

8.1 Reports of criminal activity among RPU

Table 49 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 2012–16. In 2016, 44% of participants reported involvement in some type of crime in the month prior to interview, which was stable from 2015. 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 49: Criminal activity in the month prior to interview, as reported by participants, SA, 2012–2016

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	**2016 (N=100)**
Criminal activity in last month:					
Property crime	16	7	19*	10	**10**
Drug dealing	28	22	29	32	**38**
Fraud	1	3	1	2	**2**
Violent crime	7	4	3	5	**7**
Any crime	45	32	43	37	**44**
Arrested in last 12 months	15	11	5	12	**9**
Ever in prison	7	3	4	2	**2**

Source: EDRS participant interviews
*$p<0.05$

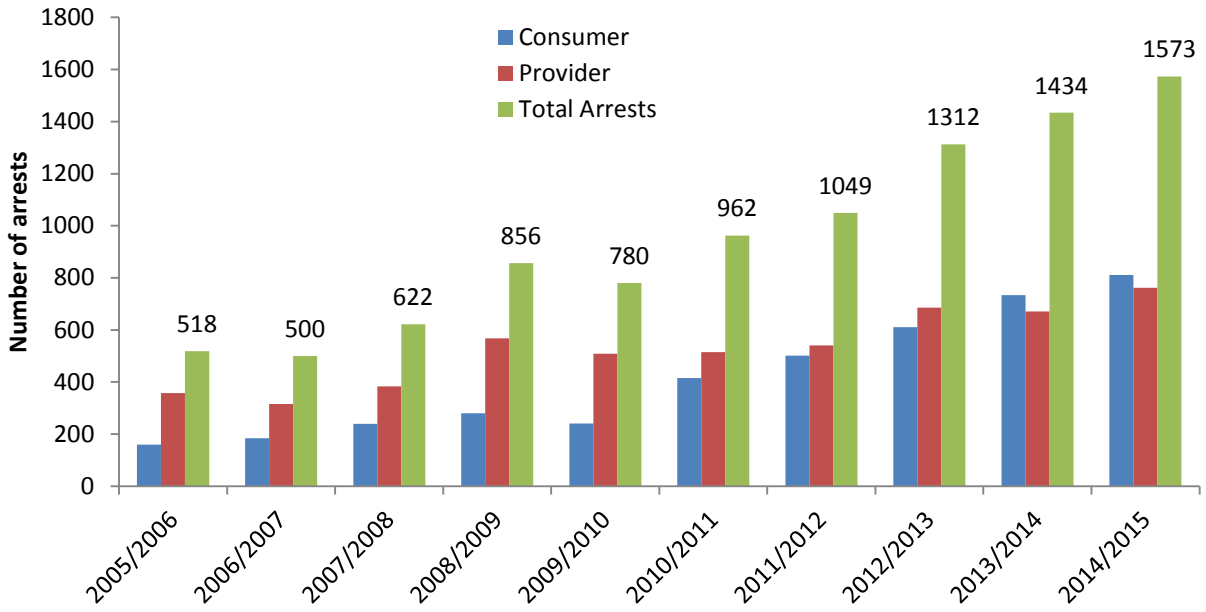
8.2 Arrests

Nine percent of RPU reported that they had been arrested within the last 12 months. The reasons for arrest were varied and included dealing/trafficking (n=3), driving offences (n=2), public order offences (n=2), and use/possession of drugs (n=1).

8.2.1 Amphetamine-type stimulants

Figure 31 presents the number of consumer and provider arrests for amphetamine-type stimulants made in SA between 2005/06 and 2014/15. Amphetamine-type stimulants include amphetamine, methamphetamine and phenethylamines. The ACIC 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 2014/15 (to 1,573), continuing an overall upward trend that has been observed since 2004/05.

Figure 31: Number of amphetamine-type stimulants consumer and provider arrests, SA, 2005/06–2014/15

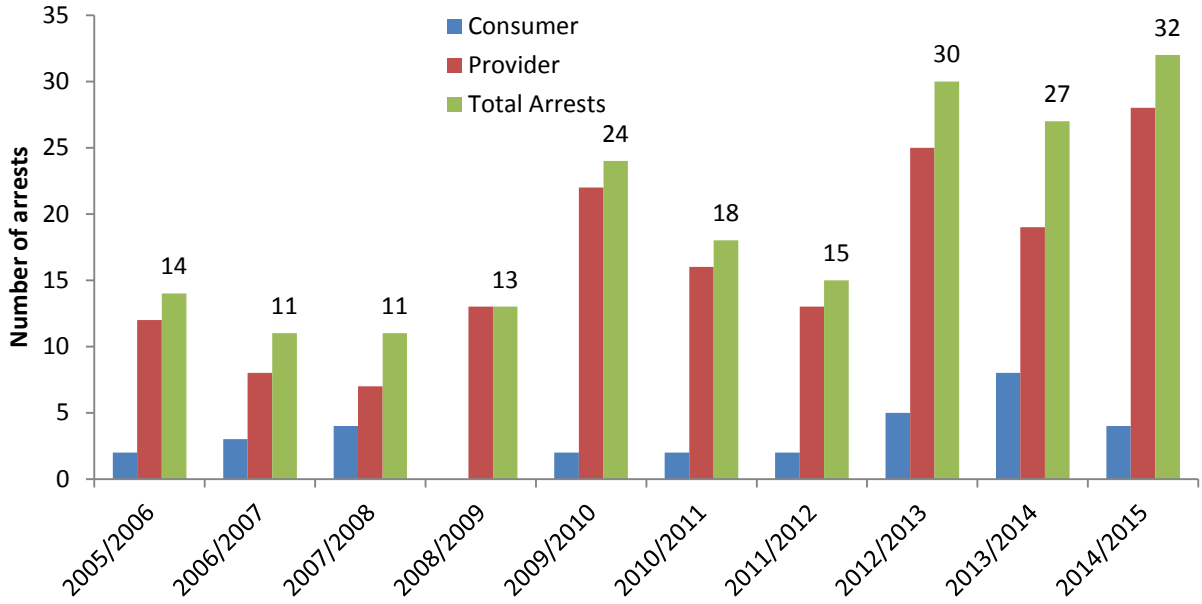


Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016
Note: Data not available for the 2015/16 financial year. Also, total arrests includes those offenders for whom consumer/provider status was not stated and thus may exceed the sum of consumer and provider arrests

8.2.2 Cocaine

Figure 32 presents the number of consumer and provider arrests for cocaine made in SA between 2005/06 and 2014/15. As can be seen, total cocaine-related arrests remained low and stable in 2014/15 (32), particularly when compared to other drug-related arrests.

Figure 32: Number of cocaine consumer and provider arrests, SA, 2005/06–2014/15

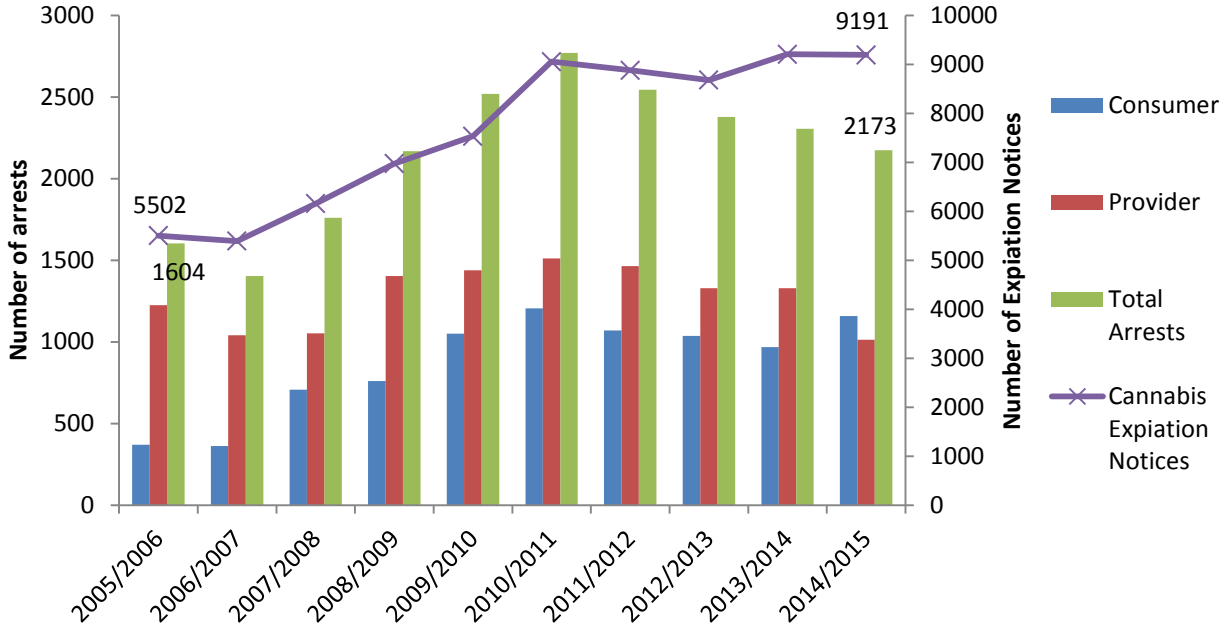


Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016
Note: Data not available for the 2015/16 financial year. Also, total arrests includes those offenders for whom consumer/provider status was not stated and thus may exceed the sum of consumer and provider arrests

8.2.3 Cannabis

Figure 33 presents the number of cannabis consumer and provider arrests in SA from 2005/06 to 2014/15. 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 2016, a higher number of drug-specific arrests were due to consumer-type cannabis offences rather than provider-type cannabis offences. Total cannabis arrests declined slightly in 2014/15, continuing an overall downward trend observed since 2010/11. In contrast, the number of Cannabis Expiation Notices issued appears to have trended upward over the past decade, with 9,191 notices issued in 2014/15.

Figure 33: Number of cannabis consumer and provider arrests, SA, 2005/06–2014/15



Source: Australian Crime Commission, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015; Australian Criminal Intelligence Commission, 2016
Note: Data not available for the 2015/16 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

Key Expert Comments

- One KE reported that the use of encrypted communications, such as encrypted blackberry's and applications like Wickr and Snapchat, had increased over the preceding 12 months. It was noted that there was a "new breed of trafficker" operating on the dark net to import and on-supply a range of substances anonymously; this often included people with little or no criminal history who were technologically competent and relatively high functioning.

9 SPECIAL TOPICS OF INTEREST

Key Findings

NPS supply and purchasing patterns

- Past year NPS consumers largely reported purchasing these substances (74%), however a sizeable minority (37%) had been given them for free.
- Friends were the most common source for obtaining NPS.
- Almost half (48%) of past year NPS consumers reported providing these substances to other people in the preceding year. This was most commonly 'social supply' (i.e. supplying to friends for no cash profit).

Online purchasing

- Twenty-two percent of RPU reported that they had ever purchased a drug online, and 16% 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 ecstasy, LSD and NBOMe.

Gaming/Gambling

- Three-quarters (76%) of RPU reported playing video games in the last six months on a median of 48 days; the median amount of time spent playing video games on a typical day was 60 minutes.
- Over half (55%) of the sample had gambled on a median of four days in the last six months (range=1-90 days).

9.1 NPS supply and purchasing patterns

Over the past decade, the number and range of substances collectively referred to as 'new psychoactive substances' (NPS) has increased dramatically. In 2015, the European Union were monitoring over 560 NPS, of which 70% were detected in the past five years (European Monitoring Centre for Drugs and Drug Addiction, 2016b). The rapid growth of the NPS market has been facilitated by a number of factors, one of which is the expansion of online marketplaces (European Monitoring Centre for Drugs and Drug Addiction, 2016a, 2016c). The expansion of these online drug markets has provided new opportunities for the supply and purchase of drugs, with internet sales of NPS now an international phenomenon and with many shops advertising worldwide delivery (European Monitoring Centre for Drugs and Drug Addiction, 2011).

Despite being readily available online and the widely held perception that most NPS are purchased online, it appears that most consumers do not source NPS in this manner. That is, despite findings that NPS users are *more likely* to purchase drugs online than other drug users (Burns et al., 2014; Van Buskirk et al., 2016), for the most part they appear to obtain these substances from 'in-person' sources such as friends and dealers (e.g. Burns et al., 2014; European Commission, 2014; Stephenson & Richardson, 2014). However, despite potential heterogeneity in the forms of NPS used, many of these studies combine NPS

consumers together into a single category and it is unclear whether differences exist across NPS consumers.

In addition to the direct purchasing of NPS for personal use, it is likely that the internet plays a role in practices of 'social supply' (i.e. the non-commercial or non-profit-making distribution of drugs to non-strangers; Hough et al., 2003 pg. 36) and dealing for cash profit. There are some anecdotal reports of this taking place, however, the overall extent to which this is happening remains unknown.

In order to address these issues, additional questions were included in the 2016 EDRS survey to examine the supply and purchasing patterns of past year NPS consumers. As outlined in Table 50, 45% of the sample reported using a NPS in the last 12 months, most commonly NBOMe and DMT. Past year NPS consumers largely reported purchasing these substances (74%); however a sizeable minority (37%) had been given them for free. The majority (55%) of those who had used a NPS in the last 12 months nominated a friend as their main source, and almost half (48%) reported that they had provided any NPS to others in the preceding year. Among those who had supplied NPS to others, the majority reported supplying these substances to friends (81%) for free (65%).

For more detailed results (including differences in purchasing and supply patterns across NPS consumers), please refer to: Sutherland, R., Barratt, M., Peacock, A., Dietze, P., Breen, C., Burns, L. & Bruno, R. 2017 (In Press). New psychoactive substances: supply and purchasing patterns in Australia. *Human Psychopharmacology: Clinical and Experimental*. 10.1002/hup.2577.

Table 50: Purchasing and supply patterns among past year NPS consumers, SA, 2016

	SA n=100
% used NPS last 12 months	45
% Main NPS used last 12 months	(n=44)
DMT	21
2C-x	9
NBOMe	36
Synthetic cannabinoids	7
PMA	11
Salvia Divinorum	2
Mescaline	2
Other	11
% How obtained substance[#]	(n=43)
Bought it	74
Given for free	37
Exchanged for something other than cash	7
% Main source	(n=44)
Friend	55
Acquaintance	5
Known dealer	9
Unknown dealer	14
Online (dark net)	7
Other	11
% Supplied NPS to others	48
% Who supplied NPS to*[#]	(n=21)
Friends	81
Relatives	0
Acquaintances	10
Strangers	19
% Method of supply*[#]	(n=20)
Gave away for free	65
Shared	30
Provided at cost price	25
Provided for cash profit	25
Exchanged	10

Source: EDRS participant interviews

9.2 Online purchasing

In 2016, the EDRS continued to investigate and monitor the practice of purchasing drugs online among RPU 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. Questions were included to investigate: (1) prevalence of online drug purchasing among the 2016 EDRS sample; (2) motivations for using the internet to purchase substances; (3) patterns of online drug purchasing; and (4) familiarity with the internet as an avenue for purchasing of illicit substances.

In 2016, 22% of RPU reported that they had ever purchased an illicit drug online, with 16% having done so in the previous year. These recent purchases occurred between once and more than five times (see Table 51).

Table 51: Online drug purchasing among RPU, SA, 2015 & 2016

	2015 N=100	**2016 N=100**
Ever purchased drug online? %	12	**22**
Purchased drug online in past year %	12	**16**
How many online purchases of illicit drugs in the past year? %	(n=12)	**(n=16)**
Once	33	**38**
Twice	17	**19**
3–5 times	25	**25**
More than 5 times	25	**19**

Source: EDRS participant interviews

Participants were asked what proportion of their drugs that were purchased online. The majority (69%) reported that less than 25% of their drugs were purchased online. Results are summarised in Table 52.

Table 52: What proportion of drugs were purchased online, SA, 2016

What proportion of all purchased drugs were purchased online? % (n)	**(N=16)**
Less than 25%	69 (n=11)
Between 25% and 49%	6 (n=1)
Between 50% and 74%	13 (n=2)
Between 75% and 99%	13 (n=2)
All (100%)	0

Source: EDRS participant interviews

Of those purchasing from the internet in the past year (n=16), half (n=8; 50%) reported doing so with the intention of supplying or selling to others. More specifically, 25% (n=4) reported that they were purchasing substances online for the purposes of supplying to friends, 13% (n=2) for the purposes of selling for a profit and 13% (n=2) for both supply to friends and for profit.

Purchases of illicit drugs were primarily made from dark net marketplaces similar to the now-closed Silk Road (81%, n=13). If participants had purchased from a dark net marketplace, they were asked to specify whether the retailer they purchased from was Australian (30%, n=3), international (50%, n=5), or both (20%, n=2).

Illicit substances recently purchased online were specified, see Table 53. Twelve participants reported buying a traditional illicit substance online, of which most reported this was ecstasy (n=5), followed by LSD (n=4), methamphetamine (n=3) and cannabis (n=2). Six participants reported purchasing an NPS online, mainly NBOMe (n=4) and DMT (n=2).

Table 53: Illicit substances reportedly purchased online recently, SA, 2016

Online substance purchased %	N=16
'Any' traditional illicit substance	**75**
	N=12
Ecstasy (any form)	31
LSD	25
Cannabis	13
Benzodiazepines	6
Ketamine	6
Methamphetamine (any form)	19
Mushrooms	0
Cocaine	6
'Any' new psychoactive substance	**38**

Source: EDRS participant interviews

All EDRS participants were asked about their level of knowledge of, and familiarity with, the 'dark net' and marketplaces, such as the now-closed Silk Road. Results are outlined in Table 54.

Table 54: Familiarity with the 'dark net', SA, 2016

What is your level of knowledge of the dark net? %	(N=96)
Never heard of the 'dark net'	27
Only heard of the 'dark net' online but never accessed it	30
Researched the 'dark net' but never accessed it	3
Obtained drugs through a friend who purchased them from 'dark net'	16
Accessed 'dark net' marketplaces but never purchased from them	4
Purchased drugs from 'dark net' market places	20

Source: EDRS participant interviews

9.3 Video gaming and gambling

Gambling disorder and internet gaming disorder are two of the most widely researched behavioural addictions (Grant et al., 2010) with the former recognised as a mental health disorder in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (American Psychiatric Association, 2013). Previous research has indicated a co–occurrence of each of these two behavioural addictions with substance use disorders (Sim et al., 2012; Petry et al., 2005).

In 2016, additional questions were added to the EDRS survey to examine the proportions of co-occurring behavioural addictions and substance use disorders among a cohort of regular psychostimulant users. The questions assessed the amount of video gaming/gambling in the last six months and single-item measures of problematic video gaming/gambling use derived from Thomas et al., (2008) for gambling were included. Widyanto et al., (2010) demonstrate a high correlation between a single-item measure for internet addiction and a multiple item questionnaire.

Approximately three-quarters (76%) of the sample reported playing video games in the last six months on a median of 48 days (around twice a week; range=1–180 days). The median amount of time spent playing video games on a typical day was 60 minutes (range 5 mins to 8 hours). Over half (55%) of those who had used video games in the last six months had

done so for one hour or less on a typical day of use. Eighteen percent of those who had played video games in the last six months reported that they had had an issue with video gaming in their lifetime (Table 55).

Participants were also asked questions around gambling. Over half (55%) of the sample had gambled on a median of four days in the last six months (range=1–90 days). Seven percent reported that they had had an issue with gambling in their lifetime (Table 55).

Table 55: Video gaming and gambling in the last six months among RPU, SA, 2016

	SA (n=100)
Video games:	
Played video games in the last six months %	76
Median days played video games (range)*	48 (1–180)
Median minutes spent playing video games on a typical day (range)*	60 (5–480)
Amount of time spent video games on a typical day* %	
% 1 hour or less	55
% More than 1 hour but less than 3 hours	37
% 3 hours or more	8
Ever had an issue with video gaming* %	18
Gambling:	(n=100)
Gambled last six months %	55
Median days gambled (range)*	4 (1–90)
Ever had an issue with gambling* %	7

Source: EDRS participant interviews
*Among those who had played video games/gambled in the past six months

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