

**Arthur Truong, Paul Dietze & Belinda Lloyd**

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

**Australian Drug Trends Series No. 157**



# **VICTORIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2015**



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**Arthur Truong, Paul Dietze and Belinda Lloyd**

**Burnet Institute**

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## ABBREVIATIONS

2C-B	4-bromo-2,5-dimethoxyphenethylamine
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AIHW	Australian Institute of Health and Welfare
ATSI	Aboriginal and/or Torres Strait Islander
AUDIT	Alcohol Use Disorders Identification Test
BZP	1-Benzylpiperazine(s)
CE	Cognitive enhancing substance
DMT	Dimethyl tryptamine
EDRS	Ecstasy and related Drugs Reporting System
NPS	New psychoactive substances
ERD	Ecstasy and related drugs
GHB	Gamma-hydroxybutyrate
HPV	Human papilloma virus
IDRS	Illicit Drug Reporting System
K10	Kessler Psychological Distress Scale (10-item)
KE	Key expert(s)
LSD	<i>d</i> -lysergic acid
MDA	3,4-methylenedioxyamphetamine
MDMA	3,4-methylenedioxymethamphetamine
MXE	Methoxetamine
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NHMD	National Hospital Morbidity Database
NPS	New psychoactive substances
REU	Regular ecstasy user(s)
RPU	Regular psychostimulant user(s)
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
STI	Sexually transmitted infection(s)
WHO	World Health Organization

## GLOSSARY OF TERMS

Binge	Use of alcohol and other drugs for 48 hours or more without sleep
Bump	An unfixed quantity, often referring to a small mound (e.g., on the corner of a plastic card or on the end of a key) that is snorted.
Illicit	In the EDRS context, illicit use of pharmaceutical drugs refers to those obtained with a prescription in someone else's name, either drugs purchased from a street dealer or obtained from a friend or partner
Key expert(s)	Also referred to as KE; participants of the Key Expert Survey component of the EDRS (see <i>Method</i> section for further details)
Licit	In the EDRS context, licit use of pharmaceutical drugs refers to those obtained with a prescription in the participant's name. This definition does not account for 'doctor shopping' practices; however, it differentiates between prescribed pharmaceuticals and those obtained without a prescription, e.g., drugs purchased from a street dealer or obtained from a friend or partner
Lifetime use	Use on at least one occasion in the participant's lifetime via one or more of the following routes of administration: injecting, shelving/shafting, smoking, snorting and swallowing.
Point	0.1 gram
Recent use	Use in the six months preceding interview via one or more of the following routes of administration: injecting, shelving/shafting (rectal), smoking, snorting and swallowing.
Tab	A small piece of blotting paper containing a drop of LSD ( <i>α</i> -lysergic acid) that is typically consumed orally.

## EXECUTIVE SUMMARY

This report presents the results from the thirteenth year of the Ecstasy and Related Drugs Reporting System (EDRS), a study monitoring ecstasy and related drug (ERD) use and market trends in Melbourne, Victoria. It includes key findings from interviews with 100 regular psychostimulant users (RPU), key expert (KE) interviews and external indicator data. The 2015 EDRS Project was supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund.

### Demographic characteristics of RPU

The mean age of participants interviewed as part of the 2015 RPU sample was 24 (slightly younger than in 2014). Other demographic characteristics were consistent with those measured in 2014; RPU interviewed in 2015 were typically heterosexual, well educated, from an English-speaking background, and few reported being in drug treatment. The proportion of RPU who were currently in full-time employment (14%) was the smallest ever recorded in the Victorian EDRS, and this was reflected in the lower mean income per week (\$446) for the 2015 sample.

### Patterns of drug use among RPU

In addition to ecstasy, most RPU in 2015 reported having recently used alcohol, tobacco and cannabis, unchanged from 2014. The prevalence of reported recent use of psilocybin mushrooms was significantly higher in 2015 than 2014 (40% vs. 24%,  $p < 0.05$ ) while the prevalences of recent use of crystal methamphetamine (19% vs. 34%,  $p < 0.05$ ) and benzodiazepines (34% vs. 59%,  $p < 0.05$ ) were significantly lower.

### Ecstasy

Similar to previous years, the 2015 RPU sample reported first using ecstasy regularly at a mean age of 18 years, swallowing a median of two pills in a 'typical' episode of use and commonly using other drugs in conjunction with ecstasy (95%). In 2015, 25% of RPU reported ecstasy as their 'favourite' drug – a significantly smaller proportion than in 2014 (44%,  $p < 0.05$ ) but comparable with 2013 (26%). A significantly larger proportion of RPU reported 'rave/dance party' (includes bush doofs) as their location of most recent ecstasy use than in 2014 (24% vs. 4%,  $p < 0.05$ ); the proportion in 2015 is also the largest ever recorded in the Victorian EDRS. The price of one ecstasy pill remained stable at \$25. The proportion of RPU reporting 'low' ecstasy purity (8% vs. 17% in 2014) continues to decline, with larger proportions reporting 'high' or 'fluctuating' purity in 2015. A significantly higher percentage of RPU reported that ecstasy was 'very easy' to obtain in 2015 than in 2014 (62% vs. 46%,  $p < 0.05$ ), and the proportion of RPU who reported that availability was 'stable' was also higher (73% vs. 58%,  $p < 0.05$ ). Consistent with previous years, most RPU interviewed in 2015 most commonly reported obtaining ecstasy from friends (58%) at a friend's home (30%) or at a nightclub (17%) on the last occasion.

Victoria Police Forensic Services Department's analyses of ecstasy seizures show that the average purity increased from 23% in the 2013/2014 financial year to 29% in 2014/2015, similar to the average in 2013 (30%).

### Methamphetamine

RPU were asked about different forms of methamphetamine: speed, crystal methamphetamine and methamphetamine base.

There appeared to be less speed use in 2015. RPU reported using a median of 0.2 gram of speed in a typical 'session' of use (vs 0.4 gram in 2014). Similarly, participants reported using speed on a median of two days compared to four days in 2014. RPU reported typically paying \$200 per gram of speed in 2015, unchanged from the previous five years. Consistent with 2014, most participants perceived the purity of speed to be medium (46%). The majority (72%) of the 2015 EDRS sample reported that speed was either 'easy' or 'very easy' to obtain and that this had remained 'stable' (58%) in the six months preceding their interview. Participants reported that on the last occasion of use they most commonly obtained speed from friends (79%) from a private home or their friend's home (43%), and last used it at a nightclub (50%).

In 2015, participants reported using a median of one and a half points of crystal methamphetamine in a typical 'session', slightly less than 2014 (two points). The median reported days of use of crystal methamphetamine in the preceding six months increased from eight days to 10 days in 2015. The

most commonly reported route of administration for crystal methamphetamine among RPU was smoking (84%). The median reported price per point of crystal methamphetamine was \$50, a decrease from 2014 (\$70). In 2015, participants generally reported crystal methamphetamine purity as high (43%) or fluctuating (36%), and either 'easy' or 'very easy' (94%) to obtain in the six months preceding their interview. RPU reported that on their last episode of use they most commonly purchased crystal methamphetamine from a friend (66%), at their friend's home (60%) and used it at their own home (44%).

Only five participants of the 2015 Victorian EDRS sample reported recent use of methamphetamine base and only one was able to respond to questions about price, purity and availability.

KE reported that methamphetamine use has remained stable and is most commonly in crystal form. Most KE included crystal methamphetamine as one of the drugs that they currently consider as most problematic due to its association with aggressive and violent behaviour, health risks and the lack of pharmacotherapy.

Victoria Police Forensic Services Department's analyses of methamphetamine seizures show that the average purity increased from 67% in the 2013/2014 financial year to 75% in 2014/2015.

## **Cocaine**

In 2015, participants reported using a median of 0.3 gram of cocaine in a typical 'session' of use, less than the median in 2014 (one gram), though similar with the median figure reported in 2013 (0.5 gram). RPU reported using cocaine on a median of two and a half days in 2015 and almost all recent users reported snorting it (98%). The median reported price of a gram of cocaine in 2015 was \$300, consistent from 2013 and 2014. Of the recent cocaine users who were able to comment, equal proportions reported that they perceived current cocaine purity to be low and high (47%). In 2015, the majority of participants reported that cocaine was either 'easy' or 'very easy' (74%) to obtain (vs. 54% in 2014). On the last episode of use, RPU reported most commonly obtaining cocaine from a friend (40%) or a known dealer (40%) at a friend's home (20%), dealer's home (20%) or at an 'agreed public location' (20%), and used it at a nightclub (36%).

Victoria Police Forensic Services Department's analyses of cocaine seizures during the 2014/2015 financial year show that the average purity was 50%, slightly higher than in 2013/2014 (44%).

## **Ketamine**

In 2015, smaller proportions of RPU reported lifetime (73% vs. 82% in 2014) and recent (50% vs. 63% in 2014) use of ketamine. Ketamine was used by RPU on a median of four days in the preceding six months in 2015, similar to 2014 (three days). Participants reported using a median of one bump of ketamine during a typical 'session' of use. The median price per gram of ketamine remains consistent with previous years at \$200. Of the participants who were able to comment, the majority perceived current ketamine purity to be high (63%) and 21 per cent noted that it was fluctuating. A higher percentage of RPU reported that ketamine was 'very easy' to obtain in 2015 than in 2014 (9%), however, a smaller proportion reported that it was 'easy' to obtain (35% vs. 43% in 2014). Most RPU reported last obtaining ketamine from a friend (44%), at a friend's home (24%), and last used it at a nightclub (40%).

## **Gamma-hydroxy-butyrate (GHB)**

The proportion of participants reporting recent use (9%) of GHB in 2015 was smaller than 2014 and 2013 (13% and 14% respectively). RPU reported recent GHB use on a median of three days in the preceding six months, a notable decrease from 2014 (10 days). The median quantity used in a typical 'session' also decreased from 5.5ml to 4.25ml in 2015. Only two participants of the 2015 Victorian EDRS sample were able to respond to questions about the price, purity and availability of GHB, precluding in-depth analysis.

## **LSD**

Recent users of LSD reported irregular use of the drug on a median of three days in the preceding six months in 2015 and typically using one tab, comparable to the median figure reported in previous years. The median reported price per tab was \$15 in 2015, unchanged among the EDRS samples since 2011. Eighty-one per cent of recent LSD users described the purity of LSD as medium or high, and the proportion reporting that LSD was 'very easy' decreased from 32% in 2014 to 15% in 2015 with 39% reporting that it was 'difficult' to obtain. On the last occasion of use, RPU typically sourced

LSD from a friend (60%), at their friend's home (29%), and a significantly larger proportion reported last using it at a 'rave/dance party' (43% vs. 17% in 2014,  $p<0.05$ ).

## **Cannabis**

Reports of recent cannabis use were common among RPU in 2015 (90%). Participants reported using cannabis on a median of 65 days which was substantially more than the median of 14 days reported by RPU in 2014 with almost all (99%) recent users reporting smoking it. RPU reported typically paying \$15 for a gram of hydroponic cannabis and \$10 for a gram of bush cannabis and most noted that potency was either medium or high for both hydroponic (92%) and bush cannabis (76%). A significantly larger proportion reported that the potency of bush cannabis had remained stable in 2015 than in 2014 (85% vs. 55% respectively,  $p<0.05$ ). Most participants also reported that both forms of cannabis were 'easy' or 'very easy' to obtain (84% for hydroponic – 74% for bush).

## **Alcohol**

As in previous years, all of the Victorian EDRS participants interviewed in 2015 reported lifetime use of alcohol, initiating drinking at a median age of 14 years, while 96% reported use in the preceding six months. This group of RPU reported drinking on a median of 32.5 days, the lowest median ever recorded for the Victorian EDRS. A similar proportion reported drinking alcohol on the last occasion of ecstasy use (83% vs. 87% in 2014) with most (64%) reporting drinking more than five standard drinks. A smaller proportion in 2015 (58%) reported drinking alcohol during a stimulant drug binge than in 2014 (66%). Alcohol continues to be the drug most KE report as problematic. KE expressed concerns relating to the Australian culture of binge drinking and the ease of access to alcohol. Violent behaviour, overdoses, crime, risk-taking behaviour, road trauma were just some of the issues that KE associated with alcohol.

## **Health and other issues**

Some RPU reported adverse consequences related to their drug consumption. Stimulant drug overdose in the preceding 12 months was reported by 14% of RPU in 2015 and was typically attributed to ecstasy. Recent depressant drug overdose was reported by 15% of participants in 2015 and was typically attributed to alcohol (67%). In 2015, RPU were administered the 10-item Kessler Psychological Distress Scale (K10) to measure the level of psychological distress experienced in the preceding four weeks; 39% were classified as experiencing moderate, 14% high and 13% very high psychological distress (vs. 2% in 2014,  $p<0.05$ ). Nine per cent of respondents reported accessing a health or medical service in relation to their ERD use in the preceding six months.

In 2014, the Victorian specialist alcohol and other drug telephone counselling service DirectLine received calls identifying ecstasy (0.6%), amphetamine and/or other stimulants (18%), cocaine (0.7%) and cannabis (10%) as drugs of concern.

## **Risk behaviour**

Only eight per cent of REU in 2015 reported ever injecting a drug, the lowest proportion since 2008 (10% in 2014). Seven RPU reported injecting a drug in the preceding six months in 2015.

Fifty-four per cent of the 2015 EDRS sample reported recent penetrative sex with a casual partner in the past six months, and 43% of those who reported recent penetrative sex with a casual partner while sober (46%) reported not using a condom the last time they had sex when sober. Fifty participants reported having had sex with a casual partner while under the influence of alcohol and/or drugs in the preceding six months. Among this group, 55% reported not using a condom with a casual partner the last time they had sex while under the influence.

The proportion (64%) of participants reporting ever having a sexual health check-up was similar to that in 2014 (71%). Twelve per cent reported being diagnosed with a sexually transmitted infection at some point in their lifetime.

Risky alcohol use was measured among participants in 2015. Sixty-seven per cent of RPU scored eight or more on the World Health Organization's (WHO) Alcohol Use Disorders Identification Test (AUDIT) – a level at which alcohol intake is considered hazardous – lower than the figure measured in 2014 (78%).

## Law enforcement-related trends associated with ERD use

In 2015, seven per cent of the RPU sample reported that they had been arrested in the past 12 months and 45% reported engaging in any type of crime in the preceding month, a figure similar to 2014 (47%). Drug dealing and property crime were the most common types of crime reported by the RPU sample (27% equally).

## Conclusions

The results reported here describe ERD use and trends in 2015 in Melbourne, Victoria, and enable comparisons with the findings of previous EDRS studies.

The key findings were as follows: reported recent use of mushrooms increased significantly between 2014 and 2015. The use of ecstasy and LSD at 'rave/dance parties' or 'bush doofs' was also significantly more common, as was the use of nitrous oxide during a stimulant drug binge. Compared to 2014, significantly smaller proportions of the 2015 sample reported recent use of crystal methamphetamine, amyl nitrite and benzodiazepines. Ecstasy and cocaine were significantly easier to obtain, however, a significantly smaller proportion of RPU reported that ecstasy was their 'favourite' drug when compared to 2014. Worryingly, significantly more RPU in the 2015 sample scored in the 'very high range' on the 10-item Kessler Psychological Distress Scale (K10), indicating higher levels of distress experienced in the preceding four weeks than in 2014.

## Implications

Patterns of poly-drug use, binge drug use, the frequency and locations where drugs are reportedly used, and the availability of many drugs, have largely remained stable across the 13 years of data collection. Other findings, such as the emergence of ecstasy crystals, possible return of high methamphetamine and ecstasy purity, high percentage of alcohol use (some at potentially harmful levels) evident in recent years, criminal behaviour and the use of NPS warrant further exploration. The EDRS has also provided unique information on a range of issues of relevance to ERD-using populations, such as help seeking behaviour and sexual health risks.

The Victorian EDRS represents a key knowledge base from which to further explore patterns and characteristics of ERD use in the state. The primary aim of the national EDRS is to provide a 'snapshot' of the characteristics of regular psychostimulant use in Australia. Although the data collection methods described in this report have limitations, the findings can be used to inform other research with the capacity to target emergent questions relating to regular ecstasy use (see below).

On the basis of the findings of the 2015 Victorian EDRS, we recommend:

- further exploration of methods to reduce and prevent the use of alcohol at harmful levels;
- tailored research and ongoing surveillance activities capable of capturing information on online marketplaces as it appears to be the preferable method by those who are using them;
- further exploration into the use of drugs at parties/raves/'bush doofs' held in secret or remote areas;
- raising health workers' awareness of NPS to increase their ability to detect related drug overdoses and enhance surveillance activities;
- further research into the health and behavioural effects of NPS in order to gain a greater understanding of these drugs, and develop clinical and public health responses;
- further investigation into how to improve RPU's utilisation of health services;
- further investigation of how to educate RPU about the risks associated with behaviour such as sexual intercourse while under the influence of drugs; and
- deliver targeted education and information about specific drugs to specific population groups such as youth and people who use drugs at music festivals/parties/events.

# 1 INTRODUCTION

This report provides a summary of ecstasy and related drug (ERD) use and market trends in Melbourne, Victoria, from the thirteenth iteration of the Ecstasy and related Drugs Reporting System (EDRS). These trends have been extrapolated from three data sources: interviews with current regular users of ERD; interviews with professionals who have contact with ERD users (key experts, or KE); and a collation of secondary indicator data sources. These three data sources are triangulated in order to minimise the biases and weaknesses inherent in each one.

For the purposes of the study, the terms 'ecstasy and related drugs' or 'psychostimulants' include drugs that are routinely used in the context of entertainment venues such as nightclubs, dance parties and music festivals. In addition to ecstasy (3,4-methylenedioxymethamphetamine or MDMA), this includes drugs such as methamphetamine, cocaine, LSD (*d*-lysergic acid), ketamine and GHB (gamma-hydroxybutyrate).<sup>1</sup>

In 2015, the EDRS Project was supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund. The project uses a methodology based on that used for the Illicit Drug Reporting System (IDRS) (Topp, Degenhardt, Day, & Collins, 2003). The IDRS monitors Australia's heroin, cocaine, methamphetamine and cannabis markets, but does not adequately capture ERD use. Consistency between the methodology of the IDRS and this study was maintained where possible, as the IDRS has demonstrated success as a monitoring system.

The focus of the Victorian EDRS is Melbourne, as new trends in illicit drug markets are more likely to emerge in large cities rather than regional centres or rural areas. Comparisons are made between the 2015 results and those reported in the 2004 to 2014 studies where appropriate.

## 1.1 Study aims

The overall aim of the 2015 Victorian EDRS was to extend to a thirteenth year the routine monitoring of key ERD market indicators in Melbourne. The specific aims of the study were to:

- describe the characteristics of a sample of current regular psychostimulant users (RPU) interviewed in Melbourne;
- examine this sample's patterns of ERD use;
- document the current market characteristics (i.e., price, purity and availability) of ERD in Melbourne;
- examine participants' perceptions of the incidence and nature of ERD-related harm, including physical, psychological, occupational, social and legal harms;
- identify emerging trends in the ERD market that might require further investigation;
- examine participants' involvement in criminal behaviours; and
- where appropriate, compare 2015 findings with those reported in the previous EDRS reports.

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<sup>1</sup> For further information about these and other party drugs, see: [www.adf.org.au](http://www.adf.org.au); [www.bluelight.org](http://www.bluelight.org); [www.erowid.org](http://www.erowid.org).

## 2 METHOD

The 2015 EDRS used the methodology trialled in the feasibility study (Breen, Topp, & Longo, 2002), subsequently used in the 2003-2014 studies, to monitor trends in the markets for ERD. The three main sources of information used to document trends were:

1. face-to-face interviews with current RPU;
2. face-to-face interviews, telephone interviews and online surveys with KE who, through their work, have regular contact with psychostimulant users in Melbourne; and
3. indicator data sources such as ERD treatment episodes, the purity of ecstasy seized in Victoria, and prevalence of use data drawn from the 2013 National Drug Strategy Household Surveys (NDSHS) conducted by the Australian Institute of Health and Welfare (AIHW).

These three data sources were triangulated so that different data sources were used to validate each other and provide a more reliable indication of emerging trends in ERD drug use and drug markets.

### 2.1 Survey of RPU

As described above, the ERD category includes a range of drugs. The sentinel population chosen to monitor trends in ERD markets in 2015 was people who reported regular use of ecstasy and other psychostimulants, termed 'regular psychostimulant users' (RPU). This was the third year the eligibility criteria included other psychostimulants, reflecting the changing nature of the ecstasy market and types of consumers.

For the purposes of this study, 'regular psychostimulant use' was defined as the use of ERD at least once a month over the previous six months. Participants were also required to be at least 18 years of age and to have resided in the Melbourne metropolitan area of Victoria for the 12 months preceding interview.

### 2.2 Recruitment

One hundred RPU were interviewed for the Victorian 2015 EDRS. All of the participants resided in the Melbourne metropolitan region and were recruited through a purposive sampling strategy (Kerlinger, 1986) consisting of advertisements in entertainment street press, online forums, social media interviewer contacts, and 'snowball' procedures (Biernacki & Waldorf, 1981). Snowballing is a means of sampling 'hidden' populations which relies on peer referral, and is widely used to access illicit drug users in Australian studies (Boys, Lenton, & Norcoss, 1997; Ovendon & Loxley, 1996; Solowij, Hall, & Lee, 1992) as well as international studies (Dalgarno & Shewan, 1996; Forsyth, 1996; Peters, Davies, & Richardson, 1997). Accordingly, on completion of the interview, participants were asked if they would be willing to discuss the study with friends who might be interested and able to participate. Snowballing is also routinely employed as a recruitment method in the IDRS (Jenkinson & O'Keeffe, 2005).

### 2.3 Procedure

Participants contacted the researchers by telephone or via email and were screened for eligibility (using the criteria listed in section 2.1). Participants were informed that all information provided was strictly confidential and anonymous, and that the study would involve a face-to-face interview that would take approximately 60 minutes to complete. All respondents were volunteers who were reimbursed \$40 for their participation. All interviews were undertaken at the Burnet Institute and were conducted by trained researchers using a standardised interview schedule. The nature and purpose of the study was explained to participants before informed consent was obtained. Ethics approval for this study was obtained from the Alfred Hospital Human Research Ethics Committee.

#### 2.3.1 Measures

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by the National Drug and Alcohol Research Centre (NDARC) in 1997 (Topp et al., 1998; Topp, Hando, Dillon, Roche, & Solowij, 2000), which incorporated items from previous NDARC studies of users of ecstasy (Solowij et al., 1992) and powder methamphetamine (Darke, Cohen, Ross, Hando, & Hall, 1994; Hando & Hall, 1993; Hando, Topp, & Hall, 1997). The interview schedule focused primarily on the preceding six months (recent use) and assessed demographic characteristics; patterns of ERD use, including frequency and quantity of use and routes of administration; the price, purity and availability of ERD; patterns of ERD purchasing; self-reported criminal activity; perceived physical and psychological side-effects of ecstasy; other ecstasy-related problems, including relationship, financial,

legal and occupational problems; help-seeking behaviour; and general trends in party drug markets, such as new drug types and new drug users. The interview schedule was administered via laptops using Questionnaire Design Studio V.2.6.1.

### **2.3.2 Data analysis**

Descriptive analyses were conducted using Statistical Package for the Social Sciences (SPSS) as well as Stata V.11.0. For selected key variables, tests of proportions were used to determine the significance of differences between 2014 and 2015 results with a statistically significant difference defined as  $p < 0.05$ . Throughout the report, a p-value is only reported when significant differences existed.

## **2.4 Survey of KE**

The criterion for KE eligibility was regular contact (at least weekly contact and/or had contact with 10 or more ecstasy users in the last six months) or significant knowledge, in the course of employment, of users of ERD throughout the preceding six months. Eleven KE provided information on the psychostimulant users they had contact with/knowledge of in the six to 12 months preceding interview.

The 11 KE interviewed in 2015 were four paramedics, three members of Victoria Police, one medical officer, one government/policy worker, one youth alcohol and others drugs treatment worker, and one harm reduction program coordinator.

Most of the KE reported working with mixed populations (in terms of age, ethnicity and gender identity); however, five reported that they worked with one or more 'special population groups', including young people, women, Aboriginal and/or Torres Strait Islanders, GLBTIQ (gay, lesbian, bisexual, transgender, intersex, queer) populations, prisoners, and motorists.

KE were asked to comment on what drug(s) they considered most problematic and the reasons why, and any changes in drug market characteristics between 2014 and 2015.

## **2.5 Other indicators**

Primary information collected from the RPU surveys and KE interviews was supplemented by data obtained from secondary indicator sources of illicit drug use and related morbidity and mortality. Where possible, data relating to trends for the 2014/2015 financial year are reported, unless otherwise indicated. For secondary indicators, when current data were not available, the most recently available data were included.

Indicator data sources accessed for this study are described in the following sections:

### **Surveys reporting on illicit drug use prevalence in Victoria**

- Estimates of prevalence of alcohol and drug use in the general community are typically derived from large-scale population surveys. The most recent Australian household survey from which estimates of illicit drug use within the community are available is the 2013 National Drug Strategy Household Survey (NDSHS, 2014).

### **Drug seizure purity levels**

- The Drug Analysis Branch of the Victoria Police Forensic Services Department conducts purity analyses for all Victoria Police's drug seizures. The Victoria Police Forensic Services Department provided drug purity data for inclusion in this report up to the 2014/2015 financial year.

### **Drug-related arrest data**

- Information pertaining to drug-related arrests in Victoria was obtained from the Australian Crime Commission (ACC). Victoria Police and the Australian Federal Police provide arrest data to the ACC for the Illicit Drug Data Report. This report presents drug-related arrest data for the 2013/2014 financial year.

### **Specialist drug treatment presentations**

- The Victorian Department of Health funds community-based agencies to provide specialist alcohol and drug treatment services across the state. The collection of client information is a mandatory requirement and occurs via a formalised client data collection system called the Alcohol and Drug Information System (ADIS). The ADIS data presented in this report represent courses of treatment (not client numbers) undertaken during the 2014/2015 financial year.

- DirectLine is a 24-hour specialist telephone service in Victoria (operated by Turning Point Alcohol & Drug Centre) that provides counselling, referral and advice about drug use and related issues. All calls to DirectLine are logged to an electronic database of information about callers' drugs of concern, calls from drug users and calls about drug users. This report presents data for the period between 2000 and 2014.

#### **Ambulance attendances at non-fatal drug-related events**

- Turning Point Alcohol & Drug Centre manages electronic drug-related ambulance attendance data extracted from a database called the Victorian Ambulance Clinical Information System. Data for the period between January 2011 and December 2014 are presented in this report.

#### **National Hospital Morbidity Database**

- Between 2012/13 and 2013/14, hospital admissions with a cannabis-related primary diagnosis increased by 64% to 518, no comprising 18% of the Australian total. Similarly, amphetamine-related hospital admissions in Victoria increased by 42% between 2012/13 and 2013/14 to 1207 admission, accounting for 27% of the Australian total. Cocaine-related hospital admissions remain relatively low in Victoria, however, the figure increased from 15 in 2012/13 to 40 in 2013/14.

## 3 DEMOGRAPHICS

### 3.1 Overview of the EDRS participant sample

The demographic characteristics of the EDRS participants recruited in 2015 in Victoria were comparable to those of previous years (Table 1). Almost two-thirds of participants were male, the sample was predominantly heterosexual (84%), and the mean age was 25 years. RPU were well educated (49% with tertiary qualifications); however, the proportion of participants who were employed full-time was the lowest ever recorded in the Victorian EDRS, and this was reflected in the mean weekly income figure (\$446). Participation in the EDRS in previous years was reported by nine participants. The 2015 RPU sample was mostly recruited via street press (40%) followed by snowballing/word-of-mouth (27%).

**Table 1: Demographic characteristics of EDRS participants, 2010–2015**

	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Mean age (years)	24	26	24	26	25	24
Male gender (%)	64	64	67	63	69	59
English-speaking background (%)	100	98	94	100	93	89
ATSI (%)	0	2	2	2	2	0
Heterosexual (%)	83	86	90	85	89	84
Mean number school years	12	12	12	12	12	12
Tertiary qualifications (%)	41	58	52	59	50	49
Employed full-time (%)	21	25	23	31	17	14
Full-time students (%)	8	9	8	18	21	13
Unemployed (%)	21	32	16	16	14	16
Previous conviction (%)*	4	-	-	-	-	-
Current drug treatment (%)	5	4	7	4	1	3
Mean income per week (\$)	\$504	\$539	\$530	\$700	\$564	\$446

Source: EDRS participant interviews

\* Previous conviction questions not asked in 2011-2015

KE interviews indicated that the RPU population remains diverse in characteristics such as age, gender, sexuality and geographic location, and described RPU as mostly aged between 16 and 35 years. There were more KE this year who described RPU as being poorly educated and unemployed or early school leavers. Most KE reported having contact with both male and female RPU, with an increasing number of females.

## 4 DRUG CONSUMPTION PATTERNS

### Summary

- A significantly smaller proportion of participants (25%) reported ecstasy as their main drug of choice (favourite or preferred drug) than in the 2014 EDRS (44%).
- Pills remained the most commonly reported form of ecstasy used.
- A significantly larger proportion reported using cannabis when coming down from ecstasy than in 2014.
- Lifetime and recent speed use was significantly less prevalent in 2015 than in 2014.
- The proportion of recent crystal methamphetamine users and psilocybin mushroom users was also significantly smaller than in 2014.
- Significantly more participants reported nitrous oxide use during a recent stimulant drug binge than in 2014.
- A significantly smaller proportion reported recent amyl nitrite use than in 2014.
- Significantly larger proportions reported raves/doofs/dance parties as the location of most recent use for both LSD and ecstasy in 2015 – the highest proportions ever recorded in the Victorian EDRS.

## 4.1 Drug use history and current drug use

In 2015, participants were asked about lifetime (ever used) and recent (used in the last six months) use of a broad range of drug types, including alcohol and tobacco (Table 2). The drugs most likely to have ever been used were alcohol, cannabis, tobacco, ecstasy, nitrous oxide, mushrooms, LSD and speed. The reported recent use of drugs was significantly higher in 2015 than 2014 for psilocybin mushrooms (40% vs. 24%,  $p < 0.05$ ) whilst proportions for recent use of crystal methamphetamine (19% vs. 34%,  $p < 0.05$ ) and benzodiazepines (34% vs. 59%,  $p < 0.05$ ) were significantly smaller.

Similar to 2014, almost half (44%) of the 2015 RPU sample reported recent use of synthetic analogues known as 'research chemicals' such as mephedrone and DMT or other synthetic drugs, such as 2C-B or benzylpiperazines (BZP), and synthetic cannabinoids (e.g., Kronic and K2 Spice). Data on these new psychoactive substances (NPS) were first collected in the 2010 EDRS.

Similar to 2014, KE considered crystal methamphetamine and alcohol to be the most problematic drugs used by RPU in 2015. Crystal methamphetamine was by far the most common form of amphetamine seen by KE. KE raised concerns relating to crystal methamphetamine and aggressive behaviour, criminal activity, violence and mental health risks due to a perceived increase in purity and availability in the previous 12 months. KE also highlighted the ubiquity of alcohol and concerns around alcohol-related harms and their burden on the health care system. Most KE who were able to comment on NPS reported that the use of synthetic cannabis is less prevalent than use of real cannabis, due to consumers often experiencing unpleasant effects from the former.

**Table 2: Lifetime and recent drug use of EDRS participants, 2010–2015**

	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
<b>Alcohol</b>						
Ever used (%)	99	99	100	100	100	100
Used last 6 months (%)	97	97	97	93	99	96
<b>Cannabis</b>						
Ever used (%)	97	96	97	100	100	98
Used last 6 months (%)	89	86	85	87	81	90
<b>Tobacco</b>						
Ever used (%)	97	92	94	92	98	96
Used last 6 months (%)	88	82	87	82	83	87
<b>Ecstasy pill</b>						
Ever used (%)	100	99	99	97	100	98
Used last 6 months (%)	98	91	92	86	90	84
<b>Ecstasy capsule</b>						
Ever used (%)	81	89	83	85	83	90
Used last 6 months (%)	65	65	67	67	66	76
<b>Ecstasy powder</b>						
Ever used (%)	48	56	43	72	61	66
Used last 6 months (%)	34	30	31	51	43	46
<b>Ecstasy crystal*</b>						
Ever used (%)	-	-	-	58	80	59
Used last 6 months (%)	-	-	-	49	64	54
<b>Methamphetamine powder (speed)</b>						
Ever used (%)	88	88	94	86	89	78
Used last 6 months (%)	70	69	77	58	56	45
<b>Methamphetamine base (base)</b>						
Ever used (%)	13	32	22	30	31	22
Used last 6 months (%)	3	12	13	8	10	5
<b>Crystal methamphetamine (ice/crystal)</b>						
Ever used (%)	45	56	57	62	42	33
Used last 6 months (%)	18	38	48	45	34	19
<b>Pharmaceutical stimulants (licit &amp; illicit)</b>						
Ever used (%)	56	59	46	65	65	54
Used last 6 months (%)	27	29	21	30	32	33
<b>Cocaine</b>						
Ever used (%)	76	74	78	78	84	71
Used last 6 months (%)	54	43	54	46	58	46
<b>LSD</b>						
Ever used %	72	82	63	88	77	85
Used last 6 months %	49	57	38	52	49	46
<b>MDA</b>						
Ever used (%)	14	27	27	31	33	35
Used last 6 months (%)	6	12	12	13	21	20
<b>Ketamine</b>						
Ever used %	53	60	63	76	82	73
Used last 6 months %	23	26	35	46	63	50
<b>GHB</b>						
Ever used (%)	23	24	24	30	34	23
Used last 6 months (%)	12	6	7	14	13	9
<b>Amyl nitrite</b>						
Ever used (%)	58	63	53	69	71	67
Used last 6 months (%)	34	24	21	23	34	28
<b>Nitrous oxide</b>						
Ever used (%)	43	55	39	72	70	79
Used last 6 months (%)	22	33	22	48	53	53
<b>Psilocybin mushrooms</b>						
Ever used (%)	75	83	74	85	78	81
Used last 6 months (%)	22	41	38	38	25	40
<b>Heroin</b>						
Ever used (%)	17	28	17	25	15	11
Used last 6 months (%)	7	15	5	10	6	5
<b>Benzodiazepines (illicit &amp; licit)</b>						
Ever used (%)	71	71	59	80	72	59
Used last 6 months (%)	45	56	46	53	59	34
<b>Other opioids (illicit &amp; licit)</b>						
Ever used (%)	25	43	33	41	60	42
Used last 6 months (%)	8	21	13	21	27	24
<b>Antidepressants (illicit &amp; licit)</b>						
Ever used (%)	36	31	36	35	26	23
Used last 6 months (%)	15	11	19	10	7	8

Source: EDRS participant interviews

\* Ecstasy crystal questions introduced in 2013

## 4.2 Ecstasy use

### 4.2.1 Ecstasy use among EDRS participants

In 2015, 25% of participants reported ecstasy as the main drug of choice ('favourite or preferred' drug), compared to 44% in 2014. This year's figure is significantly lower than the figure from 2014 ( $p < 0.05$ ), but is comparable to the figure from 2013 (26%). RPU reported swallowing a median of two ecstasy pills in a 'typical' session and almost one-fifth (18%) reporting using ecstasy pills weekly or more in the preceding six months, similar to previous years (Table 3).

Almost all ( $n=95$ ) RPU reported using other drugs on the last occasion they used ecstasy. The most common drug used in conjunction with ecstasy was tobacco (63%), followed by alcohol (consumed  $>5$  standard drinks, 53%), cannabis (50%), ketamine (18%) and LSD (12%). Similar to 2014, 56% of RPU interviewed in 2015 reported using other drugs to 'come down' from ecstasy. The drugs most commonly reported as used when coming down from ecstasy were cannabis (84% vs. 54% in 2014,  $p < 0.05$ ) and benzodiazepines (6%).

**Table 3: Patterns of ecstasy use among EDRS participants, 2010-2015**

Ecstasy	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Mean age first used ecstasy (years)	18	18	18	19	18	18
Ecstasy 'favourite' drug (%)	31	31	35	26	44	25
Median days used ecstasy pills last 6 months	12	10	12	10	12	18
Use ecstasy pills weekly or more (%)	23	20	25	29	21	18
Median ecstasy pills in 'typical' episode of use	2	2	2	2	2	2
Typically use $>1$ pill (%)	76	75	83	81	75	60
Main route of administration of ecstasy pills in the last 6 months (%)*						
Swallow	85	83	88	87	86	91
Snort	13	17	10	11	10	9
Inject	1	0	1	1	0	0
Ever injected ecstasy pills (%)**	2	10	4	8	2	-
Used other drugs in conjunction with ecstasy last occasion (%)	98	94	95	92	90	95
Used other drugs to 'come down' from ecstasy last occasion (%)	53	67	56	51	50	56

Source: EDRS participant interviews

\* Among those who had used ecstasy in the previous 6 months

\*\* Routes of administration ever used not asked in 2015 survey

Among KE who were able to comment, most reported that the prevalence of ecstasy remained stable and one KE noted the emergence of 'luxury' pills which can often cost twice as much as common pills. This group of KE did not commonly associate ecstasy with problematic behaviour. In 2015, we asked KE whether they had observed an increase in the use of ecstasy at 'bush doofs' or private dance parties in remote or rural areas. One KE suggested that it is likely to be the same culture of people moving away from warehouse parties in industrial estates to the bush. KE who were members of ambulance services and Victoria Police who were able to comment expressed concerns regarding the safety of such events, specifically with respect to long response times in cases of emergency, post-partying fatigue combined with driving, and the lack of phone reception. One KE suggested that these parties are gaining popularity because those who attend often experience a greater sense of freedom with fewer barriers to fun as well as the event being more affordable. These events often happen 'underground' and are usually facilitated through social media.

Recent use of ecstasy capsules was reported by 76% of RPU, an increase from 2014 (66%). Reports of ecstasy powder use remained stable for both lifetime (66%) and recent (46%) use. Table 4 shows reported patterns of use for all four forms of ecstasy. The difference between the proportion who reported use of ecstasy crystals in the last six months and participants who reported use of ecstasy powder was slightly larger this year than in 2014 (54% and 46% vs. 62% and 58% respectively). Pills were the most commonly reported form of ecstasy used in 2015, consistent with previous years.

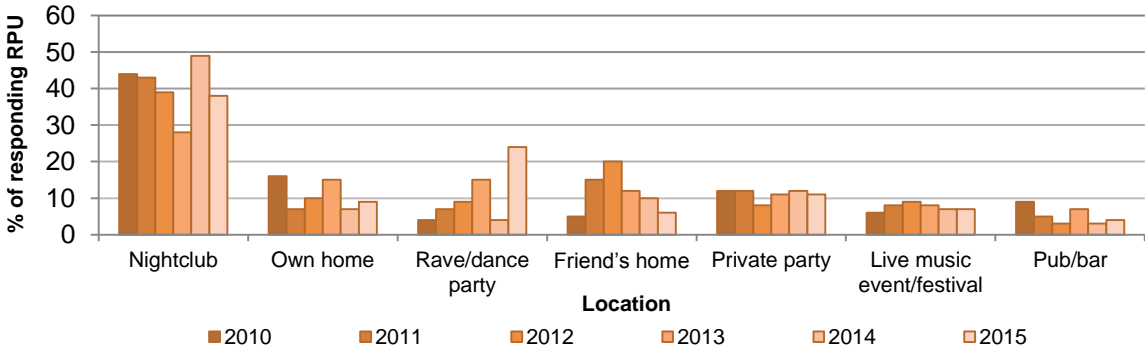
**Table 4: Patterns of ecstasy pill, capsule, powder and crystal use among EDRS participants, 2015**

Ecstasy	Ecstasy pill (n=100)	Ecstasy capsule (n=100)	Ecstasy powder (n=100)	Ecstasy crystal (n=100)
Lifetime use (%)	98	90	66	59
Used ecstasy in last 6 months (%)	84	76	46	54
Mean age in years first used (range)	18 (13-27)	20 (13-31)	20 (13-30)	20 (13-38)
Median days used last 6 months (range)	12 (1-50)	5 (1-50)	5 (1-50)	5 (1-48)
Median amount used in 'typical' episode of use* (range)	2 pills (1-6)	2 caps (0.5-9)	0.2 grams** (0.025-1)	2 points*** (0.25-100)
Route of administration in the last 6 months* (%)				
Swallow	84	97	59	74
Snort	26	34	83	56
Inject	-	-	-	2
Other	2	1	2	2

Source: EDRS participant interviews  
 \* Among those who had used ecstasy in the previous 6 months  
 \*\* Figures in the Victorian EDRS report differ slightly to those in the national report due to inclusion of points in the calculation of grams  
 \*\*\* Figures in the Victorian EDRS report differ slightly to those in the national report due to inclusion of grams in the calculation of points

Figure 1 shows RPUs' reported last location of ecstasy use. Consistent with previous years, in 2015, nightclubs were the most commonly reported location of most recent ecstasy use (38%). A significantly larger proportion of RPU reported 'rave/dance party' (includes bush doofs) as their last location of ecstasy use in 2015 than in 2014 (24% vs. 4% respectively,  $p < 0.05$ ); this is the highest proportion ever reported in the Victorian EDRS.

**Figure 1: Location of most recent ecstasy use, 2010-2015**

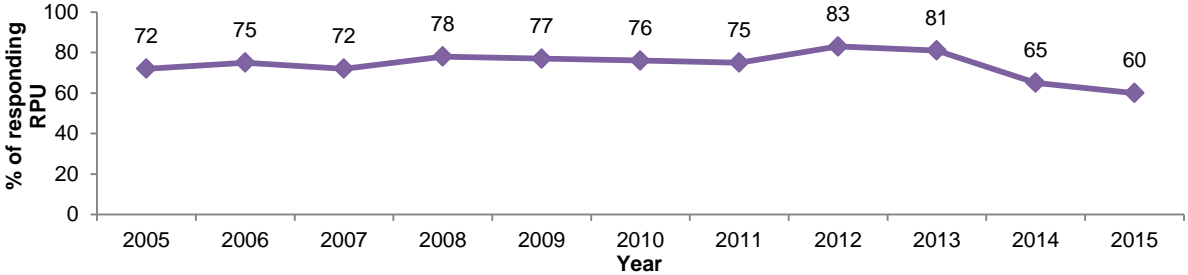


Source: EDRS participant interviews

### 4.2.2 Ecstasy trends over time

In 2015, 60% of the Victorian EDRS sample reported typically using more than one ecstasy pill per episode of use (Figure 2) and 24% reported using more than two pills per episode of use (the highest reported number of pills used per episode of use was 6). RPU reported using ecstasy pills on a median of 12 days in the preceding six months, consistent with 2014 (presented in Table 4).

**Figure 2: Percentage of EDRS participants who report typically using more than one ecstasy pill, 2005-2015**



Source: EDRS participant interviews

### 4.2.3 Ecstasy use in the general population

The 2013 NDSHS provides the most recent national figures regarding the prevalence of ecstasy use in the general population. The results of this survey indicate that, in 2013, 2.5% of the Australian population aged 14 years and over reported ecstasy use in the last 12 months (AIHW, 2014), a figure significantly lower compared to that found in 2010 (3%) and the highest prevalence of recent ecstasy use was reported by 20–29-year-olds (8.6%) (AIHW, 2014). The percentage of the Victorian population aged 14 years and over who reported ecstasy use in the last 12 months (2.4%) was similar to the national figure in 2013 (AIHW, 2014).

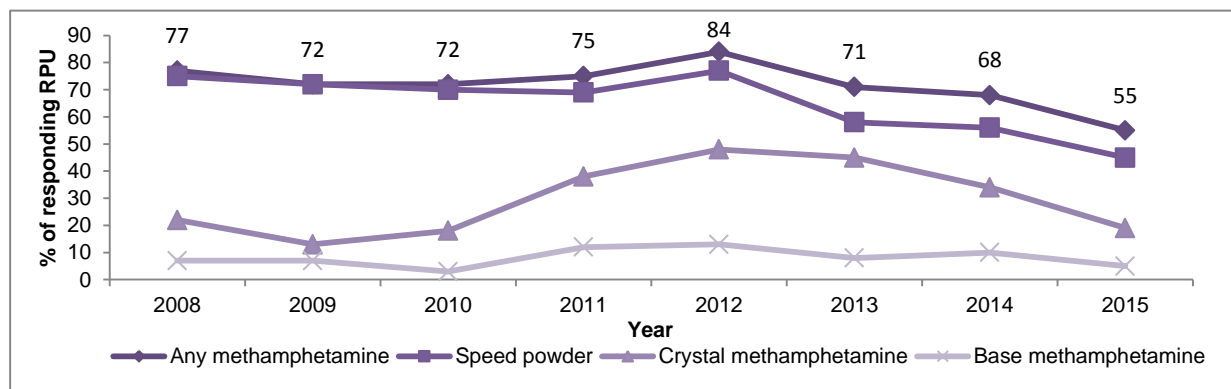
## 4.3 Methamphetamine use

### 4.3.1 Methamphetamine use among EDRS participants

The majority (82%) of participants reported lifetime use of one or more forms of methamphetamine (speed powder, base or crystal) and 55% of the sample had done so in the previous six months (Figure 3). The proportion of participants reporting recent use of all forms of methamphetamine was slightly less than in 2014 (68%).

Among KE who were able to comment, most reported that methamphetamine use has remained stable and is most commonly in crystal form, with little to no speed. Eight out of 11 KE included crystal methamphetamine as one of the drugs that they currently consider as most problematic. The most common concerns raised by KE in relation to crystal methamphetamine were aggression, violent behaviour, the lack of pharmacotherapy, and harms associated with its high purity. One KE who worked as a paramedic noted that crystal methamphetamine users, although often volatile and unpredictable, were half as likely to cause grief towards workers in 2015 than in 2014 and suggested that this indicates more responsible dosages.

**Figure 3: Recent use of any methamphetamine, speed powder, crystal and base methamphetamine, 2008-2015**



Source: EDRS participant interviews

### 4.3.2 Methamphetamine powder (speed)

Reports of both lifetime (78%) and recent (45%) use of speed in 2015 were fewer than reports in 2014 (89%,  $p < 0.05$  and 56% respectively). Consistent with previous years, the median reported age of first speed use was 19 years (range 14–29 years). The median quantity used during a typical episode of use was 0.2 gram (vs. 0.4 gram in 2014) (Table 5). Eleven per cent of recent speed users reported using speed the last time they used ecstasy.

### 4.3.3 Methamphetamine base

Consistent with previous years, methamphetamine base use remains low in Victoria among RPU. Twenty-two percent of RPU reported having ever used methamphetamine base in 2015, 5% in the preceding six months. The median reported age of first methamphetamine base use was 21 years (range 15–40 years) and base was most commonly swallowed (75%). All recent users of methamphetamine base reported using it once in the last six months, typically using one point per episode of use (range 1-3 points). There were no recent base users who reported using base the last time they used ecstasy.

**Table 5: Patterns of speed use among EDRS participants, 2010-2015**

Speed	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used (%)	88	88	94	86	89	78
Used preceding 6 months (%)	70	69	77	58	56	45
Median days used last 6 months* (range)	5 (1-180)	11 (1-115)	6 (1-120)	4 (1-80)	4 (1-180)	2 (1-40)
<b>Median quantities used* (grams)</b>						
Typical (range)**	0.5 (0.1-4.5) n=49	0.5 (0.1-2) n=63	0.5 (0.3-5) n=58	0.5 (0.05-3.5)** n=43	0.4 (0.1-2) n=11	0.2** (0.025-1) n=39
Heavy (range)**	1 (0.1-10) n=53	1 (0.1-4) n=64	1 (0.3-7) n=61	0.5** (0.1-7) n=47	1 (0.1-2) n=17	0.2** (0.025-2) n=39

Source: EDRS participant interviews

\* Among those who used speed powder in the previous 6 months

\*\* Figures in the Victorian EDRS report differ slightly to those in the national report due to inclusion of grams in the calculation of points

#### 4.3.4 Crystal methamphetamine

In 2015, the percentage of RPU in Victoria reporting lifetime (33%) use of crystal methamphetamine declined (42% in 2014) and recent use (19%) declined significantly (34%,  $p < 0.05$  in 2014) (Table 6). Consistent with previous years, RPU reported initiating crystal methamphetamine use at a median age of 21 years (range 15–32 years). The most commonly reported route of administration of crystal methamphetamine in the preceding six months was smoking (84%). RPU reported using one and a half points in a typical episode of use and two points during a heavy episode of use – slightly lower medians than 2014. Ten per cent of recent crystal methamphetamine users reported using crystal methamphetamine the last time they used ecstasy.

**Table 6: Patterns of crystal methamphetamine use among EDRS participants, 2010–2015**

Crystal methamphetamine	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used (%)	45	56	57	62	42	33
Used last six months (%)	18	38	48	45	34	19
Median days used last 6 months* (range)	3 (1-24) n=18	8 (1-120) n=37	8.5 (1-170) n=48	10 (1-170) n=45	8 (1-120) n=34	10 (1-96) n=19
<b>Median quantities used* (points)</b>						
Typical (range)	1 (1-6) n=13	2 (0.2-10) n=36	1.5 (0.1-7) n=40	2** (0.3-15) n=42	2 (0.1-5) n=23	1.5 (0.5-5) n=18
Heavy (range)	1.5 (1-6) n=11	3 (0.4-17) n=36	2.5 (0.1-10) n=37	3.5** (1-50) n=42	2.5 (0.3-6) n=20	2 (0.5-7) n=15

Source: EDRS participant interviews

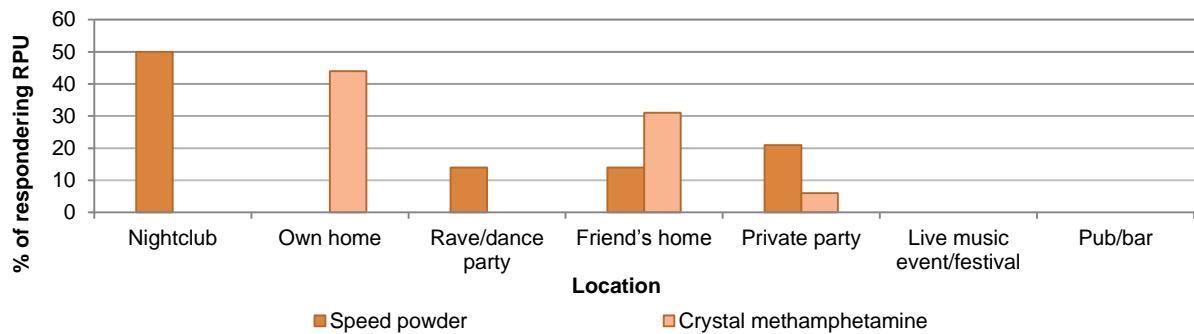
\* Among those who used crystal methamphetamine in the last 6 months

\*\* Figures in the Victorian EDRS report differ slightly to those in the national report due to inclusion of grams in the calculation of points

### 4.3.5 Location of methamphetamine use

The location of the most recent occasion of speed and crystal methamphetamine use is detailed in Figure 4. No respondents reported their home as the last location they used speed (10% in 2014) while most reported the last location of use to be at a nightclub (50% vs. 38% in 2014) or private party (21% vs. 3% in 2014,  $p < 0.05$ ). Similar to previous years, 75% of recent crystal methamphetamine users reported being in a private setting the last time they used: 44% at their own home, and 31% at a friend's home. Small numbers precluded further analysis of the locations of recent methamphetamine base use.

Figure 4: Location of most recent methamphetamine use: speed & crystal, 2015



Source: EDRS participant interviews

### 4.3.6 Methamphetamine use in the general population

The 2013 NDSHS report provides the most recent national figures regarding the prevalence of methamphetamine use in the Australian general population. The report indicated that, in 2013, 2.1% of the Australian population aged 14 years and over reported recent (in the last 12 months) use of methamphetamines, identical to the previous survey in 2010 (AIHW, 2014). As with ecstasy use, the highest prevalence of recent (5.7%) methamphetamine use nationally was reported by the 20–29-year-old age group (AIHW, 2014). The figure for the Victorian population aged 14 years and over who reported recent use of methamphetamines (1.9%) was similar to the national figure in 2013.

## 4.4 Cocaine use

### 4.4.1 Cocaine use among EDRS participants

A significantly lower percentage of participants reported having ever used cocaine in 2015 (71%) than in 2014 (84%,  $p < 0.05$ ). Similarly, a smaller proportion had used it in the preceding six months (46% vs. 58% in 2014) (Table 7).

The median age of first use among RPU who reported using cocaine was 21 years (range 16–31 years). EDRS participants reported using cocaine on a median of two and a half days (range 1–30), and used a median of three points (0.3 gram, range 0.05-1 gram) during a typical episode of use and three and a half points (0.35 gram, range 0.05-3 grams) during a heavy episode of use. Of those who reported using cocaine in the last six months, only 20% reporting using it more frequently than once a month and almost all recent users reported snorting cocaine (98%). Ten per cent of recent cocaine users reported using cocaine the last time they used ecstasy.

**Table 7: Patterns of cocaine use among EDRS participants, 2010–2015**

Cocaine	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used %	76	74	78	78	84	71
Used last six months %	54	43	54	46	58	46
Median days used last 6 months* (range)	2 (1-24)	2.5 (1-60)	3 (1-50)	2 (1-26)	3 (1-36)	2.5 (1-30)
<b>Median quantities used (grams)*</b>						
Typical (range)	0.5 (0.05-3) n=45	1 (0.1-5) n=33	0.5 (0.2-3) n=39	0.5 (0.05-3) n=33	1 (0.03-1.5) n=23	0.3** (0.05-1) n=34
Heavy (range)	0.5 (0.05-8) n=46	1 (0.1-5) n=46	1 (0.2-3) n=40	0.5 (0.05-5)** n=33	1 (0.03-3) n=28	0.35** (0.05-3) n=34

Source: EDRS participant interviews

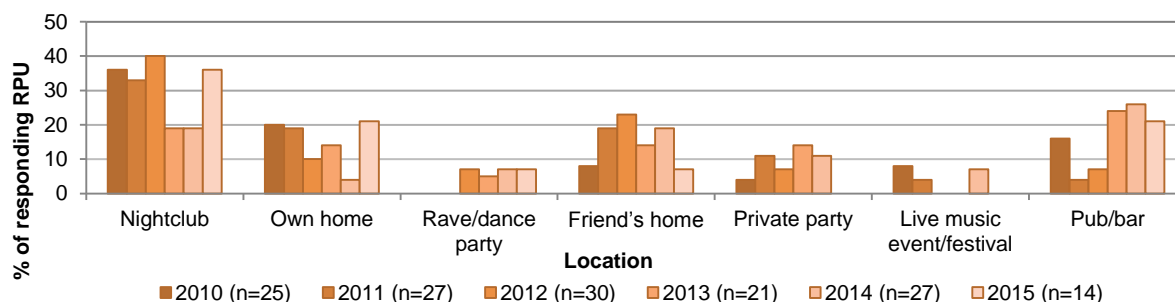
\* Among those who used cocaine in the last 6 months

\*\* Figures in the Victorian EDRS report differ slightly to those in the national report due to inclusion of grams in the calculation of points

Only a small number of KE were able to comment on cocaine. Most reported low prevalence of cocaine use among the people they work with. One law enforcement KE noted that the amount of cocaine being detected has decreased over the last 12 months.

The most frequently reported last location of cocaine use in 2015 was a nightclub (36%) followed equally by 'own home' and pub/bar (21%) (Figure 5).

**Figure 5: Location of most recent cocaine use, 2010–2015**



Source: EDRS participant interviews

#### 4.4.2 **Cocaine use in the general population**

The 2013 NDSHS provides the most recent national figures regarding the prevalence of cocaine use in the Australian general population. This survey indicates that, in 2013, 2.1% of the Australian population aged 14 years and over reported recent (in the last 12 months) cocaine use, unchanged from 2010 (2.1%) after a continued increase since the 1993 survey estimate of 0.5% (AIHW, 2014). The figure for the Victorian population is almost identical to the national figure (2%).

## 4.5 Ketamine use

### 4.5.1 Ketamine use among RPU

In 2015, a lower percentage of RPU reported lifetime (73% vs. 82% in 2014) and recent (50% vs. 63% in 2014) use of ketamine (Table 8). The median reported age of first use was 20 years (range 16–35 years). As seen in previous years, ketamine remains infrequently used – on a median of three days in the preceding six months (range 1–35). Recent ketamine users reported using a median of one bump during a typical episode (range 1–7 bumps) as well as during a heavy episode (1–10 bumps) of use. However, unlike previous years, in 2015 the most common unit of measure in which RPU reported their consumption patterns was points (n=37). Users reported using a median of two points during a typical episode (range 0.3–5 points) as well as during a heavy episode (range 0.5–10 points) of use.

**Table 8: Patterns of ketamine use among EDRS participants, 2010–2015**

Ketamine	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used (%)	53	60	63	76	82	73
Used last 6 months (%)	23	26	35	46	63	50
Median days used last 6 months* (range)	2 (1-12)	4 (1-40)	2 (1-15)	4 (1-48)	3 (1-70)	4 (1-35)
<b>Median quantities used (bumps)*</b>						
Typical (range)	2 (1-10) n=12	3 (0.3-8) n=19	2.5 (0.5-10) n=24	3 (1-4) n=13	1 (1-2) n=9	1 (1-7) n=4
Heavy (range)	2 (1-10) n=12	3 (0.3-15) n=18	2.5 (0.5-15) n=24	3 (1-6) n=13	1.5 (1-3) n=8	1 (1-10) n=4

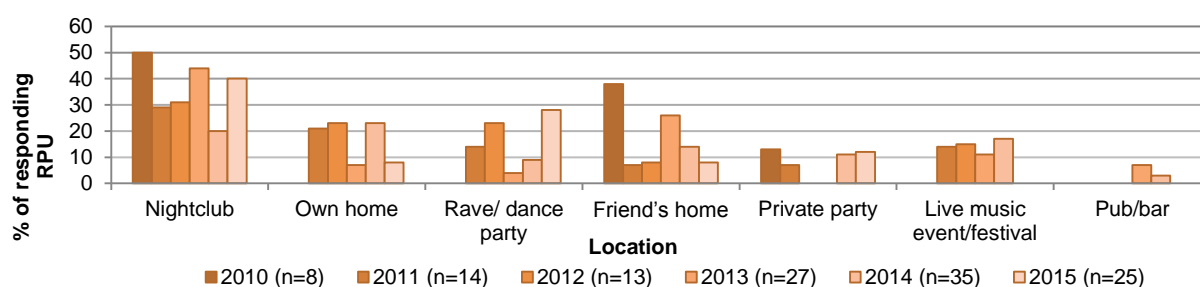
Source: EDRS participant interviews

\* Among those who used ketamine in the last 6 months

Only a small number of KE reported use of ketamine among the RPU they work with. More specifically, KEs noted that it has decreased in prevalence, with one KE explaining that ketamine was difficult to obtain before March 2015 and was often substituted by methoxetamine (MXE) by dealers. The price of 'real' ketamine during this time increased, but availability and pricing has since returned to normal.

As presented in Figure 6, RPU interviewed in 2015 reported using ketamine on the most recent occasion at a nightclub (40%) or at a rave/dance party (28%).

**Figure 6: Location of most recent ketamine use, 2010–2015**



Source: EDRS participant interviews

#### **4.5.2 Ketamine use in the general population**

There is only a small amount of data available regarding the prevalence of ketamine use in the Australian general population. Only 0.3% of respondents in the 2013 NDSHS reported ketamine use in the last 12 months and only 1.7% reported ever having used the drug (AIHW, 2014). No prevalence data for ketamine use were available for the Victorian population.

## 4.6 GHB use

### 4.6.1 GHB use among EDRS participants

Lifetime use of GHB was reported by 23% of respondents interviewed in 2015, comparable to previous years (Table 9). Nine per cent of RPU reported recent use. The median reported age of first use was 21 (range 17–38 years).

RPU reported recent GHB use on a median of three days (range 1–25 days) in the preceding six months, compared to 10 days in 2014 (Table 9). A median of 4.25ml was reported as the amount used during a typical episode of use (range 2–20ml), and 5.5ml during a heavy episode of use (range 2–70ml). Two per cent of recent GHB users reported using GHB the last time they used ecstasy.

**Table 9: Patterns of GHB use among EDRS participants, 2010–2015**

GHB	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used (%)	23	24	24	30	34	23
Used last six months (%)	12	6	7	14	13	9
Median days (range) used last 6 months*	2 (1-24)	6.5 (1-25)	6 (1-135)	2 (1-180)	10 (1-40)	3 (1-25)
<b>Median quantities used* (ml)</b>						
Typical (range)	3 (1.8-10) n=11	5.5 (1.8-50) n=6	4.5 (2.5-7) n=5	4.5 (0.5-10) n=14	5.5 (1-20) n=12	4.25 (2-20) n=8
Heavy (range)	6.5 (2-20) n=10	16.5 (1.8-50) n=6	4.5 (3-15) n=5	5 (0.5-25) n=14	6 (1.5-25) n=12	5.5 (2-70) n=8

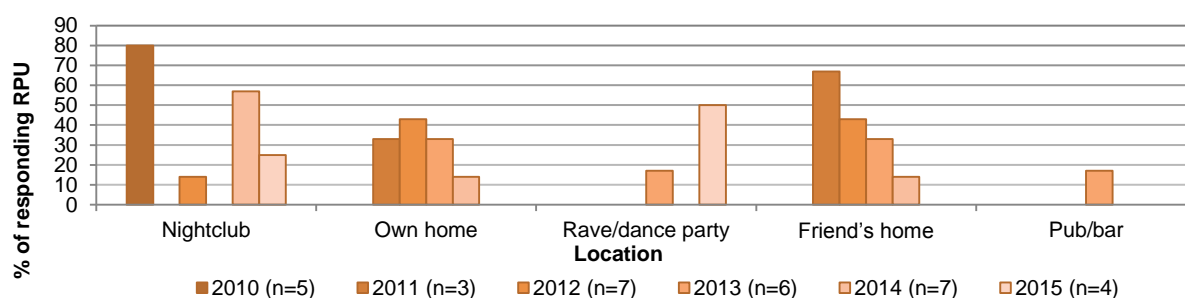
Source: EDRS participant interviews

\* Among those who used GHB in the last 6 months

KE who commented on GHB in 2015 perceived it to be problematic due to the risk of overdose, often as a result of dose miscalculation. KE noted that GHB was often used at music festivals or at nightclubs by younger users (between 18 and 30 years of age) together with alcohol. Two KE who worked as paramedics expressed the need for more education about the risks of GHB use as it greatly burdens the capacity of ambulance services and their available resources.

Only a small number of RPU provided a response for the location of their most recent GHB use. Half of these participants reported that they last used GHB at a rave/dance party (50%) (Figure 7).

**Figure 7: Location of most recent GHB use, 2010–2015**



Source: EDRS participant interviews

#### 4.6.2 **GHB use in the general population**

There is little data available regarding the prevalence of GHB use in the Australian general population. Less than 0.1% of respondents from the 2013 NDSHS reported GHB use in the last 12 months, and only 0.9% reported ever having used the drug (AIHW, 2014). As with ketamine, there are no Victorian data for 2013 (AIHW, 2014).

## 4.7 LSD use

### 4.7.1 LSD use among EDRS participants

Lifetime LSD use reported by RPU in 2015 was slightly higher than IN 2014 (85% vs. 77%) whilst reports of recent use were slightly less common (46% vs. 49%) (Table 10). Recent users of LSD had a median age of 19 years (range 13–28 years) at first use.

Consistent with 2014, participants reported use of LSD on a median of three days in the preceding six months (range 1–40 days). The median reported number of tabs used during a typical session was one (range 0.5–5 tabs) while the median number for a heavy session was two (range 0.5–16 tabs). Twelve per cent of recent LSD users reported using LSD the last time they used ecstasy.

**Table 10: Patterns of LSD use among EDRS participants, 2010–2015**

LSD	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used (%)	72	82	63	88	77	85
Used last 6 months (%)	49	57	38	52	49	46
Median days used last 6 months* (range)	3 (1-36)	4 (1-48)	3 (1-30)	3 (1-26)	3 (1-25)	3 (1-40)
<b>Median quantities used* (tabs)</b>						
Typical (range)	1 (0.5-3) n=45	1 (0.5-6) n=55	1 (0.5-3) n=34	1 (1-3) n=52	1 (0.5-2.5) n=37	1 (0.5-5) n=39
Heavy (range)	1.5 (0.5-10) n=44	2 (0.5-10) n=55	2 (0.5-15) n=34	2 (1-10) n=52	1 (0.5-12) n=37	2 (0.5-16) n=39

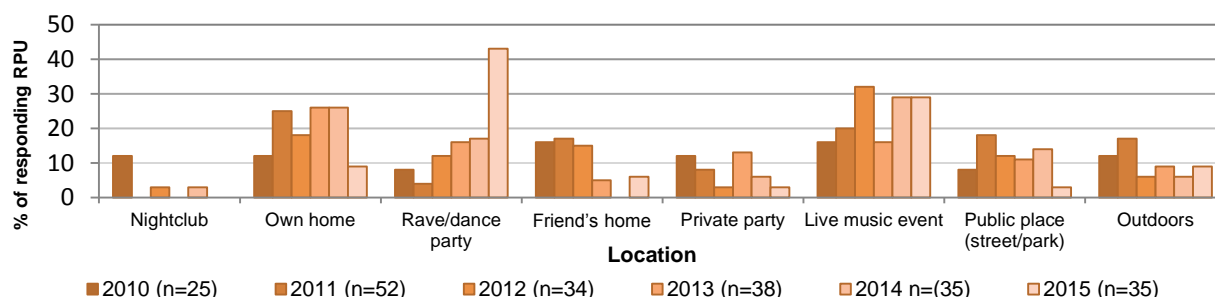
Source: EDRS participant interviews

\* Among those who used LSD in the last 6 months

Among KE who were able to comment on LSD, most reported that its prevalence was steady to increasing when compared to 2014.

The 2015 RPU sample most commonly reported their most recent LSD use occurring at a rave/dance party (43%), a significantly larger proportion than in 2014 (17%,  $p < 0.05$ ), followed by 'live music event' (29%) (Figure 8).

**Figure 8: Location of most recent LSD use, 2010–2015**



Source: EDRS participant interviews

#### **4.7.2 Hallucinogen use in the general population**

'Hallucinogens' is a category included in the NDSHS, but this is a broad category encompassing: LSD, magic mushrooms, angel's trumpet and datura (Department of Health, 2013). The most recent NDSHS data indicates that only 1.3% of the Australian general population reported recent hallucinogen use, while 9.4% reported lifetime use (AIHW, 2014). There were no available data for the Victorian population in 2013.

## Cannabis use

### 4.7.3 Cannabis use among RPU

Cannabis use remains common among EDRS participants, with 90% of the 2015 sample reporting use within the last six months (Table 11). The median reported age of first use was 15 years (range 10–28 years). RPU reported using cannabis on a median of 65 days in the last six months (between two and three times a week), substantially higher than in 2014 (median of 24 days), with 28% reporting daily use in the preceding six months (vs. 11% in 2014).

Furthermore, 50% of recent cannabis users reported using cannabis the last time they used ecstasy, and 84% reported using cannabis to come down from the last occasion of ecstasy use. Just under one-quarter (24%) of recent users reported swallowing cannabis, while 99% reported smoking. Those who reported smoking cannabis in a joint (n=35) on the last occasion of use reported smoking a median of one joint (range 0.1–5 joints) while those who were able to quantify the last time they smoked cannabis in grams (n=43) used a median of one gram (range 0.1–5 grams).

**Table 11: Patterns of cannabis use among EDRS participants, 2010–2015**

Cannabis	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used %	97	96	97	100	100	98
Used last six months %	89	86	85	87	81	90
<b>Of those who had used</b>						
Median days (range) used last 6 months	30 (1-180)	48 (2-180)	72 (1-180)	50 (1-180)	24 (1-180)	65 (1-180)

Source: EDRS participant interviews

KE confirmed cannabis use remained very common and that availability and purity have remained stable. One KE noted that many users of synthetic cannabis have returned to using real cannabis after experiencing the negative side effects of the former. One KE included cannabis as a drug considered most problematic due to its impairing qualities and its association with road trauma.

### 4.7.4 Cannabis use in the general population

The 2013 NDSHS provides national figures regarding the prevalence of cannabis use in the general population. The results of this survey indicated that, in 2013, 10.2% of the Australian population aged 14 years and over reported recent (in the last 12 months) cannabis use (AIHW, 2014). Figures for Victoria were lower than the national figures in 2010, with 9.1% reporting use of the drug within the past 12 months (AIHW, 2014).

## 4.8 Other drug use

### 4.8.1 Alcohol

All RPU reported alcohol use in their lifetime and almost all (96%) reported use in the preceding six months, comparable to previous years (Table 12). The median reported age of first use was 14 years (range 9–19 years).

Participants interviewed in 2015 reported drinking on a median of 32.5 days (range 1–180 days) in the preceding six months, the lowest median ever recorded for the Victorian EDRS. A similar proportion to 2014 reported drinking alcohol on the last occasion of ecstasy use (83% vs. 87% in 2014). Of the participants who reported alcohol use with ecstasy, 64% reported drinking more than five standard drinks while doing so (vs. 76% in 2014). A smaller proportion of RPU reported drinking alcohol during a stimulant drug binge in 2015 than in 2014 (58% vs. 66% respectively).

**Table 12: Patterns of alcohol use among EDRS participants, 2010–2015**

Alcohol	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever used %	99	99	100	100	100	100
Used last 6 months %	97	97	97	93	99	96
Median days (range) used last 6 months	72 (3-180)	48 (1-180)	48 (1-180)	50 (2-180)	48 (2-180)	32.5 (1-180)
Drank alcohol last ecstasy use occasion	86	80	80	66	87	83
Drank more than 5 standard drinks last ecstasy use occasion*	77	78	78	85	76	53
Drank alcohol during a binge**	87	66	82	63	66	58

Source: EDRS participant interviews

\* Of those who reported drinking alcohol last ecstasy use occasion

\*\* Of those who reported bingeing on any stimulant in the six months prior to interview

Alcohol continues to be the drug most KE (10 of 11 in 2015) report as problematic. KE described alcohol use as widespread among RPU, and often used with other drugs, leading to an increased risk of overdose. KE also expressed concern relating to the Australian culture of binge drinking and the easy accessibility of alcohol, which affects both infrequent party-goers as well as long-term alcoholics. Violent behaviour, overdoses, crime, risk-taking behaviour, road trauma and anti-social behaviour were all issues that KE associated with alcohol.

### 4.8.2 Tobacco

Consistent with previous years, reports of lifetime (96%) and recent (87%) tobacco use were common among RPU in 2015. The median age of first tobacco use was 15 years (range 8–27 years). Among those who reported recent use, a smaller proportion of RPU reported smoking daily than in 2014 (46% vs. 53%). Of those who used other drugs during their last occasion of ecstasy use, 63% reported smoking tobacco.

### 4.8.3 Psilocybin or magic mushrooms (mushrooms)

In 2015, 81% of participants reported having ever used mushrooms, slightly more than the proportion interviewed in 2014 (78%). A significantly larger proportion reported using mushrooms in the preceding six months than in 2014 (40% vs. 25%,  $p < 0.05$ ). Similar to 2014, the median reported age of first use of mushrooms was 18 years (range 13–26 years). Frequency of mushroom use was also higher than 2014, with RPU reporting a median of two and a half days (range 1–25 days) in the previous six months (vs. one day, range 1–6 days in 2014).

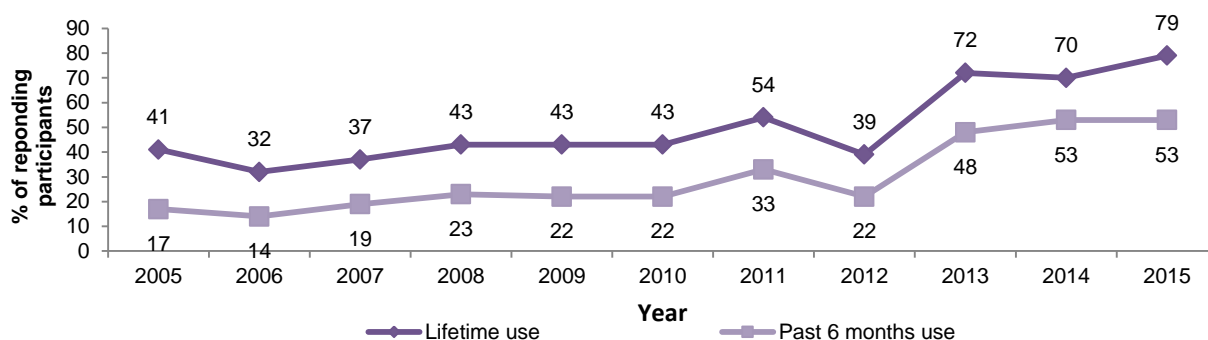
#### 4.8.4 MDA (3,4-methylenedioxyamphetamine)

Thirty-five per cent of the 2015 sample reported lifetime use of MDA (33% in 2014) and 20% reported use in the preceding six months (21% in 2014). The median reported age of first use was 20 years (range 16–38 years). MDA use remained infrequent, occurring on a median of one day in the preceding six months (range 1–12 days), and typically involving a median of one pill/tablet per episode of use (range 1–5 pills/tablets).

#### 4.8.5 Nitrous oxide

In 2015 a slightly larger proportion of RPU reported lifetime use than in 2014 (79% vs. 70% respectively) while an identical proportion reported recent use (53%) (Figure 9). The median reported age of first use of nitrous oxide was 20 years (range 12–28 years). RPU reported using nitrous oxide on a median of three days (range 1–30 days) in the preceding six months, involving a median of four bulbs during a typical session (range 1–75 bulbs). Significantly more participants reported using nitrous oxide during a stimulant drug binge in the preceding six months this year than in 2014 (19% vs. 4%,  $p < 0.05$ ).

Figure 9: Lifetime and recent use of nitrous oxide, 2005–2015



Source: EDRS participant interviews

#### 4.8.6 Amyl nitrite

Two-thirds (67%) of RPU reported lifetime use of amyl nitrite in 2015, similar to 2014 (71%). However, reported use in the preceding six months in 2015 was significantly lower than in 2014 (28% vs. 48% respectively,  $p < 0.05$ ). The median reported age of first use of amyl nitrite was 20 years (range 12–28 years) and it was used infrequently, with RPU reporting using on a median of three days (range 1–30 days) in the preceding six months.

#### 4.8.7 Benzodiazepines

A smaller proportion reported lifetime benzodiazepine use than in 2014 (59% vs. 72%) and a significantly smaller proportion reported recent use (34% vs. 59%,  $p < 0.05$ ). Of those who had used benzodiazepines in the preceding six months, the majority (76% lifetime, 78% recent) reported illicit use (not prescribed to them).

Among recent illicit benzodiazepine users, the median reported age of first use was 20 years (range 14–42 years), with recent users reporting use on a median of three days (range 1–30 days). In 2015, 18% of recent benzodiazepine users (licit or illicit) reported using them to come down on the last occasion they used ecstasy.

#### 4.8.8 Pharmaceutical stimulants

Lifetime use of any pharmaceutical stimulants (e.g. dexamphetamine; methylphenidate or Ritalin) (licit or illicit) was reported by 54% of RPU in 2015, a non-significant decrease from 65% in 2014. Almost all (91%) of the 33% of RPU who reported using pharmaceutical stimulants in the preceding six months had done so illicitly, similar to 2014 (97%). The median reported age of first illicit use was 20 years (range 13–28 years). Illicit use was infrequent, with a median of two days of use in the preceding six

months (range 1–18 days) involving a median of two pills (range 0.5–10 pills). One participant reported using pharmaceutical stimulants the last time they used ecstasy.

#### 4.8.9 Heroin and pharmaceutical opioids

Reported lifetime use of heroin was less prevalent in 2015 than in 2014 (11% vs. 15% respectively), and for methadone (4% vs. 7% respectively) and other (licit or illicit) pharmaceutical opioids, such as morphine or oxycodone (42% vs. 60%, respectively).

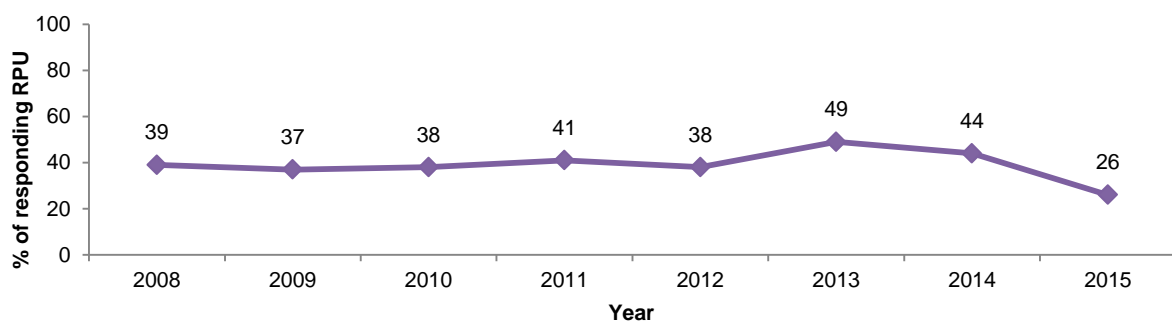
The proportions of RPU reporting using opiates or pharmaceutical opioids in the preceding six months in 2015 were comparable with 2014 for heroin (5% vs. 6% respectively), methadone (1% for both years) and pharmaceutical opioids (licit or illicit) (24% vs. 27% respectively). There were no reports of recent buprenorphine use in the preceding six months in 2015.

The majority (79%) of the 24% of RPU who reported using pharmaceutical opioids in the preceding six months had done so illicitly (not prescribed to them), an increase from 2014 (63%). The median reported age of first illicit use was 19 years (range 14–33 years). Illicit use was infrequent – median frequency of use was one day in the preceding six months (range 1–5 days).

#### 4.9 Bingeing on stimulants or related drugs

For the purpose of this study, bingeing is defined as using any drug(s) continuously for 48 hours or more without sleep (Ovendon & Loxley, 1996). A significantly smaller proportion of RPU in 2015 reported bingeing on stimulants or related drugs in the preceding six months than in 2014 (26% vs. 44%,  $p < 0.05$ ). The median length of the longest binge was 72 hours (range 48–200 hours) and those who reported recent bingeing indicated having done so on a median of three occasions (range 1–48) during that period. Of those respondents who reported that they had recently binged on stimulants or related drugs ( $n=26$ ), ecstasy was the most commonly reported drug used while bingeing (77%), followed equally by tobacco and cannabis (58%) and alcohol (using more than five standard drinks) equally with crystal methamphetamine (46%). The proportion of people reporting recent bingeing over time is presented below (Figure 10).

Figure 10: Percentage of EDRS participants who reported recently bingeing\*, 2008–2015



Source: EDRS participant interviews

\* Bingeing is defined as the use of drugs for 48 hours or more continuously without sleep

## 5 DRUG MARKET: PRICE, PURITY, AVAILABILITY & SUPPLY

### Summary

- The median price of ecstasy reported by participants in 2015 was \$25, consistent with 2014. A higher percentage of participants perceived the purity of ecstasy as fluctuating than in 2014.
- In 2015, most participants who were able to comment on the purity of crystal methamphetamine perceived it as either high or fluctuating. The median price per point of crystal decreased from \$70/point in 2014 to \$50/point in 2015.
- 94% of all responding participants reported that crystal methamphetamine was either 'very easy' or 'easy' to obtain.
- The average purity of all seizures of methamphetamines analysed by the Victoria Police Forensic Services Department during the 2014/2015 financial year was 75%, an increase from the purity measured in the 2013/2014 financial year (67%).
- Cocaine appears to be easier to obtain in 2015 than 2014, with a significantly larger proportion who reported it to be 'very easy' to obtain.

## 5.1 Ecstasy

### 5.1.1 Price

The median price of ecstasy reported by Victorian EDRS participants was \$25 per pill, consistent with 2014 (Table 13).

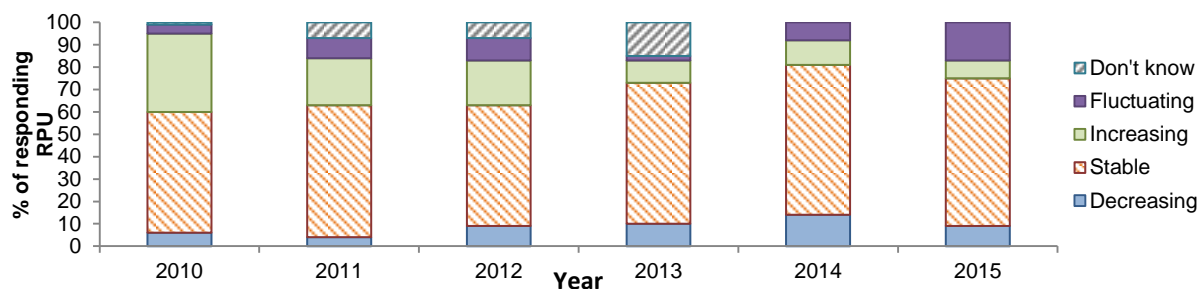
**Table 13: Price of ecstasy pill purchased by EDRS participants, 2010–2015**

Ecstasy	2010	2011	2012	2013	2014	2015
Median price per pill	\$25	\$25	\$30	\$30	\$25	\$25
(range)	(\$6-\$35)	(\$10-\$50)	(\$7-\$50)	(\$10-50)	(\$6-40)	(\$15-\$45)

Source: EDRS participant interviews

Also consistent with previous years, most of the 2015 RPU sample reported that the price of ecstasy had remained stable in the six months prior to interview (66%) (Figure 11).

**Figure 11: Recent changes in price of ecstasy purchased by EDRS participants, 2010–2015**

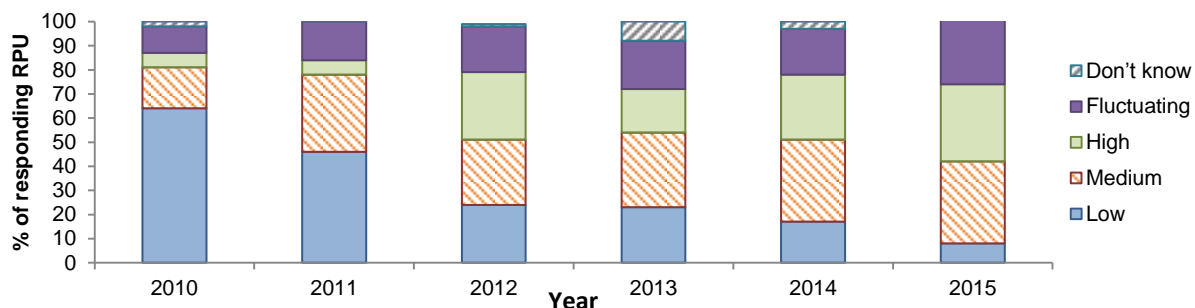


Source: EDRS participant interviews

### 5.1.2 Purity

In contrast to the stability of reported ecstasy prices, RPU considered the purity of ecstasy to be variable (Figure 12). Compared to 2014, a smaller proportion of the 2015 RPU sample reported the purity as low (8% vs. 17%), a consistent proportion reported medium purity (34%) and larger proportions reported purity as high (32% vs. 27% in 2014) and fluctuating (27% vs. 19% in 2014). There appears to be a decreasing trend in 'low' purity responses between 2010 and 2015.

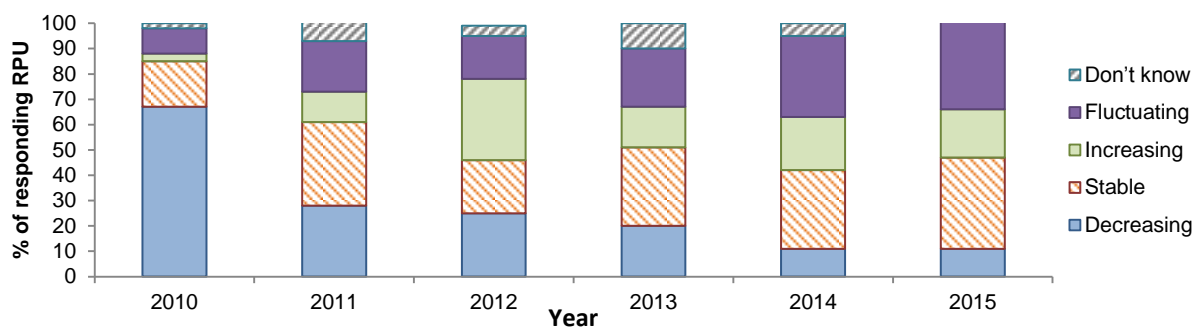
**Figure 12: RPU reports of current ecstasy purity, 2010–2015**



Source: EDRS participant interviews

Furthermore, as shown in Figure 13, the proportions of changes in purity are similar to 2014. Eleven per cent reported decreasing purity in 2015 and 2014, 36% reported no change in purity (31% in 2014), 19% reported increasing purity (21% in 2014) and 35% reported fluctuating purity (32% in 2014).

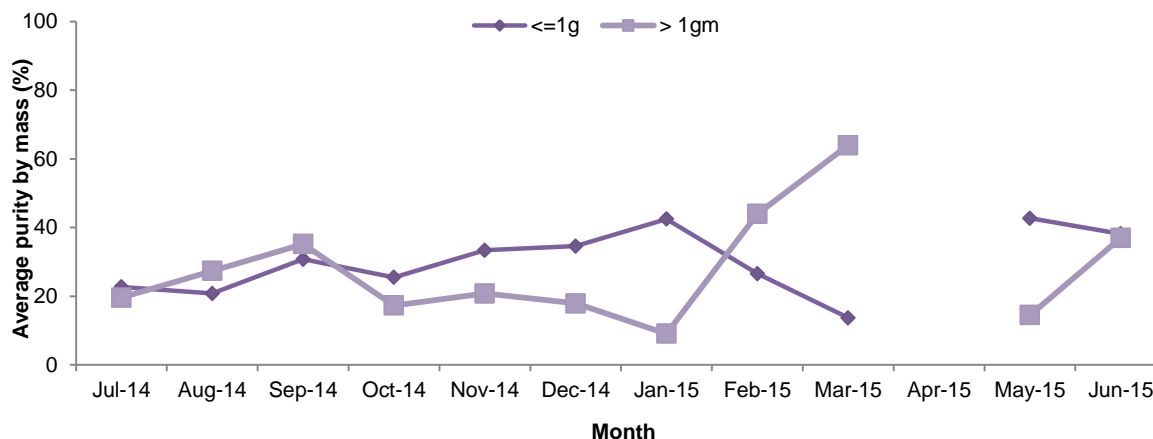
**Figure 13: RPU reports of change in purity of ecstasy in the preceding six months, 2010–2015**



Source: EDRS participant interviews

Ecstasy seizures analysed by the Victoria Police Forensic Services Department during the 2014/2015 financial year averaged 29% purity (range 9%–64%) (Figure 14) – slightly higher than the average in 2014 (23%) and very similar to the average in 2013 (30%).

**Figure 14: Purity of ecstasy seizures (includes MDMA, MDEA and MDA) by Victorian law enforcement, July 2014–June 2015\***

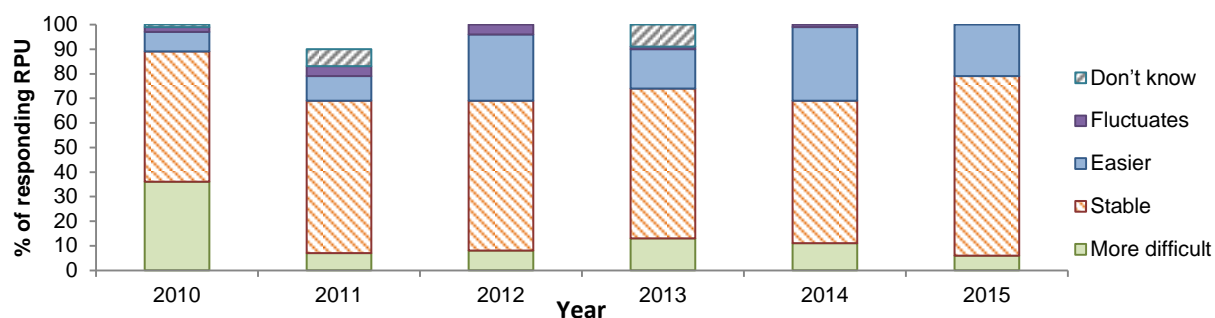


\*Figures for April 2015 not available  
Source: Victoria Police Forensic Services Department

### 5.1.3 Availability

In 2015, a significantly higher percentage of RPU reported that ecstasy was ‘very easy’ to obtain than in 2014 (62% vs. 46%,  $p < 0.05$ ); 36% reported it to be ‘easy’ to obtain, while only two per cent reported it to be ‘difficult’ to obtain. Consistent with 2014 and 2013, no participants reported ecstasy to be ‘very difficult’ to obtain. Furthermore, a significantly larger proportion reported ecstasy availability to be ‘stable’ in 2015 (73% vs. 58% in 2014,  $p < 0.05$ ). Twenty-one per cent reported that ecstasy had become easier to source in the six months preceding interview while six per cent reported that it was more difficult.

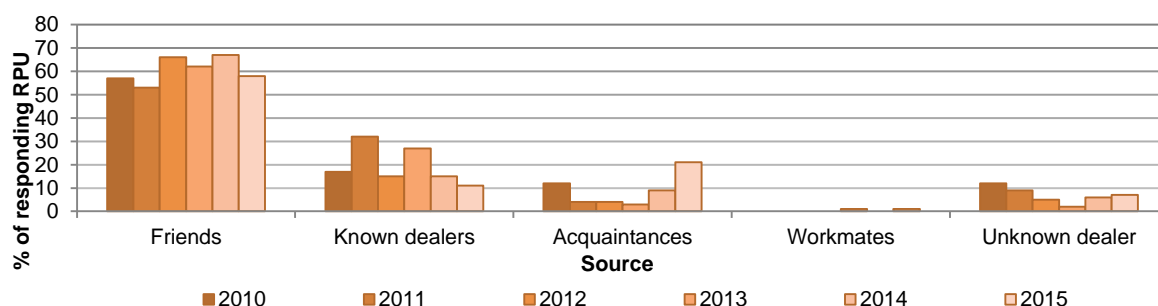
**Figure 15: RPU reports of changes in availability of ecstasy in the preceding six months, 2010–2015**



Source: EDRS participant interviews

As with previous years, most RPU interviewed in 2015 reported how they had obtained ecstasy the last time it was used in the six months prior to interview. Among those who had obtained ecstasy, most 58% obtained it from friends or acquaintances (21%) (Figure 16). In 2015, ecstasy was reported to be most commonly obtained at a friend's home (30%) or at a nightclub (17%) on the last occasion (Figure 17).

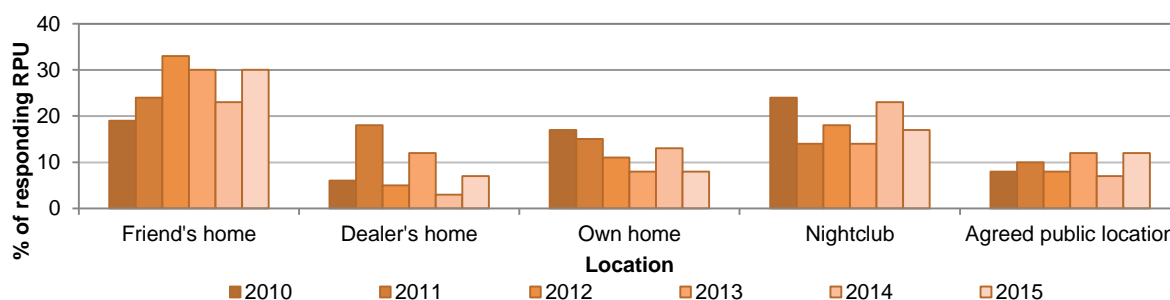
**Figure 16: People from whom ecstasy was last purchased in the preceding six months, 2010–2015**



Source: EDRS participant interviews

Note: 2008 data represent the person from whom ecstasy was purchased in the last six months, not the *last* time

**Figure 17: Locations where ecstasy was last purchased in the preceding six months, 2010–2015**



Source: EDRS participant interviews

Note: 2008 data represent the person from whom ecstasy was purchased in the last six months, not the *last* time

### 5.1.4 Ecstasy markets and patterns of ecstasy purchasing

Patterns of ecstasy purchasing by RPU in 2015 were comparable with previous years. Participants reported that they had scored ecstasy from a median of four people in the preceding six months. The majority reported purchasing ecstasy fortnightly or less often (82%), obtaining a median of four pills (range 1–100), and usually obtained pills for themselves as well as other people (56%) (Table 14).

**Table 14: Patterns of ecstasy purchasing in preceding six months, 2010–2015**

<b>Ecstasy</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
	<b>(n=100)</b>	<b>(n=101)</b>	<b>(n=100)</b>	<b>(n=100)</b>	<b>(n=100)</b>	<b>(n=100)</b>
<b>Median no. of people purchased from</b>	3	3	3	3	4	4
<b>Purchased for (%)</b>						
Self only	23	34	41	32	40	37
Self and others	73	64	55	59	58	56
Others only	1	0	3	2	0	1
<b>No. of times purchased in the last 6 months (%)*</b>						
1-6	40	47	37	46	34	45
7-12	40	38	42	31	41	27
13-24	18	13	15	21	22	24
25 +	2	2	2	2	2	4
<b>Median no. of ecstasy tablets purchased</b>	5	4	4	4	4	4

Source: EDRS participant interviews

\* Among those who reported purchasing in last six months

## 5.2 Methamphetamine

### 5.2.1 Price

Consistent with previous years, the median reported price per gram of speed was \$200 and the median price for a point remains consistent with 2014 at \$20 (Table 15). Of the 13 RPU who commented on the recent price of speed in 2014, 85% reported that the price had remained stable in the preceding six months, with eight per cent citing both decreasing and increasing price for speed (Figure 18).

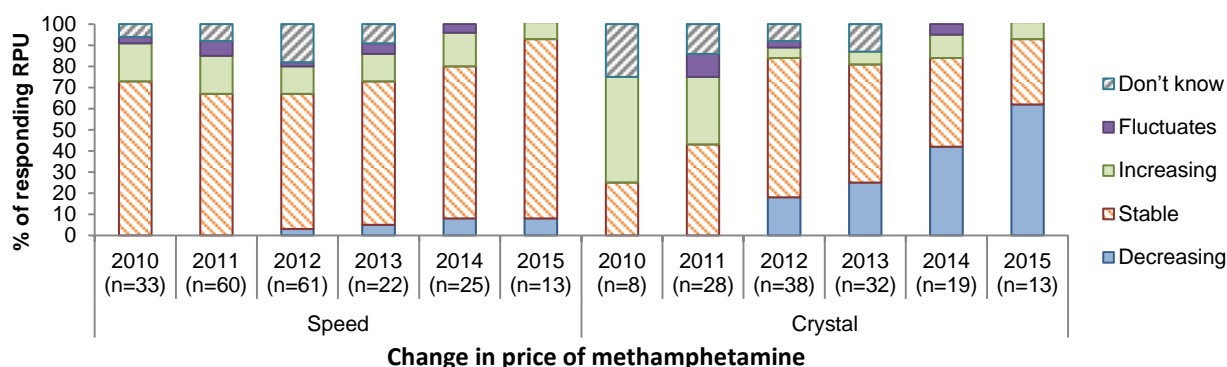
The median reported price per point of crystal methamphetamine was \$50, a slight decrease from RPU reports in 2014 (\$70). Only one participant was able to report a price for crystal methamphetamine in grams (\$400). Thirteen participants commented on the recent price of crystal methamphetamine, and over half (62%) reported a decrease (vs. 42% in 2014). A small proportion reported the price of crystal methamphetamine remaining stable (31% vs. 42% in 2014) and only eight per cent reported an increase in price (vs. 11% in 2014) (Table 15). There were no reports of methamphetamine base prices.

**Table 15: Price of various methamphetamine forms purchased by RPU, 2010–2015**

Methamphetamine	2010	2011	2012	2013	2014	2015
<b>Speed – median price</b>						
Point	\$20	\$40	\$50	\$35	\$20	\$20
(range)	(\$15-\$200)	(\$20-\$100)	(\$14-\$200)	(\$20-100)	(\$20-25)	(\$10-\$50)
	n=6	n=25	n=7	n=10	n=4	n=6
Gram	\$200	\$200	\$200	\$200	\$200	\$200
(range)	(\$90-\$250)	(\$60-\$600)	(\$75-\$300)	(\$60-\$500)	(\$38-\$280)	(\$150-\$400)
	n=21	n=51	n=48	n=15	n=15	n=9
<b>Base – median price</b>						
Point	–	\$40		\$80	\$20	–
(range)		(\$20-\$60)	--	(\$30-\$100)		
		n=2		n=3	n=1	
Gram	–	\$180	\$300	\$400	\$200	–
(range)		(\$60-\$450)	(\$300-\$350)	(\$300-750)		
		n=5	n=3	n=3	n=1	
<b>Crystal – median price</b>						
Point	\$100	\$100	\$100	\$80	\$70	\$50
(range)	(\$50-\$100)	(\$20-\$200)	(\$60-\$200)	(\$40-100)	(\$20-120)	(\$50-\$100)
	n=4	n=19	n=32	n=29	n=17	n=13
Gram	\$800	\$800	\$700	\$600	\$550	\$400
(range)	(\$450-\$1000)	(\$200-\$1000)	(\$300-\$800)	(\$300-\$850)	(\$300-\$750)	(\$400-\$400)
	n=3	n=19	n=21	n=18	n=10	n=1

Source: EDRS participant interviews

**Figure 18: Recent changes in price of speed and crystal methamphetamine purchased by EDRS participants, 2010–2015**



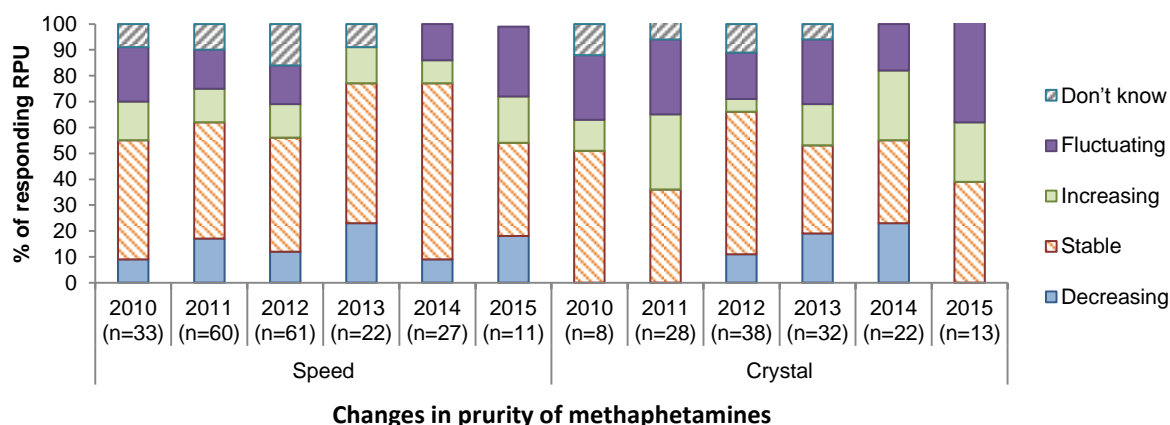
Source: EDRS participant interviews

### 5.2.2 Purity

In 2015, of the 13 participants who commented on the current purity of speed, 23% reported that it was of high purity, 15% reported low and 15% fluctuating purity. Most respondents perceived the current purity of speed to be medium (46%), comparable with 2014, and most viewed the change in purity of speed as remaining stable in the preceding six months (36% vs. 68% in 2014) or fluctuating (27% vs. 14% in 2014) (Figure 19).

Participants who were able to comment on the current purity of crystal methamphetamine (n=13) generally reported it as high (43%) or fluctuating (36%). Twenty-one per cent reported the purity of crystal methamphetamine to be medium (vs. 38% in 2014). There were mixed responses for crystal methamphetamine purity changes in the preceding six months. Equal proportions (39%) reported that purity was stable and fluctuating, while 23% reported increasing purity. In contrast to 2014, when 23% reported decreasing purity, there were no reports of decreasing purity for crystal methamphetamine in 2015 (Figure 19). There were no responses from participants for methamphetamine base in 2015.

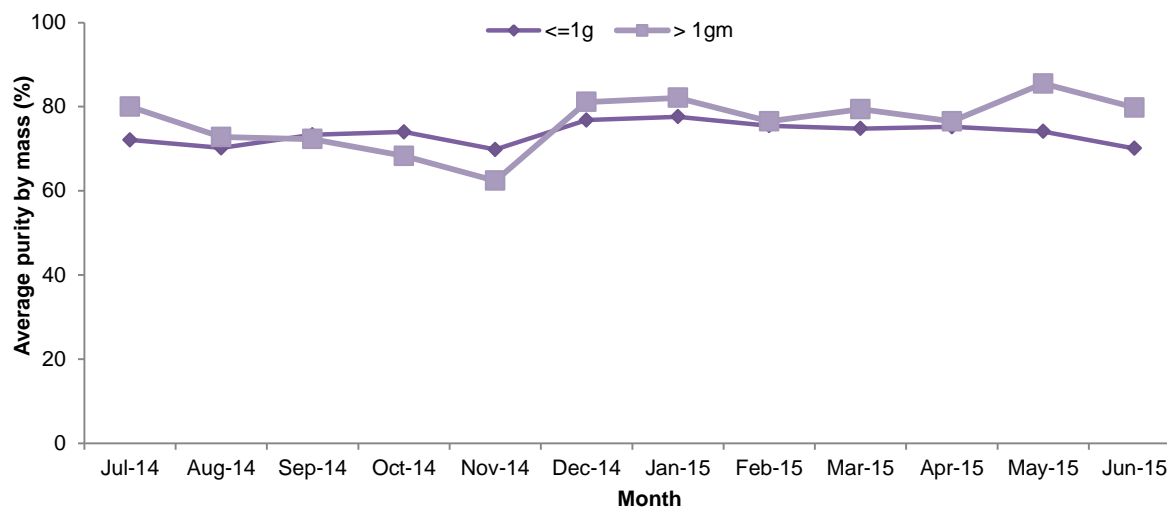
**Figure 19: Reports of change in purity of speed and crystal methamphetamine in the preceding six months among EDRS participants, 2010–2015**



Source: EDRS participant interviews

The average purity of all seizures of methamphetamines analysed by the Victoria Police Forensic Services Department during the 2014/2015 financial year was 75% (range 62%–86%) (Figure 20), higher than the average purity measured in the 2013/2014 financial year (67%).

**Figure 20: Average purity of methamphetamine seizures by Victorian law enforcement, July 2014–June 2015**



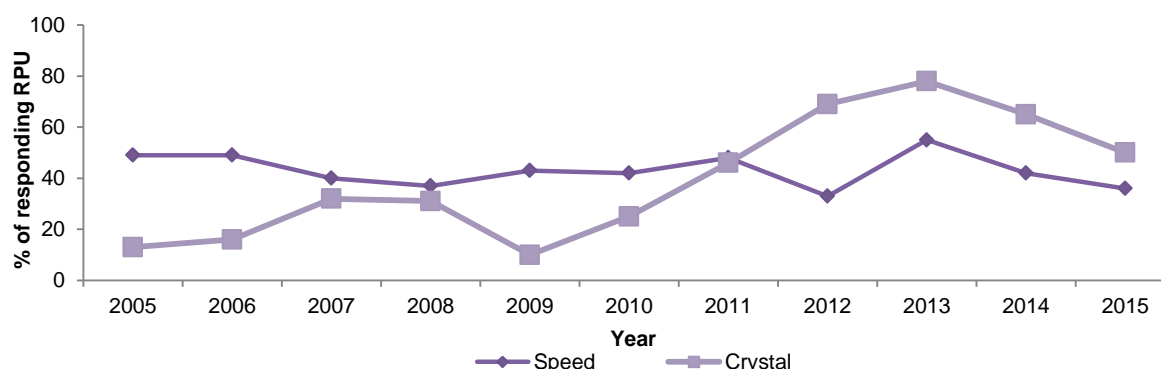
Source: Victoria Police Forensic Services Department

### 5.2.3 Availability

In 2015, there were mixed responses for the current availability of speed among participants who commented (n=13). Equal proportions reported that it was 'very easy' and 'easy' to obtain (36% vs. 45% and 31% respectively in 2014) and 29% reported that it was difficult to obtain (vs. 27% in 2014). More than half (58%) reported that availability was stable, with 17% who reported that it was becoming more difficult and a quarter (25%) reported that it was becoming easier to obtain during the six months preceding their interview.

Of the RPU who commented on the availability of crystal methamphetamine in 2015 (n=16), half (50%) reported it as 'very easy', 44% as 'easy' to obtain and one participant (6%) reported that it was very difficult to obtain. Over half (53% vs. 70% in 2014) of responding RPU reported that availability remained stable during the six months preceding their interview while one third (33% vs. 26% in 2014) reported that it was easier for them to obtain and 13% noted that it was more difficult (vs. 4% in 2014). There were no responses from participants for methamphetamine base in 2015.

**Figure 21: Changes to current methamphetamine availability over time – percentage of EDRS participants who reported that it was 'very easy' to obtain speed and crystal methamphetamine in Victoria, 2005–2015**



Source: EDRS participant interviews

Similar to 2014, participants mostly reported last purchasing speed from friends (79%) and obtaining it in a private home, a friend's home (43%) or a dealer's home (7%). In relation to crystal methamphetamine, in 2015, RPU most commonly reported last purchasing from friends (66%) and

obtaining it at their friend's home (60%). There were no responses from participants for methamphetamine base in 2015.

## 5.3 Cocaine

### 5.3.1 Price

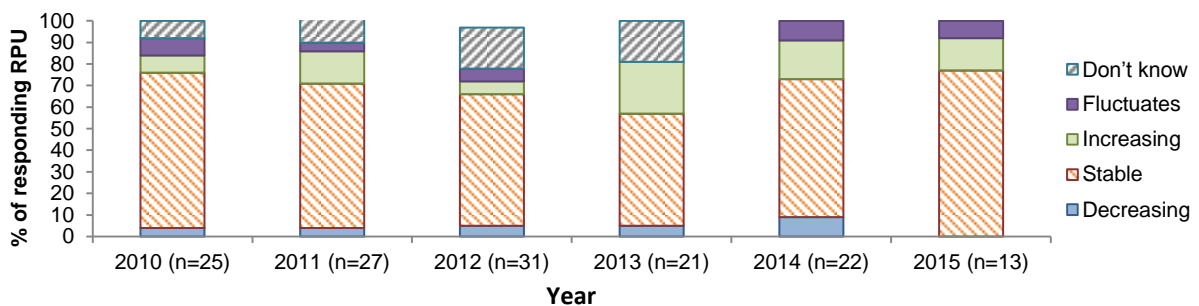
In 2015, the median reported price of cocaine was \$300 per gram, remaining stable from 2013 (Table 16). Of the RPU able to comment on the change in price of cocaine, a larger proportion in 2015 reported it as stable than in 2014 (77% vs 64% respectively) (Figure 22). 2015 was also the first year since 2005 when there were no reports of decreasing price for cocaine.

**Table 16: Price of cocaine purchased by EDRS participants, 2010–2015**

Cocaine	2010	2011	2012	2013	2014	2015
Median price per gram	\$300	\$320	\$350	\$300	\$300	\$300
(range)	(\$80-\$400) n=18	(\$200-\$500) n=23	(\$250-\$400) n=27	(\$150-\$400) n=19	(\$100-\$450) n=20	(\$280-\$400) n=11

Source: EDRS participant interviews

**Figure 22: Recent changes in price of cocaine purchased by EDRS participants, 2010–2015**

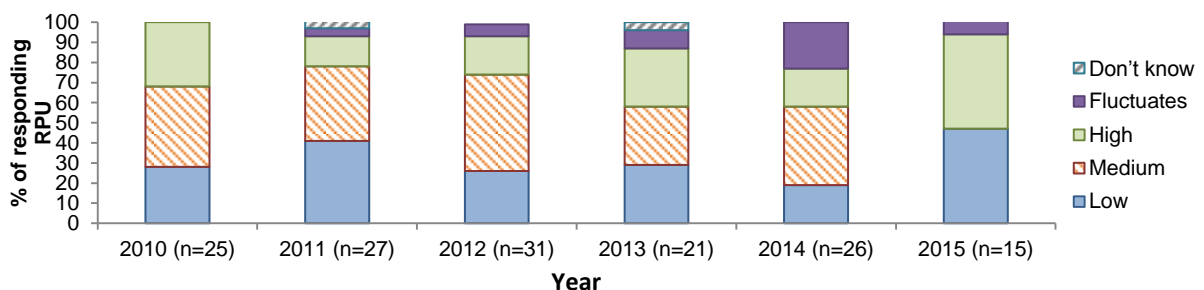


Source: EDRS participant interviews

### 5.3.2 Purity

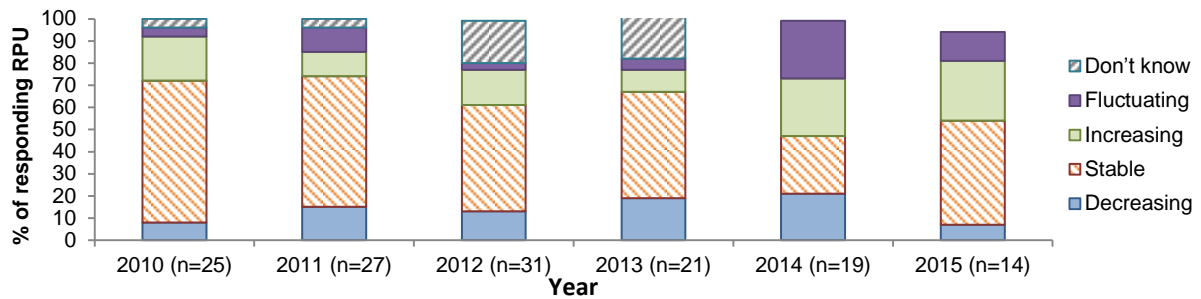
Of the 2015 RPU sample who commented (n=15), equal proportions (47%) perceived current cocaine purity to be low and high (vs. 19% in 2014) while one participant (7%) reported that purity fluctuated (Figure 23). Half (50%) of the responding RPU reported that purity remained stable in the six months preceding their interview, and 27% reported that purity was increasing, comparable with 2014 (26%) (Figure 24).

**Figure 23: RPU reports of current cocaine purity, 2010–2015**



Source: EDRS participant interviews

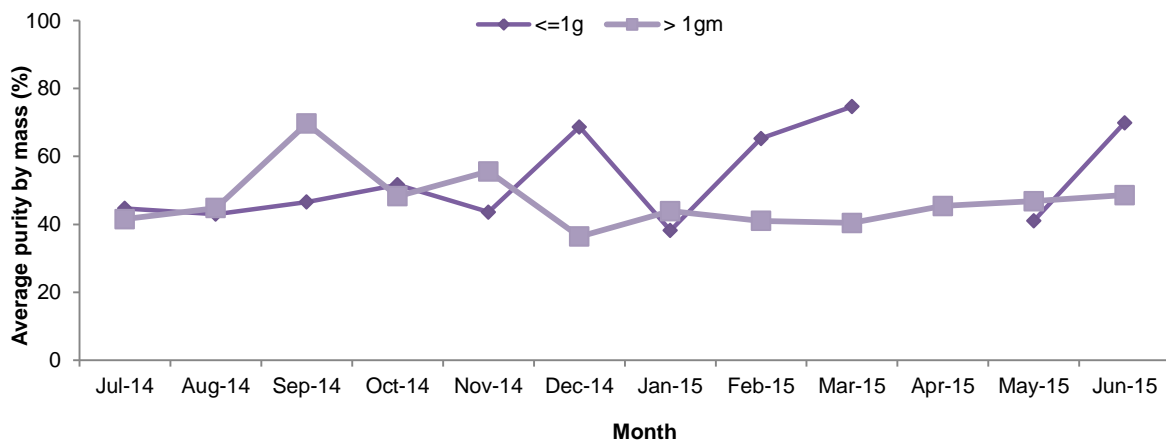
**Figure 24: RPU reports of changes in cocaine purity in the past six months, 2010–2015**



Source: EDRS participant interviews

Cocaine seizures analysed by the Victoria Police Forensic Services Department during the 2014/2015 financial year averaged 50% purity (range 36%–70%), a figure slightly higher than in the previous financial year (44% in 2013/2014) (Figure 25).

**Figure 25: Average purity of cocaine seizures by Victorian law enforcement, July 2014-June 2015\***

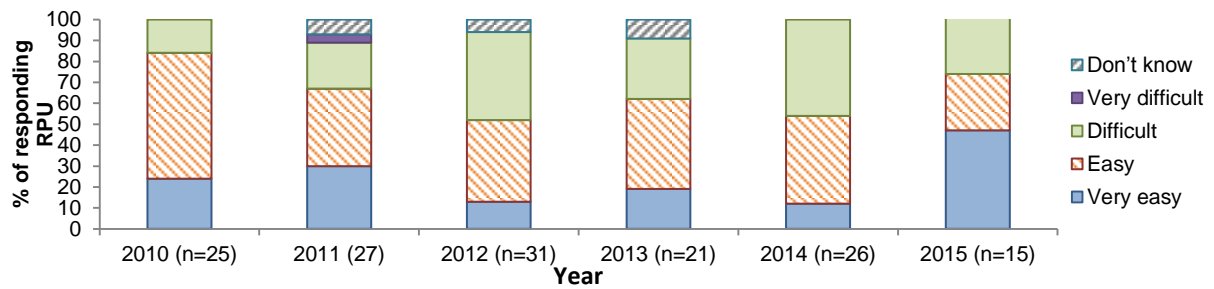


\*Figure for <=1g in April 2015 not available  
Source: Victoria Police Forensic Services Department

### 5.3.3 Availability

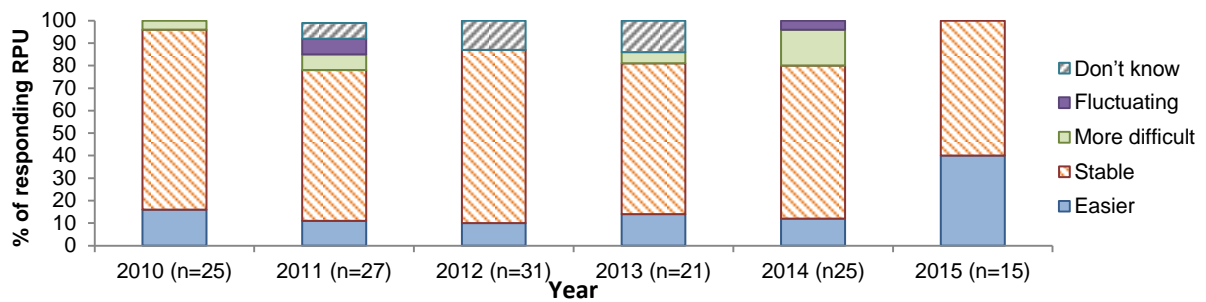
In 2015, the majority (47%, vs. 12% in 2014,  $p < 0.05$ ) of responding RPU reported cocaine to be ‘very easy’ to obtain, followed equally by ‘easy’ and ‘difficult’ (27% vs. 42% and 46% in 2014 respectively). When compared to the proportions in 2014, there appears to be a shift toward cocaine being easier to obtain (Figure 26). This is also reflected in the proportions for changes in cocaine availability: 60% reported that availability was stable and 40% reported it to be easier to obtain (Figure 27).

**Figure 26: Current availability of cocaine, 2010–2015**



Source: EDRS participant interviews

**Figure 27: Changes in cocaine availability in the preceding six months, 2010–2015**



Source: EDRS participant interviews

As in previous years, RPU who commented on the last person from whom they purchased cocaine in 2015 (n=16) reported obtaining it mainly from friends or a known dealer (40% equally). The most common locations where cocaine was purchased were at a ‘friend’s home’, ‘dealer’s home’ or at ‘an agreed public location’ (20% equally) followed by ‘nightclubs’ and ‘pubs’ (13% equally).

## 5.4 Ketamine

### 5.4.1 Price

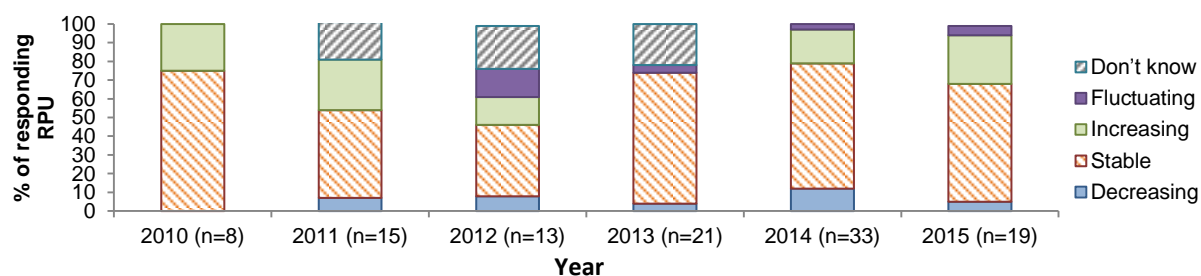
The median reported price of ketamine remained unchanged from 2011 at \$200 per gram (Table 17). Price changes were also comparable with 2014, with most (63%) participants reporting it to be stable (vs. 67% in 2014) in the preceding six months and 26% reporting it to be increasing (vs. 26% in 2014) (Figure 28).

**Table 17: Price of ketamine purchased by RPU, 2010–2015**

Ketamine	2010	2011	2012	2013	2014	2015
Median price per gram	\$220	\$200	\$200	\$200	\$200	\$200
(range)		(\$80-\$400)	(\$150-\$300)	(\$30-\$300)	(\$100-\$400)	(\$150-\$230)
	n=2	n=15	n=12	n=21	n=25	n=10

Source: EDRS participant interviews

**Figure 28: Recent changes in price of ketamine purchased by RPU, 2010–2015**

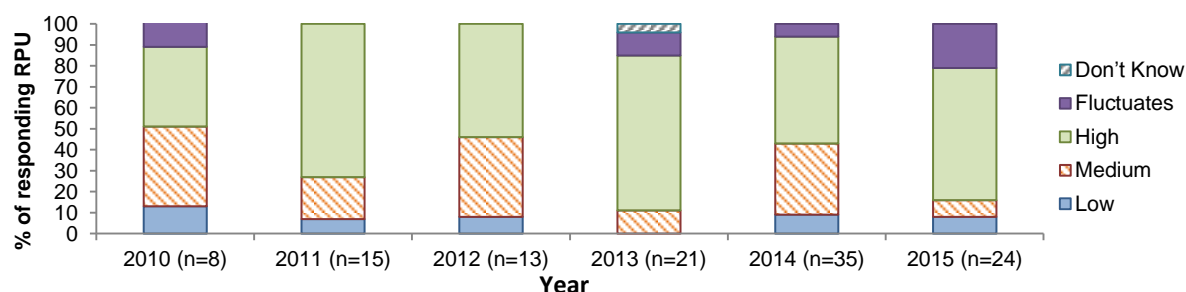


Source: EDRS participant interviews

### 5.4.2 Purity

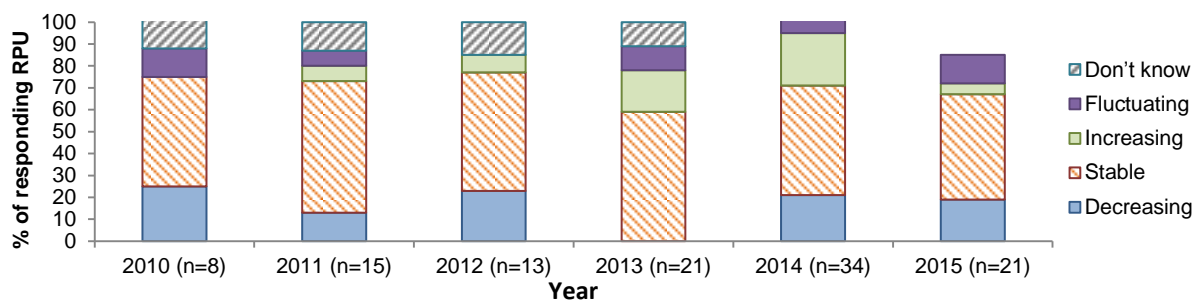
The majority (63%) of responding RPU perceived current ketamine purity to be high (vs. 51% in 2014) whilst 21% noted that it was fluctuating. Low and medium purity were each reported by eight per cent of responding RPU. When compared with 2014, there appears to be a shift from high and medium to high and fluctuating purity (Figure 29). Responses were mixed for the change in ketamine purity in the preceding six months. Almost half (48%) reported that purity remained stable, followed by 29% who reported that it was fluctuating (Figure 30).

**Figure 29: RPU reports of current purity of ketamine, 2010–2015**



Source: EDRS participant interviews

**Figure 30: RPU reports of recent change in ketamine purity, 2010–2015**



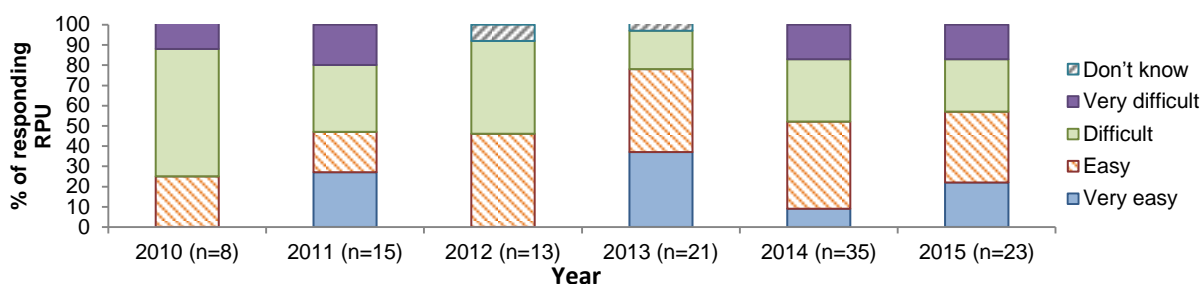
Source: EDRS participant interviews

### 5.4.3 Availability

Of the RPU who were able to comment in 2015 (n=23), a higher percentage (22%) reported that ketamine was 'very easy' to obtain than in 2014 (9%). However, a smaller proportion reported that it was 'easy' to obtain (35%, vs 43% in 2014). Forty-three per cent reported that ketamine was either 'difficult' or 'very difficult' to obtain (vs. 48% in 2014) (Figure 31).

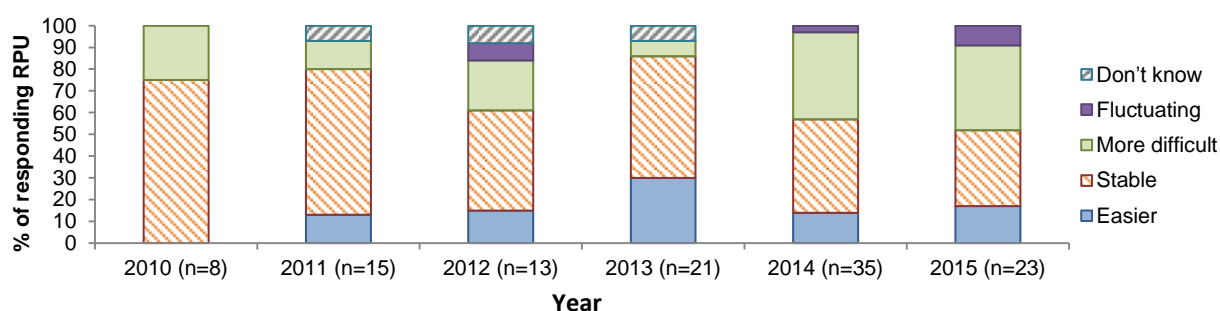
Proportions reporting changes in availability in 2015 were similar to those in 2014. Of the RPU who were able to comment in 2015 (n=23), 39% noted that it was more difficult to obtain in the preceding six months, followed closely by those who reported that availability was stable (35%) (Figure 32).

**Figure 31: RPU reports of current ketamine availability, 2010–2015**



Source: EDRS participant interviews

**Figure 32: Changes in availability of ketamine over the past six months, 2010–2015**



Source: EDRS participant interviews

Among RPU who commented about the last person from whom they purchased ketamine in 2015 (n=25), most reported obtaining it from friends (44%). The most common locations where ketamine was recently purchased were a nightclub (36%) and a friend's home (24%).

## 5.5 GHB

### 5.5.1 Price

Only two participants from the 2015 sample were able to comment on the current price of GHB; the median of their reported prices was \$2.5 per ml (Table 18).

**Table 18: Price of GHB purchased by RPU, 2010–2015**

GHB	2010	2011	2012	2013	2014	2015
Median price per ml	\$4.25	\$3	\$3	\$5	\$3	\$2.5
(range)	(\$3-\$5)	(\$0.35-\$3)	(\$3-\$4)	(\$2-\$12)	(\$2-\$4)	(\$2-\$3)
	n=4	n=3	n=7	n=5	n=6	n=2

Source: EDRS participant interviews

### 5.5.2 Purity

Too few RPU were able to comment.

### 5.5.3 Availability

Too few RPU were able to comment.

## 5.6 LSD

### 5.6.1 Price

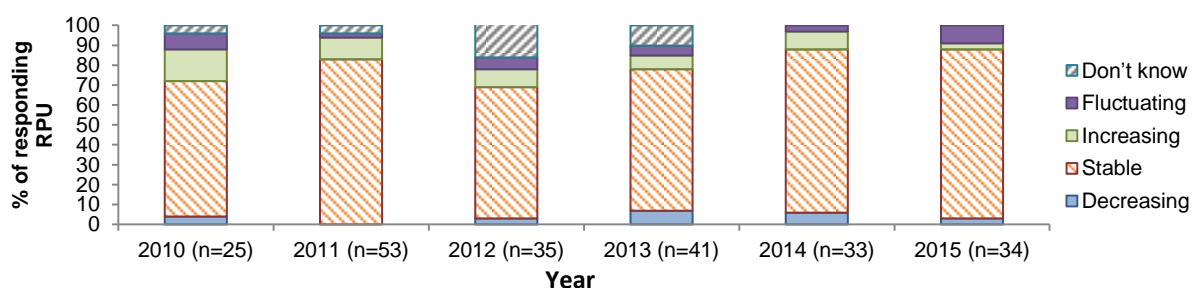
The median reported price of LSD was \$15 per tab in 2015, unchanged from 2011 (Table 19). More than two-thirds (85%) of RPU reported the price of LSD being stable in the preceding six months, comparable with 2014 (82%) (Figure 33).

**Table 19: Prices of LSD purchased by EDRS participants, 2009-2014**

LSD	2010	2011	2012	2013	2014	2015
Median price per tab	\$10	\$15	\$15	\$15	\$15	\$15
(range)	(\$10-\$25)	(\$10-\$30)	(\$10-\$50)	(\$10-\$30)	(\$5-\$20)	(\$10-\$30)

Source: EDRS participant interviews

**Figure 33: Recent changes in price of LSD purchased by EDRS participants, 2010–2015**

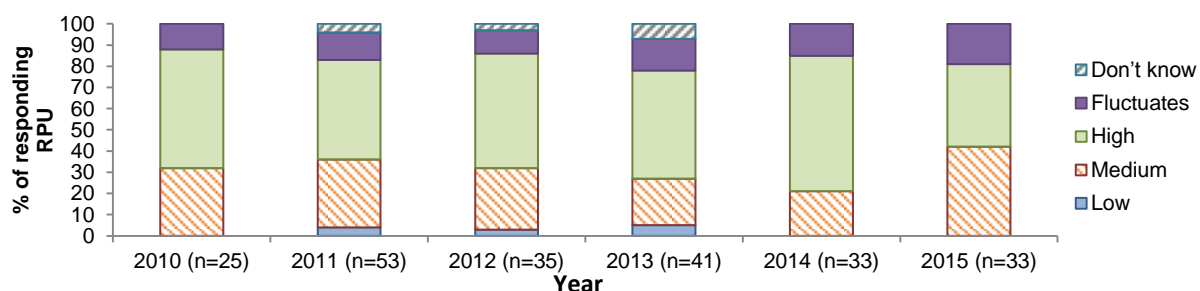


Source: EDRS participant interviews

### 5.6.2 Purity

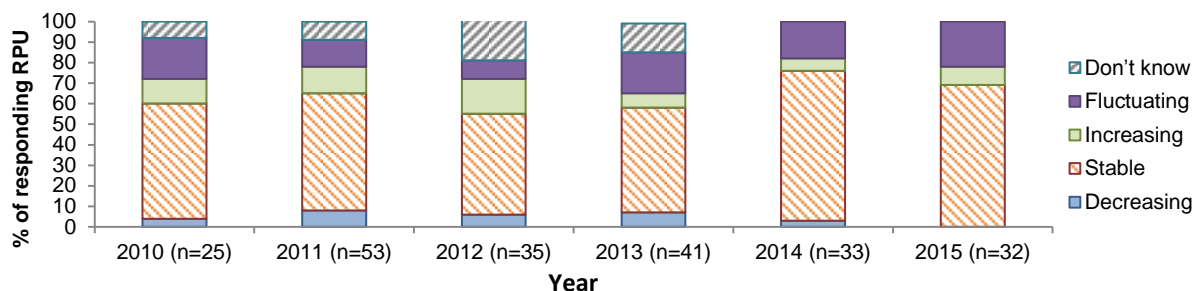
Consistent with previous years, the majority of recent LSD users reported the purity of LSD as medium (42%) or high (39%) in 2015 (Figure 34) and being stable (69%) over the six months preceding interview (Figure 35).

**Figure 34: RPU reports of purity of LSD in the preceding six months, 2010–2015**



Source: EDRS participant interviews

**Figure 35: RPU reports of change in purity of LSD in the preceding six months, 2010–2015**



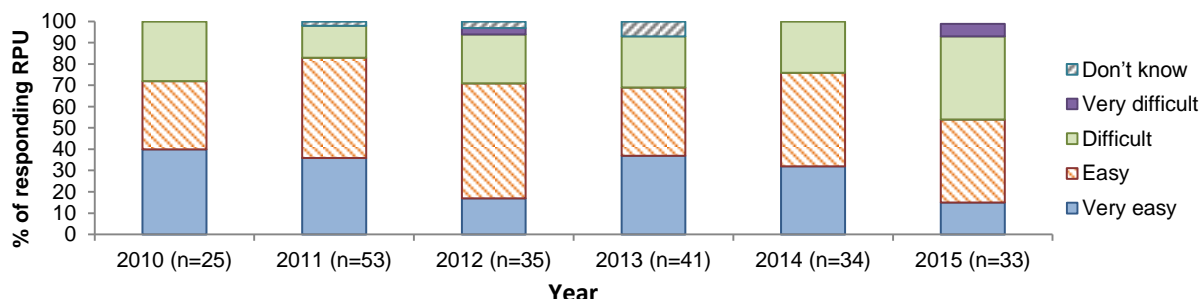
Source: EDRS participant interviews

### 5.6.3 Availability

In 2015, LSD appeared to be shifting towards being more difficult to obtain. Responding RPU reported LSD availability as 'easy' and 'difficult' equally at 39% (vs. 44% and 24% respectively in 2014). Furthermore, a smaller proportion (15%) reported that LSD was 'very easy' to obtain than in 2014 (32%), but this was not statistically significant. A small proportion (6%) reported that it was 'very difficult' to obtain (vs. 0% in 2014) (Figure 36).

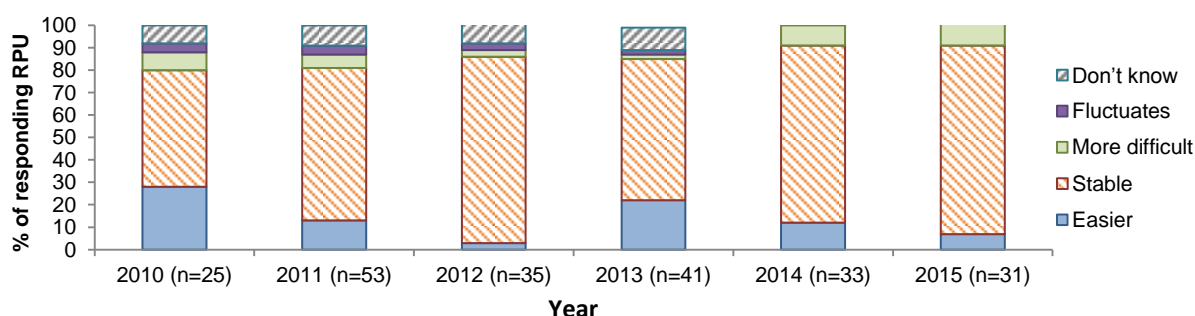
Proportions reporting changes in availability of LSD remained comparable with 2014. The majority (84% vs. 79% in 2014) of responding RPU noted that availability was stable. Small proportions reported that LSD was easier to obtain (7%) and more difficult to obtain (10%) (Figure 37).

**Figure 36: Current LSD availability, 2010–2015**



Source: EDRS participant interviews

**Figure 37: Changes in availability of LSD, 2010–2015**



Source: EDRS participant interviews

Similar to 2014, the last person from whom 2015 RPU purchased LSD was most often a friend (60%) or a known dealer (17%). The most common location for the last purchase of LSD was at a friend's home (29%) followed by 'raves' and 'live music events', both at 23%.

## 5.7 Cannabis

### 5.7.1 Price

Participants were asked questions about the price, potency and availability of both hydroponic cannabis and bush/naturally-grown cannabis.

The median price of hydroponic cannabis remained unchanged at \$15 for a gram in 2015. The median price for an ounce of hydroponic cannabis increased slightly to \$245. The median price of a gram of bush cannabis (\$10 in 2015) decreased slightly from 2014 (\$15), as did the median price of an ounce (\$210 vs. \$220 in 2014) (Table 20).

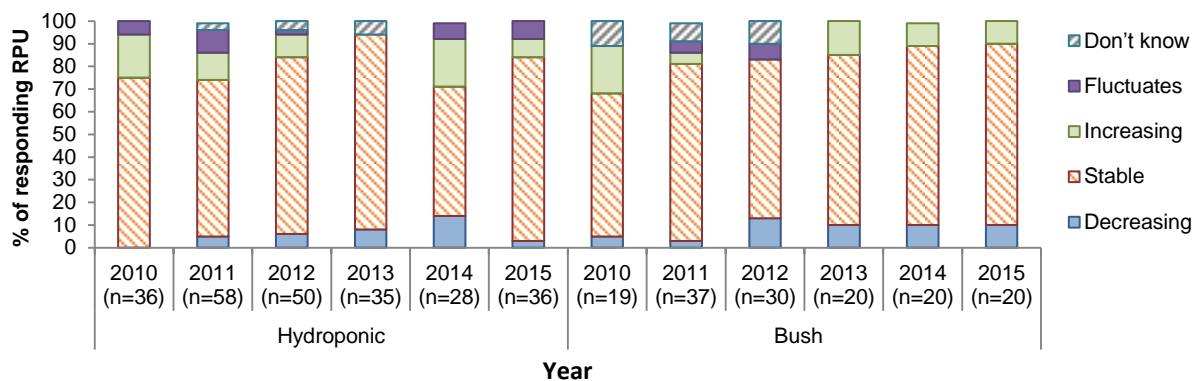
**Table 20: Price of cannabis purchased by EDRS participants, 2010–2015**

Cannabis	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
<b>Median price (range)</b>						
Hydroponic						
Gram	\$20 (\$10-\$30) n=20	\$18.75 (\$10-\$30) n=44	\$15 (\$10-\$25) n=33	\$15 (\$10-\$25) n=19	\$15 (\$7-\$20) n=15	\$15 (\$10-\$25) n=19
Ounce	\$250 (\$200-\$300) n=10	\$250 (\$70-\$320) n=38	\$250 (\$150-\$320) n=23	\$250 (\$200-\$300) n=12	\$230 (\$200-\$300) n=13	\$245 (\$150-\$300) n=18
Bush						
Gram	\$16 (\$15-\$25) n=8	\$15 (\$10-\$70) n=30	\$15 (\$5-\$65) n=22	\$12 (\$10-\$15) n=13	\$15 (\$5-\$25) n=11	\$10 (\$10-\$30) n=11
Ounce	\$270 (\$65-\$300) n=5	\$245 (\$120-\$300) n=22	\$240 (\$100-\$300) n=17	\$200 n=2	\$220 (\$180-\$300) n=10	\$210 (\$150-\$250) n=8

Source: EDRS participant interviews

Prices of cannabis were commonly reported as being stable in the preceding six months by the majority (81%) of both recent hydroponic cannabis users (n=36) and recent bush cannabis users (80%, n=20) (Figure 38).

**Figure 38: Recent changes in price of hydroponic and bush cannabis purchased by EDRS participants, 2010–2015**

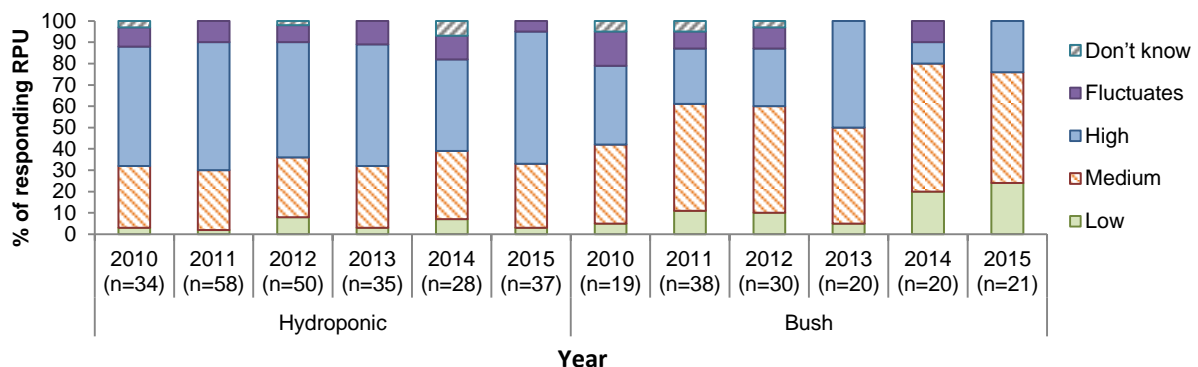


Source: EDRS participant interviews

### 5.7.2 Potency

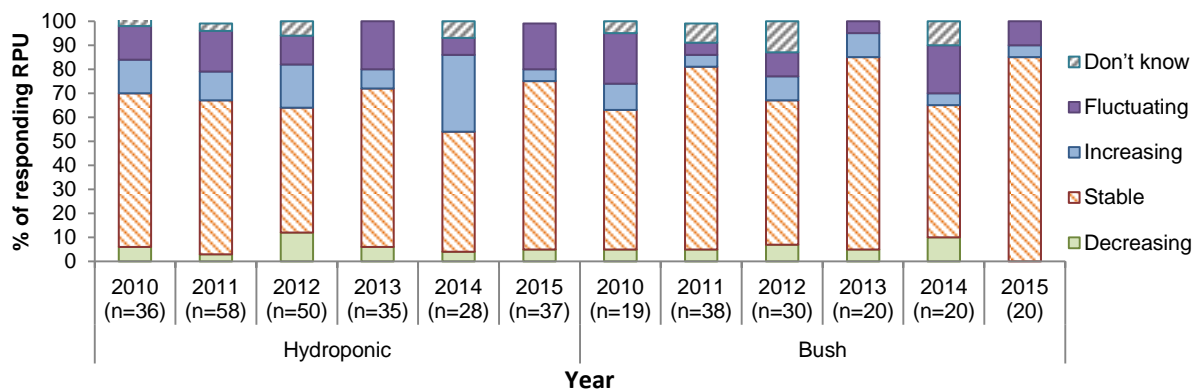
In 2015, potency was typically reported as being medium or high for both hydroponic and bush cannabis (92% and 76% respectively) (Figure 39). More than two-thirds (70%) of participants reported hydroponic cannabis potency to be stable in the preceding six months, but more participants reported that the potency had fluctuated in 2015 than in 2014 (19% vs. 7%). The majority (85%) of participants who were able to comment on the potency of bush cannabis reported it to be stable, a significant increase from 2014 (55%,  $p < 0.05$ ). For the first time since 2010, there were no reports of decreasing potency (Figure 40).

**Figure 39: Reports of current hydroponic and bush cannabis potency by RPU, 2010–2015**



Source: EDRS participant interviews

**Figure 40: Reports of changes in hydroponic and bush cannabis potency, 2010–2015**

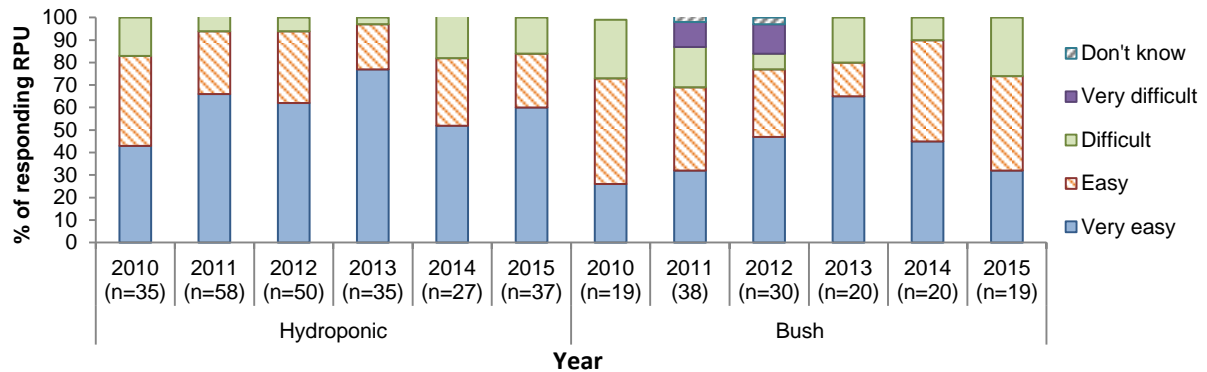


Source: EDRS participant interviews

### 5.7.3 Availability

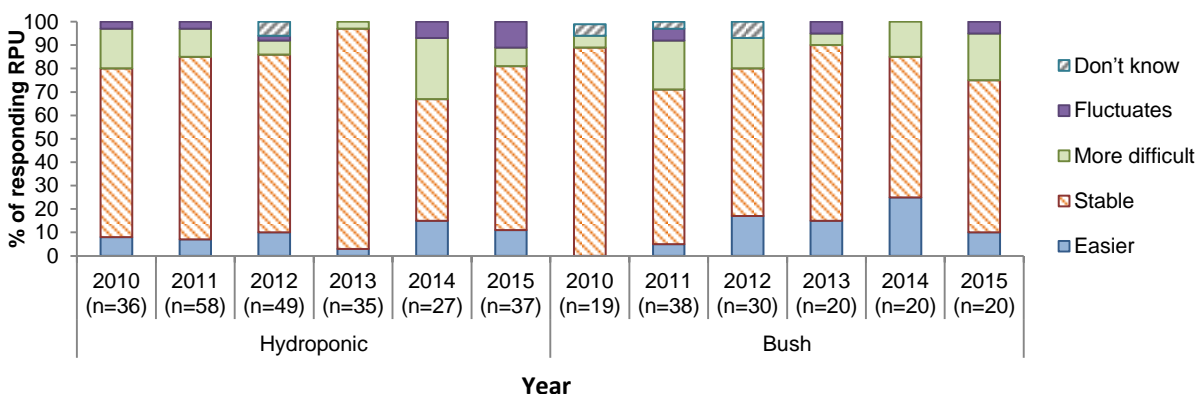
In 2015, of the participants who were able to comment, the majority reported both hydroponic and bush cannabis as 'easy' or 'very easy' to obtain (84% and 74% respectively) (Figure 41). Typically, both hydroponic and bush cannabis availability was reported to be stable in the preceding six months (70% and 65% respectively) (Figure 42).

**Figure 41: Current availability of hydroponic and bush cannabis, 2010–2015**



Source: EDRS participant interviews

**Figure 42: Recent changes in availability of hydroponic and bush cannabis, 2010–2015**



Source: EDRS participant interviews

Consistent with past years, most RPU reported that the last person they purchased cannabis from was a friend (46% for hydroponic and 52% for bush cannabis) or known dealer (35% for hydroponic and 29% for bush cannabis). Most of those who commented on the last location where they purchased cannabis reported obtaining it at a friend's home (30% hydroponic and 33% bush).

## 6 HEALTH-RELATED TRENDS ASSOCIATED WITH USE OF ECSTASY & RELATED DRUGS

### Summary

- Fourteen participants (67%) reported experiencing an overdose after taking a stimulant drug in the preceding 12 months, most commonly after taking ecstasy.
- Fifteen participants (67%) reported experiencing an overdose after taking a depressant drug in the preceding 12 months, most commonly after consuming alcohol.
- The health service participants most commonly reported as using in the six months preceding interview was a general practitioner (82%).
- Nine participants reported they had accessed a health or medical service in relation to their ERD use in the preceding six months.
- In 2014, DirectLine (a specialist drug and alcohol telephone service in Victoria) received calls identifying ecstasy (0.6%), amphetamine and/or other stimulants (18%), cocaine (0.7%), and cannabis (10%) as drugs of concern. Calls related to amphetamine and/or other stimulants increased significantly between 2009 (6.8%) and 2013.
- A significantly higher percentage of participants scored in the 'very high range' on the 10-item Kessler Psychological Distress Scale (K10), indicating higher levels of distress experienced in the preceding four weeks.

## 6.1 Overdose and drug-related fatalities

Since 2008, questions have been included in the EDRS interview schedule inquiring about drug overdose, split into stimulant drug overdose and depressant drug overdose.

In 2015, 18 participants reported that they had overdosed on any stimulant drug(s) at some point in their lifetime on a median of one occasion (range 1–10 times). Of those who had ever overdosed on stimulants, 14 participants reported having done so in the preceding 12 months, comparable with 2014 (n=16). Participants noted ecstasy (67%), cocaine (8%), LSD (8%), MDA (8%) and methamphetamine base (8%) as the main drugs associated with their most recent stimulant overdose, which reportedly occurred most commonly at a nightclub (46%) followed by a live music event (31%) and a private party (15%). The most commonly reported symptom was vomiting (23%) followed by nausea, passing out, and muscle twitches (15% equally). Only four participants (29%) reported that there was a person not under the influence of alcohol and/or other drugs present to assist when their most recent overdose occurred. Seven participants reported receiving treatment during or as a result of their most recent overdose; six of these participants stated they were monitored or watched by a friend and one participant noted that they were given water.

Thirty participants reported that they had ever overdosed after taking a depressant drug (including alcohol), on a median of two occasions (range 1–100). Of those who reported a depressant overdose, 15 (50%) had experienced this in the preceding 12 months. Most (67%) attributed the most recent depressant overdose (occurring in the preceding 12 months) to alcohol. The main symptoms experienced were losing consciousness (53%) and vomiting (33%). Participants reported a median of five hours (range 0–72 hours) before the overdose occurred. The most common location of the most recent depressant overdose was a nightclub (27%) followed by a private party (20%), and a friend's home and pub (both at 13%). Six participants (40%) noted that there was someone sober present to assist them. Six participants (40%) reported being monitored/watched by friends at the time and one participant reported attending a hospital emergency department (7%).

## 6.2 Help-seeking behaviour & health service access

Only nine per cent of the 2015 Victorian EDRS sample reported they had used a health or medical service in relation to their drug use in the six months preceding interview (5% in 2014). An additional seven per cent reported thinking about using a health service in relation to their drug use, but did not contact a service. Common reasons for not contacting a health service in relation to their drug use were that they 'could not be bothered' (n=3) or that it was 'not a priority' (n=2).

EDRS participants were also asked about the health services they had accessed in the preceding six months. Ninety-two participants reported accessing at least one health service. The health services most commonly accessed were general practitioners (82%) followed by dentists (39%).

## 6.3 Drug treatment

### 6.3.1 Alcohol and Drug Information System (ADIS)

Data on people seeking treatment from specialist alcohol and other drug agencies in Victoria are collected via the ADIS. During the 2014/2015 financial year, 50,123 courses of treatment were delivered to 28,314<sup>2</sup> clients in Victorian specialist alcohol and other drug services, compared to 66,002 courses of treatment and 34,823 clients during the 2013/2014 financial year<sup>3</sup>. Of the courses of treatment delivered, approximately 18% were delivered to approximately 17% of clients for amphetamine problems, making amphetamines the third most prevalent main presenting drug problem after alcohol (34%) and cannabis (19%). Only 0.4% of the courses of treatment were delivered to 0.5% of clients for ecstasy (ADIS Database, Victorian Department of health, unpublished data).

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<sup>2</sup> Clients in specialist alcohol and drug services include both drug users and non-users. Non-users may include partners, family or friends.

<sup>3</sup> The reduction in Victorian Alcohol and Other Drug Treatment activity is associated with service system reform during 2014–15

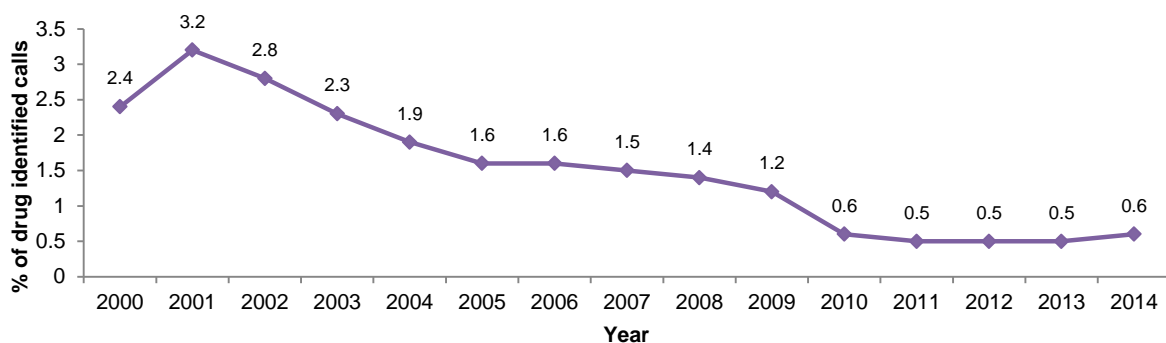
### 6.3.2 DirectLine

DirectLine is a 24-hour specialist telephone service in Victoria (operated by Turning Point Alcohol & Drug Centre) that provides counselling, referral and advice about drug use and related issues. All calls to DirectLine are logged to an electronic database that can provide information about caller drugs of concern, calls from drug users and calls about drug users. This report presents DirectLine data for the period 1999–2014.

#### *Ecstasy*

During 2014, DirectLine received 148 calls in which ecstasy was identified as a drug of concern; this represents 0.6% of all drug-identified calls to DirectLine in that year (Turning Point Alcohol & Drug Centre, unpublished data). The percentage of drug-related calls in which ecstasy was identified as the drug of concern steadily declined from 2001 to 2005, plateaued, declined from 2009 to 2011, then plateaued again (Figure 43).

**Figure 43: Proportion of calls to DirectLine in which ecstasy was identified as drug of concern, Victoria 2000–2014**

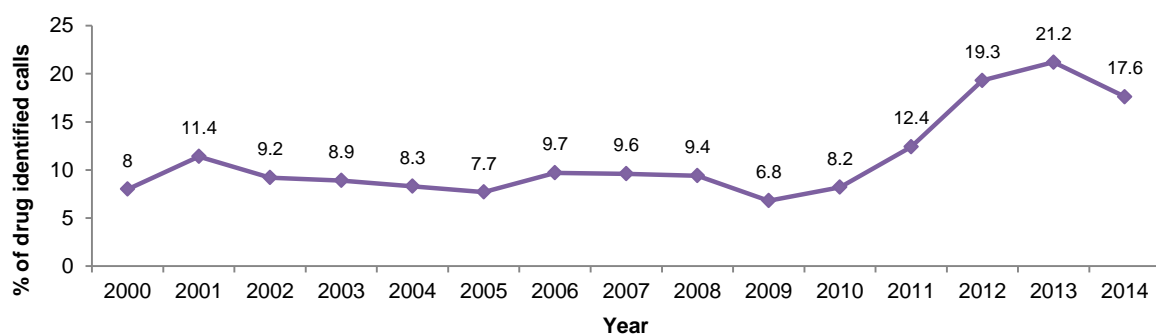


Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

#### *Amphetamines*

During 2014, DirectLine received 4,333 calls in which amphetamines and/or other stimulants (including ecstasy and cocaine) were identified as drugs of concern. This represented approximately 18% of all drug-identified calls to DirectLine (Turning Point Alcohol & Drug Centre, unpublished data). The percentage of drug-related calls in which amphetamines and/or other stimulants were identified as drugs of concern continued to increase from 2009 (Figure 44), with the 2013 figure being the highest recorded since 1999.

**Figure 44: Proportion of calls to DirectLine in which amphetamines and/or other stimulants were identified as drug of concern, Victoria, 2000–2014**

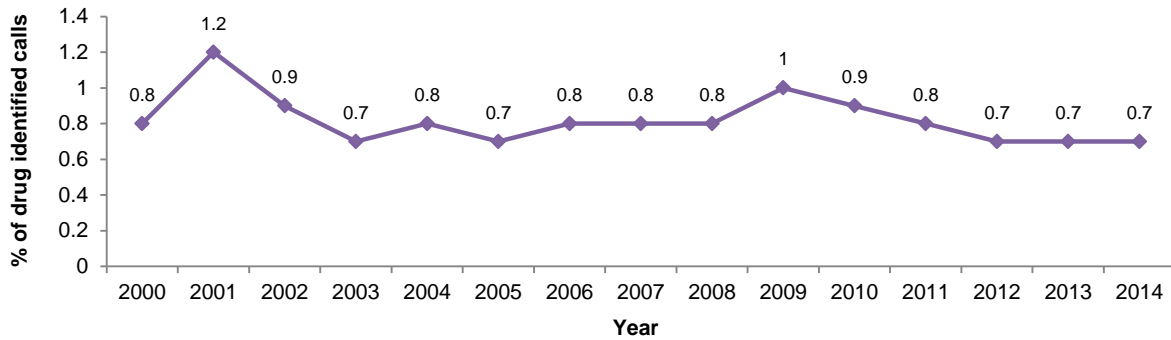


Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

## Cocaine

During 2014, DirectLine received 174 calls in which cocaine was identified as a drug of concern, which was 0.7% of all calls made to DirectLine during that time in which a drug of concern was cited (Turning Point Alcohol & Drug Centre, unpublished data). The percentage of drug-related calls where cocaine was identified has remained very low ( $\leq 1\%$ ) during recent years (Figure 45).

**Figure 45: Proportion of calls to DirectLine in which cocaine was identified as a drug of concern, Victoria, 2000–2014**

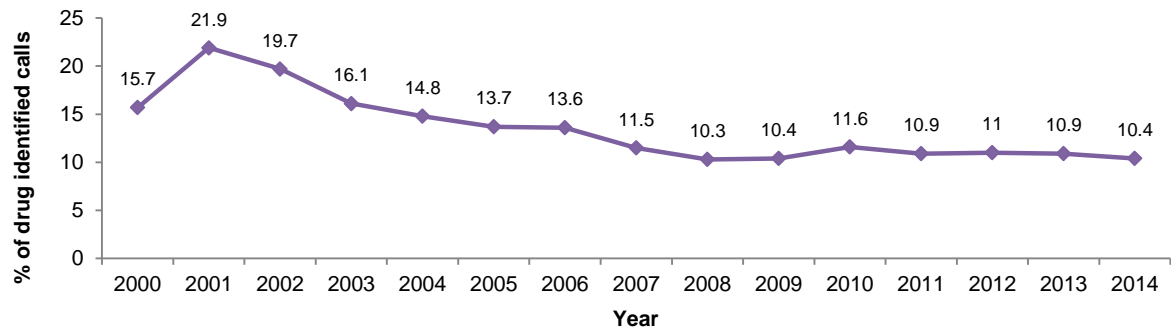


Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

## Cannabis

During 2014, DirectLine received 2,552 calls in which cannabis was identified as a drug of concern – approximately 10% of all drug-identified calls to DirectLine during that year (Turning Point Alcohol & Drug Centre, unpublished data). The percentage of drug-related calls in which cannabis was identified as the drug of concern steadily declined from 2001 to 2008, and plateaued thereafter (Figure 46).

**Figure 46: Proportion of calls to DirectLine in which cannabis was identified as a drug of concern, 2000–2014**



Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

### 6.3.3 Ambulance attendances at non-fatal drug related events

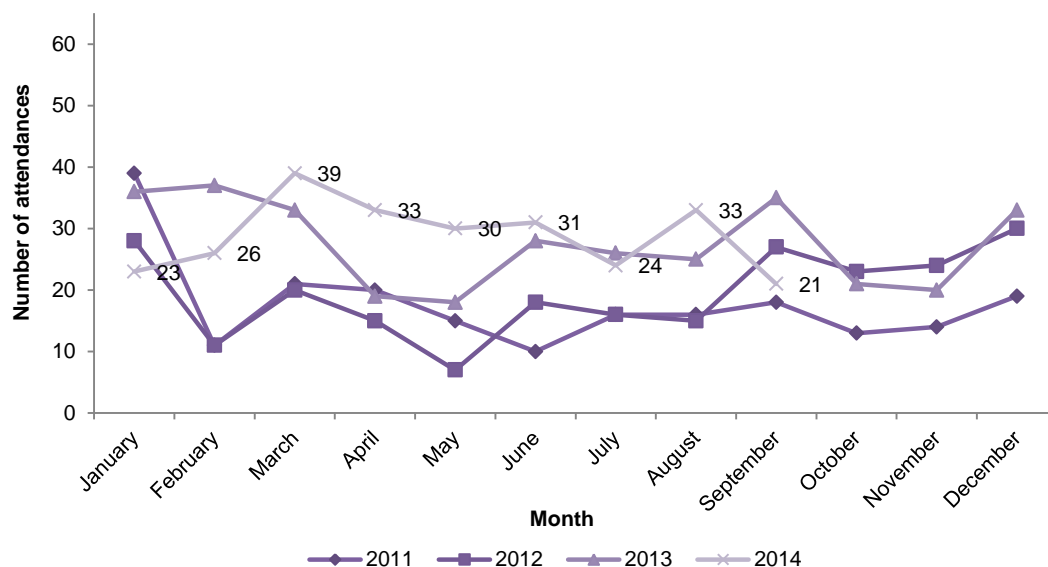
Turning Point Alcohol & Drug Centre manages an electronic drug-related ambulance attendance database containing information from Ambulance Victoria records (Dietze, Cvetkovski, Rumbold, & Miller, 2000). Data for the period between January 2011 and December 2014 are presented in this report. The lower numbers of recorded attendances was affected by industrial action that occurred between October and December 2014, when no data was recorded.

## Ecstasy

Ambulance attendances in metropolitan Melbourne at which ecstasy use was recorded ranged between seven and 39 per month during 2011–2014. The total number of attendances at which ecstasy was recorded declined by almost half between 2009 and 2010 (409 vs. 236) and continued to decline to 212 attendances in 2011 before slightly increasing to 234 in 2012. This number increased

to 331 in 2013 and declined to 260 in 2014 (Figure 47)<sup>4</sup>. The median age of these patients who were attended to by an ambulance in 2014 was 22 years (range 21–39) (Turning Point Alcohol & Drug Centre, unpublished data). Ambulance attendances recorded in regional Victoria relating to ecstasy use were less than 13 per month in 2014.

**Figure 47: Number of ecstasy-related events attended by Ambulance Victoria, Melbourne, 2011–2014**



Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

### Amphetamines

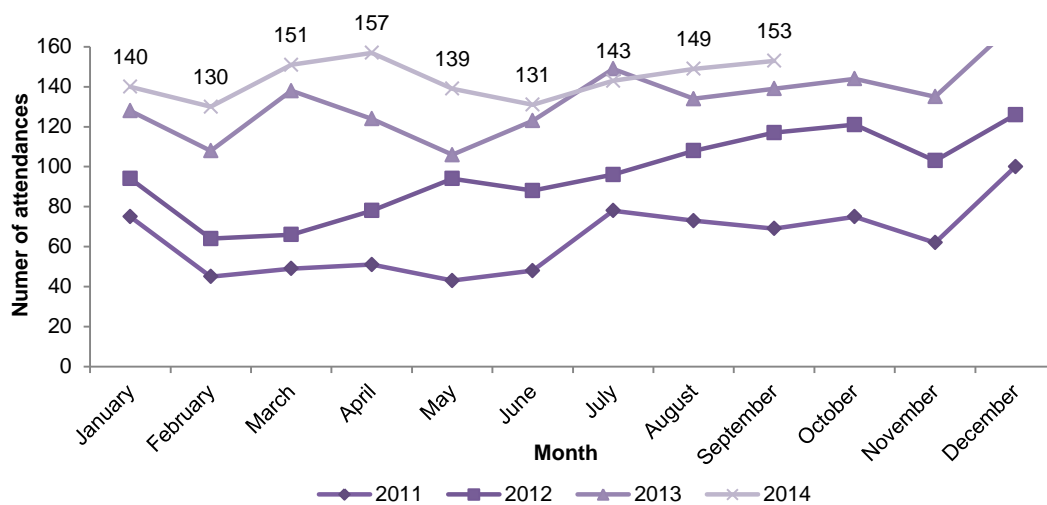
Ambulance attendances at which crystal methamphetamine use was recorded in metropolitan Victoria was categorised separately from amphetamines for the first time in 2012. Ambulance attendances in which amphetamine use was recorded in metropolitan Melbourne ranged between 43 and 172 per month between January 2011 and September 2014 (Figure 48). Attendances in metropolitan Victoria where amphetamine use was recorded have increased since 2009 (425 attendances), with 533 attendances occurring in 2010, 768 attendances in 2011, 1,155 attendances in 2012, and 1,600 attendances in 2013. The number of recorded attendances declined to 1,293 in 2014<sup>4</sup>. In regional Victoria, 311 attendances in 2014 involving amphetamines were recorded and the median age of metropolitan and regional patients was 28 years (ranges 13-70 and 3-55 respectively) (365 attendances in 2013) (Turning Point Alcohol & Drug Centre, unpublished data).

Crystal methamphetamine was recorded at 954<sup>4</sup> ambulance attendances in metropolitan Melbourne in 2014 (1,209 attendances in 2013), and the median age of patients was 29 years (range 13–70). In regional Victoria, 235 attendances occurred at which crystal methamphetamine use was recorded; the median age of these patients was 28 (range 3–55) (271 attendances in 2013) (Turning Point Alcohol & Drug Centre, unpublished data).

<sup>4</sup> Data for October-December 2014 are missing due to industrial action.

<sup>4</sup> Data for October-December 2014 are missing due to industrial action.

**Figure 48: Number of amphetamine-related events attended by Ambulance Victoria, Melbourne, 2011–2014**

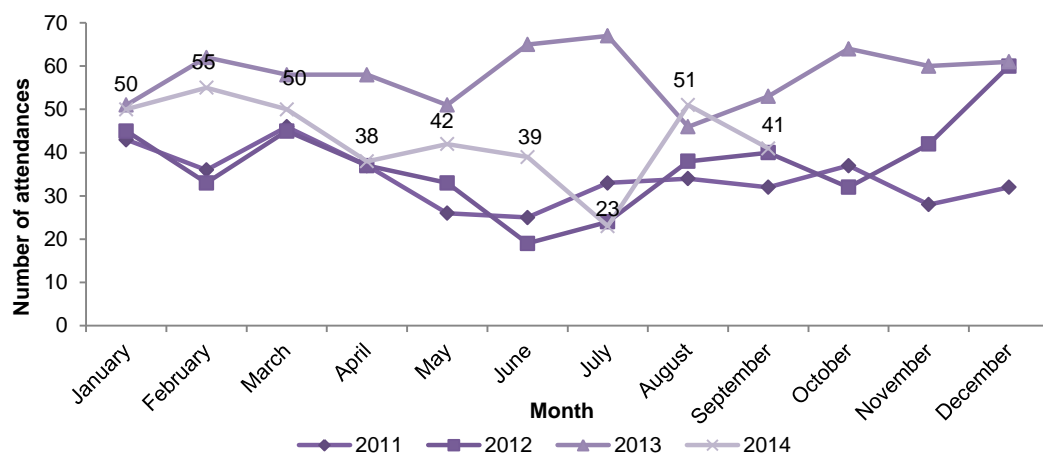


Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

**GHB**

Ambulance attendances at which GHB use was recorded ranged between 19 and 67 per month between January 2011 and September 2014 (Figure 49). In 2014, the number of ambulance attendances in metropolitan Melbourne where GHB use was recorded decreased from 696 in 2013 to 389<sup>4</sup> (Turning Point Alcohol & Drug Centre, unpublished data). The median age of patients requiring ambulance attendance was 24 years (range 15–62).

**Figure 49: Number of GHB-related events attended by Ambulance Victoria, Melbourne, 2011–2014**



Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

<sup>4</sup> Data for October-December 2014 are missing due to industrial action.

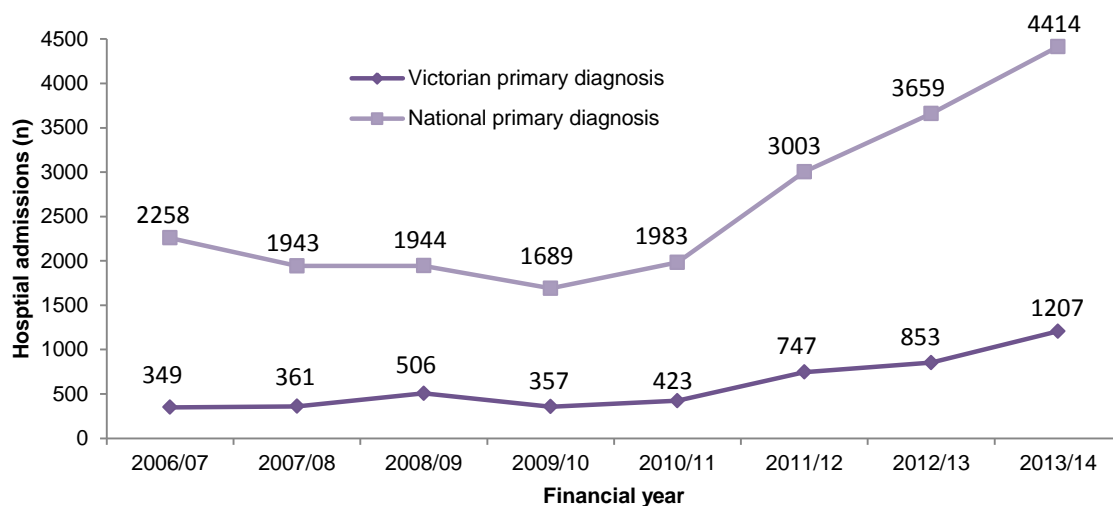
## 6.4 Hospital admissions

The National Hospital Morbidity Database (NHMD) is a collection of electronic records for hospital admissions in public and private hospitals compiled by the AIHW. Drug-related hospital admissions for amphetamine, cocaine and cannabis are reported below for Victoria and Australia, from 2006/07 to 2013/14, the most recent data available (Roxburgh & Breen, 2016). Following examination, the principal diagnosis refers to the established diagnosis that is primarily responsible for occasioning the patient's episode of care in hospital.

### 6.4.1 Amphetamines

Amphetamine-related hospital admissions from 2006/07 to 2013/14 in Victoria and Australia among persons aged 15 to 54 years are presented in Figure 50. The annual number of hospital admissions with an amphetamine-related primary diagnosis has been increasing since 2009/10. In 2013/14, these amphetamine-related hospital admissions increased by 42% in Victoria to 1207, continuing the increase from the previous year at almost twice the rate. This figure comprises 27% of Australian hospital admissions related to the drug, a larger proportion when compared to the previous year (23%).

**Figure 50: Number of amphetamine-related hospital admissions, Victoria and Australia, 2006/2007 – 2013/14**

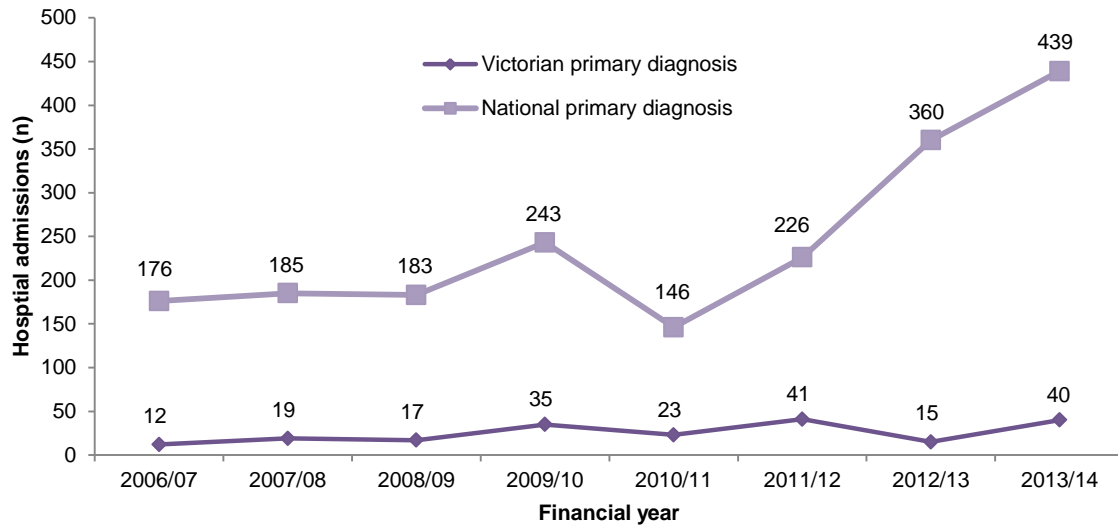


Source: Roxburgh & Breen, 2016

### 6.4.2 Cocaine

Figure 51 shows the number of cocaine-related hospital admissions among persons aged 15 to 54 years in Victoria and Australia, from 2006/07 to 2013/14. Nationally, the number of admissions with a primary diagnosis related to cocaine has been increasing since 2010/11. This pattern was not observed in Victoria, where these admissions declined to only 15 in 2012/13 but increased to 40 in 2013/14 which is comparable to the 2011/12 financial year's figure and comprises nine per cent of the national total.

**Figure 51: Number of cocaine-related hospital admissions, Victoria and Australia, 2006/07 – 2013/14**

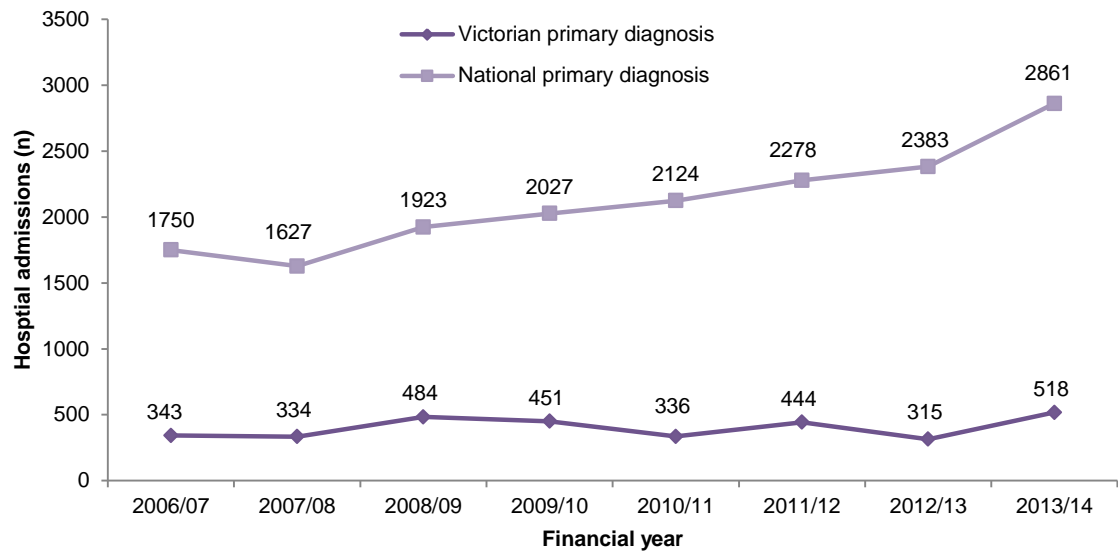


Source: Roxburgh & Breen, 2016

### 6.4.3 Cannabis

Cannabis-related hospital admissions among persons aged 15 to 54 years are shown in Figure 52 for Victoria and Australia, from 2006/07 to 2013/14. Nationally, the number of hospital admission with a cannabis-related primary diagnosis has increased steadily over the period. The number in Victoria has been fluctuating around 400 since 2006/07. In Victoria in 2013/14, there were 518 hospital admissions with a cannabis-related primary diagnosis, an increase of 64% from the previous year, the highest figure ever recorded for Victoria. This figure comprises 18% of all cannabis-related admissions in Australia.

**Figure 52: Number of cannabis-related hospital admissions, Victoria and Australia, 2006/07 – 2013/14**



Source: Roxburgh & Breen, 2016

## **6.5 Mental and physical health problems and psychological distress**

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

Since 2006 the EDRS study has included the 10-item Kessler Psychological Distress Scale (K10), a questionnaire designed to measure the level of distress that participants experienced in the preceding four weeks (Kessler et al., 2002). K10 scores ranging from 10 to 15 are classified as low or no distress, 16 to 21 as moderate distress, 22 to 29 as high distress, and 30 to 50 as very high distress.

The mean K10 score of the 2015 RPU sample was 19 (range 8–41). According to the above scoring classification, 35% of participants were in the low range, 39% in the moderate range, 14% in the high range, and 13% (vs. 2% in 2014,  $p < 0.05$ ) in the very high range. Compared to the figure in the most recent NDSHS report (AIHW, 2014), for respondents who recently used illicit drugs (1 of 17 illicit drugs in the previous 12 months), a higher percentage of the 2015 RPU scored in the high to very high distress range (27% in EDRS vs. 17.5% in 2013 NDSHS). Participants were asked whether the specified feelings occurred more often, the same or less than in a 'usual' four weeks; 57% reported that they occurred about the same as usual, while 31% reported the feelings occurring more often than usual.

### **6.5.2 Self-reported mental problems**

In 2015, 37 participants reported they had experienced a mental health problem in the preceding six months, most commonly anxiety (78%), followed by depression (60%), with 43% reporting experiencing both (32% in 2014). Forty-nine per cent of participants who experienced a mental problem reported attending a health professional in relation to it. Twenty-two percent ( $n=8$ ) of participants who attended a health professional for their mental health problem were prescribed medication. The main medications prescribed were anti-depressants ( $n=6$ ) and benzodiazepines ( $n=5$ ).

## 7 RISK BEHAVIOUR

### Summary

- Similar proportions of participants interviewed in 2015 (8%) and 2014 (10%) reported ever injecting a drug, and 7% reported injection in the preceding six months.
- Fifty-four per cent of participants reported recent penetrative sex with a casual partner, and 93% of this group had done so under the influence of alcohol and/or other drugs.
- Fifty participants reported having sex under the influence of alcohol and/or other drugs in the preceding six months with a casual partner, most commonly under the influence of alcohol (73%), followed by ecstasy (51%).
- Similar proportions of participants in 2015 (64%) and 2014 (71%) reported ever having a sexual health check-up, and 12% had been diagnosed with a sexually transmitted infection at some point in their life.
- Sixty-seven per cent of the 2015 RPU sample scored either 8 or more on the AUDIT, which refers to alcohol levels at which alcohol intake may be considered hazardous. This was a decrease from 78% scoring either or more in 2014.
- Similar to previous years, more than half (53%) of the RPU who had driven in the last six months reported driving soon after consuming any illicit drug(s), a median of four times.

## 7.1 Injecting risk behaviour

### 7.1.1 Lifetime injectors

Only eight per cent of participants reported ever injecting any drug in their lifetime. This is similar to the proportion in 2014 (10%), but the lowest proportion since 2008 (Table 21). Among those who reported ever injecting, the median age for injecting for the first time was 20.5 years (range 14–26 years). Most RPU who had ever injected reported the first drug they injected as heroin or other opiates (25% equally). RPU are only able to provide some information on trends on injecting drug use in Melbourne; the IDRS gives a more comprehensive picture. As outlined in section 1, the IDRS employs a similar methodology to the EDRS. The IDRS involves the collection of data from people who inject drugs on the prevalence and patterns of use and market characteristics of drugs of injection. Results from the 2015 Victorian IDRS will be available in early 2016 (Cogger, Aitken & Dietze, 2016).

**Table 21: Injecting behaviour among EDRS participants, 2010–2015**

	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Ever injected (%)	14	27	13	22	10	8

Source: EDRS participant interviews

### 7.1.2 Patterns of recent injecting drug use

Seven respondents reported having injected in the preceding six months in 2015, a median of eight times (range 1–330 times) in the last six months. Four participants' last injection occurred at their own home, two participants reported their last injection occurring at a friend's home and one at a library. There were no reports of needle sharing in the preceding six months. Small numbers of injectors preclude detailed interpretations of the figures in Tables 22 and 23, which should be viewed with caution.

**Table 22: Recent injecting drug use patterns among RPU who reported injecting in the last six months, 2014–2015**

	% injected past 6 months*		Median days injected last 6 months (range)*		% last drug injected	
	2014 (n=4)	2015 (n=7)	2014 (n=4)	2015 (n=7)	2014 (n=4)	2015 (n=7)
Crystal	75	57	3 (1-60)	2 (1-48)	50	29
Speed	50	-	1 (1-1)	-	25	-
Base	-	-	-	-	-	-
Pharm stimulants**	-	-	-	-	-	-
Ecstasy (pills)	-	-	-	-	-	-
Ecstasy***	-	-	-	-	-	-
Ecstasy crystal	-	14	-	6 (6-6)	-	-
Heroin	50	57	13.5 (3-24)	30 (4-179)	25	43
Cocaine	50	-	1 (1-1)	-	-	-

Source: EDRS participant interviews

\* Could nominate multiple responses

\*\* Licit & illicit

\*\*\* Powder or capsule

^ Any ecstasy

**Table 23: Context and patterns of recent injection among RPU who reported injecting in the last six months, 2010–2015**

	2010 (n=7)	2011 (n=17)	2012 (n=7)	2013 (n=12)	2014 (n=4)	2015 (n=7)
Last injected at own home (%)	86	71	57	100	50	57
Injected (only) under the influence (%)	14	13	14	25	0	0
Injected (only) while coming down (%)	29	13	-	42	0	0
Injected (both) while under the influence and coming down (%)	29	38	57	17	0	14
Median times injected any drug under the influence and/or coming down last 6 months (range)	5 (2-180)	12 (2-188)	10 (1-90)	4 (1-18)	-	6 (6-6)

Source: EDRS participant interviews

\* Could nominate multiple responses

\*\* One participant injected daily, six times per day

## 7.2 Sexual risk behaviour and sexual health

### 7.2.1 Recent casual sexual activity

In 2015, participants were asked questions about their sexual risk behaviour, focusing on penetrative sex with casual sex partners (defined as the penetration by penis or hand of the vagina or anus).

Fifty-four per cent of respondents reported penetrative sex with a casual partner in the past six months. Of those who reported recent penetrative sex with a casual partner while sober (46%), 43% reported not using a condom the last time they had sex when sober (Table 24).

**Table 24: Prevalence of casual sexual activity and number of sexual partners in the preceding six months, 2010–2015**

	2010 (n=52)	2011 (n=68)	2012 (n=69)	2013 (n=52)	2014 (n=57)	2015 (n=54)
Number of casual partners						
One person (%)	8	18	23	21	12	17
Two people (%)	19	29	20	37	13	28
3-5 people (%)	54	35	36	31	21	39
6-10 people (%)	15	9	10	9	8	9
10+ people (%)	4	9	10	2	3	7
Sex with a casual partner when sober*	-	n=67	n=64	n=38	n=42	N=46
Used a protective barrier last time (when sober) %*	-	75	61	63	55	43

Source: EDRS participant interviews

\* Only included in surveys after 2010

### 7.2.2 Drug use during sex

Fifty participants reported having had sex with a casual partner while under the influence of alcohol and/or other drugs in the past six months and 46% had done this on six or more occasions (Table 25). Similar to 2014, most respondents reporting having sex under the influence of alcohol (73%), followed by ecstasy (51%) and cannabis (33%). The proportion of RPU who reported not using a protective barrier while having sex with a casual partner under the influence of alcohol and/or other drugs remained similar to 2014, with 63% reporting that they did not use a condom on every occasion they had sex in the preceding six months, and 33% reporting never using a condom. Among this group, comparable with participants interviewed in 2014, 55% reported not using a condom or other barrier

with a casual partner on the last occasion they had sex while under the influence of alcohol and/or other drugs. Common reasons for not using a condom on the last occasion were 'we agreed not to use a condom' (50%) and 'using contraceptive pill' (21%).

**Table 25: Casual sex under the influence of drugs in the preceding six months among EDRS participants, 2013–2015**

	2013	2014	2015
<b>Penetrative sex with casual partner while on drugs last 6 months</b>	<b>n=49</b>	<b>n=52</b>	<b>n=50</b>
<b>Number of times*</b>			
Once (%)	12	13	12
Twice (%)	16	12	16
3-5 times (%)	24	25	26
6-10 times (%)	12	19	18
Ten or more times (%)	35	31	28
<b>Drugs used last time*</b>			
Ecstasy (%)	41	52	51
Cannabis (%)	27	21	33
Alcohol (%)	34	77	73
Speed (%)	6	10	10
Crystal meth (%)	22	8	8
Cocaine (%)	14	8	10
Ketamine (%)	2	2	10
LSD (%)	6	4	8
Used a protective barrier last time (%)*	57	47	45

Source: EDRS participant interviews

\* Of those who had penetrative sex with a casual partner under the influence of drugs in the last six months

### 7.2.3 Sexual health

Sixty-four per cent of the 2015 RPU sample reported ever having a sexual health check-up (swab, urine, or blood test), comparable to the proportion of the respondents interviewed in the 2014 EDRS. Among those who reported ever being tested, 66% were tested in the past year. A smaller proportion reported ever being diagnosed with a sexually transmitted infection (STI) in 2015 than in 2014 (12% vs. 20%), and two participants reported being diagnosed with an STI in the past year (Table 26).

**Table 26: Sexual health testing among RPU, 2012–2015**

	2013 n=100	2014 n=100	2015 n=100
<b>Ever had a sexual health check-up (%)</b>	n=100	n=98	n=100
No	26	29	36
Yes, in last year	55	50	42
Yes, > year ago	19	21	22
Don't know/didn't get result	-	-	-
<b>Ever diagnosed with an STI (%)</b>	n=100	n=98	n=100
Yes	24	20	12
<b>Past year STI diagnosis</b>	n=9	n=6	n=2
Gonorrhoea (%)	0	17	0
Chlamydia (%)	67	67	50
HPV (genital warts) (%)	22	17	50
Other (%)	11	17	0

Source: EDRS participant interviews

### 7.3 Risky alcohol use among RPU

The 2015 RPU sample were administered the World Health Organization's (WHO) Alcohol Use Disorders Identification Test (AUDIT) (Reinert & Allen, 2002). The AUDIT is a reliable and simple screening tool used as a measure of risky and high-risk (or hazardous and harmful) drinking. Its 10 core questions cover the domains of alcohol consumption, drinking behaviour and dependence, and the consequences or problems related to drinking. Questions were designed to assess three conceptual domains: alcohol intake or consumption, dependence, and adverse consequences (Reinert & Allen, 2002).

The consumption score derives from the first three questions of the AUDIT:

1. How often do you have a drink containing alcohol?
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
3. How often do you have six or more drinks on one occasion?

A score of six or seven indicates a risk of alcohol-related harm, particularly for those groups more susceptible to the effects of alcohol, such as young people, women, and people using other substances. Sixty-four per cent of respondents scored six or more on these questions in 2015 (Table 27), a non-significant decrease from the 74% of RPU interviewed for the 2014 EDRS.

The dependence score derives from questions four to six of the AUDIT:

4. How often during the last year have you found that you were not able to stop drinking once you had started?
5. How often during the last year have you failed to do what is normally expected from you because of drinking?
6. How often during the last year have you needed a first drink in the morning to get yourself going, after a heavy drinking session?

A score of 4 or more indicates the possibility of alcohol dependence. Thirteen per cent of participants had a score of 4 or more in 2015, similar to the proportion of RPU in 2014 (Table 27).

The alcohol-related problems score is derived from the final four questions of the AUDIT; any scoring on these items warrants further investigation to determine whether the alcohol-related problem is of current concern and requires intervention:

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

9. Have you or someone else been injured as a result of your drinking?
10. Has a relative or friend or doctor or other health workers been concerned about your drinking or suggested you cut down?

Seventy-seven per cent of participants scored on the final four questions of the AUDIT, warranting investigation to determine whether the alcohol-related problem is of current concern and requires intervention, comparable to 80% of participants in 2014.

Total AUDIT scores of 8 or more are regarded as indicators of hazardous and harmful alcohol use as well as possible alcohol dependence (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). Sixty-seven per cent of the 2015 RPU sample scored 8 or more, indicating alcohol consumption levels considered hazardous (Table 27), a decrease from 2014 (78%) and consistent with 2013 (67%).

**Table 27: AUDIT scores and proportion of RPU scoring above recommended levels indicative of hazardous alcohol use, 2015**

	Median score (range)	% scoring above recommended level
Consumption score	6 (0-10.5)	64
Dependence score	1 (0-7)	13
Adverse consequences score	2.5 (0-12)	77
Total AUDIT score	11 (0-27)	67

Source: EDRS participant interviews

## 7.4 Ecstasy dependence

Whether it is possible to be dependent on ecstasy remains controversial. Currently, using the DSM-IV-TR, 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 dependent on ecstasy. Animal models have demonstrated that dependence on ecstasy is biologically plausible.

To date, internationally, only a few studies have reported rates of dependence in ecstasy users. Studies from the United States household survey suggest a prevalence rate of past-year dependence in approximately 3.6%–3.8% of ecstasy users in the general population. An early NDARC study suggested a lifetime prevalence rate of 64% in types of REU similar to those interviewed in the EDRS.

In 2015, the participants in the EDRS were asked questions from the Severity of Dependence Scale (SDS) to investigate ecstasy dependence. 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 (Sindicich & Burns, 2012). A total score was created by summing responses to each of the five questions. Possible scores range from 0 to 15. A cut-off score of 4 was used to identify possible dependence (Sindicich & Burns, 2012).

For RPU participants who had used ecstasy in the preceding six months, the median SDS score was 0 (range 0–12). Nine per cent scored 4 or above, suggesting ecstasy dependence, a smaller proportion than in 2014 (16%). The majority of participants (78%) reported never or almost never thinking that their use of ecstasy was out of control, and 86% reported never or almost never wishing they could stop using ecstasy. Over a third (38%) of the sample reported worrying about their use of ecstasy ‘sometimes’, ‘often’ or ‘always or nearly always’, a slightly smaller proportion than in 2014 (43%). There were no significant gender differences regarding mean stimulant SDS score. Of those RPU who scored 4 or above, 41% were female, a slight increase from 2014 (38%). More than half of the sample (55%) scored zero for all questions in the SDS.

## 7.5 Driving risk behaviour

Sixty-six per cent of the 2015 RPU sample reported having driven a car/motorcycle/vehicle in the six months prior to being interviewed, a rate similar to previous years. Of those reporting having driven during this time, 44% (n=30) believed that they had driven while over the legal limit for alcohol in the preceding six months – a significantly larger proportion than in 2013 (23%, p<0.05; driving questions were not asked in 2014) (Table 28); almost half (41%) held a full licence when driving over the legal limit, the remainder were on a provisional licence or learner permit. Those who believed that they had driven over the legal limit reported having done so on a median of two occasions in the last six months (range 1–20). Forty-six per cent of those who had driven in the previous six months had undergone a police roadside breath test; only one participant reported testing over the legal limit, and one other did not receive the result when tested.

Similar to previous years, more than half (53%) of the RPU who had driven in the last six months reported driving soon after consuming any illicit drug(s), with a median of four times (range 1–180) (Table 28). The drugs the 2015 RPU sample most commonly reported as being taken just before driving in the preceding six months were cannabis (69%) and ecstasy (37%). A significantly smaller proportion of RPU reported taking crystal methamphetamine before driving than in the 2013 sample, when it was the most commonly reported drug used before driving (14% vs. 46% respectively, p<0.001). Six RPU reported receiving a roadside drug test in the preceding six months and one respondent reported receiving a positive test result.

**Table 28: Patterns of driving under the influence of alcohol and/or other drugs in the last six months among RPU, 2008–2015**

	2008	2009	2010	2011	2012	2013	2015
<b>Driven while over the legal limit of alcohol - last 6 months (%)*</b>	25	37	42	68	42	23	44
<b>Driven soon after taking a drug - last 6 months (%)*</b>	61	60	61	67	55	54	53
<b>Illicit drugs taken before driving - last six months (%)**</b>							
Ecstasy	75	60	42	30	33	34	37
Cannabis	85	63	61	59	58	43	69
Speed	55	43	26	33	20	20	9
Cocaine	15	8	8	7	10	6	14
Crystal methamphetamine	15	3	3	17	48	46	14
GHB	0	3	0	7	8	6	0

Source: EDRS participant interviews

\* Of those who had driven a car in the last six months

\*\* Participants could nominate multiple responses

## 8 LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH USE OF ECSTASY & RELATED DRUGS

### Summary

- Similar proportions reported engaging in any crime in the month preceding their interview in 2015 as in 2014 (45% and 47% respectively).
- The most common criminal activities reported by the 2015 EDRS sample were drug dealing and property crime (27% equally).
- In the 2013/2014 financial year, approximately 29% of the arrests made in Australia for amphetamine-type stimulant offences occurred in Victoria, a slight decrease from 2012/2013 (31%).
- In the 2013/2014 financial year, approximately 17% of the arrests made in Australia for hallucinogen offences occurred in Victoria, an increase from 12% in 2013/2013.

## 8.1 Reports of criminal activity among EDRS participants

Seven participants in the 2015 RPU sample reported that they had been arrested in the past 12 months (Table 29). The proportion reporting engaging in any crime in the last month changed little from 2014 (45% and 47% respectively). As in all previous years, the two most common types of crimes EDRS participants reported committing during the last month was drug dealing and property crime (27% equally).

**Table 29: Criminal activity reported by EDRS participants, 2010–2015**

Types of criminal activity	2010 (n=100)	2011 (n=101)	2012 (n=100)	2013 (n=100)	2014 (n=100)	2015 (n=100)
Any crime (%)	44	50	49	26	47	45
Drug dealing (%)	33	33	35	18	28	27
Property crime (%)	18	25	25	12	25	27
Fraud (%)	1	5	3	<2	1	5
Violent crime (%)	4	3	12	<0	3	1
Arrested in the preceding 12 months (%)	9	16	17	11	10	7

Source: EDRS participant interviews

## 8.2 Arrests

The ACC records the number of arrests for consumer offences (e.g., drug possession and/or use) and provider offences (e.g., drug trafficking and/or manufacturing) annually in Australia. This section outlines those statistics for the 2013/2014 financial year in Victoria and Australia for amphetamine-type stimulants, cocaine, cannabis and hallucinogens.

### 8.2.1 Amphetamine-type stimulants

Table 30 details consumer and provider arrests for amphetamine-type stimulants during 2013/2014 in Victoria and Australia. Amphetamines, methylamphetamine, MDMA and phenethylamines are included in the 'amphetamine-type stimulant' category. During 2013/2014, approximately 29% of the arrests made in Australia for amphetamine-type stimulant offences occurred in Victoria, comparable to the figure recorded in 2012/2013 (30%) (Australian Crime Commission, 2015).<sup>5</sup> The total number of consumer and provider arrests for amphetamine-type stimulants in Victoria increased during the 2013/2014 financial year from 2012/2013 (7,555 vs. 6,762).

**Table 30: Amphetamine-type stimulants: Consumer and provider arrests – Victoria and Australia, 2013/2014**

	Victoria (n)	Australia (n)	% of national arrests
Consumer	5,614	19,955	28%
Provider	1,941	6,265	31%
<b>TOTAL*</b>	<b>7,555</b>	<b>26,269</b>	<b>29%</b>

Source: ACC

\* Includes those offenders for whom consumer/provider status was not stated

### 8.2.2 Cocaine

Table 31 details the comparatively small number of consumer and provider arrests for cocaine during 2013/2014 in Victoria and Australia. During that period, approximately 16% of the arrests made in

<sup>5</sup> Proportions (%) should be interpreted with caution due to the lack of uniformity across states and territories in the recording and storing of data on illicit drug arrests.

Australia for cocaine offences occurred in Victoria, a slightly smaller proportion than in the previous financial year (18%) (Australian Crime Commission, 2015). In Victoria, the total number of consumer and provider arrests in 2013/2014 was comparable to 2013/2013 (240 and 235 respectively).

**Table 31: Cocaine: Consumer and provider arrests – Victoria and Australia, 2013/2014**

	Victoria (n)	Australia (n)	% of national arrests
Consumer	151	1,005	15%
Provider	89	461	19%
<b>TOTAL*</b>	240	1,466	16%

Source: ACC

\* Includes those offenders for whom consumer/provider status was not stated

### 8.2.3 Cannabis

Table 32 details consumer and provider arrests for cannabis during 2013/2014 in Victoria and Australia. During that period, approximately 13% of the arrests made in Australia for cannabis offences occurred in Victoria, consistent with the previous financial year (13%) (Australian Crime Commission, 2015). In Victoria, the total number of consumer and provider arrests continued to increase in 2013/2014 over 2012/2013 (8,588 vs. 8,305).

**Table 32: Cannabis: Consumer and provider arrests – Victoria and Australia, 2013/2014**

	Victoria (n)	Australia (n)	% of national arrests
Consumer	6,922	58,201	12%
Provider	1,636	8,460	19%
<b>TOTAL*</b>	8,588	66,684	13%

Source: ACC

\* Includes those offenders for whom consumer/provider status was not stated

### 8.2.4 Hallucinogens

Table 33 details the small number of consumer and provider arrests for hallucinogens (LSD or psilocybin mushrooms) during 2013/2014 in Victoria and Australia. During that time period, approximately 17% of the arrests made in Australia for hallucinogen offences occurred in Victoria, an increase from the percentage reported in the 2012/2013 financial year (12%) (Australian Crime Commission, 2015). The total number of consumer and provider arrests for hallucinogen offences in Victoria continued to increase to 118 arrests in 2013/2014 from 70 arrests reported in the 2012/2013 financial year.

**Table 33: Hallucinogens: Consumer and provider arrests – Victoria and Australia, 2013/2014**

	Victoria (n)	Australia (n)	% of national arrests
Consumer	95	543	18%
Provider	23	161	14%
<b>TOTAL*</b>	118	704	17%

Source: ACC

\* Includes those offenders for whom consumer/provider status was not stated

## 9 SPECIAL TOPICS OF INTEREST

### Summary

- Eighty-five per cent of participants reported that their friends had purchased an illicit drug online and 19% reported that they had done so themselves.
- Ten participants reported buying a traditional illicit substance online – most commonly a form of ecstasy (60%), followed by LSD (40%).
- Most participants were able to correctly identify that 2C-B (53%), DMT (86%) and Mephedrone (60%) were in fact illegal.
- Of slight concern are the proportions of participants who were either unsure or thought that 2CI (95%) and NBOMe (95%) were legal.
- Half (50%) of the sample reported using a cognitive enhancer (CE) in the previous six months.
- The most common CE used was coffee (56%), followed by energy drinks (14%).
- The main motivations for using CEs on their last occasion were to decrease fatigue (56%) and to improve concentration (38%).
- Thirty per cent reported experiencing negative side effects on their last occasion of CE use – most commonly anxiety (33%) or heart palpitations (33%) and stomach problems (20%).

## 9.1 Online purchasing and NPS use

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

In 2015, 85% of Victorian EDRS participants reported that their friends had purchased an illicit drug online (a few 75%, about half 7% and most 2%). Participants were then asked about their personal lifetime purchase of an illicit drug online to which 19% reported that they had. 10 participants reported that they had purchased an illicit drug online in the past 12 months. These recent purchases occurred between once and more than five times (see Table 34).

**Table 34: Number of times recently purchased illicit drugs online, 2015**

How many online purchases of illicit drugs in the past 12 months?	% (N=10 <sup>^</sup> )
Once	10% (n=1)
Twice	30% (n=3)
3-5 times	30% (n=3)
More than 5 times	30% (n=3)

Source: VIC EDRS participant interviews

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

Purchases of illicit drugs were made from either international webstores ('surface web'; 20%, n=2) or dark net marketplaces such as Silk Road (30%, n=3), other dark net marketplaces (not specified) (50%, n=5) or other online market places (e.g., eBay, Gumtree) (20%, n=2). One participant noted that he/she used a mobile phone messaging application with end-to-end text encryption. If participants had purchased from a dark net marketplace, they were asked to specify whether the retailer they purchased from was Australian (57%, n=4) or international (43%, n=3).

Illicit substances recently purchased online were specified (see Table 35). Ten participants reported buying a traditional illicit substance online, mostly ecstasy (any form) (60%), followed by LSD (40%) and other drugs (40%). One participant reported purchasing an NPS online one of the 2C-X family.

**Table 35: Illicit substances reportedly purchased online recently, 2015**

Online substance purchased	% (N=10 <sup>^</sup> )
<b>Traditional illicit substances</b>	
LSD	40% (n=4)
Ecstasy (any form)	60% (n=6)
Cannabis	0% (n=0)
Methamphetamine (any form)	10% (n=1)
Cocaine	0% (n=0)
MDA	10% (n=1)
Benzodiazepines	10% (n=1)
Other drug	40% (n=4)
<b>NPS</b>	
	<b>(N=1<sup>^</sup>)</b>
2C-X family	100% (n=1)
5-MeO-DMT	0% (n=0)
LSA	0% (n=0)

Source: VIC EDRS participant interviews

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

Participants were asked how long ago they had used an NPS and which NPS this was. The median number of days before interview people reported using an NPS was 162 days (range 36–4320 days) and the NPS most reportedly used were DMT, synthetic cannabis, the 2C-X family and NBOMe. Participants were asked if the NPS they had last taken was personally purchased online (n=81), to which five per cent (n=4) reported that it had been. The remainder of participants (n=64) were asked if the person from whom they last purchased an NPS had purchased it online, to which 13% (n=8) reported that it had been; the remainder reported negatively or that they did not know (87%).

All participants who reported NPS use (n=84) were asked about their last occasion of use and whether any adverse unexpected effects were experienced (see Table 36). The most common adverse effect experienced by VIC participants was paranoia, equal with feeling restless or anxious (24%), followed equally by heart racing and shaky hands (23%). Almost half reported experiencing no adverse effect(s) (41%). Some of the effects noted as ‘other’ by participants included confusion, grumpiness, poor motor skills and being unable to walk.

**Table 36: Unexpected adverse NPS effects experienced on last occasion of use, 2015**

Unexpected adverse effect	% (N=84)
Paranoia	24% (n=20 <sup>^</sup> )
Seeing things that were not there	17% (n=14 <sup>^</sup> )
Panicky	20% (n=17 <sup>^</sup> )
Nausea/vomiting	13% (n=11 <sup>^</sup> )
Overheating	11% (n=9 <sup>^</sup> )
Heart racing	23% (n=19 <sup>^</sup> )
Hearing things that were not there	10% (n=8 <sup>^</sup> )
Restless or anxious	24% (n=20 <sup>^</sup> )
Shortness of breath	10% (n=8 <sup>^</sup> )
Chest pain	1% (n=1 <sup>^</sup> )
Shaky hands	23% (n=19 <sup>^</sup> )
Skin discoloured (blue/red)	0% (n=0 <sup>^</sup> )
Other effects	12% (n=10 <sup>^</sup> )
None	41% (n=34 <sup>^</sup> )

Source: VIC EDRS participant interviews

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

Other effects included: confusion, drowsy, headache, seizure and paralysed locked jaw

## 9.2 NPS Policy

The laws about selling and possessing new psychoactive substances are complex, so what people understand the laws to be at the moment is of interest. The drugs included below are ones that were most commonly reported in last year's EDRS.

All participants were asked about their understanding of the legal status of the following NPS: 2CB, 2CI, DMT, Mephedrone and NBOMe. The majority of participants were able to correctly identify that 2CB, DMT and Mephedrone were in fact illegal (See Table 37). Of slight concern is the minor proportion that reported that the substances were legal: 4% Mephedrone, 5% NBOMe, 5% DMT, 6% 2CB, 5% 2CI. Of larger concern are the substantial proportions that reported that they were 'unsure' of the legal status of these illicit substances, especially for NBOMe and 2CI. This is a clear area where harm reduction messages could be further targeted and clarified.

**Table 37: Perceptions of the legal status of particular NPS, 2015**

Substance and legal status	% (N=99)
<b>2CB</b>	
Legal	6%
Illegal	53%
Unsure	41%
<b>2CI</b>	
Legal	5%
Illegal	42%
Unsure	53%
<b>DMT</b>	
Legal	5%
Illegal	86%
Unsure	9%
<b>Mephedrone</b>	
Legal	4%
Illegal	60%
Unsure	36%
<b>NBOMe</b>	
Legal	5%
Illegal	35%
Unsure	60%

Source: VIC EDRS participant interviews

### 9.3 Cognitive enhancers

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

Only two studies have examined the prevalence of CE use in Australia. Both studies used university samples, with estimates varying from 4% to 8.5% (Joshi, 2011; Mazanov, Dunn, Connor, & Fielding, 2013). Despite these varying estimates, it is clear that CE use, at least amongst Australian university students, is not negligible.

All CEs have some risk of harm. Case studies have documented adverse physical and/or psychiatric harms associated with CEs, some of which may be severe and/or permanent (Berman, Kuczenski, McCracken, & London, 2008; Oskooilar, 2005). Harms may also occur when CEs are illicitly obtained online or via others' prescriptions (Ragan et al., 2013).

At present, very little is known about the prevalence of CE use in Australia or how they are being used. EDRS participants are a recreational drug-using sample, many of whom have performance demands from study or fulltime work placed upon them. There is some evidence that use of CEs is more prevalent among illicit drug users (Mazanov et al., 2013). The EDRS project therefore aims to

investigate the prevalence of CE use in this group, along with their motivations for use and associated potential harms in order to better inform future harm reduction initiatives.

Fifty percent of the present sample reported using CEs in the last six months; these participants were asked to indicate which CEs they had used (see Table 38). The majority reported using coffee (84%, n=42), followed by energy drinks (48%, n=33), non-prescribed methylphenidate (36%, n=18), omega 3 fish oil (20%, n=10), non-prescribed dexamphetamine (14%, n=7), non-prescribed modafinil (12%, n=6), non-prescribed methylphenidate and caffeine products (each 10%, n=5).

**Table 38: Cognitive Enhancer use in the last six months, among Victorian EDRS participants**

<b>Substance %</b>	<b>N=50</b>
<b>Methylphenidate</b>	
Prescribed	0
Non-prescribed	10
<b>Any methylphenidate (prescribed or non-prescribed)</b>	10
<b>Modafinil</b>	
Prescribed	0
Non-prescribed	12
<b>Any modafinil (prescribed or non-prescribed)</b>	12
<b>Dexamphetamine</b>	
Prescribed	2
Non-prescribed	14
<b>Any dexamphetamine (prescribed or non-prescribed)</b>	14
<b>Racetams</b>	
Prescribed	0
Non-prescribed	6
<b>Any racetams (prescribed or non-prescribed)</b>	6
<b>Anti-dementia drugs</b>	
Prescribed	0
Non-prescribed	0
<b>Any anti-dementia drugs (prescribed or non-prescribed)</b>	-
<b>Energy drinks</b>	36
<b>Coffee</b>	84
<b>Other caffeine products (caffeine tablets, caffeine sublingual strips)</b>	10
<b>Ginkgo Biloba</b>	4
<b>Ginseng</b>	4
<b>Omega 3 fish oil</b>	20
<b>Other<sup>#</sup></b>	8

Source: VIC EDRS interviews

<sup>#</sup>Other reported CEs were 'Bacopa', 'Nicotine gum', 'Sunny pheram' and 'Vig'

Participants who had used CEs in the previous six months (n=50) were also asked to report the last CE that they had used. The most commonly last reported CE used was coffee (n=28, 56%), followed by energy drinks (n=7, 14%), omega 3 fish oil (n=4, 8%), racetams and dexamphetamine (each n=2, 4%), and methylphenidate (n=1, 2%).

Main motivations for using these substances on the last occasion for use were also explored (see Table 39). Participants most commonly reported using CEs to decrease fatigue (56%, n=28), whilst 38 per cent (n=19) used them to improve concentration and around one-third (34%, n=17) use them to offset sleep deprivations. Smaller proportions reported using them to enhance mood (30%, n=15), to complete an assignment or task on time (26%, n=13), to improve motivation for study (24%, n=12), to improve academic performance (18%, n=9), to improve memory (14%, n=7) and curiosity (2%, n=1).

**Table 39: Main motivations for CE use in the last six months, among RPU**

Motivations %	N=50
To decrease fatigue	56
To complete an assignment or task on time	26
To improve concentration	38
To offset sleep deprivation	34
To improve motivation for study	24
To improve academic performance	18
To enhance mood	30
To improve memory	14
Curiosity	2
Other reasons	12

Source: VIC EDRS interviews

Of participants who had used CEs in the preceding six months (n=50), just under one third (n=15, 30%) reported experiencing negative side effects on the last occasion of use. The most commonly reported side effects were anxiety, heart palpitations (each n=5, 33.3%) and stomach problems (n=3, 20%) followed by sleeping difficulties, tics and/or twitching and 'other' negative side effects (each n=2, 13%). These 'other' negative side effects were 'dry mouth' and 'sweating'. The remaining side effects, jolt and crash episode, headache, loss of appetite, rapid and/or irregular heartbeat, tremor, and vomiting, each had one participant report (each n=1, 7%).

Four participants (8%) reported using other licit or illicit drugs in conjunction with the CE substance(s) they took on the last occasion. Table 40 outlines the substances used in conjunction with CEs on the last occasion.

**Table 40: Other substances (licit or illicit) consumed with CEs on the last occasion, among EDRS participants**

<b>Other substances %</b>	<b>N= 4</b>
Cannabis	1
Alcohol (less than 5 standard drinks)	0
Alcohol (more than 5 standard drinks)	0
Nitrous oxide	0
Pharmaceutical stimulants	0
Tobacco	3
Other	0

Source: EDRS interviews

## APPENDIX A

**Table 1A: New psychoactive substances – adapted from 2011 National EDRS report (Scott & Burns, 2011)**

Street name	Chemical name	Information on Drug
<b>Phenethylamines</b>		
<i>(2C-x Class)</i>		
2C-B	2,5-dimethoxy-4-bromophenethyl-amine	A psychedelic drug with stimulant effects
2C-I	2,5-dimethoxy-4-iodophenethyl-amine	A psychedelic drug with stimulant effects
2C-E	2,5-dimethoxy-4-ethylphenethyl-amine	A psychedelic drug with stimulant effects
2C Other		A psychedelic drug with stimulant effects
<hr/>		
<b>Phenethylamines (Beta-ketones)</b>		
Mephedrone	4-methyl-methcathin-one	A stimulant which is closely chemically related to amphetamines
Methylone	3,4-methylenedioxy-N-methylcathinone	An entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes
Ivory Wave/MDPV	Methylenedioxypropylone (3,4-methylenedioxy)	A cathinone derivative
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<b>Phenethylamines (Amphetamine-based)</b>		
Benzo Fury (6-APB)	6-(2-minopropyl)benzofuran	A synthetic chemical with stimulant effects
Mescaline	3,4,5-trimethoxyphenethylamine	A hallucinogenic alkaloid
MDAI	5,6-methylenedioxy-2-aminoindane	An empathogen. Its effects are sometimes compared to MDMA (ecstasy)
<i>(Ergolines)</i>		
LSA (Hawaiian Baby Woodrose)	d-lysergic acid amide	LSA is a naturally occurring psychedelic found in many plants such as morning glory
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<b>Tryptamines</b>		
5MEO-DMT	5-methoxy-dimethyltryptamine	A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the Bufo alvarius toad
DMT	Dimethyl tryptamine	A hallucinogenic drug in the tryptamine family
<i>(Dissociative)</i>		
DXM (Cough syrup)	Dextromethorphan	A semisynthetic opiate derivative which is legally available over the counter in the United States
Methoxetamine (MXE)	2-(3-methoxyphenyl)-2-(ethylamino)cyclohexanone	A sedative and a near chemical analog of ketamine
Salvia	Salvia divinorum	Salvia is derived from the American plant Salvia divinorum, a member of the mint family

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**Piperazines**

BZP

1-benzylpiperazine

A piperazine; a central nervous system stimulant

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**Other**

Synthetic cannabis (K2/Spice) Synthetic cannabinoids

Usually sold as loose, generic plant material with a mix of chemicals on it (containing synthetic cannabinoids)

Other herbal highs

Naturally occurring substances used for a high

Capsules (contents unknown)

Capsules consumed by REU opportunistically without being aware of what the contents were

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## REFERENCES

- Australian Crime Commission. (2015). *The Illicit Drug Data Report 2013-2014*. Canberra: ACC.
- Australian Institute of Health and Welfare. (2014). *2013 National Drug Strategy Household Survey*. Canberra: Australian Institute of Health and Welfare.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT: The Alcohol Use Disorders Identification Test, Guidelines for Use in Primary Care*. Geneva: World Health Organization.
- Berman, S. M., Kuczenski, R., McCracken, J. T., & London, E. D. (2008). Potential adverse effects of amphetamine treatment on brain and behavior: a review. *Molecular Psychiatry*, *14*, 123-142.
- Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems, techniques and chain referral sampling. *Sociological Methods for Research*, *10*, 141-163.
- Boys, A., Lenton, S., & Norcross, K. (1997). Polydrug use at raves by a Western Australian sample. *Drug and Alcohol Review*, *16*, 227-234.
- Breen, C., Topp, L., & Longo, M. (2002). *Adapting the IDRS methodology to monitor trends in party drug markets: Findings of a two-year feasibility trial*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.
- Burns, L. & Van Buskirk, J. (2013, August 1). Shedding light on online stores for illicit and synthetic drugs Retrieved from <http://theconversation.com/shedding-light-on-online-stores-for-illicit-and-synthetic-drugs-16580> [Accessed 20/02/2014]
- Cogger, S., Aitken, P., & Dietze, P. (2016). Victorian Drug Trends 2015. *Findings from the Illicit Drug Reporting System (IDRS)*. Australian Drug Trends Series. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.
- Dalgarno, P. J., & Shewan, D. (1996). Illicit use of ketamine in Scotland. *Journal of Psychoactive Drugs*, *28*, 191-199.
- Darke, S., Cohen, J., Ross, J., Hando, J., & Hall, W. (1994). Transitions between routes of administration of regular amphetamine users. *Addiction*, *89*, 1683-1690.
- Department of Health. (2013). *Victorian secondary school students' use of licit and illicit substances in 2011: Results from the 2011 Australian Secondary Students' Alcohol and Drug (ASSAD) Survey*. State Government of Victoria.
- Dietze, P., Cvetkovič, S., Rumbold, G., & Miller, P. (2000). Ambulance attendance at heroin overdose in Melbourne: The establishment of a database of Ambulance Service records. *Drug and Alcohol Review*, *19*(1), 27-33.
- Farah, M. J., Smith, M. E., Ilieva, I., & Hamilton, R. H. (2014). Cognitive enhancement. *Wiley Interdisciplinary Reviews: Cognitive Science*, *5*, 95-103.
- Forsyth, A. J. M. (1996). Places and patterns of drug use in the Scottish dance scene. *Addiction*, *91*, 511-521.
- Hando, J., & Hall, W. (1993). *Amphetamine use among young adults in Sydney, Australia*. Sydney: NSW Health Department.
- Hando, J., Topp, L., & Hall, W. (1997). Amphetamine-related harms and treatment preferences of regular amphetamine users in Sydney, Australia. *Drug and Alcohol Dependence*, *46*, 105-113.
- Jenkinson, R., & O'Keeffe, B. (2005). *Victorian Drug trends 2004: Findings from the Illicit Drug Reporting System (IDRS)*. Sydney: National Drug and Alcohol Research Centre (NDARC), University of NSW.
- Joshi, P. (2011). Use of cognitive enhancing substances by University students: a cross-sectional study.
- Kerlinger, F. N. (1986). *Foundations of Behavioral Research* (3rd ed.). Japan: CBS Publishing Limited.

- Mazanov, J., Dunn, M., Connor, J., & Fielding, M.-L. (2013). Substance use to enhance academic performance among Australian university students. *Performance Enhancement & Health, 2* (3), 110-118.
- Oskooilar, N. (2005). A case of premature ventricular contractions with modafinil. *American Journal of Psychiatry, 162*, 1983-1984.
- Ovendon, C., & Loxley, W. (1996). Bingeing on psychostimulants in Australia: Do we know what it means (and does it matter)? *Addiction Research, 4*, 33-43.
- Peters, A., Davies, T., & Richardson, A. (1997). Increasing popularity of injection as the route of administration of amphetamine in Edinburgh. *Drug and Alcohol Dependence, 48*, 227-237.
- Ragan, C. I., Bard, I., & Singh, I. (2013). What should we do about student use of cognitive enhancers? An analysis of current evidence. *Neuropharmacology, 64*, 588-595.
- Reinert, D. F., & Allen, J. P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism, Clinical and Experimental Research, 26*(2), 272-279.
- Roxburgh, A., and Breen, C. (2016). Drug-related hospital stays in Australia, 1993-2014. Sydney: National Drug and Alcohol Research Centre, University of New South Wales
- Scott, L., & Burns, L. (2011). *NSW Trends in Ecstasy and Related Drug Markets 2011*. Sydney: National Drug and Alcohol Research Centre (NDARC), University of NSW.
- Sindicich, N., & Burns, L. (2012). *Australian Trends in Ecstasy and Related Drug Markets 2011, Findings from the Ecstasy and Related Drugs Reporting System*: Sydney: National Drug and Alcohol Research Centre (NDARC), University of NSW.
- Solowij, N., Hall, W., & Lee, N. (1992). Recreational MDMA use in Sydney: A profile of 'Ecstasy' users and their experiences with the drug. *British Journal of Addiction, 87*, 1161-1172.
- Topp, L., Degenhardt, L., Day, C., & Collins, L. (2003). Contemplating drug monitoring systems in the light of Australia's "heroin shortage". *Drug and Alcohol Review, 22*(1), 3-6.
- Topp, L., Hando, J., Degenhardt, L., Dillon, P., Roche, A., & Solowij, N. (1998). *Ecstasy Use in Australia*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.
- Topp, L., Hando, J., Dillon, P., Roche, A., & Solowij, N. (2000). Ecstasy use in Australia: Patterns of use and associated harms. *Drug and Alcohol Dependence, 55*, 105-115.