

Anita Feigin, Paul Dietze & Belinda Lloyd

**VICTORIAN TRENDS IN ECSTASY AND RELATED
DRUG MARKETS 2010**
Findings from the
Ecstasy and related Drugs Reporting System
(EDRS)

Australian Drug Trends Series No. 67

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Anita Feigin, Paul Dietze & Belinda Lloyd

**The Macfarlane Burnet Institute for Medical Research and Public Health
Ltd and Turning Point Alcohol and Drug Centre Inc**

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ABBREVIATIONS

1,4B	1,4-butanediol
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AGDH&A	Australian Government Department of Health and Ageing
AIHW	Australian Institute of Health and Welfare
AQFV	Alcohol Quantity, Frequency and Variability
ATSI	Aboriginal and Torres Strait Islander
AUDIT	Alcohol Use Disorders Identification Test
BBVI	Blood-borne viral infection(s)
BMI	Body mass index
BZD	Benzodiazepine(s)
CNS	Central nervous system
DMT	Dimethyltryptamine
EDRS	Ecstasy and related Drugs Reporting System
ERD	Ecstasy and related drugs
GBL	Gamma-Butyrolactone
GP	General practitioner(s)
GHB	Gamma-hydroxy-butyrate
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
IDRS	Illicit Drug Reporting System
IDU	Injecting drug user(s)
K10	Kessler Psychological Distress Scale (10-item)
KE	Key expert(s)
LSD	<i>d</i> -lysergic acid
MAS	Metropolitan Ambulance Service (Melbourne)
MDA	3,4-methylenedioxyamphetamine
MDMA	3,4-methylenedioxymethamphetamine (ecstasy)
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NDSHS	National Drug Strategy Household Survey
NHMD	National Hospital Morbidity Database
NHMRC	National Health and Medical Research Council
NSP	Needle syringe program(s)
PADD	Passive Alert Drug Detection (dog/s)

PASW	Predictive Analytics Software
PDI	Party Drug Initiative
REU	Regular Ecstasy User(s)
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection(s)
VYADS	Victorian Youth Alcohol and Drug Survey
WHO	World Health Organization

EXECUTIVE SUMMARY

This report presents the results from the eighth year of a study monitoring ecstasy and related drug (ERD) trends in Victoria. A feasibility trial of this research was conducted in 2000 and 2001 in New South Wales, Queensland and South Australia, and in 2002 the study was continued in those jurisdictions. In 2003 a two-year national trial of the study commenced, with the addition of capital cities in Western Australia, the Northern Territory, the Australian Capital Territory, Tasmania and Victoria, that has continued following successful implementation of the study.

The key finding in Victoria in 2010 is a continuation of the decrease in the reported availability of ecstasy found in 2009, such that 27% of participants reported that ecstasy was difficult or very difficult to currently obtain. This contrasts with the period between 2003 and 2008, where ecstasy was reported as readily available in Victoria, with only 3% of participants in 2008 reporting that it was difficult or very difficult to obtain ecstasy.

The decline in the ecstasy market has been accompanied by increases in the reported use of other drugs. Compared to 2009, the reported recent use of dimethyltryptamine (or DMT), mephedrone and pharmaceutical stimulants significantly increased in 2010. The most noticeable change from 2009 was the rise in the reported recent use of mephedrone (4-methylmethcathinone), from three reported cases in 2009 to 28 in 2010.

Demographic characteristics of regular ecstasy users

The regular ecstasy user (REU) sample was comprised of people who were typically aged between 18 and 26 years; they tended to be well educated, from an English-speaking background and reported living either in rental accommodation or in the family home. They were unlikely to report being involved in either the treatment or justice systems. The sample demographics remained largely comparable to previous years.

Patterns of drug use among REU

In addition to ecstasy, most REU reported having recently used alcohol, tobacco, cannabis and speed. Compared to 2009, there was a significant increase in the recent use of the “designer drugs” DMT (15% vs 5% for 2010 and 2009 respectively) and mephedrone (28% vs 3% for 2010 and 2009 respectively), as well as pharmaceutical stimulants (27% vs 15% for 2010 and 2009 respectively) in 2010. Notably, as in 2009, in 2010 Victorian REU reported benzodiazepine (illicit or licit) use more frequently than the national sample (45% vs 30% for Victoria and Australia respectively).

Thirty-eight per cent of the 2010 REU sample reported recently bingeing on drugs (defined as continuous use for more than 48 hours), most commonly reporting the use of ecstasy, speed, alcohol, cannabis and tobacco during binge periods. This percentage was similar to 2009.

Ecstasy

As in previous years, the 2010 REU sample reported first using ecstasy regularly at a mean age of 19 years. They reported typically swallowing a median of two pills on a fortnightly basis and almost all (98%) reported typically using ecstasy with other drugs. Patterns of use were similar for ecstasy *capsules* with significantly more REU reporting having used capsules in the last six months in 2010 compared to 2009. REU reported taking ecstasy in a range of locations, most commonly nightclubs.

Some ecstasy market characteristics were comparable to previous years with REU reporting typically purchasing one ecstasy pill for \$25. REU reported the purity of ecstasy as low, which is consistent with ecstasy seizures by law enforcement agencies that had an average purity of only 19%. Consistent with findings from 2009, in 2010 REU reported that ecstasy was significantly more difficult to source compared to previous years with 27% in 2010 reporting it was difficult or very difficult to currently obtain ecstasy (e.g., vs 3% in 2008). Consistent with previous years,

REU predominantly reported sourcing ecstasy from friends or known dealers in private residences and nightclubs.

Methamphetamine

As in 2009, the prevalence of reported use of all forms of methamphetamine in 2010 was lower than in previous years, with 71% of REU reporting use of any form of methamphetamine in the last six months. Of the three forms of methamphetamine, speed was the most widely reported as being used by REU in the last six months (70%), followed by crystal meth/ice (18%), and base (3%). REU reported typically snorting half a gram of speed on a monthly basis during a typical session, and one gram in a heavy session. The market characteristics of speed remained consistent with previous years with a reported median price of \$200 per gram and speed was reported as being very easy or easy to obtain. Compared to 2009, significantly more REU who commented on the purity of speed (n=33) reported that it was of high purity (33% vs 11% for 2010 and 2009 respectively), which is consistent with the change in mean purity of samples seized by law enforcement agencies between 2009 and 2010 (21% and 13% pure in 2010 and 2009 respectively). REU predominantly reported sourcing methamphetamines from friends or known dealers.

Cocaine

Just over half (54%) of the 2010 REU sample reported having recently used cocaine, generally reporting typically snorting half a gram of cocaine on an infrequent basis in a variety of locations, nightclubs and private homes.

Perhaps contributing to the relatively low frequency of recent use, the REU reported that cocaine remains an expensive drug (\$300 per gram) but is still relatively easy to obtain. The purity of cocaine seized by law enforcement agencies (42%) was comparable to previous years. REU predominantly reported sourcing cocaine from friends or known dealers.

Ketamine

Twenty-three per cent of the 2010 REU sample reported recent ketamine use, which is comparable to recent years but remains significantly lower than when the EDRS began in 2003 (51%). Those who reported recent use reported infrequent use, typically of two “bumps” per session, in nightclubs or private homes.

Gamma-Hydroxy-Butyrate

Despite the low prevalence in recent **Gamma-Hydroxy-Butyrate** (GHB) use (12%) among the REU sample in 2010 (thereby creating difficulty in interpreting data due to the small numbers able to comment on its use), many key experts (KE) reported GHB to be a very problematic drug, associated with overdoses, often made worse when mixed with alcohol. Some, but not all, KE suggested a decrease in GHB overdoses in 2010 compared to 2009; however, others reported that GHB overdoses in 2010 had remained stable and comparable to 2009.

Understanding the patterns of use and harm associated with GHB is complicated by the fact that the GHB sourced in Melbourne appears to be comprised of not actual GHB but its precursor chemicals 1,4 Butanediol (1,4BD) and gamma-Butyrolactone (GBL), which both have a longer time period before the onset of effects compared to GHB. Indeed, Victorian Police reported that they had not seized any GHB in the past 12 months; however, they still reported testing seizures of 1,4BD and an increase of seizures of GBL.

The 2010 REU sample reported that GHB was very cheap (\$4.25 per mL) and relatively easy to obtain.

LSD

Reports of recent use of LSD among the 2010 REU sample were similar to 2009 with 49% reporting recent infrequent use of typically one tab per session. Three KE reported that LSD use had increased, possible due to it being reported as very cheap (\$10 per tab) and readily available.

Consistent with previous years, purity was reported by REU as medium to high. REU predominantly reported sourcing LSD from friends or dealers (unknown or known).

Cannabis

Eighty-nine per cent of the REU sample reported recent use of cannabis, making cannabis the most commonly used illicit drug after ecstasy (a finding consistent with previous years). Recent users reported smoking cannabis relatively frequently (greater than once a week), with 15% of participants reporting daily use. Almost half reported using cannabis to come down from ecstasy. Reported cannabis prices were consistent with previous years (\$20 per gram of hydroponic cannabis and \$16 per gram of bush cannabis). Most participants who commented reported cannabis as being very easy or easy to obtain. REU predominantly reported sourcing cannabis from friends or known dealers in private homes.

Alcohol

As in previous years, the 2010 REU sample reported almost universal lifetime and recent use of alcohol, initiating drinking at the very young age of 14 years. There was a high prevalence of reported alcohol use in conjunction with ecstasy (86%); however, significantly fewer reports of using alcohol while coming down from ecstasy (2%) than in previous years. In 2010, 87% of recent drug “bingers” reported consuming alcohol during a binge, a figure higher than most previous years, but comparable to 2009 (89%).

Almost all KE rated alcohol as the most problematic drug due to the rise in alcohol-related violence, risks and harms and its very high prevalence and involvement in overdoses.

Health and other issues

In 2010, 19 participants reporting overdosing on a stimulant drug in the 12 months prior to the interview, with ecstasy being the main drug attributed to the overdose (79%). Sixty-eight per cent of 2010 REU reported overdosing on a depressant drug, generally alcohol (90%) in the preceding 12 months. Most participants reported being watched or monitored by friends during the overdose.

Twenty-seven of the 2010 REU sample reported accessing health or medical services in relation to their ERD use in the six months prior to the interview. These participants reported most commonly accessing general practitioners (48%), counsellors (37%), or psychologists (30%).

Compared to the 2007 National Drug Strategy Household Survey (NDSHS), a significantly higher percentage of the 2010 REU sample reported moderate to high distress (66% vs 29% for the 2010 REU and the 2007 NDSHS respectively) on the Kessler-10, a measure of psychological distress. Additionally, 29% of participants reported experiencing any mental health problems in the six months prior to the interview, including depression and anxiety.

Reports from the 2010 REU sample suggest that moderate levels of non-health-related problems were experienced by REU as a result of their drug use. Forty-three per cent of the participants reported that their ERD use interfered with responsibilities at work, home or school; 38% stated their drug use had put themselves or others in risky situations; and 21% reported that their drug use had caused problems with family, friends and colleagues. No participants in 2010 reported having any recent drug-related legal problems. The main drug reported by REU as responsible for these problems was alcohol followed by ecstasy and cannabis.

Risk behaviour

Consistent with previous years, recent injecting drug use by REU was rare (7%).

Fifty-two per cent of the REU sample reported recent penetrative sex with a casual partner. Of those participants, only 38% reported always using a condom when not under the influence of alcohol/drugs. Unsurprisingly, this group tended to report having sex while under the influence of drugs, mainly alcohol, ecstasy, speed or cannabis. Of those who reported having casual sex while under the influence of drugs, 36% reported always using a condom.

Reports of risky driving practices among the REU sample were concerning: 61% reported having recently driven soon after (i.e., within one hour) taking an illicit drug and 58% reported having driven over what they believed to be the legal limit of alcohol. Those reporting driving after using illicit drugs indicated that they did so most commonly following the use of cannabis, ecstasy and/or speed.

Risky alcohol use was also measured among the REU sample in 2010. Using the Alcohol Quantity, Frequency and Variability (AQFV) questionnaire as well as the WHO's Alcohol Use Disorders Identification Test (AUDIT), the majority of 2010 REU would be considered to be drinking at harmful and hazardous levels.

Criminal activity, policing and market changes

In 2010, nine participants reported that they had been arrested in the past 12 months and one-third had been involved in drug dealing in the month prior to interview.

Most of the 2010 REU sample (79%) reported that police activity had not made it more difficult to obtain ERD in the last six months.

Conclusions

The results reported here describe trends in the use of ERD in 2010 Melbourne, Victoria, and provide comparisons with the findings of the 2003 to 2009 studies. Many characteristics of ERD use reported in the previous Victorian and national reports (e.g., Stafford et al., 2008) were comparable to those of the current study, which suggests a level of stability in this illicit market. The notable changes in 2010 centred on the increase use of drugs other than ecstasy, especially the research chemical, mephedrone – possibly as a result of continued reports of difficulties in obtaining ecstasy.

GHB and alcohol were most commonly associated with drug-related harms. Health concerns related to these harms are further compounded by the poor risk discrimination skills of REU – inconsistent and low condom use, driving under the influence of alcohol and other drugs, and low rates of health-seeking behaviour.

Implications

This eighth consecutive Victorian EDRS study has provided further indication of the patterns and characteristics of ERD use and related consequences in Melbourne. Patterns of polydrug use, binge drug use, the frequency and locations where drugs are reportedly used, and the availability of many drugs, have shown a degree of consistency across the eight years of data collection. Other characteristics, such as the reduced prevalence of recent amphetamine use, increased use of alcohol at potentially harmful levels evident in recent years, and the emerging use of research chemicals, warrant further exploration. The EDRS has also provided unique information on a range of issues of relevance to ERD-using populations, such as drug-driving behaviour and sexual health risks.

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

The findings of the 2010 Victorian EDRS suggest the following recommendations:

- tailored research and surveillance activities capable of capturing information on mephedrone and other emergent research chemicals as they emerge and expand;
- further research into the health and behavioural effects of mephedrone in order to gain a greater understanding of this drug, and develop clinical and public health responses, if the use of this drug persists;

- further research into the reasons influencing REU's choice of drug and consequent initiation and cessation;
- further examination of the high prevalence of alcohol use among REU, the reasons behind this, and methods to develop and implement strategies for distributing harm-reduction messages;
- further investigation of polydrug use by REU, its associated harms, and explorations of harm-reduction strategies used by REU, with a focus on alcohol and GHB;
- exploration of treatment utilisation among users for ERD use and any barriers preventing access to such treatment; and
- targeted research examining the high levels of drug- and drink-driving reported by participants, in addition to analysis of attitudes towards current roadside drug-testing.

1 INTRODUCTION

The Illicit Drug Reporting System (IDRS) is an annual study funded by the Australian Government Department of Health and Ageing (AGDH&A). It has been conducted on an annual basis in New South Wales since 1996, Victoria since 1997 and in all states and territories of Australia since 1999.

The IDRS aims to provide a reliable method of monitoring emerging jurisdictional trends in the price, purity, availability and use of opiates, cannabis, cocaine, amphetamines and other drugs. It is intended to serve as a strategic early warning system, identifying emerging trends of local and national concern in various illicit drug markets. The IDRS is designed to be sensitive to such trends, providing data in a timely fashion, rather than to describe phenomena in detail. The drug trends information obtained from this study is intended to inform health and law enforcement sector policy and program responses to illicit drugs, as well as to identify areas and issues requiring further investigation (Darke, Hall & Topp, 2000; Topp et al., 2002).

The IDRS data collection consists of three components: interviews with illicit drug users; key expert (KE) interviews with individuals who work with illicit drug users; and the collection of secondary indicator data sources (such as surveys of drug use in the general population, data on drug seizures, arrest data, hospital accident and emergency data, etc.). These three data sources are triangulated against each other in order to minimise the biases and weaknesses inherent in each one.

The IDRS, however, has historically not provided clear data on party drug use trends. This is because the sentinel group chosen for study purposes has been injecting drug users (IDU) recruited mostly through needle and syringe programs (NSP). The majority of these IDU have been primary heroin users whose polydrug use extended to other opiates and central nervous system (CNS) depressants, but not to ecstasy and related drugs (ERD) to the same extent (Breen et al., 2004; Breen, Topp & Longo, 2002).

Given the significant demonstrated potential for health and other harms associated with ERD misuse (Topp et al., 1999), there is an imperative for broadening existing drug trend monitoring systems to facilitate a more sensitive mechanism for detecting trends in this area. The greatest opportunity for achieving this is by extending current monitoring methods to new sentinel groups and settings. With increasing community interest in the patterns and characteristics of ERD, the Victorian Ecstasy and Related Drug Reporting System (EDRS) represents a timely move to gather information about these local markets.¹

In 2000, the National Drug Law Enforcement Research Fund (NDLERF) funded a two-year, two-state trial of the feasibility of monitoring emerging trends in ecstasy and other related drug markets using the extant IDRS methodology. For the purposes of the study, the term “ecstasy and related drugs” is considered to include drugs that are routinely used in the context of entertainment venues such as nightclubs or dance parties. In addition to ecstasy (3,4-methylenedioxymethamphetamine (MDMA)), this includes drugs such as methamphetamine, cocaine, LSD, ketamine, MDA (3,4-methylenedioxyamphetamine) and GHB (gamma-hydroxybutyrate).² The findings of the two-year trial (Breen, Topp, & Longo, 2002) are reported elsewhere. The sentinel population examined in this report are regular ecstasy users (REU). The findings in this report provide a summary of trends in ERD use detected in Melbourne, Victoria, in 2010 through the conduct of the eighth year of the study, formerly known as the Party Drug

¹ See the Drugs & Crime Prevention Committee’s discussion paper “Inquiry into amphetamine and ‘party drug’ use in Victoria” as a good source for further reading.

² For further information about these and other party drugs, see: www.adf.org.au; www.bluelight.nu; www.crowid.org.

Initiative (PDI). Comparisons are also made between results reported in the 2003 to 2009 studies. The trends described in this report have been extrapolated from the three data sources: interviews with current REU, interviews with individuals who have contact with ecstasy users through their work – known as key experts (KE), and the collation of indicator data. As with the core IDRS, the data sources are triangulated in order to minimise the biases and weaknesses inherent to each. Consistency between the main IDRS and the EDRS was maintained where possible, as the IDRS has demonstrated success as a monitoring system (Shand et al., 2003; Topp et al., 2003; Topp et al., 2002). Consequently, the focus is on Melbourne, as new trends in illicit drug markets are more likely to initially emerge in large cities rather than regional centres or rural areas.

1.1 Study aims

The overall aim of the 2010 Victorian EDRS was to extend to an eighth 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 ecstasy users interviewed in Melbourne;
- examine the patterns of ERD use of this sample;
- 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 may require further investigation;
- examine levels of participants' involvement in criminal behaviours and perceptions of recent police activity towards ERD users; and
- where appropriate, provide a comparison of 2010 findings with those reported in the 2003, 2004 and 2005 PDI reports, and the 2006-2009 EDRS reports.

2 METHOD

The 2010 EDRS used the methodology trialled in the feasibility study of Breen et al. (Breen, et al., 2002), that was subsequently used in the 2003-2009 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 REU;
2. telephone and face-to-face interviews with KE who, through their work, have regular contact with ecstasy users in Melbourne; and
3. indicator data sources such as ERD drug treatment episodes, the purity of seizures of ecstasy analysed in Victoria, and prevalence of use data drawn from the National Drug Strategy Household Surveys (NDSHS).

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 drug use and party drug markets.

2.2 Survey of REU

As described above, a range of drugs are included in the category of ERD. The sentinel population chosen to monitor trends in ERD markets consisted of people who reported regular use of tablets sold as “ecstasy”. This population was chosen for a number of reasons: ecstasy can be considered one of the main illicit drugs used in Australia. It is the second most widely used illicit drug after cannabis, with 3.5% of the Australian population aged 14 years and older estimated to have used it in the last 12 months (Australian Institute of Health and Welfare (AIHW), 2008).

Further, a sample of this population was successfully recruited and interviewed for both the two-year feasibility trial (2000-2001) in New South Wales, Queensland and South Australia as well as the subsequent implementation of the PDI in 2002 in these jurisdictions. The findings from these studies provide further evidence of the central role of ecstasy to the various party drug markets of Australia (White, Breen & Degenhardt, 2003). Therefore, REU, who were used in the 2003-2009 PDI/EDRS studies, have again been used in the 2010 study to provide information on ERD markets.

For the purpose of this study, “regular ecstasy use” was defined as the use of ecstasy at least once a month for the previous six months. Participants were also required to be at least 18 years of age and have resided in the Melbourne metropolitan area for the 12 months prior to the interview.

2.2.1 Recruitment

A total of 100 REU were interviewed for the Victorian 2010 EDRS. All of the participants resided in the Melbourne metropolitan region and were recruited through a purposive sampling strategy (Kerlinger, 1986). This strategy included advertisements in entertainment street press and online forums, 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, & Norcross, 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 their interviews, participants were asked if they would be willing to discuss the study with friends who might be willing and able to participate. Snowballing is also routinely employed as a recruitment method in the IDRS (Jenkinson & O'Keeffe, 2005).

2.2.2 Procedure

Participants contacted the researchers by telephone or via email and were screened for eligibility (criteria as above). As in the main IDRS, the focus was on the capital city, since new trends in illicit drug markets are more likely to emerge in urban areas rather than in remote or regional areas.

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. All respondents were volunteers who were reimbursed \$40 for their participation. All interviews were undertaken at the Burnet Institute or at an agreed public meeting space 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.

2.2.3 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 et al., 2000), which incorporated items from previous NDARC studies of users of ecstasy (Solowij, et al., 1992) and powder meth/amphetamine (Darke et al., 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 ecstasy and other drug use, including frequency and quantity of use and routes of administration; the price, purity and availability of ERD; patterns of ecstasy 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, new drug users and perceptions of police activity.

2.2.4 Data analysis

Descriptive analyses were conducted using Predictive Analytics Software (PASW) for Windows Version 17.02 (previously known as Statistical Package for the Social Sciences or SPSS) as well as Stata. For selected key variables, chi square tests were used to determine the significance of difference between 2010 and 2009 with a statistically significant difference defined as $p < 0.05$. All “significant” findings throughout the report refer to $p < 0.05$.

2.3 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 of, in the course of employment, users of ERD throughout the preceding six months. Fourteen KE provided information on the ecstasy users they had contact with/knowledge of in the six to 12 months preceding interview.

The 14 KE interviewed in 2010 were employed in a range of occupations, and included law enforcement officers, including members of the Drug Task Force, Dog Squad (sniffer dogs), and Forensic Services Department ($n=4$); drug treatment worker/peer educators/outreach worker ($n=2$); paramedics, first aid workers, doctors and nurses ($n=4$); party promoters/event organisers ($n=1$); nightclub manager ($n=1$); dealer ($n=1$); and researchers ($n=2$).

Most of the KE reported working with mixed populations (by age, ethnicity and gender identity); however, six reported that they worked with one or more “special population groups”, including youth, people who inject drugs, prisoners, and gay and lesbian populations. Many KE reported

that the demographics of the ecstasy users they had contact with were comparable to that of the general community.

KE in 2010 were also asked to comment on what drug(s) they considered most problematic and the reasons why, and also comment on any changes in the drug market characteristics reported in 2010 compared to 2009.

2.4 Other indicators

Primary information collected from the REU surveys and KE interviews was supplemented by data obtained from a number of secondary indicator sources of illicit drug use and related morbidity and mortality. Where possible, data relating to trends for the 2009/2010 financial year are reported, unless otherwise indicated. For secondary indicators, where current data are not available, the most recently available data have been included.

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

Surveys reporting on illicit drug use prevalence in Victoria

- Data on the prevalence of drug use in the general community are typically derived from large-scale population surveys. The most recent household surveys from which estimates of illicit drug use within the community are available include the 2007 NDSHS (AIHW, 2008) and the 2009 Victorian Youth Alcohol and Drug Survey (VYADS) (Victorian Drug and Alcohol Prevention Council, 2010).

Drug seizure purity levels

- The Drug Analysis Branch of the Victoria Police Forensic Services Department conducts purity analyses for all drug seizures made by the Victoria Police. The Victoria Police Forensic Services Department has provided drug purity data for inclusion in this report up to the 2009/2010 financial year.

Drug-related arrest data

- Information pertaining to drug-related arrests in Victoria has been obtained from the Australian Crime Commission (ACC). The 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 2008/2009 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 represents courses of treatment (not client numbers) for the 2009/2010 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 that can provide information about caller drugs of concern, calls from drug users and calls about drug users. This report presents data for the period between 1999 and 2009.

Ambulance attendances at non-fatal drug-related events

- Turning Point Alcohol & Drug Centre manages an electronic drug-related ambulance attendance database, comprising information obtained from Ambulance Victoria Patient

Care Records (Dietze et al., 2000). Reliable data are available from June 1998 (with missing data for the periods May-July 2001, October 2002-February 2003, and June-July 2004). Although the database includes overdose-related calls for all types of drugs, the dataset is best suited to the monitoring of non-fatal heroin-related overdose, due to the availability of a biological marker of heroin involvement (i.e., the administration of naloxone and subsequent patient response). Data for the period between January 2006 and December 2009 are presented in this report.

National Hospital Morbidity Database

- The National Hospital Morbidity Database (NHMD) is compiled by the AIHW. It is a collection of electronic records for admitted patients in public and private hospitals in Australia. “Principal diagnosis” (the diagnosis established after study to be chiefly responsible for occasioning the patient’s episode of care in hospital) has been reported. As the most recent hospital admission data was not available at the time of printing, this report presents drug-related (amphetamine, cocaine and cannabis) hospital admissions for Victoria and Australia, 1999/2000 to 2007/2008 (Roxburgh & Burns, 2008; AIHW, 2009).

3 SAMPLE CHARACTERISTICS

3.1 Overview of the REU participant sample

The characteristics of the REU sample recruited in 2010 were comparable to previous years (Table 1). The participants were mostly heterosexual with a mean age of 24 years. The sample was almost two-thirds male and generally well educated.

Table 1: Demographic characteristics of REU sample, 2004-2010

	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Mean age (years)	23.5	24.2	24.4	24.4	23.7	23.2	24
Male (%)	58	52	52	48	53	67	64
English-speaking background (%)	96	94	94	97	96	100	100
ATSI (%)	0	2	2	0	1	2	0
Heterosexual (%)	87	86	91	85	88	84	83
Mean number school years	11.6	11.7	11.7	11.7	11.7	12	12
Tertiary qualifications (%)	53	52	42	34	46	46	41
Employed full time (%)	25	33	26	32	38	25	21
Full-time students (%)	23	17	16	4	9	9	8
Unemployed (%)	17	15	20	14	8	16	21
Previous conviction (%)	4	4	6	5	2	1	4
Current drug treatment (%)	6	0	4	3	3	2	5
Mean income per week (\$)*	-	-	-	-	-	\$542	\$504

Source: REU interviews, 2004-2010

* Income question introduced in 2009

As in previous years, information gained from KE interviews indicates that diverse groups of people (in terms of differing age, gender, sexuality, and geographic location) are part of the broad ERD-using population in Melbourne. Indeed, KE commented on the increasingly widespread nature of ERD use.

Most KE described REU as being typically aged between 18 and 35 years, well educated, and employed or students. Most KE reported having contact with both males and females – often a slightly higher proportion of males – with males more likely to have had contact with health

services. They also reported seeing a range of ethnicities and people from all areas across Melbourne.

REU were unlikely to report being involved in either drug treatment or the justice system.

4 CONSUMPTION PATTERN RESULTS

Summary

- Recent use of alcohol, cannabis, and methamphetamine powder (speed) remain high (70% or greater) among the 2010 REU sample;
- In 2010, REU were significantly less likely to report ecstasy as their favourite drug compared to 2009;
- Since 2009, the reported recent use of dimethyltryptamine (DMT), mephedrone (4-methylmethcathinone) and pharmaceutical stimulants has significantly increased;
- The most noticeable change from 2009 is the dramatic rise in the reported recent use of mephedrone, from three reported cases in 2009 to 28 in 2010; and
- GHB and alcohol were noted by most KE as the most problematic drugs, both causing overdoses and antisocial behaviour.

4.1 Drug use history and current drug use

In comparison to 2009 there was a significant increase in the reported recent use of mephedrone (3% vs 28% for 2009 and 2010 respectively), DMT (5% vs 15% for 2009 and 2010 respectively) and pharmaceutical stimulants (15% vs 27% for 2009 and 2010 respectively). Consistent with findings from 2009, in 2010 Victorian REU reported benzodiazepine (BZD) (illicit or licit) use more frequently than the national sample (45% vs 32% for the Victorian and national samples respectively).

Table 2: Lifetime and recent drug use of REU, 2004-2010

	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Alcohol							
Ever used (%)	100	100	99	100	99	100	99
Used last 6 months (%)	94	97	97	97	97	99	97
Cannabis							
Ever used (%)	98	97	97	98	99	95	97
Used last 6 months (%)	78	87	79	82	84	85	89
Tobacco							
Ever used (%)	94	93	93	96	88	91	97
Used last 6 months (%)	83	78	78	90	75	86	88
Ecstasy powder*							
Ever used (%)	–	55	66	64	49	37	48
Used last 6 months (%)	–	27	55	38	27	24	34
Methamphetamine powder (speed)							
Ever used (%)	98	97	100	99	90	90	88
Used last 6 months (%)	92	85	91	90	75	72	70
Methamphetamine base (base)							
Ever used (%)	45	34	32	30	20	18	13
Used last 6 months (%)	34	21	12	16	7	7	3
Crystal methamphetamine (crystal)							
Ever used (%)	71	71	73	64	53	36	45
Used last 6 months (%)	52	42	49	39	22	13	18
Cocaine							
Ever used (%)	72	79	82	79	79	75	76
Used last 6 months (%)	48	63	55	54	51	48	54
LSD							
Ever used %	72	67	60	70	51	63	72
Used last 6 months %	39	38	37	39	29	46	49
MDA							
Ever used (%)	37	25	26	29	24	9	14
Used last 6 months (%)	16	8	8	11	9	2	6
Ketamine							
Ever used %	70	56	56	52	55	43	53
Used last 6 months %	45	35	29	25	20	21	23
GHB							
Ever used (%)	38	33	35	34	20	15	23
Used last 6 months (%)	27	16	14	10	11	10	12
Amyl nitrite							
Ever used (%)	52	49	42	37	43	62	58
Used last 6 months (%)	20	20	11	16	16	41	34
Nitrous oxide							
Ever used (%)	54	41	32	37	43	43	43
Used last 6 months (%)	27	17	14	19	23	22	22
Psilocybin mushrooms*							
Ever used (%)	–	53	55	61	66	62	75
Used last 6 months (%)	–	19	32	26	20	27	22
BZD#							
Ever used (%)	58	54	51	52	61	74	71
Used last 6 months (%)	41	37	36	32	38	53	45
Antidepressants#							
Ever used (%)	28	33	25	23	19	27	36
Used last 6 months (%)	12	14	10	7	8	13	15
Heroin							
Ever used (%)	18	18	23	12	16	16	17
Used last 6 months (%)	9	7	8	7	5	5	7
Methadone							
Ever used (%)	8	1	11	10	6	4	6
Used last 6 months (%)	2	0	6	5	3	1	5
Other opiates#							
Ever used (%)	26	34	29	34	22	19	25
Used last 6 months (%)	13	18	16	18	13	8	8

Source: REU interviews, 2004-2010

* Question not asked prior to 2005

Illicit and licit

For the purposes of this study, “bingeing” is defined as using any drug(s) on a continuous basis for more than 48 hours without sleep (Ovendon & Loxley, 1996). Thirty-eight per cent of the sample reported that they had binged on ERD in the six months preceding interview. The median length of the longest binge was 60 hours (range=49-120 hours, excluding one participant who reported not sleeping for 10 days) and those reporting recent bingeing indicated having done so a median of two times (range=1-20 times) during the preceding six months. Of the 38 REU who reported that they had recently binged on ERD, ecstasy was the most commonly reported drug used during binges (84%), followed by tobacco (79%), alcohol (use >5 standard drinks, 68%), cannabis (66%), speed (55%), energy drinks (42%) and crystal meth (21%).

4.2 Ecstasy use

4.2.1 Ecstasy use among REU

Participants in the 2010 REU sample were significantly less likely to report ecstasy as their “favourite” drug compared to 2009 (31% vs 42% for 2010 and 2009 respectively). Similar to previous years, they reported typically swallowing a median of two ecstasy pills on a fortnightly basis (Table 3). Almost all (n=98) REU reported using ecstasy with other drugs. Of those who reported using ecstasy with other drugs, the most common other drug was tobacco (73%), followed by more than five standard drinks of alcohol per session (67%) and cannabis (56%). Twenty-seven per cent of REU reported using ecstasy weekly or more in the preceding six months.

In 2009 REU reports of the use of other drugs when coming down from ecstasy were significantly less frequent than they had been in the preceding six years of data collected through the EDRS (55% in 2009 compared to an average of 84% from 2003-2008). This lower frequency was again seen in the 2010 sample, with only 53% of REU reporting using other drugs when coming down from ecstasy. In 2010, the main reported drug used to come down from ecstasy was cannabis (77%), and compared to 2009 there was a significantly lower number of REU who reported using a BZD when coming down (26% vs 93% for 2010 and 2009 respectively).

Table 3: Patterns of ecstasy use among REU, 2004-2010

	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Mean age first used ecstasy (years)	19	19	19	19	18	19	18
Ecstasy “favourite” drug (%)	47	45	32	29	39	42	31
Median days used ecstasy pills last 6 months	15	13	14	12	12	12	12
Use ecstasy pills weekly or more (%)	21	33	31	29	38	29	23
Median ecstasy pills in “typical” session	2	2	2	2	2	2	2
Typically use >1 pill (%)	77	72	75	72	77	77	76
Recently binged on ecstasy (%)*	42	51	39	50	38	36	32
Main route of administration of ecstasy pills in the last 6 months (%)							
Swallow	95	86	94	95	95	94	85
Snort	2	13	4	2	5	5	13
Inject	1	1	2	2	3	1	1
Ever injected ecstasy pills (%)	9	9	10	8	7	3	2
Main form used last 6 months (%)**							
Tablets (pills)	—	99	98	98	-	-	-
Powder	—	1	2	2	-	-	-
Typically use other drugs in conjunction with ecstasy (%)	94	97	97	95	98	96	98
Typically use other drugs to “come down” from ecstasy (%)	85	88	82	84	80	55	53

Source: REU interviews, 2004-2010

* Binged defined as the use of drugs for more than 48 hours continuously without sleep

** Question not asked in 2004, nor in 2008-2010

Table 4 shows reported patterns of use for ecstasy *capsules*. Compared to 2009, significantly more REU reported lifetime capsule use and recent capsule use in 2010. It appears from Table 4 that there may be a rising trend in ecstasy capsule use by REU, which is something that requires further consideration if the trend continues.

Table 4: Patterns of ecstasy capsule use among REU, 2008-2010

	2008 (N=100)	2009 (N=100)	2010 (N=100)
Lifetime use of ecstasy capsules (%)	46	65	81
Used ecstasy capsules in last 6 months (%)	18	48	65
Mean age first used ecstasy (years) (range)	19 (13-33)	20 (17-43)	20 (14-48)
Median days used ecstasy capsules last 6 months* (range)	5 (1-24)	3 (1-18)	5 (1-40)
Median ecstasy capsules in “typical” session* (range)	2 (1-20)	1.5 (1-5)	2 (0.5-12)
Main route of administration of ecstasy capsules in the last 6 months* (%)			
Swallow	78	94	61
Snort	53	46	53
Inject	0	0	0

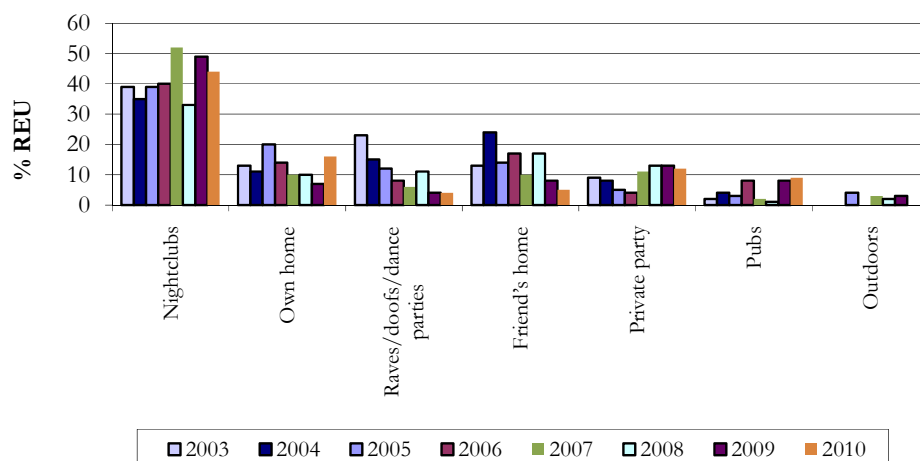
Source: REU interviews, 2008-2009

* Among those who used ecstasy capsules in the last 6 months

Consistent with REU sample findings, KE suggested that there was a high prevalence of polydrug use among ERD users. In general, KE suggested that ecstasy use alone was not problematic. In contrast, alcohol (alone or with other drugs) and GHB (alone or with alcohol) were reported by most KE as extremely problematic in 2010. Only one KE thought ecstasy use was problematic, expressing concern that people are unaware of what substances they are getting in their pills (often not MDMA) and therefore do not realise the potency of the pill.

Figure 1 shows REU’s reported last location of ecstasy use. Data from 2010 are comparable to 2009.

Figure 1: Location of most recent ecstasy use, 2003-2010



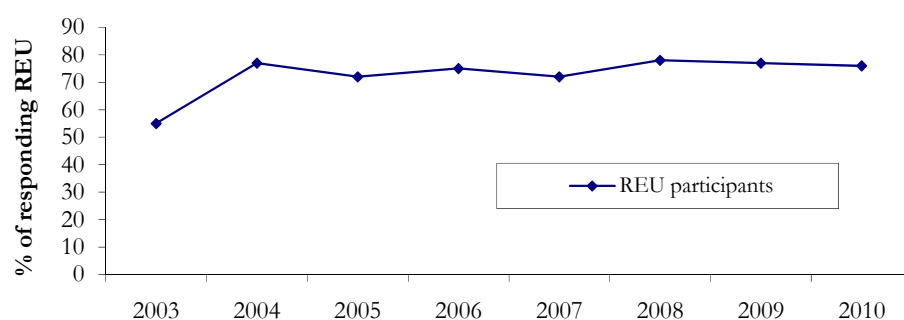
Source: REU interviews, 2003-2010

* Rave and dance party categories combined from 2004 onwards; 2003 data represents rave and dance party combined

4.2.2 Trends over time

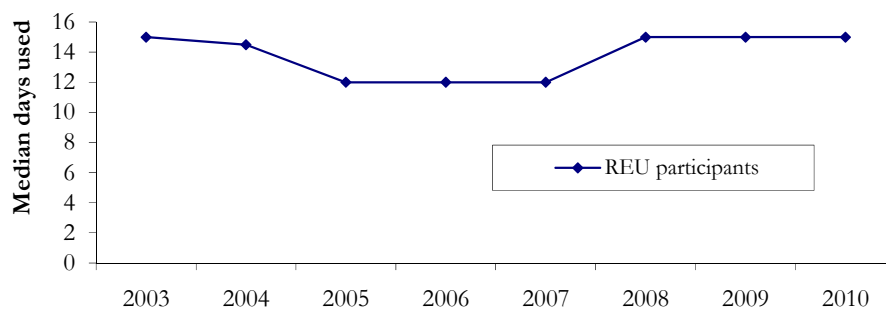
Patterns of ecstasy use were comparable to recent years with 76% of the 2010 REU sample reporting using more than one ecstasy pill per drug-using session (Figure 2), and typically reporting recently using the drug on a median of 15 days (Figure 3). Thirty-two per cent reported recently bingeing on ecstasy, the lowest figure found across the eight years of EDRS data collection (Figure 4).

Figure 2: Percentage of REU who report typically using more than one ecstasy tablet, 2003-2010



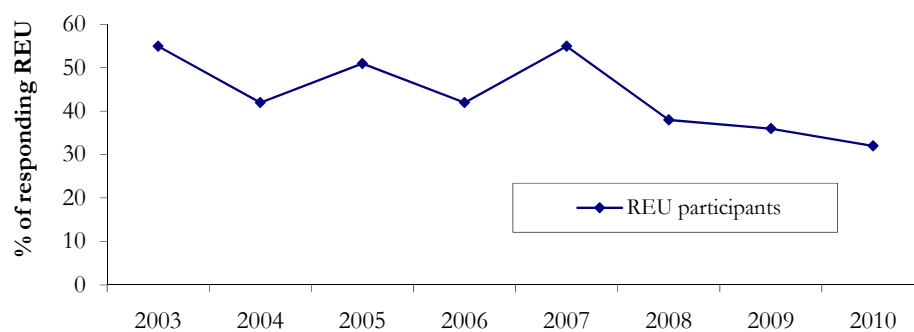
Source: REU interviews, 2003-2010

Figure 3: Median days used ecstasy in the six months prior to interview, 2003-2010



Source: REU interviews, 2003-2010

Figure 4: Percentage of REU who reported bingeing* on ecstasy during the six months prior to interview, 2003-2010



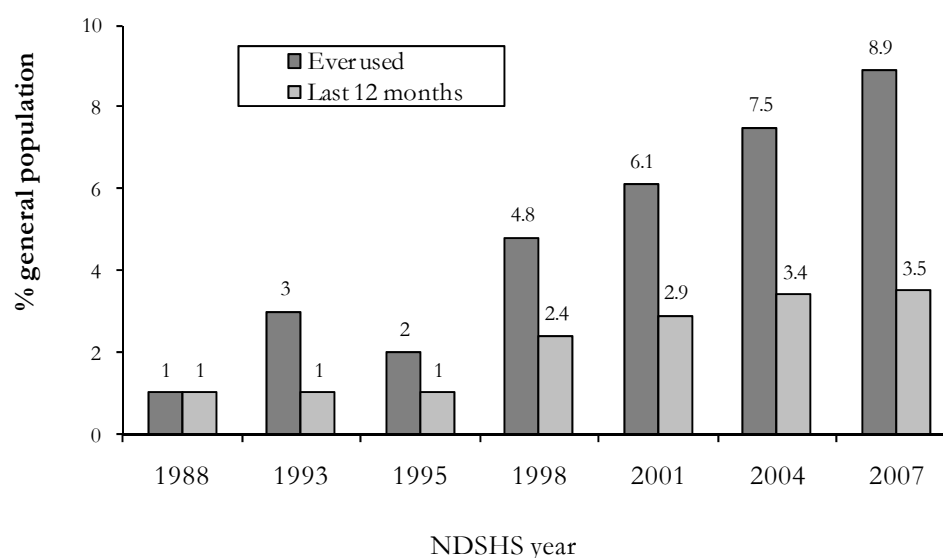
Source: REU interviews, 2003-2010

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

4.2.3 Use of ecstasy in the general population

The 2007 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 2007, 3.5% of the Australian population aged 14 years and over reported recent (in the last 12 months) ecstasy use (AIHW, 2008), a nearly identical figure to that found in the previous NDSHS (AIHW, 2008) (see Figure 5). Figures for Victoria were almost identical to the national figures in 2007.

Figure 5: Prevalence of ecstasy use among the population aged 14 years and over in Australia, 1988-2007



Source: 2007 NDSHS (AIHW, 2008)

Nationally, the highest prevalence of both reported lifetime (23.9%) and recent (11.2%) ecstasy use was found in the 20 to 29-year old age group (AIHW, 2008).

Data from the 2009 VYADS provide further evidence of the recent decrease in the use of ecstasy (Victorian Drug and Alcohol Prevention Council, 2010). Of the 16 to 24-year olds surveyed in 2009 (N=5,001), 15% reported having ever used ecstasy, while 9% reported recent use. This is less than the figures recorded when this study was last conducted in 2004, when 12% of the sample reported recent ecstasy use. Of those who reported past-year ecstasy use in 2009, frequency of use tended to be low: 35% reported using it at least once a month, 27% reported using it every few months, 24% reported using it once or twice a year, and 14% reported ecstasy use on only one occasion; these figures are comparable to those reported in 2004. The vast majority of respondents (99%) reported typically swallowing ecstasy. The median reported age of first use for the participants in the VYADS was 17.5 years (Victorian Drug and Alcohol Prevention Council, 2010), lower than the 22.6 years found in the 2007 NDSHS (AIHW, 2008).

4.3 Methamphetamine use

4.3.1 Methamphetamine use among REU

4.3.1.1 Methamphetamine powder (speed)

Most (88%) of the 2010 REU sample reported lifetime methamphetamine powder (speed) use and the majority (70%) reported speed use in the preceding six months (Table 5). However, the decline in reported use, which has been evident since 2003, continued in 2010.

As with previous years, the median reported age of first speed use was 18 years (range=12-28 years). Participants who reported speed use in the preceding six months reported use on a median of five days. Compared with 2009 there were significantly fewer REU in 2010 who reported only using speed once a month or less (60% vs 85% for 2010 and 2009 respectively,

p<0.001); however, significantly more reported weekly or more frequent use (20% vs 10% for 2010 and 2009 respectively, p<0.05). REU reported using half a gram during a typical session and a whole gram in a heavy session.

Table 5: Patterns of methamphetamine powder (speed) use among REU, 2004-2010

Speed	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	98	97	100	99	90	90	88
Used preceding 6 months (%)	92	85	91	90	75	72	70
Of those who had used							
Median days used last 6 months (range)	7.5 (1-150) (n=92)	10 (1-80) (n=85)	12 (1-120) (n=91)	7 (1-100) (n=90)	4 (1-90) (n=73)	5 (1-80) (n=72)	5 (1-180) (n=70)
Median quantities used (grams)							
Typical (range)	0.5 (0.13-1) (n=23)	0.5 (0.05-1) (n=35)	0.5 (0.25-1) (n=36)	0.5 (0.1-1.5) (n=47)	0.5 (0.1-4) (n=56)	0.5 (0.1-3) (n=42)	0.5 (0.1-4.5) (n=49)
Heavy (range)	1 (0.25-4) (n=40)	1 (0.01-5) (n=48)	1 (0.25-4) (n=51)	1 (0.15-4.5) (n=53)	1 (0.1-7) (n=64)	0.5 (0.1-17) (n=46)	1 (0.1-10) (n=53)

Source: REU interviews, 2004-2010

4.3.1.2 Methamphetamine base

Thirteen per cent of the 2010 REU sample reported that they had ever used methamphetamine base (base), with only three participants reporting base use in the preceding six months; both numbers the lowest ever reported in the Victorian EDRS (Table 6). The median reported age of first base use was 19 years (range=16-32). Given the very low number of recent base users, no further analyses were undertaken.

Table 6: Patterns of methamphetamine base use among REU, 2004-2010

Base	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	45	34	32	30	20	18	13
Used last six months (%)	34	21	12	16	7	7	3
Of those who had used							
Median days used last 6 months (range)	2.5 (1-48)	3 (1-70)	4 (1-15)	3 (1-20)	10 (1-60)	1 (1-6)	2 (2-10)
Median quantities used (points)							
Typical (range)	1 (0.25-5) (n=26)	1.25 (0.5-3) (n=14)	2 (0.5-4) (n=8)	2 (1-5) (n=10)	3 (0.5-5) (n=7)	0.85 (0.2-5) (n=7)	1 (n=1)
Heavy (range)	1 (0.5-5) (n=19)	2 (0.5-3) (n=13)	2.5 (0.5-8) (n=6)	2.25 (1-5) (n=10)	5 (1-20) (n=5)	0.85 (0.2-8) (n=7)	1 (n=1)

Source: REU interviews, 2004-2010

4.3.1.3 Crystal methamphetamine

The use of crystal methamphetamine remained low in 2010 with only 18% of participants reporting using it in the six months preceding interview (Table 7).

Patterns of use remained comparable to previous years with recent users initiating use at a median age of 21 years (range=13-34). The most common route of administration of crystal meth in the past six months was smoking (94%). REU reported using one point in a typical session and one and a half points during a heavy session. Only two participants in 2010 reported using crystal meth the last time they used ecstasy.

Table 7: Patterns of crystal methamphetamine use among REU, 2004-2010

Crystal methamphetamine	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	71	71	73	64	53	36	45
Used last six months (%)	52	42	49	39	22	13	18
Of those who had used							
Median days used last 6 mths (range)	5.5 (1-96) (n=52)	4.5 (1-100) (n=42)	5 (1-48) (n=49)	3 (1-100) (n=39)	4.5 (1-60) (n=22)	3 (1-60) (n=13)	3 (1-24) (n=18)
Median quantities used (points)							
Typical (range)	1 (0.5-5) (n=40)	1 (0.13-5) (n=28)	2 (0.25-3) (n=32)	1.5 (0.25-5) (n=31)	1 (0.1-5) (n=18)	1.5 (0.1-4) (n=9)	1 (1-6) (n=13)
Heavy (range)	1 (0.5-4) (n=31)	2 (0.5-5) (n=26)	2 (0.5-8) (n=26)	2 (0.25-10) (n=28)	2 (0.1-10) (n=17)	2 (0.1-15) (n=9)	1.5 (1-6) (n=11)

Source: REU interviews, 2004-2010

Location of methamphetamine use

In 2010, REU commonly reported recent speed use in their own home (21%), nightclubs (18%) or at a friends' home (15%), a pattern consistent with that recorded in 2009. Small numbers precluded further analysis of the locations of recent base and crystal meth use.

In contrast to last year, 2010 KE did not consider methamphetamine to be a problematic drug amongst their contacts. It was occasionally mentioned in association with mental illness and antisocial behaviour.

4.3.2 Methamphetamine use in the general population

The 2007 NDSHS provides the most recent national figures regarding the prevalence of methamphetamine use in the Australian general population. This survey indicates that, in 2007, 2.3% of the Australian population aged 14 years and over reported recent (in the last 12 months) use of methamphetamine, a decline from 2004 (3.2%) (AIHW, 2008). The figures for Victoria were almost identical. It is noteworthy that, as with ecstasy use, the highest prevalence of both lifetime (16%) and recent (7.3%) methamphetamine use nationally was reported by the 20-29 year old age group with a median reported age of first methamphetamine use of 20.9 years (AIHW, 2008).

From the 2009 VYADS, 11.5% of the 16 to 24-year olds surveyed (n=5001) reported lifetime use of amphetamines (Victorian Drug and Alcohol Prevention Council, 2010), which is 4.8 points down compared with 2005, and 6.6% of those survey reported recent amphetamine use (down 3.6 points from 2004). Similar to the 2004 survey, the 2009 VYADS provides evidence of the relatively infrequent use of methamphetamine among this younger age group: among recent methamphetamine users, 41% reported using approximately once a month or more frequently, 28% reported using every few months, 19% reported using once or twice a year, and 11% reported having only used methamphetamine on one occasion. According to the VYADS, amphetamines were most commonly snorted (71%), swallowed (66%) or smoked (34%) (Victorian Drug and Alcohol Prevention Council, 2010). Smoking amphetamines has increased since 2004 when 23% of the sample reported smoking.

4.4 Cocaine use

4.4.1 Cocaine use among REU

Consistent with previous years, 76% of the 2010 REU sample reported having ever used cocaine and about half (54%) reported use in the preceding six months (Table 8), with the median age of first use being 19 years (range=14-43).

The patterns of cocaine use in 2010 also remained comparable to previous years. REU reported using cocaine a median of two days in the preceding six months, using a median of half a gram in a typical or a heavy session, and snorting it (100%). Only 20% (n=11) reported using cocaine more frequently than once a month. Among recent users, 17% reported also using cocaine the last time they used ecstasy, 11% reported bingeing on it, and one participant reported using cocaine when coming down from ecstasy.

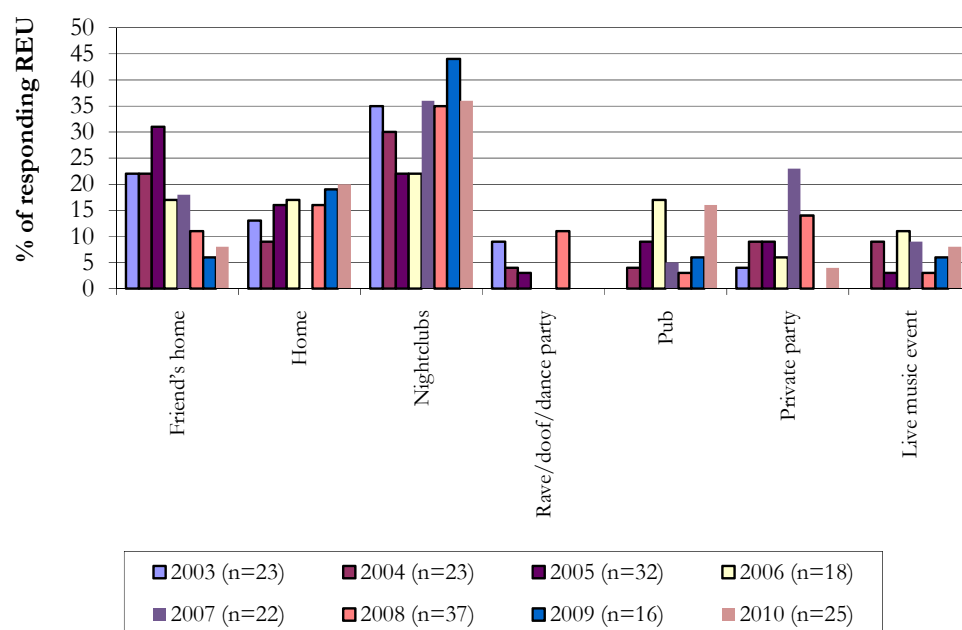
Table 8: Patterns of cocaine use among REU, 2004-2010

Cocaine	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used %	72	79	82	79	79	75	76
Used last six months %	48	63	55	54	51	48	54
Of those who had used	1.5	2	2	2	3	2	2
Median days used last 6 months (range)	(1-180) (n=48)	(1-50) (n=63)	(1-72) (n=55)	(1-34) (n=54)	(1-40) (n=51)	(1-50) (n=48)	(1-24) (n=54)
Median quantities used (grams)							
Typical (range)	0.5 (0.13-2) (n=20)	0.5 (0.1-3) (n=31)	1 (0.1-3) (n=27)	0.5 (0.15-2) (n=1)	0.5 (0.1-7) (n=40)	0.5 (0.1-2) (n=32)	0.5 (0.05 – 3) (n=45)
Heavy (range)	0.5 (0.13-4) (n=23)	1 (0.1-5) (n=33)	1 (0.2-9) (n=35)	1 (0.2-5) (n=30)	1 (0.1-7) (n=43)	1.0 (0.1-4) (n=35)	0.5 (0.05–8) (n=46)

Source: REU interviews, 2004-2010

Similar to 2009, in 2010 REU reported the *last* location of cocaine use was in nightclubs (36%) or at their own homes (20%) (Figure 6).

Figure 6: Location of most recent cocaine use, 2003-2010



Source: REU interviews, 2003-2010

4.4.2 Cocaine use in the general population

The 2007 NDSHS provides the most recent national figures regarding the prevalence of cocaine use in the Australian general population. This survey indicates that, in 2007, 1.6% of the Australian population aged 14 years and over reported recent (in the last 12 months) cocaine use, a statistically significant increase from the 2004 survey estimate of 1% (AIHW, 2008). The figures for Victoria were identical to the national figures in 2007.

As is the case with ecstasy and methamphetamine use, nationally, the highest prevalence of both lifetime (11.9%) and recent (5.1%) cocaine use was reported by the 20 to 29-year old age group (AIHW, 2008), an increase from 2004 (lifetime use 8.9% and recent use 3%).

Of the 16 to 24-year olds surveyed in the 2009 VYADS (n=5001), 6.8% reported having ever used cocaine in their lifetime, and 4.1% reported use in the 12 months prior to survey (Victorian Drug and Alcohol Prevention Council, 2010).

4.5 Ketamine use

4.5.1 Ketamine use among REU

Reports of recent ketamine use by the 2010 REU sample were infrequent, and significantly lower than recent use in the first few years of the EDRS, with only 23% reporting use within the last six months (Table 9). The median reported age of first use being 19 years (range=14-32). Consistent with last year, the use of ketamine was infrequent among those who reported recent use: on a median of two days in the preceding six months (range=1-12), with only one participant reporting using more than once a month and almost half (43%) reporting only using ketamine once in the preceding six months. Recent ketamine users most commonly quantified

their use in terms of bumps reporting using a median of two bumps (range=1-10) during a typical and heavy session of use, typically by snorting (96%). Bingeing on ketamine was uncommon (n=5) as was its use with ecstasy (n=2) or when coming down from ecstasy (n=1).

Table 9: Patterns of ketamine use among REU, 2004-2010

Ketamine	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	70	56	56	52	55	43	53
Used last 6 months (%)	45	35	29	25	20	21	23
Of those who had used							
Median days used last 6 months (range)	3 (1-96) (n=45)	3 (1-72) (n=35)	3 (1-14) (n=29)	1 (1-40) (n=25)	3 (1-50) (n=19)	2 (1-10) (n=21)	2 (1-12) (n=23)
Median quantities used (points)							
Typical (range)	1 (0.5-4) (n=21)	1.75 (0.5-3) (n=16)	2 (0.5-4) (n=18)	2 (0.1-3) (n=8)	2.5* (0.1-15) (n=12)	0.5 (0.25-1) (n=5)	2* (1-10) (n=12)
Heavy (range)	1.5 (0.5-5) (n=16)	2 (1-4) (n=15)	2 (1-4) (n=13)	2.25 (0.1-3) (n=6)	3* (0.1-20) (n=13)	0.5 (0.25-7) (n=5)	2* (1-10) (n=12)

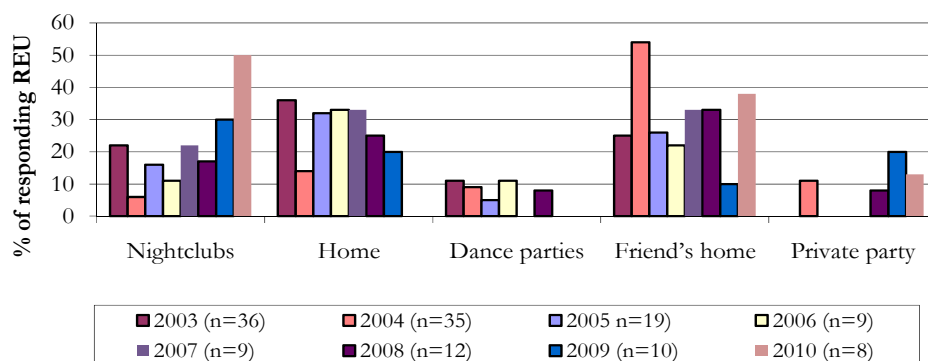
Source: REU interviews, 2004-2010

* In 2008 and 2010, median quantities described in bumps as only one participant in 2008 and two participants in 2010 described use in points

In 2010 REU reported their most recent ketamine use as being in nightclubs (50%), friends' homes (38%) or at private parties (13%) (Figure 7). However, because less than 10 participants answered these questions, no further analysis was conducted.

KE comments were conflicting, with one suggesting ketamine is popular at the moment in Melbourne as it is cheap and easy to obtain, while three other KE reported that they had not seen it at all lately or at least a lot less than a year or two ago, and a peer educator stated ketamine use was fluctuating recently.

Figure 7: Location of most recent ketamine use, 2003-2010



Source: REU interviews, 2003-2010

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 0.2% of the respondents to the 2007 NDSHS reported ketamine use in the last 12 months, and only 1.1% of the population reported ever having used the drug (AIHW, 2008). The available Victorian data suggest comparable prevalence of ketamine use, with 0.1% of the Victorian population aged 14 years and older estimated to have used ketamine in the previous 12 months (AIHW, 2008).

4.6 GHB use

4.6.1 GHB use among REU

Consistent with recent years, reports of GHB use among the REU sample were infrequent, with only 12% reporting use in the last six months (Table 10) with the median reported age of first use being 19 years (range=14-30).

The number of REU able to report on recent GHB use was low (n=12), and they reported having used irregularly on a median of two days (range=1-24) in the preceding six months. Recent GHB users reported using a median of three mLs during a typical and 6.5 mLs during a heavy session, and all reported use by the oral route.

One third of those who reported recent use of GHB also reported bingeing on GHB (4/12), one-quarter reported recent GHB (3/12), while only one participant reported using GHB when coming down from ecstasy.

Table 10: Patterns of GHB use among REU, 2004-2010

GHB	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	38	33	35	34	20	15	23
Used last six months (%)	27	16	14	10	11	10	12
Of those who had used	3	10	2.5	2	3	2.5	2
Median days (range) used last 6 months	(1-72) (n=27)	(1-100) (n=16)	(1-20) (n=14)	(1-120) (n=10)	(1-15) (n=11)	(1-5) (n=10)	(1-24) (n=12)
Median quantities used (ml)							
Typical (range)	7.5 (1-75) (n=26)	10 (3-50) (n=15)	5 (1.5-15) (n=12)	3 (1.7-30) (n=9)	3 (1-20) (n=10)	4 (0.5-15) (n=9)	3 (1.8-10) (n=11)
Heavy (range)	8 (2-150) (n=26)	20 (3-70) (n=15)	10 (2-25) (n=11)	4 (1.7-30) (n=9)	3 (2-40) (n=10)	5 (1-30) (n=9)	6.5 (2-20) (n=10)

Source: REU interviews, 2004-2010

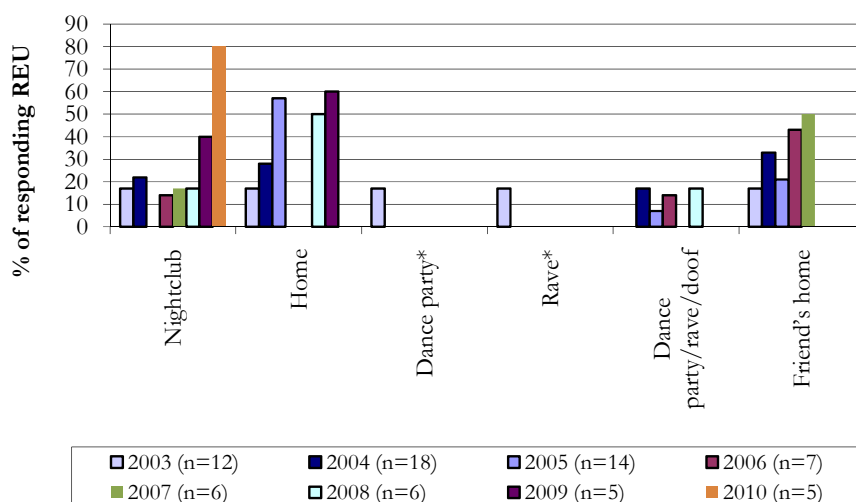
In 2010, REU reported their most recent GHB use as being in nightclubs (80%); however, with very low numbers, no further analysis was conducted (Figure 8). As was the case with KE data from 2009, GHB, often in combination with alcohol, was considered the main drug of concern among KE due to the risk of overdose. The common factors associated with GHB overdoses was reported as: (a) variations in the strength of GHB; and (b) naïve users having poor knowledge of GHB and its risk of overdose, especially in combination with alcohol. Peer outreach workers and first aid services also reported that naïve users were unaware they may not be consuming GHB but rather its precursors gamma-Butyrolactone (GBL) or more commonly 1,4-Butanediol (1,4BD). 1,4BD and GBL are converted to GHB in the body by liver enzymes, which results in a delayed onset of its effects compared to GHB. Naïve users of GHB may mistakenly take GBL or 1,4B and become impatient that it has had no effect and take another dose, only for both doses to take effect, resulting in an overdose. Additionally, the combination of alcohol and these precursor chemicals results in delayed and prolonged toxicity from 1,4BD and GBL due to alcohol inhibiting its conversion to GHB (Schneiderei et al., 2000).

In 2009, KE reported a doubling in GHB overdoses compared to the year before, mainly among nave users. In 2010, two KE reported no GHB related overdoses at all in the preceding six months. Two other KE reported having seen less GHB overdoses in the previous six months compared to last year. However, another three KE still reported GHB being very prevalent at the moment and still reported GHB overdoses.

It was suggested that the decrease in recent GHB overdoses could be due to an increased knowledge of how the substance works following education campaigns in clubs and at festivals. It was also suggested that GHB was commonly used by young people as it was very cheap and easy to obtain.

Victoria Police Forensic Services Department reported that they had not seized any GHB in the past 12 months; however, they still reported testing 1,4BD and an increase in GBL seizures.

Figure 8: Location of most recent GHB use, 2003-2010



Source: REU interviews, 2003-2010

* Rave and dance party categories combined from 2004 onwards

4.6.2 GHB use in the general population

There is only a small amount of data available regarding the prevalence of GHB use in the Australian general population. Only 0.1% of the respondents to the 2007 NDSHS reported GHB use in the last 12 months, and only 0.5% of the population reported ever having used the drug (AIHW, 2008). The available Victorian data suggest comparable prevalence of GHB use, with 0.1% of the Victorian population aged 14 years and older estimated to have used GHB in the previous 12 months (AIHW, 2008).

4.7 LSD use

4.7.1 LSD use among REU

Almost half (49%) of the 2010 REU sample reported use of *d*-lysergic acid (LSD) within the last six months (Table 11), with the median reported age of first use being 19 years (range=14-31). Reports of recent LSD use in 2009 and 2010 were significantly more frequent compared to 2008.

Recent users reported irregular use of LSD on a median of three days in the preceding six months. REU reported using a median of one to 1.5 tabs during a typical and heavy session via the oral route. Fourteen per cent of recent LSD users reported bingeing on LSD and the same number reported recent use with ecstasy, while no-one reported its use when coming down from ecstasy.

Table 11: Patterns of LSD use among REU, 2004-2010

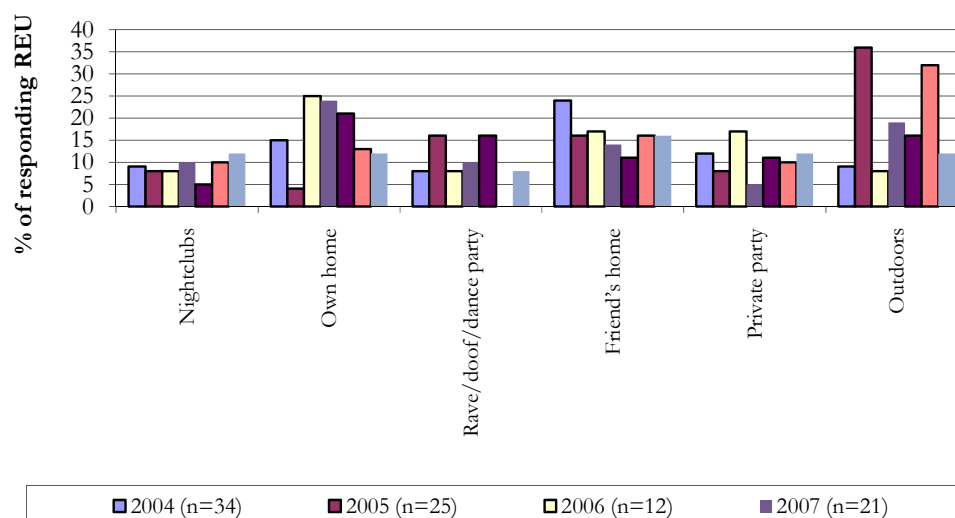
LSD	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used (%)	72	67	60	70	51	63	72
Used last 6 months (%)	40	38	37	39	29	46	49
Of those who had used							
Median days used last 6 months (range)	2 (1-18) (n=39)	3 (1-30) (n=38)	3 (1-20) (n=37)	2 (1-30) (n=39)	2 (1-12) (n=29)	2 (1-20) (n=46)	3 (1-36) (n=49)
Median quantities used (tabs)							
Typical (range)	1 (0.5-5) (n=30)	1 (0.5-3) (n=31)	1 (0.5-3) (n=34)	1 (0.5-4.5) (n=31)	1 (0.5-3) (n=28)	1 (0.25-3) (n=41)	1 (0.5-3) (n=45)
Heavy (range)	2 (0.5-50) (n=29)	1.25 (0.5-10) (n=30)	1.75 (0.5-10) (n=34)	1.5 (0.5-6) (n=31)	2 (0.5-9) (n=26)	1.5 (0.25-20) (n=41)	1.5 (0.5-10) (n=44)

Source: REU interviews, 2004-2010

The 2010 REU sample reported a wide variety of venues (in a fairly even distribution) as their last location of LSD use.

While the 2010 REU sample only reported a very slight increase of LSD use compared to 2009, some KE suggested that LSD was readily available and use had recently increased. They suggested a driver of the increase may be ease of availability and lower costs (\$10 per dose) of LSD compared to ecstasy. However, this finding was inconsistent with other KE reporting that they had not encountered many recent cases of LSD use.

Figure 9: Location of most recent LSD use, 2004-2010



Source: REU interviews, 2004-2010

4.7.2 Hallucinogen use in the general population

There is little information available regarding the prevalence of LSD use in the Australian general population. A “hallucinogen” category is included in the NDSHS, but this is a broad category encompassing the use of synthetic hallucinogens such as LSD, psilocybin and angel dust and naturally occurring hallucinogens such as magic mushrooms, and datura (AIHW, 2008). The most recent data from the 2007 NDSHS show that 0.6% of the general Australian population reported the use of this category of drugs in the preceding 12 months. It was further estimated that 6.7% of the general Australian population aged 14 years and older have ever used a hallucinogenic substance, a statistically significant reduction on the 2004 estimate of 7.5%. The estimates of use within the Victorian general population are consistent with national figures, with 0.5% estimated to have recently used a hallucinogenic substance (AIHW, 2008).

The 2009 VYADS reported on the lifetime and recent use of synthetic hallucinogens including LSD. Of this sample (n=5001), 4% reported having ever used a synthetic hallucinogen and 2.4% reported use in the preceding 12 months (Victorian Drug and Alcohol Prevention Council, 2010).

4.8 Cannabis use

4.8.1 Cannabis use among REU

Reports of recent cannabis use remain common among REU with 89% of the 2010 sample reporting use within the last six months (Table 12), with the median reported age of first use being 15 years (range=11-22). Among recent users, cannabis was reportedly used on a median of 30 days (slightly greater than weekly use) with 15% reporting daily use. Further, 62% of recent cannabis users reported using cannabis with ecstasy, 46% reported using cannabis to come down from ecstasy and 28% reported bingeing on cannabis. Only 33% reported recently swallowing cannabis as an alternative to smoking (99%), with most reporting smoking a joint (72%) or a “cone” (25%) the last time they smoked.

Table 12: Patterns of cannabis use among REU, 2004-2010

Cannabis	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used %	98	97	97	98	99	95	97
Used last six months %	78	87	79	82	84	85	89
Of those who had used							
Median days (range) used last 6 months	24 (1-180)	20 (1-180)	48 (1-180)	24 (1-180)	33 (1-180)	24 (1-180)	30 (1-180)

Source: REU interviews, 2004-2010

Two KE suggested cannabis use was extremely problematic and were concerned about its relationship with mental health problems, and the negative effects it has on family and social relationships and work life, and suggested that dependence can be disabling for young people due to these problems. Another KE reported that cannabis use caused violence and motor vehicle accidents. Cannabis is the drug most commonly tested at the Victoria Police Forensic Services Department. KE reported that cannabis was frequently used as it is always readily available and inexpensive.

4.8.2 Cannabis use in the general population

The 2007 NDSHS provides national figures regarding the prevalence of cannabis use in the general population. The results of this survey indicated that, in 2007, 9.1% of the Australian population aged 14 years and over reported recent (in the last 12 months) cannabis use (AIHW, 2008), a statistically significant reduction on the 2004 estimate of 11.3%. Figures for Victoria were almost identical to the national figures in 2007, with 8.8% reporting use of the drug within the past 12 months (AIHW, 2008).

Data from the 2009 VYADS show that cannabis continues to be the illicit drug most frequently reported as being used among Victorian young people (Victorian Drug and Alcohol Prevention Council, 2010). Thirty-eight per cent of the 16 to 24-year olds sampled reported lifetime use of cannabis, and 21% reported use in the 12 months preceding the survey. Five per cent of recent users reported using cannabis daily.

4.9 Other drug use

4.9.1 Alcohol use among REU

Consistent with previous years, almost all REU reported alcohol use in their lifetime and in the preceding six months (Table 13), with the median reported age of first alcohol use being 14 years (range=10-30).

Patterns of recent alcohol use remained comparable with previous years with most recent users reporting drinking on a median of 65 days (almost three times per week) (range=3-180) in the preceding six months. Eighty-six per cent of participants reported drinking while using ecstasy and; 77% of whom reported drinking more than five standard drinks while doing so. As in 2009, in 2010 a significantly greater percentage of recent drug bingers (n=38) reported having consumed any amount of alcohol than in years prior to 2009. The 2010 REU sample had significantly fewer reports of using alcohol while coming down from ecstasy than in 2009 and 2008 (2% vs 15% vs 32% for 2010, 2009 and 2008 respectively).

Table 13: Patterns of alcohol use among REU, 2004-2010

Alcohol	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever used %	100	100	99	100	99	100	99
Used last 6 months %	94	97	97	97	97	99	97
Usually drink alcohol while using ecstasy	62	73	74	78	86	84	86
Usually drink more than 5 standard drinks while using ecstasy*	57	60	66	79	82	81	77
Usually drink while coming down from ecstasy	25	35	37	45	32	15	2
Usually drink more than 5 standard drinks while coming down from ecstasy**	48	60	68	71	74	64	100
Drank alcohol during a binge***	33	45	57	53	51	89	87

Source: REU interviews, 2004-2010

* Of those who reported usually drinking alcohol while using ecstasy

** Of those who reported usually drinking alcohol while coming down from ecstasy

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

Alcohol continues to be the drug most commonly reported as problematic by KE. Almost all KE in 2010 suggested alcohol use was a great and growing problem with binge drinking causing violence and antisocial behaviour and almost always being involved (either alone or in combination with other drugs) in overdoses. It was reported as being the most prevalent drug used because it is legal, cheap and easily accessible.

4.9.2 Tobacco

Consistent with previous years, reports of lifetime (97%) and recent (88%) tobacco use were common among REU in 2010 with the median reported age of first use being 14 years (range=8-31). In 2010, 57% of recent smokers reported smoking on a daily basis.

4.9.3 BZD

In 2010, 71% of the REU sample reported BZD use in their lifetime and 45% reported use in the preceding six months. Of those who reported BZD use, the majority reported illicit use (89% lifetime and 80% recent use).

Among recent illicit BZD users, the median reported age of first use was 20 years (range=14-38) with recent users reporting use on a median of four days (range=1-50). Of those who reported recent use of BZD (licit or illicit), 13% reported using BZD while bingeing, 9% reported use with ecstasy, and 31% reported using BZD to come down from ecstasy.

4.9.4 Antidepressants

In 2010, 36% of the REU sample reported lifetime use of an antidepressant (licit or illicit), with 15% reporting use in the preceding six months. All participants who reported recent antidepressant use reported licit use, with only one also reporting recent illicit use. Recent licit antidepressant users reported the mean age of first use to be 20 years (range=12-32).

4.9.5 Inhalants

Comparable to 2009, in 2010 58% of the REU sample reported lifetime use of amyl nitrate, and 34% reported use in the preceding six months. The frequency of reports of lifetime or recent use of nitrous oxide in 2010 remained exactly the same as in 2009 (43% lifetime and 22% recent use).

The median age of first use reported for both amyl nitrate and nitrous oxide was 18 years. Nitrous oxide use was reported slightly more frequent than amyl nitrate use with a median of five days compared to two days in the preceding six months.

4.9.6 Psilocybin or magic mushrooms

In 2010, 75% of the REU sample reported having ever used mushrooms and 22% in the six months preceding the interview, a figure similar to 2009. The median reported age of first use of mushrooms was 19 years (range=11-33). Reports of mushroom use were infrequent (a median of two days in last six months; range=1-60).

4.9.7 Heroin and other opiates

Similar to 2009, only a small number of the 2010 REU sample reported lifetime use of an opiate (heroin 17%, methadone 6%, buprenorphine 5%), other opiates (licit 10%, illicit 16%). The most common opiate reportedly used by REU in the preceding six months was heroin at a frequency of 7%.

In 2010, data were collected specifically on the use of over the counter codeine, with 56% reporting lifetime use and 37% reporting use in the preceding six months. Six participants reported using the codeine for reasons other than pain relief, with a median of three days in the preceding six months. Only one of these six reported any harms caused by the use of codeine.

4.9.8 Pharmaceutical stimulants

Fifty-six per cent of the 2010 REU sample reported having ever used any pharmaceutical stimulant with the majority of these (91%) reporting having used it illicitly. In 2010, there was a significant increase in the amount of recent pharmaceutical stimulant users (licit or illicit) compared with 2009 (27% vs 15% for 2010 and 2009 respectively). Eighty-nine per cent of recent users reported illicit use. Among these participants (n=24), the median reported age of first use was 19 years (range=14-38), and use was infrequent with a median of 1.5 days, involving a median of four pills.

4.10 Research chemical use

4.10.1 Other drugs – mephedrone and designer drugs

The reported recent use of mephedrone (4-methylmethcathinone) among the REU sample increased significantly from 3% to 28% between 2009 and 2010. However, this use was only infrequent, reported on a median of two days in the preceding six months (range=1-24). Snorting was the most commonly reported route of administration (71%), followed by swallowing (50%).

These findings are consistent with increased interest in mephedrone noted in KE interviews. Several KE in 2010 reported having recently heard about mephedrone, either from people who had gone out to buy it and use it due to the media coverage surrounding mephedrone recently,

or those who had taken it in a pill believing it to be MDMA. Victoria Police Forensic Services Department reported testing more illicit pills containing mephedrone than in previous years. One KE interviewed was unsure as to whether people had actually taken mephedrone or not because, in his opinion, they had presented with symptoms more consistent with polydrug use of amphetamines and GHB. However, this KE also reported a number of strange presentations in early 2010 which possibly could be explained by the use of mephedrone. One researcher said there was a lack of education around the legality and consequences of the use of mephedrone. Most KE agreed that more information was needed surrounding mephedrone use and clinical presentations and more education was needed for REU about the harms associated with using mephedrone.

The recent use of DMT also significantly increased in 2010 compared to 2009 (15% vs 5% for 2010 and 2009 respectively). DMT was reportedly used on a median of one day in the preceding six months (range=1-10) and all recent users reported smoking as their route of administration.

In 2010, three participants reported lifetime use of khat and only one of those three had used khat in the last six months (khat refers to the leaves and young shoots of the plant species *Catha edulis* grown predominantly in East Africa (World Health Organization (WHO), 2006).

Polydrug use remains a common concern among KE, especially when involving combinations of alcohol, amphetamines and GHB.

5 DRUG MARKET: PRICE, PURITY, AVAILABILITY and SUPPLY

Summary

- In comparison to 2009, significantly more REU in 2010 reported the current purity of ecstasy as low (64% vs 24% in 2010 and 2009 respectively) and as having decreased in the preceding six months (67% vs 44% in 2010 and 2009 respectively);
- The average purity level of ecstasy seizures by law enforcement agencies in Victoria was also lower than it has been in previous years;
- Compared to 2009, significantly more 2010 REU who commented on the purity of speed reported that it was of high purity (33% vs 11% in 2010 and 2009 respectively);
- In 2010 the price of LSD reported by REU was lower than in previous years at a median of \$10 per tab (compared with \$17 in 2009); and
- Compared to 2009, 2010 REU found LSD significantly easier to source, with 72% (vs 52% in 2009) of those who could comment (n=25) reporting it was easy or very easy to obtain and 28% (vs 16% in 2009) reporting it easier to source in the six months preceding the interview. This is consistent with three KE who reported LSD to be readily available.

5.1 Ecstasy

5.1.1 Price

Participants reported a median price of \$25 per ecstasy pill (Table 14). The reported cost per pill was cheaper when purchased in bulk; the median reported cost per pill was approximately \$19 when 20-50 pills were purchased and \$16 (range= \$12-\$20) for 100 pills.

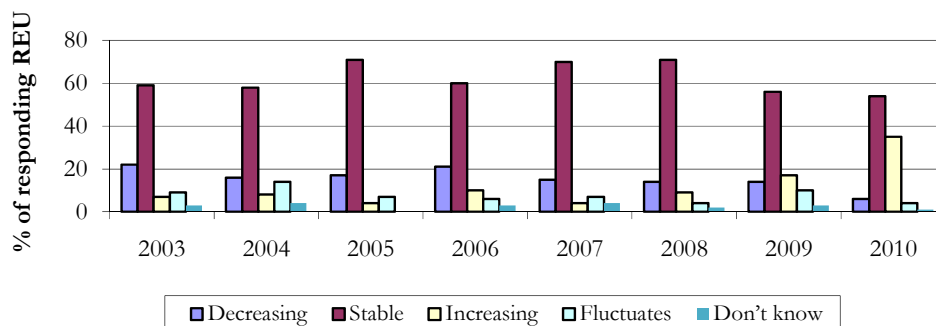
Table 14: Price of ecstasy purchased by REU, 2004-2010

	2004	2005	2006	2007	2008	2009	2010
Median price per tablet (range)	\$30 (\$14-\$45)	\$30 (\$15-\$40)	\$30 (\$15-\$40)	\$30 (\$15-\$50)	\$27.50 (\$17.50-\$40)	\$25 (\$10-\$35)	\$25 (\$6-\$35)

Source: REU interviews, 2004-2010

In 2010 a significantly higher percentage of the sample (35% vs 17% for 2010 and 2009 respectively) reported that the recent price of ecstasy was increasing compared to 2009 (Figure 10).

Figure 10: Recent changes in price of ecstasy purchased by REU, 2003-2010

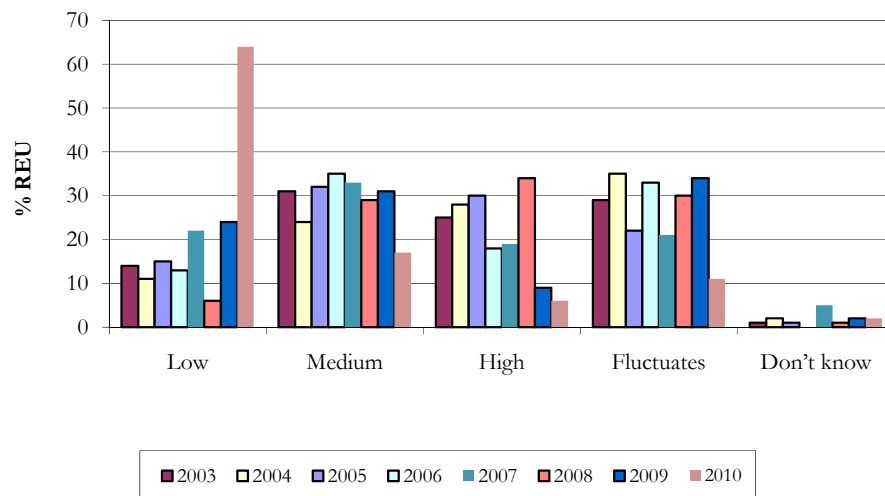


Source: REU interviews, 2003-2010 (N=100 each year)

5.1.2 Purity

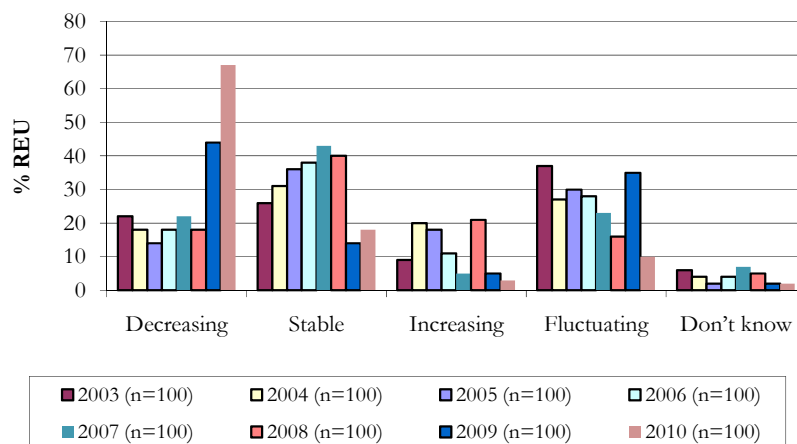
In comparison to 2009, significantly more REU in 2010 reported the current purity of ecstasy as low (64% vs 24% for 2010 and 2009 respectively) (Figure 11) and as having decreased in the preceding six months (67% vs 44% for 2010 and 2009 respectively) (Figure 12).

Figure 11: REU reports of current ecstasy purity, 2003-2010



Source: REU interviews, 2003-2010 (N=100 each year)

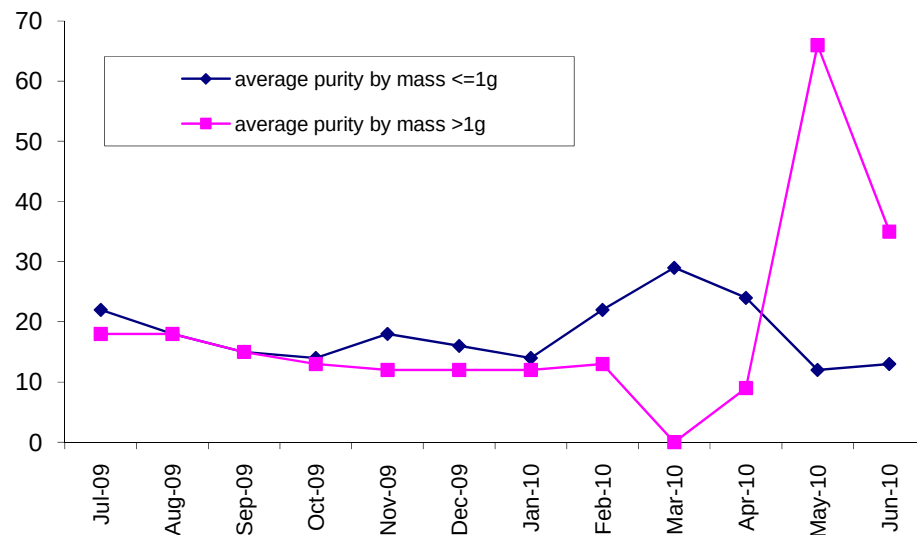
Figure 12: REU reports of change in purity of ecstasy in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010 (N=100 each year)

The average purity level of ecstasy seizures analysed by law enforcement agencies in Victoria during the 2009/2010 financial year was 19% (range=9%-66%) (Figure 13). This is a lower purity than in previous years (25% in 2008/2009, 29% in 2007/2008), which supports reports by REU in 2010 that the purity of ecstasy is low and had been decreasing in the six months prior to interview.

Figure 13: Purity of ecstasy seizures (includes MDMA, MDEA and MDA) by Victorian law enforcement, July 2009-June 2010

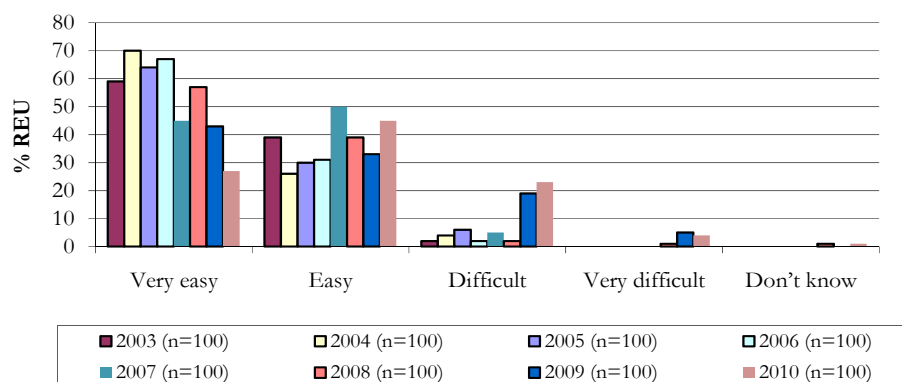


Source: Victoria Police Forensic Services Department

5.1.3 Availability

Consistent with 2009, in 2010 reports that ecstasy was more difficult to source were significantly more frequent than in previous years, with 27% (vs 3% in 2008) reporting it was difficult or very difficult to currently obtain (Figure 14) and 36% (vs 8% in 2008) reporting it difficult to source in the six months preceding the interview (Figure 15).

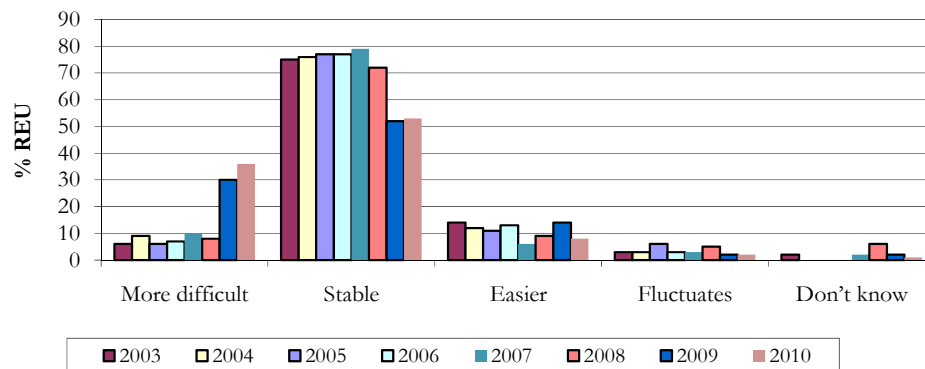
Figure 14: REU reports of current availability of ecstasy in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010 (N=100 each year)

Note: The 2003 REU survey included a moderately easy category, combined here with the easy category

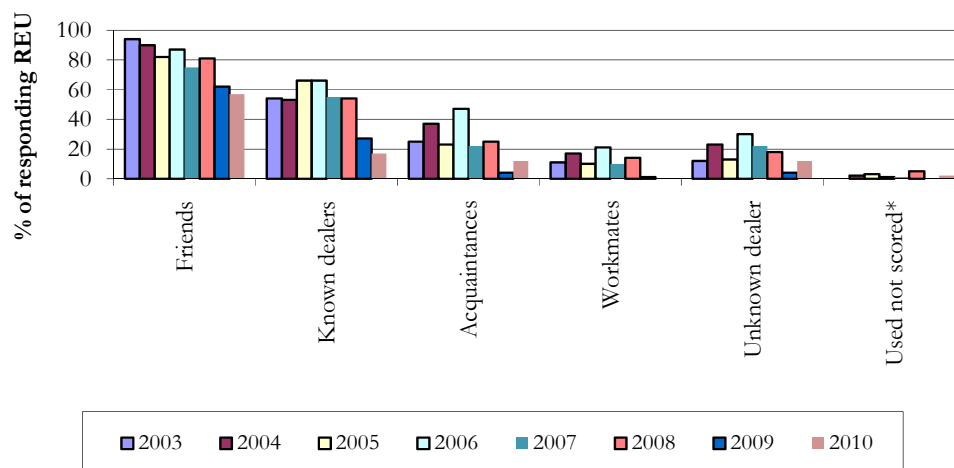
Figure 15: REU reports of changes in availability of ecstasy in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010 (N=100 each year)

As with previous years, the majority of the 2010 REU sample reported that in the six months prior to interview they had obtained ecstasy from friends (57%) or known dealers (17%) (Figure 16). Ecstasy was reported to be most commonly obtained at private homes – either their own, their friends' or their dealers' home (42%) – or at a nightclub (24%) (Figure 17).

Figure 16: People from whom ecstasy was purchased in the preceding six months, 2003-2010

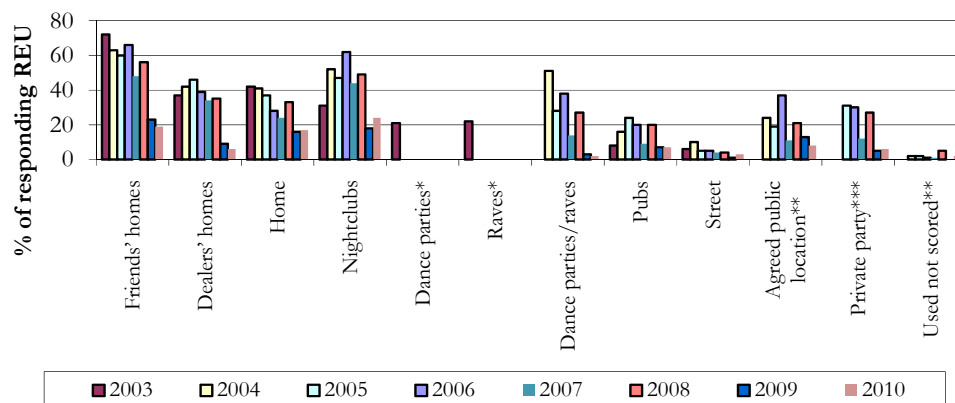


Source: REU interviews, 2003-2010 (N=100 each year)

* Category not included in 2003 REU survey

Note: 2009/2010 data represent the person from whom ecstasy was purchased the last time

Figure 17: Locations where ecstasy was purchased in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010 (N=100 each year)

* Rave and dance party categories combined from 2004 onwards

** Categories not included in 2003 REU survey

*** Private party category added in 2005

2009/2010 data represent the location at which ecstasy was purchased the *last* time

5.1.4 Ecstasy markets and patterns of purchasing ecstasy

Patterns of ecstasy purchase by 2010 REU were consistent with previous years. The majority of participants purchased a median of five pills (range=1-100) on a fortnightly to monthly basis (78%) and usually obtained pills for themselves and others (73%) (Table 15).

Table 15: Patterns of purchasing ecstasy, 2007-2010

	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Median no. of people purchased from	3	3	4	3
Purchased for (%)				
Self only	30	27	33	23
Self and others	70	67	66	73
Others only	0	0	1	1
No. of times purchased in the last 6 months (%)				
1-6	44	40	47	40
7-12	37	26	30	40
13-24	19	24	22	18
25 +	0	4	1	2
Median no. of ecstasy tablets purchased	5	5	5	5
Able to purchase other drugs from main dealer (%)*	81	67	-	-
Drugs able to purchase (%)*				
Speed	77	70	-	-
Base	11	6	-	-
Ice	37	28	-	-
Pharmaceutical stimulants	4	0	-	-
Cocaine	44	48	-	-
MDA	14	10	-	-
LSD	30	24	-	-
GHB	12	12	-	-
Ketamine	22	15	-	-
Cannabis	56	61	-	-
Heroin	1	6	-	-

Source: REU interviews, 2007-2010

* Among those who reported being able to purchase other drugs from main dealer. Not collected in 2009-2010

5.2 Methamphetamine

5.2.1 Price

Consistent with previous years, the median reported price per gram for speed was \$200 (Table 16). In 2010, the majority of REU (73%) who commented on the recent price of speed (n=33) reported that the price had remained stable. Small numbers (n<10) precluded further analysis of the prices of base and crystal meth.

Table 16: Price of various methamphetamine forms purchased by REU, 2004-2010

Median price (\$)	2004	2005	2006	2007	2008	2009	2010
Speed							
Point	\$25 (\$15-\$50) (n=34)	\$30 (\$20-\$50) (n=16)	\$20 (\$20-\$60) (n=19)	\$30 (\$20-\$100) (n=12)	\$50 (\$20-\$120) (n=7)	\$25 (\$20-\$30) (n=2)	\$20 (\$15-\$200) (n=6)
Half gram	\$95 (\$80-\$120) (n=4)	\$100 (\$50-\$130) (n=11)	–	\$100 (\$80-\$180) (n=8)	–	\$100 (n=1)	\$100 (\$80-\$100) (n=3)
Gram	\$180 (\$50-\$250) (n=34)	\$180 (\$100-\$280) (n=46)	\$200 (\$80-\$250) (n=45)	\$195 (\$90-\$250) (n=38)	\$200 (\$100-\$300) (n=52)	\$190 (\$135-\$320) (n=31)	\$200 (\$90-\$250) (n=21)
Ounce	–	\$1300 (n=1)	–	–	–	–	–
Base							
Point	\$28.75 (\$25-\$50) (n=6)	\$22.50 (\$20-\$25) (n=2)	–	\$50 (n=1)	\$30 (\$25-\$35) (n=4)	–	–
Half gram	\$110 (\$100-\$120) (n=2)	–	–	–	–	–	–
Gram	\$200 (\$160-\$270) (n=3)	\$200 (\$170-\$300) (n=4)	\$250 (n=2)	\$200 (\$120-\$200) (n=3)	\$150 (n=1)	\$300 (n=1)	–
Crystal							
Point	\$40 (\$25-\$50) (n=20)	\$40 (\$25-\$40) (n=5)	\$47.50 (\$25-\$50) (n=12)	\$40 (\$30-\$50) (n=8)	\$50 (\$40-\$50) (n=8)	\$50 (\$40-\$50) (n=5)	\$85 (\$50-\$100) (n=4)
Half gram	\$150 (\$125-\$180) (n=4)	\$120 (n=1)	–	\$200 (\$150-\$200) (n=5)	–	–	–
Gram	\$290 (\$120-\$400) (n=11)	\$385 (\$200-\$550) (n=12)	\$360 (\$200-\$400) (n=13)	\$300 (\$200-\$400)	\$237.50 (\$150-\$500) (n=10)	\$400 (\$200-\$450) (n=4)	\$800 (\$450-\$1000) (n=3)
Quarter ounce	–	\$2,450 (n=1)	–	–	–	–	–

Source: REU interviews, 2004-2010

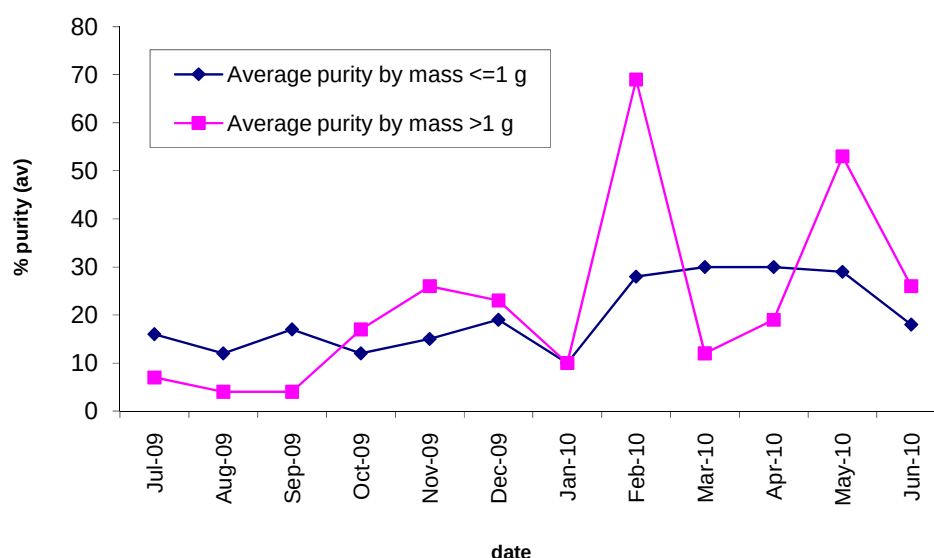
KE agreed that the price of speed was currently \$200 per gram on average, and the price of crystal meth about \$100 a point.

5.2.2 Purity

Compared to 2009, significantly more 2010 REU who commented on the purity of speed (n=33) reported that it was of high purity (33% vs 11% for 2010 and 2009 respectively). Forty-five per cent of those who commented viewed recent speed purity as stable. Small numbers precluded further analysis of the perceptions of purity of base and crystal meth.

The mean purity of all seizures of methamphetamine analysed in Victoria during the 2009/2010 financial year was 21% (range=4%-69%) (Figure 18), which is a higher purity than last year (13%) but similar to previous years (21% in 2000/2001 and 2007/2008).

Figure 18: Average purity of methamphetamine seizures by Victorian law enforcement, July 2009-June 2010



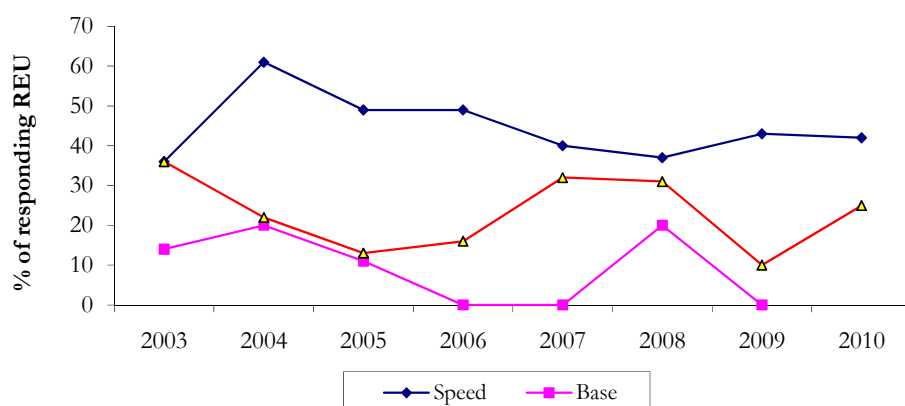
Source: Victoria Police Forensic Services Department

5.2.3 Availability

In 2010, of the REU who commented on the current availability of speed (n=33), 91% reported that it was very easy or easy to obtain.

Figure 19 presents the percentage of REU from 2003-2010 who report various forms of methamphetamine as very easy to obtain. There was no significant difference between 2009 and 2010 data in relation to speed, and small numbers precluded further analysis of the other two methamphetamine forms.

Figure 19: Changes to current availability over time – percentage of REU who report various forms of methamphetamine as very easy to obtain at the time of interview in Melbourne, 2003-2010



Source: REU interviews, 2003-2010

Note: No REU responded to the base questions in 2010

In 2010, 63% of those who commented (n=33) reported that the ease of access of speed in the preceding six months had been stable.

Similar to the 2009 sample, of the 2010 REU sample who commented (n=32), most reported last purchasing speed from friends (56%) or known dealers (19%), and obtaining it in a private home – a friend’s home (31%), their own home (22%) or a dealer’s home (13%).

Small numbers precluded further analysis of base and crystal meth availability.

5.3 Cocaine

5.3.1 Price

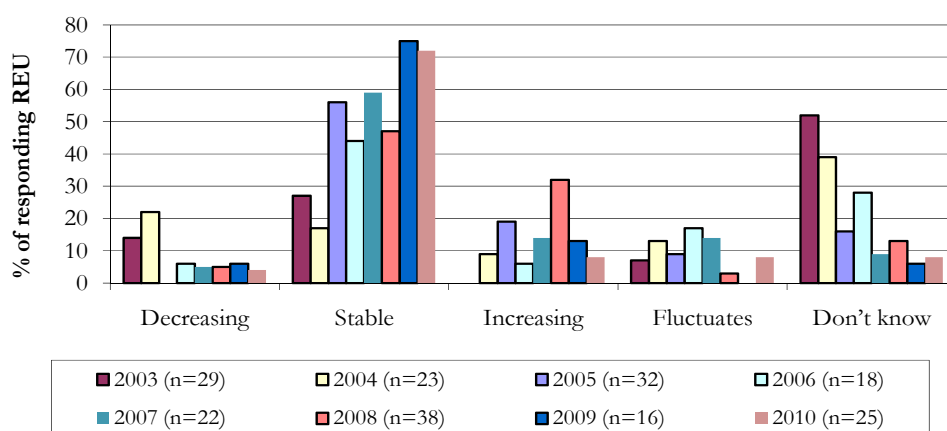
The median reported price of cocaine has remained exactly the same since 2005 at \$300 (Table 17). Most REU reported that the price of cocaine was stable.

Table 17: Price of cocaine purchased by REU, 2004-2010

Variable	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Median price	\$277.50	\$300	\$300	\$300	\$300	\$300	\$300
per gram							
(range)	(\$100-\$400) (n=16)	(\$200-\$350) (n=29)	(\$200-\$400) (n=18)	(\$250-\$500) (n=19)	(\$200-\$500) (n=36)	(\$180-\$380) (n=16)	(\$80-\$400) (n=18)

Source: REU interviews, 2004-2010

Figure 20: Recent changes in price of cocaine purchased by REU, 2003-2010

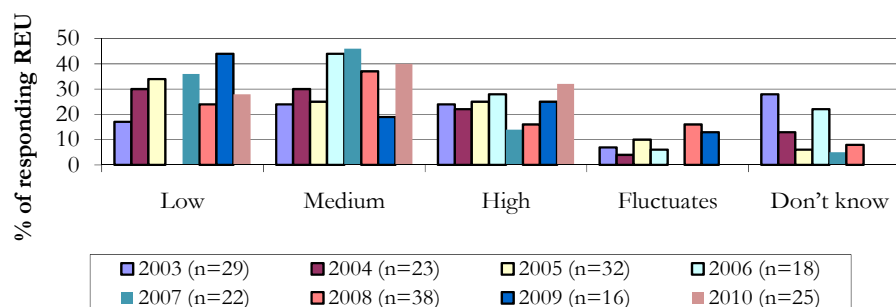


Source: REU interviews, 2003-2010

5.3.2 Purity

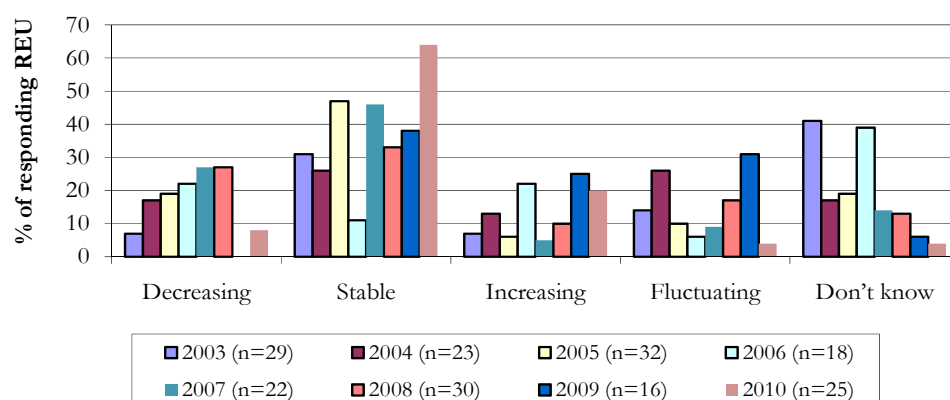
Of the 2010 sample who commented (n=25), perceptions of current cocaine purity were varied, with 28% reporting it to be low, 40% medium and 32% high (Figure 21); most (64%) believed the purity to have been recently stable (Figure 22).

Figure 21: User reports of current purity of cocaine, 2003-2010



Source: REU interviews, 2003-2010

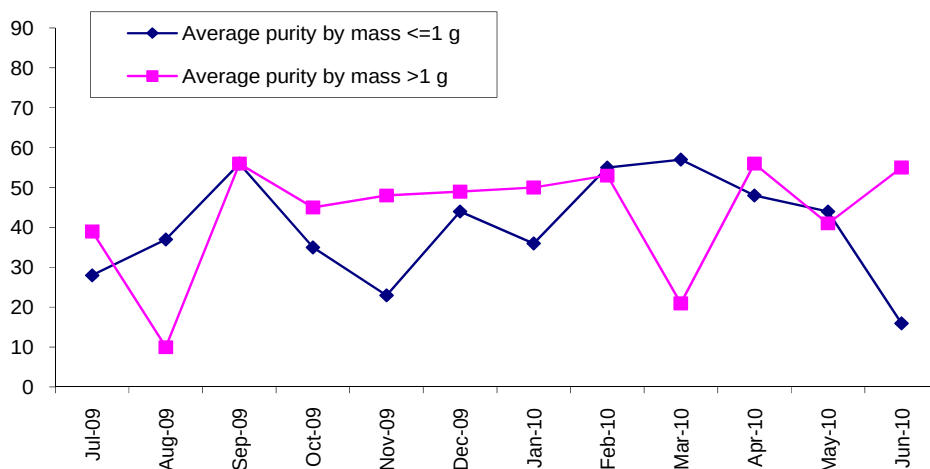
Figure 22: User reports of changes in cocaine purity in the past six months, 2003-2010



Source: REU interviews, 2003-2010

The mean purity of all cocaine seizures analysed by the Victoria Police Forensic Services Department during 2009/2010 was 42% (range=10%-57%), which is comparable to previous years (44% in 2008/2009 and 39% in 2007/2008) (Figure 23).

Figure 23: Average purity of cocaine seizures by Victorian law enforcement, July 2009-June 2010

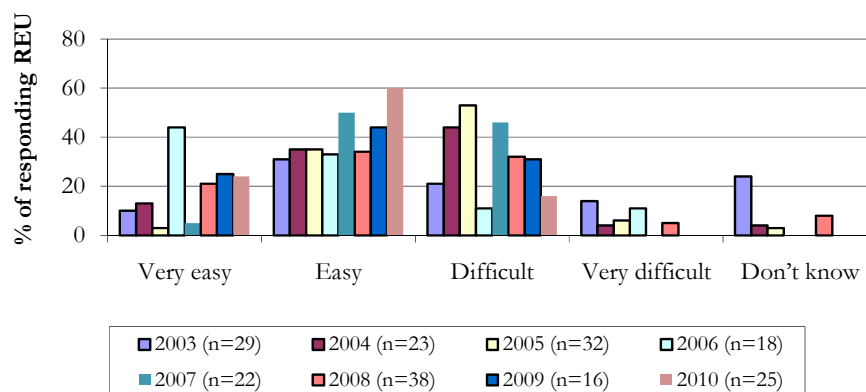


Source: Victoria Police Forensic Services Department

5.3.3 Availability

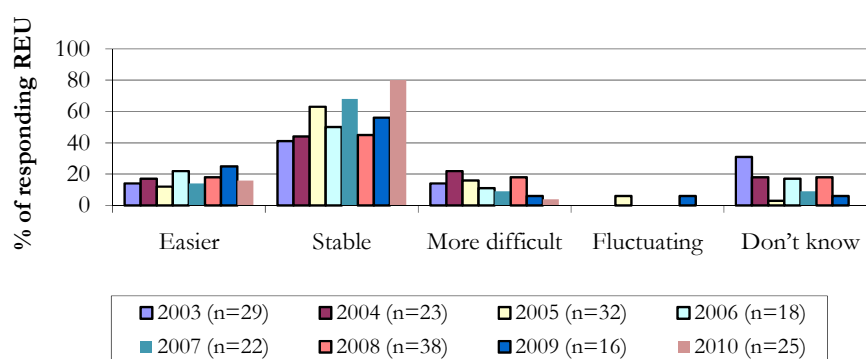
Consistent with previous years, 84% of recent cocaine users (n=25) reporting it was very easy (24%) or easy (60%) to obtain (Figure 24). Over the six months preceding the interview, cocaine availability was regarded as being stable (80%) (Figure 25).

Figure 24: Current availability of cocaine, 2003-2010



Source: REU interviews, 2003-2010

Figure 25: Changes in cocaine availability in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010

Similar to last year, in 2010, REU who commented on the *last* person they purchased cocaine from (n=25) reported obtaining it mainly from friends (48%) or known dealers (20%). The most recent location of a purchase of cocaine varied amongst the 2010 sample, with no one venue standing out as being more popular than another.

5.4 Ketamine

5.4.1 Price

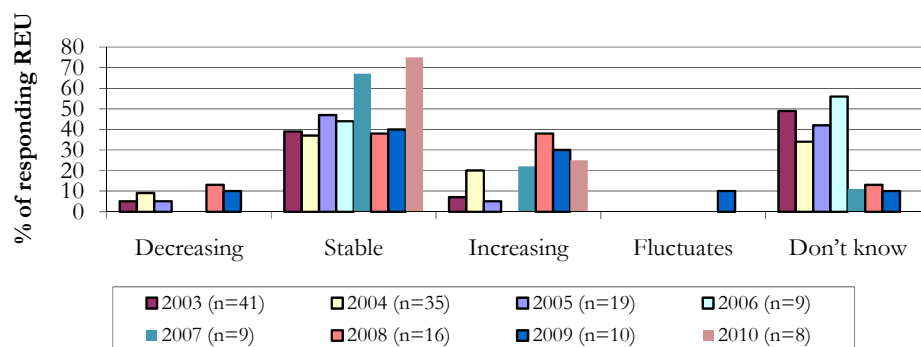
In 2010, only eight participants were able to answer questions relating to ketamine so figures in Table 18 should be treated with caution. These participants indicated that the price was either stable (75%) or increasing (25%).

Table 18: Price of ketamine purchased by REU, 2004-2010

Ketamine	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Median price (\$)							
Point (range)	\$22.50 (\$15-\$40) (n=10)	\$25 (n=1)	\$20 (n=1)	–	–	\$25 (n=1)	–
Gram (range)	\$195 (\$150-250) (n=10)	\$180 (\$150-250) (n=13)	\$100 (\$80-200) (n=5)	\$200 (\$150-250) (n=6)	\$200 (\$175-300) (n=12)	\$200 (\$170-25) (n=9)	\$220 (n=2)

Source: REU interviews, 2004-2010

Figure 26: Recent changes in price of ketamine purchased by REU, 2003-2010

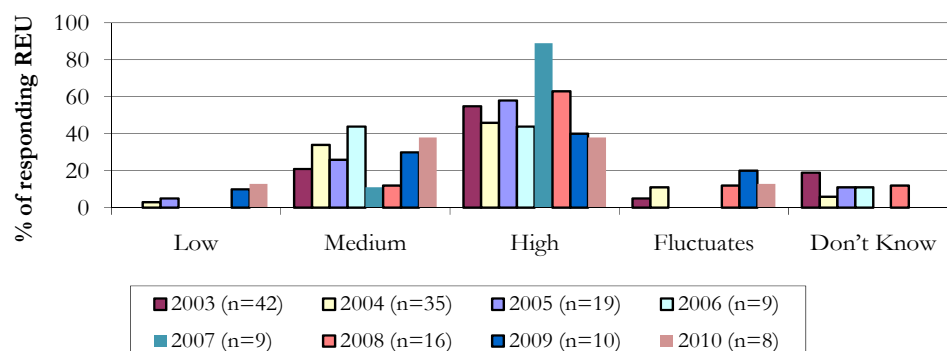


Source: REU interviews, 2003-2010

5.4.2 Purity

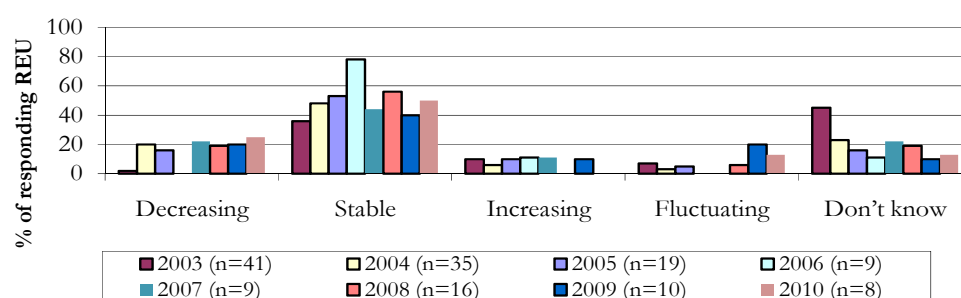
The number of REU able to report the current purity of ketamine in 2010 was small (n=8), but consistent with previous years, REU reported it to be of medium to high strength (68%) (Figure 27). Most indicated that purity was stable (50%) or decreasing (25%) (Figure 28).

Figure 27: Current purity of ketamine, 2003-2010



Source: REU interviews, 2003-2010

Figure 28: Recent change in ketamine purity, 2003-2010

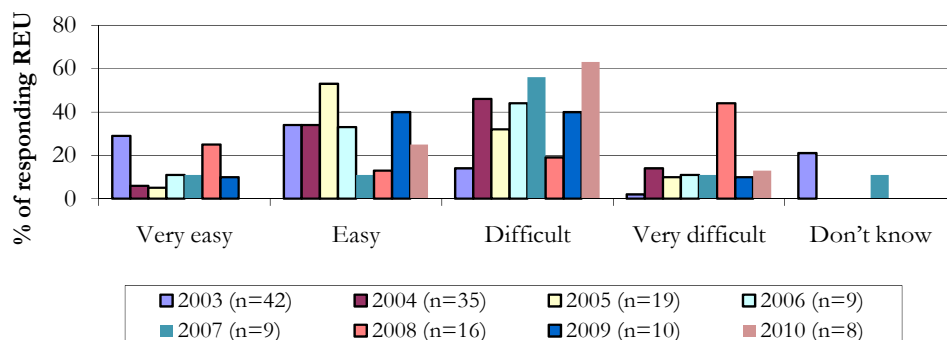


Source: REU interviews, 2003-2010

5.4.3 Availability

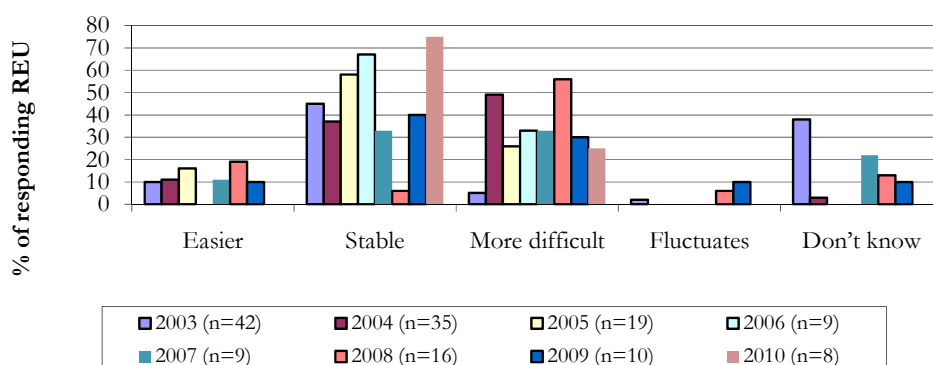
Of the small numbers who were able to comment in 2010 (n=8), most reported ketamine to be difficult to obtain (63%) (Figure 29) and that availability in the previous six months had been stable (75%) or more difficult (25%) (Figure 30).

Figure 29: Current ketamine availability, 2003-2010



Source: REU interviews, 2003-2010

Figure 30: Changes in availability of ketamine over the past six months, 2003-2010



Source: REU interviews, 2003-2010

5.5 GHB

5.5.1 Price

Very few participants (n=4) from the 2010 sample were able to comment on the current price of GHB, reporting a median price of \$4.25 per mL (Table 19). This was consistent with two KE who reported that GHB was very cheap (approximately \$4/mL).

Table 19: Price of GHB purchased by REU, 2004-2010

GHB	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Median price (\$ ml (range))	\$2.50 (\$2-\$8) (n=12)	\$2.50 (\$1-\$3) (n=12)	\$3 (\$1-\$3) (n=5)	\$3.50 (\$3-\$4) (n=3)	\$4.25 (\$3-\$10) (n=6)	\$4 (1.40-\$7) (n=5)	\$4.25 (\$3-\$5) (n=4)
3 ml (range)	–	\$3 (n=1)	–	–	–	–	–
20 ml (range)	–	\$35 (\$30-\$40) (n=2)	\$50 (n=1)	\$80 (n=1)	–	–	\$70 (n=1)
Vial 100 ml (range)	\$119 (\$38-\$200) (n=3)	–	–	–	–	–	–

Source: REU interviews, 2004-2010

5.5.2 Purity

All 2010 participants who were able to comment on the current purity of GHB (n=5) suggested purity was high and that this was stable over the preceding six months.

5.5.3 Availability

Sixty per cent of the small number of participants (n=5) who were able to comment on the current availability of GHB suggested that it was currently easy or very easy to obtain and that availability had been stable over the previous six months. KE described GHB as an odourless liquid always taken orally, often carried into dance events in fish shaped soy sauce containers provided with Japanese food or in little clear plastic bottles.

5.6 LSD

5.6.1 Price

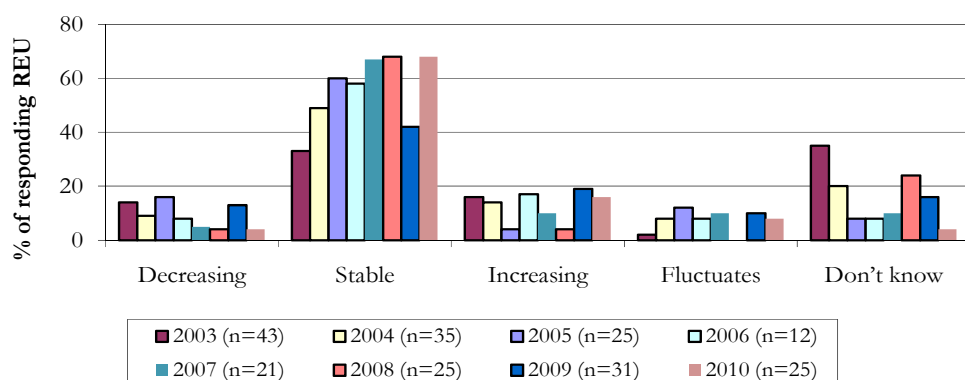
In 2010, the price of LSD reported by REU (n=17) was lower than in previous years at a median of \$10 per tab (compared with \$17 in 2009) (Table 20).

Table 20: Prices of LSD purchased by REU, 2004-2010

LSD	2004 (n=33)	2005 (n=25)	2006 (n=11)	2007 (n=19)	2008 (n=19)	2009 (n=28)	2010 (n=17)
Median price (\$ Tab (range))	\$20 (\$4-\$40)	\$15 (\$5-\$30)	\$12 (\$7.50-\$25)	\$20 (\$10-\$30)	\$15 (\$10-\$40)	\$17 (\$10-\$35)	\$10 (\$10-\$25)

Source: REU interviews, 2004-2010

Figure 31: Recent changes in price of LSD purchased by REU, 2003-2010

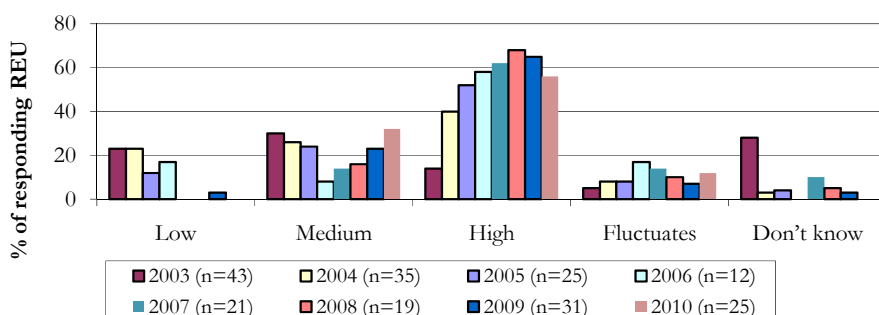


Source: REU interviews, 2003-2010

5.6.2 Purity

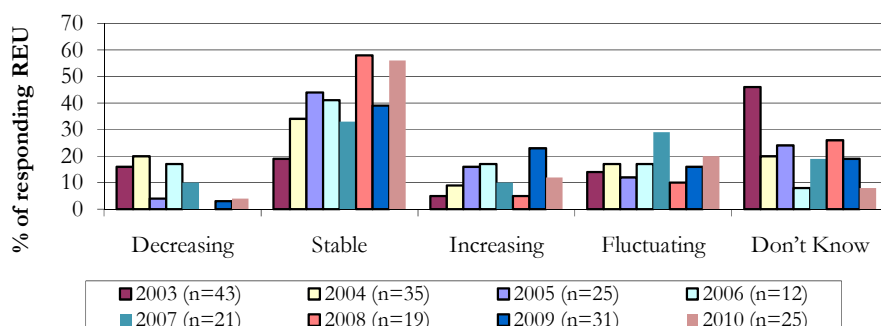
Consistent with previous years, recent LSD users reported the purity of LSD as medium to high (88%) (Figure 32) and the purity was seen as being stable (56%) over the six months preceding interview (Figure 33).

Figure 32: REU reports of purity of LSD in the preceding six months, 2003-2010



Source: REU interviews, 2003-2010

Figure 33: REU reports of change in purity of LSD in the preceding six months, 2003-2010

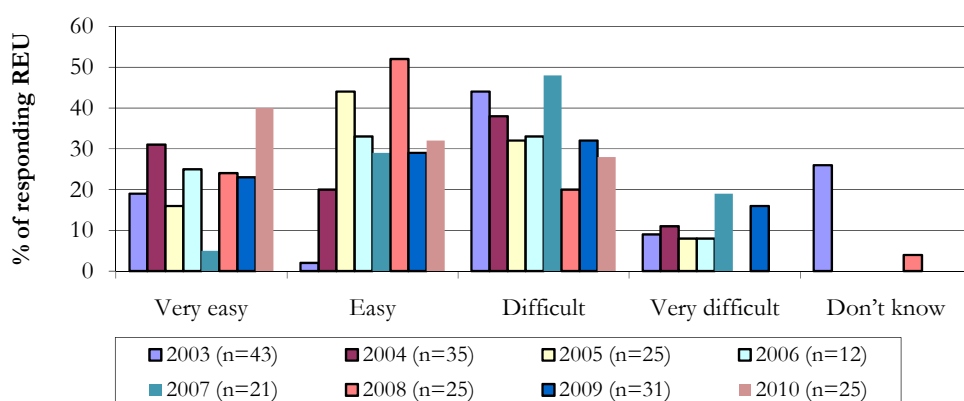


Source: REU interviews, 2003-2010

5.6.3 Availability

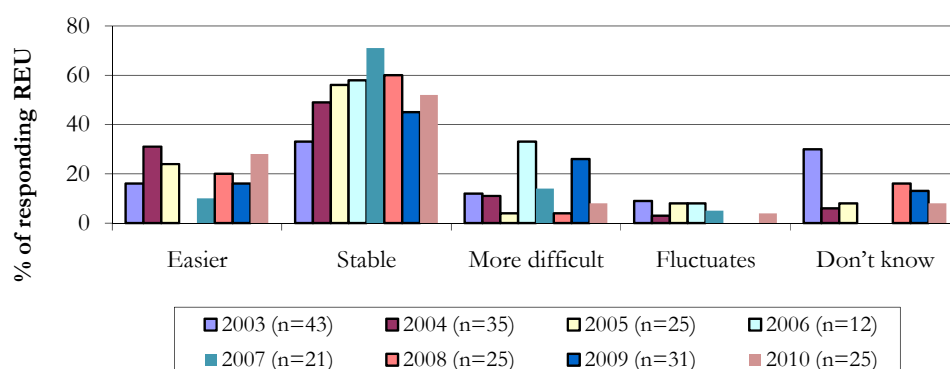
Compared to 2009, 2010 REU found LSD significantly easier to source, with 72% (vs 52% in 2009) of those who could comment (n=25) reporting it was easy or very easy to obtain (Figure 34), and 28% (vs 16% in 2009) reporting it easier to source in the six months preceding the interview (Figure 35). This is consistent with three KE who reported LSD to be readily available.

Figure 34: Current LSD availability, 2003-2010



Source: REU interviews, 2003-2010

Figure 35: Changes in availability of LSD, 2003-2010



Source: REU interviews, 2003-2010

In 2010, REU who commented (n=25), reported that the *last* person they purchased LSD from was a friend (40%), unknown dealers (20%) or a known dealer (16%).

5.7 Cannabis

5.7.1 Price

REU were asked questions regarding the price, potency and availability of both hydroponic cannabis and bush/naturally grown cannabis. Prices remained consistent with previous years at

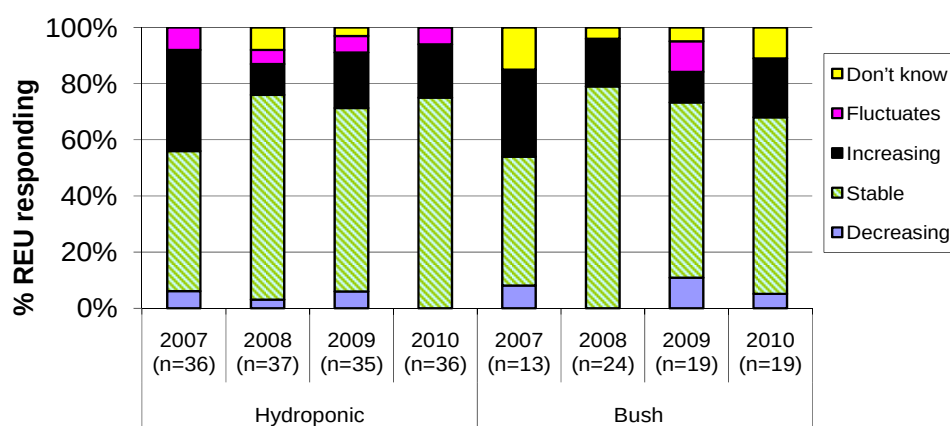
around \$20 per gram (Table 21) with the prices being reported as stable in the preceding six months by 75% of recent hydroponic cannabis users (n=36) and 63% of recent bush cannabis users (n=19) (Figure 36).

Table 21: Price of cannabis purchased by REU, 2006-2010

Cannabis	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Median price (\$)					
Hydroponic					
gram	\$15 (\$10-\$20) (n=35)	\$20 (\$15-\$50) (n=22)	\$20 (\$10-\$25) (n=34)	\$20 (\$15-\$20) (n=23)	\$20 (\$10-\$30) (n=20)
ounce	\$220 (\$180-\$300) (n=28)	\$250 (\$210-\$400) (n=18)	\$250 (\$200-\$300) (n=13)	\$250 (\$200-\$280) (n=17)	\$250 (\$200-\$300) (n=10)
Bush					
gram	\$15 (\$10-\$20) (n=11)	\$16 (\$10-\$20) (n=6)	\$20 (\$10-\$30) (n=15)	\$10 (\$10-\$20) (n=8)	\$16 (\$15-\$25) (n=8)
ounce	\$200 (\$100-\$280) (n=11)	\$235 (\$150-\$250) (n=6)	\$220 (\$80-\$380) (n=17)	\$200 (\$150-\$250) (n=5)	\$270 (\$65-\$300) (n=5)

Source: REU interviews, 2006-2010

Figure 36: Recent changes in price of hydroponic and bush cannabis purchased by REU, 2007-2010

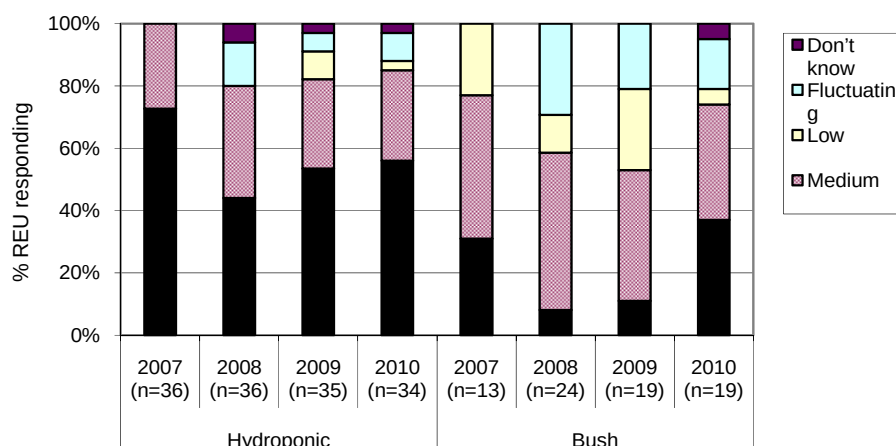


Source: REU interviews, 2007-2010

5.7.2 Potency

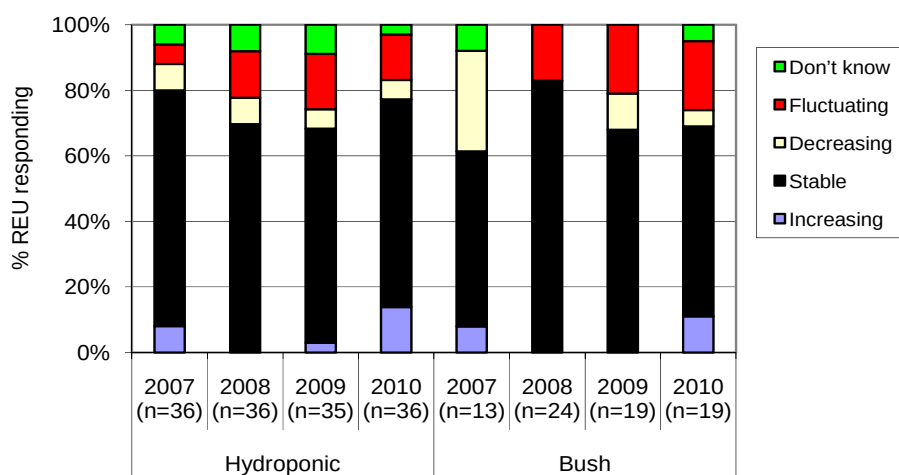
Consistent with previous years, the current potency of hydroponic cannabis was typically reported as being medium to high (85%). Compared to 2009, in 2010, significantly more REU who were able to answer reported the potency of bush cannabis as high (37% vs 11% for 2010 and 2009 respectively), with 74% of those who answered reporting potency as medium to high (Figure 37). Similar to 2009, in 2010, 64% of REU reported hydroponic cannabis potency to be stable and 58% reported bush cannabis potency as stable (Figure 38).

Figure 37: Reports of current hydroponic and bush cannabis potency by REU, 2007-2010



Source: REU interviews, 2007-2010

Figure 38: Reports of changes in hydroponic and bush cannabis potency, 2007-2010

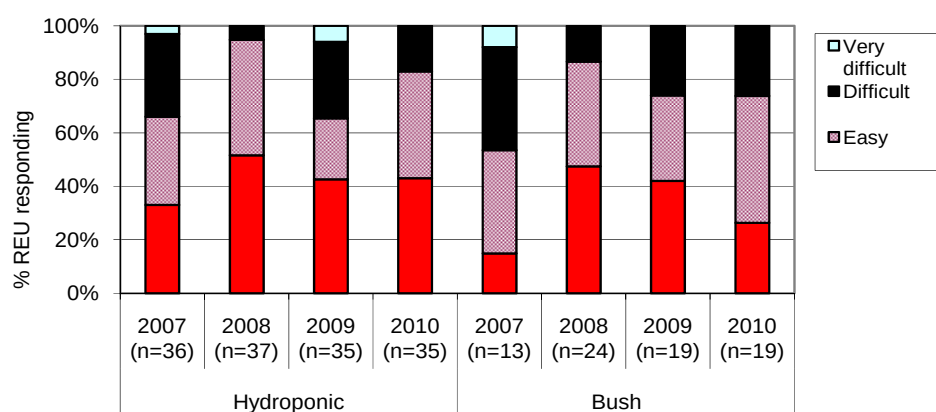


Source: REU interviews, 2007-2010

5.7.3 Availability

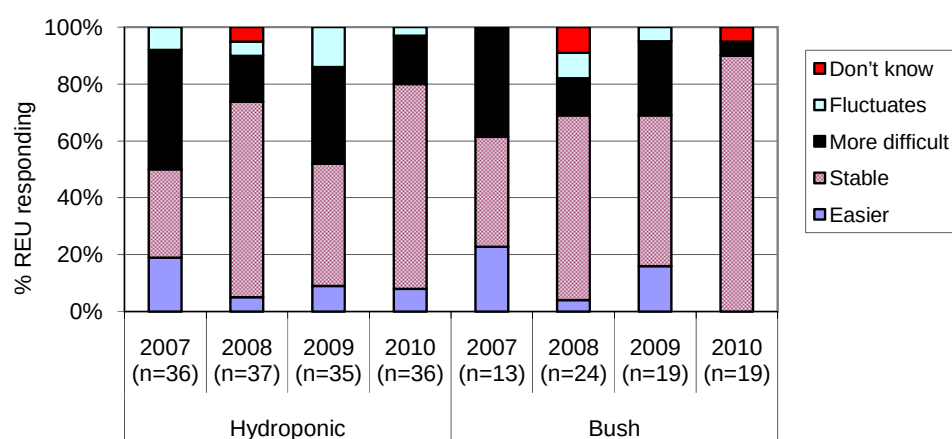
In 2010, of the REU who were able to respond, 83% reported hydroponic cannabis to be easy or very easy to obtain, and 73% reported bush cannabis to be easy or very easy to obtain (Figure 39). Of those who commented in 2010, 72% reported hydroponic cannabis availability in the previous six months as stable; similarly, 89% reported bush cannabis availability as stable (Figure 40).

Figure 39: Current availability of hydroponic and bush cannabis, 2007-2010



Source: REU interviews, 2007-2010

Figure 40: Recent changes in availability of hydroponic and bush cannabis, 2007-2010



Source: REU interviews, 2007-2010

In 2010, most REU reported that the *last* person they purchased cannabis from was friends (58% for hydroponic and bush cannabis), or a known dealer (25% for hydroponic and 16% for bush cannabis). This finding was similar to previous years. Those who commented on the *last* location where they purchased cannabis reported obtaining it from a friend's home (39% for hydroponic and 47% for bush cannabis).

6 HEALTH-RELATED TRENDS ASSOCIATED WITH ERD USE

Summary

- 88% of the 2010 REU sample reported having ever overdosed on a depressant drug and 68% of participants reported overdosing on a depressant drug in the last 12 months which is significantly more than in the 2009 REU sample (25%);
- Of those who had recently overdosed, 90% reported alcohol to be the main drug responsible;
- Many KE reported GHB to be a very problematic drug due to the high number of overdoses associated with the use of GHB;
- In 2009, the total number of ambulance attendances where GHB use was recorded increased by more than 50% from 2008, and is the highest recorded number of presentations (411 in 2009 vs 188 in 2008, 295 in 2007, and 190 in 2006);
- Of those who reported any recent mental health problem (n=29), the main issues experienced were depression (72%) and anxiety (66%); and
- 83% of those who reported a recent mental health issue attended a health professional to address this.

6.1 Overdose and drug-related fatalities

From 2008, participants were asked if they had overdosed on a stimulant or depressant in the last 12 months.

In 2010, 32 participants reported that they had ever overdosed on any stimulant drug(s) a median of two times (range=1-100). However, only 19 reported overdosing on a stimulant drug within the 12 months prior to the interview. Ecstasy was generally the main drug attributed to the overdose (79%), followed by speed (11%) and cocaine (11%). The location of the most recent overdose varied from a home or private party (47%) to a nightclub (21%) or rave/doof/dance party (21%). The main symptoms experienced during the overdose were increased heart rate (74%), nausea (58%), vomiting and increased body temperature (both 47%), and extreme anxiety or paranoia (37%). Of the 11 participants who reported they received any treatment during or as a result of the overdose, eight stated they were monitored or watched by friends, with the remainder receiving formal medical monitoring or treatment.

Eighty-eight per cent of the 2010 REU sample reported having ever overdosed on a depressant drug (including alcohol), at a median of 15 times (range=1-200). Sixty-eight per cent of participants reported overdosing on a depressant drug in the last 12 months which is significantly more than in the 2009 REU sample (25%). Of those who had recently overdosed, 90% reported alcohol to be the main drug responsible; with heroin (4%), GHB (3%), BZD (2%) or DMT (2%) being responsible for the remainder of overdoses. Consistent with 2009 reports, the main symptoms experienced were vomiting (82%) and losing consciousness (37%). Participants reported the location of their last overdose as a home or private party (65%), or a pub or nightclub (28%). Fifty-three per cent of those who commented stated that they were watched or monitored by friends during the overdose. Three participants reported receiving CPR from a friend, with the remainder requiring an ambulance, going to the emergency department or receiving naloxone.

Although GHB was not reported as a main drug associated with overdoses in the REU sample, many KE reported GHB to be a very problematic drug due to the high number of overdoses associated with its use. Even though some KE reported the number of GHB-related overdoses to be significantly less in 2010 than in 2009, it still remains one of the most problematic drugs in the eyes of the EDRS KE (see above – GHB Use Among REU).

6.2 Help-seeking behaviour

Twenty-seven per cent of the 2010 REU sample reported that they had accessed a health or medical service in relation to their ERD use in the six months preceding interview, which is significantly more than in 2009 (16%). These participants reported most commonly accessing a general practitioner (GP) (48%), counsellor (37%), or a psychologist (30%).

Respondents reported accessing these services in relation to a range of drugs such as ecstasy, alcohol, cannabis and heroin, as well as a range of issues such as dependence/addiction and anxiety.

6.3 Drug treatment

6.3.1 ADIS

Data on people seeking treatment from specialist alcohol and other drug agencies in Victoria are collected via the ADIS. During the 2009/2010 financial year, 53,960 courses of treatment were delivered to 28,476 clients³ in Victorian specialist alcohol and other drug services. Of these, approximately 5% of the total courses of treatment were delivered to approximately 6% of clients for amphetamine problems, making amphetamines the fourth most frequently occurring main presenting drug problem after alcohol (47%), cannabis (23%), and heroin (14%). Only 0.6% of the courses of treatment were delivered to 1% of clients for ecstasy (ADIS Database, Victorian Department of Health, unpublished data).

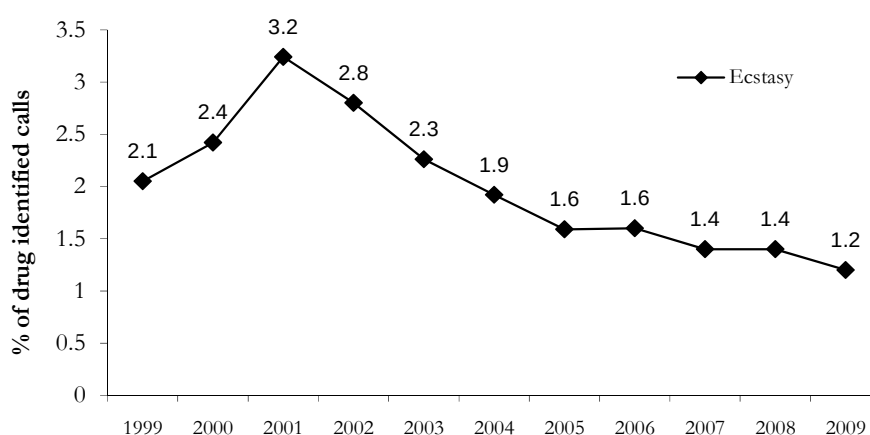
6.3.2 DirectLine

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 data for the period 1999-2009.

Ecstasy

During 2009, DirectLine responded to 253 calls where ecstasy was identified as a drug of concern. This represents 1.2% of all drug-identified calls to DirectLine in that year (Turning Point Alcohol & Drug Centre Inc., unpublished data). The percentage of drug-related calls where ecstasy was identified has steadily declined from 2001 to 2005, after which time the reported proportions remained stable (Figure 41).

Figure 41: DirectLine calls where drug of concern identified as ecstasy, 1999-2009



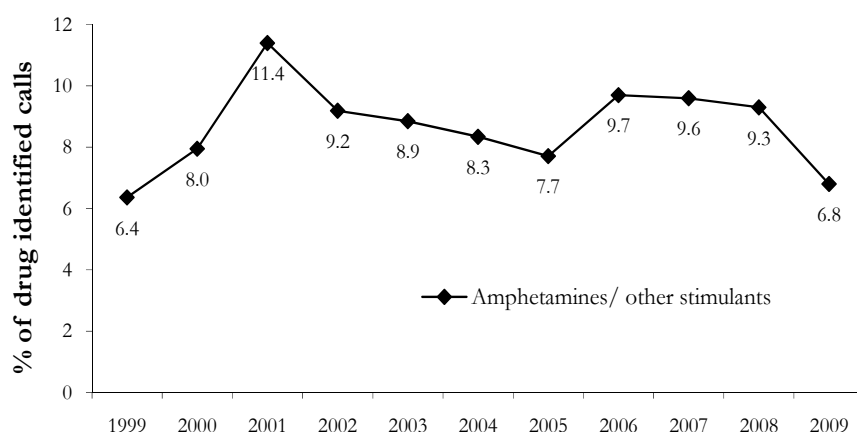
Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

³ Clients in specialist alcohol and drug services include both drug users and non-users. Non-users may include partner, family or friends.

Methamphetamine

During 2009, DirectLine responded to 1,482 calls where amphetamines and/or other stimulants were identified as a drug of concern (includes amphetamines, ecstasy, cocaine and other stimulants). This represents approximately 9% of all drug-identified calls to DirectLine in that year (Turning Point Alcohol & Drug Centre, unpublished data). This represents the lowest proportion of drug-related calls where amphetamines and/or other stimulants were identified since 1999 (Figure 42).

Figure 42: DirectLine calls where drug of concern identified as amphetamines and/or other stimulants, 1999-2009

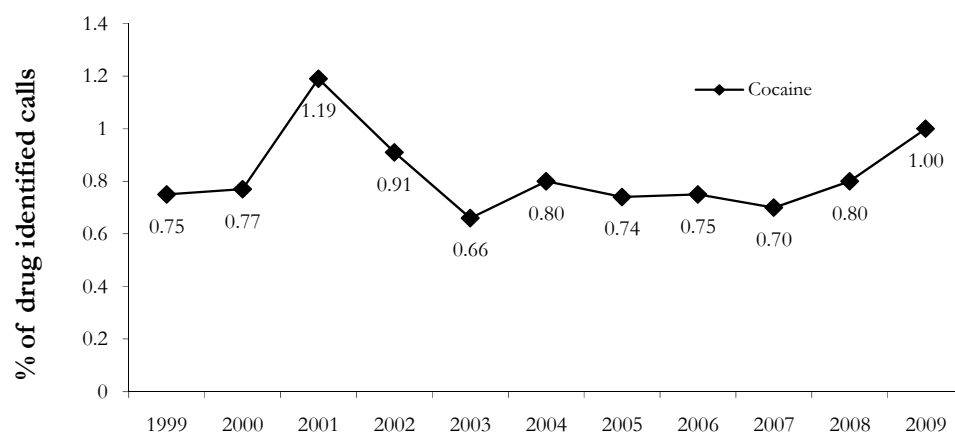


Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

Cocaine

During 2009, DirectLine responded to 224 calls where cocaine was identified as a drug of concern. This represents 1% of all calls made to DirectLine during that time where a drug of concern was cited (Turning Point Alcohol & Drug Centre Inc., unpublished data). The proportion of drug-related calls where cocaine was identified has remained very low ($\leq 1\%$) during recent years (Figure 43).

Figure 43: DirectLine calls where drug of concern identified as cocaine, 1999-2009

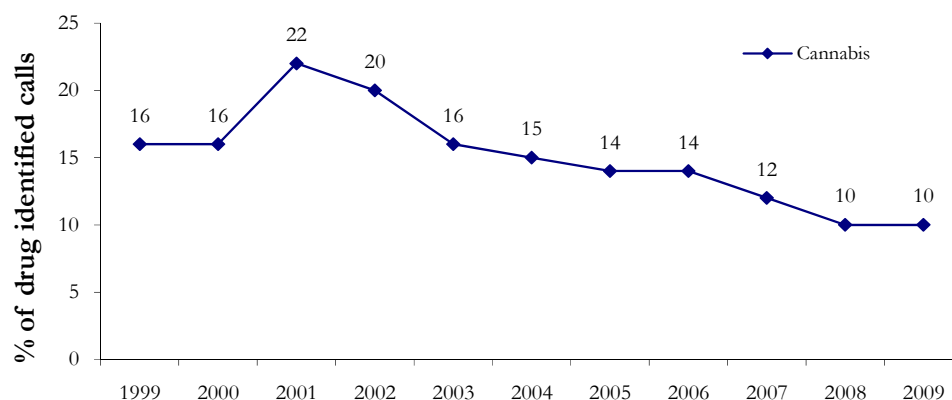


Source: DirectLine, Turning Point Alcohol & Drug Centre (unpublished data)

Cannabis

During 2009, DirectLine responded to 2,266 calls where cannabis was identified as a drug of concern. As with the previous year, this represents approximately 10% of all drug-identified calls to DirectLine during that year (Turning Point Alcohol & Drug Centre Inc., unpublished data). The proportion of drug-related calls where cannabis was identified as a drug of concern peaked in 2001 and has been decreasing ever since (Figure 44).

Figure 44: DirectLine calls where drug of concern identified as cannabis, 1999-2009



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

6.3.3 Ambulance attendances at non-fatal drug-related events

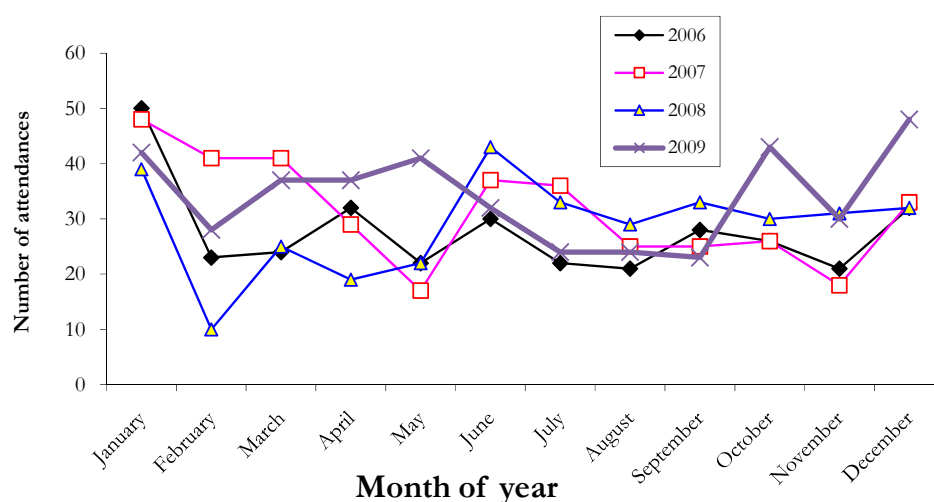
Turning Point Alcohol & Drug Centre manages an electronic drug-related ambulance attendance database, comprising information obtained from Ambulance Victoria records (Dietze et al.,

2000). Reliable data are available from June 1998 (with missing data for the periods May-July 2001, October 2002-February 2003, and June-July 2004). Although the database includes overdose-related calls for all types of drugs, the dataset is best suited to the monitoring of non-fatal heroin-related overdose, due to the availability of a biological marker of heroin involvement (i.e., the administration of naloxone and subsequent patient response). Data for the period between January 2006 and December 2009 are presented in this report.

Ecstasy

Ambulance attendances where ecstasy use was recorded ranged between approximately 10 to 50 per month during 2006-2009. The highest total attendances where ecstasy was recorded was in 2009 (409 in 2009 vs 346 in 2008, 376 in 2007, 331 in 2006). (Figure 45). (Turning Point Alcohol & Drug Centre., unpublished data).

Figure 45: Monthly totals of ambulance attendance where ecstasy was mentioned in Melbourne, January 2006-December 2009

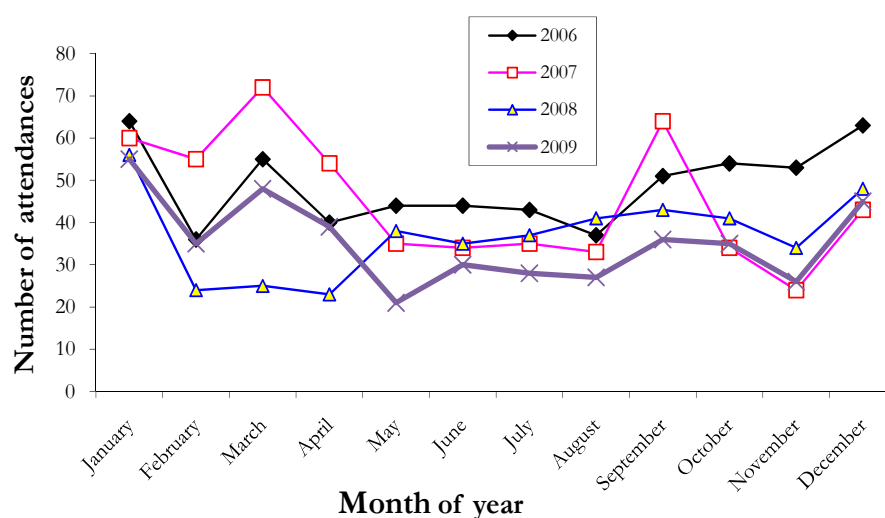


Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

Amphetamines

Ambulance attendances where amphetamine use was recorded fluctuated, ranging between 21 and 72 per month between January 2006 and December 2009 (Figure 46). During this period there was a decrease in the total number of presentations from 584 cases in 2006 to 425 cases in 2009 (Turning Point Alcohol & Drug Centre, unpublished data).

Figure 46: Monthly totals of ambulance attendance where amphetamines were mentioned in Melbourne, January 2006-December 2009



Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

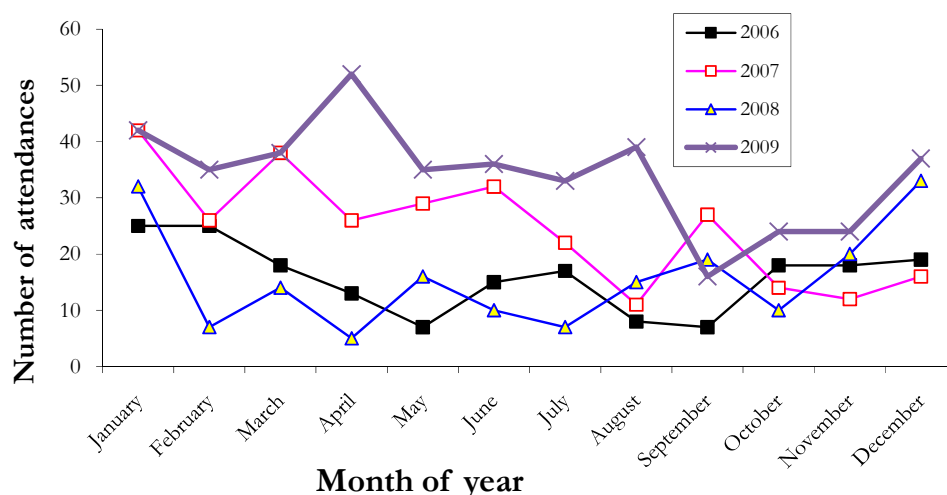
Cocaine

In 2009, there was a total of 104 ambulance attendances in Melbourne where cocaine use was mentioned, which is almost double the number of presentations where cocaine use was mentioned in 2008 (n=57) (Turning Point Alcohol & Drug Centre, unpublished data). While this number remains low, the rise in cocaine presentations from the previous year needs to be monitored in future years to determine whether there is an increasing trend in the number of ambulance attendances where cocaine is mentioned.

GHB

Ambulance attendances where GHB use was recorded ranged between seven and 52 per month between January 2006 and December 2009. In 2009, the total number of ambulance attendances where GHB use was recorded increased by more than 50% from 2008, and is the highest recorded number of presentations (411 in 2009 vs 188 in 2008, 295 in 2007, 190 in 2006) (Figure 47) (Turning Point Alcohol & Drug Centre, unpublished data). This data support KE reports from the 2009 and 2010 EDRS, which stated that GHB was an extremely problematic drug which caused a large number of overdoses and ambulance calls in 2009. This is concerning and needs to be followed closely.

Figure 47: Monthly totals of ambulance attendance where GHB was mentioned in Melbourne, January 2006-December 2009



Source: Ambulance Victoria and Turning Point Alcohol & Drug Centre

6.4 Other self-reported problems associated with ERD use

From 2007, participants were asked to report if their drug use had caused any repeated or recurrent problems in the last six months, including relationship/social problems, legal implications, problems related to responsibilities at home, work or school, or problems involving harm to themselves and/or other people. Participants were also asked to attribute such problems to the use of particular drugs.

Similar to previous years, 21% of the 2010 sample reported that their drug use had caused problems with family, friends and colleagues, 38% stated their drug use had put themselves or others in risky situations that may have caused harm and 43% of REU reported that their use of drugs had interfered with responsibilities at home, work or school.

The main drugs identified by the REU as being responsible for drug-related problems were alcohol (range=24%-58%), ecstasy (range=12%-24%), or cannabis (range=8%-33%).

6.5 Hospital admissions

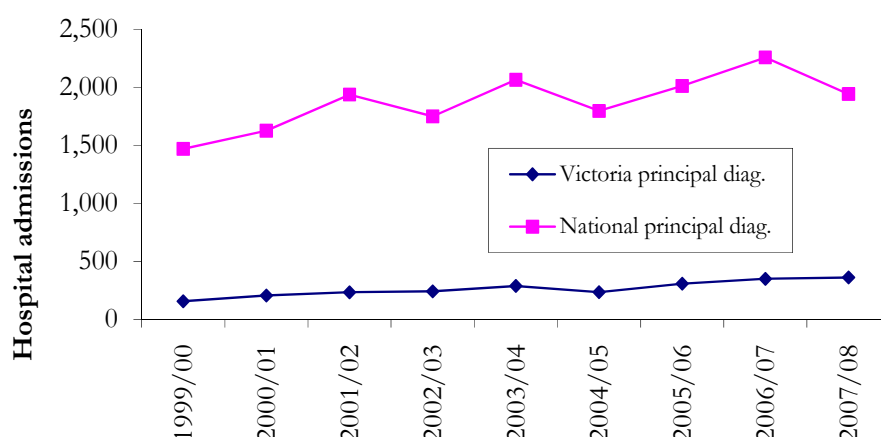
The NHMD is compiled by the AIHW. It is a collection of electronic records for admitted patients in public and private hospitals in Australia. “Principal diagnosis” (the diagnosis established after study to be chiefly responsible for occasioning the patient’s episode of care in hospital) has been reported. As the most recent hospital admissions data was not available at the time of printing, this report presents drug-related (amphetamine, cocaine and cannabis) hospital admissions for Victoria and Australia, 1999/2000-2007/2008 (Roxburgh & Burns, 2008; AIHW, 2009).

6.5.1 Amphetamines

Amphetamine-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 48. It is evident from this data that the number of amphetamine-

related hospital admissions in Victoria has generally been stable to increasing over the period of analysis.

Figure 48: Amphetamine-related hospital admissions, Victoria and national, 1999/2000-2007/2008

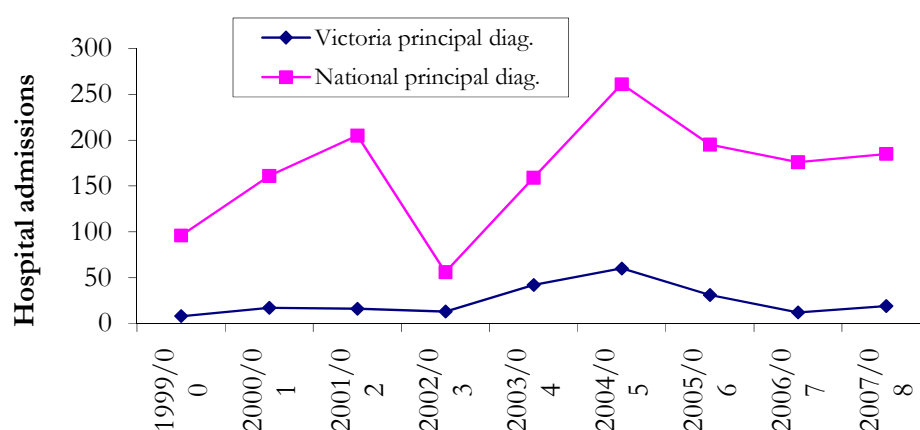


Source: Roxburgh & Burns (2009); AIHW

6.5.2 Cocaine

Cocaine-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 49. The number of cocaine-related hospital admissions in Victoria and Australia have continued to decreased since 2004/2005 and has remained relatively stable thereafter.

Figure 49: Cocaine-related hospital admissions, Victoria and national, 1999/2000-2007/2008

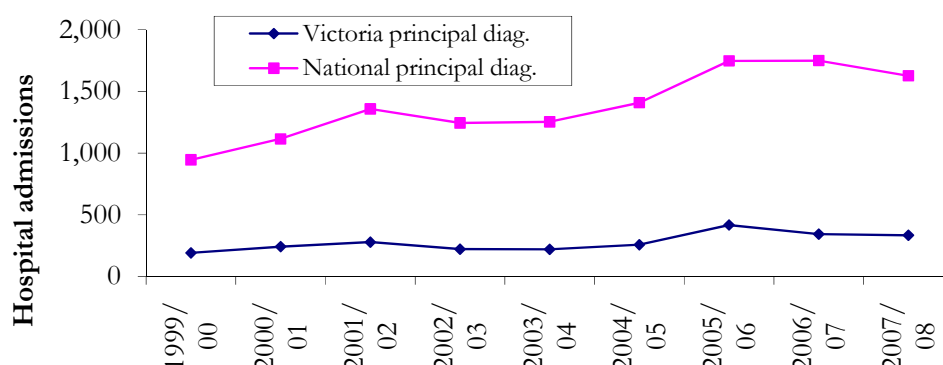


Source: Roxburgh & Burns (2009); AIHW

6.5.3 Cannabis

Cannabis-related hospital admissions for Victoria and Australia (among persons aged 15-54 years) are presented in Figure 50. It is evident from this data that, following a period during which the number of cannabis-related hospital admissions in Victoria remained relatively stable, in 2005/2006, this total increased considerably. After this time, the number of admissions remained relatively stable.

Figure 50: Cannabis-related hospital admissions, Victoria and national, 1999/00-2007/08



Source: Roxburgh & Burns (2009); AIHW

6.6 Mental and physical health problems and psychological distress

6.6.1 Mental health problems and psychological distress (K10)

From 2006, the EDRS study has included the 10-item Kessler Psychological Distress Scale (K10), a questionnaire designed for measuring the level of distress and severity associated with psychological symptoms that participants may have experienced in the preceding four weeks (Kessler et al., 2002).

The mean K10 score of the 2010 REU sample was 18 (range=10-38). K10 scores ranging from 10-15 are typically classified as low or no distress, 16-21 as moderate distress, 22-29 as high distress, and 30-50 as very high distress. According to this classification, consistent with 2009, in 2010, 27% of participants were in the low range, 40% in the moderate range, 22% in the high range, and 10% in the very high range. Compared to the 2007 NDSHS, there was a significantly higher percentage of REU scoring moderate to high distress (66% vs 29% for 2010 REU and 2007 NDSHS respectively), with 45% of the 678 participants in the NDSHS being in the low range, 21% in the moderate range, 8% in the high range, and 2% in the very high range (AIHW, 2008).

6.6.2 Self-reported mental problems

Participants in the 2010 REU survey were also asked about any mental health problem they had experienced in the preceding six months before the interview, with 29% reporting such problems. Of those who reported any recent mental health problem (n=29), the main issues experienced were depression (72%, n=21) and anxiety (66%, n=19). Eighty-three per cent (n=24) of those who reported a recent mental health issue attended a health professional to address this. Three-quarters (n=18) of those who attended a health professional to deal with their mental health problem were prescribed medication. The main medications prescribed were anti-depressants (61%) and BZD (50%).

RISK BEHAVIOUR

Summary

- REU reported more frequent use of a protective barrier with a casual partner (38% always used a condom) than with a regular partner (22% always used a condom);
- The 47 participants who reported having had sex with a casual partner while under the influence of drugs/alcohol in the past six months reported having done so most frequently under the influence of alcohol (83%), followed by ecstasy (40%), then cannabis and speed (both 21%);
- Of those in the 2010 REU sample who had driven a vehicle in the past six months (n=62), 42% believed that they had driven over the legal limit for alcohol;
- Of those who had driven in the last six months, 61% reported having driven soon after (i.e., within one hour) consuming any illicit drug(s). The drugs most commonly reported as being taken just before driving by the 2010 REU sample were cannabis (61%), ecstasy (42%), or speed (26%);
- Approximately 77% of the 2010 REU sample scored eight or more on the Alcohol Use Disorders Identification Test (AUDIT), which refers to levels at which alcohol intake may be considered hazardous; and
- Most KE reported that alcohol was the most problematic drug among the REU with whom they had contact, used alone or often in combination with other drugs, especially with GHB.

7.1 Injecting-risk behaviour

7.1.2 Lifetime injectors

Fourteen per cent of the 2010 REU sample reported ever injecting any drug (Table 22), a figure comparable to previous years. Among those who reported ever injecting, the median age for injecting for the first time was 19 years (range=13-29). Most REU who had ever injected reported the first drug they injected to be methamphetamine powder (speed) (50%) or heroin (36%).

Table 22: Injecting behaviour among REU, 2005-2010

	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Ever injected (%)	16	18	14	15	18	14

Source: REU interviews, 2005-2010

7.1.3 Patterns of recent injecting drug use

Consistent with previous years, only seven participants reported having injected in the preceding six months. These participants reported injecting a median of 100 times (range=7-252) in the last six months, at their own home (86%) or a friend's home (14%), after sourcing needles mainly from NSP (n=6). One participant reported the sharing of needles with a close friend, as well as the sharing of spoons and water. Small numbers preclude detailed interpretation of the figures in Tables 23 and 24 which should be viewed with caution.

Table 23: Recent injecting drug use patterns (recent injectors) among REU, 2008-2010

	% injected past 6 months			Median days injected last 6 months (range)*			% last drug injected		
	2008 (n=7)	2009 (n=7)	2010 (n=7)	2008 (n=7)	2009 (n=7)	2010 (n=7)	2008 (n=7)	2009 (n=7)	2010 (n=7) ***
Crystal	43	43	0	0 (0-60)	0 (0-60)	-	14	29	-
Speed	83	57	43	6 (0-65)	6 (0-180)	96(15-180)	29	29	14
Base	29	0	0	0 (0-48)	-	-	-	-	-
Ecstasy (pills)	43	14	14	0 (0-48)	0 (0-4)	96 (n=1)	-	-	-
Ecstasy**	0	0	14	-	-	24 (n=1)	-	-	-
Heroin	57	43	86	12 (0-180)	0 (0-60)	35(6-180)	57	43	57
Ketamine	0	0	0	-	-	-	-	-	-
Other opiates	14	14	0	-	0 (0-4)	-	-	-	-
Cocaine	43	14	14	0 (0-3)	-	1 (n=1)	-	-	-
Buprenorphine	0	0	0	0 (0-24)	-	-	-	-	-

Source: REU interviews, 2008-2010

* Of those who had injected in the preceding six months

** Powder or capsule

*** 14%=mephedrone, 14%=pharmaceutical stimulants

Table 24: Context and patterns of recent injection among REU, 2006-2010

	2006 recent injectors (n=11)	2007 recent injectors (n=9)	2008 recent injectors (n=9)	2009 recent injectors (n=7)	2010 recent injectors (n=7)
Locales where injected*					
Own home (%)	73	100	86	71	86
Friend's home (%)	55	44	14	29	14
Car (%)	55	44	43	-	-
Dealer's home (%)	18	33	14	-	-
Street, park (%)	46	33	14	-	-
Public toilet (%)	36	44	14	-	-
Venue toilet (%)	18	11	14	-	-
Sex venue (%)	0	0	0	-	-
Injected (only) under the influence (%)	0	11	14	14	14
Injected (only) while coming down (%)	44	11	29	14	29
Injected (both) while under the influence and coming down (%)	56	78	43	29	29
Median times injected any drug under the influence and/or coming down last 6 months (range)	10 (2-30)	5 (2-20)	96 (3-1080)**	6 (1-36)	5 (2-180)

Source: REU interviews, 2006-2010

* Could nominate more than one response

** One participant injected daily, six times a day

7.2 Blood-borne viral infections

Thirty-seven percent of the REU sample who commented on blood-borne viral infections (BBVI) (n=87) reported that they had never been vaccinated for hepatitis B virus (HBV); 56% reported that they had completed the vaccination schedule and 7% did not finish the vaccination schedule. Reasons for seeking HBV vaccination included being vaccinated as a child (66%) and going overseas (24%).

Participants were asked if they had been tested for hepatitis C virus (HCV). Of those who responded (n=94), 55% reported that they had never been tested for HCV, while 30% had been tested in the last year and 15% were tested more than a year ago. None of those tested reported positive diagnoses of HCV.

Participants were asked if they had been tested for the human immunodeficiency virus (HIV). Of the 2010 REU sample who commented (n=98), 54% had never been tested for HIV, 35% had been tested in the past year and 11% had been tested more than one year ago.

Forty-four per cent of the 2010 REU sample reported having a sexual health check-up (such as a swab, urine, or other blood test) in the past year, while 15% reported having had their last sexual health check-up more than one year ago. Forty-one per cent had never had a sexual health check-up.

The majority (85%) reported that they had never been diagnosed with a sexually transmitted infection (STI).

Table 25: BBVI and testing among REU, 2010

	VIC n=100
Vaccinated for HBV (%)	n=87
No	37
Yes, didn't complete	7
Yes, completed	56
Main reason for HBV vaccination (%)*	
At risk (IDU)	4
At risk (sexual)	0
Going overseas	24
Vaccinated as a child	66
Work	4
Don't know/can't remember	2
Other	2
Tested for HCV (%)	n=94
No	55
Yes, in last year	30
Yes, > year ago	15
HCV positive (%)**	0
Tested for HIV (%)	n=98
No	54
Yes, in last year	35
Yes, > year ago	11
HIV positive (%)#	2
Other sexual health checkups (%)	n=100
No	41
Yes, in last year	44
Yes, > year ago	15
STI positive (%)	n=100
	15
STI diagnosis (%)##	
Gonorrhoea	0
Chlamydia	80
Syphilis	0
HPV (genital warts)	20
Other	0

Source: REU interviews 2010

* Among those who had been vaccinated for Hepatitis B

** Among those tested for hepatitis C

Among those tested for HIV

Among those who tested positive for STI in the last year

7.3 Sexual risk behaviour

7.3.1 Recent sexual activity

Participants were asked questions regarding their sexual risk behaviour which focused on penetrative sex with regular or casual sex partners, defined as the penetration by the penis/fist of vagina/anus.

In 2010, 69 participants reported penetrative sex with a regular partner in the past six months, and 52 participants reported recent penetrative sex with a casual partner. REU reported more

frequent use of a protective barrier with a casual partner (38% always used a condom) than with a regular partner (22% always used a condom) (Table 26).

Table 26: Prevalence of sexual activity and number of sexual partners in the preceding six months, 2006-2010

	2006 (N=99)	2007 (N=98)	2008# (N=99)	2009 (N=100)	2010 (N=100)
Sex with a regular partner	n=68	n=75	-	n=82	n=69
Always used a protective barrier (not under influence alcohol/drugs) (%)*	26	29	-	18	22
Never used a protective barrier (not under influence alcohol/drugs) (%)*	44	45	-	52	49
Sex with a casual partner	n=58	n=40	n=61	n=56	n=52
Always used a protective barrier (not under influence alcohol/drugs) (%)**	53	58	47	50	38
Never used a protective barrier (not under influence alcohol/drugs) (%)**	5	8	12	5	6
No. of causal sexual partners **					
One person (%)	40	50	26	25	8
Two people (%)	16	19	25	21	19
3-5 people (%)	33	27	31	39	54
6-10 people (%)	5	5	11	9	15
10+ people (%)	5	0	7	5	4

Source: REU interviews, 2006-2010

Casual partners only

* Of those who had sex with a regular partner

** Of those who had sex with a casual partner

7.3.2 Drug use during sex

The 47 participants who reported having had sex with a casual partner while under the influence of drugs/alcohol in the past six months reported having done so most frequently under the influence of alcohol (83%), followed by ecstasy (40%), then cannabis and speed (both 21%) (Table 27). Among this group, only 36% reported always using a condom with a casual partner. Of those who reported sex with a regular partner while under the influence of drugs/alcohol in the past six months (n=68), only 18% reported always using a condom.

Table 27: Sex under the influence of drugs in the preceding six months, 2008-2010

	2008	2009	2010
Penetrative sex with casual partner while on drugs last 6 months	n=55	n=40	n=47
Number of times*			
Once (%)	11	15	13
Twice (%)	27	5	17
3-5 times (%)	22	38	30
6-10 times (%)	11	25	17
Ten or more times (%)	29	18	23
Drugs used*			
Ecstasy (%)	56	45	40
Cannabis (%)	49	33	21
Alcohol (%)	73	80	83
Speed (%)	22	15	21
Base (%)	0	0	0
Ice (%)	2	5	6
Cocaine (%)	11	8	6
Ketamine (%)	4	5	0
GHB (%)	2	5	2
LSD (%)	6	10	2
Always used a protective barrier (%)*	46	53	36
Never used a protective barrier (%)*	18	18	13
Sex with a regular partner under the influence of drugs last 6 months	-	n=81	n=68
Always used a protective barrier (%)	-	17	18
Never used a protective barrier (%)	-	58	56

Source: REU interviews, 2007-2010

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

7.4 Driving risk behaviour

Sixty-two per cent of the 2010 REU sample reported having driven a car/motorcycle/vehicle in the six months prior to being interviewed, a rate similar to previous years (Table 28). Of those reporting having driven during this time (n=62), 42% (n=26) believed that they had driven over the legal limit for alcohol. Those who believed that they had driven over the legal limit reported having done so a median of two times in the last six months (range=1-20). Of these 62 participants, 52% had been tested by the police roadside breath testing in the last six months, none of whom were over the legal limit when tested.

Of those who had driven in the last six months, 61% (n=38) reported having driven soon after (i.e. within one hour) consuming any illicit drug(s), at a median of three times (range=1-50) (Table 28). The drugs most commonly reported as being taken just before driving by the 2010 REU sample were cannabis (61%), ecstasy (42%), or speed (26%). Whilst ecstasy and speed were commonly reported as being taken just before driving, these drugs were reported less frequently by the 2010 sample than the 2009 sample (Table 28).

Table 28: Drug driving in the last six months among REU, 2004-2010

	2004	2005	2006	2007	2008	2009	2010
Driven while over the legal limit of alcohol (last 6 months)# (%)	–	35	39	26	25	37	42
Driven soon after* taking a drug (last 6 months)# (%)	63	58	68	71	61	60	61
<i>Of those who'd driven soon after</i>							
Drug (%)							
Ecstasy	73	70	82	63	75	60	42
Cannabis	48	43	57	63	85	63	61
Speed	58	70	64	49	55	43	26
Cocaine	8	15	23	12	15	8	8
Crystal methamphetamine	22	24	21	14	15	3	3
Methamphetamine base	8	2	2	2	0	0	0
Ketamine	11	7	5	6	5	3	3
LSD	8	9	5	4	0	5	11
GHB	8	7	4	6	0	3	0
Other opiates	0	0	2	0	0	0	0
BZD	6	2	4	2	5	0	3
MDA	0	2	2	2	0	0	3
Methadone	3	0	2	0	0	0	0
Amyl nitrate	0	0	2	4	0	5	0
Nitrous oxide	0	2	2	2	0	0	3
Heroin	6	0	5	6	0	0	8

Source: REU interviews, 2004-2010

Of those who had driven a car in the last 6 months

* Within one hour of taking

Participants in the 2010 REU survey who reported driving after taking drugs in the last six months (n=38). Fifty-five per cent believed they were quite impaired or slightly impaired, 32% said the drugs had no impact on their driving, and 13% believed their driving was slightly improved or quite improved by their drug use.

Of the participants who had driven in the last six months and who could comment (n=61), 8% had once ever been tested for drug driving by the police roadside drug testing and 5% had been tested more than once in their lifetime. In their most recent drug driving test result, only one participant tested positive – for both cannabis and MDMA.

Compared to the national sample, the Victorian REU sample reported a very low range of the number of times having driven after taking an illicit drug (national range=1-180 days, Victorian range=1-50 days). This may be because Victoria was the first state to introduce roadside drug testing; therefore, people in Victoria are more aware that this occurs. In addition, all Victorian “booze buses” are also able to perform drug testing and are clearly signed as alcohol and drug testing buses.

7.5 Risky alcohol use among REU

In 2010, the Alcohol Quantity, Frequency and Variability (AQFV) questionnaire was administered to the REU sample. Questions were asked regarding the number of standard drinks consumed on three occasions: the amount typically consumed on any day (typical), on regular changes (e.g., weekends), or on occasional changes (e.g., festivals/parties).

REU reported consuming a median of two to four standard drinks (range standard drinks: min=0-11, max=2-12) twice a week (range=1-7 days per week or month) during a *typical drinking* session. Not surprisingly, during *regular changes* (e.g., weekends) REU consumed more, drinking a median of 8-12 standard drinks (range standard drinks: min=0-30, max=2-36) twice a week (range=1-6 days per week, month or year), and during festivals/parties (*occasional changes*), REU consumed a median of 10-15 standard drinks (range of standard drinks: min=0-50, max=2-55) twice a *month* (range=1-10 days per week to yearly). Of those who responded (n=86), 45% said they drank less alcoholic drinks when using ecstasy than they usually would. Given that the 2009 National Health and Medical Research Council (NHMRC) guidelines (NHMRC, 2009) recommend no more than two standard drinks on any day, or more than four standard drinks during a single occasion of drinking, the majority of the EDRS sample would be considered to be drinking at harmful levels.

The 2010 REU sample were also asked the WHO's 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 is scored 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 may indicate 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. Seventy-four per cent of respondents scored six or more on these questions (Table 29). This is significantly lower than the 92% who scored six or more on the consumption score in the 2008 EDRS sample.

The dependence score is scored 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 four or more indicates the possibility of alcohol dependence. Twenty-seven per cent of participants had scores of four or more, indicating the possibility of dependence (Table 29).

The alcohol-related problems score is derived from the final four questions, any scoring on which is considered to warrant further investigation to determine whether the 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?

Eighteen participants scored zero on these questions, indicating that the remaining 82% of participants warranted further investigation (Table 29).

Total AUDIT scores of eight or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence (Babor et al., 2001). Seventy-seven per cent (n=76) of the REU sample who commented (n=99) scored eight or more, levels at which alcohol intake may be considered hazardous (Table 29).

Table 29: AUDIT scores and proportion of REU scoring above recommended levels indicative of hazardous alcohol use, 2010

	Median score (range)	Percentage scoring above recommended level
Consumption score	7 (1-12)	74
Dependence score	1 (0-8)	27
Adverse consequences score	5 (0-14)	82
Total AUDIT score	14 (0-30)	77

Source: REU interviews, 2010

Most KE reported that alcohol was the most problematic drug among the REU with whom they had contact, used alone or often in combination with other drugs, especially with GHB (see GHB above). The main concerns were related to the risk behaviours associated with its use, such as aggressive and antisocial behaviours including assault, robbery and injury.

Ambulance officers reported that the majority of drug-related ambulance attendances were alcohol related (intoxications, falls, assaults) and alcohol remains the main confounder of other problematic drug use. They also reported that single drug overdoses were now uncommon except for those involving alcohol alone, with most drug overdoses also involving alcohol consumption. Two emergency department workers reported that the majority of substance use cases they see involve alcohol, and that most of the violence seen is due to alcohol intoxication.

7 LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH ERD USE

Summary

- Compared to 2009, there was a significantly lower percentage of REU who reported that they believed police activity had increased in the last six months (29% vs 46%);
- Of the 2010 REU sample, 39% reported they had seen a sniffer dog at a festival or live music event at least once in the previous six months. Most (71%) reported that they kept going about their business the last time they saw a sniffer dog;
- In Victoria in the 2008/2009 financial year, the total number of consumer and provider arrests for cocaine increased compared to the 2007/2008 financial year (148 in 2008/2009 vs 119 in 2007/2008); and
- In Victoria in the 2008/2009 financial year, the total number of consumer and provider arrests for cannabis increased slightly in comparison to the 2007/2008 financial year (6,884 in 2008/2009 vs 6,681 in 2007/2008).

8.1 Reports of criminal activity among REU

Nine participants in the 2010 REU survey reported that they had been arrested in the past 12 months (Table 30). Forty-four per cent of participants reported engaging in any crime in the last month and, as in all previous years, the most common crime EDRS participants reported committing during the last month was drug dealing (33%).

Drug traffickers were described by police informants to be very organised individuals, either not using drugs themselves or young users who are dealing to support their drug habit. Typically traffickers were reported to carry multiple mobile phones and often sold drugs out of their cars near nightclubs or music events.

One police informant has noticed a reduction in visible dealing in Melbourne's Central Business District since the closure of one prominent nightclub. He also reported that the lack of police resources – due to the increased targeting of alcohol-fuelled violence – meant a decrease in the targeting and arresting of drug traffickers.

Table 30: Criminal activity reported by REU, 2004-2010

Criminal activity in the last month	2004 (N=100)	2005 (N=100)	2006 (N=98)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Any crime (%)	33	24	35	29	41	50	44
Drug dealing (%)	29	18	28	21	37	36	33
Property crime (%)	9	10	11	6	9	23	18
Fraud (%)	2	2	3	1	5	0	1
Violent crime (%)	2	1	4	3	4	2	4
Arrested in the preceding 12 months (%)	17	10	12	7	3	12	9

Source: REU interviews, 2004-2010

8.2 Perceptions of police activity towards REU and drug detection sniffer dogs

Compared to 2009, there was a significantly lower percentage of REU who reported that they believed police activity had increased in the last six months (29% vs 46% for 2010 and 2009 respectively). Forty-four per cent of participants believed police activity had been stable recently (Table 31). Of the 2010 REU sample, 39% reported they had seen a sniffer dog at a festival or live music event at least once in the previous six months. Most (71%) reported that they kept going about their business the last time they saw a sniffer dog, and only three participants had ever been searched by the police due to a positive notification from a sniffer dog and the police found nothing on all three occasions. The majority of participants (79%) reported that police activity had not made it more difficult to obtain ERD in the past six months.

KE suggested that habits of drug use had changed recently with people becoming more aware of the presence of PADD (passive alert drug detector) dogs. Individuals will apparently now more often consume their drugs prior to arriving at an event or conceal their drugs to avoid detection

by the PADD dogs. It was also suggested that in Victoria there is generally not an issue with people swallowing their drugs if they see a PADD dog. People are not usually so threatened that they ingest their drugs, instead, consistent with REU reports, they tend to simply walk the other way. Violence and aggression were seen as only a rare problem at dance parties but that this could be a lot worse if more alcohol and cannabis were being used instead of ERD. Some suggested that the current PADD dog system was working, as repeat offenders were rare.

Table 31: Perceptions of police activity by REU, 2004-2010

Recent police activity:	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=100)	2009 (N=100)	2010 (N=100)
Decreased (%)	1	1	0	3	2	1	1
Stable (%)	31	31	26	44	50	30	44
Increased (%)	58	52	45	43	29	46	29
Don't know (%)	10	16	28	10	19	23	26
Did not make scoring more difficult (%)	90	94	85	88	85	76	79

Source: REU interviews, 2004-2010

8.3 Arrests

8.3.1 Amphetamines

Table 32 details consumer (e.g., possession/use) and provider (e.g., trafficking/manufacture) arrests for amphetamine-type stimulants, during 2008/2009 in Victoria and Australia. During that financial year, approximately 22% of the arrests made in Australia for amphetamine-type stimulant offences occurred in Victoria (ACC, 2004).⁴ The total number of consumer and provider arrests for amphetamine-type stimulants in Victoria during 2008/2009 remained similar in comparison to the 2007/2008 financial year (3590 in 2008/2009 vs 3,599 in 2007/2008).

Table 32: Amphetamine-type stimulants: Consumer and provider arrests, Victoria and national, 2008/2009

	Victoria (n)	Australia (n)	% of national arrests
8.3.2 Consumer	2,465	11,778	20.9
Provider	1,125	4,629	24.3
TOTAL*	3,590	16,452	21.8

Source: ACC

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

⁴ 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.

8.3.2 Cocaine

Table 33 details the comparatively small number of consumer (e.g., possession/use) and provider (e.g., trafficking/manufacture) arrests for cocaine during 2008/2009 in Victoria and Australia. During that financial year, approximately 18% of the arrests made in Australia for cocaine offences occurred in Victoria (ACC, 2004). In Victoria, the total number of consumer and provider arrests increased compared to the 2007/2008 financial year (148 in 2008/2009 vs 119 in 2007/2008).

Table 33: Cocaine: Consumer and provider arrests, Victoria and national, 2008/2009

	Victoria (n)	Australia (n)	% of national arrests
8.3.3 Consumer	92	553	16.6
Provider	56	289	19.4
TOTAL*	148	848	17.5

Source: ACC

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

8.3.3 Cannabis

Table 34 details consumer (e.g., possession/use) and provider (e.g., trafficking/manufacture) arrests for cannabis, during the 2008/2009 financial year in Victoria and Australia. During that financial year, approximately 12% of the arrests made in Australia for cannabis offences occurred in Victoria (ACC, 2004). In Victoria, the total number of consumer and provider arrests increased slightly in comparison to the 2007/2008 financial year (6,884 in 2008/2009 vs 6,681 in 2007/2008).

Table 34: Consumer and provider arrests, Victoria and national, 2008/2009

	Victoria (n)	Australia (n)	% of national arrests
8.3.4 Consumer	5,157	47,804	10.8
Provider	1,727	7,722	22.4
TOTAL*	6,884	56,638	12.2

Source: Australian Crime Commission

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

8.3.4 Hallucinogens

Table 35 details the small number of consumer (e.g., possession/use) and provider (e.g., trafficking/manufacture) arrests for hallucinogens, during the 2008/2009 financial year in Victoria and Australia. During that financial year, 14% of the arrests made in Australia for hallucinogen offences (LSD or psilocybin mushrooms) occurred in Victoria (ACC, 2004). The number of consumer and provider arrests for hallucinogen offences remains very low; however, the total number of consumer and provider arrests in Victoria increased compared to the previous financial year, and the percentage of national arrests occurring in Victoria increased from 11% in 2007/2008 to 14% in 2008/2009.

Table 35: Hallucinogens: Consumer and provider arrests, Victoria and national, 2008/2009

	Victoria (n)	Australia (n)	% of national arrests
8.3.5 Consumer	33	270	12.2
Provider	18	99	18.2
TOTAL*	51	369	13.8

Source: ACC

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

8 SPECIAL TOPICS OF INTEREST

Summary

- In the 2010 REU sample, the main reported illicit substances consumed with an energy drink were ecstasy (48%), cannabis (26%), and speed (24%). Of those who reported having consumed an energy drink with another substance (n=54), 26% reported also combining alcohol with the mix on every occasion;
- In the 2010 REU, two-thirds (66%) reported consuming energy drinks outside the party scene in the last six months;
- Of those who commented, 8.8% had a BMI which was considered underweight (BMI<18.5), this compares to 2.6% of the general population aged 18-64 years (Australian Bureau of Statistics, 2009). Males were more likely to be overweight compared to females (21.1% versus 2.9%); and
- Among the 2010 REU, over half (56%) reported that they had been tested in the last two years for a STI by means of a blood test, urine sample or swab, while one-third (35%) reported that they had not considered taking a sexual health test.

8.1 Ecstasy dependence

In 2010, participants were asked questions regarding dependence on ecstasy. For further information, please contact: Dr Raimondo Bruno (raimondo.bruno@utas.edu.au).

9.2 Energy drink consumption

Caffeinated energy drinks came onto the world market in 1997 with the introduction of Red Bull. The drinks are marketed at the 18-35 years age group, claiming to deliver a jolt of energy through the combination of stimulant ingredients; primarily caffeine, herbal extracts (such as guarana, and ginseng) and amino acids (such as taurine).

Research suggests energy drinks do deliver on their promise of more “energy” with the strongest energising effects being 30 to 60 minutes after consumption and lasting at least 90 minutes. However, while caffeine in smaller doses has been shown to improve cognitive performance and mood (Beyrer et al., 2004), it can also have detrimental health consequences. Acute caffeine consumption reduces insulin sensitivity (Kalyoncu et al., 2005) and increases mean arterial blood pressure (Bichler, Swenson, & Harris, 2006). High caffeine consumption is associated with chronic daily headaches, particularly in women aged less than 40 years and has been known to be associated with central nervous system dysfunction, cardiovascular, gastrointestinal and renal dysfunction (Carillo & Benitez, 2000). Caffeine intake more generally can promote diuresis⁵ and natriuresis⁶ (Riesenhuber et al., 2006). Daily caffeine intake remains safe at under 600mg per day; however, doctors recommend that during times of stress, anxiety or pregnancy caffeine intake be limited to less than 200mg per day. Energy drinks on average can now contain between 80 and 160mg per serving.

Of particular concern is the recently reported “partying practice” of mixing energy drinks with alcohol and/or other substances such as ecstasy or prescribed medications such as Stilnox or BZD. The aim of this mixing is to enhance the “high” associated with these substances.

In 2010, the EDRS included questions examining the use of energy drinks (e.g., V and Red Bull) in the context of alcohol and/or ecstasy and other illicit substance use. Sixty-eight per cent had consumed an energy drink mixed with alcohol over the preceding six months. In relation to frequency, it is apparent that of recent consumers of the energy drink and alcohol cocktail, most engage in the practice less than monthly (32%), monthly (26%) or fortnightly (22%). On their last occasion, respondents had consumed a median of two (range=1-11) energy drinks mixed with alcohol (Table 36).

The studies that have been conducted would suggest that consumers hold beliefs that consuming energy drinks will reduce the fatigue, cognitive and motor impairments of alcohol and as a result they may be more likely to engage in risky behaviours such as operating a car or a motorcycle, in the erroneous belief that they are alert (Ferreira et al., 2004b; Ferreira, Mello, & Souza-Formigoni, 2004a). The REU energy drink and alcohol consumers interviewed for this study suggested that they choose energy drinks over other beverages because they believed that consuming energy drinks helps you party for a longer time period (36%) or because they like the taste (26%) (Table 36).

Despite possible negative consequences of consuming energy drinks in combination with other substances, to date there has been minimal research on the topic. In the REU sample, the main

⁵ *Diuresis* is the increased production of urine by the kidney.

⁶ *Natriuresis* is the process of excretion of sodium in the urine via action of the kidneys.

reported illicit substances consumed with an energy drink were ecstasy (48%), cannabis (26%), and speed (24%). Of those who reported having consumed an energy drink with another substance (n=54), 26% reported also combining alcohol with the mix on every occasion (Table 36).

Table 36: Use of energy drinks, alcohol and/or ecstasy and other illicit substance among REU, 2010

	N=100
Consumed energy drinks with alcohol (%)	
Yes, in the last 6 months	68
Yes, but not in the last 6 months	19
No	13
How often consume energy drink with alcohol (%)*	n=68
> Weekly	7
Weekly	12
Fortnightly	22
Monthly	26
< Monthly	32
Median number of recent energy and alcohol drinks (n)*	2
Main reason for mixing energy drink with alcohol (%)	n=85
Taste	26
Combined effect	5
Helps party longer	36
Lessens hangover	0
Keeps me straight	0
Feeling tired	5
Other†	28
Consumption of energy drinks and another substance (not including alcohol) (%)	n=100
None	46
Ecstasy	48
Speed	24
Base	0
Ice	3
Cocaine	9
Cannabis	26
LSD	10
Ketamine	4
Prescribed medication	1
Other	5
Use of energy drinks with another substance and alcohol (%)**	n=54
All of the time	26
Most of the time	13
Some of the time	24
A little of the time	30
None of the time	7

Source: REU interviews, 2010

* Among those who had consumed energy drinks with alcohol in the last six months

** Among those who had consumed energy drinks with another substance

Note: Other includes reasons such as: availability, the drink was bought for them by a friend, because it was more affordable (cheaper due to a promotional evening) and the novelty/wanting to try it

Thirty-two per cent of the 2010 REU sample reported that they had experienced a negative effect which they related to the consumption of energy drinks with alcohol, energy drinks with ecstasy or all three substances (Table 37).

Table 37: Negative effects experienced related to energy drink consumption among energy drink consumers, 2010

	VIC N=100
Any negative effects from consuming energy drinks and/or alcohol and/or ecstasy (%)	
Yes	32
Energy drinks mixed with alcohol (%)	
Headaches	11
Heart palpitations	11
Nausea	7
Vomiting	7
On edge	8
Heart burn	3
Stressed out	7
Other	2
Energy drinks mixed with ecstasy (%)	
Headaches	5
Heart palpitations	9
Nausea	2
Vomiting	1
On edge	2
Heart burn	3
Stressed out	6
Other	0
Energy drinks mixed with ecstasy and alcohol (%)	
Headaches	10
Heart palpitations	11
Nausea	5
Vomiting	5
On edge	9
Heart burn	4
Stressed out	11
Other	0

Source: REU interviews, 2010

Currently there is very little data available on quantity of general caffeinated energy drink consumption (without alcohol or other substances). In this sample of REU, two-thirds (66%) reported consuming energy drinks outside the party scene in the last six months (Table 38). The median number of cans consumed the last time they consumed energy drinks outside the party scene among 2010 REU was one (range=0.5-6).

Table 38: Consumption patterns of *energy drinks only* among REU, 2010

	VIC N=100
Energy drinks outside the party scene last 6 months (%)	
Yes	66
Frequency of consumption (%)*	
More than weekly	18
Weekly	21
Fortnightly	12
Monthly	20
Less than monthly	29

Source: REU interviews, 2010

* Among those who had consumed energy drinks outside the party scene in the last six months

9.3 Body Mass Index

Eating disorders and drug use disorders are significant public health problems. However, epidemiological research examining their associations yields ambiguous results. Evidence on a relationship between obesity and alcohol use is found in some studies (Wannamethee, Shaper, & Whincup, 2005). As to the relationships between being overweight/obesity and nicotine dependence, some studies have found overweight and obese men, but not women, were more likely to be former daily smokers than non-smokers (Zimlichman et al., 2005). In a nationally representative sample, being overweight, obesity and extreme obesity were associated with lower risk for past-year nicotine dependence in men but not in women (Pickering et al., 2007).

Relationships between body mass index (BMI) and illicit drug use disorders are also unclear. For instance, marijuana can stimulate appetite whereas cocaine is a stimulant and appetite suppressant, but one study found similar prevalence of being overweight in individuals with illicit drug use disorders as that found in the general population (Rajs et al., 2004) and another study found both positive and negative associations of BMI with various substance use disorders, and significant gender differences in those relationships (Barry & Petry, 2009). Finally, BMI and drug use are both associated with mental health problems (Kemp et al., 2009).

For the first time in 2010 participants were asked their height and weight. With this information BMI was calculated among the national sample to determine the relationship between BMI, drug use and the risk of disease. BMI is calculated from height and weight information, using the formula weight (kg) divided by the square of height (m). BMI is divided into four groups: (1) “underweight”, less than 18.5; (2) normal weight, 18.5 to less than 25; (3) overweight, 25 to less than 30; or (4) obesity, 30 and greater, in adults to measure prevalence. BMI values are grouped according to the groups reported by the WHO (WHO, http://apps.who.int/bmi/index.jsp?introPage=intro_3.html).

Among the 2010 EDRS sample, the mean height was 1.76m and weight 69.5kg. The mean BMI for the Victorian REU sample was 22.5. This means that, of the participants who provided their height and weight, 8.8% had a BMI which was considered underweight (BMI<18.5) compared to 2.6% of the general population aged 18-64 years (Australian Bureau of Statistics, 2009). Males were more likely to be overweight compared to females (21.1% versus 2.9% for males and

females respectively). Ninety-one per cent of female REU and 61% of male REU were in the normal range (Table 39).

Table 39: Self-reported height, weight and BMI, 2010

	VIC
Mean height (m)	n=92 1.76
Mean weight (kg)	n=97 69.5
Mean BMI	n=91 22.5
BMI – males (%)	n=57
Underweight	10.5
Normal range	61.4
Overweight	21.1
Obese	7.0
BMI – females (%)	n=34
Underweight	5.9
Normal range	91.2
Overweight	2.9
Obese	0
BMI – all (%)	n=91
Underweight	8.8
Normal range	72.5
Overweight	14.3
Obese	4.4

Source: REU interviews, 2010; ABS, 2009

9.4 Sexual health

Population studies have shown that younger age groups report engaging in sexual relationships with more partners in their lifetime than older age groups (Johnson et al., 2001). Amongst the REU sample, participants of a younger age have been found to be more likely to engage in risky behaviours (Cogger & Kinner, 2008). Furthermore, studies have shown that younger individuals who frequent night clubs are likely to report multiple sexual partners and incidence of STIs (Wells et al., 2010).

In Australia, approximately 10% of young women and 3% of young men (aged under 30 years) report having been tested for chlamydia (Kong et al., in press). The issues surrounding sexual health prompted questions to be developed for the EDRS survey to investigate reasons why or why not participants choose to have a STI screening. The responses to these questions were formulated by considering results of previous research (Balfe & Brugha, 2009; Dixon-Woods et al., 2001; Tilson et al., 2004).

In 2010, REU participants were asked if they had been tested for a STI in the last two years. Among the 2010 REU, over half (56%) reported that they had been tested in the last two years for a STI by means of a blood test, urine sample or swab, while one-third (35%) reported that they had not considered taking a sexual health test (Table 40).

Among those who were tested, the main reasons given for testing were a general check-up (38%) and having had unprotected sex (36%). Participants reported being tested at a GP's surgery (64%) or at a sexual health clinic (27%) (Table 40).

Table 40: Sexual health testing among REU, 2010

	VIC N=100
Tested for a STI last two years (%)?	n=100
No, don't think about it	35
No, I didn't want to be tested	1
No, another reason	8
Yes, I was tested by means of a blood test, urine sample or swab	56
Reason for test (%)*	n=56
Clear of infection after relationship	2
Clear of infection before new relationship	5
Unprotected sex	36
Symptoms of infection	9
Health provider suggested	7
Friend suggested	2
Partner suggested	2
Partner had symptoms	0
Ex-partner told me to get tested	0
Access to clinic was easy	2
Routine/general check-up	38
Other	7
Place last tested for STI (%)*	
GP	64
Sexual health clinic	27
Hospital	5
Other	4

Source: REU interviews, 2010

* Among those who were tested for a STI in the last two years

Over two-thirds (69%) of the female REU sample reported having a pap smear test in the last two years. The main reason given for not having a pap smear test was didn't think of it. The main reasons for having a pap smear test were "due for a test" and "health provider suggested it". The majority of participants (60%) were tested at a GP surgery (Table 41).

Table 41: Pap smear testing among REU, 2010

	VIC n=36*
Had a pap smear test last two years**	69
Reasons for no pap smear test last two years (%)#	n=11
Wasn't sexually active	0
No symptoms	9
Don't like them	9
Didn't think of it	45
Embarrassed/uncomfortable	9
Financial cost	9
Other	27
Reasons for having a pap smear test (%)##	n=25
Symptoms	4
Reminder letters	4
Health provider suggested	24
Friend suggested	0
Partner suggested	0
Due for a test	72
Family history of cervical cancer	4
Other	4
Place last tested for pap smear (%)##	n=25
Sexual health clinic	20
GP	60
Hospital	4
Other	16

Source: REU interviews, 2010

* Females

** Among females only

Among those who had not had a pap smear test in the last two years

Among those who had a pap smear test in the last two years

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