Western Australia

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

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WEST AUSTRALIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2017

FINDINGS FROM THE ECSTASY AND RELATED DRUGS REPORTING SYSTEM (EDRS)

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Please note that, as with all statistical reports, there is the potential for minor revisions to data in this report over its life. Please refer to the online version at www.ndarc.med.unsw.edu.au.

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ABBREVIATIONS

2C-B	2,5-dimethoxy-4-bromophenethylamine
2C-E	2,5-dimethoxy-4-ethylphenethylamine
2C-I	2,5-dimethoxy-4-iodophenethylamine
5MEO-DMT	5-methoxy-dimethyltryptamine
6-APB	6-(2-aminopropyl)benzofuran
ABCI	Australian Bureau of Criminal Intelligence
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AGDH	Australian Government Department of Health
AIHW	Australian Institute of Health and Welfare
ATS	amphetamine-type stimulants
AUDIT	Alcohol Use Disorders Identification Test
BZP	benzylpiperazine
CI	confidence interval
CNS	central nervous system
DMT	dimethyltriptamine
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders IV
DSM 5	Diagnostic and Statistical Manual of Mental Disorders 5
DOI	'death on impact'; 2,5-dimethoxy-4-iodoamphetamine
DXM	dextromethorphan
EDRS	Ecstasy and Related Drugs Reporting System
EPS	Emerging psychoactive substances
GHB	gamma-hydroxy-butyrate
GP	general practitioner
IDDR	Illicit Drug Data Report
IDRS	Illicit Drug Reporting System
K10	Kessler Psychological Distress Scale
KE	key expert/s
LSD	*d*-lysergic acid
MDA	3,4-methylenedioxyamphetamine
MDAI	5,6-Methylenedioxy-2-aminoindane
MDEA	3,4-methylenedioxyethylamphetamine
MDMA	3,4-methylenedioxymethamphetamine
MDPV	3,4-methylenedioxypyrovalerone; ivory wave; 'bath salts'
MXE	methoxetamine or 3-MeO-2-Oxo-PCE
NBOMe	4-idio-2,5-dimethoxy-N-(2-methoxybenzyl) phenethylamine
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NDSHS	National Drug Strategy Household Survey
NPS	new psychoactive substance
NSP	needle and syringe program
OTC	over-the-counter
PDI	Party Drugs Initiative
PMA	paramethoxyamphetamine
REU	regular ecstasy user/s
ROA	route of administration
RPU	regular psychostimulant user/s
SDS	Severity of Dependence Scale
STI	sexually transmitted infection
WA	Western Australia
WHO	World Health Organization

GLOSSARY

1,4-B	Acronym for 1,4-butanediol. It is a GHB precursor and substitute, which metabolises into GHB in the stomach
2-CB	Street term for 4-bromo-2,5-dimethoxyphenethylamine. It is a synthetic psychedelic of moderate duration
2-CI	Street term for 2,5-dimethoxy-4-iodophenethylamine. It is a short-acting synthetic psychedelic
Bump	A bump refers to a small amount of powder, typically measured and snorted from the end of a key, the corner of a plastic card or a 'bumper'
Bumper	A bumper is a small glass nasal inhaler, purchased from tobacconists, used to store and administer powdered substances such as ketamine
Cap	Capsule
Cocaine	A central nervous system stimulant, obtained from the cocoa plant. Cocaine hydrochloride, the salt, is the more common form used in Australia. The freebase form is called 'crack'; little or no crack is available or used in Australia
Crystal	Street term for crystal methamphetamine, a potent form of methamphetamine. Also known as 'ice'
Daily use	Use occurring on each day in the past six months, based on a maximum of 180 days
Ecstasy	Street term for MDMA (3,4-methylenedioxymethamphetamine), which may contain a range of other substances. It is an hallucinogenic amphetamine
GBL	Acronym for gamma butyrolactone. It is a GHB precursor and substitute, which metabolises into GHB in the stomach
GHB	Acronym for gamma-hydroxy butyrate. It is a central nervous system depressant. Other known terms include 'GBH' and 'liquid ecstasy'; however, the latter is misleading as GHB is a depressant, not a stimulant
Ketamine	It is a dissociative psychedelic used as a veterinary and human anaesthetic
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 ROAs: inject; smoke; snort; swallow; and/or shaft/shelve
LSD	Acronym for *d*-lysergic acid diethylamide. It is a powerful hallucinogen
MDA	Acronym for 3,4-methylenedioxyamphetamine. It is classed as a stimulant hallucinogen. It is closely related to MDMA (and is sometimes

	found in ecstasy tablets); however, its effects are said to be slightly more psychedelic
Mephedrone	Mephedrone (2-methylamino-1-p-tolylpropane-1-one), also known as 4-methylmethcathinone (4-MMC) or 4-methylephedrone, is a stimulant and entactogen drug of the phenethylamine, amphetamine, and cathinone chemical classes
Methamphetamine	An analogue of amphetamine, it is a central nervous system stimulant. The three main forms of methamphetamine in Australia are methamphetamine powder ('speed'), methamphetamine base ('base') and crystalline methamphetamine ('crystal', 'ice')
PMA	Acronym for para-methoxyamphetamine. It is an amphetamine-type drug with both stimulant and hallucinogenic properties
Point	0.1 gram
Recent injection	Injection (typically intravenous) in the last six months
Recent use	Use in the last six months via one or more of the following ROAs: inject; smoke; snort; swallow; and/or shaft/shelve
Shaft/shelve	Vaginal/anal administration
Tab/s	The most common form of LSD is paper blotter divided into about 1/4" squares called 'tabs'. A single tab usually contains between 30-100 micrograms (ug) of LSD. Paper blotters are created by taking a sheet of absorbent paper (usually decorated and perforated) and soaking it in a dilution of lysergic acid diethylamide. The dilution can vary greatly from one batch to another, or one chemist to another

EXECUTIVE SUMMARY

This report presents the results of the WA EDRS (formerly the PDI), an ongoing study monitoring ecstasy and related drug markets within WA. It is part of a nationwide study, which commenced in New South Wales, Queensland and Victoria in 2000, with the addition of other states and territories in 2003. The survey design was informed by and modelled upon the pre-existing IDRS, designed to monitor use of the main illicit drugs in Australia, developing a new survey for monitoring trends in the ecstasy and related drugs (ERD) markets.

The findings from each year not only provide a snapshot of the drug markets in WA, but also help to provide an evidence base for policy decisions, inform harm reduction messages, and provide directions for further investigation when issues of concern are detected. Continued monitoring of the ERD markets in WA will help add to our understanding of the use of these drugs; the price, potency 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.

It needs to be noted that the EDRS is not a representative sample of ecstasy/psychostimulant drug users, but rather comprises annual samples of sentinel groups of users with similar characteristics, which allow trends in drug markets to be tracked over time. The EDRS cannot provide information on rates of drug use among REU/RPU in the general population.

The current report provides findings for the 15th year of data collection in WA, obtained from two sources:

1. Quantitative interviews with 100 current REU residing in the Perth metropolitan area; and

2. Analysis of indicator data from ADIS.

I. Demographic characteristics

For the purpose of this study, REU is a population defined by the use of ecstasy on at least six occasions over the preceding six-month period. This population was recruited until 2011. In 2012, the WA EDRS expanded its selection criteria for recruitment of participants. This change was made in WA, and some other jurisdictions, in response to difficulties experienced in the 2011 EDRS recruitment process. The selection criteria expanded to include both REU and RPU. For the purpose of this study, RPU is a population defined by the use of ecstasy or any psychostimulant drug/s (e.g. MDA, cocaine, ketamine, GHB, LSD, or NPS such as 2C-B and 2C-I) on at least six occasions over the preceding six-month period.

In 2017 in WA, while the expanded criteria were employed, there were no difficulties recruiting participants who had used ecstasy on at least six occasions in the preceding six months. The 2017 sample comprised only REU.

In a change from previous EDRS data collection years, KE were not interviewed in 2017, a decision taken nationally in order to streamline the data collection process and the EDRS reports.

In the 2017 WA EDRS:

- The sample comprised 100 REU;
- There were 69 males and 31 females;
- The mean age of the sample was 20 years, a significant decrease from 21.5 years in 2016;
- The vast majority (98%) of RPU were of English speaking background;
- The mean number of high school years completed was 11.7;
- Just less than one-third (30%) of the sample had completed a tertiary qualification;
- The median weekly income was $458, a significant decrease from $590 in 2016;
- The proportion of participants who reported being employed full-time was 23%;
- The proportion of participants who reported being employed part-time was 25%
- More than one-fifth (27%) of respondents reported that they were 'working and studying';
- Four per cent of the sample reported currently being in drug treatment; and
- These demographics have remained relatively stable across WA EDRS data collection periods and remained so in 2017, aside from mild variations in age and income.

In other analyses not reported here, comparisons of rates of drug use between the 2016 and 2017 samples were statistically weighted to account for the difference in age across samples. Unless otherwise noted, the significance of the results did not change when age was accounted for.

II. Drug consumption patterns and markets

i. Ecstasy

The 2017 EDRS distinguished between four different forms of ecstasy; pills, powder, capsules and crystal/MDMA rock.

Consumption patterns

- 100% of the sample reported lifetime use of ecstasy pills and 93% reported recent use, not significantly different from 100% and 98% in 2016. When age difference between the samples was accounted for, 90% of the 2017 sample reported recent use, a significant decrease from 98% in 2016.
- Almost half (47%) of the sample reported lifetime use of ecstasy powder and 36% reported recent use, significant increases from 29% and 13% respectively in 2016.
- More than two-thirds (68%) of the sample reported lifetime use of ecstasy caps and 61% reported recent use, not significantly different from 72% and 54% respectively in 2016.
- The majority of the sample reported both lifetime (82%) and recent (78%) use of ecstasy crystal/MDMA rock, a significant increase from 66% and 59% respectively in 2016.
- Rates of use of non-pill forms of ecstasy (powder and crystal/MDMA rock) appear to be increasing while rates of use of pills and caps have remained stable from 2016.
- The mean number of days that ecstasy was used in the preceding six-month period was 22 (i.e. less than once a week), not significantly different from 20 in 2016.
- The proportion of participants who reported that ecstasy was their 'drug of choice' was 51%, not significantly different from 47% in 2016.
- More than one-third (38%) of the sample reported 'weekly or more' ecstasy use, not significantly different from 31% in 2016.
- On a 'typical' occasion of use in the preceding six months, the average number of ecstasy pills used was 3.3, a significant increase from 2.7 in 2016.

- The vast majority (93%) of the sample reported using more than one pill on a 'typical' occasion of use in the last six months, not significantly different from 88% in 2016.

Market Characteristics

Ecstasy pills

- *Price*: A median of $20 per pill, a significant decrease from $25 in 2016. Most commonly rated as stable over the preceding six months (56%).
- *Potency*: Mixed perceptions of potency; most commonly reported as fluctuating both currently (34%) and over the last six months (28%).
- *Availability*: Overwhelmingly rated as easy or very easy to obtain (96%) and rated as stable over the preceding six months (61%).

Ecstasy powder

- *Price:* A median of $150 per gram, not significantly different from $200 in 2016. Rated as stable over the preceding six months (82%).
- *Potency:* Mixed perceptions of potency; most commonly rated as medium (42%). Reported as stable over the preceding six months (71%).
- *Availability*: Rated as easy or very easy to obtain (68%) and stable over the preceding six months (91%).

Ecstasy crystal/MDMA rock

- *Price:* A median of $30 per cap, the same median reported in 2016. Rated as stable over the preceding six months (68%).
- *Potency:* Most frequently rated as high (60%) and stable over the preceding six months (64%). Overall, the pattern of results suggests that ecstasy crystal/MDMA rock continues to be rated as higher in potency than other forms of ecstasy.
- *Availability:* Rated as easy or very easy to obtain (78%) and stable over the preceding six months (76%).

Ecstasy caps

- *Price:* A median of $25 per cap, a significant decrease from $30 in 2015. Rated as stable over the preceding six months (68%).
- *Potency:* Mixed perceptions of potency, most frequently rated as high (44%). Mixed perceptions of changes in potency over the preceding six months; most frequently rated as stable (48%).
- *Availability:* Rated as easy or very easy to obtain (83%) and stable over the preceding six months (70%).
- Overall, these results suggest that while the price of ecstasy crystal/MDMA rock appears to be stable, the price of pills, powder and caps may be decreasing. However, participants most frequently perceived prices of all forms of ecstasy as stable over the preceding six months.

ii. Methamphetamine

The 2017 EDRS distinguished between three different forms of methamphetamine: methamphetamine powder (speed); methamphetamine base (base); and crystal methamphetamine (crystal).

Consumption patterns

Speed

- More than one-tenth (16%) of the respondents reported lifetime use of speed, a significant decrease from 41% in 2016.
- Recent use of speed was reported by 7% of the current sample, a significant decrease from 18% in 2016.
- There was a significant increase in rates of use in 2016. Results from the current sample suggest that rates of use have returned to those seen in 2015.

- Speed was used on a median of eight days over the preceding six months.
- Snorting was the most common recent ROA (57%).

Base

- Less than one-tenth (6%) of the sample reported lifetime use of methamphetamine base, not significantly different from 8% in 2016. Recent use was reported by 2%, not significantly different from 1% in 2016.
- No further analyses were performed regarding base use due to the small sample size.

Crystal

- More than one-tenth (15%) of the sample reported lifetime use of crystal methamphetamine, a significant decrease from 29% in 2016. When age difference between the samples was accounted for, 20% of the 2017 sample reported lifetime use, a non-significant significant decrease from 15% in 2016.
- Recent use of crystal methamphetamine was reported by 6% of the sample, not significantly different from 12% in 2016.
- Among recent users, crystal methamphetamine was used on a median of three days in the preceding six months, not significantly different from four days in 2016.
- Smoking was the only recent ROA reported (100%).
- The median amount used on a 'typical' occasion in the preceding six months was two points, the same amount reported in 2016.
- The median amount used on the 'heaviest' occasion in the preceding six months was also two points, not significantly different from four points in 2016.
- The most commonly cited location where participants spent the most time while intoxicated on the last occasion was 'friend's home' (50%), consistent with the 2016 results.

Market characteristics

Speed

- These findings should be interpreted with caution given the small number of participants able to comment.
- *Price*: The median price per point was $55; comparison with the 2016 findings was not possible due to the small sample size. Price was most commonly rated as stable over the preceding six months (75%), not significantly different from the 2016 results.
- *Potency:* Most commonly rated as high (60%). Mixed perceptions of changes in potency over the preceding six months; rated as and decreasing (50%) and stable (50%) over the preceding six months. These results were not significantly different from the 2016 findings.
- *Availability*: Most commonly rated as easy and very easy to obtain (each 40%) and stable over the preceding six months (60%), not significantly different from the 2016 results.

Base

- No participants commented on methamphetamine base.

Crystal

- These results should be interpreted with caution given the small number of participants who commented.
- *Price*: Two participants reported the price per point; the median was $50. One participant reported the price per gram as $400. Comparison with the 2016 sample was not possible due to the small sample size. Price was most commonly rated as stable over the preceding six months (60%).
- *Potency*: Mixed perceptions of current potency; most commonly reported as medium (40%). Most commonly reported as stable over the preceding six months (75%).
- *Availability*: All respondents rated it as either easy (60%) or very easy (40%) to obtain. Most frequently rated as stable over the preceding six months (75%).

iii. Cocaine

Consumption patterns

- More than half (52%) of the participants reported lifetime use of cocaine, a significant decrease from 67% in 2016. When age difference between the samples was accounted for, 60% of the 2017 sample reported lifetime use, a non-significant significant decrease from 67% in 2016.
- Recent use was reported by just less than one-third (31%) of the sample, not significantly different from 38% in 2016.
- Cocaine was used on a mean of six days in the preceding six months, a significant increase from five days in 2016.
- Not significantly different from the 2016 findings, snorting was overwhelmingly the most commonly reported ROA (93%).
- The median amount used on a 'typical' occasion in the last six months was 0.5 grams, the same median amount reported in 2016; however this finding should be interpreted with caution given the small number of participants who were able to comment in 2017.
- Not significantly different from the 2016 findings, the most commonly reported location where participants spent the most time while intoxicated on the last occasion was 'nightclub' (44%).

Market characteristics

- *Price*: A median of $350 per gram, not significantly different from $400 in 2016. Price was most commonly perceived as stable over the preceding six months (67%).
- *Potency*: Mixed perceptions of current potency; most commonly reported as medium (32%). Mixed perceptions of recent changes in potency; most commonly reported as stable over the preceding six months (50%).
- *Availability*: Mixed perceptions of current availability; most commonly rated as both easy and difficult to obtain (each 37%). Most commonly reported to be stable over the preceding six months (67%).

iv. Ketamine

Consumption patterns

- Lifetime use of ketamine was reported by 21% of the current sample, a non-significant decrease from 33% in 2015. Recent use was reported by 16%, not significantly different from 18% in 2016.
- Ketamine was used on a mean of three days over the preceding six months, not significantly different from six days in 2016.
- Snorting was the most common recent ROA (93%), consistent with the 2016 results.
- The median number of bumps used on a 'typical' occasion in the preceding six months was 1.5, not significantly different from 3.5 in 2016. The median number of bumps used on the 'heaviest' occasion in the preceding six months was two, not significantly different from 4.5 in 2016. These comparisons should be interpreted with caution given the small number of participants who were able to comment.

Market characteristics

- These findings should be interpreted with caution given the small number of participants who were able to comment (n<10).
- *Price*: A median price of $240 per gram with mixed perceptions of price changes recently; rated as stable and decreasing (each 50%).
- *Potency*: Most commonly rated as high (80%) and stable over the preceding six months (67%).
- *Availability*: Mixed perceptions of current availability; rated as easy, very easy and difficult to obtain (each 33%). Mixed perceptions of availability changes recently; rated as stable and easer (each 50%).

v. GHB

Consumption patterns

- Just 5% of the current sample reported lifetime use of GHB, and 3% reported recent use, not significantly different from 13% and 4% respectively in 2016.
- GHB was used on a median of seven days over the preceding six months.
- Swallowing was the only recent ROA reported (100%).
- Findings on recent consumption patterns for GHB should be interpreted with caution given the very small number of participants able to comment (n=3).

Market characteristics

- *Price*: No data available.
- *Potency*: No data available.
- *Availability*: No data available.

vi. LSD

Consumption patterns

- More than (53%) of the current sample reported lifetime use of LSD, a significant decrease from 78% in 2016. Recent use was reported by one-third (33%) of the sample, a significant decrease from 50% in 2016. These results suggest the proportion of use of LSD has returned to levels seen in 2015.
- LSD was used on a mean of six days in the preceding six months (i.e. once per month), not significantly different from four days in 2016.
- The median amount used on a 'typical' occasion in the preceding six months was one tab, the same median amount reported in 2016.
- Not significantly different from 2016, swallowing or sublingual use was the only recent ROA reported (100%).
- A range of public and private venues were cited as locations where participants spent the most time intoxicated on the last occasion. The most common was 'friend's home' (34%).

Market characteristics

- *Price*: A median of $25 per tab, consistent with previous years. Most commonly rated as stable over the preceding six months (82%).
- *Potency*: Most frequently rated as high (63%) and stable over the preceding six months (56%).
- *Availability*: Mixed perceptions of availability; most commonly rated as both very easy and difficult to obtain (each 37%). Most commonly rated as stable over the preceding six months (66%).

vii. Cannabis

Consumption patterns

- Consistent with previous years, almost the entire sample (95%) reported lifetime use of cannabis and the vast majority (87%) reported recent use.
- Cannabis was used on a median of 48 days (i.e. approximately twice per week) over the preceding six months, a non-significant increase from 24 days in 2016.
- Among recent users, a median of four cones were consumed on the last occasion of use, a significant increase from three cones in 2016.

Market characteristics

Hydro

- *Price*: A median of $20 per gram, a significant decrease from $25 in 2016. A median of $330 per ounce, consistent with previous years. Most frequently reported as stable over the preceding six months (86%).
- *Potency*: Most commonly rated as high (60%) and stable over the preceding six months (69%).
- *Availability*: Overwhelmingly rated as easy or very easy to obtain (98%) and stable over the preceding six months (81%).

Bush

- *Price*: A median of $20 per gram and $300 per ounce, consistent with previous years. Most frequently rated as stable over the preceding six months (82%).
- *Potency*: Most commonly rated as medium (64%) and stable over the preceding six months (68%).
- *Availability*: Most frequently rated as easy or very easy to obtain (89%) and stable over the preceding six months (93%).

viii. Consumption patterns of other drug use

- Consistent with previous years, the almost entire sample (99%) reported lifetime use of alcohol and the vast majority (96%) reported recent use.
- Consistent with previous years, the majority (93%) of the sample reported lifetime tobacco use. Recent use was reported by 90%, not significantly different from 79% in 2016.
- Lifetime use of e-cigarettes was reported by two-fifths (40%) of the sample, not significantly different from 46% in 2016. Recent use was reported by just less than one-quarter (24%) of the sample, not significantly different from 25% in 2016.
- Lifetime use of MDA was reported by almost one-third (29%) of the sample, not significantly different from 30% in 2015. Recent use was reported by 24%, a non-significant increase from 13% in 2016.
- The majority (84%) of the sample reported the lifetime use of licit or illicit pharmaceutical stimulants, not significantly different from 85% in 2016. Recent use was reported by 78% of the sample, not significantly different from 67% in 2016. The majority of use was illicit.
- Lifetime use of licit or illicit benzodiazepines was reported by more than two-fifths (42%) of the sample, not significantly different from 55% in 2016. Recent use was reported by 37% of respondents, the same proportion reported in 2016. The majority of use was illicit.
- Lifetime use of illicit antidepressants was reported by 3% of the sample, not significantly different from 9% in 2016. None of the participants reported recent use, a non-significant decrease from 5% in 2016.
- One-tenth (10%) of the sample reported lifetime use of amyl nitrate, a significant decrease from 24% in 2016. Recent use was reported by 9% of respondents, not significantly different from 14% in 2016.
- Nitrous oxide continued to be the more popular inhalant, with more than half (58%) of the sample reporting lifetime use, not significantly different from 64% in 2016. Recent use was reported by 46% of the sample, not significantly different from 45% in 2016.
- Consistent with previous years, the use of heroin was uncommon. In 2017, lifetime use was reported by just 1% of the sample, not significantly different from 4% in 2016. None of the participants reported recent use, not significantly different from 2% in 2016.
- Just 1% of the sample reported lifetime and recent use of methadone, not significantly different from 2% and 1% respectively in 2016.
- Both lifetime and recent use of buprenorphine was reported by 1% of the sample, not significantly different from 2% in 2016.

- Lifetime use of licit or illicit other opiates was reported by less than one-fifth (16%) of the sample, a significant decrease from 36% in 2016. Recent use was reported by 8% of the respondents, a significant increase from 24% in 2016. The majority of use was illicit.
- Lifetime use of OTC codeine was reported by 34% of the sample, not significantly different from 32% in 2016. Recent use was reported by one-fifth (20%) of the sample, not significantly different from 23% in 2016.
- Lifetime use of psilocybin/hallucinogenic mushrooms was reported by almost half (47%) of the sample, a significant decrease from 62% in 2016. Recent use was reported by 14% of the sample, a significant decrease from 27% in 2016.
- One-tenth (10%) of the sample reported lifetime use of OTC stimulants and 3% reported recent use, not significantly different from 11% and 4% respectively in 2016.
- Consistent with previous years, none of the participants reported lifetime or recent use of steroids for non-medicinal purposes.

III. New psychoactive substances (NPS)

Since 2010, the EDRS has attempted to systematically investigate a group of drugs commonly referred to as 'research chemicals', 'analogues', 'legal highs', 'herbal highs', 'party pills' and 'emerging psychoactive substances'. For the purpose of this report, these drugs are referred to as 'new psychoactive substances' (NPS).

- In 2017, just more than two-fifths (43%) of the sample reported lifetime use of at least one NPS, a significant decrease from 67% in 2016. Just less than one-third (32%) reported recent use, the same proportion reported in 2016.
- Consistent with the 2017 results, the NPS most commonly reported to have been used recently were DMT (23%), capsule with unknown contents (19%), NBOMe (6%) and 2C-B and (5%).

IV. Health-related issues

i. Overdose, deaths and hospital admissions

- One-quarter (25%) of the sample reported having overdosed on a stimulant drug at some point in their lifetime, not significantly different from 23% in 2016.
- One-fifth (20%) of the sample reported having overdosed on a stimulant drug in the preceding 12 months, not significantly different from 14% in 2016.
- Less than one-fifth (18%) of the sample reported having overdosed on a depressant drug in their lifetime, not significantly different from 23% in 2016.
- Thirteen per cent of the sample reported having overdosed on a depressant drug in the preceding 12 months, not significantly different from 14% in 2016.
- Not significantly different from the 2016 findings, ecstasy was the most commonly reported main drug implicated in stimulant overdoses (74%) and alcohol was the most commonly reported main drug implicated in depressant overdoses (77%).

ii. Service usage

- More than one-tenth (14%) of the sample reported having accessed a service or health professional in relation to their drug or alcohol use in the preceding six months, not significantly different from 9% in 2016.
- In the 2016/17 period, there were 59 calls to ADIS for which ecstasy was the primary drug of concern, compared to 86 calls in 2015/16. These calls comprised 0.28% of all calls received by ADIS during the 2016/17 period.
- In the 2016/17 period, there were 5,348 calls to ADIS for which (meth)amphetamine was the primary drug of concern, an increase from 3,122 in 2015/16. These calls comprised 24.6% of all calls received by ADIS during the 2016/17 period. Calls to ADIS

involving (meth)amphetamine as the primary drug of concern appear to be on an upward trend.

- In the 2016/17 period, there were 50 calls to the ADIS involving cocaine the primary drug of concern, compared to 162 calls in 2015/16. These calls comprised 0.24% of all calls received by ADIS during the 2016/17 period. The spike in calls in 2015/16 is attributed to multiple calls from a single caller rather than an overall increase in calls. Calls to ADIS involving cocaine as the primary drug of concern remain low and stable.

iii. Mental health

- Participants completed the K10. Participants most commonly scored in the 'moderate' distress category (37%). Less than one-third (27%) scored in the 'high' distress category, 24% scored in the 'low to no' distress category and more than one-tenth (12%) scored in the 'very high' distress category. There were no significant differences in the proportion of participants who scored in each category between 2016 and 2017.
- Almost two-fifths (38%) of the sample reported having experienced a mental health problem in the preceding six months, not significantly different from 42% in 2016.
- Not significantly different from the 2016 findings, the most commonly reported recent mental health problems were anxiety (74%) and depression (66%).

V. Risk behaviours

i. Injecting risk behaviour

- Three per cent of the sample reported having injected a drug at some point in their lifetime, not significantly different from 2% in 2016.
- One participant (1%) reported having injected a drug in the last month, not significantly different from 2% in 2016.
- The downward trend in injecting seen in 2014 has been maintained into 2017.

ii. Sexual risk behaviour

- Penetrative sex with a casual partner in the preceding six months was reported by almost three-quarters (74%) of the sample, not significantly different from 62% in 2016.
- Less than two-thirds (63%) of the sample reported engaging in recent casual sexual activity while under the influence of alcohol or other drugs in that time period, not significantly different from 53% in 2016. Among these participants, 49% reported that they had not used a protective barrier on the last occasion, not significantly different from 44% in 2016.
- Not significantly different from the 2016 findings, the drugs most commonly implicated in casual sexual behaviour on the last occasion were alcohol (84%), ecstasy (68%) and cannabis (49%).
- Just less than two-thirds (66%) of the sample reported engaging in recent casual sexual activity while sober, not significantly different from 57% in 2016. Among these participants, 37% reported using no protective barrier on the last occasion, not significantly different from 43% in 2016.
- Among participants who reported not using a protective barrier on the last occasion, the most commonly reported reason was 'using the contraceptive pill/IUD' for sexual activity while under the influence of alcohol and other drugs (32%) and while sober (50%).

iii. Driving risk behaviour

- Among participants who reported driving a car or other vehicle in the preceding six months, 38% reported driving over the legal alcohol limit in that time period, not significantly different from 49% in 2016.

- Among those who reported driving in the preceding six months, 57% reported driving under the influence of illicit drugs in that time period, not significantly different from 65% in 2016.

iv. Poly drug use

- The vast majority (93%) of the sample reported having used more than one drug on the last occasion of psychostimulant use. Consistent with the 2016 findings, the most commonly used drugs in this context were alcohol (76%), ecstasy (73%), tobacco (58%), cannabis (48%) and pharmaceutical stimulants (16%).

v. Bingeing behaviour

- Bingeing on ERD in the previous six months was reported by less one-third (29%) of the sample, not significantly different from 30% in 2016.
- Not significantly different from the 2016 findings, the drugs most commonly implicated in recent bingeing were ecstasy (88%) alcohol (72%), cannabis (62%), tobacco (59%), and pharmaceutical stimulants (34%).

vi. Alcohol risk behaviour

- Participants completed the AUDIT. The majority of the sample (86%) scored within the 'hazardous or harmful' range for alcohol use, not significantly different from 77% in 2016. There was no significant difference in mean AUDIT scores between males and females.

vii. Ecstasy and methamphetamine dependence

- Participants were administered the SDS in regard to both their ecstasy and methamphetamine use.
- For ecstasy, among the entire sample (n=100) more than one-fifth (22%) scored at or above the SDS cut-off score of four, suggesting ecstasy dependence, the same proportion reported in 2016. A significantly larger proportion of males reached the cut-off score than females.
- Among recent methamphetamine users, more half (50%) of respondents scored at or above the SDS cut-off score, suggesting methamphetamine dependence, not significantly different from 35% in 2016; however, this finding should interpreted with cation given the small number of participants who completed the SDS for methamphetamine use (n=8). All participants who reached the cut-off score (n=4) were male (100%).

VI. Criminal and police activity

- Involvement in any criminal activity in the preceding month was reported by almost half (48%) of the sample, not significantly different from 45% in 2016. This is the largest proportion reported since WA EDRS data collection began in 2003.
- Consistent with previous years, the most commonly reported criminal activity in that period was drug dealing (41%).
- Eight per cent of the sample reported having been arrested in the preceding 12 months, not significantly different from with 7% in 2016.

IMPLICATIONS FROM THE 2017 WA EDRS FINDINGS

The WA arm of the EDRS ultimately aims to monitor trends in the Perth ERD markets and investigate harms associated with ERD use. The 2017 WA EDRS revealed ongoing fluctuations in drug markets and signs of drug-related harms which are discussed below.

Drug use trends

The findings from the 2016 EDRS suggested that the WA ecstasy market had maintained its recovery from declines seen in the 2010/2011 data collection period. The results from the current data collection period indicate that this recovery has remained stable into 2017.

Data from the 2012 and 2013 WA EDRS indicated that the resurgence in the ecstasy market at that time was driven by increases in the use of non-pill forms of ecstasy; capsules, powder and crystal/MDMA rock. Upward trends in the use of non-pill forms of ecstasy have continued into 2017. While rates of use of ecstasy capsules remained stable from 2016, the proportions of lifetime and recent use of both ecstasy powder and ecstasy crystal significantly increased from 2016. Of all forms of ecstasy, pills continued to have the highest rates of lifetime (100%) and recent (93%) use. This was followed by ecstasy crystal/MDMA rock, with more than two-thirds of the sample reporting lifetime (82%) and recent (78%) use. It will be interesting to see if this trend towards high and increasing rates of ecstasy crystal/MDMA rock use continues into 2018.

The 2016 EDRS identified a number of additional drug use trends to be examined into the future. In 2016 there were significant increases in lifetime and recent use of LSD compared to 2015. In the 2017 sample, lifetime and recent LSD use significantly decreased compared to 2016, with 53% of the sample reporting lifetime use and 33% reporting recent use. These findings suggest rates of LSD use have returned to the smaller proportions seen prior to 2016. In the 2016 sample, lifetime and recent use of ketamine also significantly increased compared to the previous year. These higher rates of use have remained stable in 2017. There was also a significant increase in lifetime nitrous oxide use in the 2016 sample, as well as a non-significant increase in recent use. These higher rates of use have again remained stable in 2017. Finally, in 2016 there were significant increases in lifetime and recent use of methamphetamine powder (speed) compared to the previous year. In 2017, both lifetime and recent use of speed significantly decreased compared to 2016. These results suggest that rates of speed use have returned to the smaller proportions seen prior to 2016.

Findings from the 2016 WA EDRS suggested that the price of ecstasy pills, capsules and crystal/MDMA rock was decreasing and ecstasy crystal/MDMA availability was increasing, prompting concern that this may increase rates of use of these drugs. Rates of lifetime and recent use of ecstasy powder and ecstasy crystal/MDMA rock significantly increased compared to the previous year, perhaps attributable to the declining price and increasing availability. The price of some forms of ecstasy continued to decrease in 2017; there were significant decreases in the price of ecstasy pills and capsules, and a non-significant decrease in the price of ecstasy powder per gram. The majority of participants in 2017 continued to rate all forms of ecstasy as either easy or very easy to obtain. The mean number of ecstasy pills used in a 'typical' and the 'heaviest' session in the preceding six months significantly increased from 2016 to 2017. Decreasing prices and high availability of ecstasy may continue to drive decreases in pill use, increases in non-pill use and/or increases in the number of pills used in a single session. Market trends in ecstasy price and availability should continue to be monitored to see if they persist into 2018. Particular attention should be given to whether these trends are associated with further increases in rates of use of certain forms of ecstasy among REU or their associated harms.

There are additional drug trends findings in the 2017 EDRS which will be looked at with interest in 2018 and beyond to see whether they continue. These include: (1) increasing lifetime and recent use of ecstasy powder; (2) increasing lifetime and recent use of ecstasy crystal/MDMA rock; (3) increasing recent use of capsules with unknown contents; (4) decreasing lifetime use of crystal methamphetamine; (5) decreasing lifetime use of cocaine; (6) decreasing lifetime use of amyl nitrate; (7) decreasing lifetime and recent use of mushrooms; and (8) decreasing lifetime and recent use of other (pharmaceutical) opiates.

Harms

The high level of alcohol use among the sample continues to be of concern. The majority (86%) of the sample obtained AUDIT scores that indicated hazardous and harmful use of alcohol. While the mean AUDIT score was higher for males than females, it was not significantly so. Almost three-fifths (59%) of the respondents in the current sample reported consuming alcohol on a 'more than weekly' basis, consistent with 50% in 2016. Again consistent with previous years, alcohol was the main drug to which depressant overdoses were attributed in the majority of cases (77%) and alcohol was the most commonly used concomitant drug on the last occasion of stimulant overdose (67%). The vast majority of the sample (93%) reported using at least one concurrent drug on the last occasion of any psychostimulant use; alcohol was used on the last occasion by the majority (76%) of these participants. Among participants who reported recent bingeing behaviour, alcohol was the second most commonly implicated drug (72%) behind ecstasy. Among participants reporting either poly drug use on the last occasion of psychostimulant use or recent bingeing behaviour, alcohol was most frequently combined with ecstasy, tobacco, cannabis and pharmaceutical stimulants. Overall, these findings indicate that harm reduction efforts targeting REU should continue address risky drinking behaviours, particularly among males. Focus should be placed on the concomitant use of alcohol and stimulant drugs and the role of alcohol in overdoses and bingeing behaviour.

Increasing ketamine use was a potential area of concern arising from the 2016 findings. The larger proportions of lifetime and recent ketamine use seen in 2016 have been maintained into 2017. Chronic frequent ketamine use is associated with an increased risk of ketamine-induced ulcerative colitis, a thickening and inflammation of the bladder resulting in frequency and urgency of urination and bladder incontinence. Ketamine- induced ulcerative colitis does not always resolve after cessation of ketamine use. Ulcerative colitis is most likely to occur with very frequent (daily or almost daily) ketamine use (Morgan & Curran, 2011). In 2017, REU reported using ketamine on a mean of 3.5 days in the preceding six months, a non-significant decrease from six days in 2016. The frequency of ketamine use reported by the current sample is unlikely to substantially increase the risk of ulcerative colitis among these users. However, given the potential for ulcerative colitis to be severe and permanent, ketamine use among REU should continue to be closely monitored for further increases in rates and frequency of use among this population.

Increasing nitrous oxide use is a potential issue of concern arising from the 2016 and 2017 WA EDRS findings. Lifetime use of nitrous oxide significantly increased in 2016 compared to the previous year, with a non-significant increase in recent use. These higher proportions of use have been maintained into 2017, with almost three-fifths (58%) of the sample reporting lifetime use and just less than half (46%) reporting recent use. Among REU in the 2017 sample who reported new issues in drug use, 12% commented that there had been an increase in nitrous oxide use recently. The potential for asphyxiation leading to serious injury or death occurs when users lose consciousness with a tube or mask dispensing nitrous oxide attached to the nose and mouth. Nitrous oxide is commonly administered by placing a balloon over the nozzle of a nitrous oxide dispenser to collect the gas and inhaling the contents of the balloon. Using a balloon as an ROA in this way ensures asphyxia does not occur by decreasing the dose, making unconsciousness unlikely, and preventing continued delivery of nitrous oxide should unconsciousness occur. The use of balloons to administer nitrous oxide therefore represents an effective harm reduction strategy (Jay, 2008). Prolonged or frequent use of high doses (more than 50-100 bulbs per session) has been associated with potentially serious adverse effects, including peripheral neuropathy, hypomania and psychosis (Celine, Gunter & Kurt, 2013; van Amsterdam, Nabben and van den Brink, 2015). In the 2017 WA EDRS, very small proportions of REU reported using 50 or more bulbs in a typical and the heaviest session in the last six months, and one participant reported daily use; a minority of REU may be at risk of serious adverse effects. Nitrous oxide use, including its ROA, should be continued to be

closely monitored among REU to detect further increases in proportion and frequency of use. Harm reduction interventions with REU should highlight the importance of the use of balloons as an ROA. REU using more than 50 bulbs of nitrous oxide in a single session either frequently over prolonged periods are a particularly important target group for harm reduction interventions.

The possibility of 2C-type drugs or NBOMe being sold on the Perth market as LSD and/or ecstasy first arose as an issue of concern from thee 2013 and 2014 WA EDRS findings. 2C-type drugs and NBOMe carry a higher risk of acute harm than LSD and ecstasy because they are highly potent at low doses and can cause cardiovascular complications (Caldicott, Bright & Barratt, 2013). A number of findings from the 2016 WA EDRS suggested that this behaviour may have been declining. In the 2017 WA EDRS there were significant decreases in lifetime and recent LSD use, and rates of use of 2C-type drugs and NBOMe remained low, again suggesting a possible decline in this behaviour. However, one REU in the 2017 sample reported that NBOMe continued to be sold as LSD in Perth, and another suggested that NBOMe was being sold as ecstasy. While the sale of NBOMe and/or 2C-type drugs as LSD and/or ecstasy appears to be declining, service providers managing patient presentations involving LSD or ecstasy should continue to consider a diagnosis of an inadvertent 2C-type drug or NBOMe overdose. Harm reduction interventions targeting REU should continue to increase awareness of 2C-type drugs and NBOMe on the Perth market, the fact that these drugs may be sold as something else, and the acute harms associated with them.

Driving while intoxicated continues to be an issue of concern. In 2017, almost two-fifths (38%) of participants who had driven a vehicle in the preceding six months reported having driven under the influence of alcohol in that time period and almost three-fifths (57%) reported having driven under the influence of illicit drugs. Cannabis and alcohol have been shown to produce dose-dependent impairment of cognitive and psychomotor functions required for driving and increase the risk of driving accidents. The effect of other illicit drugs is less equivocal, however, it is clear that other illicit drugs impair at least some driving-related cognitive functions and increase accident risk (EMCDDA, 2014). REU may perceive illicit drugs as less likely than alcohol increase accident risk, which may increase the likelihood of driving under the influence of illicit drugs (Danton, Misselke, Bacon, & Done, 2003; Matthews, Bruno, Dietze, Butler, & Burns, 2014). Harm reduction interventions with REU should continue to target intoxicated driving, with particular focus on the impairment and accident risk associated with driving under the influence of illicit drugs as well as alcohol.

Sexual risk behaviour among REU also continues to be an issue of concern. In 2017, almost three-quarters (74%) of the sample reported engaging in casual sexual behaviour in the preceding six months. Consistent with previous years, the majority (86%) of these participants had also engaged in casual sexual behaviour while under the influence of drugs in this time period. The most commonly implicated drugs were alcohol, ecstasy, cannabis, LSD and pharmaceutical stimulants. Among participants who reported recent casual sexual activity, less than two-fifths reported that they had not used a protective barrier on the last occasion while sober (37%) and less than half reported had not done so while under the influence of alcohol and/or other drugs on the last occasion (49%). The most commonly reported reason for not using a protective barrier on the last occasion was ‘using the contraceptive pill/IUD’ for both casual sexual behaviour while sober and under the influence of alcohol and/or other drugs. These findings suggest that a sizeable proportion of REU continue to be at risk of contracting STIs, both while under the influence of drugs and while sober. While just 5% of the sample reported being diagnosed with an STI within the last 12 months, less than half (46%) of the respondents reported having had a sexual health check-up within that time period. Educational harm reduction efforts with REU should therefore seek to increase awareness of the importance of protective barriers for preventing STIs in addition to pregnancy, as well as the importance of obtaining regular sexual health check-ups.

1. INTRODUCTION

The EDRS is an ongoing project funded by the AGDH and modelled on the more established IDRS. As the focus of the IDRS was on injecting drug users, it did not directly acknowledge the distinct population regularly using ecstasy and related drugs (ERD). Consequently, in 2000, NDLERF funded a two-year, two-state trial of the feasibility of monitoring emerging trends in the markets for ERD using the extant IDRS methodology. In 2017, the EDRS was supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund.

The EDRS terms of reference are the drugs that are routinely associated in the context of entertainment venues such as nightclubs, festivals or dance parties. This includes drugs such as MDMA (ecstasy), amphetamines, cocaine, LSD, ketamine, MDA and GHB. The PDI, which became a national survey in 2003, and was re-named the EDRS in 2006.

This report presents the findings of the 15th year of data collection for the PDI/EDRS in WA. From 2003 to 2016, like the IDRS, the EDRS results were based on three data sources: interviews with current illicit drug users – in this case RPU/REU; KE interviews with people who have regular contact with these users; and the collation of secondary indicator data. In 2017, in a decision taken nationally in order to streamline the data collection and the report itself, KE interviews were not conducted and indicator data was only collected from WA ADIS.

Consistent with the paradigm of the IDRS as an early warning system, participants resided in the capital city, reflecting the likelihood that emerging trends in illicit drug markets are more likely to occur initially in large cities rather than regional centres or rural areas.

1.1. Study aims

The specific aims of the WA EDRS 2017 were to:

1. Describe the characteristics of a sample of current REU in Perth;
2. Examine patterns of ecstasy and other drug use among this sample;
3. Document market aspects of ERD in Perth, such as price, potency and availability;
4. Examine participants' experiences of the nature and incidence of ecstasy-related harm including physical, psychological, social and legal harms;
5. Compare key findings of this study with those reported in previous years; and
6. Identify emerging trends in the ERD markets that may require further investigation.

2. METHOD

In 2017, the information used to document trends came from:

1. A survey of REU, consisting of face-to-face interviews
2. Telephone advisory service data from WA ADIS.

2.1. Survey of REU/RPU

There is an established market for ecstasy, i.e. tablets that are purported to contain MDMA, which has existed for more than two decades. In WA in 2016, 2.2% of the general population reported having used of ecstasy in the last 12 months (AIHW, 2017). The entrenchment of ecstasy in Australia's illicit drug markets, relative to other related drugs, underpinned the decision that regular use of ecstasy could be considered the defining characteristic of the target population of the EDRS. Therefore, from 2003 to 2011, the sentinel population for the EDRS consisted of regular users of pills, powder or capsules sold as ecstasy. However, in some previous years, recruitment based on this criteria alone has proved challenging for some jurisdictions, including WA. It was speculated that this may have been a result of declines in the potency and availability of ecstasy in WA and across Australia at that time.

As in other parts of the world, there was evidence for a decline in ecstasy purity first seen in 2010 report by the ACC. This declining purity provided potential for an expanding market of NPS as existing ecstasy users sought alternative substances (Bruno et al., 2012). Essentially, due to a decline in the purity and availability of ecstasy, people may have been seeking out and using alternative psychoactive substances. In order to capture these users, in 2012 the decision was made by the EDRS chief investigators to broaden the selection criteria for the study in those jurisdictions where the decline in ecstasy availability had made the samples too small to undertake meaningful analysis. Consequently, in 2012, the WA EDRS selection criteria were expanded to include RPU in addition to REU. It was intended that an annual review of this strategy be undertaken in those jurisdictions where these changes were made, in order to decide on the future of these recruitment criteria. In 2017, in WA there were no difficulties recruiting participants who had used ecstasy on at least six occasions in the preceding six months. Consequently, the 2017 WA EDRS sample comprised only REU.

2.1.1. Recruitment

100 REU were interviewed, all of whom reported that they had lived in the Perth metropolitan area for more than 12 months. Participants were recruited via an advertisement on the Facebook website of entertainment street press, as well as participant snowballing techniques as described by Barnard (1995).

Ethics approval was granted from the Curtin University Human Research Ethics Committee (HR27/2015) with a stipulation that interviews be conducted with participants aged 16 years or older.

2.1.2. Procedure

Potential participants contacted the research co-ordinator by either telephone, SMS, generic email address and were then screened for eligibility only over the telephone. Participants were asked to leave either a first name or pseudonym and a contact phone number if they contacted the co-ordinator via SMS or email. Three criteria were to be met for participation:

1. Use of ecstasy (pills, powder, capsules or crystal/MDMA rock) at least monthly or on six separate occasions over the preceding six months;
2. Aged 16 years or older; and
3. Resident in the Perth metropolitan area for a minimum of 12 months prior to the interview.

Participants meeting these criteria were informed that the study consisted of a confidential face-to-face interview conducted at a public place of convenience for both parties. It was explained that the structured interview would take approximately 60 minutes to complete and that all data would be collected anonymously. Participants were reimbursed $40 to cover time and travel expenses to attend the interview. Upon meeting the interviewer, the nature and purpose of the study was again explained to participants, and informed consent was obtained. All interviewers were trained in administration of the specific interview schedule and had a range of interviewer materials contained in a display folder to assist them.

2.1.3. Measures

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp et al., 1998; Topp et al., 2000). The original survey incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij, Hall & Lee, 1992) and amphetamines (Darke et al., 1994; Hando & Hall, 1993; Hando, Topp & Hall, 1997) and has been revised over successive years of PDI/EDRS data collection. The interview schedule focused primarily on the six months preceding the interview. The survey allowed assessment of sample characteristics related to demographic information; ecstasy and other drug use history, including frequency and quantity of use and ROA; physical and psychological side effects of ecstasy; price, potency and availability of different drugs; sexual and health-related behaviours; self-reported criminal activity; and general trends in the ERD markets such as new drug types and new drug users.

2.1.4. Data analysis

Quantitative data from the REU survey were analysed using SPSS Statistics 22 for Windows. Mann-Whitley *U* tests and non-parametric median difference tests were used to calculate mean and median differences between groups. Differences between proportions were analysed by calculating Newombe-Wilson Hybrid Score Intervals, using an Excel spreadsheet available at http://www. cebm.net/index.aspx?o=1023; all CIs based on these scores presented in this report are at 95%. Differences in the spread of frequencies across multiple responses were analysed using Pearson's Chi Square tests. All quantitative analysis employed an α of 0.5. Qualitative data collected from REU were analysed using the word processing and table-making options of Microsoft Word 2010.

3. DEMOGRAPHICS

3.1. Overview of the REU/RPU sample

Interviews were conducted with 100 REU in the Perth metropolitan area in April, May and June 2017. Table 1 presents key demographic data for the samples of REU/RPU recruited in WA since 2008.

The 2017 sample comprised 69 males, 30 females and one transgender participant, with a mean age of 20 years (range 16-36), significantly younger than 21.5 years in 2016. There was no significant difference in the mean age of males and females. The majority of participants identified as coming from an English speaking background (98%) and as having been born in Australia (78%) and one participant identified as Aboriginal. The mean number of years of high school education completed was 11.7 (range 9-12). Thirty per cent had a tertiary qualification; 24% held a trade or technical qualification and six per cent held a university degree. The majority (87%) identified as heterosexual and more than half (57%) reported their current relationship status as single. The mean income was $457 per week (range $1-$1,731), significantly less than $590 in 2016.

Table 1: Demographic characteristics of WA REU/RPU samples, 2008-2017

	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Mean age (years)	22.9	23.1	23.4	26.8	23.7	20.8	20.7	21.7	21.5	**20.0***
Male (%)	48	65	48	68	60	63	69	64	73	**69**
English speaking background (%)	98	97	99	96	97	96	98	99	96	**98**
ATSI (%)	0	2	4	4	2	2	0	0	0	**1**
Heterosexual (%)	97	84	86	100	96	90	93	95	95	**87**
Mean number school years	11.8	11.5	11.7	11.4	11.6	11.6	11.9	11.8	11.7	**11.7**
Tertiary qualifications (%)	59	46	48	36	67	32	29	38	40	**30**
Full-time students (%)	3	13	8	7	4	5	4	8	6	**11**
Employed full-time (%)	55	22	31	14	28	16	23	22	29	**23**
Employed part-time (%)	12	23	29	21	22	29	16	47	14	**25**
Both studying and employed	24	27	17	18	21	22	39	2	40	**27**
Unemployed (%)	5	15	13	25	21	20	16	12	10	**8**
Mean income per week	-	$425	$467	$471	$634	$524	$590	$503	$590	**$458***
Current drug treatment (%)	3	5	3	7	3	3	0	1	4	**4**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

4. DRUG CONSUMPTION PATTERNS

4.1. Drug use history and current drug use

Participants were asked about lifetime (ever used) and recent use (last six months) of a variety of drugs. Participants were asked how often they had used an ERD in the last month. Not significantly different from the 2016 findings, the most common response was fortnightly (42%), followed by weekly (24%), monthly (15%), more than once a week (12%) and then not in the last month, once a day and more than once a day (each 2%). Consistent with previous data collection years, the majority of the 2017 sample reported recent use of alcohol (96%), tobacco (90%) and cannabis (82%). A more thorough analysis of each drug class can be found in later sections of this report.

Table 2 presents the rates of lifetime and recent use of a variety of traditional drugs among REU/RPU since 2008. The EDRS began to systematically investigate other less commonly used drugs in 2010 (e.g. mephedrone, MDPV, DMT and synthetic cannabis). These drugs are currently referred to as NPS and are reported separately (see section 3.10 'New psychoactive substances' for a detailed analysis).

In other analyses not reported here, comparisons of rates of drug use between the 2016 and 2017 samples were statistically weighted to account for the difference in age across samples. Unless otherwise stated, the significance of results did not change when age was accounted for.

There were some significant differences in rates of traditional drug use in 2017 compared to 2016. These were:

- A significant increase in lifetime and recent use of ecstasy powder;
- A significant increase in lifetime and recent use of ecstasy crystal/MDMA rock;
- A significant decrease in lifetime and recent use of methamphetamine powder (speed);
- A significant decrease in lifetime use of crystal methamphetamine*;
- A significant decrease in lifetime use of cocaine*;
- A significant decrease in lifetime and recent use of LSD;
- A significant decrease in lifetime use of amyl nitrate;
- A significant decrease in lifetime and recent use of mushrooms; and
- A significant decrease in lifetime and recent use of other opiates.

* These results became non-significant when the 2016 and 2017 samples were statistically weighted for age.

Table 2: Lifetime and recent drug use of WA REU/RPU samples, 2008-2017

	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever inject any drug (%)	10	11	10	36	10	10	2	4	2	**4**
Ecstasy pills										
ever used (%)	100	100	100	100	100	100	100	100	100	**100**
used last 6 months (%)	100	100	100	100	100	99	98	99	98	**93**†
Ecstasy powder										
ever used (%)	24	19	18	29	42	32	27	29	29	**47***
used last 6 months (%)	9	10	6	7	26	25	20	18	13	**36***
Ecstasy capsules										
ever used (%)	47	42	41	61	58	62	61	79	72	**68**
used last 6 months (%)	28	15	14	11	32	48	51	65	54	**61**
Ecstasy crystal										
ever used (%)	-	-	-	-	-	46	67	64	66	**82***
used last 6 months (%)	-	-	-	-	-	34	58	51	59	**78***
Alcohol										
ever used (%)	100	100	100	100	100	100	100	98	100	**99**
used last 6 months (%)	98	99	98	93	96	96	98	97	95	**96**
Cannabis										
ever used (%)	100	99	99	100	99	98	98	97	98	**95**
used last 6 months (%)	85	85	81	86	77	92	86	86	87	**82**
Tobacco										
ever used (%)	90	92	84	89	96	88	91	91	92	**93**
used last 6 months (%)	69	76	67	89	67	75	77	82	79	**90**
E-cigarettes										
ever used (%)	-	-	-	-	-	-	47	63	46	**40**
used last 6 months (%)	-	-	-	-	-	-	33	34	25	**24**
Methamphetamine powder (speed)										
ever used (%)	72	63	60	67	62	36	36	23	41	**16***
used last 6 months (%)	38	37	38	44	27	17	19	6	18	**7***
Methamphetamine base (base)										
ever used (%)	22	13	8	36	8	9	3	2	8	**6**
used last 6 months (%)	5	3	4	11	1	0	0	0	1	**2**
Crystal methamphetamine (crystal)										
ever used (%)	62	41	40	64	58	32	24	31	29	**15*±**
used last 6 months(%)	36	20	22	46	33	22	17	16	12	**6**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

† Result become significant when the samples were statically weighted for age

± Result become non-significant when the samples were statistically weighted for age

Table 2: Lifetime and recent drug use of WA REU/RPU samples, 2008-2017 (continued)

	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Pharmaceutical stimulants										
ever used (%)	85#	82#	83#	89#	93#	77#	91#	91#	85#	**84#**
used last 6 months (%)	53#	60#	58#	68#	64#	64#	81#	78#	67#	**78#**
Cocaine										
ever used (%)	66	52	51	82	71*	54	56	58	67	**52*±**
used last 6 months (%)	40	24	26	32	31	34	30	29	38	**31**
LSD										
ever used (%)	47	55	48	71	57	66	67	58	78	**53***
used last 6 months (%)	21	31	35	36	33	41	45	24	50	**33***
MDA										
ever used (%)	16	9	11	25	17	18	19	20	30	**29**
used last 6 months (%)	5	2	5	14	4	12	13	11	13	**24**
Ketamine										
ever used (%)	21	18	14	18	18	20	25	16	33	**21**
used last 6 months (%)	3	6	4	0	3	7	11	4	18	**16**
GHB										
ever used (%)	7	7	3	14	4	9	4	6	13	**5**
used last 6 months (%)	2	2	0	0	1	3	3	2	4	**3**
Amyl nitrate										
ever used (%)	21	20	20	29	24	14	11	20	24	**10***
used last 6 months (%)	3	6	5	7	10	7	4	11	14	**9**
Nitrous oxide										
ever used (%)	48	39	39	50	53	46	43	49	64	**58**
used last 6 months (%)	21	13	16	18	26	32	32	37	45	**46**
Mushrooms										
ever used (%)	45	50	43	79	70	44	57	57	62	**47***
used last 6 months (%)	10	15	12	11	26	17	25	21	27	**14***
Benzodiazepines										
ever used (%)	36#	41#	44#	61#	56#	55#	52#	54#	55#	**42#**
used last 6 months (%)	24#	22#	28#	39#	25#	33#	35#	45#	37#	**37#**
Anti-depressants										
ever used (%)	17#	21#	24#	29#	29#	31#	14#	18#	-	**-**
used last 6 months (%)	9#	6#	10#	4#	8#	18#	6#	9#	-	**-**

Source: WA EDRS REU/RPU interviews, 2008-2017

Includes licit and illicit use

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

± Result become non-significant when the samples were statistically weighted for age

Table 2: Lifetime and recent drug use of WA REU/RPU samples, 2008-2017 (continued)

	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Heroin										
ever used (%)	3	6	4	25	6	6	4	3	4	**1**
used last 6 months (%)	2	2	3	11	1	2	0	1	2	**0**
Methadone										
ever used (%)	5	4#	3#	7	2	1	2	3	2	**1**
used last 6 months (%)	0	1#	2#	0	0	0	2	2	1	**1**
Buprenorphine										
ever used (%)	3	2#	2#	11#	3#	3	2	2	2	**1**
used last 6 months (%)	2	-#	1#	11#	0#	0	0	2	2	**1**
Other opiates										
ever used (%)	24	20	27	43#	46#	29#*	18#	33#	36#	**16#***
used last 6 months (%)	12	10	10	14#	20#	15#	8#	16#	24#	**8#***
OTC codeine										
Ever used (%)	-	20	29	57	20	23	26	26	32	**34**
Used last 6 months (%)	-	15	22	43	14	15	17	20	23	**20**
OTC stimulants										
ever used (%)	-	19	36	43	8	7	10	20	11	**10**
used last 6 months (%)	-	8	26	11	2	5	5	10	4	**3**
Steroids										
ever used (%)	-	-	1	0	2	1	1	4	2	**0**
used last 6 months (%)	-	-	0	0	1	1	1	0	0	**0**

Source: WA EDRS REU/RPU interviews, 2008-2017

Includes licit and illicit use

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

4.2. Ecstasy use

'Ecstasy' is the term used in popular street culture for the drug MDMA. This drug is classed as an hallucinogenic amphetamine and commonly associated with what was previously termed the 'party drug' scene. Tablets (pills), powder, caps and crystals sold as ecstasy may include a range of substances, perhaps in combination with a hallucinogenic such as ketamine. They may also contain other illicit chemicals like MDA, PMA or MDEA, or licit substances such as caffeine or paracetamol. The results presented in this section relate to the participants' use and knowledge of pills, powder, capsules and crystals sold as ecstasy.

4.2.1. Ecstasy use among REU/RPU

Presented in Table 3 are key findings regarding ecstasy use collected from WA REU/RPU samples recruited since 2008.

As in previous years, pills were the most commonly reported form of ecstasy used in the 2017 sample. Not significantly different from 2016, all participants (100%) reported lifetime use of ecstasy pills and 93% reported recent use. When age difference between the samples was accounted for, 90% of the 2017 sample reported recent use, a significant decrease from 98% in 2016.

Lifetime use of ecstasy powder was reported by almost half (47%) of the sample, a significant increase from 29% in 2016 (CI: 0.04 to 0.30). Recent use of ecstasy powder was reported by 36% of the sample, a significant increase from 13% in 2016 (CI: 0.11 to 0.34). Not significantly different from the 2016 sample, just more just two-thirds (68%) of the 2017 sample reported lifetime use of ecstasy capsules and 61% reported recent use. The majority of the sample reported lifetime (82%) use of ecstasy crystal/MDMA rock, a significant increase from 66% in 2016 (CI: 0.04 to 0.27). Recent use of ecstasy crystal/MDMA rock was reported by 78%, a significant increase from 59% in 2017. Rates of use of powder and crystal/MDMA rock appear to be increasing while rates of use of pills and caps have remained stable.

The mean number of days that any form of ecstasy was reported to have been used in the preceding six month period was 22 (i.e. less than once a week, range 6-102), not significantly different from 20 days in 2016. Fifty-one percent of respondents reported that ecstasy was their 'favourite' drug, not significantly different from 47% in 2016. Almost two-fifths (38%) of the sample reported using ecstasy 'weekly or more' in the six months preceding the interview, not significantly different from 31% in 2016. The mean number of ecstasy tablets reported to have been used on a 'typical' occasion in the preceding six months was 3.3 (range 1-10), a significant increase from 2.7 in 2016. The majority (93%) of the sample reported using more than one ecstasy pill on a 'typical' occasion in the last six months, not significantly different from 88% in 2016. The mean number of ecstasy tablets reported to have been used on the 'heaviest' occasion in the preceding six months was 6.6 (range 1-40), a significant increase from 5.4 in 2016. The median number of ecstasy crystal/MDMA rock caps used on a 'typical' occasion in the last six months was two (range 1-10), the same number reported in 2016. The median number of ecstasy crystal/MDMA rock caps used on the 'heaviest' occasion in the last six months was three (range 1-11), not significant different from two caps in 2016. Less than one-third (29%) of the sample reported 'bingeing' on an ERD (i.e. using ERD(s) for more than 48 hours continuously without sleep) in the last six months, not significantly different from 30% in 2016.

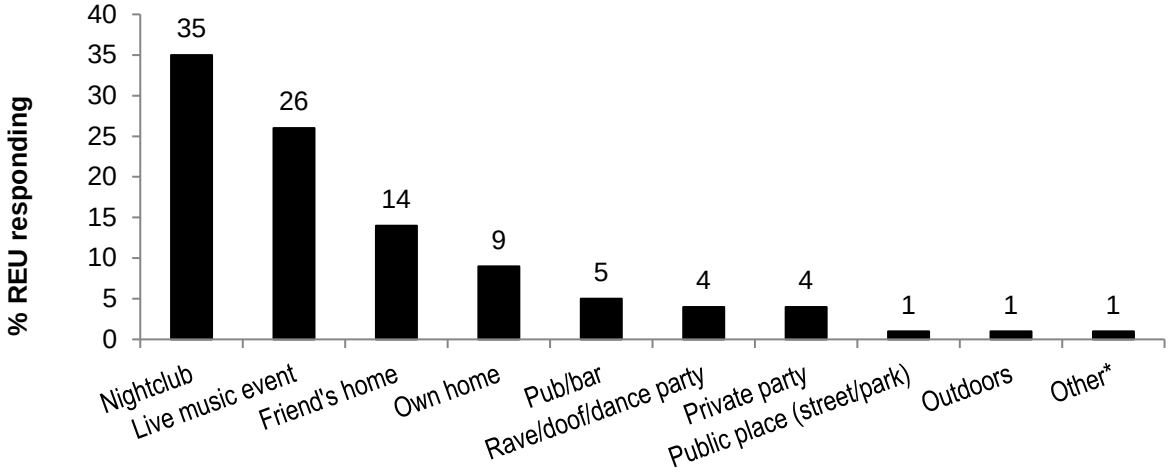
Participants were asked about the ROA they had used in the preceding six months for all four forms of ecstasy. Among those who commented on pills (n=93), the most common ROA was swallowing (n=92, 99%), followed by snorting (n=59, 63%), shelving/shafting (n=5, 5%) and smoking (n=1, 2%). Among those who commented on powder (n=36), the most common ROA was snorting (n=30, 83%), followed by swallowing (n=15, 42%) and shelving/shafting (n=1, 3%). Among those who commented on capsules (n=60), the most common ROA was

swallowing (n=56, 93%), followed by snorting (n=19, 32%) and shelving/shafting (n=1. 2%). Among those who commented on crystal/MDMA rock (n=77), the most common ROA was swallowing (n=64, 83%), followed by snorting (n=38, 49%). These findings were not significantly different from the 2016 sample.

4.2.2. Location of ecstasy use

As shown in Figure 1, the most commonly cited location where participants reported spending the most time while intoxicated on the last occasion that they used any form of ecstasy was 'nightclub' (35%). This was followed by 'live music event' (26%), 'friends home' (14%), 'own home' (9%), 'pub/bar' (5%), 'rave/doof/dance party' and 'private party' (each 4%) and 'public place (street/park)', 'outdoors' and 'other' (each 1%).

Figure 1: Location of most recent ecstasy pill use, 2017 (N=100)



Source: WA EDRS REU interviews, 2017
*Other reported location was 'hospital'.

Table 3: Patterns of ecstasy use, 2008-2017

Ecstasy	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 REU n=65	2012 REU/RPU N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ecstasy pills											
ever used (%)	100	100	100	100	100	100	100	100	100	100	**100**
used last 6 months (%)	100	100	100	100	100	100	99	98	99	98	**93**†
Ecstasy powder											
ever used (%)	24	19	18	29	54	42	32	27	29	29	**47***
used last 6 months (%)	9	10	6	7	34	26	25	20	18	13	**36***
Ecstasy capsules											
ever used (%)	47	42	41	61	63	58	62	61	79	72	**68**
used last 6 months (%)	28	15	14	11	42	32	48	51	65	54	**61**
Ecstasy crystal/MDMA rock	-	-	-	-	-	**-**	46	67	64	66	**82***
ever used (%)	-	-	-	-	-	**-**	34	58	51	59	**78***
used last 6 months (%)											
Mean age first used ecstasy (years)	18	18	18	18	18	18	18	17	18	-	**-**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

† Result became significant when the samples were statically weighted for age

- Data not collected.

Table 3: Patterns of ecstasy use, 2008-2017 (continued)

Ecstasy	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 REU n=65	2012 REU/RPU N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Mean days used ecstasy last 6 months	13	12	14	17	13	11	20	18	20	20	**22**
Ecstasy 'favourite' drug (%)	38	42	45	26	39	36	38	40	39	47	**51**
Use ecstasy weekly or more (%)	10	29	14	29	14	12	30	23	23	31	**38**
Mean ecstasy tablets in typical session	2.1	2.5	2.1	2.3	2	1.8	2.2	2.4	2.5	2.7	**3.3***
Median amount ecstasy crystal used in a typical session (caps)	-	-	-	-	-	-	-	2	2	2	**2**
Median amount ecstasy crystal used in a heavy session (caps)	-	-	-	-	-	-	-	2	2	2	**3**
Typically use >1 ecstasy pill (%)	74	86	81	75	77	66	72	86	88	88	**93**
Recently binged~ on ecstasy or related drugs (%)	22	40	27	54	29	26	38	37	28	30	**29**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

~ 'Binge' defined as use of ecstasy for more than 48 hours continuously without sleep

4.2.3. Summary of ecstasy consumption

- Pills were the most common form of ecstasy used in participants' lifetimes (100%), followed by crystal/MDMA rock (82%) capsules (68%), and powder (47%).
- Compared to the 2016 sample, in 2017, a significantly larger proportion of participants reported lifetime and recent use of ecstasy powder, as well as lifetime and recent use of ecstasy crystal/MDMA rock. When the 2016 and 2017 samples were statistically weighted for age differences, there was a significant decrease in recent pill use in 2017 compared to the previous year.
- Ecstasy was used on a mean of 22 days (i.e. less than once a week) in the preceding six months, not significantly different from 20 days in 2016.
- The proportion of participants reporting ecstasy as their 'drug of choice' was 51%, not significantly different from 47% in 2016.
- The mean number of ecstasy pills used on a 'typical' occasion in the last six months was 3.3, significantly more than 2.7 in 2016.
- More than one-third (38%) of the sample reported using ecstasy 'weekly or more' not significantly different from 31% in 2016.
- The proportion reporting typically using more than one tablet in a single session was 93%, not significantly different to 88% in 2016.
- The most common ROA used in the preceding six months was swallowing for pills, capsules and crystal/MDMA rock and snorting for powder.
- The most commonly cited last location of last use of any form of ecstasy was 'nightclub' (35%).

4.3. Methamphetamine use

Methamphetamine became a primary focus of the IDRS in 2001, in recognition of its increasing prevalence over amphetamine during the 1990s. These drug types differ in molecular structure but have a similar effect of stimulating the release of monoamines such as dopamine, noradrenaline, adrenaline and serotonin in the body (Seiden, Sobol & Ricaurte, 1993). Throughout the 1980s, amphetamine sulfate was the dominant form of illicit amphetamine in Australia, but due to legislative controls on the availability of primary precursor chemicals, there was a shift toward alternative recipes for cooking amphetamine (Wardlaw, 1993). During the 1990s, the proportion of amphetamine-type substance seizures that were methamphetamine (rather than amphetamine) steadily increased, until methamphetamine clearly dominated the market (Australian Bureau of Criminal Intelligence [ABCI], 1999, 2000, 2001). Across Australia today, the powder traditionally known as speed is almost exclusively methamphetamine rather than amphetamine (ACC, 2010).

As methamphetamine markets across the country have expanded over the past few years, it has become apparent that there is a diversity of forms of methamphetamine sold in the Australian illicit drug market.

Powder form methamphetamine is the presentation of the drug which has traditionally been available in Australia. This can range from fine powder to more crystalline or coarse, and may take different colours (commonly white, yellow, brown, orange or pink), depending on the chemical process used in its production and the quality of that process. It is typically produced within Australia, most commonly in small, portable laboratories, and is usually based on pharmaceutical pseudoephedrine (extracted from, e.g., Sudafed tablets). Because of its powder form, it is fairly easy to cut (dilute) and is commonly sold at fairly low purity/potency, although this can vary substantially.

The two other forms of methamphetamine are traditionally higher in potency (at least partially due to being more difficult to cut) (Topp et al., 2002). The first, referred to in some jurisdictions as base or paste, is commonly a gluggy, waxy, oily, 'wet' powder. This form of the drug appears oily because the conversion process from pseudoephedrine to methamphetamine produces the alkaline (base) form of methamphetamine, which is oily. To convert this to a more easily usable form (methamphetamine hydrochloride crystals, which may take the appearance of powder or, when no impurities are present, and carefully crystallised, may take the form of the 'ice' crystals – discussed below) requires a high level of skill and, when not completed correctly, the result of this process is an oily powder that often has a yellow or brownish tinge due to the presence of iodine and other impurities (Topp & Churchill, 2002).

The final form of methamphetamine examined in the current study is often referred to as ice or crystal meth(amphetamine). This is the product of a careful production process, and is believed to be chiefly imported into Australia from Asian countries (Topp & Churchill, 2002), although there are also indications of local production (ACC, 2007). It commonly appears as clear, ice-like crystals, and, as such, is difficult to cut, resulting in a relatively high purity/potency product.

4.3.1. Methamphetamine powder use among REU/RPU

Table 4 presents patterns of use of methamphetamine powder, or speed, among REU/RPU since 2008. Less than one-fifth (16%) of the 2017 sample reported lifetime use of speed, a significant decrease from 41% in 2016 (CI: -0.12 to -0.36). Recent use was reported by 7% of the sample, a significant decrease from 18% in 2016 (CI: -0.02 to -0.20). Rates of lifetime and recent speed use significantly increased in 2016 compared to the previous year. Results from the current sample suggest that rates of use have returned to those seen in 2015.

Among participants reporting recent use in 2016 (n=7), it was used on a mean of eight days (median one, range 1-48) over the preceding six-month period. The median amount of speed used on a 'typical' occasion in the last six months was 0.1 grams and on the 'heaviest' occasion also 0.5 grams. Snorting was the most common recent ROA (n=4, 57%) followed by swallowing (n=2, 29%) and smoking and injecting (each n=1, 14%). Comparisons with the 2016 sample regarding recent speed use patterns were not calculated due to the small number of participants who were able to comment.

Table 4: Patterns of methamphetamine powder (speed) use, 2008-2017

Speed	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever used (%)	72	63	60	67	62	36	36	23	41	**16***
Used preceding six months (%)	38	37	38	44	27	17	19	6	18	**7***
Of those who had used										
Mean days used last 6 months	15	7	6	44	4	11	15	8	12	**8**
Median amount used (grams)										
Typical (range)	0.4 (0.2-.50)	1 (0.25-1)	0.5 (0.1-1)	0.5 (0.1-1)	0.25 (0.2-2)	1 (1-1)	0.5 (0.1-6)	1^ (-)	0.5^ (0.1-1.5)	**0.1 (-)**
Heavy (range)	0.5 (0.25-7)	1 (0.25-10)	1.5 (0.25-4)	1 (0.2-2)	0.5 (0.2-4)	1 (1-1)	0.5 (0.1-11)	2.5^ (-)^	0.5^ (0.1-3)	**0.5 (-)**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

^ n<10. Results should be interpreted with caution

4.3.2. Methamphetamine base use among REU

Less than one-tenth (6%) of the 2017 sample reported lifetime use of methamphetamine base, not significantly different from 8% in 2016. Recent use was reported by just two participants (2%), not significantly different from 1% in 2016. Further analyses were not performed on data concerning methamphetamine base due to the very small number of participants reporting recent use.

4.3.3. Crystal methamphetamine use among REU/RPU

Table 5 presents patterns of use of crystal methamphetamine among REU/RPU since 2008. Lifetime use of crystal methamphetamine was reported by 15% of the sample, a significant decrease from 29% in 2016 (CI: -0.02 to -0.25). When age difference between the samples was accounted for, 20% of the 2017 sample reported lifetime use, a non-significant decrease from 29% in 2016. Recent use was reported by 6% of the sample, a non-significant decrease from 12% in 2016. These results suggest that the downward trend in crystal methamphetamine use in WA EDRS samples that began in 2012 was maintained into 2017.

Crystal methamphetamine used on a median of three days in the preceding six months (mean 13, range 1-48), a non-significant difference from four days (mean 24) in 2016. The median amount used on a 'typical' occasion in the preceding six months was two points (range 1-3), the same figure reported in 2016. The median amount used on the 'heaviest' occasion in the preceding six months was also two points (range 1-3), not significantly different from four points in 2016. Among those who commented (n=3), smoking was the only ROA reported to have been used over the preceding six months. Comparisons with ROAs from the 2016 sample were not performed due to the small number of participants who commented in 2017.

Table 5: Patterns of crystal methamphetamine use, 2008-2017

Crystal methamphetamine	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 REU n=65	2012 REU/RPU N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever used (%)	62	41	40	64	52	58	32	24	31	29	**15*†**
Used last six months (%)	36	20	22	46	29	33	22	17	16	12	**6**
Of those who had used recently											
Mean days used last 6 months	12	9	8	19	12	10	20	26	19	24	**13^**
Median quantities used (points)											
Typical	1	2	1	1	1	1	2	1	2	2	**2^**
(range)	(0.1-3)	(0.25-5)	(0.1-4)	(0.5-2.5)	(0.2-7)	(0.2-7)	(0.5-6)	(0.5-5)	(0.3-4)	(0.25-5)	**(1-3)**
Heavy	1	2	2	1	2	2	3	1.5	4	4	**2^**
(range)	(0.1-8)	(0.25-8)	(0.4-8.5)	(0.5-2.5)	(0.2-14)	(0.2-14)	(0.5-10)	(0.5-5)	(1-4)	(0.25-11)	**(1-3)**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

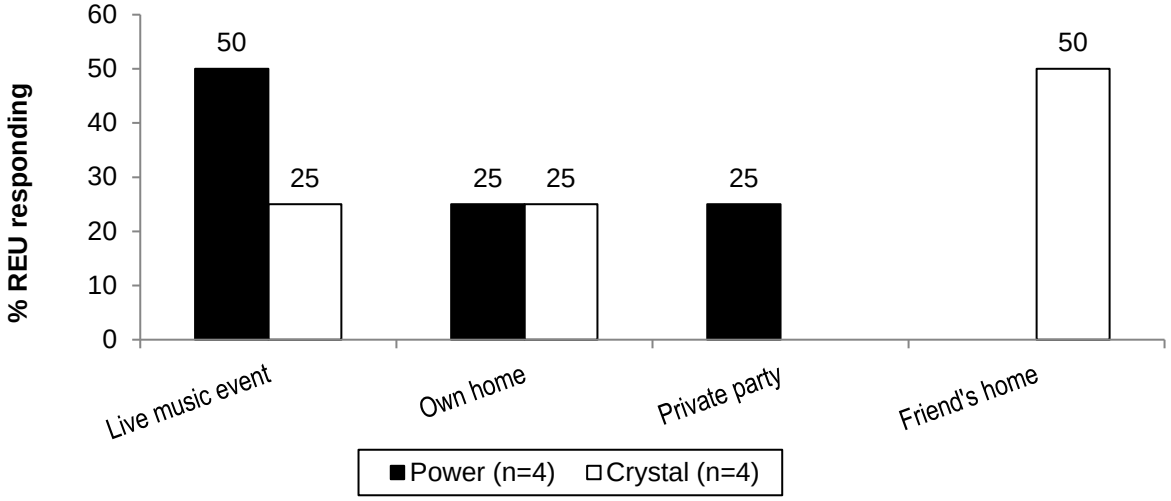
† Result became non-significant when the samples were statically weighted for age

^ n≤ 10. Results should be interpreted with caution

4.3.4. Locations of methamphetamine use

Participants reporting recent use were asked to report the location where they spent the greatest amount of time while intoxicated on the last occasion. Of the seven participants who reported recent speed use, only four were able to comment. As shown in Figure 2, the most commonly reported location was 'live music event' (n=2, 50%), followed by 'own home' and 'private party' (each n=1, 25%). For crystal methamphetamine, among those who commented (n=4), 'friend's home' was the most frequent location (n=2, 50%), followed by 'live music event' and 'own home' (each n=1, 25%). While these findings were not significantly different from the 2016 results, they should be interpreted with caution given the small number of participants who were able to comment.

Figure 2: Location of most recent crystal and power methamphetamine use, 2017



Source: WA EDRS REU interviews, 2017

4.3.5. Summary of methamphetamine consumption

Speed

- Less than one-fifth (16%) of the sample had used speed in their lifetime, a significant decrease from 41% in 2016. Recent use was reported by 7%, a significant decrease from 18% in 2016.
- Speed was used on a mean of 8 days over the preceding six months.
- The median amount used on a 'typical' occasion in the preceding six months with 0.1 grams and on the 'heaviest' occasion was 0.5 grams.

Crystal methamphetamine

- Less than one-fifth (15%) of the sample reported lifetime crystal methamphetamine use, a significant decrease from 29% in 2016; this result became non-significant when the 2016 and 2017 samples were statistically weighted for age. Recent use was reported by 6%, a non-significant decrease from 12% in 2016.
- Not significantly different from 2016, crystal was used on a mean of 13 days over the preceding six months; however this finding should be interpreted with caution given the small number of participants who commented.
- The median amount used on both a 'typical' and the 'heaviest' occasions in the preceding six months was two points. While these results are consistent with 2016 they should again be interpreted with caution given the small sample size.

4.4. Cocaine use among REU/RPU

As presented in Table 6, just more than half (52%) of the 2017 sample reported lifetime cocaine use, a significant decrease from 67% in 2016 (CI: -0.01 to -0.28). When age difference between the samples was accounted for, 60% of the 2017 sample reported lifetime use, a non-significant decrease from 67% in 2016. Recent use was reported at 31%, a non-significant decrease from 38% in 2016.

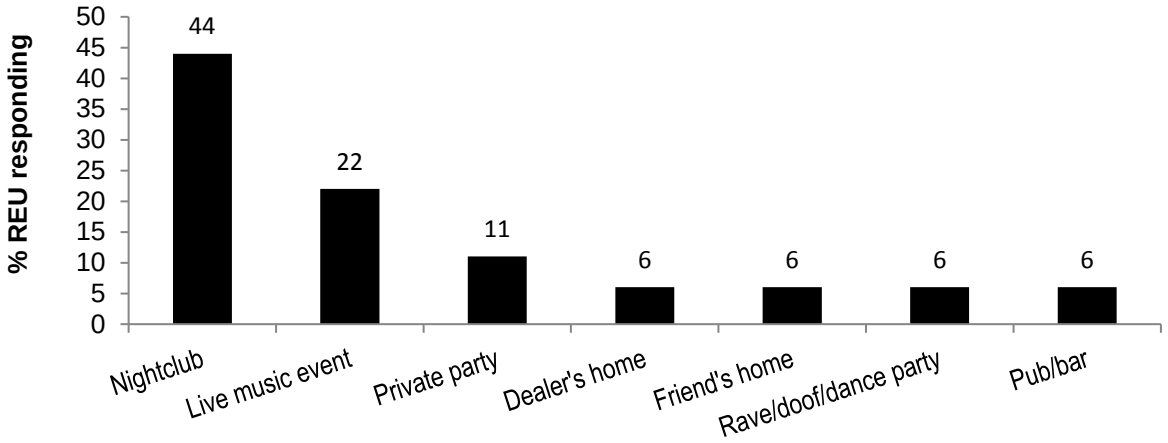
Cocaine was used on a mean of six days in the preceding six months (median two, range 1-48), not significantly different from five days in 2016. The median amount used on a 'typical' occasion in the preceding six months was 0.5 grams (range 0.13-3.5); this is the same median that was reported in 2016, but this result should be interpreted with caution given the small number of participants who commented in 2017 (n=9). The median amount used on the 'heaviest' occasion in the preceding six months was one gram (range 13-5), the same amount reported in 2016.

Not significantly different from the 2016 findings, snorting was the most common recent ROA, reported by the vast majority of participants (n=29, 93%), followed by swallowing (n=5, 16%).

4.4.1. Location of cocaine use

In the 2017 sample, 18 participants commented on the location where they spent the most time intoxicated on the last occasion of cocaine use. As presented in Figure 3, the most commonly reported location was 'nightclub' (n=8, 44%), followed by 'live music event' (n=4, 22%), 'private party' (n=2, 11%), and 'dealer's home', 'friend's home', 'rave/doof/dance party' and 'pub/bar' (each n=1, 6%). These results were not significantly different from the 2016 findings.

Figure 3: Location of most recent cocaine use, 2017 (n=18)



Source: WA EDRS REU interviews, 2017

Table 6: Patterns of cocaine use, 2008-2017

Cocaine	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 REU/RPU N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever used (%)	66	52	49	82	71	54	56	58	67	**52*†**
Used last six months (%)	40	24	26	32	31	34	30	29	38	**31**
Of those who had used in preceding 6 months										
Mean days used last 6 months	3	11	11	4	4	4	5	2	5	**6**
Median quantities used (grams)										
Typical (range)	0.5 (0.5-1)	0.5 (0.3-2)	0.5 (0.5-1)	1.0 (0.5-1)	0.5 (0.2-2)	0.5 (0.1-5)	0.5 (0.1-4)	0.5 (0.25-2)	0.5 (0.25-2)	**0.5^ (0.13-3.5)**
Heavy (range)	0.5 (0.5-1)	0.5 (0.3-5)	1.0 (0.5-3.6)	1.0 (0.5-2)	1.0 (0.25-3.5)	1.0 (0.1-5)	1 (0.1-4.5)	0.5 (0.25-2)	1 (0.4-4)	**1 (0.13-4)**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

† Result became non-significant when the samples were statically weighted for age

^ n≤ 10. Results should be interpreted with caution

4.4.2. Summary of cocaine consumption

- Just more than half (52%) of the sample reported lifetime use of cocaine, a significant decrease from 67% in 2016; this result became non-significant when the 2016 and 2017 samples were statistically weighted for age.
- Less than one-third (31%) of the sample reported recent use, not significantly different from 38% in 2016.
- Cocaine was used on a mean of six days over the preceding six months, not significantly different from five days in 2016.
- Snorting remained overwhelmingly the most commonly reported recent ROA (93%).

4.5. Ketamine use

Ketamine is a rapid acting, dissociative anaesthetic that is used in veterinary surgery and less commonly in human surgery. Ketamine is a liquid that is usually injected for legitimate use. In an illicit context it is typically converted into a fine powder through evaporation, and is typically snorted. Ketamine can also be made into tablets, capsules and tabs which are usually swallowed. Common names for ketamine include K, special K or vitamin K.

Ketamine produces a dissociative state in the user, commonly eliciting an out-of-body experience. It has a combination of stimulant, depressant, hallucinogenic and analgesic properties. Too much ketamine can result in the user having a 'near death experience' or falling into a 'K hole'.

As ketamine is complicated to manufacture, and precursor chemicals are difficult to obtain, it is unlikely that it is produced in clandestine laboratories. The majority of ketamine used by REU/RPU is probably diverted from veterinary sources or imported from overseas, making supply irregular compared with other illicit substances (Australian Crime Commission, 2008, 2009, 2010).

4.5.1. Ketamine use among REU/RPU

Presented in Table 7 are patterns of ketamine use among REU/RPU for the period 2008-2017. Lifetime use of ketamine was reported by 21% of the 2017 sample, a non-significant decrease from 33% in 2016. Recent use was reported by 16% of the sample, not significantly different from 18% in 2016. These results suggest that the increase rate of recent use of ketamine seen in 2016 has continued into 2017.

Ketamine was used on an average of three days in the preceding six months (median 2.5, range 1-12), not significantly different from six days in 2016. Four participants reported 'typical' amount of ketamine used in the preceding six months in bumps. The median 'typical' amount was 1.5 bumps (range 1-3), not significantly different from 3.5 bumps in 2016. Among those who commented (n=5), the median amount used on the 'heaviest' occasion in that time period was two bumps (range 1-6), not significantly different from 4.5 bumps in 2016. These comparisons should be interpreted with caution given the small number of participants able to comment. Among those who commented (n=15), not significantly different from the 2016 results, snorting was the most frequently reported recent ROA (n=14, 93%), followed by swallowing (n=3, 20%).

Table 7: Patterns of ketamine use, 2008-2017

Ketamine	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever used (%)	21	18	14	**0**	18	20	25	16	33	**21**
Used last six months (%)	3	6	4	**0**	3	7	11	4	18	**16**
Of those who had used in the preceding 6 months										
Mean days used last 6 months	2	1	3	**-**	4	3	2	5	6	**3.5**
Median quantities used (bumps)**										
Typical	0.5	3	1.5	**-**	-	-	4	0.5^	3.5	**1.5^**
(range)	-	(1-5)	(1-2)	**-**	-	-	(2-15)	(-)	(1-6)	**(1-3)**
Heavy	0.5	3	2	**-**	-	-	5.5	2.5^	4.5^	**2^**
(range)	-	(1-5)	(1-3)	**-**	-	-	(4-20)	(-)	(1-10)	**(1-6)**

Source: WA EDRS REU/RPU interviews 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

** A bump refers to a small amount of powder, typically measured and snorted from the end of a key, the corner of a plastic card or a 'bumper'. A bumper is a small glass nasal inhaler, purchased from tobacconists, used to store and administer powdered substances such as ketamine

^ n≤ 10. Results should be interpreted with caution

- Data not available due to low use proportion

4.5.2. Summary of ketamine consumption

- Lifetime use of ketamine was reported by just more than one-fifth (21%) of the sample, not significantly different from 33% in 2016. Recent use was reported by 16%, not significantly different from 18% in 2016.
- Ketamine was used on a mean of three days over the preceding six month period, not significantly different from six days in 2016.
- The median amount of ketamine used on a 'typical' occasion in the preceding six months was 1.5 bumps and on the 'heaviest' occasion was two bumps; while these findings were not significantly different from 2016 they should be interpreted with caution given the small number of participants able to comment.
- Not significantly different from the 2016 findings, snorting was the most frequently reported ROA (93%) followed by swallowing (20%).

4.6. GHB use

Gamma-hydroxy-butyrate (GHB) has been classified as a central nervous system (CNS) depressant that produces effects of sedation and anaesthesia (Kam & Yoong, 1998; Nicholson & Balster, 2001). Clinical studies have found that GHB has some similarities to other CNS depressants such as benzodiazepines and alcohol (Nicholson & Balster, 2001). GHB has been used for a variety of medical purposes, such as anaesthesia, and for the treatment of a variety of conditions including sleep disorders, obesity, alcohol dependence and opiate withdrawal (Chin, Kreutzer & Dyer, 1992; Kam & Yoong, 1998; Nicholson & Balster, 2001). However, clinical trials have revealed a wide array of potential adverse effects including dizziness, nausea, weakness, confusion and agitation, drowsiness, and coma (Chin, Kreutzer & Dyer, 1992; Galloway et al., 1997; Nicholson & Balster, 2001). There is also some evidence indicating that tolerance and physical dependence can occur (Galloway et al., 1997).

For almost two decades, GHB has been acknowledged as a recreational drug in Australia and in other parts of the world, including the United States (Degenhardt, Darke & Dillon, 2002). On the streets, GHB is also illicitly known as GBH, 'grievous bodily harm', 'fantasy', and 'liquid ecstasy'. An Australian study that interviewed GHB users revealed that the majority of those who reported using this drug recreationally experienced significant adverse effects, including loss of consciousness, vomiting, profuse sweating, and a small proportion experienced fitting or seizure (Degenhardt, Darke & Dillon, 2002).

4.6.1. GHB use among REU

Rates of lifetime and recent GHB use among EDRS participants have remained consistently low since 2003. In 2017, 5% of the sample reported lifetime use of GHB and 3% reported recent use, not significantly different from 13% and 4% respectively in 2016.

GHB was used of a median of seven days over the preceding six months (range 2-90) and swallowing was the only ROA reported among recent users. In light of the small sample size, no further analyses were performed for GHB.

4.7. LSD use

Lysergic acid diethylamide is commonly known as LSD, 'trips' or 'acid'. It is a powerful hallucinogen which can produce significant changes in perception, mood and thought. Only a small amount is needed to cause visual hallucinations and distortions. These experiences are known as 'trips'. Unpleasant reactions to LSD include fear, anxiety and depression. LSD is manufactured in illicit laboratories and the majority of LSD is believed to be imported from overseas.

LSD is usually adhered to perforated sheets (ACC, 2007). Small paper squares ('tabs') are detached from these sheets and usually decorated with designs which can often be culturally specific to the user groups. LSD is potent, so trips are often cut into halves or quarters and shared with others.

4.7.1. LSD use among REU/RPU

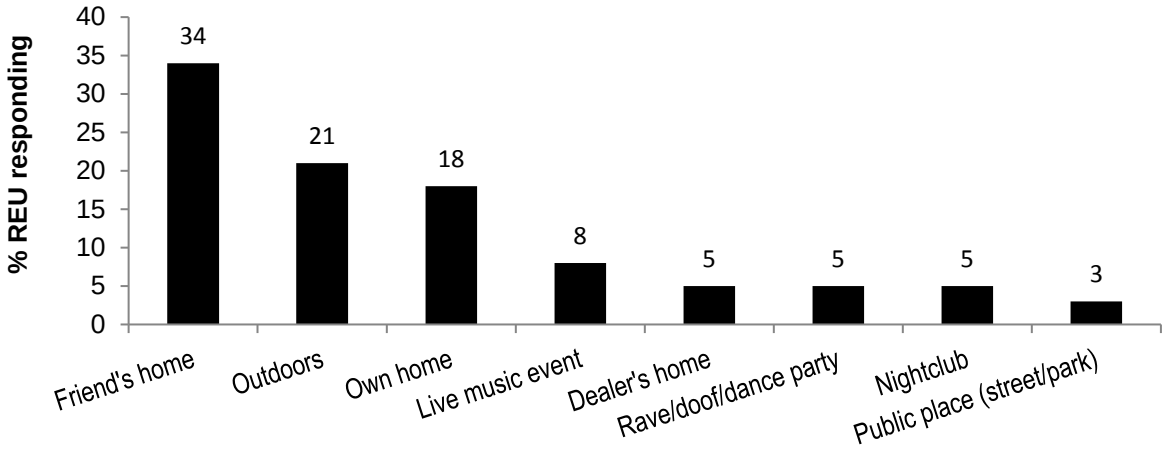
As presented in Table 8, lifetime use of LSD was reported by just more than half (53%) of the 2017 sample, a significant decrease from 78% in 2016 (CI: -0.12 to -0.37). Recent use was reported by 33% of the sample, a significant decrease from 50% in 2016 (CI: -0.03 to -0.30). After an increase in 2016, rates of use appear to have returned to those seen in 2015.

LSD was used on an average of six days over the preceding six months (once a month; median three, range 1-48), not significantly different from four days (median two) in 2016. The median number of tabs used a 'typical' occasion was one (range 0.5-9), the same median amount reported in 2016. The median number of tabs used on the 'heaviest' occasion was 1.5 (range 0.5-12), not significantly different from one in 2016. Not significantly different from 2016, swallowing or sublingual use was the only recent ROA reported.

4.7.2. Locations of LSD use

In 2017, 38 participants commented on the location where they spent the most time while intoxicated on the last occasion of LSD use. A variety of private and public locations were reported. As shown in Figure 4, the most commonly reported location was 'friend's home' (n=13, 34%), followed by 'outdoors' (n=8, 21%), 'home' (n=7, 18%), 'live music event' (n=3, 8%), 'dealer's home', 'rave/doof/dance party' and 'nightclub' (each n=2, 5%) and 'public place (street/park)' (n=1, 3%). These results were not significantly different from the 2016 findings.

Figure 4: Location of most recent LSD use, 2017 (n=38)



Source: WA EDRS REU interviews, 2017

Table 8: Patterns of LSD use, 2008-2017

LSD	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017** **N=100**
Ever used (%)	47	69	48	71	57	66	67	58	78	**53***
Used last six months (%)	21	31	35	36	33	41	45	24	50	**33***
Of those who had used in the preceding 6 months										
Mean days used last 6 months	8	6	5	6	5	6	4	2	4	**6**
Median quantities used (tabs)										
Typical (range)	1.0 (0.50-2)	1.0 (1-2.5)	1.0 (1-2)	1.0 (0.50-2)	1.4 (0.25-4)	1.0 (0.25-10)	1 (0.5-4)	1 (0.5-4)	1 (0.5-3)	**1** **(0.5-9)**
Heavy (range)	1.0 (0.50-2)	1.75 (1-7)	1.5 (1-5)	1.75 (0.5-3)	1.9 (0.5-7)	1.0 (0.25-50)	1.25 (0.66-10)	1 (0.5-8)	1 (0.5-4)	**1.5** **(0.5-12)**

Source: WA EDRS REU/RPU interviews, 2008-2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

4.7.3. Summary of LSD consumption

- Just more than half (53%) of the sample reported lifetime LSD use, a significant decrease from 78% in 2016. One-third (33%) of the sample reported recent use, a significant decrease from 50% in 2016. These results suggest that rates of use have returned to those seen in 2015.
- LSD was used on a mean of six days over the preceding six months, not significantly different from four days in 2016.
- Not significantly different from 2016, the median number of LSD tabs used on a 'typical' occasion in the preceding six months was one and on the 'heaviest' occasion was 1.5.
- Not significantly different from 2016, all users reported swallowing/sublingual use as the only recent ROA.
- Not significantly different from 2016, the most commonly reported location of last LSD use was 'friend's home' (34%).

4.8. Cannabis use among REU/RPU

As shown in Table 9, consistent with previous years, nearly the entire sample (95%) reported lifetime use of cannabis. Recent use of cannabis was also reported by the majority (82%) of the sample, not significantly different from 87% in 2016.

Cannabis was used on a median of 48 days (i.e. approximately twice per week) (mean 65, range 1-180) in the preceding six-months, not significantly different from 24 in 2016. Daily cannabis use was reported by 13% of the sample, not significantly different from 18% in 2016. Among participants who reported their use in cones (n=40), a median of four cones (range 1-20) were consumed on the last occasion of cannabis use, a significant increase form three cones (range 1-12) in 2016. Among those who commented (n=81), all (100%) reported smoking as a recent ROA, followed by swallowing (n=13, 16%) and inhaling/vaporising (n=4, 5%). A significantly smaller proportion of participants cited inhaling/vaporising as a recent ROA in the current sample (5%) compared to 2016 (24%; CI: -0.09 to -0.30).

Table 9: Patterns of cannabis use, 2008-2017

Cannabis	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Ever used (%)	100	99	99	100	99	98	98	97	98	**95**
Used last six months (%)	85	85	81	86	77	92	86	86	87	**82**
Mean days used recently*	49	81	60	113	71	65	63	66	60	**65**

Source: WA EDRS REU/RPU interviews, 2008-2017

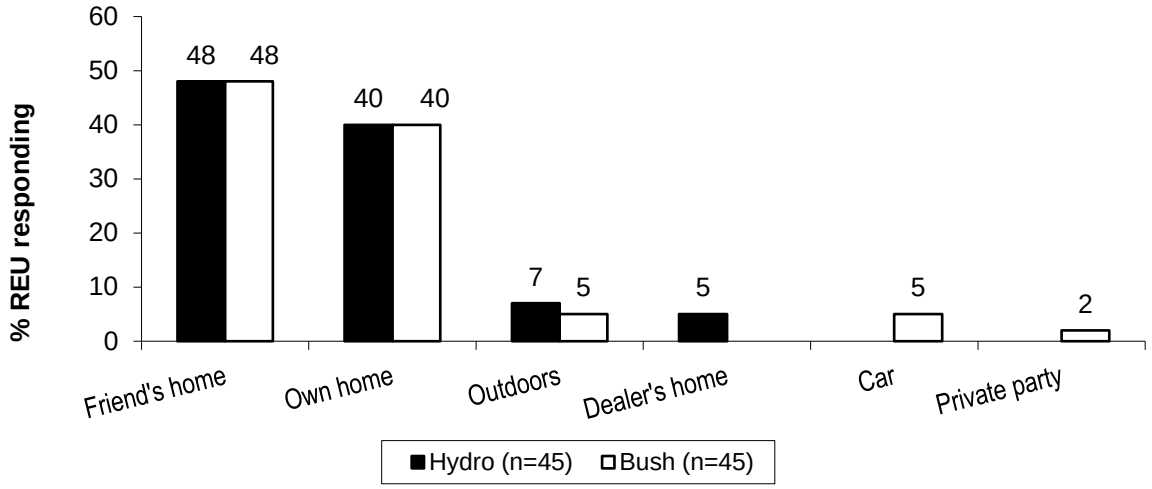
* Among participants who reported recent cannabis use

4.8.1. Location of cannabis use

Participants were asked to report the location where they spent the most time while intoxicated on the last occasion of cannabis use. A full breakdown of these results is shown in Figure 5. Among participants who commented, for both hydro (n=42) and bush (n=42), the most frequently cited locations were 'friends home' (each n=20, 48), 'own home' (each n=17, 40%). For hydro, an additional 7% of respondents cited 'outdoors' (n=3), followed by 'dealer's home' (n=2, 4%). For bush, the next most frequently cited locations were 'outdoors' and 'car' (each n=2, 5%), followed by 'private party' (n=1, 2%). These results were not significantly different from the 2016 findings.

Consistent with previous years, it is evident that cannabis continues to be typically used in private, rather than public, settings.

Figure 5: Location of most recent cannabis use, 2017



Source: WA EDRS REU interviews, 2017

4.8.2. Summary of cannabis consumption

- Consistent with previous years, almost the entire sample (95%) reported lifetime cannabis use and 82% reported recent use.
- Cannabis was used on a median of 48 days (i.e. twice per week) over the preceding six months, not significantly different from 24 days in 2016.
- A median of four cones were consumed during the last session, significantly more than three cones in 2016.
- The most frequently cited location of last use was 'friend's home' (48%) followed by 'own home' (40%) for both hydro and bush.

4.9. Other drug use

4.9.1. Alcohol

Consistent with previous years, almost the entire sample (99%) reported lifetime use of alcohol and recent use was reported by 96% (see Table 2). The median age of first alcohol use was 15 years (range 8-18), the same median age reported in 2016. Alcohol was used on a median of 48 days (i.e. approximately twice per week; range 1-180) in the preceding six months, not significantly different from 28 days in 2016. Just less than three-fifths (59%) of the sample reported drinking alcohol on more than 24 days (i.e. more than once a week) in the previous six months, not significantly different from 50% in 2016. One participant (1%) reported drinking alcohol daily, not significantly different from 3% in 2016.

4.9.2. Tobacco

Rates of tobacco use among EDRS samples have been consistently high across survey years. The majority (93%) of the sample reported tobacco use at some point in their lifetime, not significantly different from 92% in 2016. The majority (90%) also reported recent use, not significantly different from 79% in 2016. The median age of first tobacco use was 16 years (range 11-22), which is the same median age that was reported in 2016. The median number of days of use in the last six months was 90 (range 2-180), not significantly different from 48 days in 2016. One-third (33%) of the sample were daily smokers, not significantly different from 27% in 2016.

4.9.3. E-Cigarettes

EDRS participants were asked about their use of e-cigarettes for the first time in 2014. Two-fifths (40%) of the sample reported lifetime use, not significantly different from 46% in 2016. Recent use was reported by just less than one-quarter (24%) of the sample, not significantly different from 25% in 2016. The median age of first use was 18 years (range 14-29), and e-cigarettes were used on a median of 5.5 days (i.e. less than once a month; range 1-100) over the preceding six months.

Participants who reported recent used of e-cigarettes were asked if the main brand they had used in the preceding six months contained nicotine or cannabis and if they had ever used e-cigarettes as a cigarette smoking cessation tool. Among participants who responded (n=24), two-thirds (n=16, 67%) reported that main brand contained only nicotine. A further 25% (n=6) reported that it contained neither nicotine nor cannabis and 4% reported that it contained cannabis and both nicotine and cannabis (each n=1). Less than one-third (n=7, 30%) reported that they had used e-cigarettes as a cigarette smoking cessation tool.

4.9.4. MDA

MDA is part of the phenethylamine family and, like ecstasy, is classed as a stimulant hallucinogen. Use of MDA was reported by less than one-third (29%) of the sample, not significantly different from 30% in 2016. Recent use was reported by 24%, a non-significant increase from 13% in the 2016. MDA was used on a median of two days in the preceding six months (range 1-24), the same median reported in 2016.

4.9.5. Pharmaceutical stimulants

Pharmaceutical stimulants have been included as a separate drug class since the 2005 EDRS. This category includes dexamphetamine and methylphenidate drugs, such as Ritalin® and Attenta®.

Since 2007, licit use (i.e. prescribed) has been distinguished from illicit use in the EDRS. Taken together (licit or illicit use), the majority (84%) of the 2017 sample reported pharmaceutical stimulant use at some point in their lifetime, not significantly different from 85% in 2016. Recent use was reported by 78% of the sample, a non-significant change from 67% in 2016.

Table 10 presents a comparison of participants who reported recent illicit (n=76) versus recent licit use (n=4) of pharmaceutical stimulants. Given the small number of participants reporting recent licit use, analyses based on this group should be interpreted with caution.

Licit pharmaceutical stimulants

In 2017, 6% of the sample reported lifetime use of pharmaceutical stimulants that were prescribed to them (i.e. licitly obtained) and 4% reported recent use. These results were not significantly different from the 2016 sample, in which 4% reported lifetime use and 3% reported recent use.

The median number of days of use in the preceding six months was 180 (range 4-180; i.e. every day), the same median reported in 2016. On a 'typical' occasion in the preceding six months, the median number of tablets used was 4.5 (range 3-9), not significantly different from five in 2016. On the 'heaviest' occasion in the last six months, the median number of tablets used was 6.5 (range 3-9), not significantly different from ten in 2016. Not significantly different from the 2016 results, the majority of recent users reported swallowing as an ROA (n=3, 75%), followed by snorting (n=1, 25%).

For the first time in 2015, EDRS participants who reported recent licit use were asked if they had used these drugs as prescribed most of the time in the preceding six months. All (n=4, 100%) recent users reported taking them as prescribed.

Illicit pharmaceutical stimulants

In 2017, the majority (82%) of the sample reported having ever used pharmaceutical stimulants when they were not prescribed to them (i.e. illicitly obtained), not significantly different from 83% in 2016. Recent use of illicit pharmaceutical stimulants was reported by 76%, not significantly different from 65% in 2016.

The median number of days of use in the preceding six months was six (range 1-180), the same median reported in 2016. On a 'typical' occasion in the last six months, the median number of tablets used was two, not significantly different from 2.5 in 2016. The median number of tablets used on the 'heaviest' occasion in that time period was five (range 1-35), the same median reported in 2016. Among those who commented (n=74), not significantly different from 2016, the vast majority reported swallowing as a recent ROA (n=70, 95%), followed by snorting (n=23, 31%) and smoking (n=1, 1%).

Table 10: Recent illicit versus licit use of pharmaceutical stimulants, 2017

Use of pharmaceutical stimulants	**Illicit** (n=61)	**Licit** (n=4)
Days used last six months (median)	6	180^
Amount typically used (median tabs)	2	4.5
Most amount used (median tabs)	5	6.5
Route of administration (%)		
Swallowed	95	75
Snorted	31	25
Smoked	1	0
Injected	0	0

Source: WA EDRS REU interviews, 2017
^ n<10. Results should be interpreted with caution

4.9.6. Benzodiazepines

Use of benzodiazepines was also divided into licit and illicit use in 2009. Taken together (licit or illicit use), lifetime use of benzodiazepines was reported by just more than two-fifths (42%) of the current sample, not significantly different from 55% in 2016. More than one-third (37%) reported recent use, the same proportion reported in 2016.

Licit benzodiazepines

In the 2016 sample, 11% reported having ever used benzodiazepines when they were prescribed to them (i.e. licitly obtained), not significantly different from 8% in 2016. Recent licit

benzodiazepine use has remained low and stable since 2008. Recent use was reported by 10% of the 2016 sample, not significantly different from 6% in 2016.

Benzodiazepines were used on a median of 25 days in the preceding six months (range 1-180), not significantly different from 20 days in 2016. Not significantly different from the 2016 findings, among those who commented (n=9) all (100%) recent users reported swallowing as the only ROA in the preceding six months.

Participants who reported recent use of licit benzodiazepines (n=10) were asked to report the main brand they had used over the preceding six months. The spread of responses across brands in the current sample did not significantly differ from 2016. The most commonly reported brand was Valium® (diazepam) (n=7, 70%), followed by diazepam (generic), Antenex® (diazepam), alprazolam (generic) and lorazepam (generic) (each n=1, 10%).

Illicit benzodiazepines

Almost two-fifths (38%) of the current sample reported having ever used a benzodiazepine when they were not prescribed to them (i.e. illicitly obtained), significantly less than 53% in 2016 (CI: -.01 to -0.28). One-third (33%) reported recent use, not significantly different from 34% in 2016.

Illicit benzodiazepines were used on a median of five days over the preceding six months (range 1-90), a non-significant decrease from 4.5 days in 2016. Not significantly different from the 2016, among those who commented users (n=33), swallowing was reported as a recent ROA by all users (n=33, 100%), followed by snorting (n=1, 3%).

Participants reporting recent use were asked to report the main brand they had used over the preceding six months. Among those who commented (n=31), not significantly different from the 2016 results, the most common brand was Xanax® (alprazolam) (n=15, 48%), followed by Valium® (diazepam) (n=14, 45%) and then diazepam (generic) and Klonopin® (clonazepam) (each n=1, 3%).

4.9.7. Illicit anti-depressants

Just 3% of respondents reported having ever used anti-depressants when they were not prescribed to them (i.e. illicitly obtained), a non-significant decrease from 9% in 2016. None of the participants reported recent use, a non-significant decrease from 5% in 2016. No further analyses were conducted on illicit anti-depressant use since none of the participants reported recent use.

4.9.8. Inhalants

Participants were asked about their use of the inhalants amyl nitrate and nitrous oxide.

Amyl nitrate

In 2017, lifetime use of amyl nitrate was reported by one-tenth (10%) of the sample, a significant decrease from 24% in 2016 (CI:-0.03 to -0.24). Recent use was reported by 9% of the sample, a non-significant decrease from 14% in 2016.

Amyl nitrate was used on a median of three days during the preceding six months (range 1-12), not significantly different from four days in 2016.

Nitrous oxide

Throughout survey years, nitrous oxide has consistently been the more popular inhalant among REU/RPU, and it remained so in the 2017 sample. Lifetime use of nitrous oxide was reported by more than half (58%) of the sample, a non-significant difference from 64% in 2016.

Recent nitrous oxide use was reported by 46% of the sample, a non-significant increase from 45% in 2016.

Nitrous oxide was used on a median of six days in the preceding six months (range 1-180), not significantly different from four days in 2016. The median amount used on a 'typical occasion' in the last six months was six bulbs (range 1-100), not significantly different from ten bulbs in 2016. The median amount used on the 'heaviest' occasion in the time period was 20 bulbs (range 1-300), not significantly different to 15 bulbs in 2016.

4.9.9. Heroin and other opiates

Heroin

Rates of heroin use among EDRS samples have been consistently low across survey years. In 2017, just 1% (n=1) of the sample reported lifetime use of heroin, not significantly different from 4% in 2016. None of the participants reported recent use, not significantly different from 2% in 2016. No further analyses were conducted for heroin given that no participants reported recent use.

Methadone and buprenorphine

Rates of methadone and buprenorphine use have also been consistently low across EDRS survey years. In 2017, 1% of the sample (n=1) reported lifetime and recent use of methadone, not significantly different from 2% and 1% respectively in 2016. Just 1% of the sample reported both lifetime and recent use of buprenorphine, not significantly different from 2% 2016. No further analyses were conducted on methadone or buprenorphine use due to the small sample sizes.

Other opiates

This drug class includes morphine, pethidine, oxycodone and various additional pharmaceutical opiate preparations containing codeine. Use of 'other opiates' was divided into illicit and licit use for the first time in 2009. Taken together (licit and illicit), 16% of the sample reported lifetime use of other opiates, a significant decrease from 36% in 2016 (CI: -0.08 to -0.31). Recent use was reported by 8%, a significant decrease from 24% in 2016 (CI: -0.06 to -0.26).

Licit other opiates

In 2017, 6% of the sample reported having ever used other opiates when they was prescribed to them (i.e. licitly obtained), not significantly different from 11% in 2016. Just 5% percent of the sample reported recent use, not significantly different from 7% in 2016.

Licit other opiates were used on a median of two days in the preceding six months (range 1-12), not significantly different from seven days in 2016. Not significantly different from the 2016 findings, swallowing was the most commonly reported recent ROA (n=3, 60%), followed by injecting (n=2, 40%).

Illicit other opiates

More than one-tenth (12%) of the 2017 sample reported having ever used other opiates when they were not prescribed to them (i.e. illicitly obtained), a significant decrease from 26% in 2016 (CI: 09.03 to -0.25). Recent use was reported by just 3%, a significant decrease from 18% in 2016.

Illicit other opiates were used on a median of two days in the preceding six-month period (range 1-8), the same median reported in 2016. Not significantly different from 2016, the only recent ROA reported was swallowing (n=3, 100%).

OTC codeine

For the first time in 2009, EDRS participants were asked about their use of OTC codeine for non-pain use (i.e. recreational purposes). Reported lifetime and recent rates of use have remained relatively stable over this time period. In 2017, lifetime use of OTC codeine was reported by just more than one-third (34%) of the sample, not significantly different from 32% in 2016. Recent use was reported by one-fifth (20%) of the sample, not significantly different from 23% in 2016.

OTC codeine was used on a median of four days over the preceding six months (range 1-24), not significantly different from six days in 2016. Not significantly different from 2016, all participants reported swallowing as a recent ROA (n=20, 100%) and one reported snorting (n=1, 5%).

4.9.10. Psilocybin/hallucinogenic mushrooms

In 2016, lifetime use of psilocybin/hallucinogenic mushrooms was reported by 47% of the sample, a significant decrease from 62% in 2016 (CI: -0.01 to -028). Recent use was reported by 14% a significant decrease from 27% in 2016.

Hallucinogenic mushrooms were used on a median of two days in the preceding six months (range 1-6), not significantly different from one day in 2016. Not significantly different from 2016, swallowing was the only recent ROA reported (n=14, 100%).

4.9.11. OTC stimulants

Since 2009, REU/RPU have been asked about their use of OTC stimulants for non-pain use (i.e. recreational purposes). This drug class includes cold and flu medication containing pseudoephedrine. There was a brief peak in both lifetime and recent use of OTC stimulants beginning in 2010. However, reported rates of use have remained relatively low since 2012. In the 2017 sample, one-tenth (10%) of the sample reported lifetime use and 3% reported recent use, not significantly different from 11% and 4% respectively in 2016.

OTC stimulants were used on a median of two days in the preceding six months (range 1-2), not significantly different from three days in 2016. Not significantly different from 2016, swallowing was the most commonly reported recent ROA (n=2, 67%), followed by snorting (n=1, 33%). These results should be interpreted with caution due to the small sample sizes in 2016 and 2017.

4.9.12. Steroids

For the first time in 2010, EDRS participants were asked to report on their non-medicinal steroid use. None of the participants in the current sample reported lifetime or recent use of steroids, not significantly different from 2% and 0% respectively in 2016.

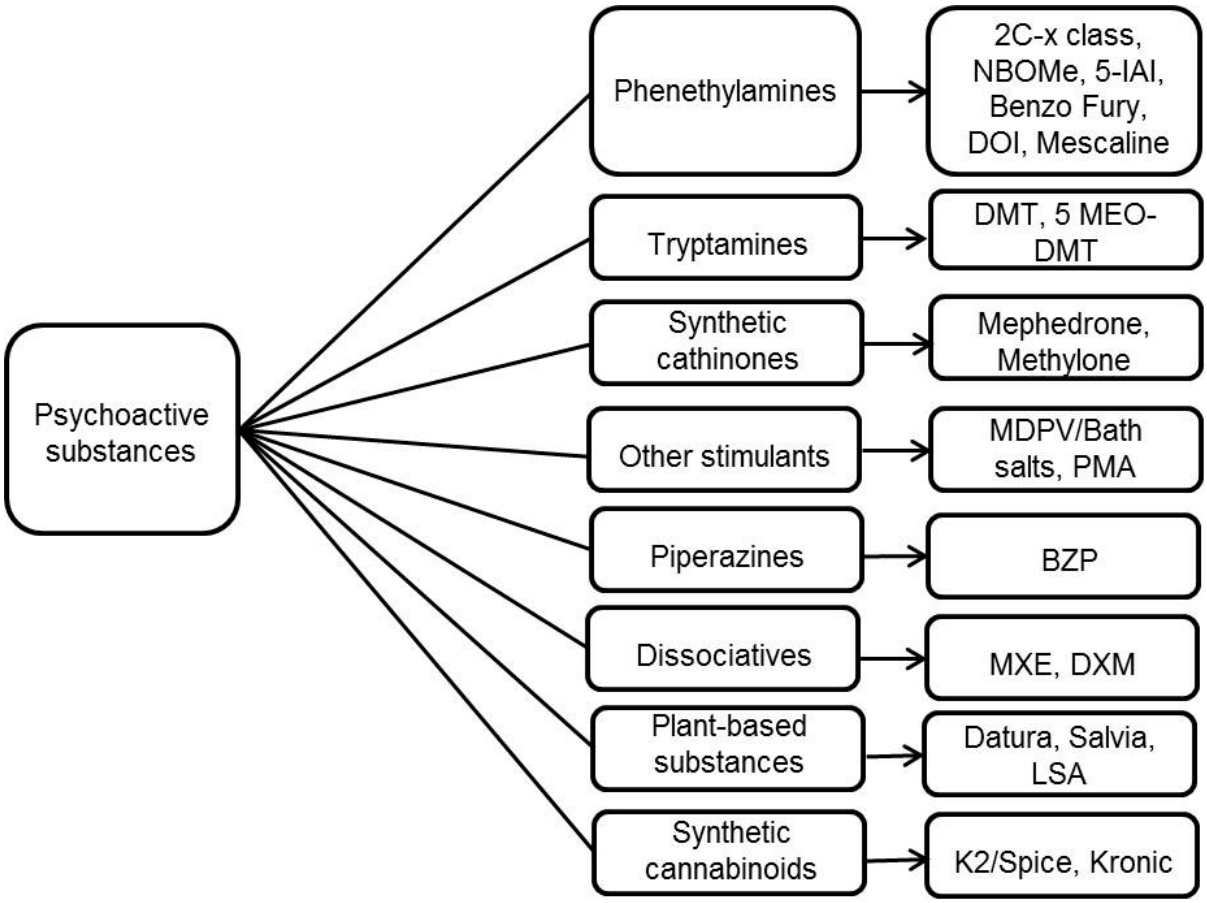
4.9.13. Summary of other drug use

- Consistent with previous survey years, almost the entire sample (99%) reported lifetime use of alcohol and the vast majority (96%) reported recent use.
- The majority of the sample reported lifetime (93%) and recent (90%) use of tobacco, consistent with previous survey years.
- Lifetime use of e-cigarettes was reported by 40% of the sample, not significantly different from 46% in 2016. Recent use was reported by almost one-quarter (24%) of the sample, not significantly different from 25% in 2016.
- Lifetime use of MDA was reported by 29% of the sample and recent use was reported by 24%, not significantly different from 30% and 13% respectively in 2016.
- Not significantly different from the 2016 findings, the majority (84%) of the sample reported the use of pharmaceutical stimulants in their lifetime and 78% reported recent use; the vast majority of this use was illicit (non-prescribed).
- More than two-fifths (42%) of the sample reported lifetime use of benzodiazepines, not significantly different from 55% in 2016. Recent use was reported by 37% of the sample, the same proportion reported in 2016. The vast majority of benzodiazepine use was illicit (non-prescribed).
- Lifetime illicit use of anti-depressants was reported by 3% of the sample, a non-significant decrease from 9% in 2016. None of the participants reported recent use, not significantly different from 5% in 2016.
- Lifetime use of amyl nitrate was reported by 10% of the sample, a significant decrease from 24% in 2016. Recent use was reported by 9%, a non-significant decrease from 14% in 2016.
- Nitrous oxide was the more popular inhalant, with more than half (58%) of the sample reporting lifetime use, not significantly different from 64% in 2016. Recent use was reported by 46%, not significantly different from 45% in 2016.
- Consistent with previous years, the use of heroin was uncommon, with just 1% of the sample reporting lifetime use and none of the participants reporting recent use.
- Consistent with previous years, methadone use was low; only 1% of the sample reported lifetime and recent use.
- Consistent with previous years, use of buprenorphine remained low; just 1% of the sample reported both lifetime and recent use.
- Lifetime use of other opiates was reported by 16% of the sample, a significant decrease from 36% in 2016. Recent use was reported by 8%, a significant decrease from 24% in 2016. The majority of use was illicit.
- Lifetime use of OTC codeine was reported by just more than one-third (34%) of the sample, not significantly different from 32% in 2016. Recent use was reported by one-fifth (20%) of the sample, not significantly different from 23% in 2016.
- Lifetime use of psilocybin/hallucinogenic mushrooms was reported by more than two-fifths (47%) of the sample, a significant decrease from 62% in 2016. Recent use was reported by 14% of the sample, a significant decrease from 27% in 2016.
- One-tenth (10%) of the sample reported lifetime use of OTC stimulants, a non-significant difference 11% from 2016. Recent use was reported by 3%, not significantly different from 4% in 2016.
- None of the participants reported lifetime or recent use of steroids, not significantly different from 2% and 0% respectively in 2016.

4.10. New psychoactive substance (NPS) use

From 2010 onward, the EDRS has attempted to systematically investigate a range of new psychoactive substances (analogues, legal highs, herbal highs, party pills). Some of these drugs can be classified according to Figure 6.

Figure 6: Psychoactive substances investigated by the EDRS



*For abbreviations, see list on page viii.

Psychedelic refers to "a mental state of enlarged consciousness, involving a sense of aesthetic joy and increased perception transcending verbal concepts" or "denoting or relating to any of a group of drugs inducing such a state, especially LSD" (Macquarie Dictionary).

Phenethylamine is a neurotransmitter that is an amine resembling amphetamine in structure and pharmacological properties. Derivatives of phenethylamine are referred to as 'phenethylamines' (Merriam-Websters Medical Dictionary).

Tryptamine is a crystalline amine derived from tryptophan. Substituted derivatives of this amine, some of which are significantly hallucinogenic or neurotoxic, are known as 'tryptamines' (Merriam-Websters Medical Dictionary).

Table 11 provides a very brief introduction to 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 Drugwise (http://www.drugwise.org.uk/) for more comprehensive information on these drugs.

Table 11: New psychoactive substances (NPS)

Street name	Chemical name	Information on drug	Information on use and effects
2C-I	2,5-dimethoxy-4-iodophenethyl-amine	A psychedelic drug with stimulant effects	A synthetic psychedelic drug[2]
2C-B	2,5-dimethoxy-4-bromophenethy-amine	A psychedelic drug with stimulant effects	A synthetic psychedelic drug. It is known for having a strong physical component to its effects and a moderate duration[3]
2C-E	2,5-dimethoxy-4-ethylphenethyl-amine	A psychedelic drug with stimulant effects	A synthetic psychedelic drug[4]
NBOMe	4-idio-2,5-dimethoxy-N-(2-methoxybenzyl) phenethylamine	A psychedelic phenethylamine	An umbrella term for several related substances, including 25I-NBOMe and 2CI-NBOMe. Powerful psychedelic powders, typically found on blotting paper. Requires only barely visible, sub-milligram doses to produce full effects. Has been associated with hospitalisations and deaths[5]
DOI (death on impact)	2,5-dimethoxy-4-iodoamphetamine	A psychedelic phenethylamine	Requires only very small dosages to produce full effects. It is uncommon as a substance for human ingestion but common in research. Has been found on blotting paper and may be sold as LSD[6]
Mescaline	3,4,5-trimethoxyphene-thylamine	A hallucinogenic alkaloid	First isolated in 1896 from the peyote cactus of northern Mexico[7]
DMT	N, N- dimethyltryptamine	A psychadelic drug in the tryptamine family	Similar to LSD, though its effects are said to be more powerful. DMT is a powerful, visual psychedelic which produces short-acting effects when smoked[8] Pure DMT is usually

[2] Erowid: https://erowid.org/chemicals/2ci/

[3] Erowid: https://erowid.org/chemicals/2cb/2cb.shtml

[4] Erowid: https://erowid.org/chemicals/2ce/2ce.shtml

[5] Erowid: https://www.erowid.org/chemicals/2ci_nbome/2ci_nbome.shtml

[6] Erowid: http://www.erowid.org/chemicals/doi/doi.shtml.

[7] Erowid: https://www.erowid.org/chemicals/mescaline/

[8] Erowid: http://www.erowid.org/chemicals/dmt/

Street name	Chemical name	Information on drug	Information on use and effects
			found in crystal form but has been reportedly sold in powder form[9]
5MEO-DMT	5-methoxy-N,N-dimethyltryptamine	A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the *Bufo alvarius* toad	It is found in some traditional South American shamanic snuffs and sometimes in Ayahuasca brews. It is comparable in effects to DMT; however, it is substantially more potent. 5 MEO-DMT is mostly seen in crystalline form[10]
Mephedrone	4-methyl-methcathin-one	A stimulant which is closely chemically related to amphetamines	Reportedly produces a similar experience to drugs like amphet-amines, ecstasy or cocaine. Mephedrone is a white, off-white or yellowish powder although it may also appear in pill or capsule form. Mephedrone is probably the most well-known of a group of drugs derived from cathinone (a chemical found in the plant called khat)[11]
BZP	1-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[12]

[9] Drugwise: http://www.drugwise.org.uk/dmt/
[10] Erowid: http://www.erowid.org/chemicals/5meo_dmt/5meo_dmt.shtml
[11] Drugwise:http://www.drugwise.org.uk/mephedrone-methedrone-methadrone-and-methylone/
[12] Erowid: http://www.erowid.org/chemicals/bzp/bzp_basics.shtml.

Street name	Chemical name	Information on drug	Information on use and effects
Ivory wave or 'bath salts'	3,4-methylenedioxypyrovalerone or MDPV	A cathinone derivative	A potent, synthetic euphoric stimulant. It is known for its tendency to cause compulsive re-dosing and some users report sexual arousal as an effect. MDPV has been found in products sold as 'bath salts' and 'plant food/fertilizer'.[13] It has recently received media attention for its involvement in a number of bizarre deaths in the US and Australia
DXM	Dextromethorphan	A semisynthetic opiate derivative which is legally available over the counter in the US	DXM is most commonly found in cough suppressants, especially those with 'DM' or 'Tuss' in their names. DXM is a dissociative drug[14]
PMA	Paramethoxyamphetamine; 4-methoxy-amphetamine	A synthetic hallucinogen that has stimulant effects	Induces symptoms reminiscent of MDMA. Doses of 60-8 mg are considered potentially lethal (due to the risk of overheating)[15]
Datura	(commonly *Datura inoxia* and *Datura strammonium*) Contains: Atropine and Scopolamine	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[16]
Salvia	*Salvia divinorum* (contains Salvinorin A)	Salvia is derived from the American plant *Salvia divinorum*, a member of the mint family	At low doses (200-500 mcg) 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[17]
LSA	*d*-lysergic acid amide	LSA is a naturally occurring	LSA has some similarities in effect to

[13] Erowid: http://www.erowid.org/chemicals/mdpv/
[14] Erowid: http://www.erowid.org/chemicals/dxm/dxm_basics.shtml
[15] Erowid: https://www.erowid.org/chemicals/pma/pma_health.shtml
[16] Drugwise: http://www.drugwise.org.uk/datura/
[17] Drugwise: http://www.drugwise.org.uk/salvia

Street name	Chemical name	Information on drug	Information on use and effects
		psychedelic found in many plants such as morning glory and hawaiian baby woodrose seeds	LSD, but is generally considered much less stimulating and can be sedating in larger doses[18]
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[19]
Methylone	3,4-methylenedioxy-*N*-methylcathinone	An entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes	Reported dosages range from 100 to 250 mg orally. Effects are primarily psychostimulant in nature[20]
4-FA	4-Fluoroamphetamine	A synthetic stimulant of the phenethylamine and substituted amphetamine classes	A synthetic stimulant with some empathogenic properties[21]
4-MEC	4-Methylethcathinone	A synthetic stimulant of the phenethylamine, amphetamine and cathinone classes	Taken orally or snorted. Use may involve re-dosing multiple times. Because of the common desire to recapture the pleasurable initial high, redoses are sometimes higher than the initial dose or are spaced closely together in time [22]
Alpha-PVP	α-Pyrrolidinopentiophenone	A synthetic stimulant of the cathinone class	A synthetic euphoric stimulant. Its dose, effects, and duration are similar to those of MDPV[23]
Etizolam	4-(2-Chlorophenyl)-2-ethyl-9-methyl-6*H*-thieno[3,2-*f*][1,2,4]triazolo[4,3-*a*][1,4]diazepine	A benzodiazepine analog	Taken orally in tablet form. Recreational dosages are between 0.5mg (light) and 5mg (heavy). 1mg of etizolam is equivalent to a 10mg diazepam (Valium)

[18] Erowid: https://www.erowid.org/chemicals/lsa/lsa_dose.shtml

[19] Erowid: https://www.erowid.org/chemicals/spice_product/

[20] Erowid: https://erowid.org/chemicals/methylone/methylone_dose.shtml

[21] Erowid: https://erowid.org/chemicals/4_fluoroamphetamine/

[22] Erowid: https://erowid.org/chemicals/4_methylethcathinone/4_methylethcathinone_dose.shtml

[23] Erowid: https://erowid.org/chemicals/a-pvp/a-pvp.shtml

Street name	Chemical name	Information on drug	Information on use and effects
			tablet; etizolam is about ten times the strength of diazepam[24]

4.10.1. NPS classes

Just more than two-fifths (43%) of the 2017 sample reported having used any NPS in their lifetime, a significant decrease from 67% in 2016 (CI: -0.10 to -0.36). Approximately one-third (32%) reported recent use, the same proportion reported in 2016.

The NPS with the largest proportion of lifetime use was DMT (27%), followed by capsule with unknown contents (24%) and then 2C-B and NBOMe (each 10%). The NPS with the highest proportion of recent use was also DMT (23%), followed by capsule with unknown contents (19%), NBOMe (6%) and 2C-B (5%). A complete breakdown of new psychoactive substances used among Perth REU/RPU since 2010 is presented by class in Table 12.

Phenethylamines

For the first time in 2016, participants were asked about their use of 4-FA. As shown in Table 12, there were no significant differences in the proportion of lifetime or recent use of any phenethylamines between 2016 and 2017.

Table 12: Patterns of phenethylamine class of NPS, 2010-2017

	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Phenethylamines (2C-x class)								
2C-I								
ever used (%)	9	4	3	20	19	13	11	**6**
used last 6 months (%)	1	0	1	17	7	4	4	**3**
2C-B								
ever used (%)	5	14	8	15	18	15	13	**10**
used last 6 months (%)	2	7	3	8	11	3	5	**5**
2C-E								
ever used (%)	0	4	1	5	2	4	3	**-**
used last 6 months (%)	0	4	0	1	1	2	1	**-**
2C-Other								
ever used (%)	-	7	3	6	2	2	3	**0**
used last 6 months (%)	-	4	2	6	0	0	0	**0**
NBOMe								
ever used (%)								
used in the last 6 months (%)	- -	- -	- -	- -	18 10	14 4	11 5	**10 6**
Phenethylamines (Amphetamine-based)								

[24] Drugwise: http://www.drugwise.org.uk/druglinkdrugwatch-factsheet-2014-etizolam/

6-(2-aminopropyl)benzofuran/6-APB/Benzo Fury								
ever used (%)	-	-	2	1	0	1	1	**0**
used last 6 months (%)	-	-	1	0	0	0	0	**0**
Mescaline								
ever used (%)	7	14	6	6	4	4	5	**2**
used last 6 months (%)	4	4	1	0	3	0	1	**1**
5,6-Methylenedioxy-2-aminoindane/MDAI								
ever used (%)	-	-	1	0	2	0	1	**0**
used last 6 months (%)	-	-	0	0	2	0	0	**0**
4-FA								
ever used (%)	-	-	-	-	-	-	1	**0**
used last 6 months (%)	-	-	-	-	-	-	0	**0**

Source: WA EDRS REU/RPU interviews, 2010-2017

* Indicates significant changes from the 2016 results according to 95%CI and p<0.05

Other classes

For the first time in 2016, participants were asked about their use of 4-MEC, Alpha-PVP, 4-AcO-DMT and Etizolam. For the first time in 2017, participants were asked about their use of 'other drugs that mimic amphetamines/cocaine', 'other drugs that mimic ecstasy' and 'other drugs that psychedelic drugs'

As shown in Table 13, in 2017 just 1% of the sample reported lifetime use of mephedrone, a significant decrease from 8% in 2016 (CI: -0.01 to -0.14). There were no further significant differences in the proportions of lifetime or recent use of any synthetic cathinones, tryptamies, dissociatives or plant-based drugs included in the survey between 2016 and 2017. A complete breakdown of reported proportions of use across these drug classes is presented in Table 13.

Table 13: Patterns of other classes of NPS, 2010-2017

NPS	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Synthetic cathinones								
Mephedrone								
ever used (%)	19	18	16	6	9	7	8	**1***
used last 6 months (%)	16	14	3	3	2	3	0	**1**
Methylone								
ever used (%)	-	11	3	6	8	7	4	**2**
used last 6 months (%)	-	4	2	5	4	5	2	**2**
4-MEC (4-Methylethcathinone)								
ever used (%)	-	-	-	-	-	-	0	**-**
used last 6 months (%)	-	-	-	-	-	-	0	**-**
Alpha-PVP								
ever used (%)	-	-	-	-	-	-	1	**0**
used last 6 months (%)	-	-	-	-	-	-	0	**0**
Other stimulants								
MDPV/ Ivory Wave								
ever used (%)	0	0	2	3	2	0	0	**0**
used last 6 months (%)	0	0	1	1	0	0	0	**0**

NPS	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017** **N=100**
PMA ever used (%) used in the last 6 months (%)	7 0	4 0	1 0	1 0	3 2	2 1	5 1	**6** **3**
Tryptamines								
5MEO-DMT ever used (%) used last 6 months (%)	4 1	4 0	0 0	0 0	1 1	2 0	1 0	**1** **1**
DMT ever used (%) used last 6 months (%)	13 8	40 25	32 22	33 22	33 19	24 13	34 18	**27** **23**
4-AcO-DMT ever used (%) used last 6 months (%)	- -	- -	- -	- -	- -	- -	3 1	**1** **1**
Dissociatives								
DXM/ **Cough syrup** ever used (%) used last 6 months (%)	7 3	21 4	11 2	7 5	11 6	16 7	12 4	**9** **4**
Methoxetamine/ **MXE** ever used (%) used last 6 months (%)	- -	- -	0 0	3 0	1 0	0 0	1 0	**0** **0**
Plant-based substances								
Datura ever used (%) used last 6 months (%)	4 1	7 0	4 1	5 0	1 0	1 0	1 0	**0** **0**
Ayahuasca	-	-	-	-	-	-	1 1	**2** **1**
Salvia divinorum ever used (%) used last 6 months (%)	- -	18 11	11 3	6 2	9 3	4 0	**4** **0**	**3** **1**
LSA/ **Hawaiian Baby Woodrose** ever used (%) used last 6 months (%)	- -	4 0	7 1	6 2	3 1	3 0	**5** **1**	**0** **0**
Piperazines								
BZP ever used (%) used last 6 months (%)	37 25	7 7	14 1	2 0	3 0	**1** **0**	**3** **0**	**1** **1**
Other								
Etizolam	- -	- -	- -	- -	- -	- -	**0** **0**	**0** **0**

NPS	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
New synthetic opioids	- -	- -	- -	- -	- -	- -	- -	**0** **0**
Other new drugs that mimic amphetamines/cocaine	- -	- -	- -	- -	- -	- -	- -	**0** **0**
Other new drugs that mimic ecstasy	- -	- -	- -	- -	- -	- -	- -	**1** **1**
Other new drugs that mimic psychedelic drugs	- -	- -	- -	- -	- -	- -	- -	**2** **2**

Source: WA EDRS REU/RPU interviews, 2010-2017

* Indicates significant changes from the 2016 results according to 95%CI and p<0.05

- Data not collected

Synthetic cannabis

As shown in Table 14, in 2017, less than one-tenth (9%) of the sample reported having ever used any form of synthetic cannabis, a significant decrease from 29% in 2016 (CI: -0.09 to -0.30). None of the participants reported recent use, not significantly different from 3% in 2016.

Table 14: Patterns of synthetic cannabis use, 2010-2017

	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Any synthetic cannabis								
ever used (%)	-	32	44	40	37	34	29	**9***
used last 6 months (%)	-	32	18	19	12	6	3	**0**

Source: WA EDRS REU/RPU interviews, 2010-2017

* Indicates significant changes from the 2016 results according to 95%CI and *p*<0.05

Herbal highs and capsules with unknown contents

As presented in Table 15, 4% of the sample reported having ever used herbal highs, not significantly different from 9% in 2016. None of the participants reported recent use, not significantly different from 3% in 2016.

Just less than one-quarter (24%) of the 2017 sample reported having ever consumed a capsule where the contents were unknown, a non-significant increase from 17% in 2016. Recent use of capsules with unknown contents was 19%, a significant increase from 8% in 2016 (CI: 0.02 to 0.21).

Table 15: Patterns of herbal high use, 2012-2017

NPS	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Herbal highs						
ever used (%)	39	12	14	12	9	**4**
used last 6 months (%)	11	5	4	5	3	**0**
Capsule (contents unknown)						
ever used (%)	17	5	8	7	17	**24**
used last 6 months (%)	7	2	6	5	8	**19***

Source: WA EDRS REU/RPU interviews, 2012-2017

* Indicates significant changes from the 2016 results according to 95%CI and *p*<0.05

- Data not collected

4.10.2. Summary of NPS use

- Just more than two-fifths (43%) of the sample reported lifetime use of any NPS, a significant decrease from 67% in 2016. Thirty-two per cent reported recent use, consistent with the 2016 findings.
- Proportions of use remained stable between 2016 and 2017 with three exceptions; compared to 2016, in 2017 there was a significant decrease in the proportion of lifetime use of mephedrone, a significant decrease in lifetime use of any synthetic cannabis and a significant increase in recent use of capsules with unknown contents.

5. DRUG MARKET: PRICE, POTENCY, AVAILABILITY AND SUPPLY

5.1. Ecstasy

5.1.1. Price

Participants were asked to report how much they purchased ecstasy for on the last occasion. As shown in Table 16, among those who commented on pills (n=94), the median price was $20 per pill (range $5-$50), significantly less than $25 in 2016. Among those able to comment on ecstasy powder per gram (n=13), the median price was $150 (range $25-$350), a non-significant decrease from $200 in 2016. However, given that only five participants were able to comment in 2016, this comparison should be interpreted with caution. Among participants who commented on ecstasy crystal/MDMA rock per cap, the median price was $30 (range $15-$45), the same median price reported in 2016. Among participants who commented on ecstasy caps, the median price per cap was $25 (range $13-$50), significantly lower than $30 in 2016. Overall, these results suggest that while the price of ecstasy crystal/MDMA rock appears to be stable, the price of ecstasy pills, powder and caps may be decreasing.

Table 16: Price of ecstasy and price variations, 2016 and 2017

	2016	**2017**
Median price per pill	$25	**$20***
Range	($15-$50)	**($5-$50)**
Median price ecstasy powder (gram)	$200^	**$150**
Range	($50-$300)	**($25-$350)**
Median price ecstasy crystal/MDMA rock (cap)	$30	**$30**
Range	($20-$40)	**($15-$45)**
Median price ecstasy capsule	$30	**$25***
Range	($20-$40)	**($13-$50)**
Ecstasy pills	2016	**2017**
Increasing	10	**3**
Stable	40	**56**
Decreasing	39	**20***
Fluctuating	12	**20**
Ecstasy crystal/MDMA rock	2016	**2017**
Increasing	7	**5**
Stable	66	**68**
Decreasing	18	**14**
Fluctuating	9	**13**

Source: WA EDRS REU interviews, 2016 and 2017

^ n<10

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

Participants were asked to comment on changes to the price of ecstasy in the preceding six months (see Table 16). Among those who commented on pills (n=94), more than half (n=53, 56%) reported the price as stable, followed by decreasing and fluctuating (each n=19, 20%) and increasing (n=3, 3%). Compared to 2016, a significantly smaller proportion of participants reported the price as decreasing in the current sample (CI: -0.05 to -0.30). Among participants who commented on ecstasy powder (n=22), the majority rated the price as stable (n=18, 82%), followed by fluctuating (n=2, 9%) and increasing and decreasing (each n=1, 4%). Among those

who commented on ecstasy crystal/MDMA rock (n=62), just more than two-thirds (n=42, 68%) reported the price as stable. This was followed by decreasing (n=9, 14%), fluctuating (n=8, 13%) and increasing (n=3, 5%). These findings were not significantly different from the 2016 results. Among participants who commented on ecstasy caps (n=72), two-thirds (n=48, 68%) reported that the price was stable, followed by decreasing (n=12, 17%), fluctuating (n=7, 10%) and increasing (n=4, 6%). Comparison with the 2016 sample for powder and caps was not possible due to the small number of participants who commented in 2016.

5.1.1. Potency

Participants were asked to comment on the current potency of ecstasy (see Table 17). Among those able to comment on ecstasy pills (n=95), potency ratings were mixed. The largest proportion (n=26, 34%) rated current potency as fluctuating. This was followed by medium (n=27, 28%), high (n=20, 21%) and low (n=14, 15%). These findings were not significantly different to the 2016 results. Among participants who commented on ecstasy powder (n=26), current potency was rated as medium by just more than two-fifths (n=11, 42%) of the sample. This was followed by high (n=8, 31%), low (n=4, 15%) and fluctuating (n=3, 11%). Among participants who commented on ecstasy crystal/MDMA rock, three-fifths (n=39, 60%) rated potency as high, followed by medium (n=14, 21%), fluctuating (n=8, 12%) and low (n=4, 6%). These findings were again not significantly different from the 2016 results. Among those who commented on ecstasy caps (n=72), perceptions of current potency were mixed. It was rated as high by more than two-fifths (n=32, 44%) of the sample, followed by medium (n=26, 36%), fluctuating (n=9, 12%) and low (n=5, 7%). Comparison with the 2016 findings was not possible for ecstasy powder and caps given the small number of participants who commented in 2016.

Overall, the pattern of results suggests that ecstasy crystal/MDMA rock continues to be rated as higher in potency than other forms of ecstasy.

Table 17: Current potency, ecstasy pills and ecstasy crystal/MDMA rock 2016 and 2017

Ecstasy pills	2016	**2017**
Low	11	**15**
Medium	25	**28**
High	19	**21**
Fluctuating	45	**36**
Ecstasy crystal/MDMA rock	2016	**2017**
Low	4	**6**
Medium	20	**21**
High	61	**60**
Fluctuating	16	**12**

Source: WA EDRS REU/RPU interviews, 2016 and 2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

Participants were asked to comment on changes to ecstasy potency over the preceding six months (see Table 18). Among those who commented on ecstasy pills (n=93), perceptions were mixed. Potency was most commonly rated as stable (n=29, 31%), followed by fluctuating (n=26, 28%), decreasing (n=21, 23%) and then increasing (n=17, 18%). These findings were not significantly different from the 2016 results. Among participants who commented on ecstasy powder (n=24), less than three-quarters (n=17, 71%) rated potency as stable over the preceding six months, followed by decreasing (n=3, 12%) and then increasing and fluctuating (each n=2, 8%). Among participants who were able to comment on ecstasy crystal/MDMA rock, (n=62), less than two-thirds (n=40, 64%) rated potency as stable, followed by increasing

and fluctuating (each n=8, 13%) and decreasing (n=6, 10%). These findings were not significantly different to the 2016 results. Among those who commented on ecstasy caps (n=69), potency was again most commonly rated as stable (n=33, 48%) followed by decreasing (n=14, 20%), increasing (n=12, 17%) and fluctuating (n=10, 14%). Comparison with the 2016 findings was not possible for ecstasy powder and caps given the small number of participants who commented in 2016.

Table 18: Potency changes in the last six months, ecstasy pills and ecstasy crystal/MDMA rock 2016 and 2017

Ecstasy pills	2016	**2017**
Increasing	21	**18**
Stable	33	**31**
Decreasing	18	**23**
Fluctuating	27	**28**
Ecstasy crystal/MDMA rock	2016	**2017**
Increasing	20	**13**
Stable	56	**64**
Decreasing	9	**10**
Fluctuating	15	**13**

Source: WA EDRS REU/RPU interviews, 2016 and 2017

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

5.1.2. Availability

Participants were asked how easy it was to obtain ecstasy currently (see Table 19). Among those who commented on pills (n=65), the almost all (n=91, 95%) rated it as easy or very easy to obtain, not significantly different from 99% in 2016. Among those who commented on ecstasy powder, (n=25), it was most commonly rated as easy to obtain (n=9, 36%), followed by very easy (n=8, 32%) and then difficult (n=7, 28%) and very difficult (n=1, 4%). Among those who commented on ecstasy crystal/MDMA rock (n=95), more than three-quarters (n=51, 78%) rated current availability as easy or very easy, not significantly different from 72% in 2016. Among those who commented on ecstasy caps (n=72), almost three-fifths (n=42, 58%) rated it as easy to obtain, followed by very easy (n=18, 25%), difficult (n=11, 15%) and then very difficult (n=1, 1%). Comparisons with the 2016 findings for ecstasy powder and ecstasy caps could not be conducted because of the small number of participants who commented in 2016.

Table 19: Current availability, ecstasy pills and ecstasy crystal/MDMA rock 2016 and 2017

Ecstasy pills	2016	**2017**
Very easy	78	**58**
Easy	21	**38**
Difficult	1	**3**
Very difficult	0	**1**
Ecstasy crystal/MDMA rock	2016	**2017**
Very easy	33	**43**
Easy	39	**35**
Difficult	22	**22**
Very difficult	6	**0**

Source: WA EDRS REU/RPU interviews, 2016 and 2017
* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

Participants were asked to rate changes in availability of ecstasy over the preceding six months (see Table 20). Among those who commented on ecstasy pills (93), almost two-thirds (n=61, 66%) rated availability as stable over that time period, followed by easier (n=19, 20%), more difficult (n=10, 11%) and fluctuating (n=3, 3%). Compared to 2016, a significantly larger proportion of participants rated ecstasy pills as more difficult to obtain recently (CI: 0.02 to 0.18) and a significantly smaller proportion rated pills as easier to obtain (CI: -0.01 to -0.26). Among those who commented on ecstasy powder (n=23), the vast majority (n=21, 91%) rated availability as stable over the preceding six months, followed by more difficult (n=2, 9%). Among those who commented on ecstasy crystal/MDMA rock (n=63), more than three-quarters (n=48, 76%) rated it availability as stable over the preceding six months, followed by easier (n=10, 16%) and more difficult (n=5, 8%). Compared to 2016, a significantly smaller proportion of participants in the current rated ecstasy crystal/MDMA rock availability as fluctuating (CI: -0.06 to -0.29). Among those who commented on ecstasy caps (n=69), more than two-thirds (n=48, 70%) rated availability as stable, followed by easier (n=11, 16%), more difficult (n=9, 13%) and fluctuating (n=1, 1%). Comparison with the 2016 findings was not possible due to the small number of participants who commented on ecstasy powder and caps in 2016.

Table 20: Availability changes in the last six months, ecstasy pills and ecstasy crystal/MDMA rock 2016 and 2017

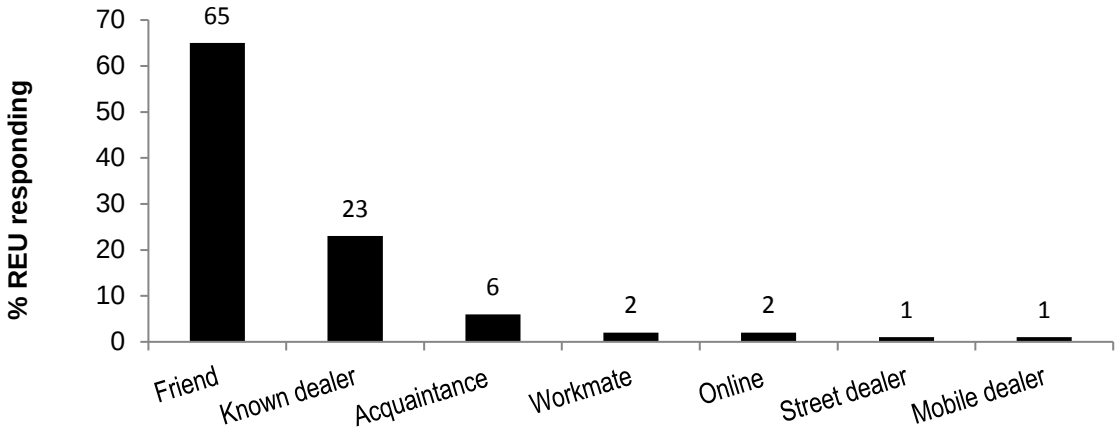
Ecstasy pills	2016	**2017**
More difficult	2	**11***
Stable	60	**66**
Easier	34	**20***
Fluctuating	3	**3**
Ecstasy crystal/MDMA rock	2016	**2017**
More difficult	12	**8**
Stable	59	**76**
Easier	20	**16**
Fluctuating	8	**0***

Source: WA EDRS REU/RPU interviews, 2016 and 2017
* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

5.1.3. Source person and source location

Participants were asked to comment on whom ecstasy (any form) was obtained from on the last occasion in the preceding six months. As demonstrated in Figure 7, 'friend' was the most commonly reported person, nominated by 65% of the sample. This was followed by 'known dealer' (23%), 'acquaintance' (6%), 'workmate' and 'online' (each 2%) and 'street dealer' and 'mobile dealer' (each 1%).

Figure 7: Person from whom ecstasy (any form) was last obtained in the preceding six months, 2017 (N=100)

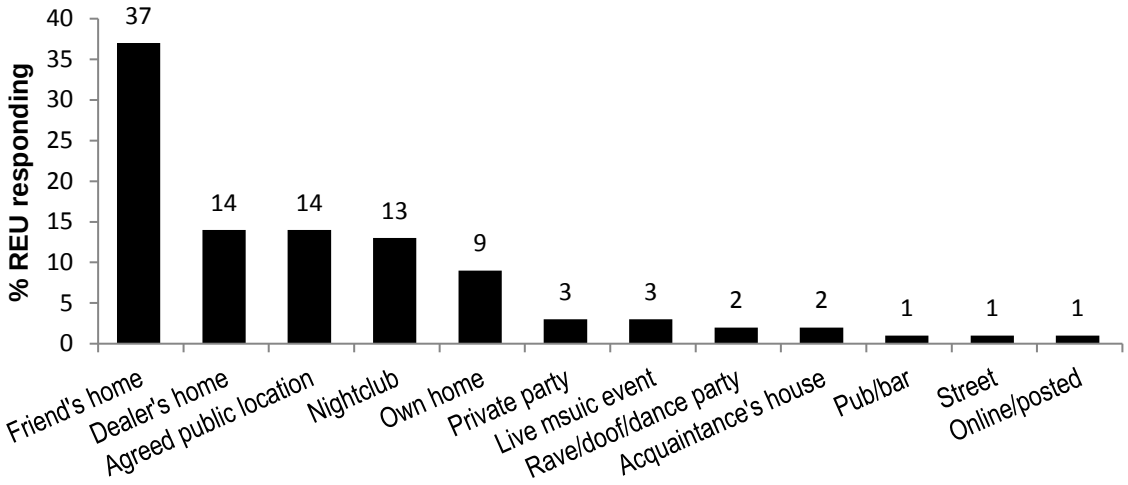


Source: WA REU interviews, 2017

Participants were asked to report the location from ecstasy (any form) was obtained on the last occasion in the preceding six months. As presented in Figure 8, 'friend's home' was the most commonly reported location (37%). This was followed by 'dealer's home' and 'agreed public location (each 14%), 'nightclub (13%), 'own home' (9%), 'private party' and 'live music

event' (each 3%), 'rave/doof/dance party' and 'acquaintance's house' (each 2%) and 'pub/bar', 'street' and 'online/posted' (each 1%).

Figure 8: Location at which ecstasy pills, powder and capsules were last obtained in the preceding six months, 2017 (N=100)



Source: WA EDRS REU interviews, 2017

5.2. Summary of ecstasy market trends

Price

- REU reported the median price of ecstasy per pill as $20, significantly less than $25 in 2016.
- The median price of ecstasy powder per gram was $150, a non-significant decrease from $200 in 2016
- The median price of ecstasy crystal/MDMA rock per cap was $30, the same median reported in 2016.
- The median price of ecstasy caps was $25, a significant decrease from $30 in 2016.
- Price was most commonly rated as stable over the preceding six months for ecstasy pills (56%), ecstasy crystal/MDMA rock (68%), ecstasy powder (82%) and ecstasy caps (68%).
- The median reported prices suggests the price of ecstasy crystal/MDMA rock appears to be stable, the price of pills, powder and caps may be decreasing. Despite this, these findings suggest participants tended to perceive the price of all forms of ecstasy as stable over the preceding six months.

Potency

- Perceptions of the current potency of ecstasy pills were mixed, most commonly rated as fluctuating (34%), and stable over the preceding six months (31%).
- The current potency of ecstasy crystal/MDMA rock was most commonly rated as high (60%) and stable over the preceding six months (64%).
- The current potency of ecstasy powder was most commonly rated as medium (42%) and stable over the preceding six months (71%).
- The current potency of ecstasy caps was most commonly rated as high (44%) and stable over the preceding six months (48%).

Availability

- Ecstasy pills were overwhelmingly rated as currently easy or very easy to obtain (95%), with availability most commonly rated as stable over the preceding six months (66%).
- The majority of participants who commented rated ecstasy crystal/MDMA rock as currently easy or very easy to obtain (88%) and availability was most commonly rated as stable over the preceding six months (76%).
- Perceptions of ecstasy powder availability were mixed, but it was most commonly rated as easy to obtain currently (36%), with the vast majority of respondents rating availability as stable over the preceding six months (91%).
- Ecstasy caps were most commonly rated as easy to obtain currently (58%) and availability was most commonly rated as stable over the preceding six months (70%).

Source person and location

- The most commonly cited person from whom participants reported obtaining ecstasy from on the last occasion was ‘friend’ (65%), and the most commonly cited location from which ecstasy was obtained on the last occasion was ‘friend’s home’ (37%).

5.4. Methamphetamine

Price, potency and availability data for methamphetamine powder (speed) and crystal are presented below. None of the participants commented on methamphetamine base.

5.4.1. Price

Participants were asked about the price of the various forms of methamphetamine on the last occasion of purchase (see Table 21). Given the small number of participants who were able to comment in 2017, these results should be interpreted with caution.

Speed

Two participants in the 2017 sample reported the price of methamphetamine powder (speed) per point as $55. None of the participants reported the price of methamphetamine powder per gram. A comparison with the 2016 data was not possible due to the small sample size.

Crystal

Of those participants who were able to comment on the price of crystal methamphetamine per point (n=2), the median was $50 (range $50-$100). One participant reported the price per gram as $400. Comparison with the 2016 sample was not possible due to the small sample size.

Table 21: Price of various methamphetamine forms purchased, 2008-2017

Median price ($)	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2017**
Speed										
Point	50	50^	50^	100^	100^	100^	100^	-	100^	**55^**
Gram	100	275	300^	800^	400^	700^	200^	300^	-	**-**
Base										
Point	50	50^	-	100^	-	-	-	-	-	**-**
Gram	-	400^	300^	1000^	-	-	-	-	200^	**-**
Crystal										
Point	50	50^	50^	100	100	100	100	100^	100^	**50^**
Gram	425	400^	400^	400^	525^	800^	800^	700^	-	**400^**

Source: WA EDRS REU/RPU interviews, 2008-2017
^ n<10. Results should be interpreted with caution

Participants were asked to comment on changes in the price of the three forms of methamphetamine over the preceding six months (see Figure 12).

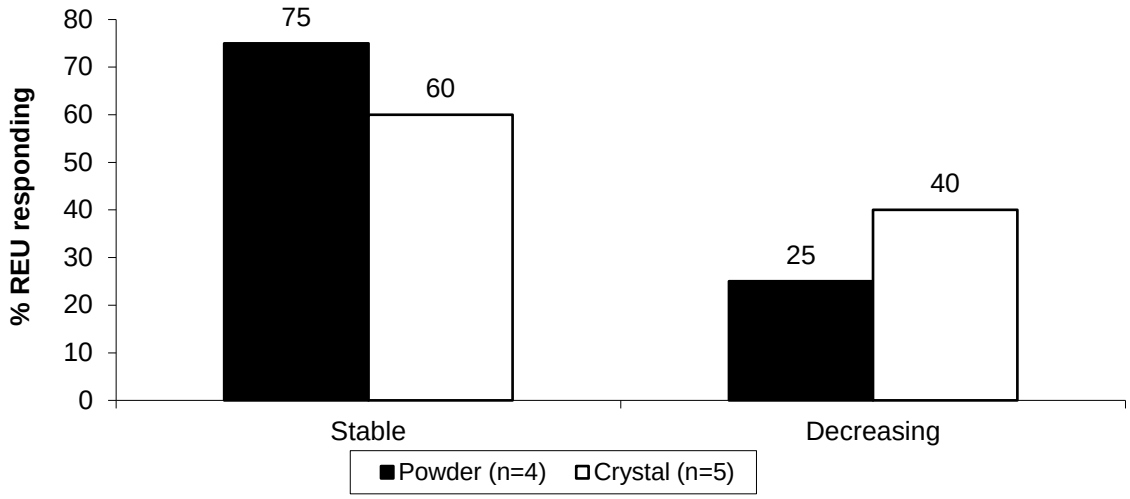
Speed

Of those able to comment (n=4), three-quarters (n=3, 75%) reported the price as stable over the preceding six months and one-quarter (n=1, 25%) reported it as decreasing. While these results were not significantly different from the 2016 findings, they should be interpreted with caution given the very small sample size.

Crystal

As shown in Figure 9, of those able to comment on crystal methamphetamine (n=5), three-fifths (n=3, 60%) reported the price as stable over the preceding six months and two-fifths (40%) reported the price as decreasing. While these results were consistent with the 2016 findings, they should be interpreted with caution given the small number of participants who were able to comment.

Figure 9: User reports of recent changes in the price of powder and crystal forms of methamphetamine, 2017



Source: WA EDRS REU interviews, 2016

5.4.2. Potency

Participants were asked to comment on the current potency of methamphetamine (see Figure 10).

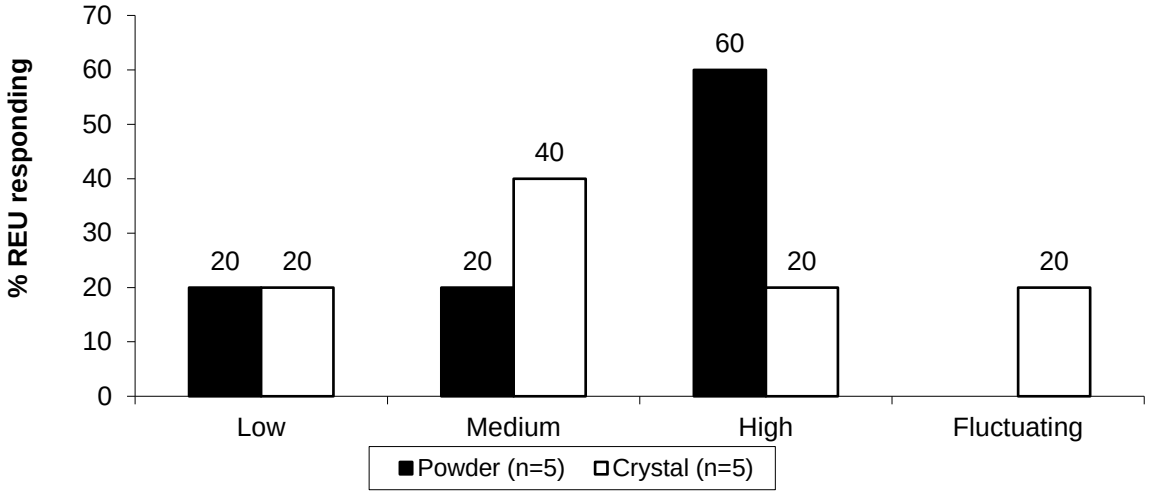
Speed

Of those able to comment on the current potency of speed (n=5), three-fifths (60%) rated it as high, followed by low and medium (each n=1, 20%). While these results were not significantly different from the 2016 findings, they should be interpreted with caution given the small number of participants who were able to comment.

Crystal

Of those participants who were able to comment on crystal methamphetamine (n=5), perceptions were mixed. The greatest proportion of participants rated the potency as medium (n=2, 40%), followed by low, high and fluctuation (each n=1, 20%). These results were not significantly different from the 2016 findings, but should be interpreted with caution given the small number of participants who were able to comment.

Figure 10: User reports of current methamphetamine potency, 2017



Source: WA EDRS REU interviews, 2017

Participants were asked to comment on perceived changes in the potency of methamphetamine over the preceding six months (see Figure 11). The small number of respondents necessitates caution in interpreting these results.

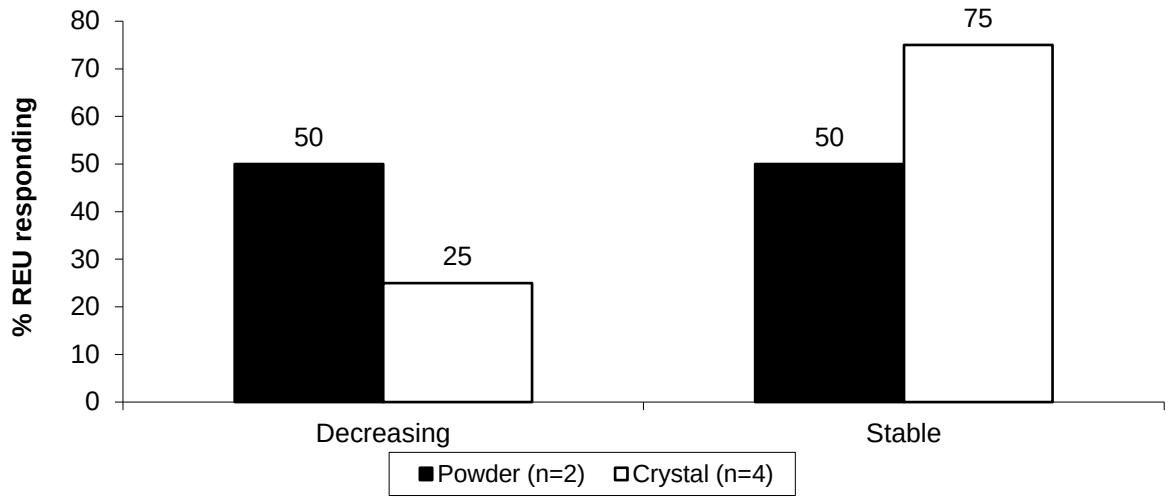
Speed

Of those participants able to comment on speed (n=2), half reported that it was decreasing and stable (each n=1, 50%). These results were not significantly different from the 2016 findings.

Crystal

Of those participants able to comment on crystal methamphetamine (n=4), three-quarters (n=3, 75%) reported that potency was stable and the remaining 25% (n=1) reported that it was decreasing. These results were not significantly different from the 2016 findings.

Figure 11: User reports of changes in methamphetamine potency in the preceding six months, 2017



Source: WA EDRS REU interviews, 2017

5.4.3. Availability

Participants were asked to comment on the current availability of methamphetamine (see Figure 12). These findings should again be interpreted with caution given the small number of participants who commented.

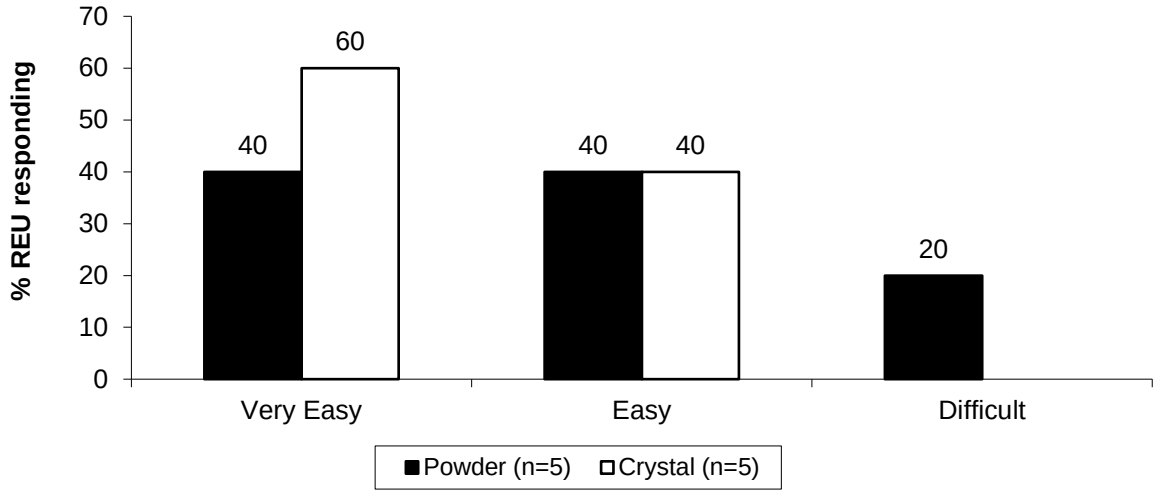
Speed

Of those respondents able to comment on speed (n=5), the largest proportions of respondents reported that it was currently easy and very easy to obtain (each n=2, 40%). This was followed by difficult (n=1, 20%). These results were not significantly different from the 2016 findings.

Crystal

Of those participants able to comment on crystal methamphetamine (n=5), three-fifths (n=3, 60%) reported that it was very easy to obtain currently and two-fifths (n=2, 40%) reported that it was easy to obtain. These findings were not significantly different from the 2016 results.

Figure 12: User reports of current availability of methamphetamine forms, 2017



Source: WA EDRS REU interviews, 2017

Participants were asked to comment on the perceived changes to availability of methamphetamine over the preceding six months (see Figure 13). Given the small number of participants who were able to comment, these results should again be interpreted with caution.

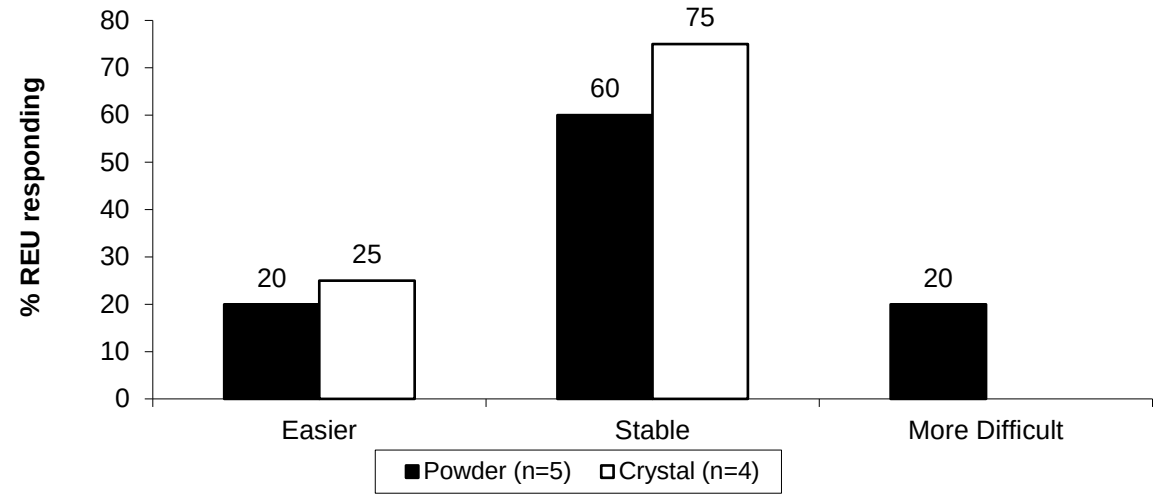
Speed

Of those respondents able to comment on speed (n=5), three-fifths (n=3, 60%) reported that availability was stable over the preceding six months. This was followed by easier and more difficult (each n=1, 20%). These results were not significantly different from the 2016 findings.

Crystal

Of those participants able to comment on crystal methamphetamine (n=4), three-quarters (n=3, 75%) reported that availability was stable over the preceding six months. These findings were not significantly different from the 2016 results.

Figure 13: User reports of changes in the availability of methamphetamine in the preceding six months, 2017



Source: WA EDRS REU interviews, 2017

5.4.4. Source person and source location

Participants were asked to report whom they had obtained methamphetamine from on the last occasion. A full breakdown of these results is shown in Figure 14. These results should be interpreted with caution due to the small number of participants who commented.

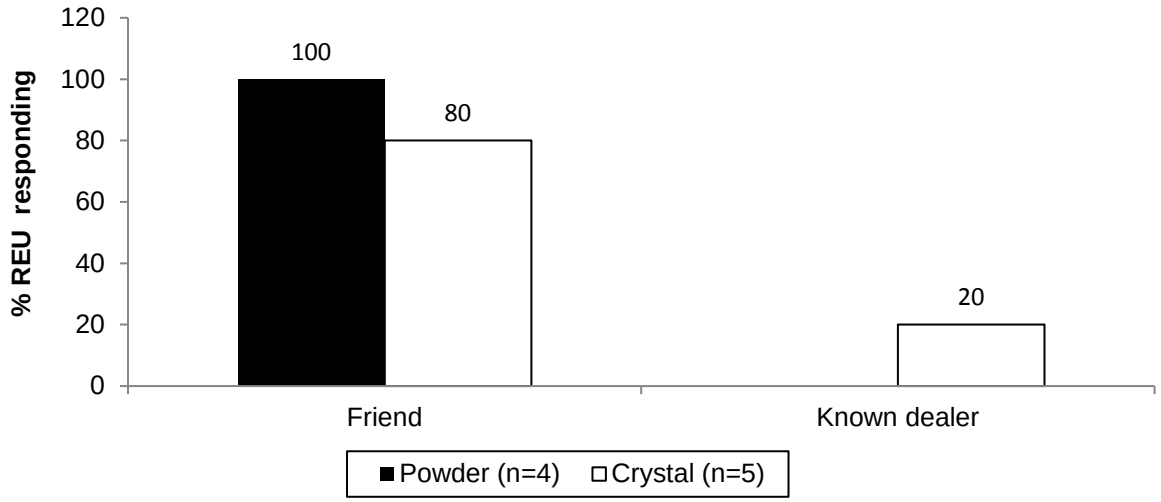
Speed

Among participants who commented on speed (n=4), aligned with the 2016 findings, all (n=4, 100%) reported that it had been obtained from a 'friend' on the last occasion.

Crystal

Not significantly different from 2016, among those who commented on crystal methamphetamine (n=5), the majority (n=4, 80%) reported that it had been obtained from a 'friend' on the last occasion, followed by 'known dealer' (n=1, 20%).

Figure 14: Person from whom methamphetamine was last obtained in the preceding six months, 2017



Source: WA EDRS REU interviews, 2017

Participants were asked where they were when they purchased methamphetamine on the last occasion in the preceding six months. A full breakdown of these responses is shown in Figure 15. These results should be interpreted with caution due to the small number of participants who commented.

Speed

Among those who commented on speed (n=4), 'friend's home' and 'private party' were reported by half of the respondents (n=2, 50%). These results were not significantly different from the 2016 findings.

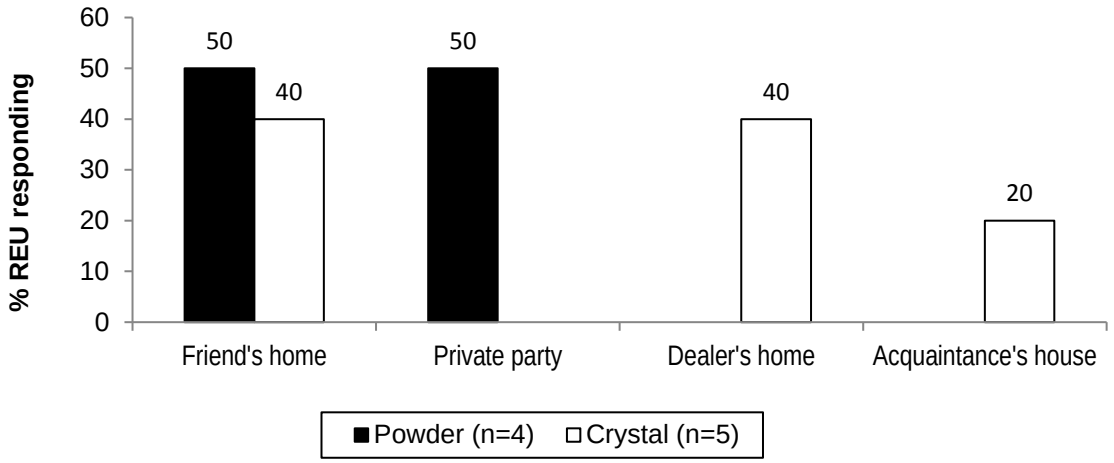
Base

No participants commented on methamphetamine base.

Crystal

Among those who commented on crystal methamphetamine (n=5), the most commonly reported locations were 'friend's home' and 'dealer's home' (each n=2, 40%), followed by 'acquaintance's house' (n=1, 20%). These results were not significantly different from the 2016 findings.

Figure 15: Location where methamphetamine was last obtained in the preceding six months, 2017



Source: WA EDRS REU interviews, 2017

5.4.5. Summary of methamphetamine market trends

Speed

- Findings for speed should be interpreted with caution given the small number of participants who were able to comment in 2017.
- The median reported price per point was $55.
- Three-fifths (60%) rated current potency as high, followed by low and medium (each 20%).
- Two participants commented on changes to speed potency over the preceding six months; one participant reported it was stable and one reported it was decreasing.
- The majority of respondents who commented reported that speed was currently easy or very easy to obtain (80%).
- Availability was rated as stable by three-fifths (60%) of respondents, followed by easier and more difficult (each 20%).
- All respondents (100%) reported 'friend' as the person from who speed was obtained on the last occasion. 'Friend's home' and 'private party' were the only locations from where speed was reported to have been obtained on the last occasion (each 50%).

Crystal

- Findings for crystal should be interpreted with caution given the small number of participants who were able to comment in 2017.
- The median reported price per point was $50. The median price per gram as $400.
- Perceptions of current potency were mixed; largest proportion rated it as medium (40%).
- Three-quarters (75%) rated crystal methamphetamine potency as stable over the preceding six months.
- All participants (100%) reported that crystal methamphetamine was currently easy or very easy to obtain and 75% rated availability was stable
- 'Friend' was the most commonly reported person from whom crystal was last obtained (80%) and 'friend's home' and 'dealer's home' were the most commonly reported locations (each 40%).

5.5. Cocaine

5.5.1. Price

Participants were asked to report the current price of cocaine per gram. Table 22 shows a breakdown of these results across survey years. As shown in Table 20, in 2017, among participants who were able to comment (n=11), the median price of cocaine per gram was $350, not significantly different from $400 in 2016.

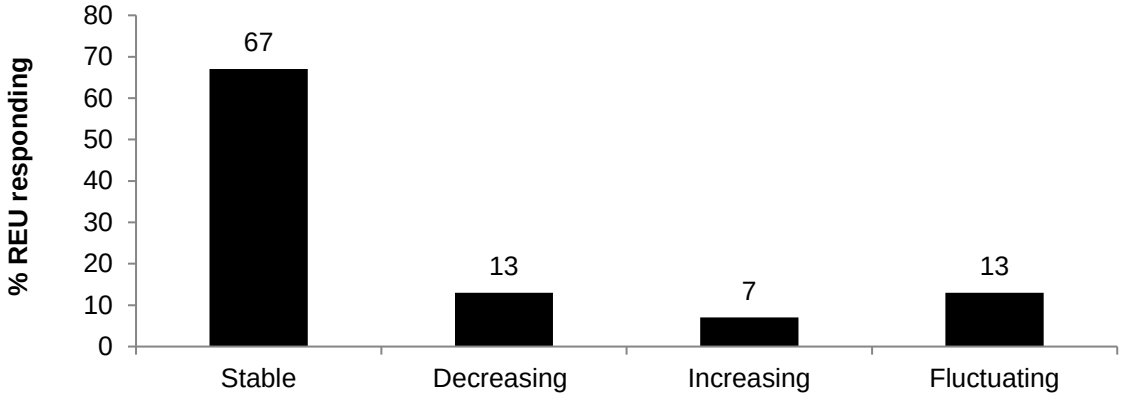
Table 22: Price of cocaine purchased, 2008-2017

	2008 (n=8)	2009 (n=9)	2010 (n=4)	2011 (n=5)	2012 (n=10)	2013 (n=10)	2014 (n=15)	2015 (n=8)	2016 (n=9)	**2017 (n=11)**
Median price per gram	$325^	$375^	$365^	$375^	$325	$400	$400	$375^	$400^	**$350**
Price range	($300-$400)^	($200-$300)^	($300-$500)^	($350-$500)^	($100-$700)	($300-500)	($150-$600)	($100-$500)^	($300-$500)^	**($80-$500)**

^n<10. Results should be interpreted with caution.
* Indicates significant changes from the 2016 results according to 95%CI and *p*<0.05
Source: WA EDRS REU/RPU interviews, 2008-2017

Participants were asked to comment on recent changes to the price of cocaine. A breakdown of these results is shown in Figure 16. Of those participants able to comment (n=15), two-thirds (n=10, 67%) reported the price was stable over the preceding six months. This was followed by decreasing and fluctuating (each n=2, 13%) and increasing (n=1, 7%). These results were not significantly different from the 2016 findings.

Figure 16: User reports of recent changes in the price of cocaine, 2017 (n=15)

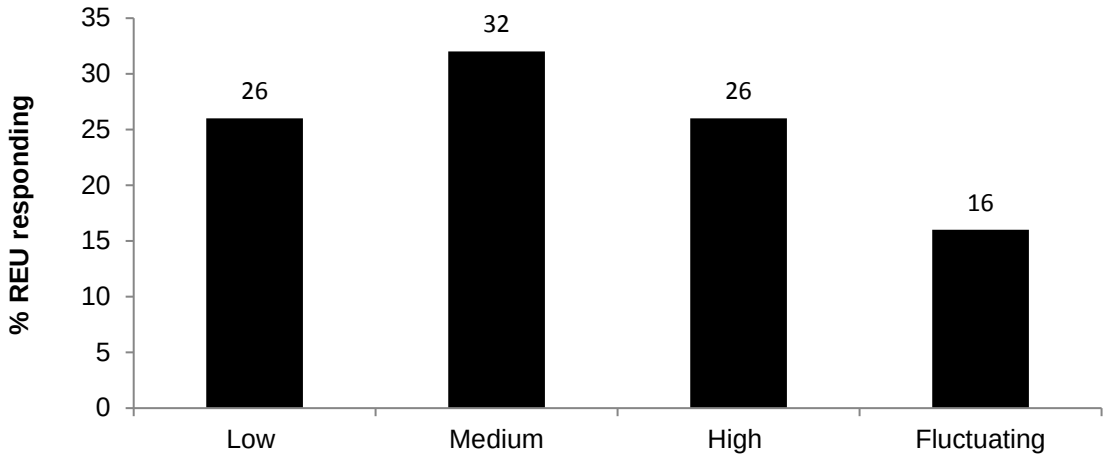


Source: WA EDRS REU interviews, 2017

5.5.2. Potency

Participants were asked to comment on the current potency of cocaine. A full breakdown of these results is shown in Figure 17. Of the 19 participants who were able to comment, perceptions were mixed. The greatest proportion of participants rated potency as medium (n=6, 32%), followed by low and high (each n=5, 26%) and then fluctuating (n=3, 16%). These results were not significantly different from the 2016 findings.

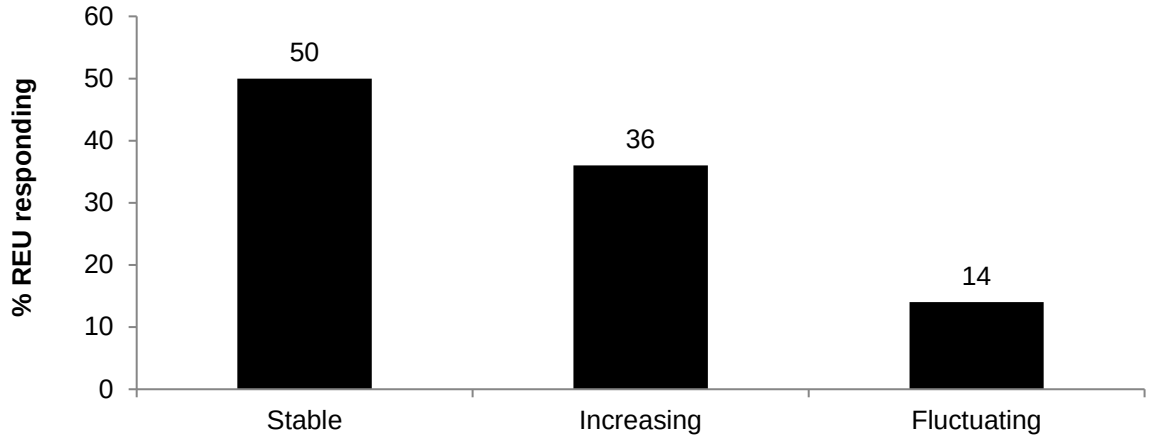
Figure 17: User reports of current potency of cocaine, 2017 (n=19)



Source: WA EDRS REU interviews, 2017

Participants were asked to report on perceived changes to potency in the preceding six months. As presented in Figure 18, among the 12 participants who were able to comment, perceptions were mixed. Half of the respondents reported that potency had been stable (n=7, 50%), followed by increasing (n=5, 36%), and then fluctuating (n=2, 14%). These findings were not significantly different from the 2016 results.

Figure 18: User reports of changes in cocaine potency in the preceding six months, 2017 (n=14)

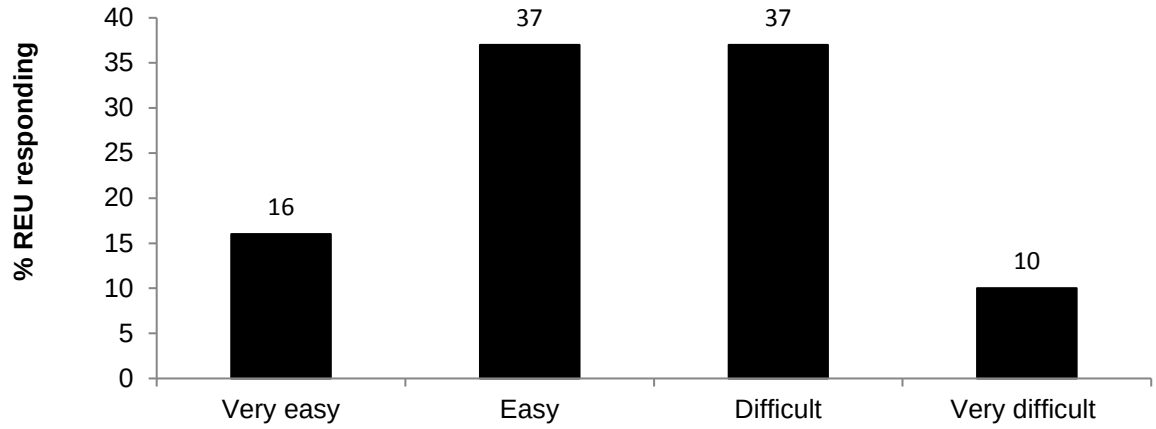


Source: WA EDRS REU interviews, 2017

5.5.3. Availability

Participants were asked how easy cocaine was to obtain currently (see Figure 19). Among the 19 participants who commented, perceptions were mixed. The greatest proportions rated it as both easy and difficult (each n=7, 37%). This was followed by very easy (each n=3, 16%) and then very difficult (n=2, 10%). These findings were not significantly different from the 2016 results.

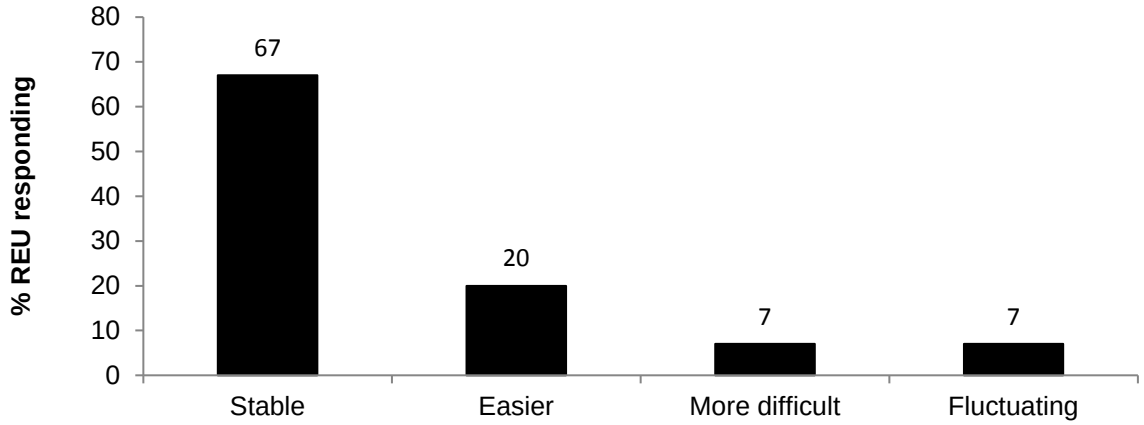
Figure 19: User reports of current availability of cocaine, 2017 (n=19)



Source: WA EDRS REU interviews, 2017

Participants were asked to comment on changes in the availability of cocaine over the preceding six months. A full breakdown of these results is shown in Figure 20. Of the 15 participants who were able to comment, two-thirds (n=10, 67%) reported that cocaine availability was stable. This was followed by easier (n=3, 20%), more difficult and fluctuating (each n=1, 7%). These results were not significantly different from the 2016 findings.

Figure 20: User reports of changes in cocaine availability in the preceding six months, 2017 (n=15)



Source: WA EDRS REU interviews, 2017

5.5.4. Source person and source location

Participants were asked whom they obtained cocaine from on the last occasion in the preceding six months. Of those able to comment (n=18), the most commonly reported person was 'friend' (n=10, 56%), followed by 'known dealer' (n=6, 33%), and then 'relative' and 'online dark net/deep web' (each n=1, 6%). These results were not significantly different from the 2016 findings.

Participants were also asked to comment on the location at which cocaine was obtained on the last occasion in the preceding six months. Among those able to comment (n=18), the most commonly reported locations were 'friend's home' and 'dealer's home' (each n=6, 33%). This

was followed by ‘rave/doof/dance party’, ‘nightclub’, ‘private party’, ‘agreed public location’, ‘acquaintance’s house’ and ‘online/posted’ (each n=1, 6%). These results were not significantly different from the 2016 findings.

5.5.5. Summary of cocaine market trends

- The median reported price of cocaine per gram was $350, not significantly different from $400 in 2016. This result should be interpreted with caution given the small number of participants able to comment in 2016.
- Not significantly different from the 2016 findings, two-thirds (67%) of the respondents reported that the price of cocaine was stable over the preceding six months.
- Not significantly different from 2016, perceptions of the current potency of cocaine were mixed; it was most commonly rated as medium (32%), followed by low and high (each 26%).
- Not significantly different from 2016, cocaine potency was most commonly reported as stable over the preceding six months (50%).
- Perceptions regarding the current availability of cocaine were mixed, with the largest proportion of respondents rating it as both easy and difficult to obtain (each 37%). Availability was most commonly rated as stable over the preceding six months (67%). These findings were not significantly different from the 2016 results.
- Not significantly different from the 2016 findings, ‘friend’ (56%) was most commonly reported person from whom cocaine was last obtained and ‘friend’s home’ and ‘dealer’s home’ were most commonly reported locations at which it was obtained (each 33%).

5.6. GHB

In 2017, only one participant was able to comment on the price, potency or availability of GHB. Data on the market characteristics of GHB are therefore not presented in this report.

5.7. Ketamine

Results concerning the price, potency and availability of ketamine presented in this report should be interpreted with caution given the small numbers of participants who were able to comment in 2016 and 2017.

5.7.1. Price

Participants were asked to comment on the current price of ketamine as well as changes in price over the preceding six months. In 2017, among those able to comment (n=3) the median price of ketamine per gram was $240 (range $100-$350), a non-significant increase from $175 in 2016. Among those who commented on price changes (n=2), not significantly different from 2016, half reported that the price was stable and half reported that it was decreasing over the preceding six months (each n=1, 50%).

5.7.2. Potency

Participants were asked to comment on the current potency of ketamine. Among those who commented (n=5), the majority (n=4, 80%) rated it as high and the remaining respondent (n=1, 20%) rated it as fluctuating. These results were not significantly different from the 2016 findings.

Participants were also asked about changes in the potency of ketamine in the preceding six months. Of those who commented, (n=3), two-thirds (n=2, 67%) reported that potency was

stable, followed by fluctuating (n=1, 33%). These results were not significantly different from the 2016 findings.

5.7.3. Availability

Participants were asked to comment on the current availability of ketamine. Of those who commented (n=6), perceptions were mixed. One-third of respondents reported that ketamine was currently very easy, easy and difficult to obtain (each n=2, 33%). These results were not significantly different from the 2016 findings.

Participants were also asked to comment on changes in the availability of ketamine over the preceding six months. Of those who commented (n=6), perceptions were again mixed. Half reported that availability was both stable and easier (each n=3, 50%). These results were not significantly different from the 2016 findings.

5.8. LSD

5.8.1. Price

Participants were asked to comment on the current price of LSD as well as changes in price over the preceding six months. A breakdown of these results across survey years is shown in Table 23. In 2017, the median reported price of LSD per tab was $25, the same median reported since 2013. Among those who commented on price changes (n=38), the majority (n=31, 82%) reported that the price was stable over the preceding six months This was followed by increasing and decreasing (each n=3, 8%) and then fluctuating (n=1, 3%).

Table 23: Price of LSD purchased and price changes in the preceding six months, 2008-2017

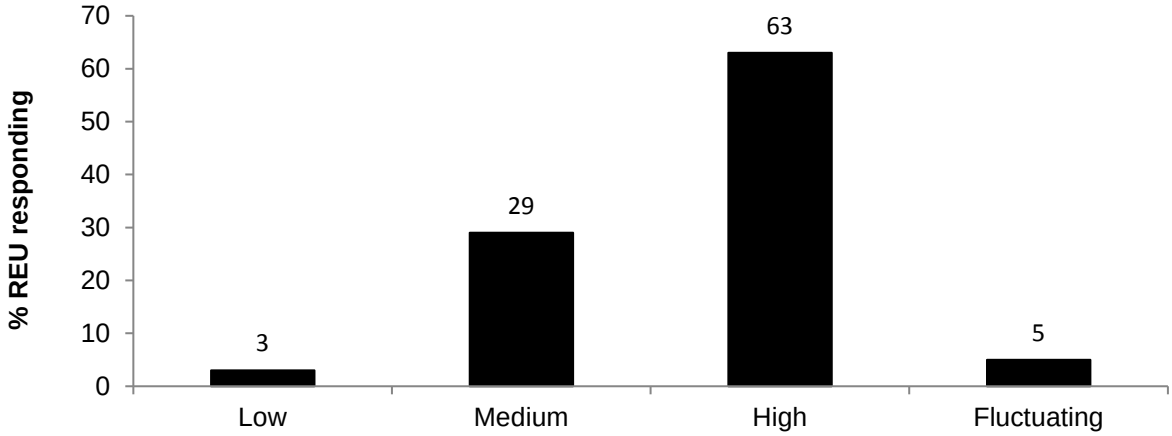
	2008 N=9	2009 N=25	2010 N=32	2011 N=12	2012 N=19	2013 N=39	2014 N=35	2015 N=20	2016 N=34	**2017 n=38**
Median price per tab ($)	25	25	25	25	20	25	25	25	25	**25**
Range ($)	(20-45)	(5-40)	(10-40)	(15-50)	(10-50)	(1-35)	(12-40)	(10-80)	(5-35)	**(5-30)**
Price change (%)	(n=7)	(n=19)	(n=27)	(n=11)	(n=19)	(n=37)	(n=35)	(n=18)	(n=33)	**(n=38)**
Increasing	29	21	11	9	0	11	17	6	6	**8**
Stable	57	74	78	64	68	60	71	83	79	**82**
Decreasing	14	5	7	0	26	16	6	11	9	**8**
Fluctuating	0	0	4	27	5	14	6	0	6	**3**

Source: WA EDRS REU/RPU interviews, 2008-2017
* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

5.8.2. Potency

Participants were asked to comment on the current potency of LSD (see Figure 21). Among those who commented (n=38), LSD potency was most commonly rated as high (n=24, 63%).This was followed by medium (n=11, 29%), fluctuating (n=2, 5%) and low (n=1, 3%). These results were not significantly different from the 2016 findings.

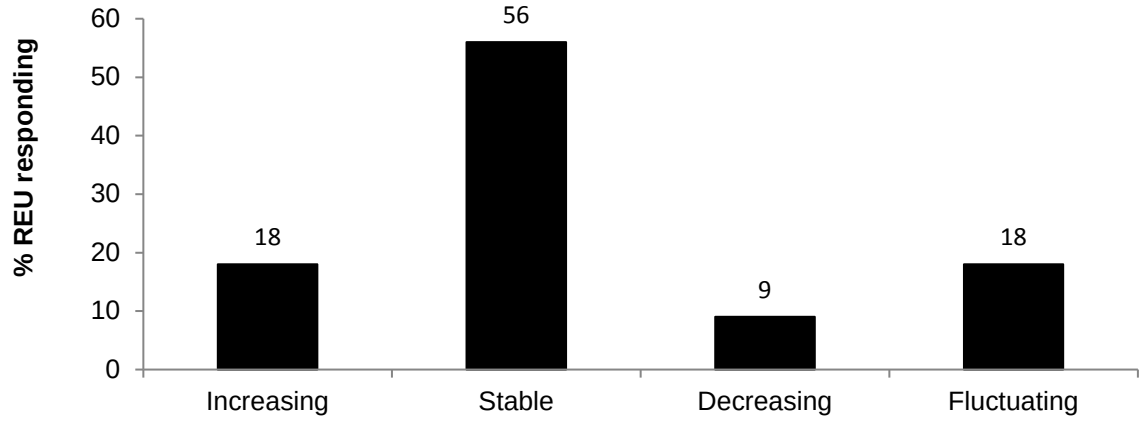
Figure 21: User reports of current LSD potency, 2017 (n=38)



Source: WA EDRS REU interviews, 2017

Participants were also asked about changes in the potency of LSD in the preceding six months (see Figure 22). Of those who commented, (n=34), more than half (n=19, 56%) reported that potency was stable. This was followed by increasing and fluctuating (each n=6, 18%) and then decreasing (n=3, 9%). These results were not significantly different from the 2016 findings.

Figure 22: User reports of changes in LSD potency in the preceding six months, 2017 (n=34)

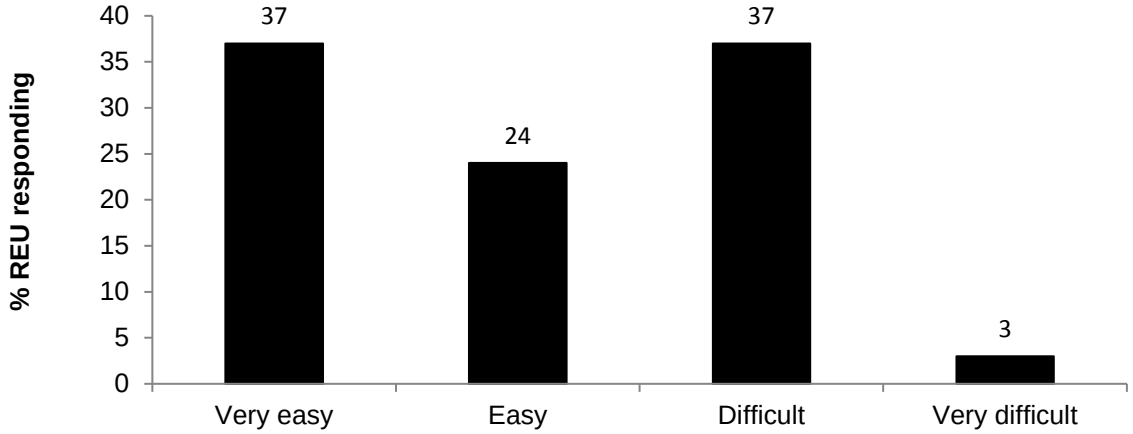


Source: WA EDRS REU interviews, 2017

5.8.3. Availability

Participants were asked to comment on the current availability of LSD. Figure 23 shows a full breakdown of these results. Of those who commented (n=38), perceptions were mixed. More than one-third reported that LSD was currently very easy and difficult to obtain (each n=14, 37%). This was followed by easy (n=9 24%) and very difficult (n=1, 3%).These results were not significantly different from the 2016 findings.

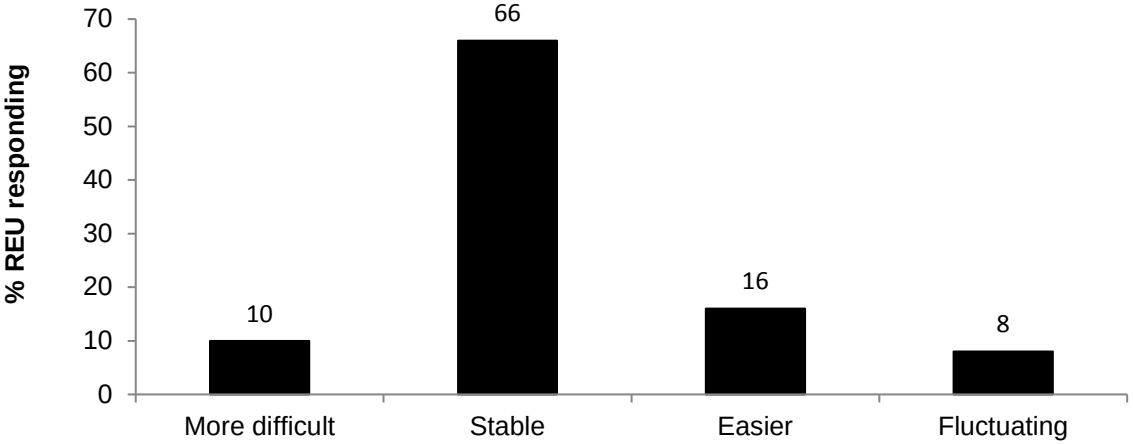
Figure 23: User reports of current availability of LSD, 2017 (n=38)



Source: WA EDRS REU interviews, 2017

Participants were also asked to comment on changes in the availability of LSD over the preceding six months (see Figure 24). Of those who commented (n=38), just less than two-thirds (n=25, 66%) reported that availability was stable. This was followed by easier (n=6, 16%), more difficult (n=4, 10%) and fluctuating (n=3, 8%).These results were not significantly different from the 2016 findings.

Figure 24: User reports of changes in availability of LSD during the preceding six months, 2017 (n=38)

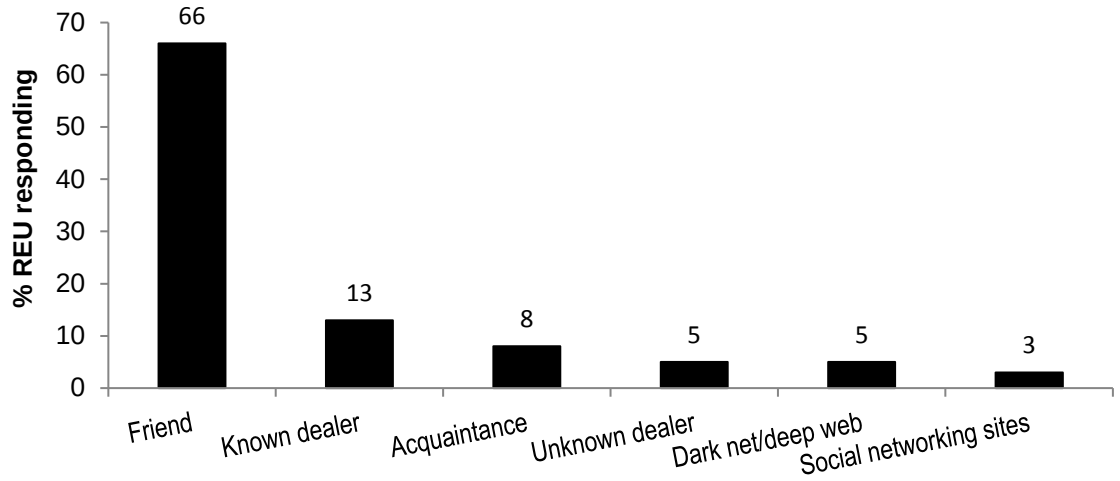


Source: WA EDRS REU interviews, 2017

5.8.4. Source person and source location

Participants were asked to report the person from whom LSD was obtained on the last occasion in the preceding six months. Not significantly different from 2016, of those who commented (n=38), 'friend' was the most commonly reported person (n=25, 66%). This was followed by 'known dealer' (n=5, 13%), 'acquaintance' (n=3, 8%), 'unknown dealer' and 'online dark net/deep web' (each n=2, 5%) and then 'online social networking sites' (n=1, 3%). A full breakdown of these results is shown in Figure 25.

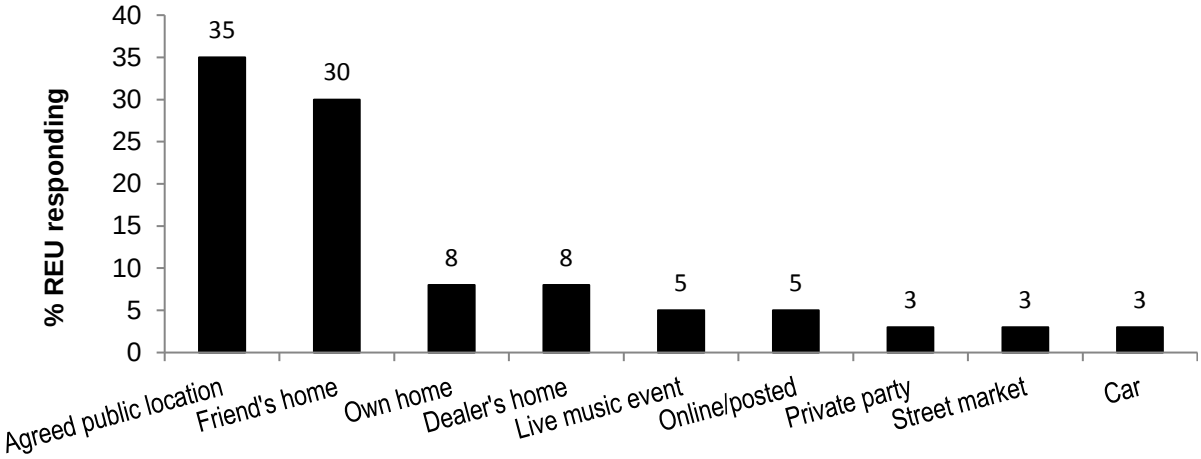
Figure 25: Person from whom LSD was last obtained in the preceding six months, 2017 (n=38)



Source: WA EDRS REU interviews, 2017

Participants were also asked to report the location where LSD was obtained on the last occasion in the preceding six months. Again not significantly different from the 2016 findings, among those who commented (n=37), the most commonly reported location was 'agreed public location' (n=13, 35%), followed 'friend's home' (n=11, 30%), 'dealer's home' and 'live music event' (each n=2, 8%) and 'online/posted', 'private party', 'street market' and 'car' (each n=1, 3%). Figure 26 shows a full breakdown of these results.

Figure 26: Location from where LSD was last obtained in the preceding six months, 2017 (n=37)



Source: WA EDRS REU interviews, 2017

5.8.5. Summary of LSD market trends

- Consistent with previous years, the median price of LSD per tab was $25.
- That majority (82%) of respondents reported that the price of LSD was stable over the preceding six months, not significantly different from 79% in 2016.
- Not significantly different from the 2016 findings, less than two-thirds (63%) of the respondents rated the current potency of LSD as high.
- More than half (56%) of the respondents reported that the potency of LSD was stable over the preceding 6 months, not significantly different from the 2016 findings.
- Aligned with the 2016 results, perceptions of the current availability of LSD were mixed; it was most commonly rated as both very each and difficult to obtain (each 37%).
- Just less than two-thirds (66%) of the respondents reported that the availability of LSD was stable over the preceding six months, not significantly different from 2016.
- Not significantly different from 2016, 'friend' was the most commonly reported person from whom LSD was last obtained (66%) and 'agreed public location' was the most commonly reported location from where it was last obtained (35%).

5.9. Cannabis

5.9.1. Price

In 2006, the EDRS began collecting data on various aspects of the cannabis market. Consistent with the IDRS, a distinction was made between indoor cultivated hydroponic cannabis (hydro) and outdoor cultivated bush cannabis (bush).

Table 24 presents the median price for an ounce of hydro and bush across survey years. In 2017, among those who commented on hydro (n=22), the median price was $330 per ounce (range $250-$360), not significantly different from $350 in 2016. Among those who commented on bush (n=17), the price per ounce was $300 (range $160-$350), the same median reported in 2016.

Participants also commented on the price of cannabis per gram. Among those who commented on hydro (n=8), the median price was $20 (range $10-$25), significantly less than $25 in 2016. However, this finding should be interpreted with caution given the small number of participants who commented in both 2016 and 2017. Among those who commented on bush (n=9), the median price per gram was also $20 (range $10-$25), not significantly different from $25 in 2016. However, again this finding should be interpreted with caution given the small number of participants who commented in 2016 and 2017.

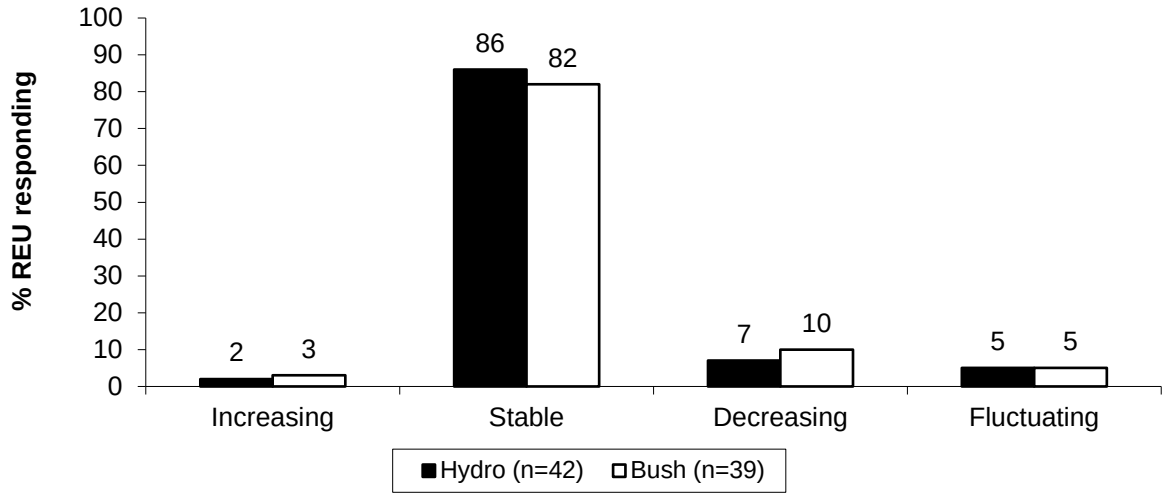
Table 24: Median price of cannabis per ounce, 2008-2017

Form	2008	2009	2010	2011	2012	2013	2014	2015	2016	**2017**
Hydro	(n=24) $305	(n=23) $350	(n=25) $350	(n=14) $350	(n=20) $350	(n=23) $350	(n=33) $350	(n=44) $350	(n=17) $350	**(n=22) $330**
Bush	(n=16) $275	(n=16) $280	(n=16) $280	(n=12) $250	(n=9) $300	(n=10) $300	(n=30) $350	(n=35) $350	(n=11) $300	**(n=17) $300**

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$
Source: WA EDRS REU/RPU interviews, 2008-2017

Participants were asked to comment on changes in the price of cannabis over the preceding six months. A breakdown of these results is shown in Figure 27. Of those who commented (n=42), the majority reported the price of hydro as stable (n=36, 86%), followed by decreasing (n=3, 7%), fluctuating (n=2, 5%) and increasing (n=1, 2%). For bush, of those who commented (n=39), again the majority reported the price as stable (n=32, 82%), followed by decreasing (n=4, 10%), fluctuating (n=2, 5%) and increasing (n=1, 3%). These results were not significantly different from the 2016 findings.

Figure 27: User reports of recent changes in price of cannabis, 2017

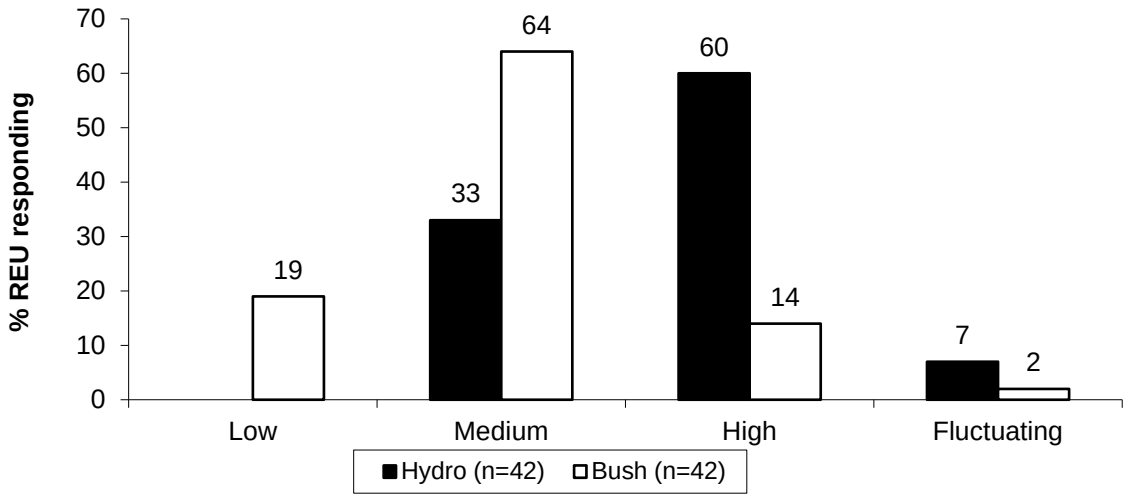


Source: WA EDRS REU interviews, 2017

5.9.2. Potency

Participants were asked to comment on the current potency of cannabis. A full breakdown of these results is shown in Figure 28. Of those participants who commented on hydro (n=42), three-fifths (n=25, 60%) rated current potency as high. This was followed by medium (n=14, 33%) and fluctuating (n=3, 7%). These findings were not significantly different from the 2016 results. Among participants who commented on bush (n=42), current potency was most commonly rated as medium (n=27, 64%), followed by low (n=8, 19%), high (n=6, 14%) and fluctuating (n=1, 2%). This pattern of results was again not significantly different from the 2016 findings.

Figure 28: User reports of current potency of cannabis, 2017

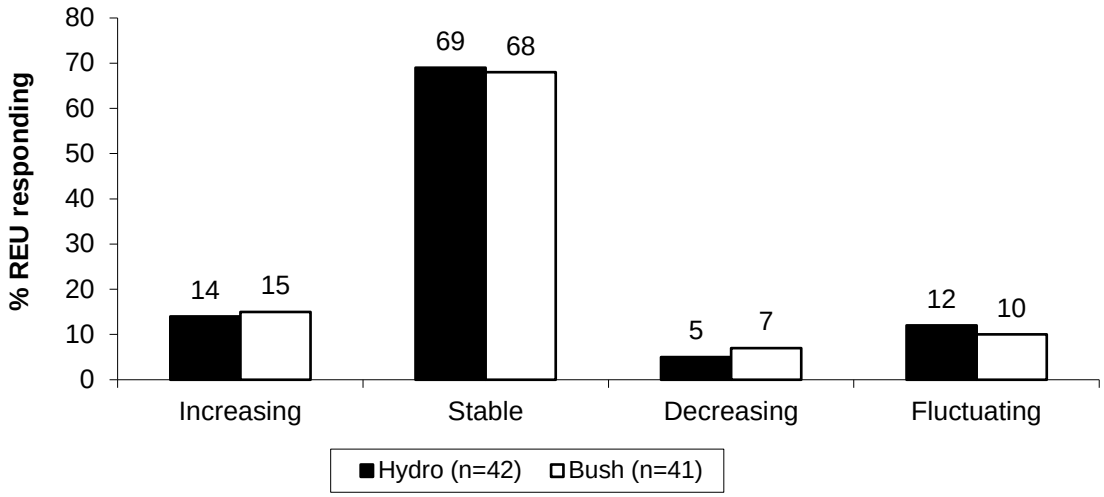


Source: WA EDRS REU interviews, 2017

Participants were asked to comment on changes in the potency of cannabis over the preceding six months. A full breakdown of these results is shown in Figure 29.

Of those who commented on hydro (n=42), not significantly different from the 2016 results, more than two-thirds of the respondents (n=29, 69%) reported that potency was stable, followed by increasing (n=6, 14%), fluctuating (n=5, 12%) and decreasing (n=2, 5%). For those who commented on bush (n=41), potency was also most commonly reported as stable (n=28, 68%), followed by increasing (n=6, 15%) and then fluctuating (n=4, 10%) and decreasing (n=3, 7%). These results were again not significantly different from the 2016 findings.

Figure 29: User reports of changes in cannabis potency in the preceding six months, 2017



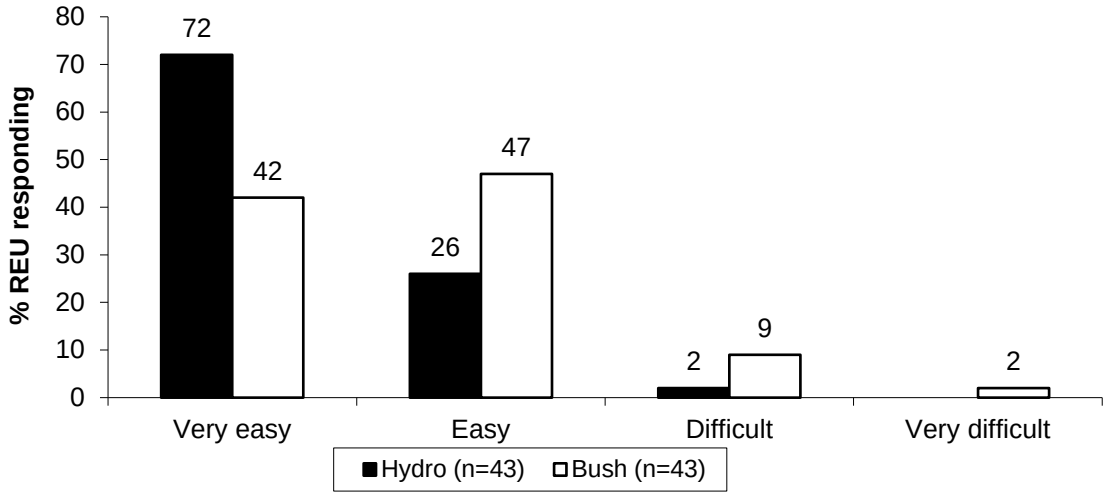
Source: WA EDRS REU interviews, 2017

5.9.3. Availability

Participants were asked to rate the current availability of cannabis. A full breakdown of these results is shown in Figure 30.

Among those able to comment hydro (n=42), the majority (n=31, 72%) reported that it was very easy obtain, followed by easy (n=11, 26%) and difficult (n=1, 2%) For bush, among those who commented (n=43), more than two-fifths (n=20, 47%) reported that it was easy to obtain. This was followed by very easy (n=18, 42%), difficult (n=4, 9%) and very difficult (n=1, 2%). These results were also not significantly different from the 2016 findings. Overall, as evident in Figure 35, these findings suggest that hydro continues to be the more available form of cannabis in Perth.

Figure 30: User reports of current availability of cannabis, 2017

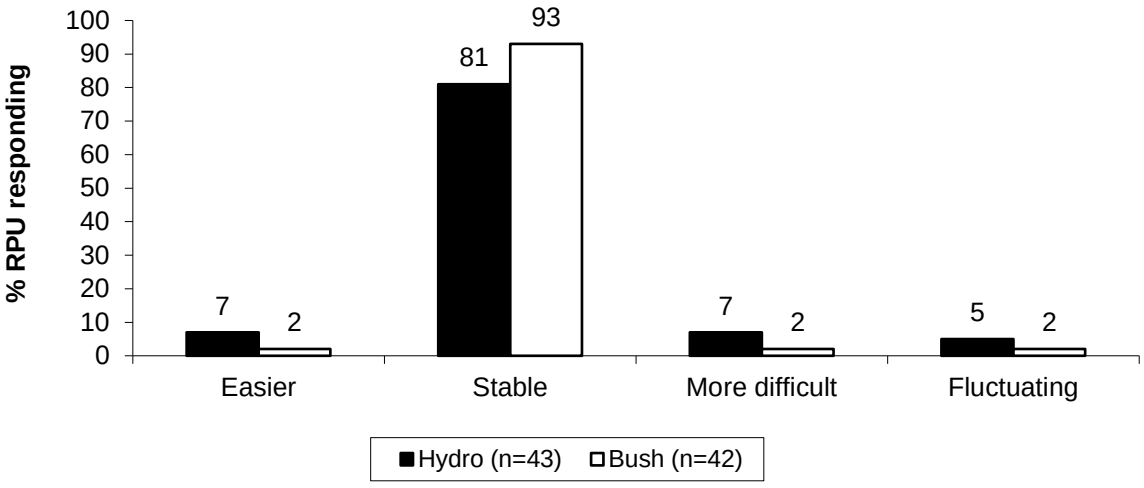


Source: WA EDRS REU interviews, 2017

Participants were asked to comment on changes in the availability of cannabis over the preceding six months. A complete breakdown of these results is shown in Figure 31.

Of those who commented on hydro (n=43), the majority (n=35, 81%) reported that availability was stable. This was followed by more difficult and easier (each n=3, 7%) and fluctuating (n=2, 5%). These results were not significantly different from the 2016 findings. Among participants who commented on bush (n=42), the vast majority (n=39, 93%) reported that availability was stable, followed by easier, more difficult and fluctuating (each n=1, 2%). Compared to the 2016 sample, a significantly larger proportion of participants in 2017 reported availability as stable (CI: 0.09 to 0.42) and a significantly smaller proportion rated it as easier to obtain (CI: -0.07 to -0.36).

Figure 31: User reports of changes in cannabis availability in the preceding six months, 2017



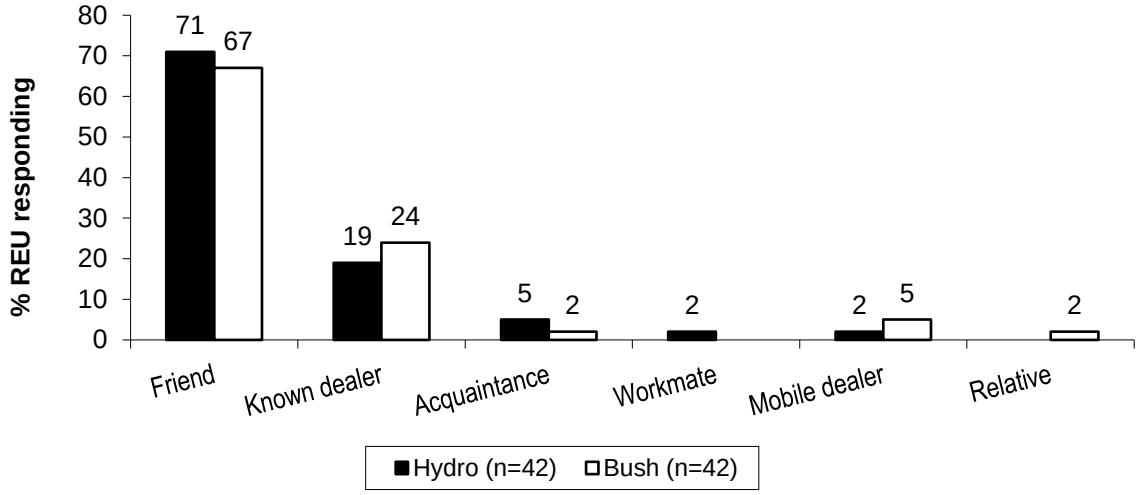
Source: WA EDRS RPU interviews, 2017

5.9.4. Source person and source location

Participants were asked to indicate who they had obtained cannabis from on the last occasion in the preceding six months. See Figure 32 for a full breakdown of these results.

Among participants who commented on hydro or bush (each n=42), the most commonly reported person was 'friend' (hydro: n=30, 71%; bush: n=28, 67%), followed by 'known dealer' (hydro: n=8, 19%; bush: n=10, 24%). These results were not significantly different from the 2016 findings.

Figure 32: Person from whom cannabis was last obtained in the preceding six months, 2017

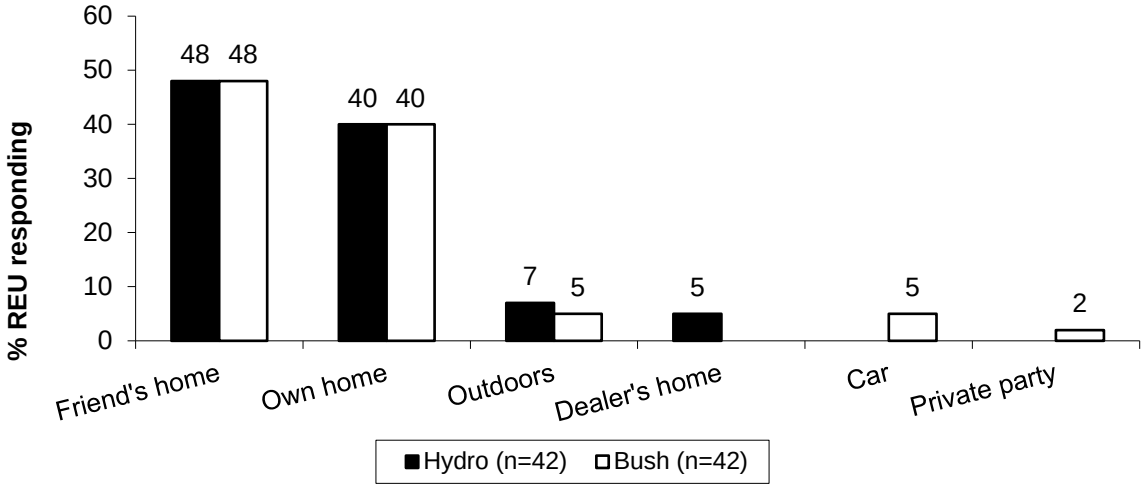


Source: WA EDRS REU interviews, 2017

Participants were asked to indicate the locations at which cannabis was obtained on the last occasion in the preceding six months. A full breakdown of these results is presented in Figure 33.

Of those who commented on hydro and/or bush (each n=42) 'friend's home' was the most frequently reported location (each n=20, 48%), followed by 'own home' (each n=17, 40%). These findings were not significantly different from the 2016 results.

Figure 33: Location where cannabis was last obtained in the preceding six months, 2017



Source: WA EDRS REU interviews, 2017

5.9.5. Summary of cannabis market trends

Hydro

- The median price per ounce was $330, not significantly different from $350 in 2016.
- The median price per gram was $20, significantly less than $25 in 2016. This finding should be interpreted with caution given the small number of participants able to comment.
- Not significantly different from 2016, the majority (86%) of respondents reported that the price was stable over the preceding six months.
- Current potency was most commonly rated as high (60%), not significantly different from the 2016 findings.
- Not significantly different from 2016, more than two-thirds (69%) of respondents reported that potency was stable over the preceding six months.
- Consistent with previous years, the vast majority (98%) of participants rated hydro as easy or very easy to obtain currently.
- Not significantly different from 2016, the majority (81%) of respondents reported that availability was stable over the preceding six months.

Bush

- The median price per ounce was $300, the same median reported in 2016.
- The median price per gram was $20, not significantly different from $25 in 2016. This result should be interpreted with caution given the small number of participants able to comment.
- Consistent with previous years, approximately the majority (82%) of respondents reported that price was stable over the preceding six months.
- The current potency of bush was most commonly reported as medium (64%), not significantly different from the 2016 findings.
- Not significantly different from 2016, approximately two-thirds (68%) of respondents reported that potency was stable over the preceding six months.
- The vast majority (89%) of respondents rated bush as easy or very easy to obtain currently, not significantly different from the 2016 findings.
- Consistent with the 2016 findings, the vast majority (93%) of respondents reported that availability was stable over the preceding six months.

6. HEALTH-RELATED TRENDS ASSOCIATED WITH ECSTASY AND RELATED DRUG USE

6.1. Overdose

Since 2007, EDRS participants have been asked about stimulant and depressant drug overdoses. 'Overdose' is defined as the experience of symptoms not significantly different from either stimulant toxicity (e.g. nausea and vomiting, chest pains, tremors, increased body temperature or heart rate, seizure, extreme paranoia, anxiety or panic, hallucinations) or depressant overdose (e.g. reduced level of consciousness, respiratory depression, turning blue, collapsing). As such, the following sections are based on participants' understanding of these definitions and their opinions as to whether they had overdosed.

6.1.1. Stimulant overdose

As shown in Table 25, in 2017, one-quarter (25%) of the sample reported overdosing on a stimulant drug at some point in their lifetime, not significantly different from 23% in 2016. Of those who had ever overdosed on a stimulant drug, the median number of times they had done so in their lifetime was one (range 1-30). The most recent overdose occurred on a median of three months ago (range 1-10).

Of those participants who had experienced a stimulant overdose in their lifetime (n=25), the majority (n=20, 80%) had experienced one in the past 12 months. This equates to 20% of the overall sample, not significantly different from 14% in 2016.

Table 25: Ever overdosed on a stimulant drug, 2017

(%)	2017 N=100
Ever overdosed	**25**
Median number of times (range)*	**1 (1-30)**
Months since most recent overdose*	**3 (1-10)**
Overdosed in last 12 months*	**80**

Source: WA EDRS REU interviews, 2017
* Of those who had ever overdosed

Among those who commented and had overdosed in the preceding 12 months (n=19), the most frequently cited main drug to which the overdose was attributed was ecstasy (n=14, 74%), not significantly different from 61% in 2016. More than three-quarters (n=15, 79%) of those who had overdosed in the last 12 months reported taking at least one other drug in combination with the main drug at the time of the overdose, not significantly different from 61% in 2016.

Among participants reporting concomitant use of other drugs in combination with the main drug at the time of the last overdose (n=15), the most commonly used drug was alcohol (n=10, 67%). This was followed by cannabis (n=5, 33%), ecstasy and pharmaceutical stimulants (each n=4, 27%), cocaine and other (unspecified) (each n=2, 13%) and then nitrous oxide, tobacco and Lyrica® (each n=1, 7%). While these findings were not significantly different from the 2016 results, this comparison should be interpreted with caution given the small number of participants (n=8) who commented in 2016.

Among those who commented (n=20), the most commonly reported location of participants' last recent overdose was 'live music event' (n=9, 45%), followed by 'nightclub' (n=5, 25%), and then 'friend's home', 'own home', 'rave/doof/dance party', 'private party', 'pub', and 'car' (each n=1, 5%). These findings were not significantly different from the 2016 results.

Among those who commented (n=20), half (n=10, 50%) reported that there was a sober person present to assist them at the time of their last overdose in the last 12 months, not significantly different from 23% in 2016. Among those who commented (n=19), more than one-quarter (n=5, 26%), reported not receiving any immediate treatment at the time of the last overdose. The most commonly reported immediate treatment was 'watched/monitored by friends' (n=9, 47%), 'GP' and 'drank water' (each n=3, 16%), 'ambulance' (n=2, 10%), and then' hospital emergency room', 'got oxygen', and 'medical tent' (each n=1, 5%). These findings were not significantly different from the 2016 results.

A full breakdown of the data regarding the reported causes and circumstances of stimulant overdose is presented in Table 26.

Table 26: Overdosed on a stimulant drug in the preceding 12 months – reported causes and circumstances, 2017

(%)	2017 n=19
Main drug	
Ecstasy	74
Pharmaceutical stimulants	10
Crystal methamphetamine	5
Other*	10
Location of most recent overdose	**n=20**
Live music event	45
Nightclub	25
Friend's home	5
Own Home	5
Rave/doof/dance party	5
Private party	5
Pub	5
Car	5
Sober person available to assist	
Yes	50
No	50

Source: WA EDRS REU interviews, 2017

* Other main drugs were: 'capsule with unknown contents' and 'Lyrica®'

Participants who reported experiencing an overdose in the preceding 12 months were asked to indicate the symptoms they experienced during their last overdose. Reported main symptoms were not significantly different from the 2016 findings, with the most frequently cited being extreme anxiety (n=3, 17%). All of these respondents also reported experiencing at least one secondary symptom in addition to the main symptom. The most frequent secondary symptom was increased body temperature (n=8, 44%). These results were again not significantly different from the 2016 findings.

A full breakdown of these results is shown in Table 27.

Table 27: Overdosed on a stimulant drug in the preceding 12 months – reported symptoms, 2017

(%)	2017 n=18
Main symptom	
Extreme anxiety	17
Nausea	11
Increased heart rate	11
Hallucination – visual	11
Vomiting	6
Chest pain	6
Tremors	6
Seizure	6
Headache	6
Hallucination - auditory	6
Dizziness	6
Other[#]	11
Secondary symptoms	
Increased body temperature	44
Increased heart rate	39
Headache	33
Nausea	28
Vomiting	28
Muscle twitches	28
Extreme anxiety	22
Hallucination – visual	22
Dizziness	17
Panic	17
Tremors	17
Irregular breathing – shallow	11
Chest pain	11
Delirium/confusion	11
Extreme agitation	6
Hallucination - tactile	6
Passed out	6
Other[##]	39

Source: WA EDRS REU interviews, 2017

Other main symptoms were: 'lost control of left eye' and 'unresponsive'

Other secondary symptoms were: 'blurred vision, couldn't feel legs, ears ringing' 'extreme panic, sweating, hot and cold at the same time, out of body experience', 'loss of control of legs, memory loss', 'shaking' and 'vision problems'.

6.1.2. Depressant overdose

In 2017, less than one-fifth (18%) of the sample reported overdosing on a depressant drug at some point in their lifetime, not significantly different from 23% in 2016. Of those who had ever overdosed on a depressant drug, the median number of times they had done so was two (range 1-50), the same median reported in 2016. Of those participants who reported ever

experiencing a depressant overdose (n=18), less than three-quarters (n=13, 72%) had experienced one in the preceding 12 months. This equates to 13% of the overall sample, not significantly different from 15% in 2016.These data are presented in Table 28.

Table 28: Ever overdosed on a depressant drug, 2017

(%)	2017 N=100
Ever overdosed	18
Median number of times (range)*	2 (1-50)
Overdosed in last 12 months*	72

Source: WA EDRS REU interviews, 2017
* Of those who had overdosed in past 12 months

Not significantly different from the 2016 findings, among those who commented (n=13), the most frequent main drug that the last overdose in the preceding 12 months was attributed to was alcohol (n=10, 77%), followed by benzodiazepines (n=3, 23%).

Of the 13 participants who commented, more than three-fifths (n=8, 61%) reported using at least one secondary drug in addition to the main drug at the time of the last overdose, not significantly different from 63% in 2016. Consistent with the 2016 results, the most frequently cited drug used concomitantly was cannabis (n=4, 50%), followed by alcohol (n=2, 25%) and then pharmaceutical stimulants, Lyrica® and tobacco (each n=1, 12%).

'Friend's home' was the most commonly reported location of last overdose (n=5, 38%), followed by 'own home', 'private party', and 'nightclub' (each n=2, 15%) and then 'pub' and 'live music event' (each n=1, 8%). More than two-thirds (n=9, 69%) of respondents reported that there was a sober person present to assist at the time of the last overdose. Almost one-third (n=4, 31%) reported receiving no immediate treatment at the time of the last overdose. The most frequently cited immediate treatment received was 'watched/monitored by friends' (n=6, 46%), followed by 'hospital emergency department' (n=3, 23%), 'GP' and 'drank water' (each n=2, 15%). These results were not significantly different from the 2016 findings.

A breakdown of this data is presented in Table 29.

Table 29: Overdosed on a depressant drug in the preceding 12 months – reported causes and circumstances, 2017

(%)	2017 n=13
Main drug*	
Alcohol	**77**
Benzodiazepines	**23**
Location of most recent overdose*	
Friend's home	**38**
Own home	**15**
Private party	**15**
Nightclub	**15**
Pub	**8**
Live music event/concert/festival	**8**
Sober person available to assist*	
Yes	**69**
No	**31**

Source: WA EDRS REU interviews, 2017
* Of those who had overdosed in past 12 months

The most commonly reported main symptom during the last depressant overdose in the preceding 12 months was losing consciousness/unable to be woken (n=7, 54%). This was followed by vomiting (n=4, 31%), supressed breathing and collapsing (each n=1, 8%). Among those who commented (n=13), the vast majority (n=12, 92%) reported experiencing secondary symptoms in addition to the main symptom, not significantly different from 72% in 2016. The most common secondary symptom was vomiting (n=6, 46%), followed by suppressed breathing and collapsing (each n=2, 15%) and then losing consciousness/unable to be woken, cold sweat, overheating, dizziness, and blackout (each n=1, 8%). These results were not significantly different from the 2016 findings.

A full breakdown of reported depressant overdose symptoms is presented in Table 30.

Table 30: Overdosed on a depressant drug in the preceding 12 months – reported symptoms, 2017

(%)	2017 n=13
Main symptom*	
Losing consciousness/unable to be woken	**54**
Vomiting	**31**
Suppressed breathing	**8**
Collapsing	**8**
Secondary symptoms*	
None	**8**
Vomiting	**46**
Collapsing	**15**
Suppressed breathing	**15**
Losing consciousness/unable to be woken	**8**
Cold sweat	**8**
Overheating	**8**
Dizziness	**8**
Blackout	**8**

Source: WA EDRS REU interviews, 2017

It must be emphasised that only a small number of participants are represented in these overdose samples. Therefore, these samples may not be representative of trends occurring within the general population of party drug users. It may also be important to note that the drugs that influence these overdoses may be more a reflection of the drug preferences of the sample than the various substances' relative potential to result in overdose.

6.2. Help-seeking behaviour

Participants were asked if they had accessed a service or health professional in relation to their drug use in the preceding six months (see Table 30). In the current sample, among those who responded (n=98), 14% (n=14) reported accessing a service in relation to drug use over this time period, not significantly different from 9% in 2016. The most frequently accessed service was medical tent (at a festival/rave) (6%). This was followed by GP (5%), emergency department and drug and alcohol counsellor (each 3%), psychiatrist and psychologist (each 2%) and social or welfare worker (1%).

Among those who commented (n=98), 89% (n=87) reported accessing health service or professional for any issue (including alcohol and/or drug support) in the preceding six months. The most commonly accessed professional was GP (n=69, 70%), followed by dentist (n=34, 35%), emergency department (n=21, 21%), psychologist (n=20, 20%), other health professional (e.g., chiropractor, physiotherapist, nurse (n=14, 14%), medical tent (n=12, 12%), hospital as inpatient and psychiatrist (each n=7, 7%), social or welfare worker (n=6, 6%) and drug and alcohol counsellor, hospital as outpatient, specialist doctor and ambulance attendance (each n=3, 3%).

A full breakdown of this data is presented in Table 31.

Table 31: Recently accessed a health service, 2017

Service (%)	For alcohol and/or drug support (n=98)	For any issue (including alcohol and/or drug support) (n=98)
None	**86**	**11**
Medical tent	**6**	**12**
Doctor (GP)	**5**	**70**
Emergency department	**3**	**21**
Drug and alcohol counsellor	**3**	**3**
Psychiatrist	**2**	**7**
Psychologist	**2**	**20**
Social welfare worker	**1**	**6**
Dentist	**0**	**35**
Hospital (inpatient)	**0**	**7**
Hospital (outpatient)	**0**	**3**
Specialist doctor	**0**	**3**
Ambulance attendance	**0**	**3**
Other health professional	**0**	**14**

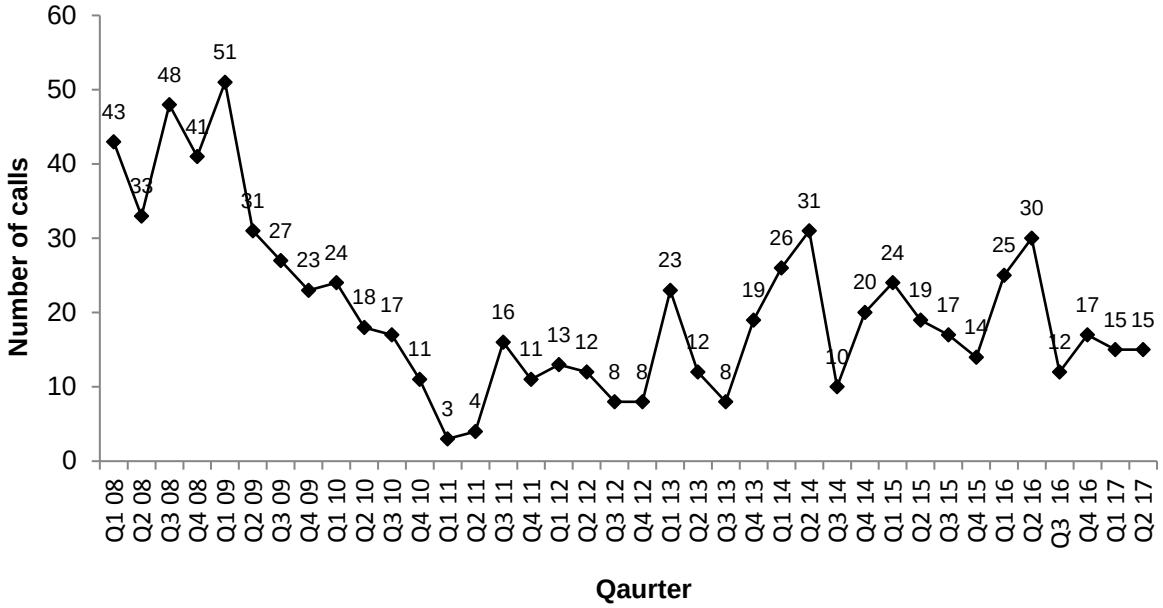
Source: WA EDRS REU interviews, 2017

6.2.1. Calls to ADIS in 2016/17

ADIS provides a free, anonymous and confidential telephone information and referral alcohol and other drug service in WA. As such, calls to ADIS provide a general indicator of the levels of use and concerns experienced by users of different drugs. During the 2016/17 period, ADIS received 20,731 calls, in comparison to 23,757 calls during the 2015/16 reporting period.

Calls to ADIS involving ecstasy as the primary drug of concern are presented by quarter in Figure 34. In the 2016/17 period, there were 59 calls to ADIS involving ecstasy as the primary drug of concern, compared to 86 calls in the 2015/16 period. These calls comprised 0.28% of all calls received by ADIS during the 2016/17 period. As evident in Figure 34, the proportion of calls where ecstasy was the main drug of concern has remained relatively low and stable since 2011.

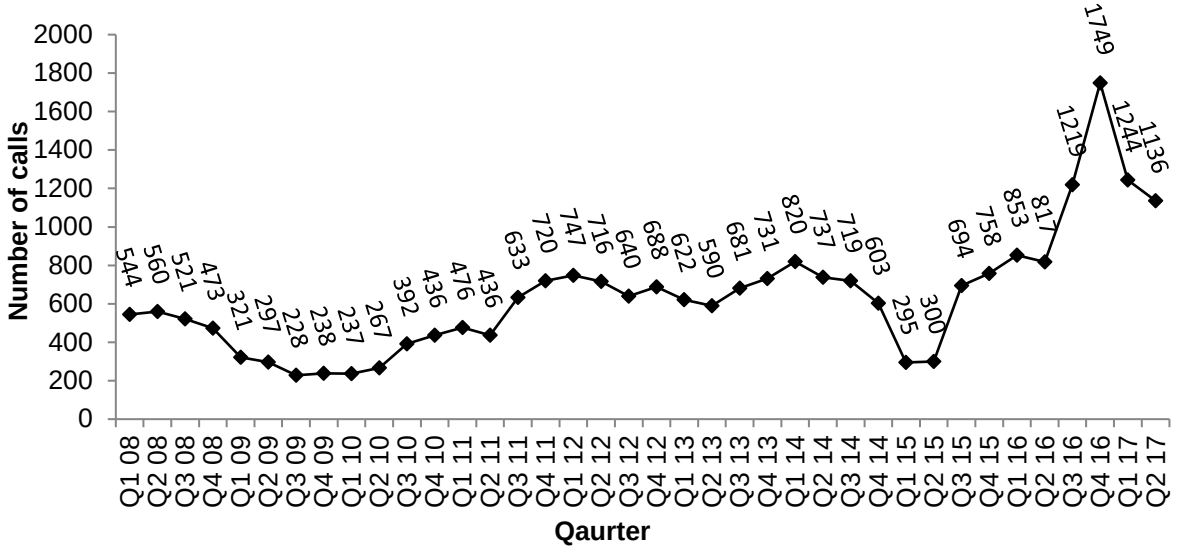
Figure 34: Number of ADIS inquiries concerning ecstasy as primary drug of concern, WA January 2008 to June 2017



Source: WA ADIS, 2017

In the 2016/17 period, there were a total of 5,348 calls to ADIS involving (meth)amphetamine as the primary drug of concern, an increase from 3,122 in 2015/16. These calls comprised 24.6% of all calls received by ADIS during the 2016/17 period. Calls to ADIS involving (meth)amphetamine as the primary drug of concern in 2016/17 are presented by quarter in Figure 35. The number of calls appears to be on an upward trend.

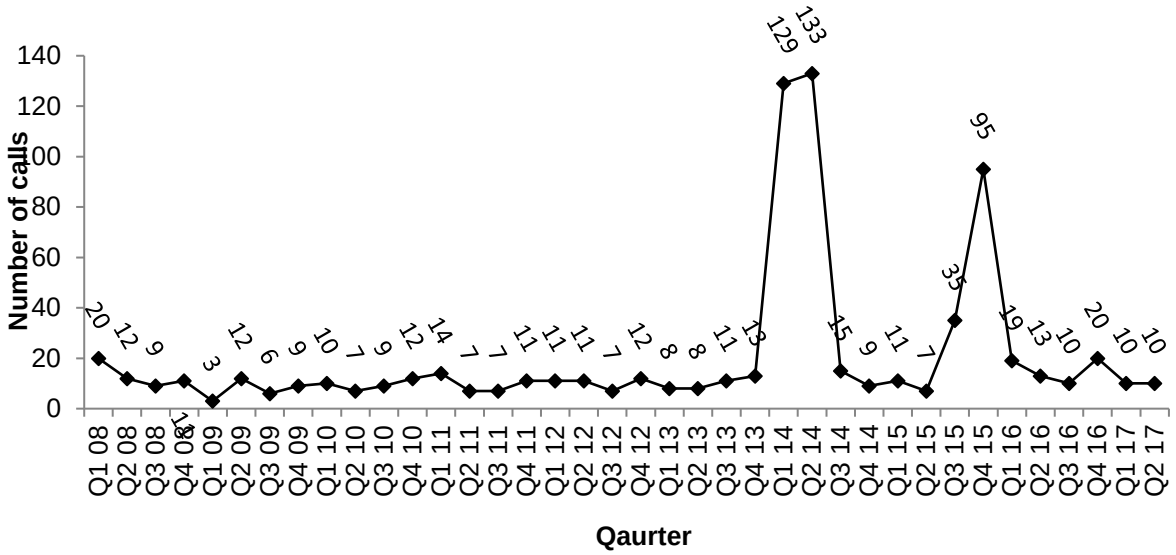
Figure 35: Number of ADIS inquiries concerning (meth)amphetamines as primary drug of concern, WA January 2008 to June 2017



Source: WA ADIS, 2017

In the 2016/17 period there were 50 calls to ADIS involving cocaine as the primary drug of concern, compared to 162 calls on 2015/16. These calls comprised 0.24% of all calls received by ADIS during 2016/17. Calls to ADIS involving cocaine as the primary drug of concern are presented by quarter in Figure 44. The steep increase in calls in the first and second quarter of 2014 and the fourth quarter of 2015 are accounted for by multiple calls from a single caller, rather than an overall increase in calls. As shown in Figure 36, excluding these increases, the number of calls to ADIS where cocaine was the primary drug of concern have been low and stable across survey years.

Figure 36: Number of ADIS inquiries concerning cocaine as primary drug of concern, WA January 2008 to June 2017



Source: WA ADIS, 2017

6.3. Mental health problems

6.3.1. Mental health problems and psychological distress (K10)

The K10 was administered to all participants. The K10 is a 10-item standardised measure that measures clinical levels of psychological distress based on the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV)/the Structured Clinical Interview for DSM disorders. It has been found to have sound psychometric properties (SCID; Andrews & Slade, 2001; Kessler, 2002).

The minimum score on the K10 is 10 (indicating no distress) and the maximum is 50 (indicating very high distress). Work conducted at the Clinical Research Unit for Anxiety Disorders found that those scoring 30 or more have 10 times the population risk of meeting criteria for an anxiety or depressive disorder.

The K10 was included in the EDRS for the first time in 2006. Participants' K10 score distribution in 2017 was not significantly different from the 2016 sample. The largest proportion of participants scored in the 'moderate distress' category (score of 16-21; 37%). This was followed by 'high distress' distress (score of 22-29; 27%), 'low to no' distress (score of 10-15, 24%), and then 'very high' distress (score of 30-50; 12%). Table 32 shows K10 scores among REU/RPU from 2012 to 2017.

Table 32: K10 scores, 2012-2017

Score category (%)	2012	2013	2014	2015	2016	**2017**
Low to no distress	40	31	34	32	33	**24**
Moderate distress	40	37	37	42	36	**37**
High distress	18	24	25	23	22	**27**
Very high distress	1	8	4	3	9	**12**

Source: WA EDRS REU/RPU interviews, 2012-2017

6.3.2. Self-reported mental problems and medication

Questions regarding mental health problems were included for the first time in the 2008 EDRS. Participants were asked whether they had experienced any mental health problems in the preceding six months, including those issues that they had and had not spoken to a health professional about.

Almost two-fifths (38%) of the sample reported experiencing a mental health problem in the preceding six months, not significantly different from 42% in 2016. The most frequently reported problem was anxiety (n=28, 74%), followed by depression (n=25, 66%). Among participants reporting a recent mental health problem, approximately three-fifths (n=23, 60%) reported attending a mental health professional in the preceding six months, not significantly different from 59% in 2016. A complete breakdown of reported mental health problems for 2016 and 2017 is presented in Table 33. There were no significant differences in the proportion of respondents who reported a particular mental health problem between 2016 and 2017.

Table 33: Recent mental health problems, 2016 and 2017

(%)	2016 N=100	**2017 N=100**
Recent mental health problem	42	**38**
Of those who reported a mental health problem		
Types of problems reported[#]	(n=42)	**(n=38)**
Anxiety	76	**74**
Depression	55	**66**
ADHD	2	**16**
OCD	2	**8**
Personality disorder	2	**8**
Paranoia	7	**5**
Drug induced psychosis	0	**5**
PTSD	0	**5**
Panic	5	**0**
Other[**]	14	**10**
Of those who reported a mental health problem	(n=42)	**(n=38)**
Attended a professional for the treatment of a mental health problem	59	**60**
Prescribed psych med*	36	**56**

Source: WA EDRS REU interviews, 2016 and 2017

[#] Participants could select multiple categories of problems allowing percentage totals to exceed 100

* Of those who attended a health professional

** Other reported mental health problems were: 'insomnia' (n=2), 'mood swings' and 'suicidal thoughts' (each n=1).

Of those participants who reported attending a mental health professional (n=23), more than half (n=13, 56%) reported being prescribed a medication in the last six months, not significantly different from 36% in 2016. The medications prescribed were anti-depressants (n=8, 61%), benzodiazepines (n=6, 46%) and anti-psychotics (n=2, 15%). Prescribed anti-depressants were Lexapro® (n=3, 43%), generic escitalopram (n=2, 27%), generic mirtazapine and generic sertraline (each n=1, 14%). Benzodiazepines were Valium® (n=3, 50%), Antenex®, generic diazepam and generic alprazolam (each n=1, 17%). The only prescribed antipsychotic was Seroquel® (n=2, 100%).

6.4. Summary of health-related trends

Overdose

- One-quarter (25%) of the sample reported having overdosed on a stimulant drug in their lifetime, not significantly different from 23% in 2016.
- One-fifth (20%) of the sample reported having overdosed on a stimulant drug in the past 12 months, not significantly different from 14% in 2016.
- Consistent with the 2016 findings, ecstasy was the most commonly implicated main drug in stimulant overdoses (74%).
- Less than one-fifth (18%) of the sample reported having overdosed on a depressant drug in their lifetime, not significantly different from 23% in 2016.
- Thirteen per cent of the sample reported having overdosed on a depressant drug in the past 12 months, not significantly different from 15% in 2016.
- Consistent with the 2016 findings, alcohol was the most commonly implicated main drug in depressant overdoses (77%).

Service usage

- More than one-tenth (14%) of the sample reported accessing a service or health professional in relation to their drug use in the preceding six months, not significantly different from 9% in 2016. The most commonly accessed service was medical tent (at a rave/festival) (6%).
- The majority (89%) of the sample reported accessing a service or health professional for any reason (including alcohol and/or drug support) in the preceding six months. The most commonly accessed health professional for any reason was GP (70%).
- The number of calls to ADIS concerning ecstasy remained low, with 59 calls made in the 2016/2017 period compared to 86 calls in 2015/16.
- There were 5,348 calls to ADIS involving methamphetamines as the primary drug of concern in 2015/16, in comparison to 3,122 in 2015/16. Calls regarding methamphetamines appear to be on an upward trend
- Calls to ADIS involving cocaine as the primary drug of concern have been low and stable across survey years.

Mental health

- Consistent with previous years, the largest proportion of participants scored within the ‘moderate distress’ category of the K10 (37%).
- Almost two-fifths (38%) of the sample reported experiencing a mental health problem in the preceding six months, not significantly different from 42% in 2017.
- Not significantly different from with 2016, the most commonly reported mental health problems were anxiety (74%) and depression (66%).
- Among participants reporting a mental health problem in the last six months, 60% reported having attended a mental health professional for treatment in that period, not significantly different from 59% in 2016.

7. RISK BEHAVIOURS

7.1. Injecting risk behaviours

As presented in Table 34, three participants (3%) reported having injected a drug in their lifetime, not significantly different from 2% in 2016. Just one participant (1%) reported having injected a drug in the last month, not significantly different from 2% in 2016.

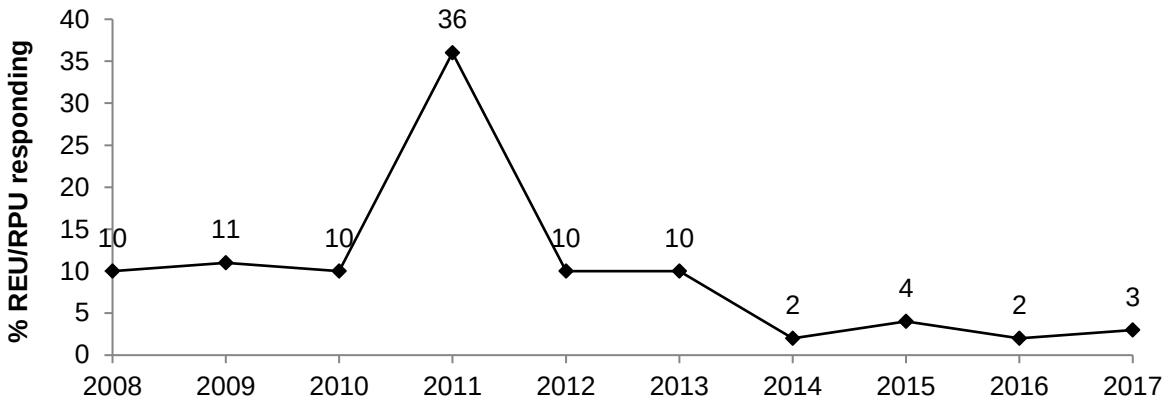
Table 34: Injecting risk behaviours, 2016 and 2017

(%)	2016 N=100	**2017 N=100**
Ever injected (%)	2	**3**
Injected in the last month (%)	2	**1**

Source: WA EDRS REU interviews, 2016 and 2017

As presented in Figure 37, with the exception of 2011 (which had a disproportionate representation, attributed to substantial difficulties during the recruitment process), the rate of lifetime injecting use among REU/RPU has been low across survey years. Rates declined in 2012 and again in 2014. Results from the present sample suggest that the downward trend seen in 2014 has been maintained in 2017.

Figure 37: Ever injected drugs, 2008-2017



Source: WA EDRS REU/RPU interviews, 2008-2017

7.1.1. Recent injectors

Given that only one participant reported recent injecting, further data on injecting are not presented in this report.

7.2. Sexual risk behaviour

Penetrative sex was defined as penetration by the penis or hand of the vagina or anus. Casual partner was defined as anyone that a participant had had penetrative sex with who was not a regular partner. Given the sensitive nature of these questions, participants were given the option of self-completing this section of the questionnaire.

7.2.1. Recent sexual activity

Participants were asked about the number of casual partners they had engaged in penetrative sex with in the preceding six months (see Table 35). Of the 99 participants who responded, almost three-quarters (n=73, 74%) reported engaging in casual penetrative sex with at least one person in the last six months, not significantly different from 62% in 2016. Among these participants, the most common number of casual partners in that time period was three to five (n=23, 31%), followed by two (n=22 22%), one (n=12,12%), six to ten (n=11, 11%) and more than ten (n=5, 5%). These findings were not significantly different from the 2016 results.

7.2.2. Protective barriers during sex while sober

Among participants reporting recent casual sexual activity (n=73), the majority (n=65, 89%) reported engaging in casual sexual activity while sober in the preceding six months. This equates to 66% of the overall sample, not significantly different from 57% in 2016. Among these participants, more than one-third (n=24, 37%) reported not having used a protective barrier (i.e. condoms or dams) on the last occasion, not significantly different from 43% in 2016. Participants reported various reasons as to why a barrier was not used. The most commonly reported reason was 'using the contraceptive pill/IUD' (n=11, 50%), followed by 'we agreed not to use' (n=5, 23%), 'I didn't wish to use' (n=3, 14%), 'it wasn't mentioned' (n=2, 9%) and 'both females' (n=1, 4%). These results were not significantly different from the 2016 findings.

Table 35: Recent sexual activity, 2016 and 2017

(%)	2016	**2017**
Number of casual sexual partners	(n=98)	**(n=99)**
No casual partner	38	**26**
1 person	18	**12**
2 people	17	**22**
3-5 people	21	**23**
6-10 people	5	**11**
More than 10	0	**5**
Use of protection during sex with casual partner while sober*	(n=56)	**(n=65)**
Yes	57	**63**
No	43	**37**

Source: WA EDRS REU interviews, 2016 and 2017
***** Of those who had penetrative sex while sober in the last 6 months

7.2.3. Casual sex while under the influence

Of those participants who had engaged in casual sex in the preceding six months (n=73), the majority (n=63, 86%) reported having done so while under the influence of alcohol or other drugs. This equates to 63% of the overall sample, not significantly different from 53% in 2016. Participants were asked how many times they had engaged in sex while under the influence of alcohol or other drugs in the preceding six months. The most common response was three to five times (n=27, 43%), followed by twice (n=14, 22%), more than ten times (n=8, 13%), and then once and six to ten times (each n=7, 11%).These proportions were not significantly different from the 2016 findings.

The drug most commonly reported to have been used on the last occasion of casual sex was alcohol (n=53, 84%), followed by ecstasy (n=43, 68%), cannabis (n=31, 49%), LD (n=8, 13%),

pharmaceutical stimulants (n=6, 9%) and nitrous oxide (n=5, 8%). These results were not significantly different from the 2016 findings.

7.2.4. Protective barriers during casual sex while under the influence

Among participants who reported recent casual sex while under the influence of drugs (n=63), just less than half (n=31, 49%) reported that they had not used a protective barrier on the last occasion, not significantly different from 43% in 2016. Among these participants, the most frequently reported reason for not using a protective barrier was 'using contraceptive pill/IUD' (n=10, 32%), followed by 'we agreed not to use' (n=6, 19%), 'lack of availability' and 'we were too intoxicated (each n=4, 13%), 'it wasn't mentioned' (n=3, 10%), 'I didn't wish to use' (n=2, 6%) and 'I knew the person' and 'both females' (each n=1, 3%).These results were not significantly different from the 2016 findings.

A breakdown of this data is presented in Table 36.

Table 36: Casual sex while under the influence, 2016 and 2017

(%)	2016 (n=98)	**2017 (n=99)**
Penetrative casual sex	62	**74**
Penetrative casual sex while on drugs[#]	85	**86**
Of those who had penetrative casual sex under the influence of drugs	(n=53)	**(n=63)**
Drug used		
Alcohol	75	**84**
Ecstasy	54	**68**
Cannabis	46	**49**
LSD	2	**13**
Pharmaceutical stimulants	8	**9**
Nitrous oxide	0	**8**
Benzodiazepines	0	**3**
Crystal methamphetamine	2	**3**
Cocaine	8	**3**
Ketamine	0	**3**
Mushrooms	4	**3**
Amyl Nitrate	0	**2**
Speed	0	**2**
Tobacco	4	**2**
Use of protection		
Yes	57	**51**
No	43	**49**

Source: WA EDRS REU interviews, 2016 and 2017

[#] Of those who had engaged in casual sex in the last six months

* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

7.2.5. Sexual health check-ups and sexually transmitted infections

Participants were asked if they had ever had a sexual health check-up, including a swab, urine test or blood test, and whether they had ever been diagnosed with an STI. Among those who

commented (n=94), almost three-fifths (n=55, 59%) reported having ever had a sexual health check-up, not significantly different from 53% in 2016. Almost half (n=43, 46%) reported having had one in the last year and 13% (n=12) reported having had one more than a year ago. Just more than two-fifths the respondents (42%) reported that they had never having had a sexual health check-up, not significantly different from 47% in 2016.

Of those who commented (n=93), the majority (n=82, 88%) reported never having been diagnosed with an STI, not significantly different from 84% in 2016. Among those who reported having been diagnosed with an STI (n=11), less than half (n=5, 45%) reported being diagnosed within the last year and the remaining 55% (n=6) reported being diagnosed more than a year ago.

7.3. Driving risk behaviour

WA EDRS participants were asked a series of questions regarding their driving behaviour. In 2017, the majority of the sample (89%) reported having driven a car in the last six months, not significantly different from 82% in 2016. Of these respondents, almost two-fifths (n=33, 38%) reported that they had driven while over the legal alcohol limit in that time period, not significantly different from 49% in 2016. Almost three fifths of these respondents (n=51, 57%) reported having driven within three hours of taking an illicit drug in the preceding six months, not significantly different from 65% in 2016.

A complete breakdown of this data across survey years is presented in Table 38.

Table 37: Drug driving in the preceding six months, 2009-2017

(%)	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2015 N=100	2016 N=100	**2017 N=100**
Driven a car in last 6 months	80	84	61	91	82	87	82	**89**
Driven while over the limit of alcohol[#]	75	73	77	52	37	44	49	**38**
Driven soon after taking a drug[#]	75	58	53	55	66	68	65	**57**

Source: WA EDRS REU/RPU interviews, 2009-2017
[#] Of those who had driven a car in the last 6 months

7.4. Bingeing behaviour

Bingeing is defined as the use of any stimulants or related drugs for 48 hours or more continuously without sleep. Less than one-third (29%) of the current sample reported bingeing on ERD in the preceding six months, not significantly different from 30% in 2016. Recent bingeing occurred on a median of two occasions (range 1-48) in that time period, not significantly different from 2.5 occasions in 2016. The median length of the longest recent binge was 72 hours (i.e. approximately three days; range 48-168 hours), not significantly different from 58 hours (i.e. approximately two and half days) in 2016.

The drugs most commonly implicated in recent bingeing were ecstasy (n=24, 88%), alcohol (n=21, 72%; 10% <5 standard drinks and 62% >5 standard drinks), cannabis (n=18, 62%) tobacco (n=17, 59%), pharmaceutical stimulants (n=10, 34%), energy drinks (n=7, 21%), LSD (n=8, 27%) and nitrous oxide (each n=6, 21%), cocaine, crystal methamphetamine and benzodiazepines (each n=2, 7%), and mushrooms, ketamine, speed, over-the-counter codeine, DMT and 5-MeO-DIPT (each n=1, 3%). These results were not significantly different from the 2016 findings.

A complete breakdown of this data is presented in Table 38.

Table 38: Bingeing behaviour, 2016 and 2017

(%)	2016 N=100	**2017 N=100**
Recent binge	30	**29**
Median amount of recent binges*	2.5 (1-24)	**2 (1-48)**
Median length of longest binge* (hours)	58 (48-131)	**72 (48-168)**
Drugs implicated in binge*	(n=30)	**(n=29)**
Ecstasy	77	**83**
Alcohol (>5 standard drinks)	67	**62**
Alcohol (<5 standard drinks)	3	**10**
Cannabis	50	**62**
Tobacco	60	**59**
Pharmaceutical stimulants	47	**34**
Energy drinks	10	**24**
LSD	27	**21**
Nitrous oxide	10	**21**
Cocaine	30	**10**
Crystal methamphetamine	20	**7**
Benzodiazepines	7	**7**
MDA	0	**7**
Mushrooms	10	**3**
Ketamine	7	**3**
Speed	3	**3**
OTC codeine	3	**3**
DMT	3	**3**
5-MeO-DIPT	0	**3**
NBOMe	3	**0**
Other**	10	**3**

Source: WA EDRS REU interviews, 2016 and 2017
***** Of those who had binged on ERD in the last six months
** Other drugs were: 'heroin' 'other opiates' and 'MD' for 2016 and 'PCP' for 2017

7.5. Poly drug use

For the first time in 2016, participants were asked which (if any) drugs they had used concurrently on the last occasion of any psychostimulant drug use. The vast majority (93%) of the sample reported using at least one concurrent drug, the same proportion reported in 2016. The drug most commonly used in this context was alcohol (76%; 58% >5 standard drinks and 18% <5 standard drinks), followed by ecstasy (73%), tobacco (58%), cannabis (48%), and pharmaceutical stimulants (16%). These findings were not significantly different from the 2016 results.

A full breakdown of these results is shown in Table 39.

Table 39: Poly drug use, 2016 and 2017

(%)	2016 N=100	**2017 n=99**
Drugs used on last occasion of psychostimulant use		
No other drugs	7	**7**
Alcohol (>5 standard drinks)	56	**58**
Alcohol (<5 standard drinks)	15	**18**
Ecstasy	81	**73**
Tobacco	47	**58**
Cannabis	51	**48**
Pharmaceutical stimulants	18	**16**
Energy drinks	6	**9**
Cocaine	10	**8**
Nitrous oxide	4	**8**
Benzodiazepines	4	**7**
LSD	4	**5**
Ketamine	5	**3**
Crystal methamphetamine	5	**2**
DMT	2	**1**
5-MeO-DIPT	0	**1**
Speed	1	**1**
Mushrooms	1	**1**
NBOMe	1	**0**
Amyl nitrate	1	**0**
GHB	1	**0**
Other*	4	**2**

Source: WA EDRS REU interviews, 2016 and 2017
*Other drugs were: other opiates and heroin, MD for 2016 and codeine and PCP for 2017.

7.6. The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT was designed by the WHO as a brief screening tool to identify individuals with alcohol problems, including those in the early stages (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). It is a 10-item scale, designed to assess three conceptual domains: alcohol intake; dependence; and adverse consequences (Reinert & Allen, 2002). Total scores of eight or more are recommended as indicators of hazardous and harmful alcohol use and may also indicate alcohol dependence (Babor, de la Fluente, Saunders, & Grant, 1992). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor & Higgins-Biddle, 2000).

Table 40 shows AUDIT data from the 2016 and 2017 WA EDRS samples. Ninety-nine EDRS participants completed the AUDIT in 2017. The mean AUDIT score in 2017 was 11.96 (range 0-30), not significantly different from 12.58 in 2016. The majority of the respondents in 2017

(n=85, 86%) scored equal to or greater than the cut-off of eight, indicating hazardous drinking, not significantly different from 77% in 2016.

The total AUDIT scores place participants into one of four 'zones' or risk levels. In the 2017 sample, 14% scored in Zone 1 (AUDIT score 0-7; low-risk drinking or abstinence), 65% scored in Zone 2 (AUDIT score 8-15; risky/hazardous drinking), 12% scored in Zone 3 (AUDIT score 16-19; high risk/harmful drinking) and 9% scored in Zone 4 (AUDIT score 20 or more; high likelihood of alcohol dependence). A significantly larger proportion of participants in the current sample (64%) scored in Zone 2 (risky/hazardous drinking) compared to 2016 (47%). In 2016 males had significantly higher mean AUDIT scores than females, implicating males as being more likely to exhibit hazardous drinking behaviour than females. Conversely, in 2017 there was no significant difference in mean AUDIT scores between males and females.

Table 40: AUDIT scores, 2016 and 2017

	2016 (n=97)	**2017 (n=99)**
Mean AUDIT score	12.58	**11.96**
(range)	(0-36)	**(0-30)**
Males (range)	13.72 (0-36)	**12.26 (0-30)**
Females (range)	10.17 (0-24)	**11.37 (0-21)**
Score 8 or above (%)	77	**86**
Zone 1 (%)	23	**14**
Zone 2 (%)	47	**65***
Zone 3 (%)	16	**12**
Zone 4 (%)	14	**9**

Source: WA EDRS REU interviews, 2016 and 2017
* Indicates significant changes from the 2016 results according to 95%CI and $p<0.05$

7.7. Ecstasy and methamphetamine dependence

The question as to whether it is possible to be dependent on ecstasy is a controversial one. Currently, according to the DSM-5, it is possible to be diagnosed with ecstasy dependence (coded as either amphetamine dependence or hallucinogen dependence), and there are clear case studies in the literature of people who are dependent on ecstasy. Animal models have demonstrated that dependence on ecstasy is biologically plausible and Topp, Hall and Hando (1997) found that 64% of a sample of regular ecstasy users met diagnostic criteria for ecstasy dependence.

Since 2012, all participants in the EDRS have been asked questions from the Severity of Dependence scale (SDS) regarding their ecstasy use. For the first time in 2015, all EDRS participants reporting recent use of methamphetamine were also administered the SDS regarding their 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 is created by summing responses to each of the five questions. Possible scores range from 0 to 15. A cut-off score of four is used to determine those whose scores were suggestive of dependence (Bruno, Gomez & Matthews, 2011).

7.7.1. Ecstasy dependence

As presented in Table 41, in 2017, 22% of the sample reached the SDS cut-off score of four or more, suggesting ecstasy dependence, the same proportion reported in 2016. Among participants who reached the SDS cut-off score (n=22), there was a significantly larger proportion of males (n=15, 68%) than females (n=7, 32%).

Table 41: Ecstasy dependence, 2012-2017

(%)	2012 N=90	2013 N=100	2014 N=69	2015 N=100	2016 N=100	**2017 N=100**
Ecstasy SDS score						
Zero to three (below dependency cut off)	96	87	80	79	78	**78**
Four or more (dependency cut off)	4	13	20	21	22	**22**
Gender*	(n=4)	(n=13)	(n=14)	(n=21)	(n=22)	**(n=22)**
Male	0	46	57	62	60	**68**
Female	100	54	43	38	40	**32**

Source: WA EDRS REU/RPU interviews, 2012-2017
***** Of those with score of four or more (dependency cut-off)

Less than two-thirds (63%) of the respondents in 2017 reported that they never/almost never thought their use of ecstasy was out of control, not significantly different from 59% in 2016. Less than three-quarters (72%) reported that they never or almost never wished they could stop, not significantly different from 77% in 2016. More than three-quarters (77%) reported that they would not find it difficult to stop or go without ecstasy, not significantly different from 81% in 2016.

7.7.2. Methamphetamine dependence

Eight participants answered the SDS questions in regard to their methamphetamine use. As presented in Table 42, 50% (n=4) of these participants reached the SDS cut off score of four or more, suggesting methamphetamine dependence. This was not significantly different to 35% in 2016. Among participants who reached the SDS cut off score (n=4), all (100%) participants were male, not significantly different to 57% in 2016. These comparisons should be interpreted with caution given the small number of participants who commented.

Table 42: Methamphetamine dependence, 2016 and 2017

(%)	2016 n=20	**2017 n=8**
Methamphetamine SDS score		
Zero to three (below dependency cut off)	65	**50^**
Four or more (dependency cut off)	35	**50^**
Gender*	(n=7)	**(n=4)**
Male	57^	**100^**
Female	43^	**0^**

Source: WA EDRS REU interviews, 2016 and 2017
***** Of those with score of four or more (dependency cut-off)
^ n<10. Results should be interpreted with caution.

Among participants who answered the SDS questions regarding their methamphetamine use (n=9), half (n=4, 50%) reported that they had never/almost never thought their use of methamphetamine was out of control. The majority (n=7, 87%) reported they had never/almost never wished they could stop and three-quarters (n=6, 75%) reported that they would not find it difficult to stop or go without methamphetamine.

Findings based on the methamphetamine SDS in the current sample should be interpreted with caution due to the small number of participants who completed the measure in 2017. No further analyses were performed due to the small sample of respondents.

7.8. Summary of risk behaviours

Injecting risk behaviour

- Consistent with the 2016 results, 3% of the sample reported injecting a drug in their lifetime and 1% reported injecting in the last month.

Sexual risk behaviour

- Penetrative sex with a casual partner in preceding six months was reported by almost three-quarters (74%) of respondents.
- More than three-fifths (63%) reported engaging in casual sex while under the influence of drugs, not significantly different from 53% in 2016. The most commonly used drug on the last occasion was alcohol (84%) followed by ecstasy (68%).
- Among participants who had engaged in casual sex under the influence of drugs, 49% reported that they had not used a protective barrier on the last occasion, not significantly different from 43% in 2016. Not significantly different from the 2016 results, almost three-fifths (59%) of respondents reported ever having had a sexual health check-up, with 46% reporting having had one in the last year.

Driving risk behaviour

- Among participants who reported recent driving, 38% reported driving over the legal limit for alcohol in that time period, not significantly different to 49% in 2016.
- Among recent drivers, 57% reported driving within three hours of illicit drug use in the preceding six months, not significantly different from 65% in 2016.

Bingeing behaviour

- Recent bingeing on an ERD was reported by less than one-third (29%) of the sample, not significantly different from 30% in 2016.
- Consistent with the 2016 findings, the drugs most commonly implicated in bingeing were ecstasy (88%), alcohol (72%) and cannabis (62%).

Alcohol risk behaviour

- The majority (86%) of respondents fell in the hazardous or harmful drinking range on the AUDIT, not significantly different from 77% in 2016.
- There was no significant difference in mean AUDIT scores between males and females.

Ecstasy and methamphetamine dependence

- Just more than one-fifth (22%) of respondents who reported recent ecstasy use (n=100) reached the SDS cut-off suggesting ecstasy dependence, the same proportion reported in 2016.
- Among recent methamphetamine users (n=8), 50% reached the SDS cut-off score, suggesting methamphetamine dependence, not significantly different from 35% in 2016.

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

8.1. Reports of criminal activity among REU/RPU

Table 43 presents the proportion of REU/RPU reporting criminal activity in the month preceding the interview since 2008. In 2017, almost half (48%) sample reported engaging in criminal activity in the past month, not significantly different from 45% in 2016. This is the largest proportion reported since WA EDRS data collection began in 2003. Aligned with the 2016 results, the most commonly reported crime in this period was drug dealing, reported by 41% of respondents. Thirteen per cent of participants reported engaging in property crime in the last month, not significantly different from 8% in 2016. Consistent with previous years, only a very small number of participants reported engaging in fraud (1%) and violent crime (2%).

Of those who reported drug dealing in the past month (n=41), more than half (n=23, 56%) reported doing so less than once a week in that time period. A further 17% (n=7) reported doing so once a week and 22% (n=9) reported doing so more than once a week (but less than daily. A further 5% (n=2) reported doing so daily. These results were not significantly different from the 2016 findings.

Among participants who reported engaging in property crime in the last month (n=13), just more than three-fifths (n=8, 61%) reported doing so less than once a week, 8% (n=1) reported doing so once a week and 31% (n=4) reported doing so more than once a week (but less than daily) in that time period. These results were not significantly different from the 2016 finding but should be interpreted with caution given the small number of participants able to comment in 2016.

The one participant who reported engaging in fraud in the preceding month reported doing so less than once a week in that time period. Finally, among those participants who reported engaging in violent crime in the past month (n=2) all (100%) reported doing so less than once a week in that time period. Comparisons with the 2016 sample were not made due to the small number of participants able to comment.

In 2017, 8% of the sample reported being arrested in the preceding 12 months, not significantly different from 7% in 2016. The most common reason for arrest was property crime (n=4, 50%), public order (drunk and disorderly) (n=2, 25%) and then hit and run, breach of supervised release order and other driving offense (each n=1, 12%). These results were not significantly different from the 2016 findings but should be interpreted with caution given the small number of participants able to comment.

Table 43: Criminal activity in the past month, 2008-2017

Criminal activity in the last month	2008 N=58	2009 N=100	2010 N=100	2011 N=28	2012 N=90	2013 N=100	2014 N=100	2015 N=100	2016 N=100	**2017 N=100**
Any crime (%)	31	38	35	39	29	42	40	45	45	**48**
Drug dealing (%)	24	32	24	21	18	25	33	38	42	**41**
Property crime (%)	7	6	13	11	16	25	11	11	8	**13**
Fraud (%)	2	0	2	7	2	2	5	4	2	**1**
Violent crime (%)	3	3	3	7	1	3	5	3	3	**2**
Arrested last 12 months (%)	5	19	13	18	11	13	12	6	7	**8**

Source: WA EDRS REU/RPU interviews, 2008-2017

8.2. Summary of law enforcement-related trends

- Almost half (48%) of the sample reported engaging in criminal activity in the past month, not significantly different from 45% in 2016. This is the largest proportion reported since the beginning of the WAS EDRS
- Among participants reporting criminal activity, the largest proportion reported engaging in drug dealing (41%), followed by property crime (13%), violent crime (2%) and fraud (1%). These findings were not significantly different from the 2016 results.
- Less than one-tenth (8%) of the sample reported being arrested in the preceding 12 months, not significantly different to 7% in 2016.

9. GENERAL TRENDS

Participants were asked what proportion of their friends had used ecstasy in the preceding six months. Not significantly different from the 2016 results, the most common response was ‘most’ (56%), followed by ‘about half’ (20%), ‘all’ (15%) and then ‘a few’ (9%).

Participants were also asked if there was anything new happening in drug use among themselves or their friends in the preceding six months. Two-fifths (40%) reported that there was, not significantly different to 52% in 2016. Among these participants, almost three-fifths (n=22, 58%) reported that there was an ‘increase in drug use by some types of users’, 18% (n=7) reported that there were ‘new drug types’ and 29% (n=11) reported an ‘other’ trend.

Among those who commented on current drug trends, a small number of participants (n=5, 12%) reported an increase in drug use in general, with a smaller proportion indicating decreasing general drug use (n=3, 7%). Smaller proportions of participants reported that new people were beginning to take drugs, people were experimenting with different drugs (each n=2, 5%) and there was an increase in younger drug users (n=1, 2%).

Comments made in relation to ecstasy were that the purity of ecstasy pills was currently low and that ecstasy use was increasing (each n=2, 5%). Additional comments were that pills sold as ecstasy are actually NBOMe, that ecstasy pills contain speed, that there was an increase in the use of ecstasy crystal/MDMA rock, that ecstasy use was becoming more socially acceptable, and that there was an increase in ‘parachuting’ as an ROA; wrapping up crushed pills in paper and swallowing the paper (each n=1, 2%).

Regarding drugs other than ecstasy, participants made comments about an increase in nitrous oxide use recently (n=5, 12%), as well as increased use of DMT and cocaine (each n=2, 5%) and ketamine, LSD, methamphetamine, Lyrica® and cannabis (each n=1, 2%). One additional participant reported that LSD sold on the Perth market is actually NBOMe, and another participant commented the 2C-B is currently considered ‘the perfect party drug’, and that it was difficult to obtain currently.

Finally, three participants commented on new types of drugs. One participant commented that there were more NPS on the market recently. Other comments were that there was a new liquid form of LSD on the market that was high in purity and that a new type of DMT in crystal form had emerged on the market (each n=1, 2%).

A full breakdown of these results is shown in Table 44.

Table 44: New issues reported, 2017

(%)	2017 n=40
Themes	
Increase in drug use by some types of users	**58**
Different types of users	**18**
Other	**29**
General drug use	**(n=40)**
Increased overall drug use	**12**
Decreased overall drug use	**7**
New people beginning to take drugs	**5**
Experimenting with different drugs	**5**
Increased younger drug users	**2**
Ecstasy	
Ecstasy pills are low purity	**5**
Increased use of ecstasy	**5**
Pills sold as ecstasy are actually NBOMe	**2**
Ecstasy pills contain speed	**2**
Increased prevalence of ecstasy crystal	**2**
Ecstasy use becoming more socially acceptable	**2**
Increased use of 'parachuting' as an ROA	**2**
Other drug use	
Increased use of nitrous oxide	**12**
Increased use of DMT	**5**
Increase use of cocaine	**5**
Increased use of ketamine	**2**
Increased use of LSD	**2**
Increased use of methamphetamine	**2**
Increased use of Lyrica®	**2**
Increased use of cannabis	**2**
Tabs sold as LSD are actually NBOMe	**2**
2C-B considered the 'perfect party drug'	**2**
New drug types	
More NPS drugs on the market	**2**
Liquid LSD on the market	**2**
New type of DMT (crystal)	**2**

Source: WA EDRS REU interviews, 2017

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