South Australia

R. Sutherland

SA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2017
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

Australian Drug Trends Series No. 195

SOUTH AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2017

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Australian Drug Trends Series No. 195

ISBN 978-0-7334-3790-8

Suggested citation: Sutherland, R. (2018). *South Australian Trends in Ecstasy and Related Drug Markets 2017. Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 195. Sydney, National Drug & Alcohol Research Centre, University of New South Wales.

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ACKNOWLEDGEMENTS

In 2017, the EDRS (formerly known as the Party Drugs Initiative, or PDI) was funded by the Australian Government Department of Health, and was coordinated by the National Drug and Alcohol Research Centre (NDARC). The EDRS team would like to thank the Australian Government Department of Health for their continued assistance with and support of the EDRS.

The authors would like to thank Professor Alison Ritter, Associate Professor Lucinda Burns, Dr Courtney Breen and Jenny Stafford for their support and guidance, as well as all the researchers and research institutions that contributed to the information presented in this report. In 2017, the EDRS team included:

- Ms Kerryn Butler, Ms Rachel Sutherland, Ms Antonia Karlsson, Ms Julia Uporova, Ms Courtney O'Donnell, Dr Courtney Breen, Professor Alison Ritter and Associate Professor Lucinda Burns, National Drug and Alcohol Research Centre, University of New South Wales;
- Dr Caroline Salom and Professor Rosa Alati, School of Public Health, The University of Queensland;
- Ms Bethany Lusk, Dr Allison Matthews, Dr Amy Peacock and Associate Professor Raimondo Bruno, School of Medicine, University of Tasmania;
- Mr Arthur Truong and Professor Paul Dietze, Burnet Institute, Victoria; and
- Ms Marina Nelson and Professor Simon Lenton, National Drug Research Institute, Curtin University, Western Australia.

We would like to acknowledge Nancy White, Robyn Vial, Robert Ali and Karla Heese, the previous SA EDRS coordinators, for their hard work on the project, and Amanda Roxburgh for her help with access and analysis of indicator data.

The authors also wish to acknowledge and thank the following:

- the three research interviewers who conducted the EDRS participant surveys: Elizabeth Fontaine, Amanda Osborn and Amy McQuade;
- the organisations that generously provided us with indicator data or advice where indicator data were not available at the time of publication, including Alcohol and Drug Information Service, Drug and Alcohol Services South Australia, and the Royal Adelaide Hospital.

Finally, the authors wish to thank the 100 participants who took part in the 2017 SA EDRS survey.

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
5-MeO-DMT	5-methoxy-dimethyltryptamine
ADIS	Alcohol and Drug Information Service
AGDH	Australian Government Department of Health
AIHW	Australian Institute of Health and Welfare
A&TSI	Aboriginal and/or Torres Strait Islander
AUDIT	Alcohol Use Disorders Identification Test
BAC	Blood alcohol concentration
BZP	1-Benzylpiperizine(s)
CI	Confidence intervals
DASC	Drug and Alcohol Services Council
DASSA	Drug and Alcohol Services South Australia
DOI	2,5-dimethoxy-4-iodoamphetamine, ‘Death on Impact’
DMT	Dimethyl tryptamine
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
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
IDRS	Illicit Drug Reporting System
K10	Kessler Psychological Distress Scale
LSA	*d*-lysergic acid amide
LSD	*d*-lysergic acid
MDA	3,4-methylenedioxyamphetamine
MDMA	3,4-methylenedioxymethamphetamine / ’ecstasy’
MDPV	Methylenedioxypyrovalerone (Ivory Wave)
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

NPS	New psychoactive substances
OST	Opioid substitution treatment
OTC	Over the counter
PDI	Party Drugs Initiative
PMA	Para-methoxyamphetamine
PPA	Price, purity and availability
RAH	Royal Adelaide Hospital
ROA	Route of administration
SA	South Australia
SEN	Simple Expiation Notice
SD	Standard deviation
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
STI	Sexually transmitted infection
WHO	World Health Organization

GLOSSARY OF TERMS

Binge	Use over 48 hours without sleep
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)	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 eighteenth 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 people who use stimulants regularly, 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 two sources: (a) surveys with people who use stimulants regularly; and (b) the analysis of existing data sources that contain information on ecstasy and related drugs (ERD). The EDRS surveys are not representative of people who use stimulant drugs in the general population. The EDRS sample is 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 people who use stimulants in Adelaide and in regional areas.

Demographic characteristics of participants

- A total of 100 participants were interviewed for the EDRS survey in 2017.
- Participants reported a median age of 20 years, and were predominantly male (60%) and heterosexual (87%).
- The participants interviewed were well educated; two-fifths (40%) had gained post-secondary qualifications, and 52% were current students.
- Eighteen 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 (52%) or renting/owned their own accommodation (44%).
- Demographic characteristics were unchanged from 2016.

Patterns of drug use among participants

- Ecstasy remained the primary drug of choice among participants in 2017.
- There were significant increases in lifetime use of e-cigarettes, methamphetamine powder, MDA, ketamine, nitrous oxide, pharmaceutical stimulants, magic mushrooms and other opiates.
- Similarly, there were significant increases in past six month use of e-cigarettes, ketamine, nitrous oxide, pharmaceutical stimulants, magic mushrooms and other opiates.
- Poly drug use remained common, with participants reporting that they had used an average of ten different drugs in the six months preceding interview.
- Ten participants reported that they had ever injected a drug, which remained stable from 2016.
- Two-fifths (41%) of the sample reported that they had recently binged on ecstasy and/or related drugs, which was stable from 2016. The most commonly used drugs in a binge session were alcohol, tobacco, ecstasy, cannabis, crystal methamphetamine and cocaine.

Ecstasy

Consumption patterns

- The median age of first ecstasy use remained stable at 17-18 years of age (depending on the form of ecstasy being used).
- 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 18 days in the preceding six months, which was stable from 2016 (20 days).
- There was a significant decrease in the percentage of the sample who reported recent use of ecstasy pills; conversely, there were significant increases in recent use of ecstasy powder and capsules. Recent use of MDMA crystal remained stable in 2017.
- 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.

Perceived price, purity and availability

- The prices of all forms of ecstasy remained relatively stable in 2017 (see chapter 5.1 for further details).
- Perceived purity varied across the different forms of ecstasy. Specifically, the current purity of ecstasy pills was perceived as low–medium, the current purity of ecstasy powder was perceived as medium, whilst the current purity of ecstasy capsules and MDMA crystal were perceived as 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.

Methamphetamine

Consumption patterns

- Lifetime and recent use of 'any' methamphetamine remained stable in 2017 (56% and 37% respectively).
- The frequency of 'any' methamphetamine use remained stable in 2017, at a median of five days of use in the past six months.
- Crystal methamphetamine remained the most commonly used form of methamphetamine in the six months preceding interview (26%), followed by powder methamphetamine (19%) and base methamphetamine (11%).
- Median age of first use remained stable for all three forms of methamphetamine.
- Smoking was the most common ROA for crystal and base methamphetamine, whilst snorting was the main ROA for methamphetamine powder.

Perceived price, purity and availability

- The reported last median price of a point of crystal methamphetamine remained stable at $50.
- The perceived purity of crystal methamphetamine was largely considered to be 'high'.
- All participants reported that crystal methamphetamine was 'easy' or 'very easy' to obtain.
- The largest percentage of participants reported obtaining crystal methamphetamine from friends or a known dealer, and it was most commonly obtained at a private home.
- Only a small number of participants were able to report on the PPA of powder (n=6) and base (n=9) methamphetamine; hence results are not presented for these forms of methamphetamine.

Cocaine

Consumption patterns

- The median age of first cocaine use was 18 years.
- Lifetime and past six month use of cocaine remained stable at 77% and 60% respectively.
- Frequency of cocaine use remained low and stable.

Perceived price, purity and availability

- In 2017, the median price of cocaine remained relatively stable at $300 per gram.
- The purity of cocaine was perceived as medium.
- The current availability of cocaine was largely perceived as 'easy' or 'very easy' to obtain, with a significant decrease in those who reported that it was 'difficult' to obtain. Among those who could comment, the largest percentage reported that cocaine had become easier to obtain in the six months preceding interview.
- Among those who could comment, most purchased cocaine from a friend, and it was most commonly obtained at a private home.

LSD

Consumption patterns

- The median age of first LSD use was 17, stable from 2016.
- Lifetime and recent use of LSD remained stable at 56% and 36% respectively. Frequency of use also remained stable in 2017, at a median of three days in the past six months.
- The amount used in a typical and heavy session remained relatively stable.
- All participants reported swallowing LSD, with no other ROA reported.

Perceived price, purity and availability

- The median price of LSD remained relatively stable at $20 for a tab.
- Reports regarding the perceived purity of LSD were mixed, with 44% of those able to comment reporting that the current purity of LSD was high and 32% reporting that it was medium.
- The majority of those able to answer (64%) reported that it was 'easy' or 'very easy' to obtain LSD; this was stable from 2016.
- Participants generally bought LSD from friends and obtained it from a friend's home.

Ketamine

Consumption patterns

- Three-fifths (60%) of the sample reported lifetime use of ketamine and 48% reported use in the six months preceding interview, both of which were significant increases from 2016 (see Table 2).
- The frequency of use remained low at a median of two days in the six months prior to interview.
- Snorting was the main ROA reported by participants who had recently used ketamine (92%).

Perceived price, purity and availability

- In 2017, the median price of ketamine was $250 per gram, and this was largely reported to have remained stable in the six months preceding interview.
- The purity of ketamine was perceived as high or medium.
- Reports regarding the perceived availability of ketamine were mixed, with almost equal percentages of those able to answer reporting that it was easy/very easy or difficult/very difficult to obtain.
- Among those who could comment, most purchased ketamine from a friend, and it was most commonly obtained at a private home.

Cannabis

Consumption patterns

- Median age of first use was stable in 2017, with the majority of participants having first used cannabis at 15 years of age.
- Prevalence of cannabis use remained high, with 100% of participants reporting lifetime use and 89% reporting use in the preceding six months.
- Frequency of use remained stable at a median of 72 days (approximately three times a week).
- Smoking remained the primary ROA, however there were significant increases in both swallowing and inhaling (using a vaporiser) as reported routes of administration.
- On the last occasion of use, cannabis users reported using a median of 3 cones or one joint. This was stable from 2016.
- The majority of cannabis users reported using in their own home or at a friend's home.

Perceived price, purity and availability

- The price reported for hydro and bush cannabis remained stable at $25 for a bag.
- The purity of hydro cannabis was reported as high, with a significant decrease in the percentage who reported it as medium. The largest percentage of participants able to comment reported that the purity of hydro had fluctuated in the last six months, which was a significant increase from 2016.
- The purity of bush cannabis was largely reported as medium, and this was reported to have remained stable in the six months preceding interview.
- Availability was reported as easy or very easy, and this had reportedly remained stable over the preceding six months.
- Participants generally bought cannabis from a known dealer, and obtained it from a private home.

New psychoactive substances (NPS)

- For the eighth year running, participants in 2017 were asked about their use of a range of NPS).
- Lifetime and recent of 'any' NPS remained relatively stable in 2017, at 63% and 38% respectively.
- There were significant increases in both lifetime and recent use of DMT.
- The most commonly used NPS in the six months preceding interview were DMT, 2CB and NBOMe.

Other drugs

GHB

- Twenty percent of the sample reported lifetime use of GHB and 9% reported use in the six months preceding interview (both stable from 2016).
- Recent users of GHB reported using on a median of one day (range=1−24 days).

MDA

- Thirty percent of the sample reported lifetime use of 3,4-methylenedioxyamphetamine (MDA), which was a significant increase from 2016 (17%; see Table 2).
- Fourteen percent of the sample reported using MDA on a median of 2.5 days in the past six months, both of which remained stable from 2016.

Inhalants

- In 2017, 61% of participants reported that they had ever used nitrous oxide, and 45% reported past six-month use, both of which were significant increases from 2016 (see Table 2).
- Frequency of use remained stable at a median of six days in the past six months.
- Sixty-one percent of the sample reported lifetime use of amyl nitrite, and 42% reported use in the preceding six months, both of which were stable from 2016.
- Frequency of use also remained stable, at a median of five days in the six months preceding interview.

Mushrooms

- Sixty-one percent of the sample reported lifetime use of mushrooms and 26% reported use in the six months preceding interview, both of which were significant increases from 2016 (see Table 2).
- Frequency of use remained low and stable at a median of two days in the six months preceding interview.

Capsule (contents unknown)

- Twenty-six percent of the sample reported lifetime use of a capsule with unknown contents and 11% reported use in the six months preceding interview, both of which remained stable from 2016.
- Frequency of use was low, with participants reporting that they had used a capsule with unknown contents on a median of one day in the preceding six months.

Alcohol

- In 2017, the median age at which participants reported first using alcohol was 14 years.
- Almost the entire sample reported lifetime (100%) and recent use (99%) of alcohol, with participants reporting that they had used alcohol on a median of 40 days in the past six months (range=2−180).

Tobacco

- The median reported age of first use of tobacco was stable in 2017, at 15 years.
- Ninety-four percent of the sample reported lifetime use of tobacco and 87% reported use in the six months preceding interview, both remaining stable from 2016.
- Frequency of tobacco use remained high and stable at a median of 180 days in the previous six months; this continues to greatly exceed the daily smoking prevalence rate in the general SA population aged 14 years and over.

E-cigarettes

- Over four-fifths (84%) of the sample reported they had used electronic cigarettes within their lifetime, and almost half (49%) reported past six-month use, both of which were significant increases from 2016 (see Table 2).
- Frequency of use remained stable at a median of three days (range=1−90) in the preceding six months.

Dextromethorphan (DXM)

- Fifteen percent of the sample reported lifetime use of DXM and 4% reported recent use, both of which remained stable from 2016.
- Frequency of use was low at a median of 2.5 days in the preceding six months.

Pharmaceutical drugs

- There were significant increases in lifetime use of illicit pharmaceutical stimulants, OTC codeine, OTC stimulants and other illicit opiates (see Table 2 or chapter 4.7 for further details).
- Similarly, there were significant increases in past six-month use of illicit pharmaceutical stimulants, and other illicit opiates.
- Lifetime and recent use of illicit benzodiazepines remained relatively common (and stable) in 2017.
- Use of other opioids (i.e. methadone, buprenorphine, heroin) and other illicit pharmaceutical drugs (i.e. antidepressants, antipsychotics) remained low and stable in 2017.

Steroids

- Four participants reported lifetime use of steroids, and one participant reported using steroids in the preceding six months.

Health-related issues

Overdose

- Two-fifths of the sample (40%) self-reported that they had overdosed on a stimulant drug and 20% reported that they had overdosed on a depressant drug in the past 12 months.

Health service use

- The majority of participants (86%) reported accessing a health service (for any reason) in the preceding six months, 28% had accessed a health service for drug and/or alcohol support, and an additional 23% 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, whilst increasing for alcohol and amphetamines.
- Alcohol dominated as the primary drug of concern for the largest percentage 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 half (55%) of the sample were assessed as having high to very high levels of psychological distress in 2017, which was a significant increase from 2016 (36%).
- Fifty-eight percent of the sample reported that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview, which was a significant increase from 2016. Among these participants, the majority reported experiencing anxiety and depression.

Risk behaviour

Injecting risk behaviour

- Ten percent of the sample reported having injected at some time in their lives, and two participants reported injecting in the month preceding interview. The median age of first injection was 19 years.

Sexual risk behaviour

- Sixty-nine percent of participants 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 (94%) reported doing so while under the influence of drugs and/or alcohol.
- Just over half (51%) of those who had had casual sex while under the influence of drugs and/or alcohol in the past six months reported that they had not used protection during their last sexual encounter.
- Three-fifths of the sample (59%) had received a sexual health check-up in their lifetime, with eleven participants reporting that they had been diagnosed with an STI in the past year.

Driving risk behaviour

- Eighty-one percent of the sample reported that they had driven a vehicle in the preceding six months, and of these, 34% had driven while over the BAC limit.
- Of those who had driven recently, 53% had done so within three hours of consuming an illicit substance, most commonly cannabis.

Alcohol risk behaviour

- Using the Alcohol Use Disorders Identification Test (AUDIT), the majority of the sample (83%) scored eight or more; indicating hazardous alcohol intake. There was no significant difference between males and females.

Stimulant dependence

- One-quarter (25%) of the sample scored 3 or above on the ecstasy SDS, indicative of problematic dependent ecstasy use.
- Among those who answered the methamphetamine SDS, 39% obtained a score of 4 or above, indicative of amphetamine dependence.

Law enforcement-related trends

- In 2017, the percentage of participants who had engaged in a criminal offence in the month prior to interview remained stable at 43%.
- Drug dealing remained the most commonly reported crime (42%), followed by property crime (10%).
- Four percent of the sample reported that they had been arrested in the past year, and one participant reported lifetime prison history; this was stable from 2016.

Special topics of interest

Online marketplaces

- Twenty-seven percent of the sample reported that they had ever purchased a drug online, and 22% 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 drug purchased online was ecstasy, which increased significantly from 2016. Conversely, there was a significant decrease in the percentage of the sample who had purchased NPS online.
- There was a significant decrease in the percentage of the sample who had never heard of the dark net, and an inverse increase in those who had obtained drugs through a friend who purchased them from the dark net.

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 2017 South Australian EDRS were to:

- describe the characteristics of a sample of people who use stimulants regularly in Adelaide in 2017;
- 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 2016 EDRS.

2 METHOD

In order to document emerging trends in the illicit drug market, this report presents data from two sources:

- face-to-face interviews with people who use stimulant drugs regularly in the Adelaide metropolitan area;
- an examination of existing, current indicator data relating to drug use and drug-related issues.

In 2017, results from key expert interviews are not presented.

2.1 Survey of people who use stimulants regularly

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 people who use ERD 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 third most commonly used illicit drug after cannabis and cocaine (Australian Institute of Health and Welfare, 2017). 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 2017, a total of 100 participants were interviewed from March to April. Despite the expansion of the eligibility criteria, there were only five participants who had not used ecstasy regularly in accordance with recent ecstasy use criteria. That is, the 2017 EDRS results still comprise a large amount of data from people who use ecstasy regularly.

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, 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 consumers conducted by NDARC in 1997 (Topp et al., 1998; Topp et al., 2000), which incorporated items from a number of previous NDARC studies of consumers 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 online purchasing.

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 Other indicators

To complement and validate data collected from the face-to-face surveys, a range of secondary data sources were utilised, including population surveys and other health 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, 2013 and 2016 (reports published by the Australian Institute of Health and Welfare);

- drug-related admissions to the Emergency Department (ED) of the Royal Adelaide Hospital (RAH), provided by the Emergency Department;

3 DEMOGRAPHICS

Key Findings

- A total of 100 participants were interviewed for the EDRS survey in 2017.
- Participants reported a median age of 20 years, and were predominantly male (60%) and heterosexual (87%).
- The participants interviewed were well educated; two-fifths (40%) had gained post-secondary qualifications, and 52% were current students.
- Eighteen 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 (52%) or renting/owned their own accommodation (44%).
- Demographic characteristics were unchanged from 2016.

3.1 Overview of the EDRS sample

3.1.1 Demographic characteristics of the EDRS sample

In the 2017 EDRS, 100 participants were interviewed in South Australia. Twenty-four percent of the EDRS sample reported they had participated in previous years (1% in 2010; 6% in 2014; 11% in 2015; 12% in 2016). No participants reported participating in a previous SA IDRS survey of people who inject drugs.

In 2017, three-fifths (60%) of the sample interviewed were male. The median age of the sample was 20 years (range=17−32). The majority of participants reported their sexual identity as heterosexual (87%), and nominated English as their main language (98%). Four participants were of Aboriginal and/or Torres Strait Island (A&TSI) descent.

Two-thirds (65%) of the sample reported that they were of single status, 29% had a regular partner and six participants reported to be married or living in a de facto relationship. About half (52%) lived in their parent's or family's home and two-fifths (44%) lived in their own (owned or rented) accommodation.

The median number of years of school education completed by the sample was 12 (range=7−12), with over two-thirds (69%) of participants reporting that they had completed year 12. Two-fifths (40%) had completed courses after school, with 14% having completed a university degree and 26% a trade/technical qualification. Eighteen percent of participants were employed on a full-time basis, 16% were employed on a part-time/casual basis, 52% were currently students (16% full-time, 3% part-time, 33% were employed and studying) and 7% were currently unemployed. The median weekly income was $400.

Table 1 presents key demographic characteristics across time. The demographic characteristics of participants recruited for the EDRS have remained relatively stable between 2013 and 2017, although there has been a downward trend in the percentage of the sample that identified as male. Demographic comparisons between the 2016 sample and 2017 sample showed no significant changes.

Table 1: Demographic characteristics of EDRS sample, SA, 2013–2017

Characteristic	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Age (median in years)	21	21	20	19	**20**
(range)	(16−44)	(17−53)	(17−43)	(17–47)	**(17–32)**
Sex (% male)	75	62	58	61	**60**
Sexual Identity (%)					
Heterosexual	85	80	89	80	**87**
Gay male	1	2	0	4	**1**
Lesbian	6	9	3	1	**1**
Bisexual	7	7	5	13	**11**
Other	1	2	3	2	**0**
English main language spoken at home (%)	98	97	96	96	**98**
Aboriginal and/or Torres Strait Islander (%)	2	1	2	1	**4**
Employment (%)					
Not employed	13	10	17	10	**7**
Full-time	23	15	17	23	**18**
Part-time/casual	28	27	28	24	**16**
Full-time student	6	10	7	12	**16**
Part-time student	1	0	2	1	**3**
Both studying & employed	26	36	26	26	**33**
Home duties	0	0	0	0	**0**
Other	3	2	3	3	**7**
School education (median in years)	12	12	12	12	**12**
(range)	(10−12)	(9−12)	(9−12)	(9−12)	**(7−12)**
Tertiary education (%)					
None	51	69	56	56	**60**
Trade/Technical	25	19	37	27	**26**
University/College	24	12	7	17	**14**

Source: EDRS participant interviews

4 CONSUMPTION PATTERN RESULTS

Key Findings

- Ecstasy remained the primary drug of choice among participants in 2017.
- There were significant increases in lifetime use of e-cigarettes, methamphetamine powder, MDA, ketamine, nitrous oxide, pharmaceutical stimulants, magic mushrooms and other opiates.
- Similarly, there were significant increases in past six month use of e-cigarettes, ketamine, nitrous oxide, pharmaceutical stimulants, magic mushrooms and other opiates.
- Poly drug use remained common, with participants reporting that they had used an average of ten different drugs in the six months preceding interview.
- Ten participants reported that they had ever injected a drug, which remained stable from 2016.
- Two-fifths (41%) of the sample reported that they had recently binged on ecstasy and/or related drugs, which was stable from 2016. The most commonly used drugs in a binge session were alcohol, tobacco, ecstasy, cannabis, crystal methamphetamine and cocaine.

4.1 Drug use history and current drug use

In 2017, 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 percentage of our sample 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 percentage reporting lifetime and recent use of alcohol and tobacco. 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 consistent over the years.

EDRS participants are often described as poly drug users and the 2017 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 13 drug types in their lifetime (range=6–26) and a mean of ten in the preceding six months (range=4–18). 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'.

[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 (illicit only), 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 participants, SA, 2013–2017

	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Alcohol					
Ever used (%)	100	100	100	99	**100**
Used last six months (%)	97	100	100	98	**99**
Cannabis					
Ever used (%)	94	98	99	100	**100**
Used last six months (%)	85	87	92	97	**89**
Tobacco					
Ever used (%)	84	92	94	95	**94**
Used last six months (%)	75	82	86	84	**87**
E-cigarettes[#]					
Ever used (%)	–	64	74	62	**84*** **
Used in last six months (%)	–	54	50	34	**49***
Meth. powder (speed)					
Ever used (%)	47	40	30	23	**41****
Used last six months (%)	21	13	11	12	**19**
Meth. base					
Ever used (%)	15	18	15	15	**24**
Used last six months (%)	11	10	6	3	**11**
Crystal meth. (ice/crystal)					
Ever used (%)	37	35	37	42	**37**
Used last six months (%)	28	20	26	33	**26**
Cocaine					
Ever used (%)	58	68	65	77	**77**
Used last six months (%)	35	45	45	57	**60**
LSD					
Ever used (%)	51	63	51	49	**56**
Used last six months (%)	25	35	37	30	**36**
MDA					
Ever used (%)	9	10	17	17	**30***
Used last six months (%)	3	3	8	12	**14**
Ketamine					
Ever used (%)	28	27	22	20	**60*****
Used last six months (%)	6	4	4	15	**48*****
GHB/1,4B/GBL					
Ever used (%)	12	11	7	16	**20**
Used last six months (%)	5	3	4	9	**9**

[#] first included in 2014
*p<0.05; **p<0.01; ***p<0.001

Table 2: Lifetime and recent use of drugs among participants, SA, 2013–2017 (continued)

	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Amyl nitrite					
Ever used (%)	30	25	46	68	**61**
Used last 6 months (%)	14	7	29	54	**42**
Nitrous oxide					
Ever used (%)	48	33	33	40	**61****
Used last 6 months (%)	17	8	16	26	**45****
Unknown capsule					
Ever used (%)	12	14	21	24	**26**
Used last 6 months (%)	8	6	9	15	**11**
Benzodiazepines#					
Ever used (%)	59	40	58	60	**71**
Used last 6 months (%)	29	22	37	44	**55**
Antidepressants^					
Ever used (%)	20	22	32	11	**13**
Used last 6 months (%)	9	6	20	5	**6**
Pharmaceutical stimulants#					
Ever used (%)	43	38	45	38	**66*****
Used last 6 months (%)	25	22	26	29	**47***
Mushrooms					
Ever used (%)	54	57	57	36	**61*****
Used last 6 months (%)	19	22	19	7	**26*****
Heroin					
Ever used (%)	9	5	3	5	**7**
Used last 6 months (%)	3	2	1	2	**3**
Methadone#					
Ever used (%)	6	3	0	3	**5**
Used last 6 months (%)	0	1	0	1	**2**
Buprenorphine#					
Ever used (%)	2	5	0	0	**3**
Used last 6 months (%)	0	3	0	0	**1**
Other Opiates#					
Ever used (%)	35	31	37	45	**65****
Used last 6 months (%)	10	11	21	27	**47****

Source: EDRS participant interviews

Includes both licit and illicit use

^ From 2012–2015, figures include both licit and illicit use. In 2016 and beyond, we asked about 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 2016, there were a number of significant changes in consumption patterns in 2017. These included:

- higher lifetime (41%; 23% in 2016; $p=0.009$; 95% CI: -0.30, -0.05) use of methamphetamine powder and MDA (30%; 17% in 2016; $p=0.045$; 95% CI: -0.24, -0.01);

- higher lifetime (84%; 62% in 2016; p<0.001; 95% CI: -0.33, -0.10) and recent use (49%; 34% in 2016; p=0.045; 95% CI: -0.28, -0.01) of e-cigarettes;
- higher lifetime (60%; 20% in 2016; p<0.001; 95% CI: -0.51, -0.27) and recent use (48%; 15% in 2016; p<0.001; 95% CI: -0.44, -0.20) of ketamine;
- higher lifetime (61%; 40% in 2016; p=0.005; 95% CI: -0.34, -0.07) and recent use (45%; 26% in 2016; p=0.008; 95% CI: -0.31, -0.06) of nitrous oxide;
- higher lifetime (66%; 38% in 2016; p<0.001; 95% CI: -0.40, -0.14) and recent use (47%; 29% in 2016; p=0.013; 95% CI: -0.31, -0.05) of pharmaceutical stimulants;
- higher lifetime (61%; 36% in 2016; p<0.001; 95% CI: -0.38, -0.11) and recent use (26%; 7% in 2016; p<0.001; 95% CI: -0.29, -0.09) of magic mushrooms; and
- higher lifetime (65%; 45% in 2016; p=0.007; 95% CI: -0.33, -0.06) and recent use (47%; 27% in 2016; p=0.005; 95% CI: -0.32, -0.07) of other opiates.

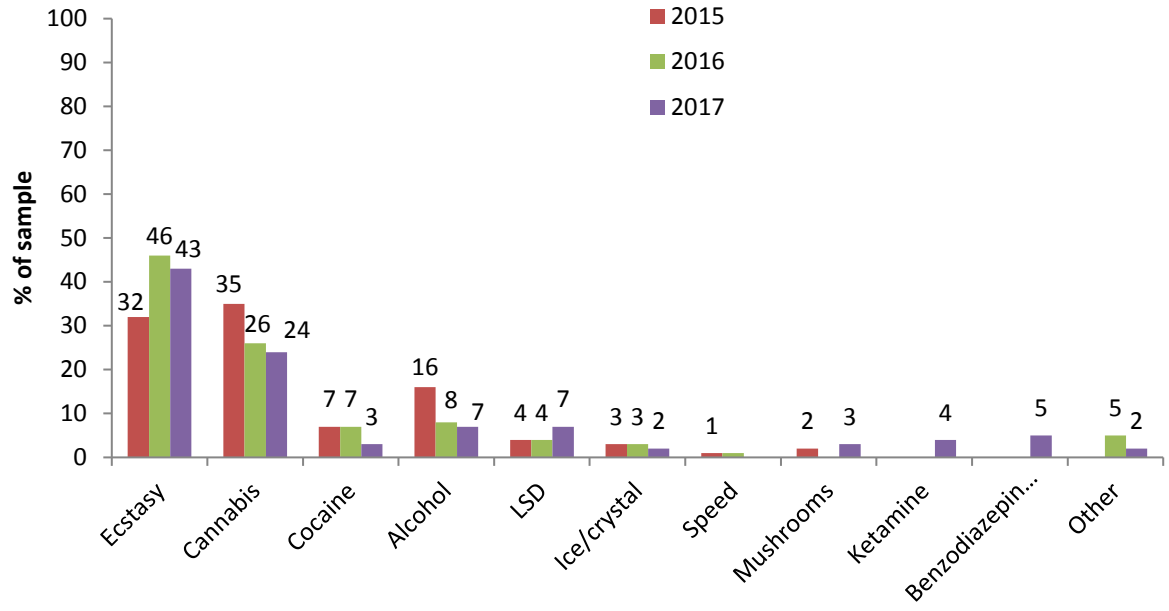
4.1.1 Injecting drug use

In 2017, 10% of the sample reported having ever injected any drug, of which two participants reported injecting in the month prior to interview. This has remained relatively stable from 2016. 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 2015−17. In 2017, ecstasy remained the most common drug of choice (43%), followed by cannabis (24%) and alcohol (7%). This was stable from 2016.

Figure 1: Drug of choice among participants, SA, 2015−2017



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 (41%) of the sample reported bingeing on ERD within the six months prior to interview, which was stable from 2016 (43%). Bingeing occurred on a median of three occasions (range =1−48) with the median length of the longest binge being 72 hours (range=48−392); both of which remained stable from 2016.

In 2017, alcohol and tobacco emerged as the drugs most commonly used in a binge session (35% respectively), followed by ecstasy (29%), cannabis (26%), crystal methamphetamine

(19%) and cocaine (17%). Other drugs that were used in a binge session are listed in Table 3, and remained relatively stable from 2016 (except for nitrous oxide, which increased to 9% in 2017; $p<0.05$).

Table 3: Percentage of participants reporting use of various drugs during a 'binge'[#] episode in the last six months, SA, 2016 & 2017

Drug	Percent of whole sample to include drug in 'binge' episode in the last 6 months	
	2016 (N=100) %	**2017 (N=100) %**
Ecstasy	33	**29**
Meth powder	2	**7**
Meth base	1	**0**
Meth crystal	24	**19**
Pharmaceutical stimulants	1	**0**
Cocaine	12	**17**
LSD	3	**3**
MDA	0	**2**
Ketamine	3	**9**
GHB	0	**2**
Amyl nitrite	1	**3**
Nitrous oxide	1	**9***
Cannabis	26	**26**
Alcohol	26	**35**
<5 standard drinks	8	**8**
>5 standard drinks	18	**27**
Benzodiazepines	2	**6**
Tobacco	26	**35**
Energy drinks	2	**7**
NBOMe	1	**0**
2C-B	0	**0**
DMT	0	**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 2017, 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 11% reporting use on a greater than weekly basis (Table 4).

Table 4: Frequency of ERD use among participants, SA, 2016 & 2017

	2016	**2016**
	N=100 %	**N=100 %**
Not in the last month	0	**1**
Monthly	16	**19**
Fortnightly	36	**38**
Weekly	30	**31**
More than once a week	15	**11**
Once a day	2	**0**
More than once a day	1	**0**

Source: EDRS participant interviews

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.). Forty-nine percent of the sample indicated that there had been some recent changes in drug use, with the primary theme being:

- An increase in drug use. 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 and MDMA crystal), cocaine and ketamine.
- A number of participants also commented on the expansion of online purchasing behaviours.

4.2 Ecstasy use

Key Findings

- The median age of first ecstasy use remained stable at 17-18 years of age (depending on the form of ecstasy being used).
- 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 18 days in the preceding six months, which was stable from 2016 (20 days).
- There was a significant decrease in the percentage of the sample who reported recent use of ecstasy pills; conversely, there were significant increases in recent use of ecstasy powder and capsules. Recent use of MDMA crystal remained stable in 2017.
- 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

The entire sample (100%) reported having used at least one form of ecstasy in their lifetime, and 99% reported use in the six months preceding interview. Participants reported using ecstasy (pills, powder, capsules or crystal[2]) on a median of 18 days (range=1−160; n=99) within the previous six months, which was stable from 2016 (20 days).

Twenty-seven percent of the sample reported using ecstasy (any form) once a fortnight or less, 32% reported using ecstasy more than fortnightly but less than weekly and 40% reported weekly or more use. Almost one-third (29%) reported having binged on ecstasy in the preceding six months, which was relatively stable from 2016 (33%).

[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 participants, SA, 2012–2017

	2012 (N=92)	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (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)	**18 (1–160)**
Recently binged[#] on ecstasy (%)	43	33	19	22	33	**29**
Use other drugs with psychostimulants^ (%)	98	91	94	95	99	**97**

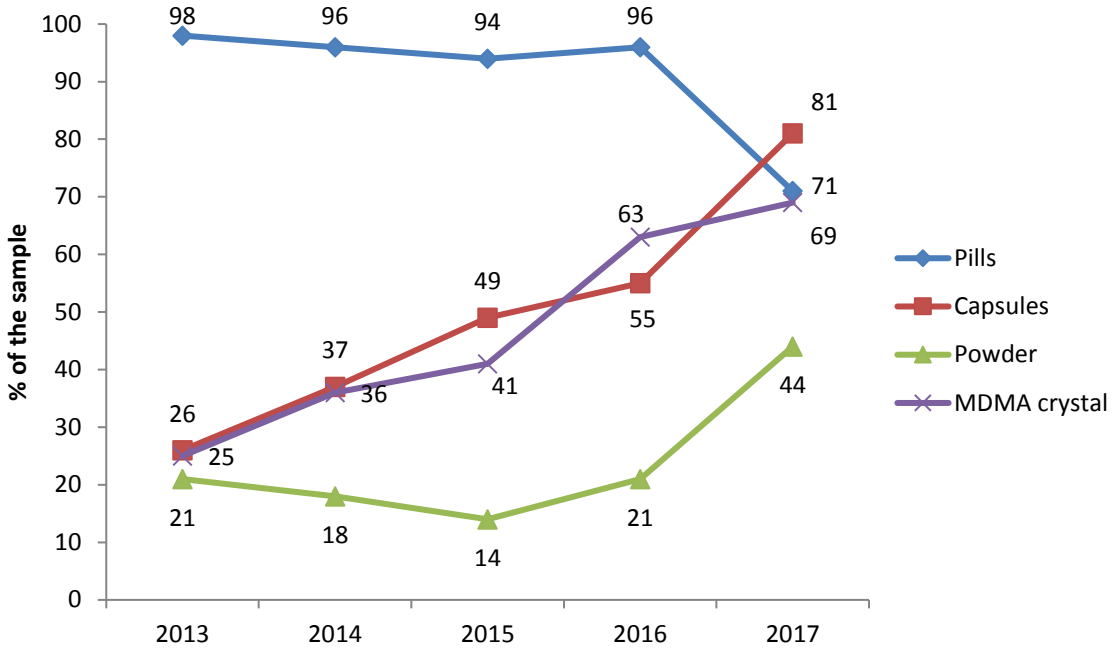
Source: EDRS participant interviews

[#] 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 2017, the EDRS continued to distinguish between four forms of ecstasy: pills, powder, capsules and crystal MDMA.[3] There was a sharp decrease in the percentage of the sample who reported recent use of ecstasy pills (71%; 96% in 2016; $p<0.001$; 95% CI: 0.15, 0.35); conversely, there were significant increases in the recent use of ecstasy capsules (81%; 55% in 2016; $p<0.001$; 95% CI: -0.38, -0.13) and ecstasy powder (44%; 21% in 2016; $p<0.001$; 95% CI: -0.35, -0.10). Recent use of MDMA crystal remained stable (69%; 63% in 2016) (Figure 2).

Figure 2: Recent use of ecstasy forms among participants, SA, 2013–2017



Source: EDRS participant interviews

4.2.2 Ecstasy pills

Table 6 summarises the use of ecstasy pills among the participant sample from 2013–17. The vast majority of the sample (93%) reported lifetime use of ecstasy pills. The median age at which participants first tried ecstasy pills was 17 years (range=12–24; n=93), with no

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

significant differences in terms of gender and age of first use. Seventy-one percent of the sample reported recent use of ecstasy pills, which was a significant decrease from 2016 (96%; *p*<0.001; 95% CI: 0.15, 0.35). Frequency of use remained stable at a median of 12 days.

Participants reported using a median of 2.5 ecstasy pills in a typical session (range=1−30; n=71), which was relatively stable from 2016. The median 'most' amount used in a single session in the past six months was five pills (range=1−42); again, this was stable from 2016. The majority (89%) of those who reported past six month use of ecstasy pills reported that they typically used more than one pill per session, and over half (54%) reported using more than two pills per session.

Table 6: Patterns of ecstasy use (pills) among participants, SA, 2013–2017

	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Lifetime use (%)	99	100	97	99	**93**
Median age first used ecstasy (range)	18 (13−29)	17 (13−31)	17 (14−35)	17 (13−35)	**17 (12−24)**
Recent use (%)	98	96	94	96	**71*** **
Median days used in the last six months (range)	12 (3−72)	12 (1−72)	12 (1−96)	12 (1−72)	**12 (1−90)**
Median pills in typical session[#] (range)	2 (1−8)	2 (0.5−12.5)	2.75 (1−10)	4 (1−17)	**2.5 (1−30)**
Typically use >1 pills (%)	82	82	81	92	**89**
Median pills in heavy session[#] (range)	5 (1−19)	5 (1−19)	5 (1−23)	7 (1.5−30)	**5 (1−42)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
***p<0.001

4.2.3 Ecstasy capsules

Table 7 summarises the use of ecstasy capsules among the participant sample from 2013–17. Ninety-two percent of the sample reported lifetime use of ecstasy capsules, which was a significant increase from 2016 (70%; *p*<0.001; 95% CI: -0.32, -0.11). The median age at which participants first tried ecstasy capsules was 18 years (range=15−24; n=92), with no significant differences in terms of gender and age of first use. The majority (81%) of the sample reported recent use of ecstasy capsules, which was a significant increase from 2016 (55%; *p*<0.001; 95% CI: -0.38, -0.13). 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 and four capsules respectively.

Table 7: Patterns of ecstasy use (capsules) among participants, SA, 2013–2017

	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Lifetime use (%)	49	65	74	70	**92*** **
Median age first used ecstasy (range)	19 (14−30)	19 (13−41)	18 (15−38)	18 (14−38)	**18 (15−24)**
Recent use (%)	26	37	49	55	**81*** **
Median days used in the last six months (range)	1.5 (1−6)	2 (1−12)	3 (1−48)	5 (1−72)	**6 (1−72)**
Median caps in typical session[#] (range)	1 (0.5−4)	1.5 (0.5−6)	2 (1−6)	2 (1−6)	**2 (1−30)**
Median caps in heavy session[#] (range)	2 (0.5−5)	2 (0.5−12)	2 (1−6)	3 (1−10)	**4 (1−36)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
***p<0.001

4.2.4 Ecstasy powder

Table 8 summarises the use of ecstasy powder among the participant sample from 2013–17. Two-fifths (59%) of the sample reported lifetime use of ecstasy powder, which was a significant increase from 2016 (32%; p<0.001; 95% CI: -0.39, -0.13). The median age at which participants first tried ecstasy powder was 18 years (range=14−24; n=59), with no significant differences in terms of gender and age of first use. Two-fifths (44%) of the sample reported recent use of ecstasy powder, which was a significant increase from 2016 (21%; p<0.001; 95% CI: -0.35, -0.10). Frequency of use also increased, to a median of ten days (versus four days in 2016; p=0.009). The median 'typical' and 'most' amount used in a single session in the past six months was one and 1.5 grams respectively.

Table 8: Patterns of ecstasy use (powder) among participants, SA, 2013–2017

	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Lifetime use (%)	28	32	27	32	**59*** **
Median age first used ecstasy (range)	20 (14−30)	18.5 (15−27)	18 (15−42)	18 (14−37)	**18 (14−24)**
Recent use (%)	16	18	14	21	**44*** **
Median days used in the last six months (range)	1 (1−24)	4.5 (1−18)	2 (1−12)	4 (1−24)	**10 (1−48)****
Median grams in typical session[#] (range)	–	–	–	–	**1 (0.2−10)**
Median grams in heavy session[#] (range)	–	–	–	–	**1.5 (0.2−18)**

Source: EDRS participant interviews
[#] A session was defined as a period of continuous drug use
– Data not presented due to small numbers (n<10)
****p*<0.001; ***p*<0.01

4.2.5 MDMA crystal

Table 9 summarises the use of MDMA crystal among the participant sample from 2013 to 2017. Four-fifths (80%) of the sample reported lifetime use of MDMA crystal, which was stable from 2016.The median age at which participants first tried MDMA crystal was 18 years (range=13−26; n=80), with no significant differences in terms of gender and age of first use. Over two-thirds (69%) of the sample reported recent use of MDMA crystal, on a median of eight days. The median 'typical' and 'most' amounts used in a single session in the past six months were 0.5 and 0.65 grams respectively.

Table 9: Patterns of ecstasy use (MDMA crystal) among participants, SA, 2013–2017

	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Lifetime use (%)	36	44	62	75	**80**
Median age first used ecstasy (range)	20 (14−30)	19 (15−36)	19 (14−40)	18 (13−44)	**18 (13−26)**
Recent use (%)	25	36	41	63	**69**
Median days used ecstasy in the last six months (range)	1 (1−12)	2 (1−12)	4 (1−24)	6 (1−72)	**8 (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)	**0.5 (0.05−2; 44)**
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)	**0.65 (0.2−7; 46)**

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

4.2.6 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 consumers, SA, 2016 & 2017

%	Pills		Powder		Caps		Crystal	
	2016 (N=96)	**2017 (N=71)**	2016 (N=21)	**2017 (N=44)**	2016 (N=55)	**2017 (N=81)**	2016 (N=63)	**2017 (N=69)**
ROA[#]								
Swallow	100	**99**	38	**68***	96	**98**	87	**87**
Snort	50	**51**	67	**75**	33	**40**	60	**73**
Smoke	2	**3**	0	**5**	0	**0**	5	**3**
Shelve/Shaft	5	**7**	0	**0**	0	**0**	0	**3**
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 majority of participants (58%) reported that they spent most of their time at a nightclub while intoxicated on ecstasy.

Table 11: Location of last ecstasy use by participants, SA, 2017

	Where did you spend the most time while intoxicated? (n=99)
Home	**9**
Friend's home	**8**
Acquaintance's home	**0**
Nightclub	**58**
Private party	**4**
Pub	**6**
Rave	**4**
Live music event	**4**
Public place	**1**
Outdoors	**6**

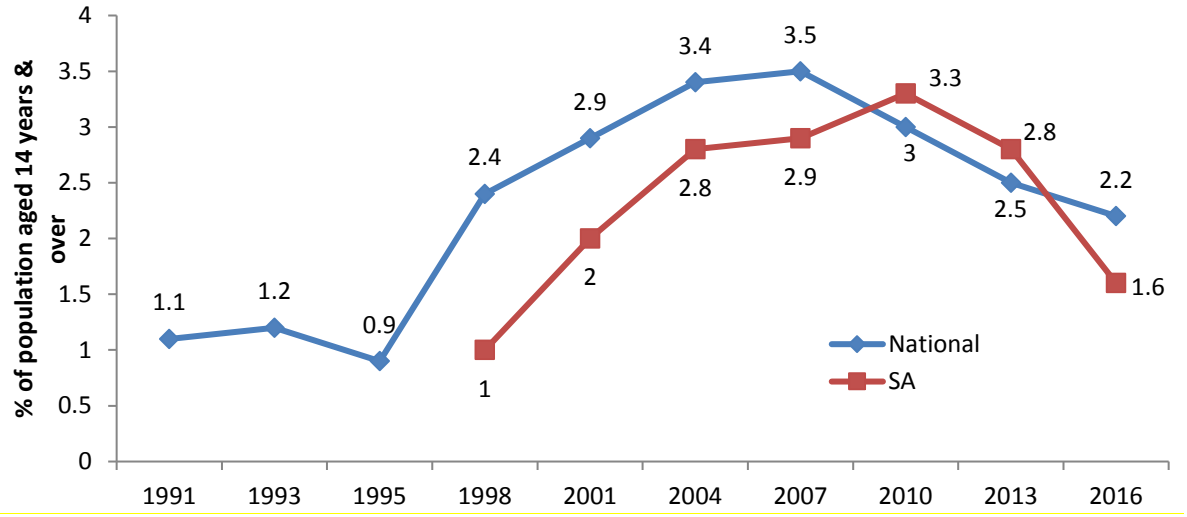
Source: EDRS participant interviews

4.2.7 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 1991–2016 and in SA from 1998–2016. 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. In 2016, past year ecstasy use among the national sample remained stable at 2.2%, whilst it decreased significantly in SA to 1.6%. This decline in ecstasy use in SA was only significant for females (from 3.0% to 1.2%).

Figure 3: Prevalence of past 12-month ecstasy use in Australia and South Australia, 1991–2016



Sources: National Campaign Against Drug Abuse Household Survey 1991, 1993; National Drug Strategy Household Survey 1995, 1998, 2001, 2004, 2007, 2010, 2013, 2016 (Australian Institute of Health and Welfare, 2005, 2008, 2011, 2014, 2017)
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 2016 reported that they had typically obtained ecstasy from a friend (63%), followed by a dealer (32%). The most common place to use ecstasy was at raves/dance parties (65%), with large percentages also using at private parties (57%), private homes (48%) and public establishments (45%) (AIHW, 2017). This remained relatively stable from 2013.

4.3 Methamphetamine use

Key Findings

- Lifetime and recent use of 'any' methamphetamine remained stable in 2017 (56% and 37% respectively).
- The frequency of 'any' methamphetamine use remained stable in 2017, at a median of five days of use in the past six months.
- Crystal methamphetamine remained the most commonly used form of methamphetamine in the six months preceding interview (26%), followed by powder methamphetamine (19%) and base methamphetamine (11%).
- Median age of first use remained stable for all three forms of methamphetamine.
- Smoking was the most common ROA for crystal and base methamphetamine, whilst snorting was the main ROA for methamphetamine powder.

4.3.1 Methamphetamine use among participants

Over half (56%) 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 (37%) reported use within the six months preceding interview (both stable from 2016). The median number of days used methamphetamine was five (range=1−96).

The EDRS continued to distinguish between three forms of methamphetamine in 2017. 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 sample in 2017, with 2016 data for comparison. In 2017, 41% of participants reported lifetime use of methamphetamine powder, which was a significant increase from 2016 (23%; $p<0.01$; 95% CI: -0.30, -0.05). The median age at which participants first tried speed was 18 years (range=10−24; n=41), with no significant differences in terms of gender and age of first use. One-fifth (19%) of participants reported recent use of methamphetamine powder, on a median of two days (stable from 2016).

With respect to the 'average' and 'most' amounts used in a single session, the greatest number of participants provided information in terms of grams. The median amount of grams used in a session was 0.2 (range=0.05−8), and the 'most' amount of powder methamphetamine used in a single session reported by participants was a median of 0.25 grams (range=0.05−8).

Over two-thirds (68%) of those who used methamphetamine powder reported snorting as a ROA in the six months prior to interview, and one-third (37%) reported having smoked powder in that same time period. There were no significant changes from 2016 in ROA. The percentage of participants who reported bingeing on powder methamphetamine remained stable in 2017 (7%; 2% in 2016; Table 3).

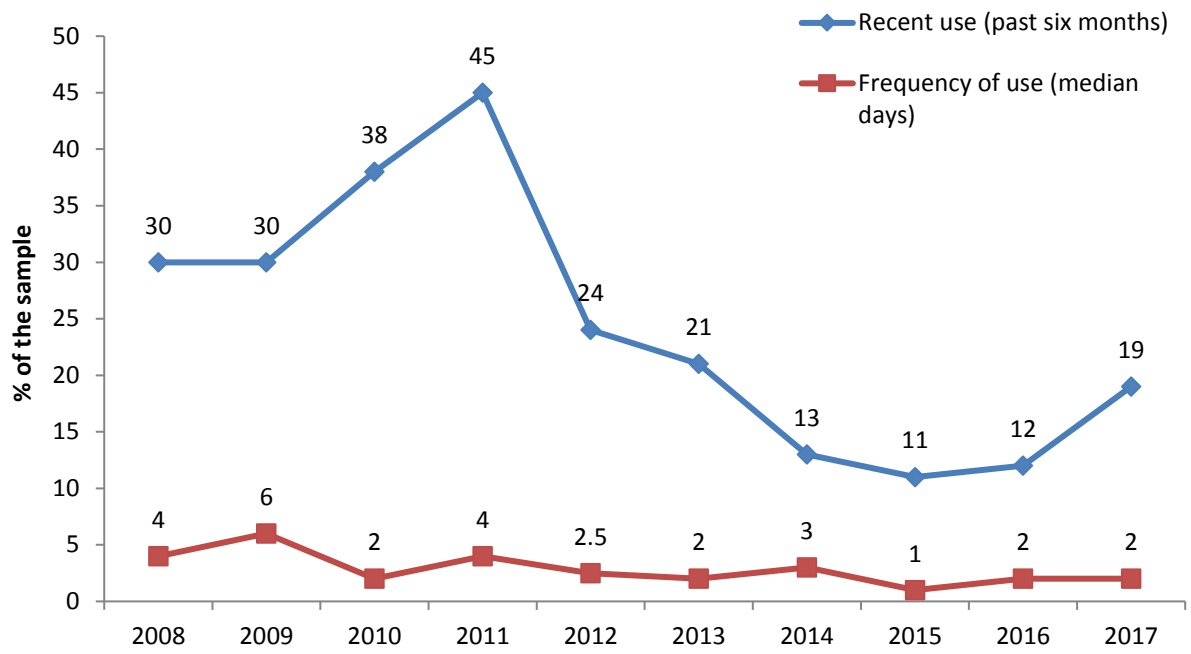
Table 12: Patterns of methamphetamine powder use and ROA among participants, SA, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	23	**41****
Age first used: median in years (range)	18 (14−35)	**18 (10−24)**
Used in last 6 months (%)	12	**19**
Days used in last 6 months[#]: median (range)	2 (1−12)	**2 (1−21)**
Average amount used in a single session[^]:		
Grams: median (range; n)	–	**0.2 (0.05−8; 14)**
Most amount used in a single session[^]:		
Grams: median (range; n)	–	**0.25 (0.05−8; 14)**
Routes of administration recent use[#] (%):	(n=12)	**(n=19)**
Swallowing	33	**16**
Snorting	42	**68**
Smoking	42	**37**
Injecting	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 6 months
– Data not presented due to small numbers (n<10)
***p*<0.01

Looking at trends over time (see Figure 4), it can be seen that from 2009−11 there was a sharp rise in the percentage of the sample reporting recent use of methamphetamine powder. However, this upward trend has since reversed, with rates of use declining from 2011−1 and then plateauing from 2014 onwards. 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, 2008–2017



Source: EDRS participant interviews

4.3.3 Methamphetamine base

Table 13 summarises the patterns of use of methamphetamine base reported by participants in 2017. One-quarter (24%) of participants reported lifetime use, with the median age of first use stable at 18 years (range=10−24). Eleven percent of participants reported using methamphetamine base in the six months prior to interview, on a median of seven days, both of which were non-significant increases from 2016.

With respect to the 'average' and 'most' amounts used in a session of use, most participants provided information in terms of 'grams'. The median 'average' and 'most' amount of base methamphetamine used in a session reported by participants was 0.3 and 0.5 grams respectively.

Participants who had used methamphetamine base in the last six months reported smoking (100%) and snorting (9%). 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 2012−17 smoking emerged as the most dominant ROA. No participants reported bingeing on base methamphetamine in 2017 (Table 3).

Table 13: Patterns of methamphetamine base use and ROA among participants, SA, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	15	**24**
Age first used: median in years (range)	17 (14−24)	**18 (10−24)**
Used in last 6 months (%)	3	**11**
Days used in last 6 months[#]: median (range)	1 (1−96)	**7 (1−90)**
Average amount used in a single session[^]:		
Grams: median (range; n)	–	**0.3 (0.1−1; 11)**
Most amount used in a single session[^]:		
Grams: median (range; n)	–	**0.5 (0.1−7; 10)**
Routes of administration recent use[#] (%):	(n=3)	**(n=11)**
Swallowing	–	**0**
Snorting	–	**9**
Smoking	–	**100**
Injecting	–	**0**

Source: EDRS participant interviews

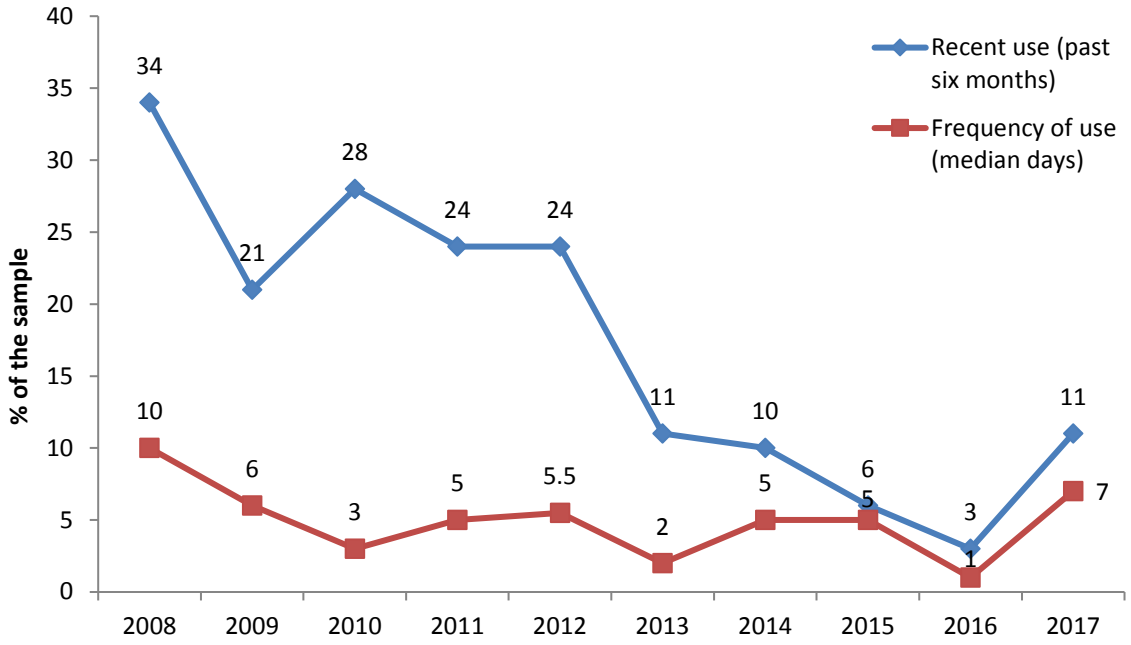
[#] Of those who reported use in the last six months

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

– Data not presented due to small numbers (n<10)

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 2008−09. From 2009−12, the prevalence of recent use plateaued, before a significant decline was observed in 2013. From 2013−16 there was a further downward trend in the recent use of base methamphetamine, with a non-significant increase observed in 2017. The median number of days used in the last six months remained relatively stable at seven days.

Figure 5: Methamphetamine base – trends in recent use and median days used, SA, 2008–2017



Source: EDRS participant interviews

4.3.4 Crystal methamphetamine

Table 14 presents the patterns of use of crystal methamphetamine by participants in 2017, with 2016 data presented for comparison. In 2017, 37% of participants had used crystal in their lifetime, with the median age of first use being 18 years (range=10−25 years). One-quarter (26%) of participants had used crystal in the six months preceding interview, which was a non-significant decrease from 2016 (33%). Frequency of use remained stable at a median 6.5 days.

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 1.5 (range=0.5−3) and the median 'most' amount used in a single session was also two points (range=0.5−7). Compared to 2016, participant reports in 2017 of 'average' and 'most' amounts used in a session remained stable.

Participants who had used crystal methamphetamine in the previous six months reported smoking (96%), snorting (12%) and/or swallowing (4%; 30% in 2016; *p*=0.024; 95% CI: 0.07, 0.44) as the ROA. No participants reported that they had injected crystal methamphetamine in the six months preceding interview. Nineteen percent of participants reported bingeing on crystal methamphetamine in 2017 (Table 3).

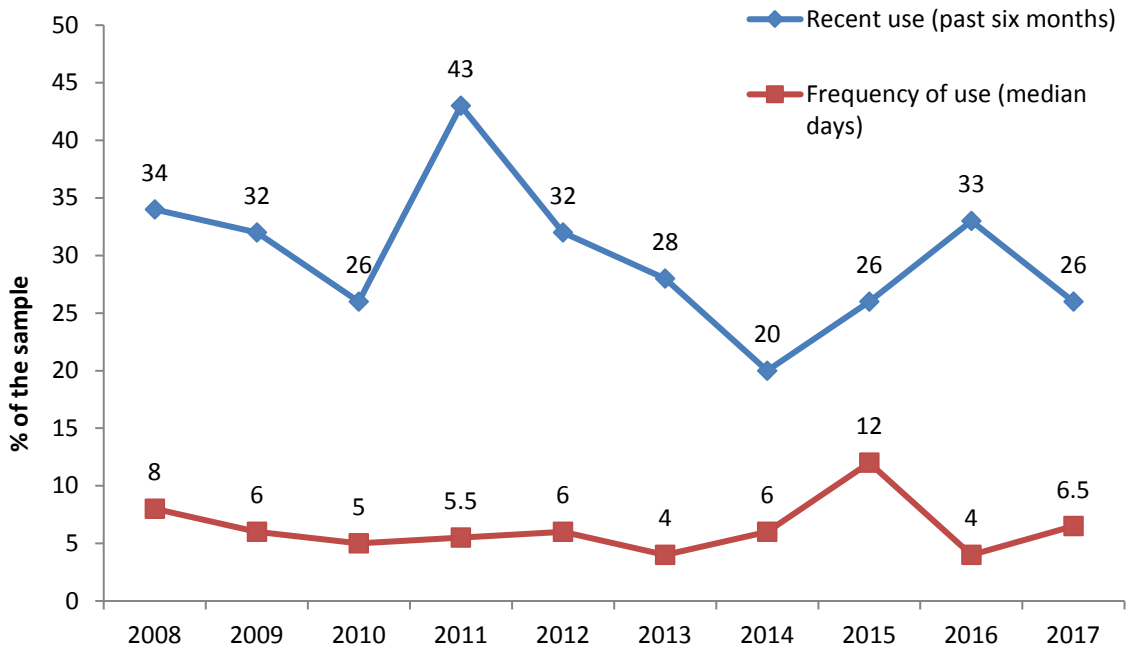
Table 14: Patterns of crystal methamphetamine use and ROA among participants, SA, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	42	**37**
Age first used: median in years (range)	19 (13−44)	**18 (10−25)**
Used in last 6 months (%)	33	**26**
Days used in last 6 months[#]: median (range)	4 (1−96)	**6.5 (1−48)**
Average amount used in a single session^: Points: median (range; n)	2 (0.5−5; 26)	**1.5 (0.5−3; 15)**
Most amount used in a single session^: Points: median (range; n)	2 (0.5−10; 22)	**2 (0.5−7; 15)**
Routes of administration recent use[#] (%):	(n=33)	**(n=26)**
Swallowing	30	**4***
Snorting	36	**12**
Smoking	82	**96**
Injecting	3	**0**

Source: EDRS participant interviews
[#] Of those who reported use in the six months prior to interview
^ A session was defined as a period of continuous drug use without sleep, in the last six months
*$p<0.05$

Looking at trends over time (see Figure 6), it can be seen that after a decline of recent use of crystal methamphetamine from 2008−10, 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, which reversed from 2014–16. In 2017, there was a non-significant decrease in recent use. Frequency of use remained relatively stable in 2017.

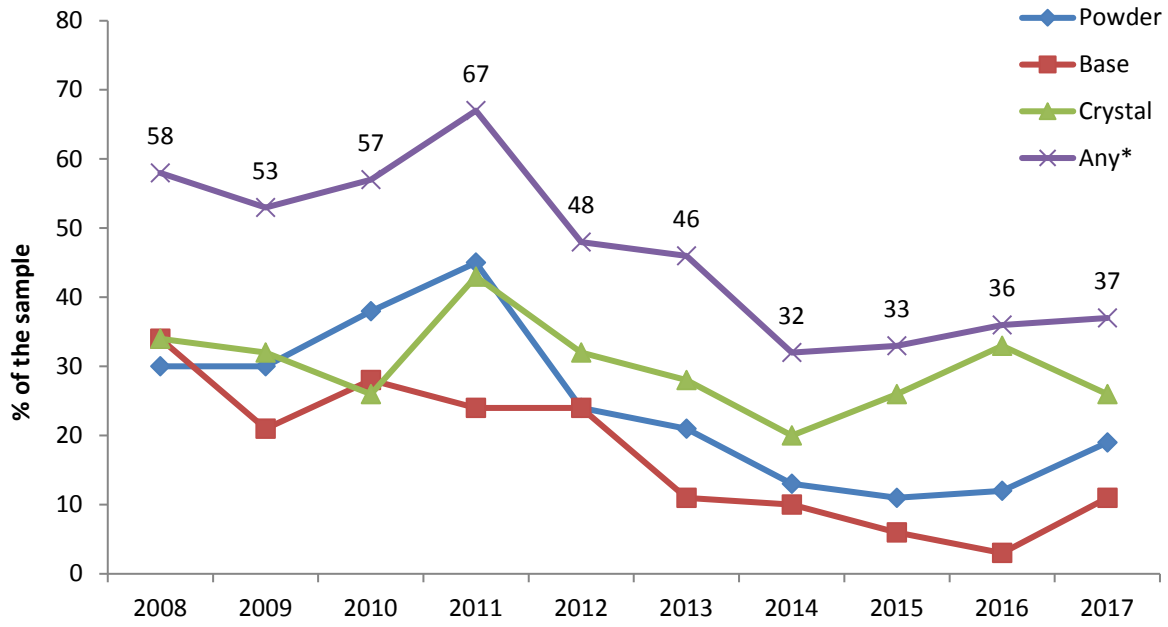
Figure 6: Methamphetamine crystal – trends in recent use and median days used, SA, 2008–2017



Source: EDRS participant interviews

Figure 7 presents trends in recent methamphetamine use from 2008–17. In 2017, over one-third (37%) of the sample reported recent use of 'any' methamphetamine; this was stable from 2016. With respect to the individual forms of methamphetamine, recent use of all forms of methamphetamine remained relatively stable in 2017.

Figure 7: Trends in recent use of the different forms of methamphetamine, SA, 2008–2017



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 crystal methamphetamine users was at a private home (own or friend's home).

Table 15: Venue where participants spent the most time while intoxicated on methamphetamine, SA, 2017

	Where did you spend the most time while intoxicated?		
	Powder (%) (n=5)	Base (%) (n=8)	Crystal (%) (n=20)
Home	–	–	**65**
Friend's home	–	–	**20**
Dealer's home	–	–	**5**
Nightclub	–	–	**0**
Private party	–	–	**5**
Work	–	–	**5**

Source: EDRS participant interviews
– Data not presented due to small numbers (n<10)

4.4 Cocaine use

Key Findings

- The median age of first cocaine use was 18 years.
- Lifetime and past six month use of cocaine remained stable at 77% and 60% respectively.
- Frequency of cocaine use remained low and stable.
- Snorting continued to be the main ROA, although there was a significant increase in the percentage of cocaine users who reported swallowing as a ROA.

4.4.1 Cocaine use among participants

In 2017, 77% of the sample reported having ever used cocaine, with median age of first use remaining stable at 18 years (range=13−25 years). Three-fifths (60%) of the sample reported using cocaine in the preceding six months, stable from 2016. Frequency of use remained low at a median of 3.5 days (range=1−72 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 0.8 grams (range=0.25−2 grams) and three lines (range=1−10 lines). The 'most' amount of cocaine used in a single session was a median of 1.5 grams (range=0.25−3 grams) and 4.5 lines (range=1−10 lines). The reported 'average' and 'most' amount of grams and lines used in a session was similar to that reported in 2016.

All participants (100%) who reported recent cocaine use reported that they snorted it in the past six months, with smaller percentages reporting that they had also swallowed (22%), smoked (2%) and/or shelved/shafted (2%) it. No participants reported recent use by injecting. Seventeen participants reported that they had binged on cocaine in the preceding six months (Table 3).

Table 16: Patterns of cocaine use and ROA among participants, SA, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	77	**77**
Age first used: median in years (range)	18 (15−44)	**18 (13−25)**
Used in last 6 months (%)	57	**60**
Days used in last 6 months[#]: median (range)	3 (1−24)	**3.5 (1−72)**
Average amount used in a single session[^]:		
Grams: median (range; n)	1 (0.10−1.75; 16)	**0.8 (0.25−2; 20)**
Lines: median (range; n)	3 (1−8; 31)	**3 (1−10; 25)**

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

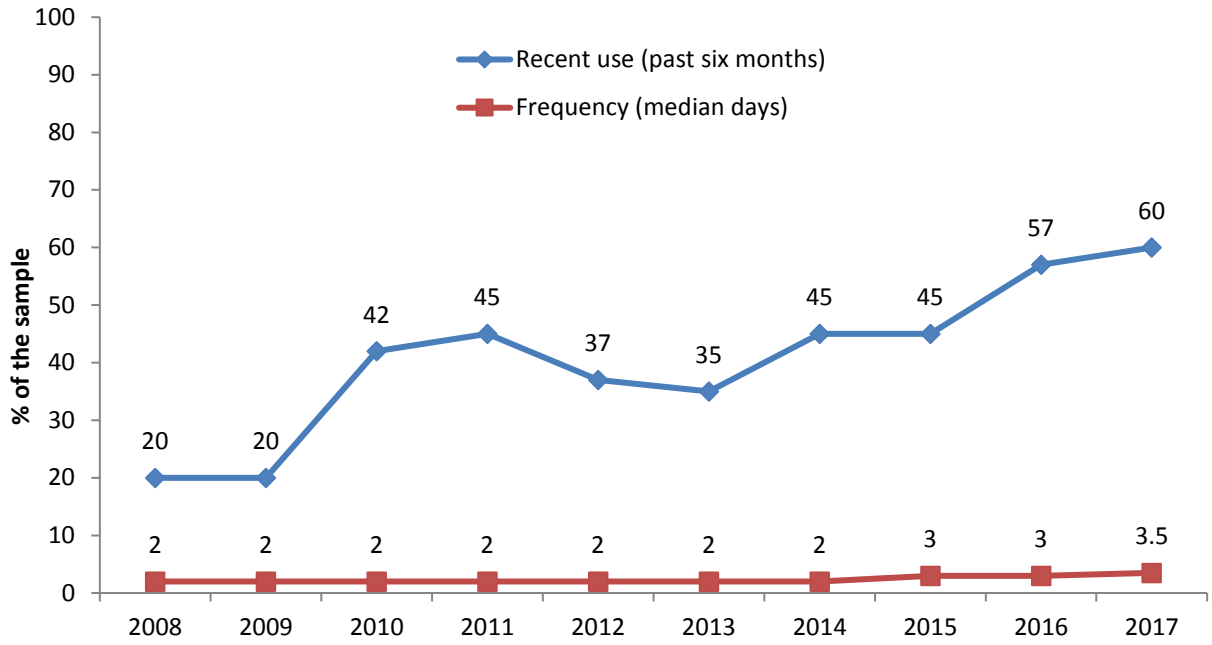
Table 16: Patterns of cocaine use and ROA among participants, SA, 2016 & 2017 (continued)

	2016 (N=100)	**2017 (N=100)**
Most amount used in a single session[#]:		
Grams: median (range; n)	1 (0.1−4; 17)	**1.5 (0.25−3; 23)**
Lines: median (range; n)	4 (1−10; 31)	**4.5 (1−10; 24)**
Routes of administration recent use[^] (%):	(n=57)	**(n=60)**
Swallowed	5	**22***
Snorted	98	**100**
Smoked	0	**2**
Injected	0	**0**
Shelved/shafted	0	**2**

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
* $p<0.05$

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. Recent use remained stable in 2017 at 60% - a three-fold increase from 2008. 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, 2008–2017



Source: EDRS participant interviews

Thirty-three 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=12); friend's home (n=6); private party (n=4); and pub/bar (n=4).

4.5 LSD use

Key Findings

- The median age of first LSD use was 17, stable from 2016.
- Lifetime and recent use of LSD remained stable at 56% and 36% respectively. Frequency of use also remained stable in 2017, at a median of three days in the past six months.
- The amount used in a typical and heavy session remained relatively stable.
- All participants reported swallowing LSD, with no other ROA reported.

4.5.1 LSD use among participants

In 2017, 56% of participants reported having used LSD in their lifetime, with the median age of first use remaining stable at 17 years (range=14−27 years). Thirty-six percent of participants reported using LSD on a median of three days (range=1−33) in the last six months, which was stable from 2016.

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 two tabs/trips (range=1−8) used in the heaviest recent session. All LSD users reported recent use by swallowing (100%, n=36), 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 participants, SA, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	49	**56**
Age first used: median in years (range)	17 (14−45)	**17 (14−27)**
Used in last 6 months (%)	30	**36**
Days used in last 6 months[#]: median (range)	2.5 (1−24; 30)	**3 (1−33; 36)**
Average amount used in a single session[^]: Tabs: median (range; n)	1 (1−5; 23)	**1 (1−5; 30)**
Most amount used in a single session[^]: Tabs: median (range; n)	1.5 (1−11; 22)	**2 (1−8; 29)**
Routes of Administration[#] (%):	(n=30)	**(n=36)**
Swallowed	100	**100**
Snorted	0	**0**
Smoked	0	**0**
Shelved/Shafted	0	**0**
Injected	0	**0**

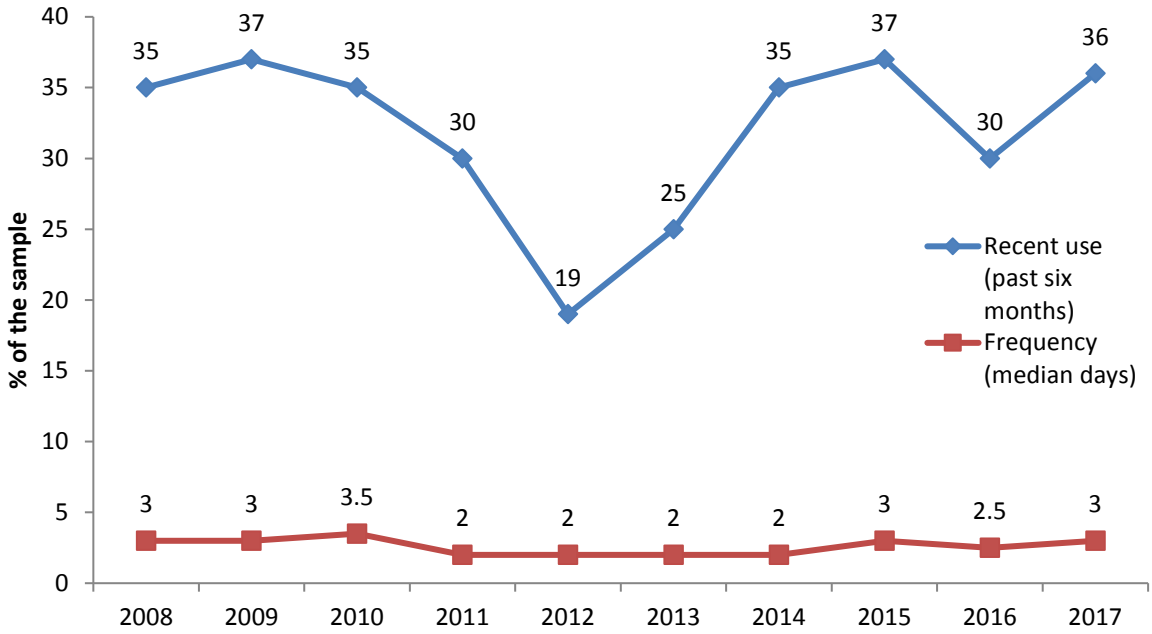
Source: EDRS participant interviews

[#] 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 2008−11 there was relative stability in the percentage 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 2013–17. 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, 2008–2017



Source: EDRS participant interviews

Of those who were able to comment (n=24), the majority reported that while intoxicated they spent the majority of their time at a private home (n=12), at a live music event/festival (n=4) or at a rave (n=3).

4.6 Cannabis use

Key Findings

- Median age of first use was stable in 2017, with the majority of participants having first used cannabis at 15 years of age.
- Prevalence of cannabis use remained high, with 100% of participants reporting lifetime use and 89% reporting use in the preceding six months.
- Frequency of use remained stable at a median of 72 days (approximately three times a week).
- Smoking remained the primary ROA, however there were significant increases in both swallowing and inhaling (using a vaporiser) as reported routes of administration.
- On the last occasion of use, cannabis users reported using a median of 3 cones or one joint. This was stable from 2016.
- 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 5.6 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.

4.6.1 Cannabis use among participants

The entire sample (100%) reported having used cannabis in their lifetime, with the median age of first use remaining stable at 15 years (range=8−24). Eighty-nine percent of participants had used cannabis in the preceding six months, which was a non-significant decrease from 2016.

The frequency of cannabis use reported by participants in 2017 was a median 72 days (range=1−180 days); this was stable from 2016. Among recent cannabis users, 74% (n=66) reported using cannabis weekly or more and 29% (n=26) had used cannabis on a daily basis in the past six months.
Participants who had recently used cannabis were asked how much cannabis they had consumed on the last day of use. Cannabis had been predominantly consumed in cones

(54%) and joints (27%). Among those who had consumed in cones, the median number used on the last day was three 'cones' (range=0.5−10 cones). The median number of joints consumed was one (range=0.5−6 joints). Daily users of cannabis had consumed a median of three cones (range=1−5 cones).

The vast majority (98%) of recent cannabis users reported recent use by smoking, although there were significant increases in both swallowing (p<0.001; 95% CI: -0.38, -0.12) and inhaling (using a vaporiser; p<0.001; 95% CI: -0.38, -0.13) as ROA. Twenty-six percent of the sample 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, 2016 & 2017

	2016 (N=100)	**2017 (N=100)**
Ever used (lifetime) (%)	100	**100**
Age first used: median in years (range)	15 (11−23)	**15 (8−24)**
Used in last 6 months (%)	97	**89**
Days used in last 6 months[#]: median (range)	72 (1−180)	**72 (1−180)**
Routes of administration[#] (%):	(n=97)	**(n=89)**
Smoked	99	**98**
Swallowed	22	**47*** **
Inhaled^	16	**43*** **
Cones used last time (range; n)[#]	3 (1−20; 62)	**3 (0.5−10; 48)**
Joints used last time (range; n)[#]	1 (0.5−8; 15)	**1 (0.5−6; 24)**

Source: EDRS participant interviews
[#] Of those who reported use in the last six months
^ Using a vaporiser included as a ROA in 2014
*** p<0.001

Among the participants who commented on hydro (n=41), the majority reported spending most of their time while intoxicated in their own home (73%) or at a friend's home (27%). There was a similar pattern for those who commented on bush cannabis (n=39): while intoxicated participants spent most of their time at their own home (74%) or at a friend's home (18%).

4.7 Other drug use

Key Findings

- There were significant increases in lifetime use ketamine, MDA, nitrous oxide, magic mushrooms, e-cigarettes, illicit pharmaceutical stimulants, OTC codeine, OTC stimulants and other illicit opiates.
- Similarly, there were significant increases in past six-month use of ketamine, nitrous oxide, magic mushrooms, e-cigarettes, illicit pharmaceutical stimulants, and other illicit opiates.
- There were no significant changes in the lifetime or recent use of GHB, amyl nitrite, DXM or capsules of unknown content in 2017.
- Almost all participants (99%) reported consuming alcohol in the six months preceding interview, and they had done so a median of 40 days indicating greater than weekly use. Among these participants, 3% reported drinking on a daily basis.
- Lifetime and recent tobacco use remained stable at 94% and 87% respectively.
- Lifetime and recent use of illicit benzodiazepines remained relatively common (and stable) in 2017.
- Use of other opioids (i.e. methadone, buprenorphine, heroin), other illicit pharmaceutical drugs (i.e. antidepressants, antipsychotics) and steroids remained low and stable in 2017.

4.7.1 Ketamine

Three-fifths (60%) of the sample reported lifetime use of ketamine and 48% reported use in the six months preceding interview, both of which were significant increases from 2016 (see Table 2). The frequency of use remained low at a median of two days (range=1−48 days) in the six months prior to interview.

The median amount of ketamine used in a typical or average session in the preceding six months was two ‘bumps’ (range=1−10; n=13), 1.75 points (range=1−6; n=10) and two lines (range=1−3; n=10). The ‘most’ amount of ketamine used in a single session was a median of three ‘bumps’ (range=1−12; n=12), two points (range=1−10; n=10) and two lines (range=1−4; n=10).

Snorting was the main ROA reported by participants who had recently used ketamine (92%), followed by swallowing (15%) and injecting (2%). No participants reported smoking or shelving/shafting as routes of administration. Nine participants reported bingeing on ketamine within the past six months.

4.7.2 GHB

Twenty percent of the sample reported lifetime use of GHB and 9% reported use in the six months preceding interview (both stable from 2016). Recent users of GHB reported using on a median of one day (range=1−24 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. Two participants reported using GHB in a binge session in 2017.

4.7.3 MDA

Thirty percent of the sample reported lifetime use of 3,4-methylenedioxyamphetamine (MDA), which was a significant increase from 2016 (17%; see Table 2). Fourteen percent of the sample reported using MDA on a median of 2.5 days (range=1−10) in the past six months, both of which remained stable from 2016.

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

Most participants who reported recent use had swallowed MDA in the preceding six months (n=10; 71%), with 57% (n=8) reporting snorting as a route of administration. Two 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 2017, 61% of participants reported that they had ever used nitrous oxide, and 45% reported past six-month use, both of which were significant increases from 2016 (see Table 2). Frequency of use remained stable at a median of six days (range=1−48) in the past six months. Recent nitrous oxide users reported using a median of ten bulbs in typical session (range=0.5−180 bulbs), and 16 bulbs (range=1−400) in a heavy session of use over the preceding six months. Nine participants reported having binged on nitrous oxide in the past six months, which was a significant increase from 2016 (see Table 3; p=0.02; 95% CI: -0.15, -0.02).

4.7.4.2 Amyl nitrite

Sixty-one percent of the sample reported lifetime use of amyl nitrite, and 42% reported use in the preceding six months, both of which were stable from 2016. Frequency of use also remained stable, at a median of five days (range=1−96) in the six months preceding interview. Three participants reported having binged on amyl nitrite in the last six months.

4.7.5 Mushrooms

Participants were asked about their use of 'magic mushrooms' (i.e. hallucinogenic mushrooms). Sixty-one percent of the sample reported lifetime use of mushrooms and 26% reported use in the six months preceding interview, both of which were significant increases from 2016 (see Table 2). Frequency of use remained low and stable at a median of two days (range=1−15) in the six months preceding interview. No participants reported including magic mushrooms in a binge session in the six months preceding interview.

4.7.6 Capsule (contents unknown)

Twenty-six percent of the sample reported lifetime use of a capsule with unknown contents and 11% reported use in the six months preceding interview, both of which remained stable from 2016. Frequency of use was low, with participants reporting that they had used a capsule with unknown contents on a median of one day (range=1−0) in the preceding six months. Swallowing (n=9; 82%) was the main ROA reported by participants, with two participants (18%) reporting snorting.

The median amount used in a typical or average episode in the preceding six months was one cap (range=1−4); the 'most' amount used in a session was also one capsule (range=1−6).

4.7.7 Alcohol

In 2017, the median age at which participants reported first using alcohol was 14 years (range=6−18 years). Almost the entire sample reported lifetime (100%) and recent use (99%) of alcohol, with participants reporting that they had used alcohol on a median of 40 days in the past six months (range=2−180). Fifty-five percent of recent alcohol users reported using alcohol more than once per week (43% in 2016), and 3% reported drinking on a daily basis (3% in 2016). Thirty-five percent of participants reported including alcohol in a binge session in the six months preceding interview.

In 2017, the Alcohol Use Disorders Identification Test (AUDIT) was administered to participants. Detailed information regarding the AUDIT in the 2017 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 in 2017, at 15 years (range=4−21 years). Ninety-four percent of the sample reported lifetime use of tobacco and 87% reported use in the six months preceding interview, both remaining stable from 2016. Frequency of tobacco use remained high and stable at a median of 180 days in the previous six months (range=1−180). Over half (52%) of recent tobacco consumers reported daily use (58% in 2016), which continues to greatly exceed the daily smoking prevalence rate in the general South Australian population aged 14 years and over (10.8%; AIHW, 2017).

4.7.9 Electronic cigarettes (e-cigarettes)

In 2017, for the fourth year running, participants were asked about their lifetime and recent use of electronic cigarettes. The median reported age of first use of e-cigarettes remained stable in 2017, at 18 years (range=13−31 years). Over four-fifths (84%) of the sample reported they had used electronic cigarettes within their lifetime, and almost half (49%) reported past six-month use, both of which were significant increases from 2016 (see Table 2). Frequency of use remained stable at a median of three days (range=1−90) in the preceding six months. Among those who had recently used e-cigarettes, 31% (n=15) reported using them as a smoking cessation tool and 83% (n=39) had used electronic cigarettes that contained nicotine.

4.7.10 Dextromethorphan (DXM)

Fifteen percent of the sample reported lifetime use of DXM and 4% reported recent use, both of which remained stable from 2016. Frequency of use was low at a median of 2.5 days (range=1−6) in the preceding six months.

4.7.11 Illicit benzodiazepines

Two-thirds (66%) of the sample reported lifetime use of illicit benzodiazepines, which was a non-significant increase from 2016 (55%). Forty-eight percent of the sample reported that they had used illicit benzodiazepines in the six months preceding interview (42% in 2016) and they had done so on a median of four days (range=1−80).

4.7.12 Illicit antidepressants

Thirteen participants reported lifetime use of illicit antidepressants. Six participants reported using illicit antidepressants in the preceding six months, and they had done so on a median of two days (range=1−30).

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).
Sixty-four percent of the sample reported use of illicit pharmaceutical stimulants in their lifetime (35% in 2016; p<0.001; 95% CI: -0.41, -0.15) and 45% reported use within the preceding six

months (27% in 2016; *p*=0.01; 95% CI: -0.30, -0.05), both of which were significant increases from 2016. Frequency of use remained stable at a median of three days (range=1−120) in the preceding six months. The ROA of recent use was mainly swallowing (n=41; 91%), with small numbers snorting (n=8; 18%).

The median amount used in a typical or average episode in the preceding six months was two pills/tablets (range=0.5−12; n=38); the 'most' amount used in a session was also two pills/tablets (range=1−12; n=38).

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

Forty-one percent of participants reported ever using OTC codeine, which was a significant increase from 2016 (25%; *p*=0.02; 95% CI: -0.29, -0.03). Twenty-four percent of participants reported using OTC codeine on a median of four days (range=1−48 days) in the preceding six months (18% in 2016), both of which remained stable from 2016. Swallowing was the main ROA reported by participants who had recently used OTC codeine (100%), with one participant reporting that they had also snorted OTC codeine in the six months preceding interview.

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

Twenty-one percent of participants reported ever using OTC stimulants, which was a significant increase from 2016 (9%; *p*=0.03; 95% CI: -0.22, -0.02). Nine percent of participants reported using OTC stimulants on a median of one day (range=1−6) in the preceding six months, stable from 2016. Swallowing (n=8; 89%) was the main ROA reported by participants who had recently used OTC stimulants, with two participants (22%) reporting that they had snorted OTC stimulants in the six months preceding interview.

4.7.16 Illicit antipsychotics

Twelve percent of participants reported ever using illicit antipsychotics, and eight participants reported use of this substance on a median of five days (range=1−12) within the preceding six months. Swallowing was the main ROA reported by participants (n=8; 100%), with one participant (13%) reporting that they had snorted illicit antipsychotics in the six months preceding interview.

4.7.17 OST medications

4.7.17.1 Methadone

Five participants reported lifetime use of methadone, and two participants reported using methadone on a median of 1.5 days (range=1−2) in the preceding six months. Swallowing was the only ROA reported.

4.7.17.2 Buprenorphine

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

4.7.18 Other illicit opioids

Forty-seven percent of the sample reported lifetime use of other illicit opioids, which was a significant increase from 2016 (30%; *p*=0.02; 95% CI: -0.30, -0.04). Past six-month use also increased (32% versus 18% in 2016; *p*=0.03; 95% CI: -0.26, -0.02), whilst frequency remained low and stable at a median of 3.5 days (range=1−48 days) in the preceding six months. The main ROA by those who had recently used was swallowing (100%, n=32), followed by snorting (n=3; 9%). No participants reported injecting, smoking or shelving/shafting.

4.7.19 Heroin

Seven percent of the sample reported lifetime use of heroin. Consistent with the low levels of recent use among the EDRS cohorts in previous years, three participants had used heroin during the six months preceding the interview and they had done so on a median of one day (range=1−2 days). Smoking (n=2) and snorting (n=1) were the only ROA reported.

4.7.20 Steroid use

Four participants reported lifetime use of steroids, and one participant reported using steroids on 60 days in the preceding six months. Swallowing was the only ROA reported.

4.8 New psychoactive substances (NPS) use

Key Findings

- Lifetime and recent of 'any' NPS remained relatively stable in 2017, at 63% and 38% respectively.
- There were significant increases in both lifetime and recent use of DMT.
- The most commonly used NPS in the six months preceding interview were DMT, 2CB and NBOMe.

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 anaesthetic) 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 analogue 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

Almost two-thirds (63%) of the 2017 SA EDRS sample reported lifetime use of 'any' NPS, which was a non-significant increase from 2016 (54%). Two-fifths (38%) of the sample reported 'any' NPS use in the six months preceding interview, which was stable from 2016 (32%).

There were significant increases in both lifetime (40%; 20% in 2016; p=0.003; 95% CI: -0.32, -0.07) and past six-month (22%; 10% in 2016; p=0.03; 95% CI: -0.22, -0.02) use of DMT, making this the most commonly used NPS among participants. The next most commonly used NPS were 2C-B and NBOMe (see Table 20).

Table 20: Percentage of participants reporting lifetime and recent use of NPS, SA, 2016 & 2017

	Ever used (%)		**Used last six months (%)**	
	2016 (N=100)	**2017 (N=100)**	2016 (N=100)	**2017 (N=100)**
Phenethylamines				
2C-B	20	**32**	8	**8**
2C-I	9	**11**	1	**2**
2C-Other	2	**4**	0	**0**
NBOMe	31	**24**	9	**8**
DO-x	4	**6**	0	**3**
PMA	12	**10**	5	**3**
4-FA	0	**0**	0	**0**
Tryptamines				
5-MeO-DMT	2	**1**	0	**0**
4-AcO-DMT	2	**2**	0	**1**
DMT	20	**40****	10	**22***
Synthetic cathinones				
Mephedrone	2	**3**	0	**0**
Methylone/bk MDMA	3	**7**	2	**5**
MDPV/Ivory wave	0	**1**	0	**0**
Alpha-PVP	0	**1**	0	**0**
Other substituted cathinone	0	**1**	0	**0**
Synthetic opioids[#]	0	**1**	0	**1**

Source: EDRS participant interviews
*p<0.05; **p<0.01
[#] not specifically asked about in 2016

Table 20: Percentage of participants reporting lifetime and recent use of NPS, SA, 2016−2017 (continued)

	Ever used (%)		Used last six months (%)	
	2016 (N=100)	**2017 (N=100)**	2016 (N=100)	**2017 (N=100)**
Piperazines				
BZP	0	**0**	0	**0**
Benzodiazepines				
Etizolam	0	**2**	0	**1**
Dissociative				
MXE	0	**3**	0	**2**
Plant-based substances				
Salvia divinorium	6	**12**	2	**4**
Ayahuasca	4	**2**	2	**1**
Mescaline^	9	**11**	6	**6**
Synthetic cannabinoids	6	**11**	4	**4**
Herbal high	8	**9**	4	**2**

Source: EDRS participant interviews
^Mescaline is a naturally occurring phenethylamine, so could also be classified under the phenethylamine heading

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

5.1 Ecstasy

Key Findings

- The prices of all forms of ecstasy remained relatively stable in 2017.
- Perceived purity varied across the different forms of ecstasy. Specifically, the current purity of ecstasy pills was perceived as low–medium, the current purity of ecstasy powder was perceived as medium, whilst the current purity of ecstasy capsules and MDMA crystal were perceived as 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 2017, participants were asked to report on the price, purity and availability (PPA) of ecstasy pills, powder, capsules and MDMA crystals separately.

5.1.1 Price

In 2017, participants were asked about the cost of ecstasy 'at last purchase'. The results are presented in Table 21, with no significant differences observed from 2016. 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 21: Last price of ecstasy in the past six months, SA, 2016 & 2017

	2016	2017
Median price of last purchase (range; n)		
Tablet/pill	$15 ($6−30; 82)	**$15 ($6−30; 60)**
Capsule	$25 ($10−35; 46)	**$20 ($10−35; 74)**
Crystal (point)	$25 ($15−80; 11)	**$20 ($7−100; 21)**
Crystal (cap)	$25 ($15−40; 44)	**$25 ($10−30; 39)**
Crystal (gram)	$220 ($50−370; 25)	**$200 ($30−300; 41)**
Powder (point)	–	–
Powder (gram)	–	**$190 ($35−300; 18)**

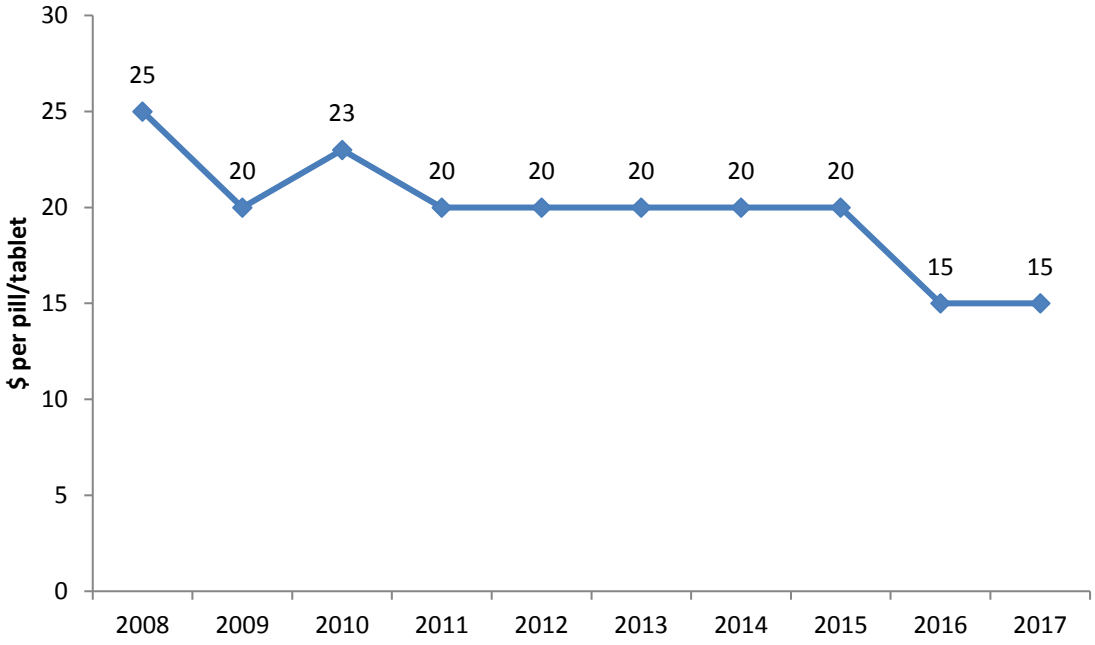
Source: EDRS participant interviews
Note: 'Don't know' excluded
– Results not presented due to small numbers (n<10)

Table 22: Change in price over the last six months, SA, 2016–2017

Change in price %	Pills		Capsules		MDMA crystal		Ecstasy powder	
	2016 (n=82)	**2017 (n=61)**	2016 (n=12)	**2017 (n=75)**	2016 (n=42)	**2017 (n=57)**	2016 (n=2)	**2017 (n=18)**
Increasing	1	**12**	8	**5**	14	**9**	_	**0**
Stable	59	**49**	75	**61**	60	**60**	_	**61**
Decreasing	27	**16**	17	**21**	21	**23**	_	**22**
Fluctuating	13	**23**	0	**12**	5	**9**	_	**17**

Source: EDRS participant interviews
Note: 'Don't know' excluded
– Results not presented due to small numbers (n<10)

Figure 10: Trends in the 'last purchase price' of ecstasy per pill[#], SA, 2008–2017



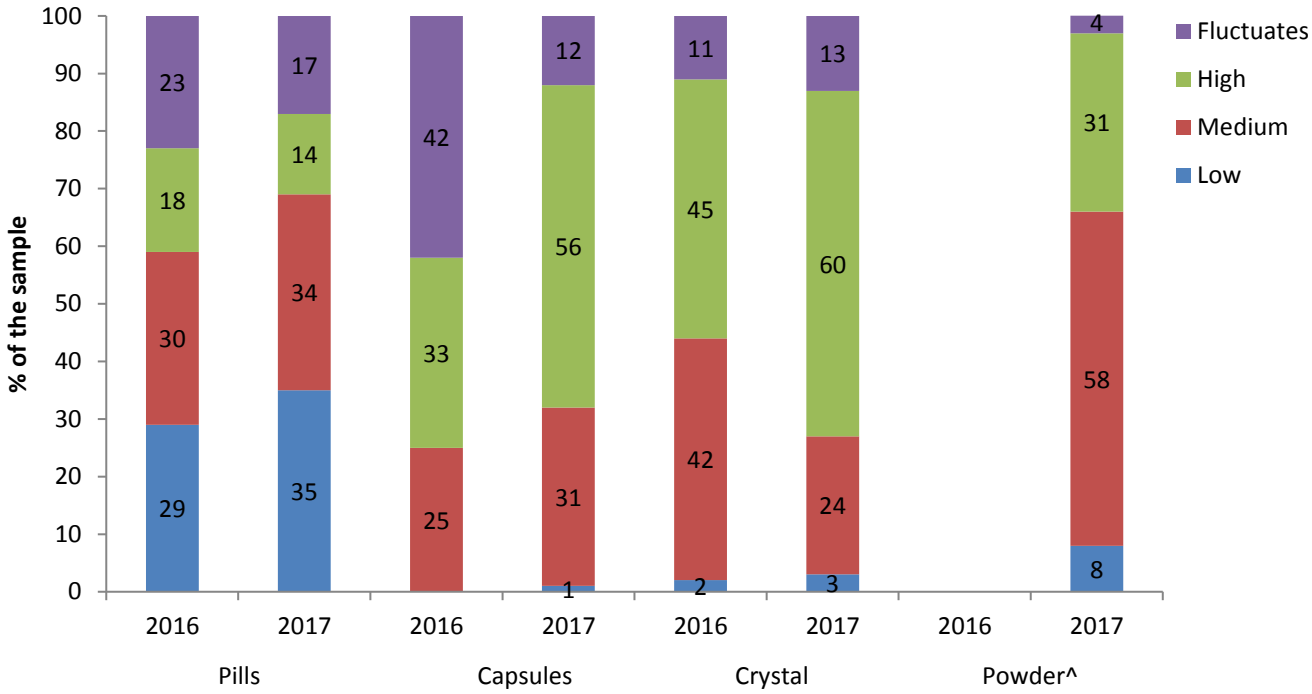
Source: EDRS participant interviews
[#] Among those who commented

5.1.2 Perceived purity

Figure 11 presents the participants perceived purity of ecstasy and Table 23 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 high (60%) to medium (24%), and the majority (51%) reported that this had remained stable in the six months preceding interview. Similarly, the perceived purity of ecstasy capsules was largely reported as high (56%) to medium (31%), and again this was largely reported to have remained stable in the past six months (59%). In contrast, the largest percentage of those answering for ecstasy pills reported current purity to be low (35%) to medium (34%), with the largest percentage of those answering reporting that current purity had decreased in the preceding six months (37%; 21% in 2016; p=0.048; 95% CI: -0.31, -0.02). The perceived purity of ecstasy powder was largely reported to be medium (58%), with the largest percentage of those answering (61%) reporting that current purity had remained stable in the preceding six months.

Figure 11: Trends in the perceived purity of ecstasy in the last six months, SA, 2016–2017



Source: EDRS participant interviews
Note: 'Don't know' excluded
^Data not presented for 2016 due to small numbers (n<10)

Table 23: Change in perceived purity over the last six months, SA, 2016–2017

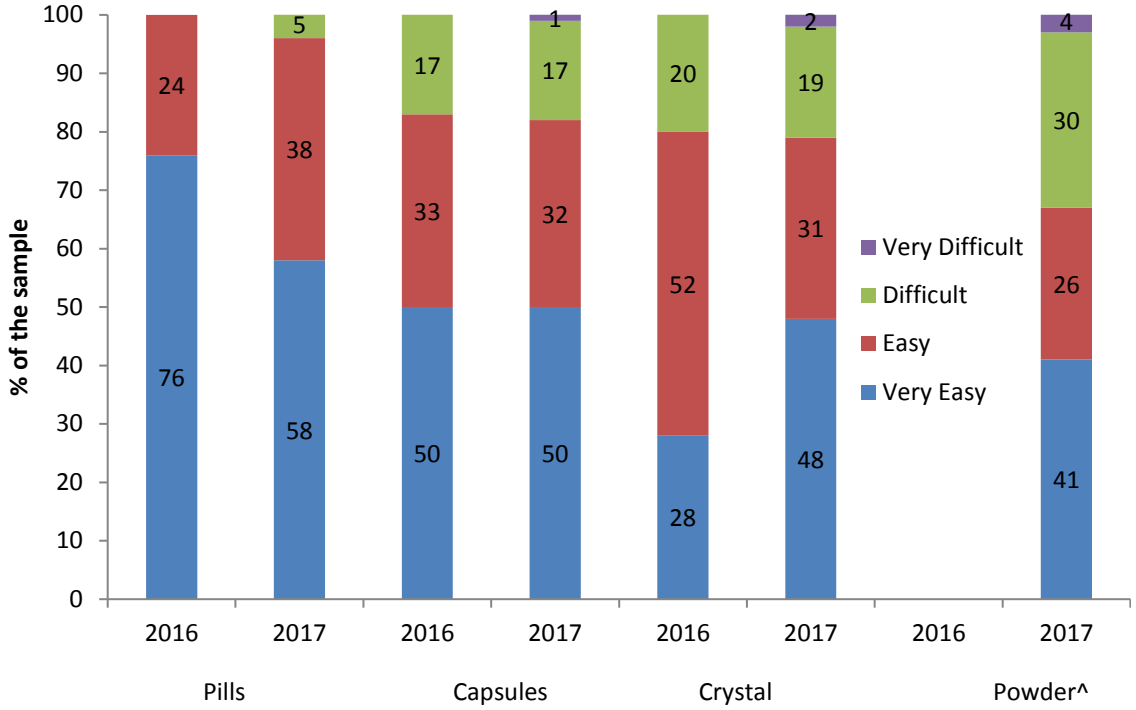
Change in purity %	Pills		Capsules		MDMA crystal		Ecstasy powder	
	2016 (n=82)	**2017 (n=59)**	2016 (n=12)	**2017 (n=75)**	2016 (n=49)	**2017 (n=61)**	**2016 (n=2)**	**2017 (n=23)**
Increasing	15	**10**	8	**17**	8	**25***	_	**17**
Stable	32	**27**	42	**59**	55	**51**	_	**61**
Decreasing	21	**37***	0	**8**	14	**8**	_	**9**
Fluctuating	39	**25**	50	**16***	22	**16**	_	**13**

Source: EDRS participant interviews
Note: 'Don't know' not included
– Results not presented due to small numbers (n<10)
*$p<0.05$

5.1.3 Perceived availability

Figure 12 presents the current availability of ecstasy and Table 24 summarises the changes in availability in the last six months, as perceived by participants. As can be seen, all forms of ecstasy were largely perceived as 'very easy' or 'easy' to obtain (96% for pills; 82% for capsules; 79% for MDMA crystals; 67% for ecstasy powder). The availability of ecstasy was largely reported to have remained stable over the preceding six months.

Figure 12: Trends in perceived availability of ecstasy in the preceding six months, SA, 2016–2017



Source: EDRS participant interviews
Note: Don't know' excluded
^Data not presented for 2016 due to small numbers (n<10)

Table 24: Change in perceived availability over the last six months, SA, 2016–2017

Change in availability %	Pills		Capsules		MDMA crystal		Ecstasy powder	
	2016 (n=81)	**2017 (n=66)**	2016 (n=12)	**2017 (n=76)**	2016 (n=52)	**2017 (n=63)**	**2016 (n=2)**	**2017 (n=25)**
More difficult	1	**11**	17	**9**	15	**16**	_	**20**
Stable	67	**58**	58	**62**	58	**57**	_	**60**
Easier	31	**23**	25	**25**	19	**22**	_	**20**
Fluctuating	1	**9**	0	**4**	8	**5**	_	**0**

Source: EDRS participant interviews
Note: 'Don't know' not included.
– Results not presented due to small numbers (n<10)

5.1.4 Last source and venue of purchase

Ecstasy was purchased from a range of sources (most commonly friends) and from a variety of public and private locations (most commonly nightclub or a friend's home; see Table 25).

Table 25: The last person and venue where participants purchased ecstasy (any form), SA, 2017

	(n=99)
Person (%)	
Friends	52
Known dealers	22
Workmates	0
Acquaintances	11
Unknown dealers	3
Street dealers	4
Online (dark net)	6
Online (surface web)	1
Online (social media)	1
Venue (%)	
Own home	12
Dealer's home	12
Friend's home	20
Acquaintance's home	1
Raves/dance parties	2
Nightclubs	22
Pubs	3
Agreed public location	9
Private party	0
Street	8
Live music event	3
Online	5
Other	2

Source: EDRS participant interviews

5.2 Methamphetamine

Key Findings

- The reported last median price of a point of crystal methamphetamine remained stable at $50.
- The perceived purity of crystal methamphetamine was largely considered to be 'high'.
- All participants reported that crystal methamphetamine was 'easy' or 'very easy' to obtain.
- The largest percentage of participants reported obtaining crystal methamphetamine from friends or a known dealer, and it was most commonly obtained at a private home.
- Only a small number of participants were able to report on the PPA of powder (n=6) and base (n=9) methamphetamine; hence results are not presented for these forms of methamphetamine.

In 2017, participants were asked to report on the price, purity and availability (PPA) of methamphetamine powder, base and crystal methamphetamine. Only nine participants were able to report on the PPA of methamphetamine base and six participants were able to report on the PPA of methamphetamine powder, and hence results are not presented for these forms of methamphetamine.

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 26 presents the prices of methamphetamine and Table 27 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 remained stable at $50 (Table 26). Participant reports of changes in price were mixed, with equal percentages reporting that the price of crystal methamphetamine had either decreased or remained stable in the six months preceding interview (35% respectively; see Table 27).

Table 26: Median price of last purchase of the main forms of methamphetamine, SA, 2016 & 2017

	Median price per amount $ (range; n)					
Amount	**Powder**		**Base**		**Crystal**	
	2016	**2017**	2016	**2017**	2016	**2017**
Point Price at last purchase	–	**–**	–	**–**	50 (20−100; 21)	**50 (30−100; 16)**

Source: EDRS participant interviews

– Results not presented due to small numbers (n<10)

Table 27: Changes in price over the last six months, SA, 2016 & 2017

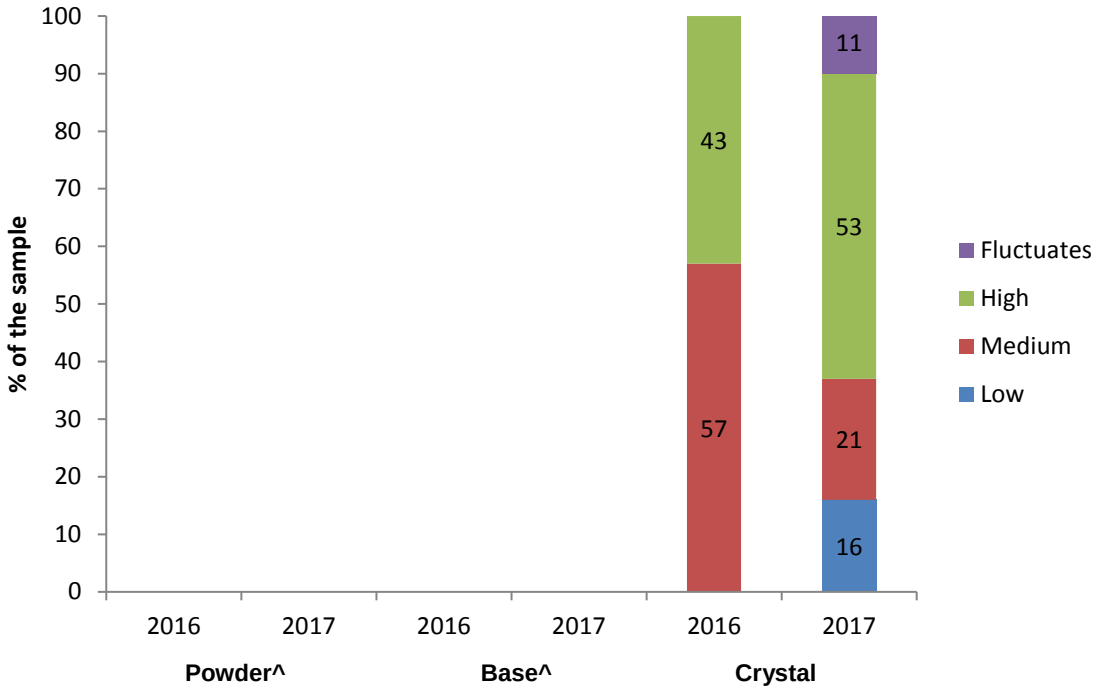
Change in price	Powder		Base		Crystal	
	2016 (n=7)	**2017 (n=6)**	2016 (n=5)	**2017 (n=8)**	2016 (n=21)	**2017 (n=20)**
Increasing	_	**–**	_	**–**	10	**15**
Stable	_	**–**	_	**–**	38	**35**
Decreasing	_	**–**	_	**–**	43	**35**
Fluctuating	_	**–**	_	**–**	10	**15**

Source: EDRS participant interviews
Note: Excludes 'don't know'
– Results not presented due to small numbers (n<10)

5.2.2 Perceived purity

Few participant (n<10) were able to comment on the perceived purity of powder and base methamphetamine. As can be seen in Figure 13, the perceived purity of crystal methamphetamine was considered to be high or medium, and the largest percentage of participants (40%) reported that this had remained stable over the preceding six months (see Table 28).

Figure 13: Perceived purity of the main forms of methamphetamine over the last six months, SA, 2016 & 2017



Source: EDRS participant interviews
Note: 'Don't know' not included
^ Results not presented due to small numbers (n<10) reporting

Table 28: Changes in perceived purity of the main forms of methamphetamine over the last six months, SA, 2016 & 2017

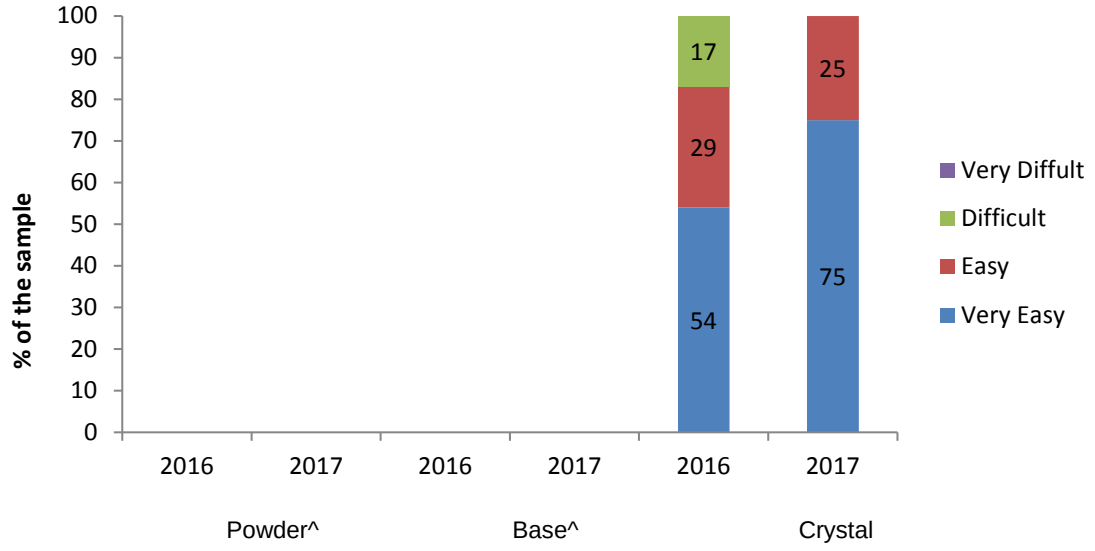
Change in purity	Powder		Base		Crystal	
	2016 (n=5)	**2017 (n=5)**	2016 (n=4)	**2017 (n=8)**	2016 (n=21)	**2017 (n=20)**
Increasing	_	**_**	_	**_**	20	**20**
Stable	_	**_**	_	**_**	50	**40**
Decreasing	_	**_**	_	**_**	5	**25**
Fluctuating	_	**_**	_	**_**	25	**15**

Source: EDRS participant interviews
Note: 'Don't know' not included
– Results not presented due to small numbers (n<10)

5.2.3 Perceived availability

It should be noted that few participants were able to report on the perceived availability of powder and base methamphetamine (n<10). Crystal methamphetamine was considered to be 'easy' or 'very easy' to obtain (see Figure 14), and this was largely perceived to have remained stable in the last six months (see Table 29).

Figure 14: Perceived availability of the main forms of methamphetamine over the last six months, SA, 2016 & 2017



Source: EDRS participant interviews
^ Results not presented due to small numbers (n<10) reporting

Table 29: Change in perceived availability of the main forms of methamphetamine over the last six months, SA, 2016 & 2017

Change in availability in last 6 months (%)	Powder		Base		Crystal	
	2016 (n=3)	**2017 (n=6)**	2016 (n=6)	**2017 (n=9)**	2016 (n=24)	**2017 (n=20)**
More difficult	_	**–**	_	**–**	4	**0**
Stable	_	**–**	_	**–**	42	**80***
Easier	_	**–**	_	**–**	42	**20**
Fluctuates	_	**–**	_	**–**	13	**0**

Source: EDRS participant interviews
Note: 'Don't know' not included
– Results not presented due to small numbers (n<10)
*p<0.05

5.2.4 Last source and venue of purchase

Few participants were able to report on where they last sourced powder and base methamphetamine from (n<10). In regard to crystal methamphetamine, participants most commonly reported obtaining it from friends or a known dealer, and it was most commonly obtained at a private home.

Table 30: The last person and venue where participants purchased methamphetamine, SA, 2017

	Powder (n=6)	Base (n=9)	Crystal (n=20)
Person (%)			
Friends	–	–	**40**
Known dealer	–	–	**45**
Street dealer	–	–	**5**
Online (surface web)	–	–	**5**
Other	–	–	**5**
Venue (%)	–	–	
Own home	–	–	**30**
Dealer's home	–	–	**45**
Friend's home	–	–	**20**
Agreed public location	–	–	**5**

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

5.3 Cocaine

Key Findings

- In 2017, the median price of cocaine remained relatively stable at $300 per gram.
- The purity of cocaine was perceived as medium.
- The current availability of cocaine was largely perceived as 'easy' or 'very easy' to obtain, with a significant decrease in those who reported that it was 'difficult' to obtain. Among those who could comment, the largest percentage reported that cocaine had become easier to obtain in the six months preceding interview.
- Among those who could comment, most purchased cocaine from a friend, and it was most commonly obtained at a private home.

5.3.1 Price

Cocaine was most commonly purchased in grams and was purchased for a median of $300 (range=$300−$450). The majority of participants who commented on the price considered it to have remained stable in the last six months (52%) (Table 31).

Table 31: Price of cocaine, SA, 2016 & 2017

	2016	**2017**
Median price of last purchase Gram (range; n)	$350 (250−400; 17)	**$300 (300−450; 21)**
Price change in last month (%)	(n=23)	**(n=27)**
Increasing	4	**19**
Stable	74	**52**
Decreasing	0	**19**
Fluctuating	22	**11**

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

5.3.2 Perceived purity

Participants were asked what the current purity or strength of cocaine was, and whether the purity had changed in the six months preceding interview. The purity of cocaine was largely perceived as medium (49%); 27% reported it was high, 18% reported it was low and 6% reported that had fluctuated over the past six months.

The largest percentage of participants who commented (48%) reported that the purity of cocaine had remained stable over the past six months, 29% believed it had increased, 13% reported it had decreased and 10% reported that it had fluctuated.

5.3.3 Perceived availability

Of those able to answer, the majority reported that cocaine was 'easy' (44%) or 'very easy' (32%) to obtain, with a significant decrease in those who reported that it was 'difficult' to obtain (18%; 50% in 2016; p=0.01; 95% CI: 0.09, 0.52). This is consistent with participant reports that cocaine had become 'easier' to obtain (49%) in the six months preceding interview.

Table 32: Perceived availability of cocaine and change in availability over the last six months, SA, 2016 & 2017

	2016 (n=30)	**2017 (n=34)**
Current availability (%)		
Very easy	10	**32**
Easy	33	**44**
Difficult	50	**18***
Very difficult	7	**6**
Change in availability in last 6 months (%)	(n=28)	**(n=33)**
More difficult	21	**12**
Stable	50	**39**
Easier	25	**49**
Fluctuates	4	**0**

Source: EDRS participant interviews
Note: 'Don't know' not included
*$p<0.05$

5.3.4 Last source and venue of purchase

Cocaine was most commonly acquired through friends (52%), and was most commonly obtained at a private home (see Table 33).

Table 33: The last person and venue where participants purchased cocaine, SA, 2017

	(n=33)
Person (%)	
Friends	**52**
Acquaintances	**3**
Known dealers	**33**
Unknown dealer	**3**
Relatives	**3**
Online (surface web)	**3**
Other	**3**
Venue (%)	
Own home	**24**
Dealer's home	**12**
Friend's home	**18**
Raves	**3**
Nightclub	**9**
Pubs	**6**
Private party	**6**
Street market	**6**
Work	**3**
Agreed public location	**6**
Live music event	**3**
Other	**3**

Source: EDRS participant interviews

5.4 LSD

Key Findings

- The median price of LSD remained relatively stable at $20 for a tab.
- Reports regarding the perceived purity of LSD were mixed, with 44% of those able to comment reporting that the current purity of LSD was high and 32% reporting that it was medium.
- The majority of those able to answer (64%) reported that it was 'easy' or 'very easy' to obtain LSD; this was stable from 2016.
- Participants generally bought LSD from friends and obtained it from a friend's home.

5.4.1 Price

In 2017, the median last price paid for a tab of LSD was $20 (range $6–50; n=25), which was stable from 2016 ($17.50; range $8–30; n=26). The majority of those participants able to comment reported that the price of LSD had been stable in the previous six months (70%). The remaining participants believed the price had fluctuated (17%), decreased (9%) or increased (4%).

5.4.2 Perceived purity

Table 34 summarises the current perceived purity of LSD and the changes in purity in the last six months, as perceived by the participants in 2017. As can be seen, reports regarding the purity of LSD were mixed, with 44% of those able to comment reporting that the current purity of LSD was high and 32% reporting that it was medium. The majority (59%) perceived that purity had remained stable in the six months prior to interview, whilst 27% reported that purity had fluctuated over the preceding six months.

Table 34: Perceived purity of LSD and change in purity over the last six months, SA, 2016 & 2017

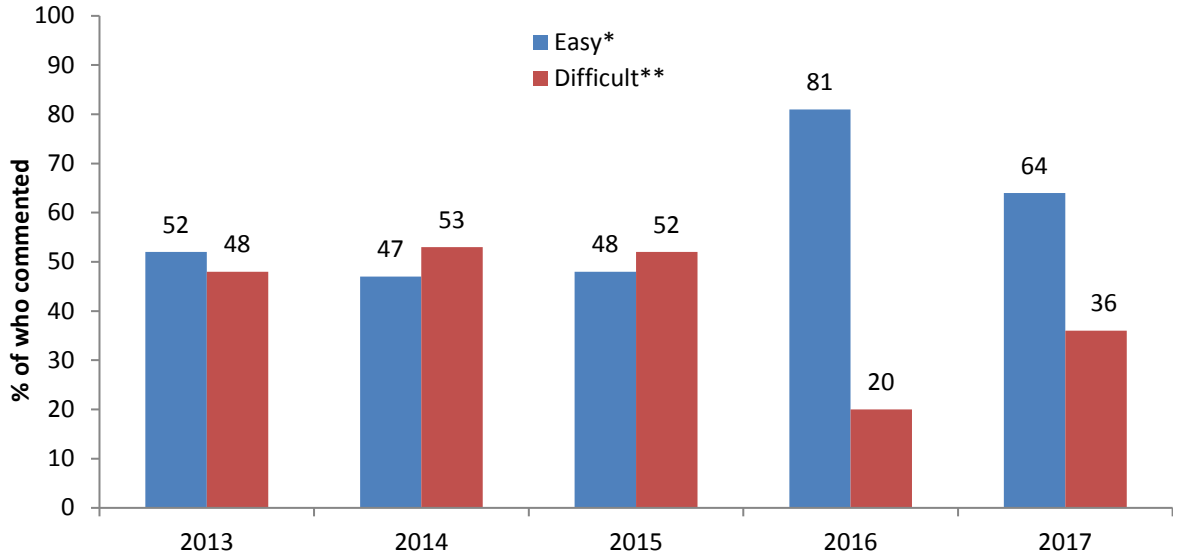
	2016 (n=25)	**2017 (n=25)**
Current purity (%)		
Low	4	**4**
Medium	36	**32**
High	36	**44**
Fluctuates	24	**20**
Change purity in last 6 months (%)	(n=24)	**(n=22)**
Increasing	21	**5**
Stable	38	**59**
Decreasing	8	**9**
Fluctuating	33	**27**

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

5.4.3 Perceived availability

The majority of those able to answer (64%) reported that it was 'easy' or 'very easy' to obtain LSD (see Figure 15); this a non-significant decrease from 2016 (81%; *p*>0.05). Half (50%) of those able to answer reported that the availability of LSD had been stable in the previous six months, 29% believed it was easier to obtain, 13% reported that it was more difficult to obtain and 8% reported that availability had fluctuated over the preceding six months.

Figure 15: Trends in perceived availability of LSD, SA, 2013–2017



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'

5.4.4 Last source and venue of purchase

Among those able to comment, the largest percentage of participants reported that they had bought LSD from friends (67%) and that they had 'scored' at their friend's home (38%) (Table 35).

Table 35: The last person and venue where participants purchased LSD, SA, 2017

	(n-24)
Person (%)	
Friends	**67**
Known dealers	**13**
Unknown dealer	**4**
Online (dark net)	**17**
Venue (%)	**(n=24)**
Own home	**13**
Friend's home	**38**
Dealer's home	**13**
Raves	**8**
Live music event/festival	**4**
Street market	**4**
Educational institute	**4**
Online/posted	**13**
Other	**4**

Source: EDRS participant interviews

5.5 Ketamine

Key Findings

- In 2017, the median price of ketamine was $250 per gram, and this was largely reported to have remained stable in the six months preceding interview.
- The purity of ketamine was perceived as high or medium.
- Reports regarding the perceived availability of ketamine were mixed, with almost equal percentages of those able to answer reporting that it was easy/very easy or difficult/very difficult to obtain.
- Among those who could comment, most purchased ketamine from a friend, and it was most commonly obtained at a private home.

5.5.1 Price

Ketamine was most commonly purchased in grams and was purchased for a median of $250 (range=$180−$300). The majority of participants who commented on the price considered it to have remained stable in the last six months (83%) (Table 36).

Table 36: Price of ketamine, SA, 2016 & 2017

	2016	2017
Median price of last purchase Gram (range; n)	–	**$250 (180−300; 10)**
Price change in last month (%)		**(n=12)**
Increasing	–	**0**
Stable	–	**83**
Decreasing	–	**17**
Fluctuating	–	**0**

Source: EDRS participant interviews
Note: 'Don't know' excluded from analysis
– Results not presented due to small numbers (n<10)

5.5.2 Perceived purity

Participants were asked what the current purity or strength of ketamine was, and whether the purity had changed in the six months preceding interview. The purity of ketamine was largely perceived as high (59%) or medium (41%), and this was largely reported to have remained stable (79%) in the six months preceding interview. Smaller numbers reported that the purity of ketamine had increased (14%) or decreased (7%) in the past six months.

5.5.3 Perceived availability

Reports regarding the perceived availability of ketamine were mixed. Almost equal percentages of those able to answer reported that ketamine was 'easy' or 'very easy' (52%) to obtain, or that it was 'difficult' or 'very difficult' to obtain (48%). Similarly, 47% of those able to answer reported that ketamine availability had remained stable in the six months preceding interview, whilst 42% reported that it had become 'easier' to obtain (Table 37).

Table 37: Perceived availability of ketamine and change in availability over the last six months, SA, 2016 & 2017

	2016	2017 (n=25)
Current availability (%)		
Very easy	–	**8**
Easy	–	**44**
Difficult	–	**32**
Very difficult	–	**16**
Change in availability in last 6 months (%)		**(n=19)**
More difficult	–	**5**
Stable	–	**47**
Easier	–	**42**
Fluctuates	–	**5**

Source: EDRS participant interviews
Note: 'Don't know' not included
– Results not presented due to small numbers (n<10)

5.5.4 Last source and venue of purchase

Ketamine was most commonly acquired through friends (52%), and was most commonly obtained at a private home (see Table 38).

Table 38: The last person and venue where participants purchased ketamine, SA, 2017

	(n=25)
Person (%)	
Friends	**52**
Acquaintances	**8**
Known dealers	**20**
Unknown dealer	**12**
Online (dark net)	**8**
Venue (%)	
Own home	**24**
Dealer's home	**12**
Friend's home	**36**
Nightclub	**4**
Private party	**4**
Agreed public location	**12**
Live music event	**4**
Online/posted	**4**

Source: EDRS participant interviews

5.6 Cannabis

Key Findings

- The price reported for hydro and bush cannabis remained stable at $25 for a bag.
- The purity of hydro cannabis was reported as high, with a significant decrease in the percentage who reported it as medium. The largest percentage of participants able to comment reported that the purity of hydro had fluctuated in the last six months, which was a significant increase from 2016.
- The purity of bush cannabis was largely reported as medium, and this was reported to have remained stable in the six months preceding interview.
- Availability was reported as easy or very easy, and this had reportedly remained stable over the preceding six months.
- Participants generally bought cannabis from a known dealer, 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 2017, participants were asked if they were able to differentiate between hydro and bush cannabis in terms of price, potency and availability. Just under half (46%) of the SA sample reported that they were able to distinguish between the two forms.

5.6.1 Price

The reported last median purchase price (by those able to comment) for a 'bag' of hydro (n=17) and bush cannabis (n=16) was $25 (no ranges), which was stable from 2016. The median purchase prices reported for an ounce of hydro (n=24) and bush (n=21) cannabis were $220 (range=$80−$250) and $220 (range=$100−$250) respectively; these were stable from 2016 ($215 an ounce for hydro; $200 an ounce for bush).

The majority of participants (69%; 27 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 (13%), decreased (13%) or increased (5%) 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 (74%; 28 out of 38 participants), while 11% reported that it had increased, 8% reported that it has decreased and 8% reported that the price had fluctuated in the last six months.

5.6.2 Perceived purity

Table 39 and Table 40 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 2017, the purity of hydro was reported as high (49%), with a significant decrease in the percentage who reported it as medium (12%; 36% in 2016; *p*=0.03; 95% CI: 0.05, 0.41; Table 39). The largest percentage of participants able to comment reported that the purity of hydro had fluctuated in the last six months (46%), which was a significant increase from 2016 (18%; *p*=0.02; 95% CI: -0.46, -0.07; Table 40).

In regard to bush cannabis, the majority of participants able to comment reported that the purity of hydro was medium (51%; Table 39) and that had remained stable in the six months preceding interview (54%; Table 40).

Table 39: Perceived purity of hydro and bush cannabis over the last six months, SA, 2016 & 2017

	% Able to answer			
	2016		**2017**	
	Hydro (n= 39)	Bush (n= 42)	**Hydro (n= 41)**	**Bush (n=39)**
High	44	33	**49**	**21**
Medium	36	52	**12***	**51**
Low	3	7	**10**	**13**
Fluctuates	18	7	**29**	**15**

Source: EDRS participant interviews
Note: 'Don't know' not included
*$p<0.05$

Table 40: Change in perceived purity of cannabis in last six months, SA, 2016 & 2017

	% Able to answer			
	2016		**2017**	
	Hydro (n=39)	Bush (n=40)	**Hydro (n=39)**	**Bush (n=39)**
Increasing	10	13	**3**	**8**
Stable	62	63	**44**	**54**
Decreasing	10	8	**8**	**13**
Fluctuating	18	18	**46***	**26**

Source: EDRS participant interviews
Note: 'Don't know' not included
*$p<0.05$

5.6.3 Perceived availability

Table 41 and Table 42 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 2017, the majority of participants able to comment reported hydro and bush cannabis as 'easy' or 'very easy' to obtain (90% and 82% respectively). Of those able to comment, the majority of participants reported that the availability of hydro (80%) and bush (74%) had remained stable in the last six months.

Table 41: Perceived availability of cannabis currently, SA, 2016 & 2017

How easy is it to get cannabis at the moment?	% Able to answer			
	2016		2017	
	Hydro (n=39)	Bush (n=42)	Hydro (n=41)	Bush (n=39)
Very easy	64	52	**68**	**49**
Easy	31	31	**22**	**33**
Difficult	5	17	**7**	**10**
Very difficult	0	0	**2**	**8**

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

Table 42: Change in perceived availability of cannabis over the last 6 months, SA, 2016 & 2017

Has [availability] changed in the last 6 months?	% Able to answer			
	2016		2017	
	Hydro (n=39)	Bush (n=42)	Hydro (n=40)	Bush (n=38)
More difficult	3	12	**3**	**16**
Stable	80	79	**80**	**74**
Easier	10	2	**8**	**11**
Fluctuates	8	7	**10**	**0**

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

5.6.4 Last source and venue of purchase

Table 43 summarises information from participants on the source (both person and venue) from which they had 'last' obtained cannabis in the preceding six months. In 2017, participants able to comment reported that they had last obtained cannabis from a known dealer (56% for hydro; 51% for bush) or a friend (34% 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 last obtained cannabis from was a dealer's home (42% for hydro; 41% for bush), a friend's home (20% for hydro; 23% for bush) or home delivery (29% for hydro; 26% for bush).

Table 43: The last person and venue where participants purchased hydro and bush cannabis, SA, 2017

	Hydro (n=41)	Bush (n=39)
Person (%)		
Friends	**34**	**31**
Known dealer	**56**	**51**
Acquaintance	**0**	**3**
Unknown dealer	**0**	**3**
Workmate	**2**	**0**
Relative	**0**	**8**
Online (social networking site)	**7**	**5**
Venue (%)	**(n=41)**	**(n=39)**
Home delivery	**29**	**26**
Dealer's home	**42**	**41**
Friend's home	**20**	**23**
Agreed public location	**7**	**5**
Pub/bar	**0**	**3**
Online/posted	**2**	**0**
Other	**0**	**3**

Source: EDRS participant interviews

5.7 Other drugs

Very few participants were able to answer on pharmaceutical stimulants (n=9), DMT (n=4), GHB (n=3), 2C-B (n=3) or MDA (n=1) and hence data will not be presented for these drugs. No participants were able to answer on MDA, antidepressants, antipsychotics or steroids.

6 Health-Related Trends Associated with Ecstasy & Related Drug Use

Key Findings

Overdose

- Two-fifths of the sample (40%) self-reported that they had overdosed on a stimulant drug and 20% reported that they had overdosed on a depressant drug in the past 12 months.

Health service use

- The majority of participants (86%) reported accessing a health service (for any reason) in the preceding six months, 28% had accessed a health service for drug and/or alcohol support, and an additional 23% 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, whilst increasing for alcohol and amphetamines.
- Alcohol dominated as the primary drug of concern for the largest percentage 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 half (55%) of the sample were assessed as having high to very high levels of psychological distress in 2017, which was a significant increase from 2016 (36%).
- Fifty-eight percent of the sample reported that they had experienced a mental health problem (other than drug dependence) in the six months preceding interview, which was a significant increase from 2016. Among these participants, the majority reported experiencing anxiety and depression.

6.1 Overdose and drug-related fatalities

As in previous years, participants in the 2017 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, 45% of the sample reported that they had experienced a recent overdose.

6.1.1 Stimulant overdose

Lifetime stimulant overdose was reported by 49% of the sample, which was a non-significant increase from 2016 (39%). Those who had ever experienced a stimulant overdose reported

doing so on a median of two occasions (range=1−50). The median time since last overdose was six months (range=1−48 months).

Forty participants reported that they had overdosed on a 'stimulant' drug in the last 12 months. Participants predominantly reported being at a nightclub (n=12), at their own home (n=11) or at a friend's home (n=9) at the time of overdose. Fewer participants reported being at a live music event (n=3), a private party (n=2), outdoors (n=1), a rave (n=1) or at work (n=1) at the time of overdose. Among those who had recently overdosed, the main drug involved was ecstasy (n=21), with smaller numbers attributing their last overdose to methamphetamine (n=9), cocaine (n=5), LSD (n=2), ketamine (n=2) and MDA (n=1).

The main symptoms participants reported on their last stimulant overdose (if it occurred within the last 12 months) included extreme anxiety (n=7), paranoia (n=4), vomiting (n=3), chest pain (n=3), increased heart rate (n=3), tremors (n=2), and visual hallucinations (n=2). Fewer participants reported symptoms of irregular breathing, panic, delirium/confusion, and muscle twitches (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=17). Twenty participants reported that there was a sober person present at the time of their last stimulant overdose.

6.1.2 Depressant overdose

Thirty-two participants reported they had 'ever' overdosed on a 'depressant' drug; this was a non-significant increase from 2016 (20%). Those who had experienced a depressant overdose had done so on a median of 3.5 occasions (range=1−100). The median time since last overdose was eight months (range=1−132 months).

Twenty participants reported overdosing on a 'depressant' drug in the last 12 months. The main drug involved in these recent depressant overdoses was alcohol (n=13), with losing consciousness (n=11) and vomiting (n=6) being the most common symptoms reported by those who had overdosed on a depressant drug in the past year.

The location of last overdose was mixed with most participants reporting that they were at their own home (n=9) or at friend's home (n=6). Smaller numbers reported being at a nightclub (n=3) or a private party (n=2).

Almost half of those who had overdosed in the past 12 months (45%; n=9) reported that they had been monitored or watched by friends; 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 (86%) reported accessing a health service (for any reason) in the preceding six months. The main service accessed was a GP (n=72), followed by a dentist (n=35). Smaller numbers reported that they had visited a: psychologist (n=23); 'other' health professional (n=17); emergency department (n=11); psychiatrist (n=11); hospital (n=9); specialist doctor (n=7); medical tent (n=7); drug and alcohol counsellor (n=6); ambulance (n=4); and social/welfare worker (n=4).

In 2017, 28% of the sample reported that they had accessed health services for alcohol and/or drug support in the past six months; most commonly a GP (n=11), drug and alcohol counsellor (n=8), medical tent (n=8) or psychologist (n=6). Smaller numbers reported that they had visited a: psychiatrist (n=4); emergency department (n=3); social or welfare worker (n=3); dentist

(n=2); ambulance (n=2); hospital (n=1); or other health professional (n=1) for drug and alcohol support in the preceding six months. An additional 23% of the sample 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.

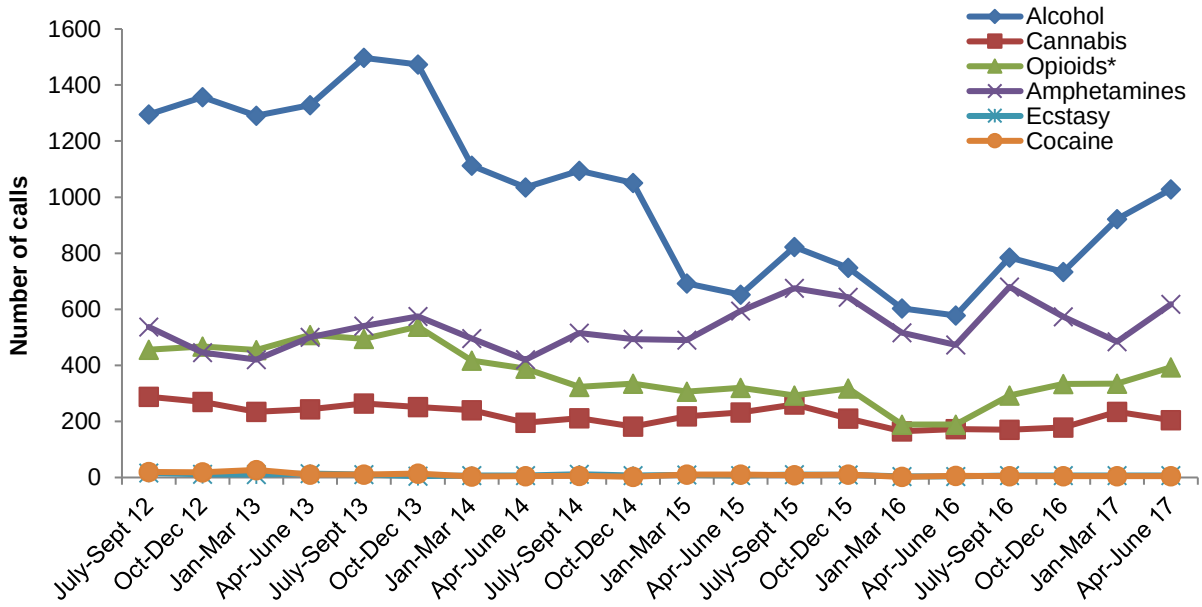
6.3 Drug treatment services

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 16 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 2012/13 to 2016/17. It can be seen that the majority of drug-related calls to SA ADIS across the time period depicted have been alcohol-related, with an increase noted in 2016/17. Similarly, there was a slight increase in the number of amphetamine-related calls in 2016/17, whilst the number of cannabis and opioid-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 16: Number of drug-related calls to ADIS per quarter, by selected drug type, SA, July 2012–June 2017

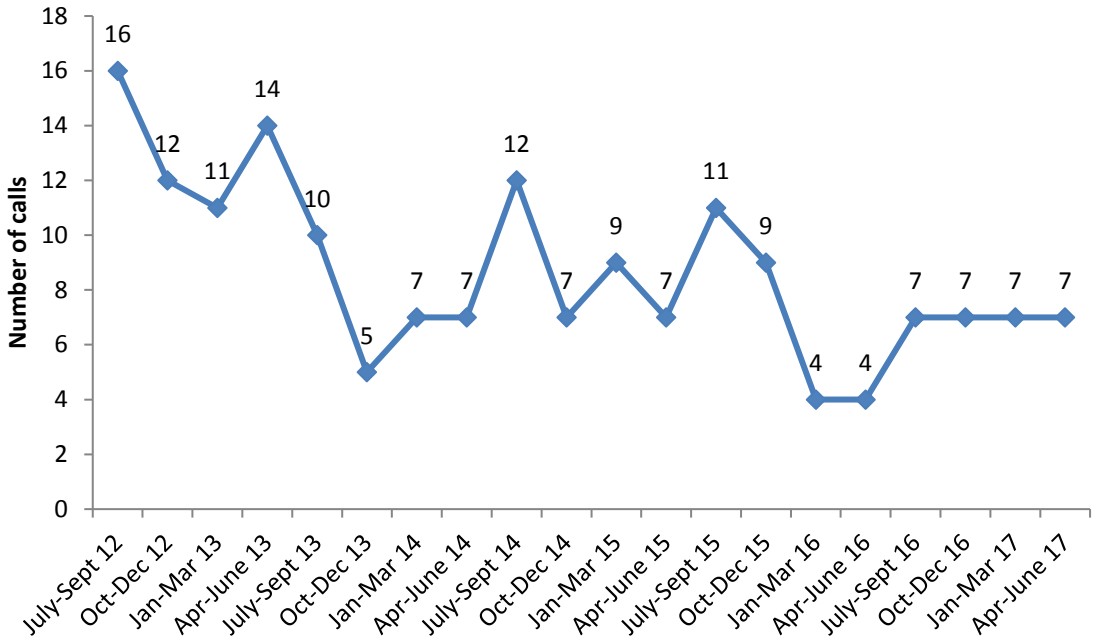


Source: SA ADIS
* In 2014/15 the 'opioids' category was expanded to include all calls coded under the categories heroin, methadone, buprenorphine, naltrexone, opioid pharmacotherapies, alcohol opioid pharmacotherapies, codeine, fentanyl, morphine, opioids (general), organic opiate analgesics (n.e.c), 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 2016/17 financial year (n=9,289); this was stable from 2015/16 (0.3%; n=28). Figure 17 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 17: Number of inquiries to ADIS regarding ecstasy, SA, July 2012–June 2017



Source: SA ADIS

6.3.1.2 Amphetamine-related calls

Telephone calls to ADIS regarding amphetamines accounted for 25.4% (n=2,357) of the 9,289 total drug-related calls in the 2016/17 financial year. This represents a slight increase from the previous financial year (21.8% of a total 10,564 calls).

Figure 16 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 2016/17 calls related to amphetamines continued to be higher than all other drugs, except alcohol.

Looking specifically at methamphetamine-related calls, the number of telephone calls to ADIS remained stable in 2016/17 (1,729 vs. 1,731 in 2015/16).

6.3.1.3 Cocaine-related calls

Telephone calls to ADIS regarding cocaine accounted for only 0.2% (n=20) of total drug-related telephone calls in 2016/17; this was stable from 2015/16 (0.2%; n=26).

Figure 16 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 8.5% (n=787) of the total coded telephone contacts (drug-related) in the 2016/17 financial year (including three calls in relation to synthetic cannabinoids); this was relatively stable from 2015/16 (7.8%; n=809).

Figure 16 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 44, in 2016/17 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 percentage (<1%) of the total attendances, and this remained stable from 2015/16.

Table 44: Primary drug of concern nominated by clients of Drug and Alcohol Services South Australia, as a percentage of total number of clients*, 2012/13–2016/17

Drug type (%)	2012/13 N=5,262	2013/14 N=4,932	2014/15 N=4,604	2015/16 N=4,495	**2016/17 N=4,421**
Alcohol	47.5	47.1	42.9	42.0	**41.1**
Amphetamines	19.1	18.5	21.1	25.1	**25.1**
Heroin	8.6	7.0	8.5	5.7	**5.9**
Opioid analgesics	8.9	8.2	8.9	9.2	**8.4**
Cannabis	13.9	13.3	11.6	11.9	**14.1**
Benzodiazepines	2.0	1.9	1.9	1.8	**1.2**
Ecstasy	0.3	0.5	0.2	0.2	**0.1**
Cocaine	0.2	0.2	0.2	0.1	**0.2**
Tobacco	0.5	0.4	0.5	0.7	**0.5**
Unknown	0.1	0.4	0.2	0.3	**0.2**
Buprenorphine	1.9	2.2	2.2	1.1	**1.2**
Suboxone	–	0.4	0.8	1.0	**1.2**
Other	3.0	0.4	0.9	0.9	**0.8**

Source: Drug and Alcohol Services South Australia

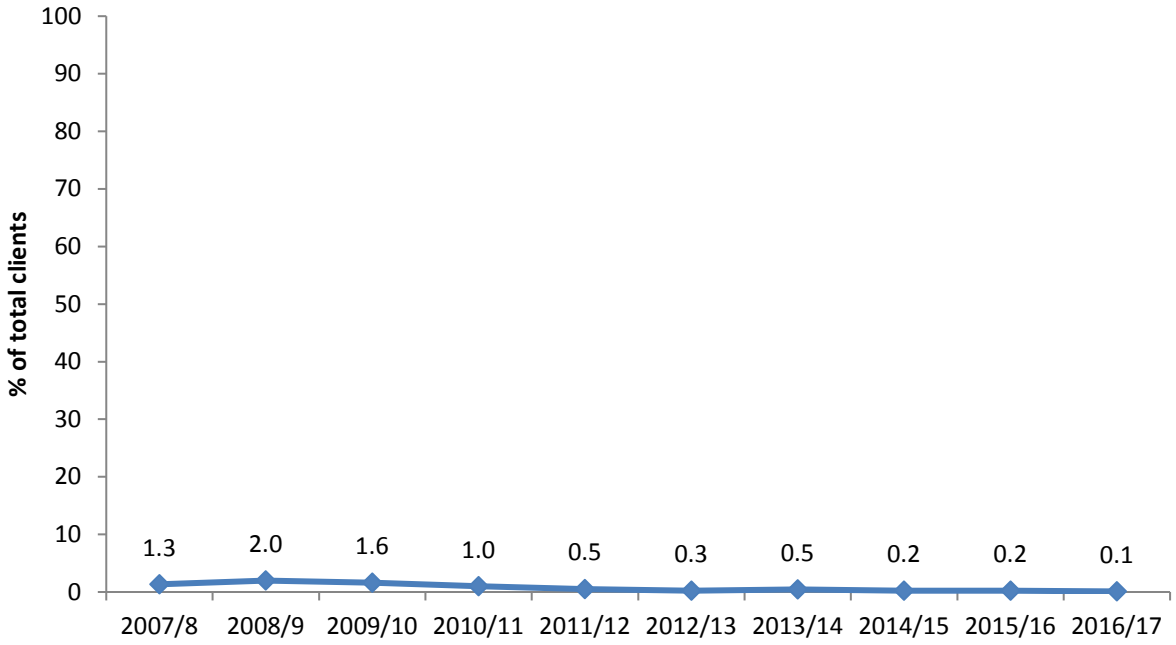
* Total number of clients = total number of individuals who started one or more new episodes of treatment during the period. Figures rounded up to one decimal place

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 2016/17 there were three clients (individuals) to all DASSA treatment services who nominated ecstasy as their primary drug of concern. This constitutes <0.1% of total clients for that year, which is relatively stable from 2015/16 (Figure 18). See also Table 44 for a comparison of ecstasy to other primary drugs of concern among clients of DASSA treatment services.

Figure 18: Percentage of total DASSA clients with ecstasy as the primary drug of concern, 2007/08–2016/17



Source: Drug and Alcohol Services South Australia

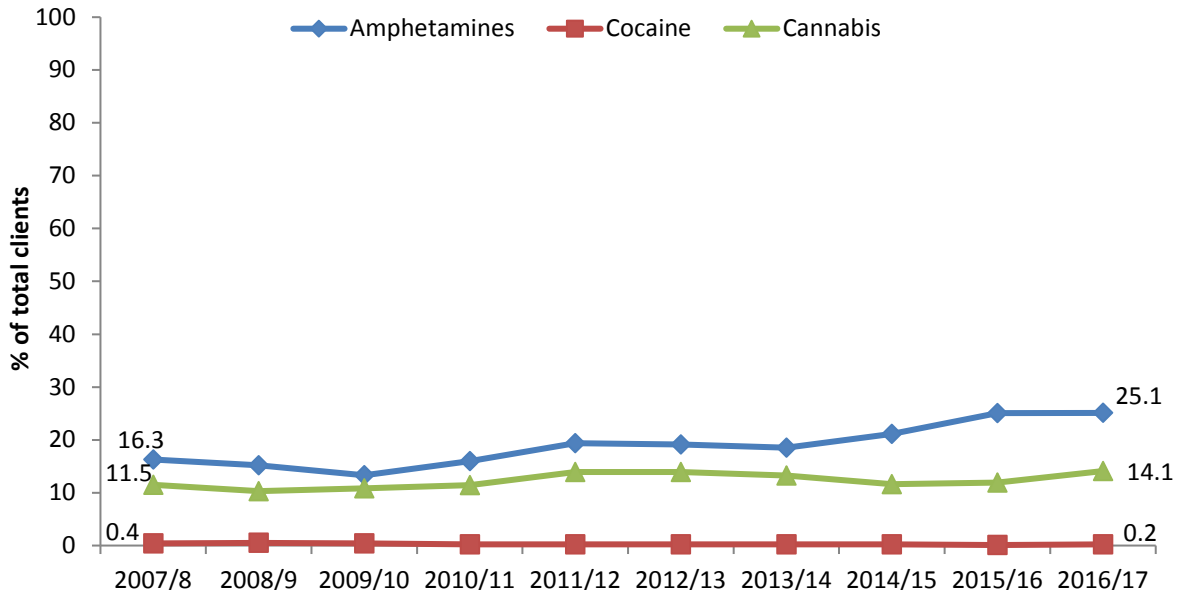
6.3.2.2 Methamphetamine, cocaine and cannabis-related attendances

The percentage of clients nominating amphetamines as their primary drug of concern remained stable in 2016/17. Amphetamines (25.1%) continued to dominate as the most common *illicit* drug of concern among DASSA clients, coming second only to alcohol (41.1%).

The percentage of clients nominating cocaine as their primary drug of concern has remained consistently low across all years reported. Of clients to all DASSA treatment services, 0.2% (n=9 of 4,421 individuals) nominated cocaine as their primary drug of concern in 2016/17.

The percentage of clients nominating cannabis as their primary drug of concern increased slightly in 2016/17. Of clients to all DASSA treatment services, 14.1% (n=622 of 4,421 individuals) nominated cannabis as their primary drug of concern in 2016/17 (Figure 19).

Figure 19: Percentage of total DASSA clients with amphetamines, cocaine or cannabis as the primary drug of concern, 2007/08–2016/17



Source: Drug and Alcohol Services South Australia

6.4 Emergency Department admissions

Information on drug-related attendances to the Emergency Department (ED) (Table 45) 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 45, 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; these remained relatively stable in 2016/17, except for the number of GHB presentations which more than doubled, from 26 in 2015/16 to 59 in 2016/17. Amphetamine-related attendances remained the most common of the illicit drug-related attendances at the RAH.

Table 45: Number of attendances[*] to the Emergency Department at the Royal Adelaide Hospital, SA, from 2007/08–2016/17 (per drug or diagnosis)

	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	**2016/ 2017**
Amphetamines	67	58	61	61	83	109	136	121	170	**163**
Cocaine	1	4	5	1	2	4	4	3	8	**9**
LSD	3	7	7	3	2	2	1	6	4	**11**
GHB	15	15	17	20	20	17	25	10	26	**59**
Alcohol	1,554	1,585	2,078	2,119	1,835	1,860	1,739	1,636	1,795	**1,785**
Cannabis	15	13	11	14	22	14	16	19	28	**27**
Heroin	44	66	51	66	63	55	35	51	50	**47**
Other opioid[**]	28	38	36	38	40	47	21	32	28	**32**
Benzodiazepines	145	151	169	162	147	117	130	135	109	**118**
Antidepressants	78	67	58	71	73	67	60	51	36	**54**
Other[#]	528	464	480	471	439	448	446	447	450	**499**
TOTAL	*2,514*	*2,469*	*2,973*	*3,026*	*2,726*	*2,740*	*2,613*	*2,513*	*2,704*	***2,804***

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

6.5 Mental and physical health problems

6.5.1 Mental health problems and psychological distress (K10)

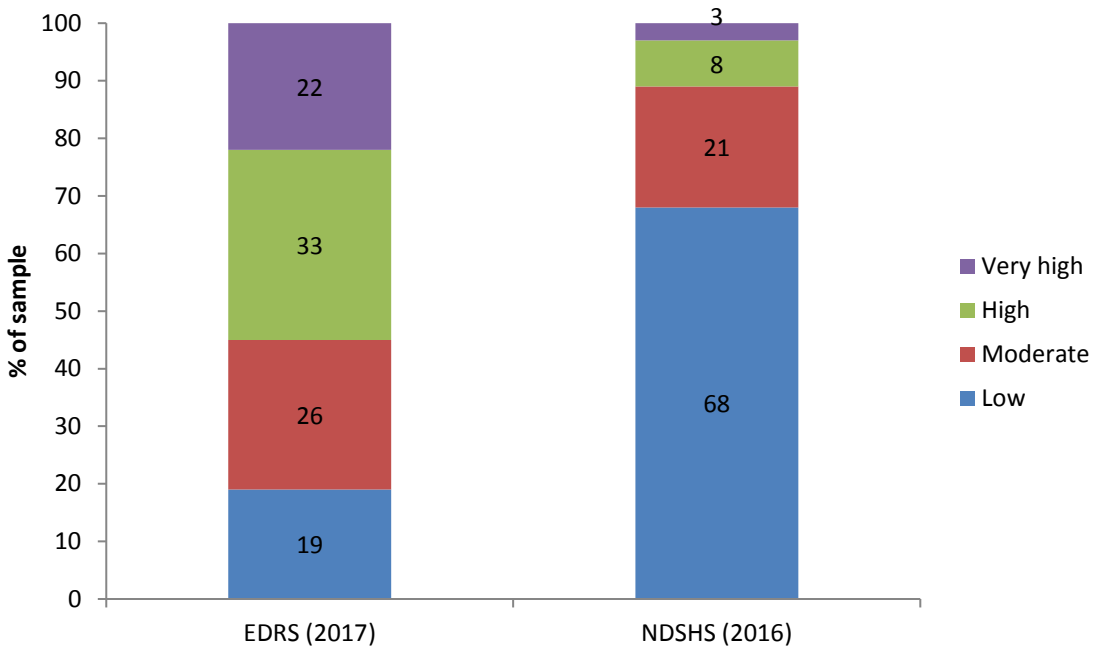
The Kessler Psychological Distress Scale (K10) (Kessler & Mroczek, 1994) was used to give a measure of levels of psychological distress among the participant sample.

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.

Nineteen participants had scores between 10–15 (low distress) on the K10, which was a significant decrease from 2016 (33%; p=0.04; 95% CI: 0.02, 0.26). Twenty-six percent of participants scored between 16–21 (moderate distress) (31% in 2016), 33% of participants scored between 22–29 (high distress) (28% in 2016), and 22% scored between 30–50 (very high distress) (8% in 2016; p=0.01; 95% CI: -0.24, -0.04) (Figure 20). The median total score for participants was 22.5 (range=10−42), indicating that over half of the sample was at high/very high risk of psychological distress as measured by the K10.

The 2016 National Drug Strategy Household Survey (AIHW, 2017) 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 percentage of EDRS participants reporting ‘high’ (33%) or ‘very high’ (22%) distress was higher (55%) compared to those in the National Drug Strategy Household Survey (11%: high = 8%, very high = 3%).

Figure 20: K10 categories among the EDRS sample (2017) and the general population (NDSHS, 2016)



Source: EDRS interviews; Australian Institute of Health & Welfare, 2017
Note: The extent to which cut-offs derived from population samples can be applied to the EDRS sample 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 2017, 58% of the sample reported experiencing a mental health problem (other than drug dependence) in the six months preceding interview; this was a significant increase from 2016 (35%; *p*=0.002; 95% CI: -0.36, -0.09).

Among these participants, the majority reported experiencing anxiety (69%; n=40) and depression (64%; n=37). Smaller numbers reported posttraumatic stress disorder (14%; n=8), panic (12%; n=7), paranoia (10%; n=6), any personality disorder (9%; n=5), ADHD (7%; n=4), manic-depression/bipolar (5%; n=3), obsessive compulsive disorder (5%; n=3), drug-induced psychosis (5%; n=3), other psychosis (3%; n=2), mania (2%; n=1), phobias (2%; n=1) or schizophrenia (2%; n=1). Half (55%; n=32) of those who reported suffering from a mental health problem had sought professional help, and 19 participants had been prescribed some form of medication (most commonly antidepressants).

7 RISK BEHAVIOUR

Key Findings

Injecting risk behaviour

- Ten percent of the sample reported having injected at some time in their lives, and two participants reported injecting in the month preceding interview. The median age of first injection was 19 years.

Sexual risk behaviour

- Sixty-nine percent of participants 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 (94%) reported doing so while under the influence of drugs and/or alcohol.
- Just over half (51%) of those who had had casual sex while under the influence of drugs and/or alcohol in the past six months reported that they had not used protection during their last sexual encounter.
- Three-fifths of the sample (59%) had received a sexual health check-up in their lifetime, with eleven participants reporting that they had been diagnosed with an STI in the past year.

Driving risk behaviour

- Eighty-one percent of the sample reported that they had driven a vehicle in the preceding six months, and of these, 34% had driven while over the BAC limit.
- Of those who had driven recently, 53% had done so within three hours of consuming an illicit substance, most commonly cannabis.

Alcohol risk behaviour

- Using the Alcohol Use Disorders Identification Test (AUDIT), the majority of the sample (83%) scored eight or more; indicating hazardous alcohol intake. There was no significant difference between males and females.

Stimulant dependence

- One-quarter (25%) of the sample scored 3 or above on the ecstasy SDS, indicative of problematic dependent ecstasy use.
- Among those who answered the methamphetamine SDS, 39% 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 2017, 10% of the sample (n=10) reported ever injecting any drug and two participants reported having injected in the month prior to interview. The median age of first injection was 19 years (range=17−26 years; n=10).

7.1.1 Sharing of needles/syringes and other injecting equipment

Results not presented due to small numbers (i.e. only two participants had injected in the month preceding interview.

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 46 summarises the reports of recent sexual activity and condom use with casual partners. Sixty-nine percent of the sample reported having casual sex with at least one casual partner in the six months preceding interview. Sixteen percent reported having one casual sexual partner during the preceding six months and 53% 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 46, about half (49%) of those who had had casual sex 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/IUD (n=16), participant did not wish to use (n=6), agreed not to (n=3) and it wasn't mentioned (n=2).

Table 46: **Prevalence of sexual activity and number of sexual partners in the preceding six months, SA, 2016 & 2017**

	2016	**2017**
No. casual sexual partners (%)	(N=100)	**(N=100)**
No casual partner	26	**31**
1 person	20	**16**
2 people	16	**9**
3−5 people	28	**26**
6−10 people	8	**15**
10 or more	2	**3**
Use of protection during last sexual encounter with casual partner when sober* (%)	(n=74)	**(n=69)**
Yes	60	**49**
No	35	**42**
Not applicable	5	**9**

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

7.2.2 Drug use during sex

Table 47 summarises the reports of recent sexual activity and condom use while under the influence of a drug or drugs, in the last six months. The majority (94%) of those reporting recent penetrative sex with a casual partner reported that they had done so while under the influence of alcohol and/or drugs, in the six months prior to interview. The large majority (89%) of these participants reported doing so on multiple occasions, with 23% 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 (80%), followed by ecstasy (48%), and cannabis (37%) (see Table 47).

About half of participants (49%) who had had recent penetrative sex with a casual partner while under the influence of drugs reported that they had used protection, while the other half (51%) reported that they had not used protection. The main reasons for *not* using protection while on drugs included: using a contraceptive pill/IUD (n=12), participant did not wish to (n=6), agreed not to (n=5), or it wasn't mentioned (n=4).

Table 47: Drug use during sex with a casual partner in the preceding six months, SA, 2016 & 2017

	2016 n=74	**2017 n=69**
Penetrative sex with casual partner while on drugs (%)[*] [#]	85	**94**
No. times had sex while on drugs with casual partner (%)	n=63	**n=65**
Once	14	**11**
Twice	10	**15**
3−5 times	38	**37**
6−10 times	18	**14**
Eleven +	21	**23**
Drugs used during last sexual episode	n=63	**n=65**
Ecstasy	64	**48**
Alcohol	75	**80**
Cannabis	35	**37**
Methamphetamine – powder	2	**0**
Methamphetamine – base	2	**0**
Methamphetamine – crystal	6	**3**
Cocaine	14	**11**
LSD	5	**8**
Ketamine	0	**3**
MDA	5	**0**
Amyl nitrite	8	**0**
Nitrous oxide	0	**5**
GHB	2	**0**
Pharmaceutical stimulants	2	**3**
Other opioids	0	**2**
Benzodiazepines	2	**6**
Use of protection during last sexual encounter with casual partner under influence of drugs (%)[#]	n=63	**n=65**
Yes	62	**49**
No	38	**51**

Source: EDRS participant interviews

[*] In the six months preceding interview

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

7.2.3 Sexual health

Three-fifths of the sample (59%) reported having had a sexual health check-up within their lifetime, and 19% had ever been diagnosed with an STI (Table 48). Eleven participants reported being diagnosed with an STI in the past year.

Table 48: Sexual health check-ups and diagnosis, SA, 2016 & 2017

	2016 (n=100)	**2017 (n=100)**
Sexual health check-up (lifetime) %		
No	47	**41**
Yes (last year)	41	**40**
Yes (>year ago)	12	**19**
Diagnosed with STI[#] %		
No	89	**81**
Yes, in last year	6	**11**
Yes, >year ago	5	**8**
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-one percent of the sample reported that they had driven a vehicle in the preceding six months. These participants were asked whether they had driven within three hours of consuming any illicit drug(s) in the six months prior to interview, and, if so, which drugs were involved. They were also asked if they had driven while over the limit for alcohol. The results are detailed in Table 49.

Table 49: Recent occurrence of driving following drug use, SA, 2015–2017

% of recent drivers	2015 (n=89)	2016 (n=82)	**2017 (n=81)**
Driven over the limit for alcohol[^]	36	28	**34**
Driven within three hours of taking any illicit drug[^]	60	50	**53**
Driven after illicit use of[#]:	(n=53)		**(n=43)**
Ecstasy	40	N/A	**33**
Methamphetamine – powder	6	N/A	**5**
Methamphetamine – base	2	N/A	**5**
Methamphetamine – crystal	19	N/A	**12**
Pharmaceutical stimulants	4	N/A	**0**
Cannabis	64	N/A	**86***
LSD	4	N/A	**5**
NBOMe	4	N/A	**0**
Mushrooms	0	N/A	**0**
Cocaine	4	N/A	**12**
Amyl nitrate	0	N/A	**0**
Heroin	2	N/A	**0**
Other opiates	0	N/A	**2**
Benzodiazepines	4	N/A	**7**
Oxycodone	2	N/A	**2**

Source: EDRS participant interviews
[*] In the six months preceding interview
[#] Among those who had driven within three hours of taking of illicit drugs
*$p<0.05$
N/A: this data only collected every second year

Thirty-four percent of the participants (n=27) who had driven a vehicle in the six months prior to interview reported that they had driven while over the limit of alcohol, and they had done so on a median of two days (range=1−24) during that period. Thirty-seven percent of recent drivers (n=30) had been random breath tested (for alcohol) in the six months prior to interview; two participants reported registering a positive result for being over the legal limit.

Fifty-three percent of recent drivers (n=43) also reported that they had driven after consuming an illicit drug, and they had done so on a median of 5 days (range=1−180). The drugs most commonly reported as having been used prior to driving, in the previous six months, were cannabis (86%; 64% in 2015; p=0.03; 95% CI: -0.37, -0.04), ecstasy (33%), crystal

methamphetamine (12%) and cocaine (12%). Participants reported driving a median of 90 minutes after taking any illicit drug (range=1−240 minutes; n=43). Sixteen percent of recent drivers (n=13) had been tested for drug driving in the six months prior to interview, with two participants testing positive to their most recent drug driving test.

7.4 The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT (Saunders et al., 1993) was completed by participants in the EDRS for the tenth 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 50 presents an overview of the AUDIT scores. The overall mean score on the AUDIT was 12.8 (range=0−30; SD=6.2), and there were no significant differences in AUDIT scores for male and female participants. Eighty-three 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 2017, 17% scored in Zone 1 (low-risk drinking or abstinence), 51% scored in Zone 2 (alcohol use in excess of low-risk guidelines), 18% scored in Zone 3 (harmful or hazardous drinking) and 14% scored in Zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence). This was stable from 2016.

Table 50: AUDIT total scores and percentage of the sample scoring above recommended levels indicative of hazardous alcohol intake, SA, 2016 & 2017

	2016	**2017**
Mean AUDIT total score	11.2	**12.8**
SD	5.7	**6.2**
(range)	(0−26)	**(0−30)**
Score 8 or above (%)	74	**83**
Zone 1	26	**17**
Zone 2	51	**51**
Zone 3	13	**18**
Zone 4	10	**14**

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 participants 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 2011−17, participants of the EDRS have been asked questions from the Severity of Dependence Scale (SDS) adapted to investigate ecstasy dependence. In 2015−17, 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 (n=98), 25% 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 participants scored 4 or above. There were no significant gender differences among those who scored 3 or above, or those who scored 4 or above.

The median SDS score was 1 (range=0−11). Two-fifths of the sample (42%) obtained a score of zero on the ecstasy SDS, and 22% obtained a score of 1 on the scale. This indicates that almost two-thirds of the sample (64%) 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=31), 39% 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 two (range=0−12).

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

Key Findings

- In 2017, the percentage of participants who had engaged in a criminal offence in the month prior to interview remained stable at 43%.
- Drug dealing remained the most commonly reported crime (42%), followed by property crime (10%).
- Four percent of the sample reported that they had been arrested in the past year, and one participant reported lifetime prison history; this was stable from 2016.

8.1 Reports of criminal activity and arrest among participants

Table 51 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 2013–17. In 2017, 43% of participants reported involvement in some type of crime in the month prior to interview, which was stable from 2016. 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 51: Criminal activity in the month prior to interview, as reported by participants, SA, 2013–2017

	2013 (N=100)	2014 (N=100)	2015 (N=100)	2016 (N=100)	**2017 (N=100)**
Criminal activity in last month:					
Property crime	7	19	10	10	**10**
Drug dealing	22	29	32	38	**42**
Fraud	3	1	2	2	**1**
Violent crime	4	3	5	7	**2**
Any crime	32	43	37	44	**43**
Arrested in last 12 months	11	5	12	9	**4**
Ever in prison	3	4	2	2	**1**

Source: EDRS participant interviews

Four percent of participants reported that they had been arrested within the last 12 months. The reasons for arrest were use/possession of drugs (n=2) and property crime (n=2).

9 SPECIAL TOPICS OF INTEREST

Key Findings

Online purchasing

- Twenty-seven percent of the sample reported that they had ever purchased a drug online, and 22% 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 drug purchased online was ecstasy, which increased significantly from 2016. Conversely, there was a significant decrease in the percentage of the sample who had purchased NPS online.
- There was a significant decrease in the percentage of the sample who had never heard of the dark net, and an inverse increase in those who had obtained drugs through a friend who purchased them from the dark net.

9.1 Online purchasing

In 2017, the EDRS continued to investigate and monitor the practice of purchasing drugs online among participants. 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 2017 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 2017, 27% of the sample reported that they had ever purchased an illicit drug online, with 22% having done so in the previous year. Among those who had purchased drugs online in the past year, 50% reported doing so on more than five occasions (see Table 52).

Table 52: Online drug purchasing among participants, SA, 2016 & 2017

	2016 N=100	**2017 N=100**
Ever purchased drug online? %	22	**27**
Purchased drug online in past year %	16	**22**
How many online purchases of illicit drugs in the past year? %	(n=16)	**(n=22)**
Once	38	**14**
Twice	19	**18**
3–5 times	25	**18**
More than 5 times	19	**50**

Source: EDRS participant interviews

Participants were asked what proportion of their drugs that were purchased online. Results are summarised in Table 53.

Table 53: What proportion of drugs were purchased online[#], SA, 2016 & 2017

What proportion of all purchased drugs were purchased online? % (n)	2016 (n=16)	**2017 (n=22)**
Less than 25%	69	27
Between 25% and 49%	6	23
Between 50% and 74%	13	32
Between 75% and 99%	13	9
All (100%)	0	9

Source: EDRS participant interviews
[#] Among those who had purchased drugs online in the last 12 months

Of those purchasing from the internet in the past year and who were willing to answer (n=21), over half (n=12; 57%) reported doing so with the intention of supplying or selling to others. More specifically, 33% (n=7) reported that they were purchasing substances online for the purposes of supplying to friends, 14% (n=3) for the purposes of selling for a profit and 10% (n=2) for both supply to friends and for profit.

Purchases of illicit drugs were primarily made from dark net marketplaces (82%, n=18) and social networking sites (41%; n=9). If participants had purchased from a dark net marketplace, they were asked to specify whether the retailer they purchased from was Australian (25%, n=4), international (50%, n=8), or both (25%, n=4).

Illicit substances recently purchased online were specified, see Table 54. The majority of participants (96%; n=21) reported buying a traditional illicit substance online, with a significant increase in those who had purchased ecstasy online (73%; 31% in 2016; *p*=0.03; 95% CI: -0.64, -0.09). Only one participant reported purchasing NPS online, which was a significant decline from 2016 (*p*=0.03; 95% CI: 0.07, 0.57).

Table 54: Illicit substances reportedly purchased online in the past 12 months, SA, 2016 & 2017

Online substance purchased %	2016 N=16	**2017 N=22**
'Any' traditional illicit substance	75	**96**
Ecstasy (any form)	31	73*
LSD	25	41
Cannabis	13	32
Benzodiazepines	6	14
Ketamine	6	23
Methamphetamine (any form)	19	5
Mushrooms	0	9
Cocaine	6	23
Pharmaceutical stimulants	0	14
MDA	0	9
Opioids	0	9
Pharmaceutical opioids	0	5
'Any' new psychoactive substance	38	**5***

Source: EDRS participant interviews
*$p<0.05$

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 55. As can be seen, there was a significant decrease in the percentage of participants who had never heard of the dark net ($p<0.001$; 95% CI: 010, 0.30), and an inverse increase in

those who had obtained drugs through a friend who purchased them from the dark net (*p*<0.001; 95% CI: -0.35, -0.11).

Table 55: Familiarity with the 'dark net', SA, 2016 & 2017

What is your level of knowledge of the dark net? %	2016 (N=96)	**2017 (n=100)**
Never heard of the 'dark net'	27	**7*** **
Only heard of the 'dark net' online but never accessed it	30	**20**
Researched the 'dark net' but never accessed it	3	**4**
Obtained drugs through a friend who purchased them from 'dark net'	16	**39*** **
Accessed 'dark net' marketplaces but never purchased from them	4	**10**
Purchased drugs from 'dark net' market places	20	**20**

Source: EDRS participant interviews
***p<0.001

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