New South Wales

E. Whittaker, L. Scott and L. Burns

NSW TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2012
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

Australian Drug Trends Series No. 101

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NEW SOUTH WALES TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2012

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National Drug and Alcohol Research Centre
University of New South Wales

Australian Drug Trends Series No. 101


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ACKNOWLEDGEMENTS

In 2012, the NSW Ecstasy and Related Drugs Reporting System (EDRS) was supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund, and was coordinated by the National Drug and Alcohol Research Centre (NDARC). The NSW EDRS team would like to thank Mr Chris Milton, Dr Robyn Davies and Mr Joe Upston of the AGDH&A for their continued assistance with and support of the EDRS.

We are indebted to the 100 regular ecstasy users (REU) interviewed for the 2012 NSW EDRS for their open discussion of illicit and stigmatised activities. The detail in this report would not be possible without the information they provide. We would like to also thank the key experts (KE) who agreed to be involved in the 2012 NSW EDRS. KE participated in 45 minute interviews and receive no compensation for their time and effort, and we gratefully acknowledge their expert input.

We thank Amanda Roxburgh for assistance with indicator data. Her tireless efforts each year in collecting indicator data, and her assistance in the analysis and interpretation of indicator data, are greatly appreciated. We thank Elena Cama, Katherine Tye, Monika Wadolowski, Sarah McNally, Shalee Rooke and Sonja Memedovic for their assistance as casual interviewers.

The EDRS depends on a large number of people who generously give their time and support to the project. In 2012 the EDRS relied upon many, including:

- Mr Tony Trimmingham and Ms Jennifer Chapman, Family Drug Support (FDS);
- Mr George Bodilsen, Mr John Gross and Ms Maria Velasco, Australian Institute of Health and Welfare (AIHW);
- Ms Debra Crosbie and Mr David Lester, Alcohol and Drug Information Service (ADIS), St Vincent’s Hospital;
- Mr Kieron McGlone and Mr John McShane, NSW Department of Health;
- Ms Sandra Gliddon and Mr David Biddle, Australian Bureau of Statistics;
- Mr Don Smith, Dr Brad Grant and Ms Trish Piper, Australian Customs and Border Protection Service; and
- Detective Superintendent, Nicholas Bingham, State Crime Command, NSW Police.
We also wish to thank the following agencies that provided indicator data for the 2012 NSW EDRS:

- Alcohol and Drug Information Service, St Vincent’s Hospital;
- Australian Crime Commission (formerly the Australian Bureau of Criminal Intelligence);
- Australian Institute of Health and Welfare (AIHW);
- Family Drug Support;
- NSW Police Force;
- NSW Bureau of Crime Statistics and Research;
- NSW Department of Health; and
- National Centre in HIV Epidemiology and Clinical Research.

We extend many thanks to the current national coordinators, Ms Natasha Sindicich and Ms Jennifer Stafford, and to the previous national coordinators, Ms Emma Black, Dr Matthew Dunn, Ms Courtney Breen and Ms Susannah O’Brien, for their guidance and support.
ABBREVIATIONS

2C-B  4-bromo-2,5-dimethoxyphenethylamine
2C-E  2,5-dimethoxy-4-ethylphenethylamine
2C-I  2,5-dimethoxy-4-iodophenethylamine
5-MeO-DMT  5-methoxy-dimethyltryptamine
ABCI  Australian Bureau of Criminal Intelligence
ABS  Australian Bureau of Statistics
ACC  Australian Crime Commission
ACON  AIDS Council of NSW
ACPR  Australasian Centre for Policing Research
ACT  Australian Capital Territory
ADIS  Alcohol and Drug Information Service
AFP  Australian Federal Police
AGDH&A  Australian Government Department of Health and Ageing
A&TSI  Aboriginal and/or Torres Strait Islander
AIHW  Australian Institute of Health and Welfare
ATS  amphetamine type stimulant
AUDIT  Alcohol Use Disorders Identification Test
BBVI  blood-borne viral infections
BOCSAR  Bureau of Crime Statistics and Research
BZP  1-benzylpiperazine
CNS  central nervous system
DASSA  Drug and Alcohol Services South Australia
DMT  dimethyl tryptamine
DOB  2,5-dimethoxy-4-bromoamphetamine
DOI  death on impact; 2,5-dimethoxy-4-iodoamphetamine
DOM  2,5-dimethoxy-4-methylamphetamine
DXM  dextromethorphan
EDRS  Ecstasy and Related Drug Reporting System
ERD  ecstasy and related drugs
EPS  emerging psychoactive substances
FDS  Family Drug Support
GBL  gamma-butyrolactone
GHB  gamma-hydroxybutyrate
GLBT  gay/lesbian/bisexual/transgender
HBV  hepatitis B virus
HCV  hepatitis C virus
HIV  human immunodeficiency virus
IDRS  Illicit Drug Reporting System
IDU  injecting drug user(s)
IPS  illicit psychostimulant
K10  Kessler Psychological Distress Scale
KE  key expert(s)
LBQ  lesbian, bisexual and queer
LSD  d-lysergic acid diethylamide
MDA  3,4-methylenedioxyamphetamine
MDEA  3,4-methylenedioxethylamphetamine
MDMA  3,4-methylenedioxymethamphetamine
MDPV  3,4-methylenedioxymethylpyrvalerone; ivory wave
MDS AODTS Minimum Data Set for Alcohol and Other Drug Treatment Services
MPTP  1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine
N  (or n) Number of participants
NDARC National Drug and Alcohol Research Centre
NDLERF National Drug Law Enforcement Research Fund
NDSHS National Drug Strategy Household Survey
NNDSS National Notifiable Diseases Surveillance System
NSW New South Wales
OTC over the counter
PASW Predictive Analytics Software
PDI Party Drugs Initiative
PIED performance and image enhancing drugs
PMA para-methoxyamphetamine
PNS peripheral nervous system
QLD Queensland
QOL quality of life
REU regular ecstasy user(s)
SA South Australia
SDS Severity of Dependence Scale
SNOMED CT Systematized Nomenclature Of Medicine Clinical Terms
STI sexually transmitted infection(s)
SWASH Sydney Women and Sexual Health Survey
THC delta-9-tetrahydro-cannabinol
TMA 3,4,5-trimethoxyamphetamine
VIC Victoria
GLOSSARY OF TERMS

2C-B Street term for 4-bromo-2,5-dimethoxyphenethylamine. It is a synthetic psychedelic of moderate duration

2C-I Street term for 2,5-dimethoxy-4-iodophenethylamine. It is a short-acting synthetic psychedelic

Binge Use over 48 hours without sleep

Bump A bump refers to a small amount of powder, typically measured and snorted from the end of a key, the corner of a plastic card or a ‘bumper’

Bumper A bumper is a small glass nasal inhaler, purchased from tobacconists, used to store and administer powdered substances such as ketamine

Cap Capsule

Cocaine A central nervous system stimulant, obtained from the cocoa plant. Cocaine hydrochloride, the salt, is the more common form used in Australia. The freebase form is called ‘crack’; little or no crack is available or used in Australia

Crystal Street term for crystal methamphetamine, a potent form of methamphetamine. Also known as ‘ice’

Daily use Use occurring on each day in the past six months, based on a maximum of 180 days

Ecstasy Street term for MDMA (3,4-methylenedioxymethamphetamine), which may contain a range of other substances. It is a hallucinogenic amphetamine

GBL Acronym for gamma-butyrolactone. It is a GHB precursor and substitute, which metabolises into GHB in the stomach

GHB Acronym for gamma-hydroxy butyrate. It is a central nervous system depressant. Other known terms include ‘GBH’ and ‘liquid ecstasy’; however, the latter is misleading as GHB is a depressant, not a stimulant

Illicit Illicit refers to pharmaceuticals obtained from a prescription in someone else’s name, e.g. through buying them from a dealer or obtaining them from a friend or partner

Indicator data Sources of secondary data used in the EDRS (see Method section for further details)

Ketamine It is a dissociative psychedelic used as a veterinary and human anaesthetic
Key expert(s) Also referred to as KE; persons participating in the Key Expert Survey component of the EDRS (see Method section for further details)

Licit Licit refers to pharmaceuticals (e.g. benzodiazepines, antidepressants and opioids such as methadone, buprenorphine, morphine and oxycodone) obtained by a prescription in the user’s name. This definition does not take account of ‘doctor shopping’ practices; however, it differentiates between prescriptions for self as opposed to pharmaceuticals bought on the street or those prescribed to a friend or partner

Lifetime injection Injection (typically intravenous) on at least one occasion in the participant’s lifetime

Lifetime use Use on at least one occasion in the participant’s lifetime via one or more of the following routes of administration: inject; smoke; snort; swallow; and/or shaft/shelve

LSD Acronym for d-lysergic acid diethylamide. It is a powerful hallucinogen

MDA Acronym for 3,4-methylenedioxyamphetamine. It is classed as a stimulant hallucinogen. It is closely related to MDMA (and is sometimes found in ecstasy tablets); however, its effects are said to be slightly more psychedelic

Mephedrone Mephedrone (2-methylamino-1-p-tolypropane-1-one), also known as 4-methylmethcathinone (4-MMC) or 4-methylephedrone, is a stimulant and entactogen drug of the phenethylamine, amphetamine, and cathinone chemical classes

Methamphetamine An analogue of amphetamine, it is a central nervous system stimulant. The three main forms of methamphetamine in Australia are methamphetamine powder (‘speed’), methamphetamine base (‘base’) and crystalline methamphetamine (‘crystal’, ‘ice’)

Opiates Opiates are derived directly from the opium poppy by departing and purifying the various chemicals in the poppy

Opioids Opioids include all opiates but also include chemicals that have been synthesised in some way e.g. heroin is an opioid but not an opiate, morphine is both an opiate and opioid

PMA Acronym for para-methoxyamphetamine. It is an amphetamine-type drug with both stimulant and hallucinogenic properties

Point 0.1 gram although may also be used as a term referring to an amount for one injection

Recent injection Injection (typically intravenous) in the last six months
Recent use
Use in the last six months via one or more of the following routes of administration: inject; smoke; snort; swallow; and/or shaft/shelve

Shelving/shafting
Use via insertion into vagina (shelving) or the rectum (shafting)

Guide to days of use/injection

<table>
<thead>
<tr>
<th>Days</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>180</td>
<td>daily use/injection* over preceding six months</td>
</tr>
<tr>
<td>90</td>
<td>every second day</td>
</tr>
<tr>
<td>24</td>
<td>weekly use/injection*</td>
</tr>
<tr>
<td>12</td>
<td>fortnightly use/injection*</td>
</tr>
<tr>
<td>6</td>
<td>monthly use/injection*</td>
</tr>
</tbody>
</table>

* As appropriate
EXECUTIVE SUMMARY

The 2012 NSW Trends in Ecstasy and Related Drug Markets report represents the thirteenth year in which data has been collected in NSW on the markets for ecstasy and related drugs (ERD). The Ecstasy and related Drugs Reporting System (EDRS; formerly the Party Drugs Initiative, or PDI) is the most comprehensive and detailed study of ERD markets in NSW.

Using a similar methodology to the Illicit Drug Reporting System (IDRS), the EDRS monitors the price, purity and availability of ‘ecstasy’ (3,4-methylenedioxymethamphetamine; MDMA) and other related drugs such as methamphetamine, cocaine, gamma-hydroxybutyrate (GHB), d-lysergic acid diethylamide (LSD) and ketamine. It also examines trends in the use and harms of these drugs. It utilises data from three sources: a) surveys with regular ecstasy users (REU); b) surveys with key experts (KE) who have contact with REU through the nature of their work; and c) the analysis of existing data sources that contain information on ecstasy and other drugs. REU are recruited because they are considered a sentinel group to detect illicit drug trends. The information from REU is, therefore, not representative of ecstasy and other drug users in the general population, but is indicative of emerging trends that may warrant further monitoring.

The findings from each year not only provide a snapshot of the drug markets in NSW, but also help to provide an evidence base for policy decisions, inform harm reduction messages, and provide directions for further investigation when issues of concern are detected. Continued monitoring of the ERD markets in NSW will help add to our understanding of the use of these drugs; the price, purity and availability of these drugs and how these may impact on each other; and the associated harms which may stem from the use of these drugs.

Executive Summary Snapshot

Demographics

- 100 REU were sampled in the 2012 EDRS (64 male and 36 female).
- Participants were young (mean age = 25 years), reasonably well educated and most commonly spoke English as their first language.
- Very few participants reported being currently in drug treatment (3%).
- These demographics have remained relatively stable over time aside from mild variations in unemployment status and income.

Patterns of drug use among REU

- Participants had experience with a wide range of drugs, having used an average of 15 different drug types during their lifetimes and 7 different drug types over the past six months.
- One-in-five reported having ever injected a drug.
- Reductions were seen in the recent use of ketamine and lifetime use of other opiates.
- Ecstasy was the main drug of choice for one-third of the sample.
- One-quarter of the group had recently binged on ERD. The median number of binge episodes was 4 in the past six months.
Ecstasy

Consumption Patterns

- Ecstasy was used on a median of 12.5 days over the past six months (i.e. approximately fortnightly).
- Participants had used a median of 2 tablets during a ‘typical’ occasion of use (range 1-15).
- Swallowing was the main route of administration (92%).
- The majority of REU (87%) reported using other drugs in combination with ecstasy the last time they used it, most commonly alcohol, tobacco, cannabis and LSD.
- Three-fifths (61%) of participants used other drugs to help them come down from ecstasy the last time they used it (most commonly cannabis, tobacco and alcohol).
- Ecstasy was most commonly last used at a nightclub (41%) and other public venues.
- The proportion of the NSW population who reported using ecstasy within the last 12 months fell significantly from 3.5% in 2007 to 3% in 2010.
- Approximately one-quarter (27%) of men interviewed for the Sydney Gay Community Periodic Survey reported having recently used ecstasy, which was a significant decline from the 2011 survey.
- One-quarter (25%) of women in the Sydney Women and Sexual Health Survey had used ecstasy in the last six months.
- KE noted that ecstasy use was common among young people and different forms were being used (i.e. caps, capsules) to better control the dose they received.

Market Characteristics

- Price: $25 per tablet.
- Purity: Currently medium and fluctuating.
- Availability: Currently easy to very easy to obtain and stable.
- Several KE had reason to believe that the purity of ecstasy was beginning to increase after a substantial period of low purity, and that ecstasy had become more available in NSW.
- KE reported an increase in the forms of MDMA available, including in powder and crystal form.

Methamphetamine

The 2012 EDRS distinguished between three different forms of methamphetamine: methamphetamine powder (‘speed’); methamphetamine base (‘base’); and crystal methamphetamine (‘crystal’).

Consumption Patterns

Speed

- Two-thirds of REU had ever used speed and one-third had done so recently.
- Speed was used on a median of 2 days over the preceding six months and was primarily snorted (71%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.
Base
- Two-fifths of the sample had ever used base and 9% had done so recently.
- Base was used on a median of 2 days over the preceding six months and was primarily swallowed (67%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.

Crystal
- One-third of the sample had ever used crystal and one-fifth had done so recently.
- Crystal was used on a median of 8 days over the preceding six months and was primarily smoked (83%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.
- Speed and base were commonly used in public settings, and crystal was used in a mix of private and public settings.
- The use of methamphetamine among the NSW general population remained stable from 2007 (2.3%) to 2010 (2.1%).
- The use of speed and crystal by respondents in the Sydney Gay Community Periodic Survey has significantly declined over time since 2008. However, a slight, though significant, increase in the proportion of participants reporting the use of crystal was reported in 2012.
- Fifteen per cent of women interviewed in the Sydney Women and Sexual Health Survey had used speed and 5% had used crystal recently. These figures have remained relatively stable since 2010.
- Most KE expressed concern for crystal use and the associated acute and long-term health problems. KE also reported that there was poor knowledge of stimulant treatment options amongst users.

Market Characteristics:

Speed
- Price: $75 per gram, which is a slight decrease from 2011.
- Purity: Currently medium to high, appears to be stable.
- Availability: Reports variable.

Base
- Price: $170 per gram and reportedly stable.
- Purity: Currently low, appears to be stable.
- Availability: Reports variable.

Crystal
- Price: $50 per point and reportedly stable.
- Purity: Reports variable for current purity and stability.
- Availability: Currently easy to obtain and stable.

- Key experts agreed that speed and base had become more difficult to access, however, there were mixed reports on the availability of crystal.
Cocaine

Consumption Patterns

- The majority of the group (81%) had tried cocaine at least once, and 57% had used it recently.
- Cocaine was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- The proportions using cocaine, the frequency and quantities used had all remained stable from 2011 to 2012.
- Recent use of cocaine among the NSW general population increased significantly from 1.6% in 2007 to 2.1% in 2010.
- Approximately one-fifth of participants in both the Sydney Gay Community Periodic Survey and the Sydney Women and Sexual Health Survey reported recent use of cocaine.
- KE reported that cocaine users want more control over the doses consumed and their level of intoxication.
- Poor knowledge of available drug treatments and usage amongst affluent cocaine users had also been observed by KE.

Market Characteristics

- Price: $300 per gram, stable.
- Purity: Variable although appears to have increased.
- Availability: Currently easy to obtain, stable.
- KE reported that cocaine purity was high, however, the purity had fluctuated. It was also noted that there were signs to suggest an increase in cocaine availability.

Ketamine

Consumption Patterns

- Almost half of the sample had tried ketamine at least once and a quarter had used it recently.
- Ketamine was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- There was a significant decrease in proportions reporting recent ketamine use from 2011 to 2012, although quantities used remained mostly stable.
- Recent use of ketamine among the NSW general population remained low and stable.
- There was a significant decline in the use of ketamine among participants of the Sydney Gay Community Periodic Survey from 2008-2012.
- Recent ketamine use amongst women interviewed in the Sydney Women and Sexual Health Survey has remained relatively stable since 2006, with 6% reporting ketamine use in 2012.
- KE reported that although ketamine was still available in Sydney, there had been a recent decrease in its popularity.

Market Characteristics

- Price: $150 per gram, stable.
- Purity: Currently high and stable.
- Availability: Reports variable.
KE reported that the availability and popularity of ketamine was low, however, when it was seen it was commonly in powder form.

GHB

Consumption Patterns

- One-fifth of the sample had tried GHB at least once and 11% had used it recently.
- GHB was used on a median of 2 days (i.e. once every three months) over the preceding six months.
- The frequency and quantity of use of GHB remained stable from 2011 to 2012.
- Recent use of GHB among the NSW general population remained low and stable.
- From 2008 to 2012 the use of GHB among participants of the Sydney Gay Community Periodic Survey has significantly declined.
- GHB use among LBQ women in the Sydney Women and Sexual Health Survey has remained relatively stable across time, with 4% reporting recent GHB use in 2012.
- KE were concerned that since GBL was often available in Sydney, irregular users may not have been informed of this and may be at risk of overdose if they took GBL when expecting to take GHB.
- Several KE were also concerned about the increasing use of GHB among male heterosexuals, as it was felt that this group was not aware of the risks of overdose or how to deal with the situation if it arose.

Market Characteristics

- Price: $9 per mL, stable.
- Purity: Medium to high, variable.
- Availability: Currently easy to obtain, stable.
- KE comments indicated that GHB price, purity and availability were stable, however, there was a vast predominance of GBL rather than GHB.

LSD

Consumption Patterns

- The vast majority of the sample had tried LSD at least once and almost half had used it recently.
- LSD was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- Unlike most other drugs, LSD was often used in outdoor settings.
- The use of LSD among the sample appeared to be increasing over the past five years.
- The use of hallucinogens among the NSW general population increased significantly from 0.6% in 2007 to 1.4% in 2010.
- The use of LSD among participants of both the Sydney Gay Community Periodic Survey and Sydney Women and Sexual Health Survey remained relatively low and stable over time.
- KE comments indicated that there had been an increase in hallucinogens amongst party goers, but there was uncertainty as to whether this was due to an increase in LSD or other emerging drugs with hallucinogenic effects such as 2C-B.
Market Characteristics

- **Price:** $20 per tab, stable.
- **Purity:** Currently high, stable.
- **Availability:** Currently easy to very easy to obtain, stable.
- KE reported that LSD purity and price were stable and availability was high. KE felt that most LSD had been imported via postal channels.

Cannabis

Consumption Patterns

- Almost every participant had tried cannabis at least once and the vast majority had used it recently.
- Cannabis was used on a median of 48 days (i.e. twice per week) over the preceding six months.
- The use of cannabis had remained relatively stable over time.
- The use of cannabis among the NSW general population increased significantly from 9.1% in 2007 to 10.3% in 2010.
- The use of cannabis among participants of the Sydney Gay Community Periodic Survey has continued to decline over time.
- About one-third of women in the Sydney Women and Sexual Health Survey reported recent use of cannabis, which has remained stable over time.
- KE revealed that cannabis use was more problematic with young users. KE working with this age group observed difficulty educating them on the long-term effects of cannabis use.

Market Characteristics

**Hydro**

- **Price:** $20 per gram; $290 per ounce, stable.
- **Potency:** Currently high, stable.
- **Availability:** Currently very easy to obtain, stable.

**Bush**

- **Price:** $20 per gram; $265 per ounce, stable.
- **Potency:** Currently medium, stable.
- **Availability:** Currently easy to obtain, stable.

KE reported an increased cultivation of bush, which reflects its high availability. KE expected that with hydro and bush both comparable in potency, there would be minimal price differences between the two.

Other drug use

**Alcohol**

- Almost all 2012 NSW REU reported lifetime use (98%) and recent use (95%) of alcohol.
- KE reported that alcohol continued to be one of the most problematic drugs among REU, particularly amongst young people and festival goers. They also noted that the problematic alcohol use often occurred in self-serve environments where quantities were uncontrolled.
**Tobacco**
- The majority of REU had used tobacco at least once (96%) and 91% had smoked within the past six months.

**Benzodiazepines**
- One-third of the group had recently used benzodiazepines. Illicit use was more common than licit use.
- KE reported widespread benzodiazepine use amongst a variety of people, however, the risks of using this substance were poorly understood by users.

**Antidepressants**
- One-in-ten REU had recently used antidepressants. Licit use was more common than illicit use.

**Inhalants**
- Amyl nitrite was used more commonly among REU (37%) than nitrous oxide (12%).

**MDA**
- KE reported an increased presence of MDA in Sydney.

**Heroin and other opiates**
- Nine REU reported recent heroin use. Recent use of other opiates were slightly more common for those illicitly obtained.
- KE felt that the use of heroin and other opiates was uncommon amongst REU because of the stigma associated with injecting.

**Mushrooms**
- Twenty-one per cent of the sample had recently used mushrooms.

**Pharmaceutical stimulants**
- One-quarter of the group had recently used pharmaceutical stimulants. Illicit use was more common than licit use.

**Over the counter (OTC) drugs**
- Twelve per cent reported recent use of OTC codeine-containing products for non-pain use, and 4% reported recent use of OTC stimulants for non-medical use.

**Emerging Psychoactive Substance (EPS) use**
- In 2012, half (51%) of the NSW EDRS sample had consumed an EPS in the previous six month period.
- The most commonly used psychoactive substances over the preceding six months were 2C-B (17%), herbal highs (13%), synthetic cannabinoids (12%) and DMT (11%).
- KE reported that although EPS are not overly prevalent amongst REU, they have the potential to be very problematic.
Health-related harms associated with ecstasy and related drug use

Overdose, Deaths and Hospital Admissions

- One-third of participants reported having overdosed on a stimulant drug throughout their lifetime.
- Over one-third reported having ever overdosed on a depressant drug.
- Deaths associated with ecstasy, ketamine and cannabis have remained stable in the past year. A slight increase was observed in deaths associated with methamphetamines in 2011/12. There were no deaths during 2011/12 where GHB was detected.
- Hospital admissions in which amphetamine was the principal diagnosis appeared to have remained stable in NSW. Hospital admissions where cocaine or cannabis was the principal diagnosis appeared to be increasing over time.

Service Usage

- Only 16% of respondents reported that they had recently accessed a medical or health service in relation to their drug use.
- Calls to ADIS and FDS regarding ecstasy have gradually increased from 2011 to 2012. Calls regarding amphetamines, cocaine, ketamine, GHB and LSD have remained relatively stable from 2011 to 2012.

Mental Health

- Participants commonly reported that their drug use caused repeated social problems (33%), resulted in exposure to risk of injury (30%) and/or interfered with responsibilities (45%). Recurrent drug-related legal problems were uncommon (6%).
- One-third of the group had recently experienced a mental health problem. Mood and anxiety disorders were most commonly reported.
- Participants completed the K10. One-third of the group fell into the ‘high’ or ‘very high’ distress categories.

Risk behaviour

- One-fifth of the sample had ever injected a drug and 13% had done so recently.
- Half of the group had completed a hepatitis B vaccination schedule.
- Rates of testing for blood-borne viral infections (BBVI) were low with 19% having recently tested for hepatitis C, 20% for human immunodeficiency virus (HIV) and 42% having recently had a sexual health check-up.
- Three-quarters of the sample had recently had penetrative sex with a casual partner. Approximately two-fifths did not use a sexual barrier on the last occasion (regardless of whether or not they were intoxicated). The main reasons were either that it was not mentioned or the partner was using contraception.
- Over half the sample had recently driven a vehicle. Of these, two-thirds had done so while over the legal blood alcohol limit and more than half had driven after having taken an illicit drug.
- Participants completed the Alcohol Use Disorders Identification Test (AUDIT). The majority (78%) of the group fell in the ‘harmful drinking’ range.
Criminal activity

- Fourteen percent of REU had reportedly been arrested over the past year.
- One-third of REU had committed a crime within the past month; most commonly drug dealing and property crimes.
- The number of arrests for ecstasy use/possession seemed to have increased since mid-2011. Increases were also noted in the number of arrests for use/possession of amphetamines and cocaine. The number of arrests for use/possession of cannabis in both inner Sydney and NSW appeared to decline mid-2011, which was followed by an increase in 2012.
- The majority of participants (86%) reported that half or more of their friends had used ecstasy during the previous six months.
- The vast majority (94%) believed that the quantity of drugs possessed would affect the type of criminal charge received.

Special topics of interest

- More than half of the total NSW sample smoked cigarettes daily. One-tenth of daily smokers in NSW were classified as highly dependent on nicotine.
- Using the Severity of Dependence Scale (SDS), ecstasy dependence was reported by 25% of REU when using a cut-off score of three or more, or by 14% of REU when using a cut-off score of four or more.
- The majority of participants supported the legalisation of cannabis for personal use, and about half supported the legislation of ecstasy for personal use.
- One-third had ever lost consciousness due to a knock to the head.
- One-tenth of REU reported ever using illicit psychostimulants (IPS) to lose or maintain weight, with methamphetamine being the most commonly used IPS.

Implications

The NSW branch of the EDRS aims ultimately to monitor trends in the Sydney ecstasy and related drug (ERD) markets and to investigate harms associated with ERD use. The 2012 NSW EDRS revealed ongoing changes in drug markets and indications of drug related harms which are discussed below.

Ongoing fluctuation in ERD markets

Over the past three years, there has been growing evidence of increasing experimentation among REU with other existing and emerging substances. Data from 2010 revealed growing interest in drugs such as LSD and GHB in particular subcultures around the city. This interest appeared ongoing, with 2011 data revealing increased use of hallucinogens (including mushrooms and LSD) among REU and the general Australian population. In 2012, the data indicated an upward trend in the mean number of drugs ever tried, which may be attributable to the expanding EPS market. With the reported significant decline in recent ketamine use, and the increasing purity of ecstasy, it will be interesting to monitor the changes in drug use patterns in 2013 in light of these ongoing fluctuations in the marketplace.

Emerging Psychoactive Substances

In 2012, we continued to see an upward trend in the use of emerging psychoactive substances (EPS) amongst Sydney REU. With three-quarters of REU reporting that they had used an EPS before, and half (51%) using an EPS in the last six months, there is an apparent need to continue monitoring these relatively new substances and acquiring a better understanding of the harms associated with these drugs.
Although there had been a significant decline in 2012 in the proportion of REU reporting lifetime use of 2C-E and mephedrone, a notable proportion had reported recent use of 2C-B (17%), herbal highs (13%), synthetic cannabinoids (12%) and DMT (11%). However, it still remains unclear whether these drugs are more common in scattered subcultures which may not be well sampled using the EDRS methodology.

Notably, the overall rate of use of EPS were greater than drugs such as ketamine, which had received substantially greater media and research attention, and for which harm reduction information was relatively widely available. There is a lack of research on the health and behavioural outcomes of using EPS, which in turn poses a significant risk to both the consumers and health workers in this area. It is critical that research continues to identify the associated risks of EPS use, so as to assist health professionals and law enforcement personnel to make informed decisions on appropriate interventions and harm reduction strategies.

**Alcohol and tobacco use**

As in past years, alcohol and tobacco use continued to be highly prevalent amongst the NSW REU cohort in 2012. Given this, focused interventions to reduce the harms associated with high risk alcohol (including binge drinking) and tobacco use are warranted.

Hazardous alcohol consumption is a concern in this population, particularly as a large majority of REU scored in the harmful range for alcohol consumption, which may be indicative of alcohol related disorders and dependence. Of particular concern was the proportion of REU who reported bingeing on alcohol whilst consuming ecstasy. There is emerging evidence from animal studies to suggest that the interaction between these two drugs dramatically alters the pharmacology of MDMA in the brain, which in turn may exacerbate neurological harms or other associated problems, such as dependence. Furthermore, there is increased risk of dehydration when both alcohol and ecstasy are consumed, and individuals may end up consuming large quantities of alcohol because the immediate effects of intoxication are delayed when ecstasy has been consumed. Continued dissemination of harm reduction messages to reduce and prevent the use of alcohol at harmful levels is recommended in light of these findings.

With the vast majority of REU also reporting recent tobacco use, and about two-thirds smoking daily, there is a clear need to focus interventions targeting tobacco use amongst this population. Further research is required to determine whether traditional interventions (e.g. nicotine gum) are a suitable fit for this group, or whether novel tailored interventions would have more success in reducing tobacco use.

**Polydrug use and awareness of associated risks**

Given that the NSW EDRS sample typically consumed ecstasy in combination with other drugs, it is clear that polydrug use and its related harms are an issue of concern for this cohort. Simultaneous consumption of different drugs may have harmful and unpredictable consequences, such as intoxication being enhanced due to the drug interactions arising from the concoction of drugs consumed. Further research into the interactions of drugs, and treatment approaches and harm reduction interventions are warranted to better understand safe consumption patterns and overdose risks.

It is also critical that information regarding polydrug use is widely disseminated amongst this cohort. Although only about one-in-ten REU reported consuming capsules where they did not know what it contained, by increasing the cohort’s awareness of potentially harmful drug combinations, this may encourage them to be more aware of the drugs they are consuming and of the potential risks involved.
Continued use by REU of combinations of multiple drugs warrant continued education regarding the harms associated with such behaviour.

**Limited awareness of, and access to, mental health services**

Further investigation on how to improve REU utilisation of health services is warranted, as it is concerning to note that the 2012 sample had the lowest recorded proportion of REU who recently accessed medical or health services in the last seven years. Despite this, approximately one-third of REU reported that they had recently experienced a mental health problem, which is higher than self-reported rates over the past few years.

Of those who had sought help from a health professional, about three-quarters had been prescribed medication, which is more than double the rate reported in 2011. This two-fold increase in prescriptions suggests that of those REU who did self-report a mental health problem, they were eligible for medication. It is reasonable to suggest that there may be a lack of awareness of, or access to, mental health services amongst this population, as one-third of REU did not seek help for their mental health problem. Additional resources should be allocated to educating and engaging this population about their mental health well-being and avenues to access support.
1 INTRODUCTION

The Ecstasy and Related Drugs Reporting System (EDRS) is an ongoing monitoring system funded in 2012 by the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund. It is run in a similar manner to the Illicit Drug Reporting System (IDRS), another ongoing data collection system funded by the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund. The IDRS provides a coordinated approach to the monitoring of the markets of heroin, methamphetamine, cannabis and cocaine. It was identified that the IDRS did not capture the use of ecstasy and related drugs (ERD), as these were used infrequently among the target population of the IDRS – injecting drug users (IDU).

In June 2000, the National Drug Law Enforcement Research Fund (NDLERF), administered by the Australasian Centre for Policing Research (ACPR), funded a two-year, two state trial in New South Wales (NSW) and Queensland (QLD) of the feasibility of monitoring emerging trends in the markets for ecstasy and other related drugs using the extant IDRS methodology. In addition, Drug and Alcohol Services South Australia (DASSA) (formerly known as the Drug and Alcohol Services Council) agreed to provide funding for two years to allow the trial to proceed in this state. The results of this trial are presented elsewhere (see Topp et al., 2004). Regular ecstasy users (REU) were identified as an appropriate sentinel population to investigate ecstasy and related drug (ERD) markets.

The term ‘ecstasy and related drugs’ includes any drug routinely used in the context of entertainment venues such as nightclubs or dance parties. ERD refers to drugs such as ecstasy (3,4-methylenedioxymethamphetamine - MDMA), methamphetamine, LSD (d-lysergic acid diethylamide), ketamine, MDA (3,4-methylenedioxyamphetamine) and GHB (gamma-hydroxybutyrate).

As with the IDRS, the EDRS involves the collection and analysis of three data components: a) a survey of current regular ‘ecstasy’ users (REU), who represent a sentinel population of regular ecstasy users likely to be aware of trends in illicit drug markets; b) interviews with key experts (KE) – professionals and volunteers who work with, or have regular contact with, regular ecstasy users; and c) the analysis of secondary indicator data sources, such as existing databases of customs seizures, police drug-related arrests, and drug information telephone services. The three data sources are triangulated against each other in order to minimise the biases and weaknesses inherent in each one, ensuring that only valid emerging trends are documented.

1.1 Aims

The aims of the 2012 NSW EDRS were:

1. to describe the demographic characteristics of a sample of current ecstasy users interviewed in Sydney in 2012;

2. to examine the patterns of ecstasy and related drug use of this sample, including lifetime and recent use of over 20 licit and illicit drugs;

3. to document the current price, purity and availability of ecstasy and related drugs in Sydney, including locations and persons scored from and locations of use;

4. to examine participants’ perceptions of the incidence and nature of ecstasy and other drug-related harms, including health-related harms, as well as financial, occupational, social and legal harms;

5. to identify emerging trends in the ecstasy and related drug market that may require further investigation; and

6. to compare key findings of this study with those reported in previous years (2006-2012).
2 METHODS

The 2012 EDRS used the methodology trialled in the feasibility study (Topp et al., 2004) 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 recruited in Sydney;
2. telephone interviews with KE who, through the nature of their work, have regular contact with users of ecstasy and/or other related drugs, or knowledge of the markets for these drugs in Sydney; and
3. indicator data sources such as the purity of seizures of ecstasy analysed in NSW, calls to drug support and information lines, and treatment services data.

These three data sources were triangulated to provide an indication of emerging trends in drug use and ecstasy and related drug markets.
2.1 Survey of regular ecstasy users (REU)

The sentinel population chosen to monitor trends in ecstasy and related drug (ERD) markets consisted of people who engaged in the regular use of tablets sold as ‘ecstasy’. Although a range of drugs fall into the category ‘ecstasy and related drugs’, ecstasy is a drug that 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% of the population aged 14 years or older reporting recent use of ecstasy in the 2010 National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2011).

The ecstasy (tablets sold purporting to contain MDMA) market has existed here for more than two decades. In contrast, other drugs that fall into the class of ERD have either declined in popularity since the appearance of ecstasy in this country (e.g. MDA), have fluctuated widely in availability (e.g. ketamine and LSD), or are relatively new in the market and are not as widely used as ecstasy (e.g. GHB). It has been suggested that it would be difficult to identify a regular user of GHB or ketamine who was not also an experienced user of ecstasy, whereas the reverse will often be the case (Topp & Darke, 2001). Ecstasy may be the first illicit drug with which many young Australians who choose to use illicit drugs will experiment with, and a minority of these users will go on to experiment with the less common related drugs such as ketamine, LSD and GHB.

The entrenchment of ecstasy in Australia’s illicit drug markets, relative to other related drugs, underpinned the decision that regular use of ecstasy could be considered the defining characteristic of the target population – namely, ecstasy and related drug users/markets (Topp & Darke, 2001). A sample of this population was successfully recruited and interviewed in the two-year feasibility trial (Topp et al., 2004), and was able to provide the data that were sought. Therefore, REU have been used again in 2012 to provide information on ecstasy and related drug markets.

2.1.1 Recruitment

A total of 100 REU residing in the Sydney metropolitan region were interviewed for the 2012 NSW EDRS. Participants were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements in entertainment street press, gay and lesbian newspapers, 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 both in Australian (Boys, Lenton & Norcoss, 1997; Ovendon & Loxley, 1996; Solowij, Hall & Lee, 1992) and international studies (Dalgarno & Shewan, 1996; Forsyth, 1996; Peters, Davies & Richardson, 1997). Initial contact was established through newspaper advertisements or interviewers’ personal contacts. On completion of the interview, participants were requested to mention the study to friends who might be willing and able to participate and were handed cards containing the researcher’s contact details to distribute to their peers.

2.1.2 Procedure

Participants contacted the researchers by telephone and were screened for eligibility. To meet entry criteria, they had to be at least 17 years of age (due to ethical constraints), have used ecstasy at least six times during the preceding six months, and have been a resident of the Sydney metropolitan region for the past 12 months. As in the IDRS, the focus was on the
capital city, as new trends in illicit drug markets are more likely to emerge in urban 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 45 minutes. All respondents were volunteers who were reimbursed $40 for their participation. Interviews took place in a location negotiated with participants, predominantly at the National Drug and Alcohol Research Centre (NDARC) or in coffee shops, and were conducted by the NSW coordinator and a small group of casual interviewers. The nature and purpose of the study was explained to participants before informed consent was obtained.

2.1.3 Measures

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp et al., 1998; 2000), which incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij, Hall & Lee, 1992) and powder amphetamine/methamphetamine (Darke et al., 1994; Hando & Hall, 1993; Hando, Topp & Hall, 1997). The interview schedule focused primarily on the preceding six months, and assessed demographic characteristics; patterns of ecstasy use and related drug use, including: frequency and quantity of use and routes of administration; the price, purity and availability of a range of related drugs; health-related trends and service usage; risky behaviours (including injecting behaviours, blood-borne viral infections (BBVI), sexual activity, driving, and problematic alcohol use); law enforcement-related trends (including self-reported criminal activity and arrest, perceptions of police activity, and perceptions and knowledge of drug law thresholds); and trends in special areas of interest for 2012 (including nicotine dependence, ecstasy dependence, drug policy attitudes, neurological history and body image).

2.1.4 Data analysis

For continuous, normally distributed variables, \( t \)-tests were employed and means reported. Where continuous variables were skewed, medians\(^1\) were reported and the Mann-Whitney \( U \)-test, a non-parametric equivalent of the \( t \)-test (Siegel & Castellan, 1988), was employed. Categorical variables were analysed using chi-square analysis. The Fisher’s exact test statistic was reported for analyses where there was an expected value less than 5. Analyses were conducted using Predictive Analytics Software (PASW) Statistics Version 18 (PASW, 2009).

The data collected in 2012 were compared with data collected from comparable samples of ecstasy users from 2006 onward, recruited as part of the EDRS. As each of these samples was recruited using the same methods, meaningful comparisons can be made.


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\(^1\) The median value lies in the middle of a series of data points arranged in order of size, i.e. it provides a more representative view of skewed data than the mean value.
2.2 Survey of key experts (KE)

The main eligibility criterion for KE participation in the EDRS was regular contact with a range of REU in the preceding six months. A small number of KE who did not have regular contact with REU were also included because they had a special area of expertise which helped contribute to the 2012 EDRS report. Regular contact was defined as average weekly contact and/or contact with 10 or more REU throughout the past six months. KE were recruited either through professional networks of project staff or recommendations, and in some instances through ‘cold calls’.

A total of 17 KE were interviewed in 2012. KE were administered a qualitative interview schedule derived from a previous study of cocaine use (Hando, Flaherty & Rutter, 1997), with the focus dependent on the KE’s area of expertise. In general, KE were interviewed on topics relating to patterns of illicit drug use among the REU they had had contact with in the past six months. The KE interviewed for the 2012 EDRS came from a wide range of occupations which fell into three major categories: law enforcement; health care provision; and hospitality industry workers.

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2 People who were thought suitable to act as KE were contacted and invited to participate in a key expert (semi-structured) interview.
2.3 Other indicators

To complement and validate data collected from REU surveys and KE interviews, a range of secondary data sources were examined. These included health and law enforcement data. The pilot study for the IDRS recommended that such data should be available at least annually, include 50 or more cases, be brief, and be collected in the main study site (i.e. Sydney or NSW) (Hando et al., 1997).

Data sources that have been included in this report are:

- National Drug Strategy Household Survey;
- Australian Crime Commission – purity data from police seizures;
- Australian Institute of Health and Welfare – inpatient hospital admissions, Australian Psychological Distress (K10);
- NSW Department of Health – drug-related visits to emergency departments, number of treatment episodes by drug type and gender, overdoses and toxicology data from suspected drug users in which drugs were detected;
- NSW Bureau of Crime Statistics and Research – drug possession/use and deal/traffic incidents;
- Alcohol and Drug Information Service – calls regarding problematic drug use;
- Family Drug Support – telephone support service for family members affected by problematic drug use and for users themselves;
- Sydney Gay Community Periodic Survey;
- Sydney Women and Sexual Health Survey; and
- NSW Police Force – clandestine methamphetamine and MDMA laboratories.
3 DEMOGRAPHICS

Summary:

- 100 REU were sampled in the 2012 EDRS (64 male and 36 female).
- Participants were young (mean age = 25 years), reasonably well educated and most commonly spoke English as their first language.
- Very few participants reported being currently in drug treatment (3%).
- These demographics have remained relatively stable over time aside from mild variations in unemployment status and income.

3.1 Overview of the REU participant sample

There were 100 REU sampled in the 2012 NSW EDRS. Table 1 presents the demographics of the sample across time. The mean age of the 2012 sample was 25 years (median 22, range 17-49). Two-thirds (64%) of the participants interviewed were male. The vast majority (98%) spoke English as their first language and were born in Australia (85%). A minority (2%) identified as being of Aboriginal and/or Torres Strait Islander (ATSI) descent. Most participants identified as heterosexual (82%), followed by 8% as a gay man, 5% as a lesbian and 4% as a bisexual. Most participants reported being currently single (62%) and were residing in rental accommodation (49%) or in their parents’ or family’s house (45%).

The median number of years of school education completed was 12 years (range 6-12), and 79% had completed high school education (year 12 or above). Many had completed either a trade or technical qualification (21%) or a university or college degree (19%), and 32% were currently engaged in some form of study. One-quarter (27%) of the sample reported being currently employed on a full-time basis, while 17% of participants were currently unemployed. Median weekly income for this group was $300 per week (range $0-$1,700), and wage or salary was reported as the main source of income in the last month for the majority of participants (61%). Very few participants reported that they were currently in any form of drug treatment (3%).

Demographic characteristics of this sample have remained mostly stable from 2011 to 2012. It is noted that the 2012 sample comprised of a greater proportion of females. Additionally, there has been a marked reduction in the unemployment status and median weekly income. This may be due to a large portion of participants commencing tertiary study or residing in their parents’ or family’s house, which may reduce their need to earn a higher income.
Table 1: Demographic characteristics of REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
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</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
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<td>27</td>
<td>28</td>
<td>22</td>
<td>26</td>
<td>24</td>
<td>25</td>
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<tr>
<td>Male (%)</td>
<td>68</td>
<td>64</td>
<td>68</td>
<td>64</td>
<td>74</td>
<td>77</td>
<td>64</td>
</tr>
<tr>
<td>English-speaking background (%)</td>
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<td>98</td>
<td>94</td>
<td>91</td>
<td>98</td>
<td>98</td>
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<tr>
<td>A&amp;TSI (%)</td>
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<td>3</td>
<td>0</td>
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<td>1</td>
<td>2</td>
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<td>Heterosexual (%)</td>
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<td>63</td>
<td>91</td>
<td>78</td>
<td>76</td>
<td>82</td>
</tr>
<tr>
<td>Mean number of school years</td>
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<td>12</td>
<td>12</td>
<td>12</td>
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<td>Tertiary qualifications (%)</td>
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<td>66</td>
<td>72</td>
<td>33</td>
<td>51</td>
<td>40</td>
<td>39</td>
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<tr>
<td>Employed full-time (%)</td>
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<td>33</td>
<td>54</td>
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<td>27</td>
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<tr>
<td>Full-time students (%)</td>
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<td>11</td>
<td>10</td>
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<td>10</td>
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<td>Unemployed (%)</td>
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<td>11</td>
<td>13</td>
<td>16</td>
<td>25</td>
<td>17</td>
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<tr>
<td>Median weekly income ($) (range)</td>
<td>Data not available until 2009</td>
<td>400 (50-2,115)</td>
<td>500 (0-4,231)</td>
<td>350 (67-2,400)</td>
<td>300 (0-1,700)</td>
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<tr>
<td>Prison history (%)</td>
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<td>4</td>
<td>2</td>
<td>3</td>
<td>6</td>
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<tr>
<td>Currently in drug treatment (%)</td>
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<td>4</td>
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</table>

Source: EDRS regular ecstasy user interviews 2006-2012
* Question changed in 2007 to report only those in full-time education
4 CONSUMPTION PATTERN RESULTS

4.1 Drug use history and current drug use

Summary:

- Participants had experience with a wide range of drugs, having used an average of 15 different drug types during their lifetimes and 7 different drug types over the past six months.
- One-in-five reported having ever injected a drug.
- Reductions were seen in the recent use of ketamine and lifetime use of other opiates.
- Ecstasy was the main drug of choice for one-third of the sample.
- One-quarter of the group had recently binged on ERD. The median number of binge episodes was 4 in the past six months.

Participants were asked about their lifetime and recent use of over 20 different drug types. Experience with a broad range of drugs was very common. An increase in the average number of drugs used within the lifetime (15, SD 2) was noted in the 2012 sample, however, this figure was not significantly different to that recorded in 2011. The average number of drugs used recently (7, SD 2) continues to remain remarkably stable over time (Table 2). One-in-five (20%) REU reported having ever injected a drug, which returned to figures comparable with 2010. A more thorough analysis of injecting drug use behaviours amongst this sample can be found in section 7.1 ‘Injecting risk behaviour’.

Table 2 presents the proportion of REU reporting lifetime and recent drug use across time. There were very few significant changes from 2011 to 2012 but they include:

- a significant decline in the proportion reporting recent use of ketamine (p=0.03);
- a significant decline in the proportion reporting lifetime use of other opiates (p=0.009).

3 ‘Lifetime’ usage refers to drugs that have ever been used. ‘Recent’ usage refers to drugs that had been used in the six months prior to the interview.
Table 2: Lifetime and recent polydrug use among REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
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<td>Mean no. drug types used recently</td>
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<tr>
<td>Ever inject any drug (%)</td>
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<td>Alcohol</td>
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<td>99</td>
<td>100</td>
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<td>98</td>
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<tr>
<td>used last 6 mths (%)</td>
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<td>92</td>
<td>95</td>
<td>100</td>
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<td>Cannabis</td>
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<tr>
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<td>93</td>
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<td>71</td>
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<td>Tobacco</td>
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<td>95</td>
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<td>92</td>
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<td>used last 6 mths (%)</td>
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<td>Methamphetamine powder (speed)</td>
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<td>48</td>
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<td>Methamphetamine base (base)</td>
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<td>53</td>
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<td>23</td>
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<td>Methamphetamine crystal (ice)</td>
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<tr>
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<td>60</td>
<td>52</td>
<td>29</td>
<td>44</td>
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<tr>
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<td>90</td>
<td>85</td>
<td>88</td>
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<td>81</td>
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<tr>
<td>used last 6 mths (%)</td>
<td>45</td>
<td>62</td>
<td>51</td>
<td>64</td>
<td>60</td>
<td>59</td>
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</table>

Source: EDRS regular ecstasy user interviews 2006-2012
Table 2: Lifetime and recent polydrug use of REU, NSW 2006-2012 (continued)

<table>
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<tr>
<th>Variable</th>
<th>2006 (N=100)</th>
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<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
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<td>57</td>
<td>62</td>
<td>77</td>
<td>75</td>
<td>84</td>
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<tr>
<td>used last 6 mths (%)</td>
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<td>22</td>
<td>18</td>
<td>37</td>
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<td>30</td>
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<tr>
<td>used last 6 mths (%)</td>
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<td>5</td>
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<td>65</td>
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<tr>
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<td>30</td>
<td>19</td>
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<td>37</td>
<td>24</td>
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<td>34</td>
<td>27</td>
<td>45</td>
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<td>used last 6 mths (%)</td>
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<td>26</td>
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<tr>
<td>used last 6 mths (%)</td>
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<td>10</td>
<td>10</td>
<td>12</td>
<td>9</td>
<td>11</td>
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<td>42</td>
<td>38</td>
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<td>48</td>
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<td>used last 6 mths (%)</td>
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<td>14</td>
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<td>9</td>
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Source: EDRS regular ecstasy user interviews 2006-2012
Includes licitly and illicitly obtained
Table 2: Lifetime and recent polydrug use of REU, NSW 2006-2012 (continued)

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<tr>
<th>Variable</th>
<th>2006 (N=100)</th>
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<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
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<td>5</td>
<td>2</td>
<td>4</td>
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<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>OTC codeine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2009</td>
<td>77(^*)</td>
<td>69(^*)</td>
<td>57(^*)</td>
<td>26(^**)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>55(^*)</td>
<td>46(^*)</td>
<td>39(^*)</td>
<td>12(^**)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTC stimulants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>39(^*)</td>
<td>42(^*)</td>
<td>38(^*)</td>
<td>60(^*)</td>
<td>50(^*)</td>
<td>43(^*)</td>
<td>18(^**)</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>7(^*)</td>
<td>3(^*)</td>
<td>10(^*)</td>
<td>34(^*)</td>
<td>27(^*)</td>
<td>27(^*)</td>
<td>4(^**)</td>
</tr>
<tr>
<td>Other opiates(^*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>17</td>
<td>27</td>
<td>23</td>
<td>27</td>
<td>39</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>6</td>
<td>11</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>14</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

Note: OTC (over the counter)
\(^*\) Includes licitly and illicitly obtained
\(^**\) For non-pain use only

Participants also reported having used other drugs such as 2C-B (4-bromo-2,5-dimethoxyphenethylamine), DMT (dimethyl tryptamine) and synthetic cannabinoids. In 2010, the EDRS began to systematically investigate these other, less commonly used, drugs. This information can be found in section 4.10 ‘Emerging Psychoactive Substance (EPS) use’.

In 2012, approximately one-third (38%) of participants reported that ecstasy was their main drug of choice. Other commonly reported drugs were cannabis (21%), alcohol (12%) and LSD (8%). Smaller proportions of the sample nominated other drugs such as cocaine (6%), crystal methamphetamine (3%), MDA (2%), GHB (2%), amyl nitrite (2%) and tobacco (2%).

Approximately one-quarter (23%) of participants reported bingeing on ERD over the past six months. Bingeing is defined as using the drug on a continuous basis for more than 48 hours without sleep (Ovenden & Loxley, 1996). Participants who had binged had done so on a median of 4 occasions over the preceding six months. The median length of the longest binge was 72 hours (range 50-192). Among those who had recently binged, the majority (78%) had used ecstasy during a binge episode. Similarly, the majority (70%) had used cannabis during a binge episode. Other drugs used during binge episodes included
consuming more than five standard drinks of alcohol (57%), crystal (48%), speed (22%),
ketamine (22%), LSD (17%), amyl nitrite (17%), less than five standard drinks of alcohol
(17%), cocaine (13%), base (9%), GHB (9%) and MDA (4%).
4.2 Ecstasy use

Summary:
- Ecstasy was used on a median of 12.5 days over the past six months (i.e. approximately fortnightly).
- Participants had used a median of 2 tablets during a ‘typical’ occasion of use (range 1-15).
- Swallowing was the main route of administration (92%).
- The majority of REU (87%) reported using other drugs in combination with ecstasy the last time they used it, most commonly alcohol, tobacco, cannabis and LSD.
- Three-fifths (61%) of participants used other drugs to help them come down from ecstasy the last time they used it (most commonly cannabis, tobacco and alcohol).
- Ecstasy was most commonly last used at a nightclub (41%) and other public venues.
- The proportion of the NSW population who reported using ecstasy within the last 12 months fell significantly from 3.5% in 2007 to 3% in 2010.
- Approximately one-quarter (27%) of men interviewed for the Sydney Gay Community Periodic Survey reported having recently used ecstasy, which was a significant decline from the 2011 survey.
- One-quarter (25%) of women in the Sydney Women and Sexual Health Survey had used ecstasy in the last six months.
- KE noted that ecstasy use was common among young people and different forms were being used (i.e. caps, capsules) to better control the dose they received.

‘Ecstasy’ is a street term for a number of substances related to MDMA or 3,4-methylenedioxymethamphetamine. MDMA is classed as a hallucinogenic amphetamine. Tablets sold as ecstasy may contain a range of substances that do not include MDMA, and are more likely to contain methamphetamine, perhaps in combination with a hallucinogenic such as ketamine. They may also contain illegal chemicals like 3,4-methylenedioxyamphetamine (MDA), para-methoxymphetamine (PMA) or 3,4-methylenedioxymethylamphetamine (MDEA) or substances such as caffeine or paracetamol or nothing at all. The results presented in this section relate to the participants’ use and knowledge of tablets sold as ‘ecstasy’.

On average, participants in the 2012 EDRS had used ecstasy for the first time at 18 years of age (median 17, range 12-35). Males were significantly older than females when they used ecstasy for the first time (mean age 18.5 versus 16.7, \(U=821.5, \ p<0.05\)). Participants reported using ecstasy regularly (at least monthly) at a mean age of 19 years (median 18, range 14-42). Again, males were significantly older than females when they reported using ecstasy regularly (mean age 20.4 versus 17.7, \(U=666.5, \ p<0.001\)).
4.2.1 Ecstasy use among REU

Table 3 presents an outline of patterns of use of ecstasy among REU. Ecstasy was used on a median of 12.5 days (range 6-120) over the preceding six months. Half the sample had used ecstasy between monthly and fortnightly (50%), one-third (32%) had used it between fortnightly and weekly and 18% had used ecstasy more than once a week over the preceding six months.

The majority (76.5%) of respondents commonly used more than one tablet during a session. REU had used a median of 2 tablets during a 'typical' occasion of use (range 1-15) over the preceding six months. The median number of tablets consumed in the 'heaviest' session over the preceding six months was 4 (range 1-20).

Almost all REU reported that swallowing was their main route of administration (92%) for ecstasy, however, 7% reported mainly snorting it and 1% reported mainly injecting it. Participants were asked to identify each method of administration they had used over the preceding six months for ecstasy 'pills'. Swallowing (99%) and snorting (59%) were by far the most common methods of administration, although smaller proportions had shelved/shafted (7%), smoked (6%) or injected (3%) ecstasy.

<table>
<thead>
<tr>
<th>Ecstasy variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age first used ecstasy (years)</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>17</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Ecstasy ‘favourite’ drug (%)</td>
<td>44</td>
<td>38</td>
<td>30</td>
<td>45</td>
<td>32</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>Median days used ecstasy last 6 mths</td>
<td>15</td>
<td>12.5</td>
<td>12</td>
<td>15</td>
<td>12</td>
<td>13</td>
<td>12.5</td>
</tr>
<tr>
<td>Use ecstasy weekly or more (%)</td>
<td>19</td>
<td>21</td>
<td>19</td>
<td>24</td>
<td>18</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>Median ecstasy tablets in ‘typical’ session</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Typically use &gt;1 tablet (%)</td>
<td>69</td>
<td>84</td>
<td>82</td>
<td>91</td>
<td>84</td>
<td>85</td>
<td>76.5</td>
</tr>
<tr>
<td>Recently binged on ecstasy (%)</td>
<td>41</td>
<td>36</td>
<td>30</td>
<td>33</td>
<td>26</td>
<td>31</td>
<td>24</td>
</tr>
<tr>
<td>Ever injected ecstasy (%)</td>
<td>11</td>
<td>15</td>
<td>8</td>
<td>5</td>
<td>11</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Mainly swallowed ecstasy last 6 mths (%)</td>
<td>100</td>
<td>97</td>
<td>100</td>
<td>96</td>
<td>92</td>
<td>93</td>
<td>92</td>
</tr>
<tr>
<td>Mainly snorted ecstasy last 6 mths (%)</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Mainly injected ecstasy last 6 mths (%)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012
Participants were asked about their use of different forms of ecstasy (tablets, powder and capsules). Almost every participant (99%) reported having used ecstasy tablets (‘pills’) during the preceding six months. Two-fifths (42%) reported having ever used ecstasy powder, and one-fifth (20%) had done so recently. Three-quarters (78%) reported having ever used ecstasy capsules (‘caps’) and half (57%) had used them over the preceding six months. Pills were first used at a median age of 17 years (range 12-35), powder at 20 years (range 14-36) and caps at 19 years (13-39).

The majority of REU (87%) reported using other drugs in combination with ecstasy the last time they used it. The drugs most commonly used with ecstasy were alcohol (90% of those who reported last using other drugs with ecstasy; i.e. 27% less than five standard drinks and 63% more than five standard drinks), tobacco (65%), cannabis (44%) and LSD (13%).

About three-fifths (61%) of the sample used other drugs to help them come down from ecstasy the last time they used it. Among these respondents, the three most commonly reported drugs used to come down from ecstasy were cannabis (82%), tobacco (54%) and alcohol (26% overall; 8% less than five standard drinks, 18% more than five standard drinks).

About half of the group reported that most (41%) or all (11%) of their friends had used ecstasy over the last six months. One-third (34%) reported that ‘about half’ and 14% reported that ‘a few’ of their friends had used ecstasy recently. Interestingly, no participants reported that they were the only person in their social network who had recently used ecstasy.

4.2.2 Locations of ecstasy use

Participants were asked where they spent the most time while intoxicated, the last time they used ecstasy. Ecstasy was most commonly last used in public venues (67%) although one-third of participants reported last using ecstasy in private venues (33%). The majority of participants last used ecstasy at a nightclub (41%).

**Figure 1: Location of last ecstasy use among REU, NSW 2012**

Source: EDRS regular ecstasy user interviews 2012
4.2.3 Use of ecstasy in other populations

General population

Figure 2 presents data collected for the National Drug Strategy Household Survey (NDSHS) from 2004 to 2010. Over this time, the reported lifetime prevalence of ecstasy use among the general Australian population (aged 14 years and over) increased from 7.5% to 10.3%. However, in 2010 for the first time since 1995, the NDSHS recorded a significant decline in the proportion of the general Australian population who reported having used ecstasy within the past year (Australian Institute of Health and Welfare, 2011). Data for recent use of ecstasy in NSW (2.9%) was comparable with the national figure.

Figure 2: Percentage of sample reporting lifetime and recent ecstasy use in the NSW general population, 2004-2010


Sydney Gay Community Periodic Survey

The Sydney Gay Community Periodic Survey is an annual cross-sectional survey of gay and homosexually active men. The first survey was conducted in February 1996 and the most recently published survey was completed in February 2012, with 2,843 men participating. The major aim of the survey is to provide data on levels of sexual-, STI- and HIV-related practices, though the survey also asks about drug use in the past six months.

Figure 3 shows the proportion of men surveyed who had used ecstasy in the past six months. In 2012, approximately one-quarter (27%) of the sample reported having recently used ecstasy. The authors reported that, since the 2011 survey, there had been a significant decline in the reported use of ecstasy. Additionally, it was noted that from 2008 there has been a significant downward trend in ecstasy use amongst this group (Hull et al., 2012).
Figure 3: Proportion of gay men in Sydney reporting recent ecstasy use, 2006-2012

Source: Sydney Gay Community Periodic Survey 2006-2012

Sydney Women and Sexual Health Survey
First conducted in Sydney in 1996 and run every two years since, the Sydney Women and Sexual Health survey (SWASH) is the longest running and only regular survey of lesbian, bisexual and queer (LBQ) women's health and well-being in Australia (Mooney-Somers, Deacon & Parkhill, in press). SWASH is a unique and important source of health-related information pertaining to Australian LBQ women. The most recently published survey was completed in 2012 with 827 women participating.

Figure 4 shows the proportion of women surveyed who had used ecstasy in the past six months. In 2012, one-quarter (25%) of the sample reported having recently used ecstasy. This figure has remained stable since 2010.

Figure 4: Proportion of LBQ women in Sydney reporting recent ecstasy use, 2006-2012

Source: Sydney Women and Sexual Health Survey 2006-2012
Key expert comments

Several KE had observed a decline in ecstasy use in recent years, however, others had specifically noted increases in ecstasy use over the six months preceding the interview.

One working in law enforcement reported increased detections of MDMA following a large dip in 2009. They noted that the numbers of tablets detected tended to be low (e.g. 1 or 2 tablets) and mostly among people in their mid-20s.

Multiple KE associated different geographical locations with different rates of ecstasy use and highlighted that it was not only present in the inner city but also in surrounding cities.

A few commented that party goers were more likely to use MDMA caps at the moment because they tended to be stronger than pills. One had heard that users sometimes preferred to open capsules and snort lines (rather than swallowing a cap or a pill) because they felt this allowed them to better control the dose they received.

Two KE working with GLBT (gay/lesbian/bisexual/transgender) clients had observed a very small number of clients injecting ecstasy. They highlighted that injecting is still seen as taboo among this group although it is more acceptable in certain sub-populations. One mentioned that some clients used injected ecstasy within the context of ‘party weekends’ with a focus on enhancing sexual encounters.
### 4.3 Methamphetamine use

#### Summary:

**Speed**
- Two-thirds of REU had ever used speed and one-third had done so recently.
- Speed was used on a median of 2 days over the preceding six months and was primarily snorted (71%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.

**Base**
- Two-fifths of the sample had ever used base and 9% had done so recently.
- Base was used on a median of 2 days over the preceding six months and was primarily swallowed (67%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.

**Crystal**
- One-third of the sample had ever used crystal and one-fifth had done so recently.
- Crystal was used on a median of 8 days over the preceding six months and was primarily smoked (83%).
- The frequency and quantity of use appeared to be stable from 2011 to 2012.

- Speed and base were commonly used in public settings, and crystal was used in a mix of private and public settings.
- The use of methamphetamine among the NSW general population remained stable from 2007 (2.3%) to 2010 (2.1%).
- The use of speed and crystal by respondents in the Sydney Gay Community Periodic Survey has significantly declined over time since 2008. However, a slight, though significant, increase in the proportion of participants reporting the use of crystal was reported in 2012.
- Fifteen per cent of women interviewed in the Sydney Women and Sexual Health Survey had used speed and 5% had used crystal recently. These figures have remained relatively stable since 2010.
- Most KE expressed concern for crystal use and the associated acute and long-term health problems. KE also reported that there was poor knowledge of stimulant treatment options amongst users.
Throughout the 1990s, the proportion of amphetamine-type substance (ATS) seizures that were methamphetamine (rather than amphetamine sulphate, the form most commonly available throughout the 1980s) steadily increased, until methamphetamine dominated the market (Australian Bureau of Criminal Intelligence, 2001). Both the number and weight of ATS (excluding MDMA) detections at the Australian border increased in 2010-11, with the number of detections the highest recorded in the last decade (Australian Crime Commission, 2012).

Chemically, amphetamine and methamphetamine differ in molecular structure but are closely related. They exert their effects indirectly by stimulating the release of peripheral nervous system (PNS) and central nervous system (CNS) monoamines (principally dopamine, noradrenaline, adrenaline and serotonin), and both have psychomotor, cardiovascular, anorexogenic and hyperthermic properties (Seiden, Sobol & Ricaurte, 1993). Compared to amphetamine, methamphetamine has proportionally greater CNS than PNS stimulatory effects (Chesher, 1993), and is a more potent form with stronger subjective effects.

In Australia today, the powder traditionally known as ‘speed’ is almost exclusively methamphetamine. The more potent forms of this family of drugs, known by terms such as ice, shabu, crystal meth, base and paste are also methamphetamine.

The distinction between methamphetamine powder (‘speed’), methamphetamine base (‘base’) and crystalline methamphetamine (‘crystal’) has been made in an attempt to collect more comprehensive information on the use, price, purity and availability of each of these different forms.

‘Speed’ is typically manufactured in Australia and ranges in colour from white to yellow, orange, brown or pink, due to differences in the chemicals used to produce it. It is usually of relatively low purity (approximately 10%) (McKetin, McLaren & Kelly, 2005).

‘Base’ (also called paste, wax, point or pure) is thought to be an oily or gluggy, damp, sticky, powder that often has a brownish tinge. Base is also thought to be manufactured in Australia; its purity has been found to be approximately twice that of speed (21%) (McKetin, McLaren & Kelly, 2005).

The crystal form (also called ice, shabu, or crystal meth) is large crystals that range from translucent to white but may also have a green, blue or pink tinge due to either impurities or the addition of food dye. Crystal is predominantly manufactured in Asia and imported into Australia (Topp & Churchill, 2002), although the first crystalline methamphetamine laboratory was detected in QLD in February 2002 (Australian Crime Commission, 2003). Pure crystal has an estimated purity of 80%.

A form of methamphetamine with a crystalline appearance has been detected which has a lower purity (19%); this lower purity crystalline methamphetamine may reflect either methamphetamine base with a crystalline appearance or crystal methamphetamine cut with crystalline adulterants (McKetin, McLaren & Kelly, 2005).
4.3.1 Methamphetamine use among REU

**Methamphetamine powder (speed)**

Approximately two-thirds of participants (67%) had ever used speed and one-third (31%) of the sample had used it during the preceding six months. Speed was first used at a median age of 18 years (range 13-31). Speed was used on a median of 2 days (range 1-180) over the preceding six months. The vast majority (86%) of those who had recently used speed had done so on a less than monthly basis.

Most recent users quantified their use in terms of ‘grams’ (n=15) or ‘lines’ (n=9). The median amount used in a ‘typical’ or ‘average’ use episode in the preceding six months was either 1 gram (range 0.25-2) or 2 lines (range 1-10). The median amount used in the ‘heaviest’ use episode was very similar, either 1.25 grams (range 0.25-4) or 3 lines (range 2-10). The most common route of administration for speed users in the preceding six months was snorting (71%), however, other routes of administration included swallowing (45%), injecting (16%) and smoking (7%).

There was no significant change in the proportions reporting the lifetime or recent use of speed from 2011 to 2012. Reported frequency of use also appears stable, and reported quantity appears to have returned to reported 2010 levels (Table 4).

<table>
<thead>
<tr>
<th>Speed variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>88</td>
<td>86</td>
<td>92</td>
<td>83</td>
<td>79</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Used last six months (%)</td>
<td>55</td>
<td>45</td>
<td>48</td>
<td>37</td>
<td>29</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>Of those who had used: Median days used last 6 mths (range)</td>
<td>5 (1-180)</td>
<td>6 (1-90)</td>
<td>4 (1-120)</td>
<td>3 (1-30)</td>
<td>2 (1-30)</td>
<td>3 (1-40)</td>
<td>2 (1-180)</td>
</tr>
<tr>
<td>Median quantities used (grams): Typical (range)</td>
<td>1 (0.5-3)</td>
<td>0.5 (0.25-2)</td>
<td>1 (0.2-2)</td>
<td>1 (0.2-2)</td>
<td>1 (0.3-2)</td>
<td>0.5 (0.2-1.5)</td>
<td>1 (0.25-2)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>1.75 (0.5-6)</td>
<td>1 (0.5-3.5)</td>
<td>1 (0.2-4)</td>
<td>1 (0.25-3.5)</td>
<td>1 (0.3-7)</td>
<td>0.6 (0.25-6)</td>
<td>1.25 (0.25-4)</td>
</tr>
</tbody>
</table>

**Source: EDRS regular ecstasy user interviews 2006-2012**

**Methamphetamine base**

Two-fifths (38%) of the sample had ever used base and 9% had used it over the preceding six months. The median age at which base was first used was 20 years (range 16-42). Base had been used on a median of 2 days (range 1-30) over the preceding six months. The majority (67%) of those who had recently used base had done so less than monthly, one-fifth (22%) had used it between monthly and fortnightly, and 11% has used it more than weekly.
Most recent users of base quantified their use in terms of ‘points’, however, one REU referred to their use in terms of ‘lines’. Although it is likely that the actual weight of ‘points’ varies slightly, it is commonly understood that one ‘point’ is equal to approximately 0.1 grams. Those referring to points used a median of 1 point (range 0.1-2) in a ‘typical’ session and a median of 2 points (range 0.5-3) during the heaviest occasion of use over the preceding six months. Base was most commonly swallowed (67%), followed by snorted (44%) and injected (22%).

The proportions reporting the lifetime and recent use of base have remained stable from 2011 to 2012, as have the frequency and quantities used (Table 5).

**Table 5: Patterns of base use among REU, NSW 2006-2012**

<table>
<thead>
<tr>
<th>Base variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>50</td>
<td>54</td>
<td>53</td>
<td>51</td>
<td>53</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>Used last six months (%)</td>
<td>24</td>
<td>23</td>
<td>17</td>
<td>23</td>
<td>18</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>3.5 (1-180)</td>
<td>5 (1-90)</td>
<td>2 (1-120)</td>
<td>2 (1-96)</td>
<td>2 (1-18)</td>
<td>2 (1-20)</td>
<td>2 (1-30)</td>
</tr>
<tr>
<td>Median quantities used (points):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical (range)</td>
<td>1 (0.5-3)</td>
<td>2 (0.5-5)</td>
<td>2 (1-5)</td>
<td>2 (0.3-4)</td>
<td>1 (0.5-2)</td>
<td>2 (0.1-5)</td>
<td>1 (0.1-2)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>1 (0.5-7)</td>
<td>2 (0.5-5)</td>
<td>2 (1-5)</td>
<td>2 (0.5-6)</td>
<td>1.25 (0.5-3)</td>
<td>2 (0.1-10)</td>
<td>2 (0.5-3)</td>
</tr>
</tbody>
</table>

**Crystal methamphetamine**

One-third (32%) of the sample had ever used crystal, and one-fifth (18%) had used it over the six months prior to the interview. The median age of first use of crystal was 22 years (range 16-43). Males were significantly older than females when they reported first using crystal (mean age 26.6 versus 19.9, $U=47$, $p<0.05$). Crystal was used on a median of 8 days (range 1-96) over the preceding six months. Almost half (44%) of those who had recently used crystal had done so between monthly and fortnightly, one-third (33%) had used so on a less than monthly basis, 6% between fortnightly and weekly and 17% at more than once per week.

The majority of respondents quantified their use in terms of ‘points’ (generally believed to be 0.1 grams). These participants reported using a median of 1.25 points (range 0.25-3) during ‘typical’ sessions of use and a median of 3 points (range 0.3-5) on the heaviest episode of crystal use over the preceding six months. As in previous years, smoking was the most...
common route of administration for crystal (83%), followed by injecting (50%), snorting (17%) and swallowing (17%).

The proportions reporting the use of crystal have remained relatively stable from 2011 to 2012 (Table 6). Although the frequency of use of crystal has fluctuated since 2006, a downward trend in crystal use in the NSW REU sample does appear to be emerging in recent years. It is also apparent that the average quantity used has returned to levels comparable to years prior to 2011.

Table 6: Patterns of crystal use among REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Crystal variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>68</td>
<td>60</td>
<td>52</td>
<td>29</td>
<td>44</td>
<td>37</td>
<td>32</td>
</tr>
<tr>
<td>Used last 6 mths (%)</td>
<td>56</td>
<td>42</td>
<td>33</td>
<td>9</td>
<td>21</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>6 (1-180)</td>
<td>9 (1-180)</td>
<td>6 (1-170)</td>
<td>12 (1-48)</td>
<td>3 (1-20)</td>
<td>6 (1-96)</td>
<td>8 (1-96)</td>
</tr>
<tr>
<td>Median quantities used (points):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical (range)</td>
<td>1 (0.5-4)</td>
<td>1 (0.25-3)</td>
<td>1.75 (0.5-3)</td>
<td>1 (1-5)</td>
<td>1 (0.5-7)</td>
<td>2 (0.5-6)</td>
<td>1.25 (0.25-3)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>2 (0.5-0.7)</td>
<td>3 (0.25-15)</td>
<td>2 (1-6)</td>
<td>3.5 (1-5)</td>
<td>3 (0.5-10)</td>
<td>3 (0.5-12)</td>
<td>3 (0.3-5)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

4.3.2 Locations of methamphetamine use

The majority of participants who had recently used speed reported that they had last used it in a public setting, including at a nightclub (47%), at a pub (12%) or at a live music event (6%). Among the participants who reported on the location of their last use of base, the majority had used it at a nightclub (66%), followed by a friend’s home or a private party (17% respectively). Half of those participants who had recently used crystal had last used it in a private setting, with 36% using it in their home and 14% using it in a friend’s home. A portion of crystal users also reported last using it in a nightclub (21%) or pub (14%) (Figure 5).
Figure 5: Last location methamphetamine use by form among REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
Speed n=17, base n=6, crystal n=14

4.3.3 Methamphetamine use in other populations

General population
Figure 6 shows the proportion of the general population in NSW (aged 14 years and over) who reported having recently used any form of methamphetamine. The authors reported a significant increase in the proportion of the Australian population who had ever used methamphetamine from 2007 to 2010, while the proportions reporting last year use remained relatively stable at 2.1% (Australian Institute of Health and Welfare, 2011).

Figure 6: Percentage of sample reporting recent\(^1\) and lifetime methamphetamine use in the NSW general population, 2004-2010

\(^1\) Used in the last 12 months

Sydney Gay Community Periodic Survey
The Sydney Gay Community Periodic Survey (Figure 7) shows the proportion of gay men surveyed who had used speed and crystal in the past six months. In 2012, 11% of men
interviewed had used speed and 14% had used crystal. While there is a significant downward trend in the use of crystal since 2008, in the 2012 survey there was a slight, though significant increase in the proportion of participants reporting the use of this drug (Hull et al., 2012). The authors also reported an overall significant decline in the use of speed since 2008.

**Figure 7:** Proportion of gay men in Sydney reporting recent speed and crystal use, 2006-2012

[Graph showing proportion of gay men reporting speed and crystal use from 2006 to 2012]

Source: Sydney Gay Community Periodic Survey 2006-2012

**Sydney Women and Sexual Health Survey**

The Sydney Women and Sexual Health Survey (Figure 8) showed the proportion of LBQ women surveyed who had used speed and crystal in the past six months. In 2012, 15% of women interviewed had used speed and 5% had used crystal. These figures appear to have remained relatively stable since 2010 (Mooney-Somers, Deacon & Parkhill, in press).

**Figure 8:** Proportion of LBQ women in Sydney reporting recent speed and crystal use, 2006-2012

[Graph showing proportion of LBQ women reporting speed and crystal use from 2006 to 2012]

Source: Sydney Women and Sexual Health Survey 2006-2012

**Illicit Drug Reporting System**

A separate monitoring system investigating trends in the use of methamphetamine in injecting drug users has been conducted in NSW since 1996, in Victoria (VIC) and South Australia (SA) since 1997 and nationally since 2000. This is called the Illicit Drug Reporting System, or IDRS, and reports and bulletins are available from the NDARC website (http://ndarc.med.unsw.edu.au/group/drug-trends#menu_item_5).
Key expert comments

It was generally agreed that speed was less common than other forms of methamphetamine (particularly crystal) and that it was not widely used among REU. Law enforcement KE noted that there appeared to have been a recent increase in importation of speed (as opposed to precursor chemicals used to make it) due to stricter controls placed on pseudoephedrine. One explained that there was no longer any benefit to importing precursor materials as opposed to the final product.

Most had not heard much about base lately. One noted that some crystal users would use base if crystal were not available but it was rarely the preferred option. There were mixed reports about the prevalence of crystal, however, many agreed that crystal was more common than speed or base. A few commented that while it was predominantly used by males, there was a substantial minority of female users.

KE who worked with GLBT groups noted that while crystal use had mostly died down among these groups, a small subculture remained among which crystal use had become normative. This group is generally known for being sexually adventurous and likely to be slightly older (i.e. in their 40s or 50s).

It was also noted that injecting was still taboo among the GLBT community and particularly so among lesbians. They were concerned that there was a culture of silence around crystal use among lesbians and that this could lead to increased risk for this group. One observed that knowledge of safe injecting practices was ‘lower than expected’ among members of the GLBT community he had spoken with.

One very common theme among KE who commented was that regular crystal use was often problematic. A KE in the health sector observed high rates of mental illness (both acute and more long-term) among this group. One working in festival settings observed that there were some users who would come to a festival after days of crystal use and then continue drinking and taking other drugs. This often resulted in either medical or police attention.

One reported that stimulant users were often unaware that there were treatment programs tailored toward their needs. He had received the impression that people with problematic stimulant use felt that all treatment options were aimed toward opioid users and that there was nothing that could be done about problematic stimulant use other than ‘deal with it yourself’.
4.4 Cocaine use

Summary:
- The majority of the group (81%) had tried cocaine at least once, and 57% had used it recently.
- Cocaine was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- The proportions using cocaine, the frequency and quantities used had all remained stable from 2011 to 2012.
- Recent use of cocaine among the NSW general population increased significantly from 1.6% in 2007 to 2.1% in 2010.
- Approximately one-fifth of participants in both the Sydney Gay Community Periodic Survey and the Sydney Women and Sexual Health Survey reported recent use of cocaine.
- KE reported that cocaine users want more control over the doses consumed and their level of intoxication.
- Poor knowledge of available drug treatments and usage amongst affluent cocaine users had also been observed by KE.

Cocaine is a stimulant, like methamphetamine. Cocaine is a colourless or white crystalline alkaloid. Cocaine hydrochloride, a salt derived from the cocoa plant, is the most common form of cocaine available in Australia (‘crack’ cocaine is most prevalent in North America and infrequently encountered in this country) (Australian Crime Commission, 2008). ‘Crack’ is a form of freebase cocaine (hydrochloride removed) which is particularly pure.

Street cocaine is usually ‘cut’ or diluted with other substances, some of which mimic the taste or appearance of cocaine. There is not a great deal of information on the adulterants found in street cocaine, but lidocaine, glucose, lactose, baking soda and even talcum powder have been found.

The majority (81%) of regular ecstasy users in 2012 had ever used cocaine, and more than half (57%) had used it during the six months prior to the interview. The median age at which cocaine was first used was 19 years (range 15-41). Males were significantly older than females when they first reported using cocaine (mean age 22.3 versus 17.7, $U=22.5$, $p<0.05$).

4.4.1 Cocaine use among REU

Participants who had used cocaine over the preceding six months had done so on a median of 3 days (range 1-90). Three-quarters (77%) had used cocaine on a less than monthly basis, 16% had used between monthly and fortnightly and 7% on a greater than fortnightly basis. The majority (56%) of recent cocaine users quantified their use in terms of grams. The median amount used during a ‘typical’ occasion of use was 0.5 grams (range 0.1-1) and the median amount used on the heaviest occasion was 1 gram (range 0.1-5). Eighteen recent users quantified their use of cocaine according to ‘lines’. These participants reported using a median of 2.5 lines (range 1-5) in a ‘typical’ session and a median of 3 lines (range 1-6) used on the heaviest occasion. The vast majority (97%) of recent users of cocaine reported having snorted it over the preceding six months. A notable proportion of recent users of cocaine reported having swallowed it (39%), injected it (5%) and smoked it (2%) during this time.
Table 7 presents data across time on the prevalence, frequency and quantity of cocaine use among REU interviewed in NSW. The number of participants reporting the lifetime and recent use of cocaine has remained stable from 2011 to 2012. The frequencies of use and quantities used have also remained remarkably stable.

**Table 7: Patterns of cocaine use among REU, NSW 2006-2012**

<table>
<thead>
<tr>
<th>Cocaine variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used %</td>
<td>80</td>
<td>88</td>
<td>90</td>
<td>85</td>
<td>88</td>
<td>84</td>
<td>81</td>
</tr>
<tr>
<td>Used last 6 mths %</td>
<td>45</td>
<td>62</td>
<td>51</td>
<td>64</td>
<td>60</td>
<td>59</td>
<td><strong>57</strong></td>
</tr>
</tbody>
</table>

**Of those who had used:**
- Median days used last 6 mths (range):
  - 2 (1-14)
  - 4 (1-48)
  - 5 (1-90)
  - 3 (1-30)
  - 5 (1-100)
  - 4 (1-120)
  - 3 (1-90)

**Median quantities used (grams):**
- Typical (range):
  - 1 (0.25-2)
  - 0.5 (0.25-3)
  - 0.5 (0.25-2)
  - 0.5 (0.1-2.5)
  - 0.5 (0.2-3)
  - 0.5 (0.1-3)
  - 0.5 (0.1-1)

- Heavy (range):
  - 1 (0.25-3)
  - 1 (0.25-7)
  - 1 (0.5-5)
  - 1 (0.25-5)
  - 1 (0.25-7)
  - 1 (0.1-6.5)
  - 1 (0.1-5)

Source: EDRS regular ecstasy user interviews 2006-2012

Among those who commented (n=40), the largest portion reported last using cocaine in a nightclub (43%). However, a portion of respondents reported last using cocaine at private events, including at a friend’s home (20%), at a private party (15%) or at their own home (8%) (Figure 9).

**Figure 9: Last location of cocaine use among REU, NSW 2012**

Source: EDRS regular ecstasy user interviews 2012
4.4.2 Cocaine use in other populations

*General population*
Reported lifetime use of cocaine increased significantly to 7.3% of the Australian population in 2010 (Figure 10). There was also a significant increase in the proportions who had used cocaine within the past year (from 1.6% to 2.1%) (Australian Institute of Health and Welfare, 2011).

**Figure 10: Percentage of sample reporting recent* and lifetime cocaine use in the NSW general population, 2004-2010**

![Graph showing percentage of recent and lifetime cocaine use in the general population from 2004 to 2010.]

*Used in the last 12 months

*Sydney Gay Community Periodic Survey*
In February 2012, approximately one-fifth of gay men interviewed for the survey reported the recent use of cocaine (Figure 11). It appears that the use of cocaine amongst this group has remained relatively stable across time.

**Figure 11: Proportion of gay men in Sydney reporting recent cocaine use, 2006-2012**

![Graph showing proportion of gay men reporting recent cocaine use from 2006 to 2012.]

Source: Sydney Gay Community Periodic Survey 2006-2012
Sydney Women and Sexual Health Survey
The Sydney Women and Sexual Health Survey (Figure 12) reports the proportion of LBQ women surveyed who had used cocaine in the past six months. In 2012, one-fifth of LBQ women had recently used cocaine (Mooney-Somers, Deacon & Parkhill, in press). There appears to be an upward trend in the use of cocaine amongst this group.

Figure 12: Proportion of LBQ women in Sydney reporting recent cocaine use, 2006-2012

Source: Sydney Women and Sexual Health Survey 2006-2012

Illicit Drug Reporting System
A separate monitoring system investigating trends in the use of cocaine in injecting drug users has been conducted in NSW since 1996, VIC and SA since 1997 and nationally since 2000. This is called the Illicit Drug Reporting System, or IDRS, and reports and bulletins are available from the NDARC website (http://ndarc.med.unsw.edu.au/group/drug-trends#menu_item_5).
Key expert comments

The majority reported that there had been an increase in the prevalence of cocaine use over the past few years.

KE observed that it was more likely to be used among older REU (i.e. 25 years and above). This was mostly thought to be due to the fact that older REU were more likely to be able to afford cocaine. Several noted that it was often used among people who were ‘comfortably off’.

Another had observed that as REU became older, they were more interested in reducing the after effects of their drug use and also wanted more control over the doses consumed. She said that being able to control the size and number of lines helped people to titrate their level of intoxication.

KE working with GLBT populations were of the opinion that cocaine was very widespread among this group and continuing to grow in popularity. One said that cocaine use was ‘much more general and higher than crystal use’.

Those working in health care had observed a worrying increase in the number of people presenting with cocaine-related problems. The most common complaint was cardiovascular problems (e.g. tachycardia and shortness of breath) and drug induced psychosis. One said that this was often not the first time these problems had arisen for patients. Patients often reported that they were trying to manage their use themselves rather than accessing a drug-related service, however, they appeared somewhat unsuccessful.

KE had seen patients who used very high quantities of cocaine (e.g. up to 10 grams at a time; the equivalent of $10,000 per week). Typically, these patients tended to be experienced users who did not use other drugs. They also tended to be male, in their 30s or 40s and fully employed professionals or successful entrepreneurs. One also commented that symptoms of psychosis and anxiety were common among this group.

One observed that cocaine had traditionally maintained a low profile in Australia and as a result, people were often not fully aware of the dangers associated with this drug or with treatment options that were available. It was noted that affluent cocaine users were often very inexperienced when it came to drugs of addiction and, therefore, did not know how to identify and manage problematic drug use very effectively.
4.5 Ketamine use

Summary:
- Almost half of the sample had tried ketamine at least once and a quarter had used it recently.
- Ketamine was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- There was a significant decrease in proportions reporting recent ketamine use from 2011 to 2012, although quantities used remained mostly stable.
- Recent use of ketamine among the NSW general population remained low and stable.
- There was a significant decline in the use of ketamine among participants of the Sydney Gay Community Periodic Survey from 2008-2012.
- Recent ketamine use amongst women interviewed in the Sydney Women and Sexual Health Survey has remained relatively stable since 2006, with 6% reporting ketamine use in 2012.
- KE reported that although ketamine was still available in Sydney, there had been a recent decrease in its popularity.

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

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

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

Almost half (48%) of the 2012 sample of regular ecstasy users reported having ever used ketamine and approximately one quarter (24%) had done so recently. Ketamine was first used at a median age of 20 years (range 15-42).
4.5.1 Ketamine use among REU

Ketamine had been used on a median of 3 days (range 1-12) by REU who had recently used ketamine. Of these REU, 83% had used ketamine on a less than monthly basis, and the remaining 17% had done so between monthly and fortnightly. Thirteen recent users of ketamine reported their use in terms of ‘bumps’\textsuperscript{4}. They reported using a median of 2 bumps on both a typical occasion (range 1-10) and on the heaviest occasion (range 1-12) over the preceding six months. The other common unit reported was grams (n=6). These respondents reported using a median of 0.5 grams (range 0.25-3) in an average session of use, and 0.75 grams (range 0.25-3) during the heaviest episode of use.

The most common route of administration for ketamine was snorting (75%), followed by 33% of recent users who swallowed and 13% who injected ketamine over the past six months. Sixteen participants commented on the location of ketamine use. Ketamine was most commonly last used at a private party (43%), the participant’s own home (28%) and a friend’s home (14%).

Table 8 presents data across time regarding patterns of ketamine use among REU interviewed in the EDRS. The proportions reporting the recent use of ketamine decreased significantly from 2011 to 2012 (95% CI:0.02-0.27; p<0.05), in which recent use returned to the level reported in 2010. The frequency of use also remained fairly stable, however, there was a slight decrease in the amounts used in typical sessions of use continuing a decrease from 2009 onward.

<table>
<thead>
<tr>
<th>Ketamine variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>57</td>
<td>62</td>
<td>65</td>
<td>53</td>
<td>64</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>Used last 6 mths (%)</td>
<td>27</td>
<td>36</td>
<td>30</td>
<td>19</td>
<td>24</td>
<td>39</td>
<td>24</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>2 (1-48)</td>
<td>2 (1-25)</td>
<td>3 (1-12)</td>
<td>2 (1-8)</td>
<td>2.5 (1-30)</td>
<td>2 (1-100)</td>
<td>3 (1-12)</td>
</tr>
<tr>
<td>Median quantities used (bumps):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical (range)</td>
<td>2 (0.5-7)</td>
<td>1 (1-3)</td>
<td>2 (1-4)</td>
<td>4 (1-7)</td>
<td>3 (1-12)</td>
<td>2 (1-10)</td>
<td>2 (1-10)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>2.5 (0.5-7)</td>
<td>2 (1-10)</td>
<td>2 (1-10)</td>
<td>4.5 (1-8)</td>
<td>3 (1-12)</td>
<td>3 (1-10)</td>
<td>2 (1-12)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

\textsuperscript{4} A bump refers to a small amount of powder, typically measured and snorted from the end of a key, the corner of a plastic card or a ‘bumper’. A bumper is a small glass nasal inhaler, purchased from tobacconists, used to store and administer powdered substances such as ketamine.
4.5.2 Ketamine use in other populations

General population
Ketamine was first included in the National Drug Strategy Household Survey in 2004 (Australian Institute of Health and Welfare, 2005a). While there was a significant increase in the proportions reporting lifetime ketamine use, the proportions reporting use within the past year remained low and stable (Figure 13) (Australian Institute of Health and Welfare, 2011).

Figure 13: Percentage of sample reporting recent* and lifetime ketamine use in the NSW general population, 2004-2010

Used in the last 12 months

Sydney Gay Community Periodic Survey
Figure 14 shows the proportion of men surveyed who had used ketamine in the past six months. This figure had remained relatively stable from 2011 to 2012 at approximately one-tenth of the group. The authors reported a significant decline in the use of ketamine among their sample from 2008 to 2012 (Hull et al., 2012).

Figure 14: Proportion of gay men in Sydney reporting recent ketamine use, 2006-2012

Source: Sydney Gay Community Periodic Survey 2006-2012
Figure 15 shows the proportion of women surveyed who had used ketamine in the past six months. In 2012, 6% of this group reported recent use of ketamine, which has remained relatively stable since 2006 (Mooney-Somers, Deacon & Parkhill, in press).

**Figure 15: Proportion of LBQ women in Sydney reporting recent ketamine use, 2006-2012**

Source: Sydney Women and Sexual Health Survey 2006-2012

**Key expert comments**

Most said they had not seen or heard much about ketamine lately.

One mentioned having heard of ketamine use among some people in the ‘dance party scene’ but said this was probably a stable group of experienced users in their 30s. Another observed that while ketamine was ‘still around’ it had dropped in popularity recently.
4.6 GHB use

Summary:

- One-fifth of the sample had tried GHB at least once and 11% had used it recently.
- GHB was used on a median of 2 days (i.e. once every three months) over the preceding six months.
- The frequency and quantity of use of GHB remained stable from 2011 to 2012.
- Recent use of GHB among the NSW general population remained low and stable.
- From 2008 to 2012 the use of GHB among participants of the Sydney Gay Community Periodic Survey had significantly declined.
- GHB use among LBQ women in the Sydney Women and Sexual Health Survey has remained relatively stable across time, with 4% reporting recent GHB use in 2012.
- KE were concerned that since GBL was often available in Sydney, irregular users may not have been informed of this and may be at risk of overdose if they took GBL when expecting to take GHB.
- Several KE were also concerned about the increasing use of GHB among male heterosexuals, as it was felt that this group was not aware of the risks of overdose or how to deal with the situation if it arose.

Gamma-hydroxybutyrate (GHB) has been researched and used for a number of clinical purposes including as an anaesthetic (Kam & Yoong, 1998; Nicholson & Balster, 2001). In 1964, GHB was introduced in Europe as an anaesthetic agent particularly for children (Laborit, 1964; Vickers, 1968), but was not widely used due to the incidence of vomiting and seizures (Hunter, Long & Ryrie, 1971). Research has also examined the effectiveness of GHB as a treatment for narcolepsy (Chin, Kreutzer & Dyer, 1992; Mack, 1993; Mamelak, 1989) and for alcohol dependence and opioid withdrawal (Kam & Yoong, 1998; Nicholson & Balster, 2001).

In recent years, there has been documentation of the use of GHB as a recreational drug, in a range of countries around the world. Common street names for GHB in Australia include ‘liquid ecstasy’, ‘fantasy’, ‘GBH’, ‘grievous bodily harm’ and ‘blue nitro’. Following restrictions on the availability of GHB, there have been reports of the production of GHB from its precursor, gamma-butyrolactone (GBL). The use of GBL, and a similar chemical, 1,4-butanediol (1,4-B), has also been documented (Ingels et al., 2000). GBL and 1,4-B are metabolised into GHB in the body. They may be used as substitutes for GHB, but are known to be pharmacologically different.

Approximately one-fifth (22%) of the sample had ever used GHB and about one-in-ten (11%) REU reported having done so recently. GHB was first used at a median of 26 years (range 14-43).
4.6.1 GHB use among REU

GHB had been used on a median of 2 days (range 1-90) over the past six months. Four-fifths (80%) of those who had recently used GHB had done so on a less than monthly basis, with the remaining fifth (20%) using GHB more than once a week.

Ten participants commented on the quantities of GHB they used. These participants reported using a median of 2mL (range 2-30) in an average episode of use and 4.5mL (range 2-80) in their heaviest episode of use over the past six months. All recent users of GHB had swallowed it. Seven participants commented on where they had last used GHB. The majority had used GHB last in a nightclub or at their home (43% respectively).

From 2011 to 2012 the proportion reporting the lifetime and recent use of GHB remained stable (Table 9). Figures regarding the frequencies and quantities of use of GHB also appear to have remained stable, although caution should be used when examining the data given the small numbers of participants who were able to report on this data.

Table 9: Patterns of GHB use among REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>GHB variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>40</td>
<td>37</td>
<td>37</td>
<td>24</td>
<td>42</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>Used last 6 mths (%)</td>
<td>21</td>
<td>23</td>
<td>24</td>
<td>6</td>
<td>17</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>3 (1-40)</td>
<td>6 (1-180)</td>
<td>2.5 (1-48)</td>
<td>4 (1-72)</td>
<td>3 (1-10)</td>
<td>2 (1-4)</td>
<td>2 (1-90)</td>
</tr>
<tr>
<td>Median quantities used (mL):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical (range)</td>
<td>3.5 (.25-20)</td>
<td>2 (1-15)</td>
<td>3 (1-20)</td>
<td>7 (5.5-10)</td>
<td>3.5 (1-10)</td>
<td>2 (1-4)</td>
<td>2 (2-30)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>6 (.25-40)</td>
<td>6 (2-40)</td>
<td>6 (1-20)</td>
<td>8 (5.5-15)</td>
<td>5 (1-50)</td>
<td>4 (1-10)</td>
<td>4.5 (2-80)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

^ Small numbers reporting, interpret with caution

4.6.2 GHB use in other populations

General population

The 2004 National Drug Strategy Household Survey was the first to include GHB as a separate drug class (Australian Institute of Health and Welfare, 2005a). From 2007 to 2010 the recent use of GHB among the NSW general population aged 14 years and over remained stable at 0.1%, while the proportions reporting lifetime use increased significantly to 0.8% (Figure 16) (Australian Institute of Health and Welfare, 2011).
Figure 16: Percentage of sample reporting recent* and lifetime GHB use in the NSW general population, 2004-2010

* Used in the last 12 months

Sydney Gay Community Periodic Survey
Figure 17 shows the proportion of gay men surveyed who had used GHB in the past six months. This proportion has remained relatively stable from 2011 to 2012 with just over one-in-ten reportedly using GHB (12% in 2012) (Hull et al., 2012). However, the authors noted that there had been significant downward trend since 2008 in the use of GHB among this group.

Figure 17: Proportion of gay men in Sydney reporting recent GHB use, 2006-2012

Source: Sydney Gay Community Periodic Survey 2006-2012

Sydney Women and Sexual Health Survey
Figure 18 shows the proportion of women surveyed who had recently used GHB. This figure had remained relatively stable across time, with 4% reporting recent GHB use in 2012 (Mooney-Somers, Deacon & Parkhill, in press).
Figure 18: Proportion of LBQ women in Sydney reporting recent GHB use, 2006-2012

Source: Sydney Women and Sexual Health Survey 2006-2012

Key expert comments

There was the impression that the use of GHB was declining in GLBT populations but increasing slightly among heterosexual groups. Data from law KE reflected this, with fewer detections than in previous years and especially around Mardi Gras.

Various health KE noted that there were very few cases of GHB overdose in the recent partying season and that this represented a decline from previous years. A few noted that when overdose occurred, it was usually due to mixing GHB/GBL with alcohol or taking very high quantities (e.g. 5-10mL in a short period).

KE last year were concerned about the fact that there was a mix of GHB and GBL available on the Sydney market. Because GBL has a longer time to onset, unsuspecting users can be at risk of overdose if they take additional doses too soon. One noted that this continued to be an issue in 2012, however, most regular users appeared to be aware that they were most likely purchasing GBL and used appropriate caution before re-dosing. This KE was concerned that irregular users may not have been informed of this change and may be at risk of overdose if they took GBL when expecting to take GHB.

Several had observed increasing use of GHB among heterosexual partygoers, especially among experienced males. It was generally agreed that this group was not aware of the risks of overdose or of how to deal with the situation if it arose.

One health KE reported that every case of GHB overdose he had seen had been the result of mixing with other drugs (usually alcohol). It was noted that mixing drugs with alcohol was almost ubiquitous among heterosexual partygoers leaving GHB users at risk of overdose.
4.7  LSD use

Summary:
- The vast majority of the sample had tried LSD at least once and almost half had used it recently.
- LSD was used on a median of 3 days (i.e. once every two months) over the preceding six months.
- Unlike most other drugs, LSD was often used in outdoor settings.
- The use of LSD among the sample appeared to be increasing over the past five years.
- The use of hallucinogens among the NSW general population increased significantly from 0.6% in 2007 to 1.4% in 2010.
- The use of LSD among participants of both the Sydney Gay Community Periodic Survey and Sydney Women and Sexual Health Survey remained relatively low and stable over time.
- KE comments indicated that there had been an increase in hallucinogens amongst party goers, but there was uncertainty as to whether this was due to an increase in LSD or other emerging drugs with hallucinogenic effects such as 2C-B.

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

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

The vast majority (84%) of the sample had ever used LSD and more than two-fifths (43%) had used it recently. Respondents had first used LSD at a median age of 18 years (range 13-43).

4.7.1  LSD use among REU

LSD was used on a median of 3 days (range 1-24) over the preceding six months (Table 10). Of those who had used LSD, two-thirds (67%) had done so on a less than monthly basis, one-quarter (26%) had used it between monthly and fortnightly, and 7% has used LSD between fortnightly and weekly.

All respondents quantified their use in terms of tabs. They reported having used a median of 1 tab (range 0.5-2) during a ‘typical’ episode of use, and 1 tab (range 0.5-5) during the heaviest episode of use in the preceding six months (Table 10). All recent users of LSD had swallowed it.
Table 10 presents data across time on patterns of LSD use among REU. Although the proportions reporting lifetime and recent use of LSD remained statistically stable, the lifetime use of LSD continues to rise amongst the NSW REU samples over time. Despite this, the frequency of use and the quantities used appear to have remained stable over the past four years.

Table 10: Patterns of LSD use among REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>LSD variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>65</td>
<td>68</td>
<td>57</td>
<td>62</td>
<td>77</td>
<td>75</td>
<td>84</td>
</tr>
<tr>
<td>Used last 6 mths (%)</td>
<td>17</td>
<td>22</td>
<td>18</td>
<td>37</td>
<td>44</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>2 (1-25)</td>
<td>2.5 (1-20)</td>
<td>2 (1-20)</td>
<td>2 (1-25)</td>
<td>3 (1-25)</td>
<td>2 (1-48)</td>
<td>3 (1-24)</td>
</tr>
<tr>
<td>Median quantities used (tabs):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical (range)</td>
<td>1 (0.50-2)</td>
<td>1 (0.25-4)</td>
<td>1 (0.25-2.5)</td>
<td>1 (0.5-3)</td>
<td>1 (0.5-3)</td>
<td>1 (0.25-5)</td>
<td>1 (0.5-2)</td>
</tr>
<tr>
<td>Heavy (range)</td>
<td>2 (0.50-6)</td>
<td>1 (0.25-10)</td>
<td>1.75 (0.5-3)</td>
<td>1 (0.5-3.5)</td>
<td>1 (0.5-6)</td>
<td>1 (0.25-20)</td>
<td>1 (0.5-5)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

Figure 19 presents the location of last LSD use. In contrast to many of the other drugs reported herein, LSD had been often used in public settings such as outdoors (34%), at live music events (10%) and raves/dance parties (5%). However, respondents had also recently used it at a friend’s home (24%) and, less commonly, in other venues.

Figure 19: Last location of LSD use among REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
4.7.2 Hallucinogen use in other populations

General population

Figure 20 presents data across time on the recent use of hallucinogens in the NSW general population among participants aged 14 years or over. The authors noted a significant increase in the proportions reporting both lifetime and past year use of hallucinogens from 2007 to 2010 (Australian Institute of Health and Welfare, 2011).

Figure 20: Percentage of sample reporting recent* and lifetime hallucinogen use in the NSW general population, 2004-2010

Used in the last 12 months

Sydney Gay Community Periodic Survey

LSD was omitted from the questionnaire for the Sydney Gay Community Periodic Survey in 2011. The most recent data available is from 2010 where 6% reported recently using LSD/trips (Figure 21). This figure reportedly remained relatively stable over time (Lee et al., 2010).

Figure 21: Proportion of gay men in Sydney reporting the recent use of LSD/trips, 2004-2010

Source: Sydney Gay Community Periodic Survey, 2006-2010
Sydney Women and Sexual Health Survey

Figure 22 shows the proportion of women surveyed who had used LSD in the past six months. This figure had remained relatively stable since 2008, with nearly one-tenth of the group reporting recent LSD use (Mooney-Somers, Deacon & Parkhill, in press).

Figure 22: Proportion of LBQ women in Sydney reporting recent LSD use, 2008-2012

Source: Sydney Women and Sexual Health Survey 2008-2012
Note: LSD use was not recorded in the 2006 survey

Key expert comments

Most agreed that there had been at least a slight increase in the use of LSD and other hallucinogens lately. Two commented that LSD was mostly used among older, more experienced REU (i.e. 25 years and above), however, one reported that it was becoming more popular among younger users because it was comparatively inexpensive.

Health KE noted that people who had taken hallucinogens rarely presented to their services. On occasions when they did present, they tended to be inexperienced users. One noted that in most cases the issue seemed to be one of a lack of education about the effects of this drug rather than reckless behaviour per se.

The most common presentation to health services was disorientation or injuries associated with trips and falls. However, in some cases, patients were displaying signs of psychotic behaviour and required sedation.

One had observed that some of his patients had only displayed behaviour of intoxication with a hallucinogen for 1 or 2 hours and wondered whether they had taken other hallucinogenic drugs like 2C-B instead of LSD (which has a far longer duration).

Several had heard of ‘tripstasy’ although were unsure what drug this was exactly (some suggested it referred to a drug of the 2C-X family).
4.8 Cannabis use

Summary:
- Almost every participant had tried cannabis at least once and the vast majority had used it recently.
- Cannabis was used on a median of 48 days (i.e. twice per week) over the preceding six months.
- The use of cannabis had remained relatively stable over time.
- The use of cannabis among the NSW general population increased significantly from 9.1% in 2007 to 10.3% in 2010.
- The use of cannabis among participants of the Sydney Gay Community Periodic Survey has continued to decline over time.
- About one-third of women in the Sydney Women and Sexual Health Survey reported recent use of cannabis, which has remained stable over time.
- KE revealed that cannabis use was more problematic with young users. KE working with this age group observed difficulty educating them on the long-term effects of cannabis use.

Cannabis is derived from the cannabis plant (Cannabis sativa). While cannabis can be grown in almost any climate, it is being increasingly cultivated by means of indoor hydroponic technology. The main active ingredient in cannabis is delta-9-tetrahydrocannabinol (THC). Cannabis is used recreationally in three main forms: marijuana (‘bush’ or ‘hydro’ – see below for a description of these forms of marijuana); hashish (‘hash’); and hash oil (National Drug and Alcohol Research Centre, 2008). Cannabis remains the dominant illicit drug in Australia in terms of arrests, seizures and use (Australian Crime Commission, 2012).

Almost every participant in the 2012 EDRS (99%) had ever used cannabis and the majority (86%) reported having done so over the six months preceding the interview (Table 11). Cannabis was first used at a median age of 15 years (range 11-25).

4.8.1 Cannabis use among REU

Recent cannabis users reported having used it on a median of 48 days (range 1-180). While approximately one-quarter of users (23%) had used cannabis on a less than monthly basis and 13% has used on a monthly to fortnightly basis, substantial proportions had used it more than fortnightly (12%), more than weekly (33%) or on a daily basis (18%). All recent users of cannabis had smoked it over the past six months and about one-third (30%) reported having recently ingested it.

Recent users of cannabis were asked how much they had smoked on their last occasion of use. Thirty-five participants quantified their last use in terms of cones and reported having smoked a median of 5 cones (range 1-30) on their last occasion of use. Forty REU quantified their use in terms of joints and reported having smoked a median of 1 joint (range 0.25-5) on their last occasion of use.
Trends in the use of cannabis are presented in Table 11. There was no significant change in the proportions reporting the lifetime or recent use of cannabis or in the number of days of use from 2011 to 2012.

Table 11: Patterns of cannabis use among REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Cannabis variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever used (%)</td>
<td>95</td>
<td>97</td>
<td>93</td>
<td>98</td>
<td>98</td>
<td>97</td>
<td>99</td>
</tr>
<tr>
<td>Used last 6 mths (%)</td>
<td>73</td>
<td>74</td>
<td>71</td>
<td>83</td>
<td>78</td>
<td>83</td>
<td>86</td>
</tr>
<tr>
<td>Of those who had used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median days used last 6 mths (range)</td>
<td>24 (1-180)</td>
<td>48 (1-180)</td>
<td>24 (1-180)</td>
<td>25.5 (1-180)</td>
<td>49 (1-180)</td>
<td>48 (1-180)</td>
<td>48 (1-180)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

4.8.2 Cannabis use in other populations

General population
The proportion of the NSW general population aged 14 years or over reporting recent use of cannabis increased significantly from 9.1% in 2007 to 10.3% in 2010. There was also a significant increase in the proportions reporting lifetime cannabis use over this time (Figure 23) (Australian Institute of Health and Welfare, 2011).

Figure 23: Percentage of sample reporting recent* and lifetime cannabis use in the NSW general population, 2004-2010

* Used in the last 12 months
Sydney Gay Community Periodic Survey

Figure 24 shows the proportion of gay men surveyed that had used cannabis in the past six months. About one-third of the men who participated had recently used cannabis. The authors reported a significant decrease in the use of cannabis over time since 2008 (Hull et al., 2012).

Figure 24: Proportion of gay men in Sydney reporting recent cannabis use, 2006-2012

Source: Sydney Gay Community Periodic Survey 2006-2012

Sydney Women and Sexual Health Survey

Figure 25 shows the proportion of women surveyed who had used cannabis in the past six months. This figure had remained relatively stable over time at approximately one-third of the group (Mooney-Somers, Deacon & Parkhill, in press).

Figure 25: Proportion of LBQ women in Sydney reporting recent cannabis use, 2006-2012

Source: Sydney Women and Sexual Health Survey 2006-2012

Illicit Drug Reporting System (IDRS)

A separate monitoring system investigating trends in the use of cannabis in IDU has been conducted in NSW since 1996, VIC and SA since 1997 and nationally since 2000. This is called the Illicit Drug Reporting System, or IDRS, and reports and bulletins are available from the NDARC website (http://ndarc.med.unsw.edu.au/group/drug-trends#menu_item_5).
Key expert comments

It was generally agreed that cannabis use was uncommon in venues. While it may be present at festivals, health KE reported that people rarely presented to them with cannabis-related complaints.

Most agreed that the cannabis market appeared stable overall.

Those who worked with young people noted that cannabis was very commonly used among this group. They reported often hearing from their clients that cannabis helped to ‘calm them down’ or to relieve mood swings and aggression.

One had observed that her clients who were heavy cannabis users were less likely to be involved in school or work and that their use of cannabis often resulted in conflict in the home.

Another reported that in her experience, young people did not consider cannabis to be a particularly dangerous drug and often ‘laugh[ed] off’ the mental health symptoms that it provoked. She noted that it is difficult for young people to conceive of long-term harm and the lack of immediate negative consequences with cannabis made it difficult to educate this group about the risk associated with this drug.
4.9 Other drug use

Summary:

Alcohol
- Almost all 2012 NSW REU reported lifetime use (98%) and recent use (95%) of alcohol.
- KE reported that alcohol continued to be one of the most problematic drugs among REU, particularly amongst young people and festival goers. They also noted that the problematic alcohol use often occurred in self-serve environments.

Tobacco
- The majority of REU had used tobacco at least once (96%) and 91% had smoked within the past six months.

Benzodiazepines
- One-third of the group had recently used benzodiazepines. Illicit use was more common than licit use.
- KE reported widespread benzodiazepine use amongst a variety of people, however, the risks of using this substance were poorly understood by users.

Antidepressants
- One-in-ten REU had recently used antidepressants. Licit use was more common than illicit use.

Inhalants
- Amyl nitrite was used more commonly among REU (37%) than nitrous oxide (12%).

MDA
- KE reported an increased presence of MDA in Sydney.

Heroin and other opiates
- Nine REU reported recent heroin use. Recent use of other opiates was slightly more common for those illicitly obtained.
- KE felt that the use of heroin and other opiates were uncommon amongst REU because of the stigma associated with injecting.

Mushrooms
- Twenty-one per cent of the sample had recently used mushrooms.

Pharmaceutical stimulants
- One-quarter of the group had recently used pharmaceutical stimulants. Illicit use was more common than licit use.

Over the counter (OTC) drugs
- Twelve per cent reported recent use of OTC codeine-containing products for non-pain use, and 4% reported recent use of OTC stimulants for non-medicinal use.
4.9.1 Alcohol

Almost the entire 2012 sample of REU reported having used alcohol at least once (98%) and almost all of these (95%) reported having done so during the past six months. Participants had first used alcohol at a median age of 14 years (range 9-18). Participants reported having consumed alcohol on a median of 48 days (range 2-180) over the preceding six months and the majority of REU had used alcohol on a greater than weekly basis (67%) or a fortnightly to weekly basis (21%).

Figure 26 presents the median days of use of alcohol by REU within the six months preceding the interview across time. This figure appears to have remained relatively stable across time. See section 7.5 ‘Problematic alcohol use among REU’ for a discussion of harmful alcohol use among REU in NSW.

**Figure 26: Days of alcohol use among REU in the last six months, NSW 2006-2012**

![Figure 26](image)

Source: EDRS regular ecstasy user interviews 2006-2012

**Key expert comments**

Most KE felt that alcohol was currently the most problematic drug.

Several commented on drinking among young people. One noted that young people tended to drink with the explicit aim of ‘get[ting] smashed’. Interestingly, another noted that many of her younger clients didn’t like the taste of alcohol. In fact, she believed that alcohol may be less popular than cannabis in younger groups. She also noted that heavy alcohol use was not necessarily associated with heavy polydrug use among young people. Two commented that alcohol was not consumed as much at GLBT events.

One KE working in festival settings observed that among the people who presented to his health service with alcohol-related issues, there was a high proportion who were young girls. He also noted that while in previous years he would have an influx of alcohol-related presentations at 6pm or 7pm this had changed at recent events when people were presenting as early as 1pm or 2pm with extreme alcohol intoxication. This KE hypothesised that this resulted from people (especially young people) smuggling spirits into festivals and becoming very intoxicated very early as a result of drinking uncontrolled quantities of alcohol.
4.9.2 Tobacco
The vast majority (96%) of REU interviewed in 2012 had used tobacco at some point and most (91%) reported having done so over the preceding six months. Tobacco was first used at a median age of 15 years (range 7-25). Tobacco had been used on a median of 180 days (range 4-180) over the preceding six months and over half (60%) of those who had recently used tobacco were daily smokers. The proportion of REU using tobacco in their lifetime and over the past six months has remained relatively stable from 2011 to 2012 (Figure 27).

Figure 27: Proportion of REU reporting lifetime and recent tobacco use, NSW 2006-2012

Source: EDRS regular ecstasy user interviews 2006-2012

Key expert comments
It was uncommon for KE to comment on tobacco use among REU. However, one who worked with young people noted that many of her clients had tried smoking tobacco. She reported that approximately one-third smoked regularly. It was not her impression that all regular tobacco users were also regular cannabis users in this group. She also noted that her young clients had mixed attitudes toward smoking with a substantial group indicating that they did not like or support smoking.

4.9.3 Benzodiazepines
More than half (57%) of the sample reported having ever used any benzodiazepines and one-third (30%) reported having done so recently. Among those who had recently used them, benzodiazepines had been used on a median of 5.5 days (range 1-180). Lifetime and recent use of benzodiazepines remained relatively stable from 2011 to 2012 (Figure 28).
Licit benzodiazepines
One-fifth (19%) REU reported having ever used licitly obtained benzodiazepines and 13% had done so recently. Licit benzodiazepines were first used at a median age of 26 years (range 14-37). They had been used on a median of 24 days (range 1-180) over the six months prior to the interview. The majority reported using licitly obtained benzodiazepines either more frequently than weekly (39%) or fortnightly to weekly (23%). All thirteen participants reported swallowing as the main route of administration of licitly obtained benzodiazepines over this period.

Illicit benzodiazepines
Half (50%) of REU had ever used illicitly obtained benzodiazepines, and one-fifth (21%) had done so over the preceding six months. They were first used at a median age of 19 years (range 15-41) and were most commonly swallowed. Illicit benzodiazepines had been used on a median of 3 days (range 1-180) by recent users, with the majority (67%) reporting that they had used illicitly obtained benzodiazepines on a less than monthly basis.

**Figure 28: Proportion of REU reporting lifetime and recent benzodiazepine use, NSW 2006-2012**

Source: EDRS regular ecstasy user interviews 2006-2012

**Key expert comments**
KE generally agreed that drugs such as Valium and Xanax tend to be used as ‘downers at the end of the night’ or to help people get to sleep. One reported that people tend to swallow benzodiazepines including people who inject drugs. Others agreed that most users were unaware of the potential for overdose and also of how to react in that situation.

Some who worked with young people observed that the use of benzodiazepines was reasonably common in this group. One estimated that 10-20% of her clients had recently used these drugs.
4.9.4 Antidepressants

One-quarter (24%) of participants reported having ever used antidepressants and one-in-ten (11%) had done so over the preceding six months. Among those who had recently used them, antidepressants had been used on a median of 60 days (range 1-180).

Licit antidepressants

One-fifth of the sample (19%) had ever used licitly obtained antidepressants and almost one-tenth (9%) had done so over the preceding six months. Licit antidepressants were first used at a median age of 19 years (range 16-38). They had been used on a median of 90 days (range 15-180), with the majority of participants reporting that they had used licitly obtained antidepressants either daily (45%) or more frequently than weekly (33%). Swallowing was reported as the main route of administration.

Illicit antidepressants

Seven participants reported having ever used illicit antidepressants and two participants reported having used them over the past six months. Illicit antidepressants were first used at a median age of 19 years (range 17-27). Given the small sample who had recently used illicitly obtained antidepressants (n=2), data on routes of administration and the median days of use are not presented here.

Figure 29 presents data from 2006 onwards on the reported lifetime and recent use of any antidepressants. Both of these proportions have remained stable from 2011 to 2012.

Figure 29: Proportion of REU reporting lifetime and recent antidepressant use, NSW 2006-2012

Source: EDRS regular ecstasy user interviews 2006-2012
### 4.9.5 Inhalants

**Amyl nitrite**

Almost three-quarters (70%) of REU interviewed had ever used amyl nitrite and two-fifths of the sample (37%) had used it over the preceding six months. Amyl nitrite was first used at a median age of 17.5 years (range 12-43). Those who had recently used it had done so on a median of 3 days (range 1-180) over the preceding six months. The majority of recent users of amyl nitrite (65%) used it on a less than monthly basis.

**Nitrous oxide**

Approximately half (46%) of the sample reported having ever used nitrous oxide and 12% had done so recently. Nitrous oxide was first used at a median age of 18 years (range 15-38). Among those who had used it over the last six months, nitrous oxide had been used on a median of 3.5 days (range 1-21) during this time, with the majority reporting that they used it on a less than monthly basis (67%).

Figure 30 presents trends across time of the proportions of the EDRS samples that had ever used, and had recently used, both amyl nitrite and nitrous oxide. The proportions reporting recent and lifetime use of both drugs remained stable from 2011 to 2012.

**Figure 30: Proportion of REU reporting lifetime and recent amyl nitrite and nitrous oxide use, NSW 2006-2012**

![Graph showing trends in the use of amyl nitrite and nitrous oxide](image)

**Source:** EDRS regular ecstasy user interviews 2006-2012

Inhalant use in other populations

The recent use of inhalants in the NSW general population aged 14 years has remained low, although there was a significant increase reported from 0.4% in 2007 to 0.6% in 2010 (Australian Institute of Health and Welfare, 2011).

Data collected across time from the Sydney Gay Community Periodic Survey has shown that large proportions of men reported the use of amyl nitrite in the past six months (Figure 31). Two-fifths (41%) of participants in 2012 reported recently using amyl nitrite, which has remained stable across time (Hull et al., 2012).
Figure 31: Proportion of gay men in Sydney reporting recent amyl nitrite use, 2006-2012

Source: Sydney Gay Community Periodic Survey 2006-2012

In the 2012 Sydney Women and Sexual Health Survey, approximately one-tenth of LBQ participants reported recent use of amyl nitrite. These figures have remained stable over the past four years (Mooney-Somers, Deacon & Parkhill, in press).

Figure 32: Proportion of LBQ women in Sydney reporting recent amyl nitrite use, 2008-2012

Source: Sydney Women and Sexual Health Survey 2008-2012

4.9.6 MDA

One-quarter (28%) of participants in the 2012 EDRS reported having ever used MDA, and 16% reported they had used it over the preceding six months. MDA was first used at a median age of 18.5 years (range 16-39). Recent users reported using MDA on a median of 2.5 days (range 1-24). Although the proportion of REU who have used MDA recently has doubled from 2011 to 2012, this increase was not statistically significant (Figure 33).
4.9.7 Heroin and other opiates

Heroin
Over one-in-ten (14%) of REU reported that they had ever used heroin and 9% reported using it in the preceding six months. The median age that heroin was first used was 21.5 years (range 14-47). Of those participants who reported heroin use in the preceding six months, the median days of use was 12 (range 1-130). Although participants reported injecting (89%) as the most common route of administration, one participant also reported snorting.

Methadone and buprenorphine
Eleven participants reported the lifetime use of methadone and eight participants had used it over the preceding six months. Four participants reported lifetime use of buprenorphine and two participants had used it within the past six-months. Given such a small sample of recent users, details regarding frequency and quantity of use are not presented.

Other opiates
While one-fifth (17%) of respondents had ever used a licitly obtained opiate (other than methadone or buprenorphine), only five participants had used a licitly obtained opiate recently. Over one-fifth (23%) of the sample reported having ever used illicitly obtained opiates (other than heroin, methadone or buprenorphine) and eight participants had used them over the six months prior to the interview.

Opiate use in other populations
A separate monitoring system investigating trends in the use of opioids in injecting drug users has been conducted in NSW since 1996, VIC and SA since 1997 and nationally since
2000. This is called the Illicit Drug Reporting System, or IDRS, and reports and bulletins are available from the NDARC website (http://ndarc.med.unsw.edu.au/group/drug-trends#menu_item_5).

### Key expert comments
KE noted the use of heroin and other opiates was very uncommon among party goers. One who worked with young people noted that there was a lot of stigma associated with injecting drugs among this group, which would likely discourage someone from ‘expos[ing] themselves as an injector’. Two KE working in a nightclub setting said they had previously seen syringes in the venue but not so much recently.

#### 4.9.8 Mushrooms
Three-fifths (57%) of the REU interviewed in 2012 reported having ever used mushrooms and one-fifth (21%) had done so over the preceding six months. Mushrooms were first used at a median age of 18 years (range 15-26). Those who had recently used mushrooms had done so on a less than monthly basis and the main route of administration described by users of mushrooms was swallowing. Recent use of mushrooms appears to have remained relatively stable from 2011 to 2012 (Figure 34).

**Figure 34: Proportion of REU reporting recent mushroom use, 2006-2012**

![Graph showing percentage of regular ecstasy users reporting recent mushroom use, 2006-2012.](image)

Source: EDRS regular ecstasy user interviews 2006-2012

#### 4.9.9 Pharmaceutical stimulants
Almost two-thirds (62%) of participants in 2012 reported having ever used pharmaceutical stimulants and one-quarter (25%) had done so within the six months preceding the interview. The lifetime and recent use of pharmaceutical stimulants had remained mostly stable from 2011 to 2012. Pharmaceutical stimulants were used on a median of 2 days (range 1-102) over the preceding six months.
Licit pharmaceutical stimulants
While nine participants reported having used licitly obtained pharmaceutical stimulants, only two REU had used them recently. Licitly obtained pharmaceutical stimulants were first used at a median age of 15 years (range 5-40).

Illicit pharmaceutical stimulants
Over half of the sample (58%) had ever used illicitly obtained pharmaceuticals and 24% had done so over the preceding six months. Illicit pharmaceutical stimulants were first used at a median age of 18 years (range 14-42). Those who had recently used them had done so on a median of 2 days (range 1-30) over the preceding six months. While the majority of those who had recently used illicitly obtained pharmaceutical stimulants had swallowed them (88%), over half of this group had also recently snorted them (54%).

4.9.10 Over the counter drugs

Codeine
One-quarter (26%) of the sample reported having ever used over the counter codeine-containing products for non-pain use and 12% reported having done so over the preceding six months. These products were first used at a median age of 18 years (range 12-36). Swallowing was the most common route of administration.

Stimulants
One-fifth of the sample (18%) reported having ever used over the counter stimulants (such as Sudafed and Codral) for non-medicinal use and only 4% had used them recently. These products were first used at a median age of 17.5 years (range 14-27). Given such a small sample of recent users, details regarding frequency and quantity of use are not presented.

4.9.11 Performance and image enhancing drugs (PIED)
Only one participant reported lifetime use of steroids, however, there were no reports of steroid use in the preceding six months in the 2012 NSW REU sample.
### 4.10 Emerging psychoactive substance (EPS) use

**Summary:**
- In 2012, half (51%) of the NSW EDRS sample had consumed an EPS in the previous six month period.
- The most commonly used psychoactive substances over the preceding six months were 2C-B (17%), herbal highs (13%), synthetic cannabinoids (12%) and DMT (11%).
- KE reported that although EPS are not overly prevalent amongst REU, they have the potential to be very problematic.

From 2010 onward, the EDRS attempted to systematically investigate a group of emerging drugs known as ‘psychoactive substances’ (also known as research chemicals, analogues, legal highs, herbal highs, party pills). These drugs can be classified as outlined in Figure 35.

**Figure 35: Psychoactive substances investigated by the EDRS**

Psychedelic refers to “a mental state of enlarged consciousness, involving a sense of aesthetic joy and increased perception transcending verbal concepts” or “denoting or relating to any of a group of drugs inducing such a state, especially LSD” (Macquarie Dictionary). Phenethylamine is a neurotransmitter that is an amine resembling amphetamine in structure and pharmacological properties. Derivatives of phenethylamine are referred to as phenethylamines (Merriam-Websters Medical Dictionary). Tryptamine is a crystalline amine derived from tryptophan. Substituted derivatives of this amine, some of which are significantly hallucinogenic or neurotoxic, are known as ‘tryptamines’ (Merriam-Websters Medical Dictionary).
Table 12 provides a very brief introduction to these drugs to provide a rough guide for interpreting trends data. Interested readers are directed toward online sources such as Erowid (http://www.erowid.org/splash.php) and Drugscope (http://www.drugscope.org.uk/) for more comprehensive information on these drugs.

### Table 12: Emerging psychoactive substances

<table>
<thead>
<tr>
<th>Street name</th>
<th>Chemical name</th>
<th>Information on drug</th>
<th>Information on use and effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psychedelic Phenethylamines</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2C-I</td>
<td>2,5-dimethoxy-4-iodophenethylamine</td>
<td>A psychedelic drug with stimulant effects</td>
<td>Recent reports suggest that 2C-I is slightly more potent than the closely related 2C-B. A standard oral dose of 2C-I is between 10-25 mg.</td>
</tr>
<tr>
<td>2C-B</td>
<td>4-Bromo-2,5-dimethoxyphenethylamine</td>
<td>A psychedelic drug with stimulant effects</td>
<td>2C-B is sold as a white powder sometimes pressed in tablets or gel caps. The dosage range is listed as 16-24mg. Commonly taken orally but can also be snorted.</td>
</tr>
<tr>
<td>2C-E</td>
<td>2,5-dimethoxy-4-ethylphenethyl-amine</td>
<td>A psychedelic drug with stimulant effects</td>
<td>Mostly taken orally and is highly dose-sensitive. 2C-E is commonly active in the 10-20mg range.</td>
</tr>
<tr>
<td>DOI (death on impact)</td>
<td>2,5-dimethoxy-4-iodoamphetamine</td>
<td>A psychedelic phenethylamine</td>
<td>Requires only very small doses to produce full effects. It is uncommon as a substance for human ingestion but common in research. Has been found on blotting paper and may be sold as LSD⁵.</td>
</tr>
<tr>
<td>Mescaline</td>
<td>3,4,5-trimethoxyphenethylamine</td>
<td>A hallucinogenic alkaloid</td>
<td>First isolated in 1896 from the peyote cactus of northern Mexico. A standard dose for oral mescaline use ranges from 200-500mg.</td>
</tr>
<tr>
<td><strong>Psychedelic Tryptamines</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMT</td>
<td>Dimethyl tryptamine</td>
<td>A hallucinogenic drug in the tryptamine family</td>
<td>Similar to LSD though its effects are said to be more powerful. Pure DMT is usually found in crystal form but has been reportedly sold in powder form⁶.</td>
</tr>
<tr>
<td>5-MeO-DMT</td>
<td>5-methoxy-N,N-dimethyltryptamine</td>
<td>A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the <em>Bufo alvarius</em> toad</td>
<td>5-MeO-DMT is comparable in effects to DMT, however, it is substantially more potent. It can be injected, smoked or sniffed and the effects rarely last more than two hours. 5-MeO-DMT is mostly seen in crystalline form⁷ but has been as reportedly sold in powder form.</td>
</tr>
</tbody>
</table>

⁵ Erowid: http://www.erowid.org/chemicals/doi/doi.shtml
⁶ Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/dmt
⁷ Erowid: http://www.erowid.org/chemicals/5meo_dmt/5meo_dmt.shtml
### Table 12: Emerging psychoactive substances (continued)

<table>
<thead>
<tr>
<th>Street name</th>
<th>Chemical name</th>
<th>Information on drug</th>
<th>Information on use and effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stimulants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mephedrone</td>
<td>4-methyl-methcathinone</td>
<td>A stimulant which is closely chemically related to amphetamines</td>
<td>Reportedly produces a similar experience to drugs like amphetamines, ecstasy or cocaine. Mephedrone is a white, off-white or yellowish powder although it may also appear in pill or capsule form. Mephedrone is probably the most well known of a group of drugs derived from cathinone (a chemical found in the plant called khat)(^8).</td>
</tr>
<tr>
<td>BZP</td>
<td>1-benzylpiperazine</td>
<td>A piperazine; a CNS stimulant.</td>
<td>Gained popularity in some countries in the early 2000’s as a legal alternative to amphetamines and ecstasy. One of the more common piperazines, providing stimulant effects which people describe as noticeably different than those of amphetamines. Not particularly popular as many people find that it has more unpleasant side effects than amphetamines. BZP is used orally at doses of between 70-150 mg and effects are reported to last 6-8 hours(^9).</td>
</tr>
<tr>
<td>Ivory wave/MDPV</td>
<td>Methylenedioxypyrovalerone (3,4-methylenedioxy)</td>
<td>A cathinone derivative</td>
<td>More potent than other cathinones. Lidocaine (a common local anesthetic) is frequently used as a cutting agent, to give users the numbing sensation in the mouth or nose which is associated with drugs of high purity (e.g. high-purity cocaine)(^10).</td>
</tr>
<tr>
<td><strong>Naturally Occurring Substances</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datura</td>
<td>Commonly <em>Datura inoxia</em> and <em>Datura stramonium</em>. Contains Atropine and Scopolamine. Also known as Angel's Trumpet</td>
<td>Atropine is a potent anticholinergic agent. Scopolamine is a CNS depressant and has antimuscarinic properties</td>
<td>The plant’s effects make the user feel drowsy, drunk-like and detached from things around them. They can also bring on hallucinations. Doses are difficult to judge and can cause unconsciousness and death(^11).</td>
</tr>
</tbody>
</table>

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\(^8\) [Drugscope](http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/mephedrone)

\(^9\) [Erowid](http://www.erowid.org/chemicals/bzp/bzp_basics.shtml)

\(^10\) [Drugscope](http://www.drugscope.org.uk/Media/Press+office/pressreleases/ivory_wave_MDPV)

\(^11\) [Drugscope](http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/datura)
### Naturally Occurring Substances (continued)

<table>
<thead>
<tr>
<th>Street name</th>
<th>Chemical name</th>
<th>Information on drug</th>
<th>Information on use and effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salvia</td>
<td><em>Salvia divinorum</em> (contains Salvinorin A)</td>
<td>Salvia is derived from the American plant <em>Salvia divinorum</em>, a member of the mint family</td>
<td>At low doses (200-500mcg) salvia produces profound hallucinations that last from 30 minutes to an hour or so. In higher doses the hallucinations last longer and are more intense.</td>
</tr>
<tr>
<td>LSA</td>
<td><em>d</em>-lysergic acid amide</td>
<td>A naturally occurring psychedelic found in plants such as Morning Glory and Hawaiian Baby Woodrose seeds</td>
<td>LSA has some similarities in effect to LSD, but is generally considered much less stimulating and can be sedating in larger doses.</td>
</tr>
</tbody>
</table>

### Other Psychoactive Substances

<table>
<thead>
<tr>
<th>Street name</th>
<th>Chemical name</th>
<th>Information on drug</th>
<th>Information on use and effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>DXM</td>
<td>Dextromethorphan</td>
<td>A semisynthetic opiate derivative which is legally available over the counter in the US</td>
<td>Commonly found in cough suppressants, especially those with ‘DM’ or ‘Tuss’ in their names. It is a dissociative drug that is almost always used orally, although pure DXM powder is occasionally snorted. Recreational doses range from 100-1200mg or more.</td>
</tr>
<tr>
<td>PMA</td>
<td>Paramethoxyamphetamine; 4-methoxy-amphetamine</td>
<td>A synthetic hallucinogen that has stimulant effects</td>
<td>Ingesting a dose of less than 50mg (usually one pill or capsule) without other drugs or alcohol induces symptoms reminiscent of MDMA, although PMA is more toxic than MDMA. Doses over 50mg are considered potentially lethal (due to the risk of overheating). Pure PMA is a white powder, but street products can also be beige, pink or yellowish. Today it is usually made into pressed pills.</td>
</tr>
<tr>
<td>K2/Spice</td>
<td>Synthetic cannabinoid</td>
<td>Usually sold as loose, generic plant material with a mix of chemicals on it (containing synthetic cannabinoids)</td>
<td>A psychoactive herbal and chemical product that, when consumed, mimics the effects of cannabis.</td>
</tr>
<tr>
<td>Methylone</td>
<td>3,4-methylenedioxy-N-methylcathinone</td>
<td>An entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes</td>
<td>Reported dosages range from 100-250mg orally. Effects are primarily psychostimulant in nature.</td>
</tr>
</tbody>
</table>

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12 Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/salvia
13 Erowid: http://www.erowid.org/chemicals/dxm/dxm_basics.shtml
14 Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/pma
Amongst the 2012 NSW EDRS sample, 73% reported having ever used EPS and 51% reported using EPS in the last six months. The most common psychoactive substances ever used among Sydney REU were 2C-B (35%), herbal highs (26%), synthetic cannabinoids (23%) and DMT (15%). However, the proportions who had used psychoactive substances in the last six months were lower. Those most commonly used over the preceding six months were 2C-B (17%), herbal highs (13%), synthetic cannabinoids (12%) and DMT (11%) (Table 13).

Table 13 presents the proportion of REU reporting lifetime and recent EPS use across time. Significant changes that were reported in EPS use from 2011 to 2012 included:

- a significant decline in the proportion reporting lifetime use of 2C-E ($p=0.03$);
- a significant decline in the proportion reporting lifetime use of mephedrone ($p=0.005$);

It was also noted that there was a marked increase in reported lifetime and recent use of 2C-B, which was approaching significance.

### Table 13: Emerging psychoactive substance use among REU, NSW 2010-2012

<table>
<thead>
<tr>
<th>Emerging psychoactive substances</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2C-I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2C-B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>16</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>2</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>2C-E</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>DOI (Death On Impact)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Mescaline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>8</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>DMT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>18</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>7</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>5-MeO-DMT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>1</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Mephedrone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>4</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>4</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2010-2012
Table 13: Emerging psychoactive substance use among REU, NSW 2010-2012 (continued)

<table>
<thead>
<tr>
<th>Emerging psychoactive substances</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BZP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>2</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td><strong>MDPV / Ivory Wave</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Datura</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>1</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Salvia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>n/a</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>LSA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2011</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>DXM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>2</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td><strong>PMA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td><strong>K2 / Spice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2011</td>
<td>1</td>
<td>Refer to synthetic cannabinoids</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Methyline</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2011</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>MPTP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2011</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Synthetic cannabinoids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td>Data not available until 2011</td>
<td>3`</td>
<td>23^</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>3`</td>
<td>12^</td>
<td></td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2010-2012

^ In 2011, ‘K2 / Spice’ and ‘Other synthetic cannabinoids’ were separate categories.

# In 2012, ‘synthetic cannabinoids’ incorporated both ‘K2 / Spice’ and ‘Other synthetic cannabinoids’ categories.
Table 13: Emerging psychoactive substance use among REU, NSW 2010-2012 (continued)

<table>
<thead>
<tr>
<th>Emerging psychoactive substances</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MDAI</strong></td>
<td></td>
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</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>5-IAI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Benzo Fury / 6-APB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Methoxetamine / MXE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>2C-P</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Capsule (contents unknown)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Herbal high</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ever used (%)</td>
<td></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>used last 6 mths (%)</td>
<td>Data not available until 2012</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2010-2012
Key expert comments

Overall, KE knowledge of these drugs was scarce and usually based on small numbers. A KE working in a health setting noticed that there was a tendency for EPS to ‘pop up for one or two months and then disappear’.

Many reported an increase in the number of ‘MDMA analogue’ detections over the recent financial year. A law KE reported that the main EPS identified in NSW recently were 2C-B and MDA. These two drugs accounted for approximately 66% of all ‘MDMA analogues’ seized. The next most common drug was DMT, accounting for 6% of all ‘MDMA analogue’ seizures during this period.

Two KE noted that they had recently heard of users taking ‘tripstasy’ which is described as a cross between ecstasy and LSD. This sounds very similar to the effects described by 2C-B users. Given the high rates of 2C-B seized in Sydney recently, there is some indication that this may indeed be the drug which dealers and users refer to locally as Tripstasy.
5 DRUG MARKET: PRICE, PURITY, AVAILABILITY AND SUPPLY

5.1 Ecstasy

Summary:
- **Price**: $25 per tablet.
- **Purity**: Currently medium and fluctuating.
- **Availability**: Currently easy to very easy to obtain and stable.
- Several KE had reason to believe that the purity of ecstasy was beginning to increase after a substantial period of low purity, and that ecstasy had become more available in NSW.
- KE reported an increase in the forms of MDMA available, including in powder and crystal form.

5.1.1 Price

Almost all (96%) participants were able to comment on the price of ecstasy tablets in Sydney. The median price was reported by users to be $25 per tablet (range 5-50) (Table 14). While the majority of the group (56%) reported that the price of ecstasy tablets had remained stable, one-quarter (24%) reported that this price had increased over the six months preceding the interview.

Over one-third (38%) of the sample was able to comment on the price of ecstasy capsules (commonly referred to as caps). Caps were reportedly $40 each (range $20-60). As only five participants were able to comment on the price of ecstasy powder, these data will not be presented here.

Table 14: Price of ecstasy purchased by REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Ecstasy variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median price/tablet ($) (range)</td>
<td>30 (20-50)</td>
<td>30 (15-40)</td>
<td>30 (15-50)</td>
<td>20 (11-40)</td>
<td>25 (10-50)</td>
<td>25 (7-50)</td>
<td>25 (5-50)</td>
</tr>
</tbody>
</table>

**Price change:**
- Increased (%): 3, 4, 5, 6, 20, 28, 24
- Stable (%): 69, 71, 68, 58, 61, 58, 56
- Decreased (%): 16, 12, 17, 27, 15, 8, 8
- Fluctuated (%): 7, 8, 3, 4, 4, 6, 12
- Don’t know (%): 5, 5, 7, 5, - , - , -

Source: EDRS regular ecstasy user interviews 2006-2012
Note: Response option ‘don’t know’ was removed from analyses from 2010 onward
Participants were asked questions regarding their purchasing of ecstasy over the last six months. Participants reported that they had purchased ecstasy from a median of 3 people (range 1-20). While two-fifths (42%) of the sample usually purchased ecstasy for themselves only, more than half of the sample (57%) had purchased ecstasy for themselves and others. When asked about how frequently they purchased ecstasy, the majority of participants reported that they had bought ecstasy monthly or less (38%) or fortnightly or less (44%). A smaller proportion reported that they purchased ecstasy weekly or less (15%) or three times a week or less (3%). The median number of tablets purchased was 4 (range 1-1,000).

**Source person and source location of last purchase**

Participants were asked to describe the types of person they had last purchased ecstasy from (Figure 36). The majority of the group reported that they had last purchased ecstasy from a friend (51%) although over one-third (36%) had last bought it from a dealer (who was previously known to them). Smaller proportions purchased ecstasy from unknown dealers and acquaintances.

**Figure 36: People from whom ecstasy was last purchased by REU, NSW 2012**

Ecstasy was most often obtained at a friend’s house (19%) on the last occasion of purchase. Other common locations for purchasing ecstasy were at a dealer’s home (16%), at a nightclub (14%), at the participant’s own home (12%) or an agreed public location (12%) (Figure 37).
Figure 37: Locations at which ecstasy was last purchased* among REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
* Locations with <7% response were not included

5.1.2 Purity

Current purity
Figure 38 presents REU reports of ecstasy purity across time. In 2012, the majority of the sample reported that the current purity of ecstasy was either ‘medium’ (39%) or that it ‘fluctuated’ (29%). Nineteen per cent of participants reported that ecstasy purity was ‘low’ and 13% reported that it was ‘high’. It appeared that the purity of ecstasy in 2012 may be increasing, however, the purity was not stable and tended to fluctuate.

Figure 38: REU reports of current ecstasy purity, NSW 2006-2012

Source: EDRS regular ecstasy user interviews 2006-2012
Note: Response option ‘don’t know’ was removed from analyses from 2010 onward

Purity change
Figure 39 presents REU reports of changes in the purity of ecstasy over the six months prior to the interview. Over half of the sample reported that the purity of ecstasy remained stable (31%) or had declined (31%). An additional 20% reported that purity of ecstasy had
fluctuated, and the remaining 18% reported that purity had increased. These figures have remained relatively stable from 2011 to 2012.

Figure 39: REU reports of change in ecstasy purity in the past six months, NSW 2006-2012

![Graph showing change in ecstasy purity](image)

Source: EDRS regular ecstasy user interviews 2006-2012

Note: Response option 'don't know' was removed from analyses from 2010 onward

Estimates of purity are necessarily subjective and depend, among other factors, on users’ tolerance levels. Laboratory analyses of the purity of seizures of ecstasy provide objective evidence regarding purity changes, and should, therefore, be more highly regarded than the reports of users. However, it is also important to note the limitation of the purity figures calculated by forensic agencies. Not all illicit drugs seized by Australia’s law enforcement agencies are analysed for purity. In some instances, seized drugs will be analysed only in a contested court matter. The purity figures, therefore, relate to an unrepresentative sample of the illicit drugs available in Australia. Notwithstanding this limitation, it remains the case that the purity figures provided by forensic agencies remain the most objective measure of changes in purity levels available in Australia.

The purity data presented in this report were provided by the Australian Crime Commission (ACC), formerly the Australian Bureau of Criminal Intelligence (ABCI). The ACC reports both federal and state police seizure data, including number and weight of seizures. In 1999/00, the purity was reported as ‘ecstasy’ seizures. Since 2000/01, ecstasy seizures have been reported under phenethylamines. Ecstasy belongs to the phenethylamine family of drugs. Other drugs such as DOB (2,5-dimethoxy-4-bromoamphetamine), DOM (2,5-dimethoxy-4-methylamphetamine), MDA, MDEA, mescaline, PMA and TMA (3,4,5-trimethoxyamphetamine) also belong to the phenethylamine family (Australian Crime Commission, 2003) and seizures of these drugs are included in the seizure data from 2000/01.

Figure 40 presents the median purity of phenethylamines seizures analysed by the NSW Police and Australian Federal Police (AFP) from 2005/06 to 2010/11. While the median purity of analysed seizures continued to decline for NSW, the median purity of phenethylamines seized by the AFP rose from 52% in 2009/10 to 57% in 2010/11.

It should be noted that figures do not represent the purity levels of all seizures – only those that have been analysed at a forensic laboratory. In addition, the period between the date of
seizure by police and the date of receipt at the laboratory can vary greatly, and no adjustment has been made to account for double-counting joint operations between the AFP and NSW Police. Further, patterns of arrest and police operations change over time; for example, targeting of higher-level suppliers versus street dealers, and this, in turn, can influence the purity of the drug seized.

**Figure 40: Median purity of phenethylamines seizures analysed in NSW, 2005/06-2010/11**

![Median Purity Graph]


* Data for 2011/12 were unavailable at time of publication

The number of phenethylamine seizures made by the AFP continued to decrease from 5 in 2009/10 to 3 in 2010/11 (Figure 41). There was also a decline in the number of seizures made by NSW Police with the figure almost halving from 256 in 2009/10 to 167 in 2010/11. Caution should be used when interpreting the increase in the number of seizures analysed from 2005/06 when compared with previous years as this may reflect an increased police attention toward phenethylamines rather than an increased availability of these drugs.

**Figure 41: Number of phenethylamines seizures analysed in NSW, 2005/06-2010/11**

![Number of Seizures Graph]


* Data for 2011/12 were unavailable at time of publication
5.1.3 Availability

The large majority (88%) of REU interviewed in 2012 reported that it was currently ‘easy’ or ‘very easy’ to obtain ecstasy. Three-fifths (62%) of respondents indicated that the availability of ecstasy had remained ‘stable’ over the preceding six months (Table 15).

Table 15: Reports of availability of ecstasy in the past six months by REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Ecstasy variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current availability:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very easy (%)</td>
<td>60</td>
<td>72</td>
<td>74</td>
<td>52</td>
<td>41</td>
<td>51</td>
<td>42</td>
</tr>
<tr>
<td>Easy (%)</td>
<td>34</td>
<td>25</td>
<td>22</td>
<td>44</td>
<td>41</td>
<td>37</td>
<td>46</td>
</tr>
<tr>
<td><strong>Availability:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable (%)</td>
<td>80</td>
<td>81</td>
<td>73</td>
<td>61</td>
<td>59</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td>Easier (%)</td>
<td>5</td>
<td>7</td>
<td>16</td>
<td>22</td>
<td>10</td>
<td>13</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

Note: Response option ‘don’t know’ was removed from analyses from 2010 onward

**Key expert comments**

Several said that REU generally believed that ecstasy tablets were of poor quality i.e. contained low amounts of MDMA or did not contain MDMA at all, but rather, were unusual mixes of other drugs. These KE often said that REU believed MDMA caps were more pure and consistent than ecstasy tablets.

One KE working in law enforcement noticed an increase in the amount of ecstasy tablets available this year. They had also noticed an increase in the average purity of MDMA tablets compared with previous years where it was very low. In addition, this KE reported that the most common secondary constituent in MDMA containing tablets was caffeine. It was noted that occasionally tablets were seized which contained other unusual drugs (such as dextromethorphan); however, these tablets tended to contain very low levels of MDMA.

Several had observed a growing availability of MDMA ‘crystal’, a coarse powder/rock sold as MDMA. Toxicological analyses were able to confirm that the drug is available in that form and had indeed been observed by NSW Police. MDMA powder (typically sold in sachets) was also reported.

Two observed that users tended to open capsules and either snort or ‘bomb’ the powder inside (i.e. place a small amount of powder in tissue paper and swallow the package whole). They believed that users saw this as a better way to control their dose, rather than taking a pill and being uncertain of the effects.
5.2 Methamphetamine

Summary:

**Speed**
- *Price:* $75 per gram, which is a slight decrease from 2011.
- *Purity:* Currently medium to high, appeared to be stable.
- *Availability:* Reports variable.

**Base**
- *Price:* $170 per gram and reportedly stable.
- *Purity:* Currently low, appeared to be stable.
- *Availability:* Reports variable.

**Crystal**
- *Price:* $50 per point and reportedly stable.
- *Purity:* Reports variable for current purity and stability.
- *Availability:* Currently easy to obtain and stable.

Key experts agreed that speed and base had become more difficult to access, however, there were mixed reports on the availability of crystal.

5.2.1 Price

**Speed**
Twenty-one participants reported on the price of speed over the six months prior to the interview (Table 16). The median price reported the last time speed was purchased was $75 a gram (range $20-450), which is slightly lower than that recorded in 2011 ($80 per gram) (Table 16).

The vast majority of those who commented (88%) believed the price of speed had remained stable over the preceding six months, with only 6% respectively reporting that the price had decreased or had fluctuated. This is in keeping with the price changes noted above.

**Base**
Seven participants were able to report on the price of base overall, however, since smaller numbers reported on each individual price, these figures must be interpreted with caution. Three participants had last purchased base by point and reported a median price of $50 per point (range $40-60). Only two participants had last purchased base by the gram and reported a median price of $170 per gram (range $160-180) (Table 16).

The majority (86%) of those who commented felt the price of base had remained stable over the preceding six months, however, 14% reported that it had increased over that time.
Crystal

Fifteen participants were able to comment on the price of crystal over the preceding six months. The median price for a point of crystal was $50 (range $40-100), which is a return to the price trend observed prior to 2011 (Table 16).

The majority (64%) of those who commented on changes to the price of crystal over this time reported that it had remained stable, while one-fifth (21%) reported it had increased.

Table 16: Price of various methamphetamine forms purchased by REU, NSW 2006-2012

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point ($) (range)</td>
<td>n=50</td>
<td>n=23</td>
<td>n=27</td>
<td>n=18</td>
<td>n=14</td>
<td>n=27</td>
<td>n=21</td>
</tr>
<tr>
<td>Gram ($) (range)</td>
<td>40</td>
<td>47.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>32.5</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>(30-50)</td>
<td>(40-50)</td>
<td></td>
<td></td>
<td></td>
<td>(15-50)</td>
<td>(20-50)</td>
</tr>
<tr>
<td><strong>Base</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point ($) (range)</td>
<td>n=24</td>
<td>n=9</td>
<td>n=13</td>
<td>n=13</td>
<td>n=16</td>
<td>n=12</td>
<td>n=7</td>
</tr>
<tr>
<td>Gram ($) (range)</td>
<td>37.5</td>
<td>40</td>
<td>42.5</td>
<td>30</td>
<td>20</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>(20-50)</td>
<td>(15-50)</td>
<td>(20-70)</td>
<td>(20-60)</td>
<td>(10-50)</td>
<td></td>
<td>(40-60)</td>
</tr>
<tr>
<td><strong>Crystal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point ($) (range)</td>
<td>n=54</td>
<td>n=37</td>
<td>n=27</td>
<td>n=9</td>
<td>n=18</td>
<td>n=16</td>
<td>n=15</td>
</tr>
<tr>
<td>Gram ($) (range)</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>(30-80)</td>
<td>(30-60)</td>
<td>(40-60)</td>
<td>(50-80)</td>
<td>(40-90)</td>
<td>(16-100)</td>
<td>(40-100)</td>
</tr>
</tbody>
</table>
| **Source:** EDRS regular ecstasy user interviews 2006-2012 **Small numbers reporting, interpret with caution**

5.2.2 Purity

Figure 42 illustrates that the current purity of speed varied mostly from ‘medium’ (29%) to ‘high’ (41%). In contrast, the largest portion of respondents reported that the current purity of base was ‘low’ (42%). There was poor agreement among participants commenting on the current purity of crystal, which implies that this could be quite variable.
Figure 42: REU reports of current methamphetamine purity*, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
Note: ‘Don’t know’ responses removed
* Of those who commented (speed n=17; base n=7; crystal n=15)

Figure 43 presents data on the perceived change in purity of speed, base and crystal over the six months preceding the interview. The purity of speed was largely reported to have remained stable (73%), although a sizeable minority (18%) felt it had decreased recently. The purity of base was generally reported to have remained stable (72%), and the purity of crystal was variable.

Figure 44 shows the median purity of methylamphetamine seizures analysed in NSW for the period July 2005 to June 2011. The median purity of methylamphetamine seizures analysed remained relatively stable from 2009/10 to 2010/11 (Figure 44), according to data gathered by NSW Police. Over time, there has been much greater variation in the seizures analysed by the AFP and they have generally been of a higher median purity. Note that the majority of these seizures are likely to be from targeted, higher level operations than those made by state police. Thus it may be expected that these seizures would generally be of higher purity and that there would be fewer AFP seizures compared with those made by NSW Police. No methylamphetamine seizure purity data was available from the AFP for the period July 2007 to June 2011.
It should be noted that figures do not represent the purity levels of all methylamphetamine seizures—only those that have been analysed at a forensic laboratory. In addition, the period between the date of seizure by police and the date of receipt at the laboratory can vary greatly, and no adjustment has been made to account for double-counting joint operations between the AFP and NSW Police.

Figure 44: Median purity of methylamphetamine seizures analysed in NSW, 2005/06-2010/11

Note: Data for 2011/12 were unavailable at time of publication

Figure 45 shows the number of methylamphetamine seizures upon which the above purity figures are based. The number of seizures analysed in NSW appears to have increased over the last year. No methylamphetamine seizures were reported for the AFP over the period July 2007 to June 2011.

Figure 45: Number of methylamphetamine seizures analysed in NSW, 2005/06-2010/11

Note: Data for 2011/12 were unavailable at time of publication
5.2.3 Availability

Poor agreement was found among participants commenting on the current availability of both speed and base. For reports of speed availability, half of the sample reported that it was ‘easy’ (32%) or ‘very easy’ (21%), whereas the other half of the sample reported that speed was ‘difficult’ (42%) or ‘very difficult’ (5%) to currently obtain. Similarly, of those who could report on the availability of base, half reported that it was ‘easy’ (38%) or ‘very easy’ (12%) to obtain, whereas the other half reported that base was ‘difficult’ (38%) or ‘very difficult’ (12%) to currently obtain. Crystal was considered to be either ‘easy’ (53%) or ‘very easy’ (47%) to obtain at the time of interviewing in 2012 (Figure 46).

Figure 46: REU reports of current availability of methamphetamine forms*, NSW 2012

![Figure 46](image)

Source: EDRS regular ecstasy user interviews 2012

* Of those who commented (speed n=19; base n=8; crystal n=15)

Figure 47 shows the proportion of REU reporting the availability of the three forms of methamphetamine as ‘very easy’ to obtain over time. This figure has remained relatively stable from 2011 to 2012 across all three forms of methamphetamine investigated. This suggests that the availability of methamphetamine has remained relatively stable over this time.

Figure 47: Proportion of REU reporting methamphetamine as ‘very easy’ to obtain across time, NSW 2006-2012

![Figure 47](image)

Source: EDRS regular ecstasy user interviews 2006-2012

Note: Response option ‘don’t know’ was removed from analyses from 2010 onward
Figure 48 presents the perceived change in availability of speed, base and crystal over the six months prior to interviewing. Most participants who commented believed that the availability of speed (63%), base (63%) and crystal (80%) had remained stable.

**Figure 48:** REU reports of changes in the availability of various forms of methamphetamine in the past six months’, NSW 2012

![Graph showing availability changes]

**Source:** EDRS regular ecstasy user interviews 2012

Of those who commented (speed n=19; base n=8; crystal n=15)

**Source person and source location**

Overall, methamphetamines were most commonly purchased from friends followed by known dealers. Small numbers reported having purchased methamphetamines from street dealers, unknown dealers, acquaintances and online (Figure 49).

**Figure 49:** People from whom methamphetamine was last purchased’ by REU, NSW 2012

![Graph showing purchase locations]

**Source:** EDRS regular ecstasy user interviews 2012

Of those who commented (speed n=19; base n=8; crystal n=15)
Figure 50 compares locations of last purchase across the three forms of methamphetamine. Both base and crystal were most commonly purchased in private locations. Speed was last purchased in a mix of private and public settings, perhaps suggesting a different pattern of use than for base and crystal.

**Figure 50: Locations at which methamphetamine was last purchased among REU, NSW 2012**

Source: EDRS regular ecstasy user interviews 2012

Of those who commented (speed n=17; base n=7; crystal n=15)

**Key expert comments**

KE comments indicated that speed was not very available and also that the price and availability had remained stable over the past six to 12 months.

One mentioned that whenever he heard speed mentioned it was always in the context of ‘speed balls’. He said this tended to refer to either pills sold as ecstasy which users suspected mostly contained speed, or also to the practice of swallowing small parcels of powdered speed wrapped up in tissue paper.

Only two KE were able to comment on base. One said they had not heard of it lately and the other reported that there had not been any major change in the price or availability of base over the past six to 12 months.

There appeared to be mixed views about the availability of crystal. Two KE working in nightclub and festival settings said they had not noticed much ice use lately. However, another health KE noted that there appeared to be a ‘fair bit of ice around’. He said that some of the people presenting to his service had been injecting crystal while others had been smoking it.
5.3 Cocaine

Summary:
- **Price**: $300 per gram, stable.
- **Purity**: Variable although appears to have increased.
- **Availability**: Currently easy to obtain, stable.
- KE reported that cocaine purity was high, however, the purity had fluctuated. It was also noted that there were signs to suggest an increase in cocaine availability.

5.3.1 Price

Thirty-three participants were able to comment on the price of cocaine. The median price per gram was $300 (range $220-350). This figure has continued to remain stable for the past seven years (Table 17).

<table>
<thead>
<tr>
<th>Cocaine variable</th>
<th>2006 (n=23)</th>
<th>2007 (n=50)</th>
<th>2008 (n=41)</th>
<th>2009 (n=34)</th>
<th>2010 (n=38)</th>
<th>2011 (n=37)</th>
<th>2012 (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median price per gram ($) (range)</td>
<td>300 (100-300)</td>
<td>300 (180-350)</td>
<td>300 (250-400)</td>
<td>300 (120-400)</td>
<td>300 (200-450)</td>
<td>300 (80-1,000)</td>
<td>300 (220-350)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

The majority (70%) of those who commented on the price of cocaine believed it had remained stable over the preceding six months (Figure 51).

**Figure 51: Recent changes in price of cocaine purchased among REU, NSW 2012**

Source: EDRS regular ecstasy user interviews 2012
5.3.2 Purity

Forty-three REU were able to comment on the purity of cocaine. There was poor agreement on the current purity of cocaine, with the largest portion of participants rating cocaine purity as ‘medium’ (35%), closely followed by ‘high’ (28%) and ‘low’ (26%) (Figure 52). These data together suggest that the current purity of cocaine is variable.

Figure 52: REU reports of current purity of cocaine, NSW 2011 and 2012

Source: EDRS regular ecstasy user interviews 2011 and 2012
Note: Response option ‘don’t know’ was removed from analyses

From 2011 to 2012 there was a 24% increase in the percentage of respondents indicating that the purity of cocaine had remained stable over the preceding six months. There was a concurrent decrease in the proportions reporting that the purity of cocaine had decreased from 34% in 2011 to 15% in 2012 (Figure 53).

Figure 53: REU reports of change in cocaine purity in the past six months, NSW 2011 and 2012

Source: EDRS regular ecstasy user interviews 2011 and 2012
Note: Response option ‘don’t know’ was removed from analyses

Figure 54 presents data on the purity of cocaine seizures analysed in NSW by the AFP and NSW Police between July 2005 and June 2011. The purity of cocaine samples analysed by the AFP appears to have remained relatively stable over time. The purity of seizures analysed by NSW police continued to be substantially lower than those analysed by the AFP, and there was a notable drop in purity over the last months.
It should also be noted that figures do not represent the purity levels of all cocaine seizures – only those that have been analysed at a forensic laboratory. The period between the date of seizure by police and the date of receipt at the laboratory can vary greatly. No adjustment has been made to account for double-counting joint operations between the AFP and state/territory police.

**Figure 54: Median purity of cocaine seizures analysed in NSW, 2005/06-2010/11**

![Median purity graph](attachment:image.png)


**Note:** Data for 2011/12 were unavailable at time of publication

Figure 55 shows the number of seizures analysed in NSW between January 2006 and June 2011. The number of seizures made by the NSW Police peaked in mid- to late-2009, and then returned to levels observed earlier. The number of seizures analysed by the AFP has remained lower than the rates observed for NSW Police.

**Figure 55: Number of cocaine seizures analysed in NSW, January 2006 to June 2011**

![Number of seizures graph](attachment:image.png)


**Note:** Data for 2011/12 were unavailable at time of publication
5.3.3 Availability
Forty-four participants were able to comment on the availability of cocaine. Of these, the majority (66%) believed cocaine was currently either ‘easy’ or ‘very easy’ to obtain. However, one-third (34%) reported that it was currently ‘difficult’ to obtain. These figures have remained comparable with those from 2011 (Figure 56).

Figure 56: REU reports of current availability of cocaine, NSW 2011 and 2012

Source: EDRS regular ecstasy user interviews 2011 and 2012
Note: Response option ‘don’t know’ was removed from analyses

Two-thirds (69%) of those who commented stated that the availability of cocaine had remained stable over the preceding six months (Figure 57). This figure was similar to that reported in 2011.

Figure 57: REU reports of change in the availability of cocaine in the past six months, NSW 2011 and 2012

Source: EDRS regular ecstasy user interviews 2011 and 2012
Note: Response option ‘don’t know’ was removed from analyses
Source person and source location
Of those who commented on purchasing cocaine over the preceding six months (n=43), the majority had purchased it from a friend (53%) or a known dealer (28%). The most common location of last purchase was at a friend’s home (25%) followed by their own home (15%), at a private party (15%), or at a pub (13%). Smaller proportions purchased cocaine at other varied locations.

Key expert comments
KE noted that REU tend not to disclose the price of cocaine, however, it tends to be comparatively expensive. One reported that cocaine was becoming more available.

One KE noted that the purity was said to fluctuate and he frequently heard users complain that the purity of cocaine in Australia was lower than that in Europe. A KE working in law enforcement reported that the purity of seized cocaine tended to be very high regardless of whether the seizures were made from high-end dealers or users.
5.4 Ketamine

Summary:
- **Price**: $150 per gram, stable.
- **Purity**: Currently high and stable.
- **Availability**: Reports variable.
- KE reported that the availability and popularity of ketamine was low, however, when it was seen it was commonly in powder form.

5.4.1 Price

The reported price of ketamine has remained stable for the past six years at $150 per gram (Table 18). Over this time, the price range has been quite large, possibly indicating that the street price can be variable. In 2012, there was one report of ketamine purchased by the point at $50.

Of the twelve REU who commented, 67% reported that the price of ketamine had remained stable over the preceding six months, while one-quarter (25%) believed it had increased.

<table>
<thead>
<tr>
<th>Ketamine variable</th>
<th>2006 (n=7)</th>
<th>2007 (n=15)</th>
<th>2008 (n=13)</th>
<th>2009 (n=6)</th>
<th>2010 (n=7)</th>
<th>2011 (n=14)</th>
<th>2012 (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median price per gram ($) (range)</td>
<td>175 (80-200)</td>
<td>150 (50-280)</td>
<td>150 (40-250)</td>
<td>150 (140-170)</td>
<td>150 (100-280)</td>
<td>150 (50-200)</td>
<td>150 (20-180)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

5.4.2 Purity

Sixteen participants were able to comment on the purity of ketamine. Most of these (63%) reported that ketamine was currently ‘high’ purity, although one-third (31%) reported that it was currently ‘medium’ purity. While the majority of respondents (64%) stated that the purity of ketamine had remained stable over the preceding six months, a portion of respondents reported that purity had increased or decreased (14% respectively).

5.4.3 Availability

Sixteen participants commented on the availability of ketamine. Similar to 2011, there was little consensus about the current availability of ketamine with comparable proportions reporting that it was currently ‘easy’ or ‘very easy’ to obtain (50%), and that it was currently ‘difficult’ or ‘very difficult’ to obtain (50%). When asked about changes in the availability of ketamine over the preceding six months, two-thirds (67%) of the group stated that it had been stable, with smaller proportions reporting that it had become more difficult (20%) or easier (13%) to obtain.
Source person and source location
The majority of those who commented (93%) reported that on the last occasion they purchased ketamine from a friend. In keeping with this, 36% reported that they had last purchased ketamine at a private party or at their friend's home (29%).

Key expert comments
The overall consensus was that ketamine was not readily available and not particularly popular. One KE specifically noted that there had been a drop in people using ketamine and a subsequent drop in availability.

A KE working in law enforcement said they had observed few cases where ketamine had been seized by police. Almost all cases had been ketamine in powder form.
5.5 GHB

Summary:
- **Price**: $9 per mL, stable.
- **Purity**: Medium to high, variable.
- **Availability**: Currently easy to obtain, stable.
- KE comments indicated that GHB price, purity and availability were stable, however there was a vast predominance of GBL rather than GHB.

5.5.1 Price
Given the confusion regarding the size of vials in which GHB is typically purchased and the uncertainty around what constitutes a typical dose, it is not surprising that there is wide variation and seemingly inconsistent reports of the price of GHB between years.

In 2012, four participants commented on the price of GHB. The median price of 1mL was $9 (range $6-25). This is marginally lower than the price recorded in 2011 ($10 per mL (range $0-10)), however, due to small sample numbers this should be interpreted cautiously. Anecdotally, participants often commented that a ‘fish’ of GHB usually contains 2mL and this was a very common quantity purchased. One participant reported purchasing a ‘fish’ for $20. Of the four respondents, two reported that the price of GHB had remained stable. Again, since such small numbers comment on the price of GHB, it is difficult to identify trends and draw strong conclusions from this data and it is presented as an indicator of the market only.

5.5.2 Purity
Seven participants were able to comment on the purity of GHB. The majority reported that GHB purity is currently ‘medium’ (43%) to ‘high’ (43%). When asked about changes to the purity of GHB over the preceding six months, most respondents reported that it had remained stable (43%) or was decreasing (43%). One participant reported that the purity of GHB had been increasing.

5.5.3 Availability
Eight participants were able to comment on the availability of GHB. Two-thirds (63%) reported that GHB was currently either easy (25%) or very easy (38%) to obtain, although the remaining third reported that it was either difficult (25%) or very difficult (12%) to obtain. Half (50%) the group said that the availability of GHB had remained stable, while the remaining respondents reported that it was more difficult (25%) or easier (25%) to obtain.

Source person and source location
GHB had been last purchased from either friends (57%) or known dealers (43%). There were a mixture of locations reported as the last venue that GHB was purchased, including at the participant’s own home (29%), at a friend’s home (29%), at the dealer’s home (14%), at a private party (14%) or at a nightclub (14%).
Key expert comments
Most KE agreed that the market indicators for GHB had remained stable.

Two highlighted that the vast majority of GHB sold in Sydney was actually GBL. One KE working in law enforcement said there had been some initial signs of GHB/GBL production in NSW, however, it was not particularly widespread. The majority was assumed to be imported.
5.6 LSD

Summary:
- **Price**: $20 per tab, stable.
- **Purity**: Currently high, stable.
- **Availability**: Currently easy to very easy to obtain, stable.
- KE reported that LSD purity and price were stable and availability was high. KE felt that most LSD had been imported via postal channels.

### 5.6.1 Price

Thirty-seven participants reported on the price of LSD (Table 19). The median price last paid for a tab of LSD was $20 (range $12-40), which has remained stable over the last four years. The majority of those who commented (87%) reported that the price had remained stable over the preceding six months, with only a small portion reporting that the price was increasing (5%), decreasing (5%) or fluctuating (3%).

**Table 19: Price of LSD purchased by REU, NSW 2006-2012**

<table>
<thead>
<tr>
<th>LSD variable</th>
<th>2006 (n=27)</th>
<th>2007 (n=34)</th>
<th>2008 (n=12)</th>
<th>2009 (n=30)</th>
<th>2010 (n=31)</th>
<th>2011 (n=34)</th>
<th>2012 (n=37)</th>
</tr>
</thead>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012

### 5.6.2 Purity

Forty-two participants commented on the purity of LSD. Of these, 50% reported that LSD was currently of ‘high’ purity and 38% reported ‘medium’ purity (Figure 58). The majority reported that purity had remained stable (64%) over the past six months, however, a smaller proportion (17%) reported that it had fluctuated.

**Figure 58: REU reports of current purity of LSD, NSW 2011 and 2012**

Source: EDRS regular ecstasy user interviews 2011 and 2012

Note: Response option ‘don’t know’ was removed from analyses
5.6.3 Availability

Forty-five participants commented on the availability of LSD. The majority of respondents (60%) believed that LSD was currently ‘easy’ or ‘very easy’ to obtain, however, 38% reported that it was ‘difficult’ (Figure 59). These figures remained comparable with those from 2011, aside from a significant reduction in the proportions reporting that LSD availability is ‘very easy’ to obtain from 34% to 22%. The majority of those who commented on availability of LSD reported that it had remained stable (61%) and one-fifth (19%) reported that it had become more difficult to obtain. Smaller proportions reported that it had become easier (15%) to obtain or that the availability fluctuated (5%).

Figure 59: REU reports of current availability of LSD, NSW 2011 and 2012

Source: EDRS regular ecstasy user interviews 2011 and 2012
Note: Response option ‘don’t know’ was removed from analyses

Source person and source location
LSD was most commonly purchased from friends (51%) or known dealers (34%) and most commonly at a friend’s home (32%) or at an agreed public location (24%). Smaller proportions of various other locations were also reported.

Key expert comments
KE observed that the price and purity had remained stable over the past year. A KE working in law enforcement said she had seen quite a few LSD seizures over the past year and they were mostly tabs and small, incidental seizures.

Another law KE reported that there had been no reports of local manufacture recently and the police strongly suspected that LSD was mostly imported via postal channels. They believed LSD tended to be imported in small quantities and mostly from the Netherlands. In fact, this KE reported that LSD was one of the drugs most commonly purchased online because of the belief that it is undetectable. However, it was noted that customs officials were able to target postal items according to various profiles of risk (e.g. coming from the Netherlands), and thus increasing the likelihood that packages were intercepted.
5.7 Cannabis

From 2006, the EDRS included a more detailed section about cannabis and made a distinction between indoor-cultivated ‘hydroponic’ cannabis (hydro) and outdoor-cultivated ‘bush’ cannabis for price, potency and availability. In 2012, only participants who were able to distinguish between hydro and bush provided information about the price, purity and availability of cannabis.

**Summary:**

*Hydro*

- *Price:* $20 per gram; $290 per ounce, stable.
- *Potency:* Currently high, stable.
- *Availability:* Currently very easy to obtain, stable.

*Bush*

- *Price:* $20 per gram; $265 per ounce, stable.
- *Potency:* Currently medium, stable.
- *Availability:* Currently easy to obtain, stable.

- KE reported an increased cultivation of bush, which reflects its high availability. KE expected that with hydro and bush both comparable in potency, there would be minimal price differences between the two.

5.7.1 Price

Table 20 presents the reported price for one ounce and one gram of hydro and bush cannabis\(^{15}\). These data should be interpreted with caution since in 2008 participants were asked to report the ‘median’ price paid for these quantities, whereas from 2009 participants were asked to report what they paid the last time they purchased this amount. Prices for hydro have remained relatively stable from 2011 to 2012, while the price per ounce of bush appears to have decreased in 2012 (Table 20).

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\(^{15}\) Data regarding the price of hash or hash oil is not presented here due to small numbers reporting.
Table 20: Price of hydroponic and bush cannabis purchased by REU, NSW 2008-2012

<table>
<thead>
<tr>
<th>Cannabis variable</th>
<th>2008 (n=16)</th>
<th>2009 (n=55)</th>
<th>2010 (n=40)</th>
<th>2011 (n=46)</th>
<th>2012 (n=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median price per ounce ($) (range)</td>
<td>300 (90-350)</td>
<td>295 (100-350)</td>
<td>300 (150-450)</td>
<td>300 (230-400)</td>
<td>290 (160-350)</td>
</tr>
<tr>
<td>Median price per gram ($) (range)</td>
<td>20 (20-110)</td>
<td>20 (10-25)</td>
<td>20 (20)</td>
<td>20 (10-20)</td>
<td>20 (10-25)</td>
</tr>
<tr>
<td>Bush</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median price per ounce ($) (range)</td>
<td>- (150-300)</td>
<td>200 (150-300)</td>
<td>235 (150-300)</td>
<td>290 (200-300)</td>
<td>265 (150-300)</td>
</tr>
<tr>
<td>Median price per gram ($) (range)</td>
<td>20 (20-110)</td>
<td>20 (7.5-20)</td>
<td>20 (5-25)</td>
<td>20 (10-20)</td>
<td>20 (10-20)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2008-2012
^ Small numbers reporting, interpret with caution

Participants were asked about changes to the price of hydro and bush over the preceding six months. The vast majority reported that it had been stable both for hydro (89%) and bush (79%) (Figure 60).

Figure 60: REU reports of price change of hydro and bush cannabis*, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
Note: Don’t know responses removed from analyses
* Of those who commented (n=61 for hydro, n=33 for bush)

5.7.2 Potency

Figure 61 presents participants’ perceptions of the current potency of hydro and bush cannabis. Over half of those who commented reported that hydro was currently of ‘high’ potency (56%) and that bush was currently of ‘medium’ potency (61%). This is consistent with the data from 2011.
Participants were asked to comment on changes in the potency of cannabis over the preceding six months. Respondents agreed that the potency of hydro and bush had remained relatively stable over this time (Figure 62).

**Figure 62: REU reports of change in potency of hydro and bush cannabis over the last six months**, NSW 2012

Of those who commented (n=61 for hydro, n=39 for bush)

5.7.3 Availability

Figure 63 presents data on the REU-reported current availability of hydro and bush. The majority of respondents (73%) believed that hydro was currently ‘very easy’ to obtain. The largest proportion of respondents reported that bush availability was ‘easy’ (49%) or ‘very easy’ (31%) to obtain.
The majority of those who commented reported that the availability of both hydro and bush had remained stable over the preceding six months (Figure 64).

Source person and source location
REU were asked to comment on purchasing cannabis over the six months prior to the interview. Both hydro (48%) and bush (44%) were most commonly purchased from friends, however, sizeable minorities purchased hydro and bush from a known dealer (29% and 31% respectively) and an acquaintance (10% and 8% respectively) (Figure 65).
Figure 65: People from whom hydro and bush cannabis was last purchased* by REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
* Of those who commented (n=63 for hydro, n=39 for bush)

Both forms of cannabis were most commonly purchased at a friend’s home, however, respondents also often purchased at the dealer’s home or had it delivered to their own home (Figure 66).

Figure 66: Locations at which hydro and bush cannabis was last purchased* among REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
* Of those who commented (n=63 for hydro, n=39 for bush)

Key expert comments
One law KE reported that there had been larger amounts of outdoor cultivated cannabis (i.e. bush) in NSW within the past year. This KE also commented that while cannabis sativa was the most common strain seized, cannabis indica was also seen last year. Recent research that this KE had been involved with had indicated that the potency of hydro and bush cannabis was reasonably comparable, yet the price continued to be higher for hydro cannabis.
6 HEALTH-RELATED TRENDS ASSOCIATED WITH ERD USE

Summary:

**Overdose, Deaths and Hospital Admissions**
- One-third of participants reported having overdosed on a stimulant drug throughout their lifetime.
- Over one-third reported having ever overdosed on a depressant drug.
- Deaths associated with ecstasy, ketamine and cannabis have remained stable in the past year. A slight increase was observed in deaths associated with methamphetamines in 2011/12. There were no deaths during 2011/12 where GHB was detected.
- Hospital admissions in which amphetamine was the principal diagnosis appeared to have remained stable in NSW. Hospital admissions where cocaine or cannabis was the principal diagnosis appeared to be increasing over time.

**Service Usage**
- Only 16% of respondents reported that they had recently accessed a medical or health service in relation to their drug use.
- Calls to ADIS and FDS regarding ecstasy have gradually increased from 2011 to 2012. Calls regarding amphetamines, cocaine, ketamine, GHB and LSD have remained relatively stable from 2011 to 2012.

**Mental Health**
- Participants commonly reported that their drug use caused repeated social problems (33%), resulted in exposure to risk of injury (30%) and/or interfered with responsibilities (45%). Recurrent drug-related legal problems were uncommon (6%).
- One-third of the group had recently experienced a mental health problem. Mood and anxiety disorders were most commonly reported.
- Participants completed the K10. One-third of the group fell into the ‘high’ or ‘very high’ distress categories.

6.1 Overdose and drug-related fatalities

Participants were asked if they had ever overdosed on a stimulant drug or a depressant drug. In both instances, ‘overdose’ was defined as presenting with symptoms consistent with either stimulant toxicity (e.g. nausea and vomiting, chest pains, tremors, increased body temperature or heart rate, seizure, extreme paranoia, anxiety, panic or agitation, hallucinations, excited delirium) or symptoms consistent with a depressant overdose (e.g. reduced level of consciousness, respiratory depression, turning blue, collapsing). As such, the following sections are based on participants’ understanding of these definitions and their opinions as to whether they had overdosed.
6.1.1 Stimulant overdose

Approximately one-third (36%) of participants reported having overdosed on a stimulant drug throughout their lifetime. Participants reported having experienced a median of 1 overdose (range 1-25), and that their last overdose had occurred a median of 11 months ago (range 1-228). Close to one-quarter (22%) of participants reported having overdosed on a stimulant drug within the preceding 12 months. Among these, the most common location of their last overdose was at their own home (27%), followed by a friend’s home (23%), nightclub (14%), a rave/doof/dance party (14%) or outdoors (14%). Overall, stimulant overdoses occurred almost as often in private (52%) as in public (48%) settings. The majority of participants (77%) believed that they did not have a sober person present to assist them the last time they overdosed on a stimulant drug.

Those who had recently overdosed (i.e. within the last year) were asked to identify the main drug to which they attributed their last overdose and also to identify other drugs they had used. Ecstasy was the drug most commonly reported to have caused the overdose (55%) followed by speed (18%) and cocaine (14%). Most participants (82%) who had recently experienced a stimulant overdose had been using multiple drugs on that occasion. The most common additional drug used was alcohol (n=15), followed by tobacco (n=5) and cannabis (n=3).

Amongst those who overdosed within the preceding year, the most common symptoms reported included vomiting (n=4), increased heart rate (n=4) and paranoia (n=3). The majority (68%) of those who had recently overdosed on a stimulant drug did not receive any treatment. The remaining participants were watched or monitored by their friends (59%), received ambulance attention (9%) or drank water (9%). Only two participants reported seeking information about stimulant overdose or treatment after their most recent stimulant overdose; one person received information from their GP, and the other sourced information from the internet.

Participants were asked how long they had been partying prior to overdosing on the last occasion. The median number of hours participants had been partying was 6.5 (range 1-120). Most respondents reported that the overdose had occurred on a heavy session (64%) rather than on a normal night out.

Approximately three-quarters (73%) of the NSW REU sample reported taking at least one precaution in the last six months to avoid bad effects from ecstasy-type (stimulant) pills. Of these participants, the most common precautions taken were to use pills from a trusted source (45%), check drug use websites (35%) and only take one pill (or less) to start off with (35%).

6.1.2 Depressant overdose

Over one-third (39%) of the current sample of REU reported having ever overdosed on a depressant drug. Those who had overdosed reported having done so on a median of 2 occasions (range 1-28) with the most recent having occurred a median of 11 months prior to the interview (range 1-240). Twenty-three participants reported having overdosed on a depressant drug within the year preceding the interview.

Alcohol (57%) was the main drug that participants most often attributed their most recent depressant overdose to. Smaller proportions reported having overdosed on benzodiazepines
(13%), opiates other than heroin (9%), heroin (9%) and GHB (9%). In contrast to those who recently experienced a stimulant overdose, almost half (48%) of those who had recently overdosed on a depressant drug reported not having used any other drugs on that occasion. Among those who had used other drugs, that most commonly reported were cannabis (n=5), alcohol (n=4) and tobacco (n=2).

Participants were asked where they were when they last overdosed within the past 12 months. The majority occurred in private locations such as a friend’s home (30%), their own home (17%) or at a private party (17%). However, a substantial proportion had experienced a depressant overdose in a public setting, most commonly outdoors or in another public place such as a street (9%) or park (9%). The majority (61%) reported that there had not been a sober person present at the time of overdose who was able to assist them.

The most commonly reported symptoms of a depressant overdose among this group were losing consciousness (39%) and vomiting (35%). Over half (61%) of the participants who had recently experienced a depressant overdose reported that they did not receive any formal treatment or care on the last occasion. Among those who had received assistance, the majority were monitored by friends (n=11). In addition, three were attended to by an ambulance, two were given oxygen and two were given Narcan. Only three participants sought information about drug overdose or treatment following their depressant overdose, which were accessed through their GP and the internet.

Participants reported that on their last occasion of overdosing on a depressant drug, they had been partying for a median of 4 hours (range 0-48). Slightly more than half of respondents reported that the overdose had occurred on a heavy session (52%) rather than on a normal night out.

### 6.1.3 Ecstasy

The number of suspected drug-related deaths where ecstasy was detected was low and appeared to have remained relatively stable over time, generally fluctuating between one or two each quarter (Figure 67). The detection of MDMA, however, does not imply that MDMA was causally related to the death, as there may have been other drugs present post-mortem.

**Figure 67: Number of deaths of individuals suspected of drug use, in which MDMA was detected post-mortem, March 2006 to June 2012**

Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories

Note: These numbers relate to deaths in which ecstasy was detected; however, there may have also been other drugs present.
Since the introduction of the Systematized Nomenclature Of Medicine Clinical Terms (SNOMED CT) coding structure in Australia, it is now possible to extract the number of emergency department presentations for ecstasy poisonings in NSW. These would previously have been coded under amphetamine type stimulants presentations. In 2011/12, there were 33 emergency department presentations for ecstasy poisonings.

### 6.1.4 Methamphetamine

While the total number of amphetamine overdose presentations to NSW emergency departments has fluctuated over time, there appeared to be a generally declining trend over the past 10 years (Figure 68). However, a slight upward trend in presentations was recorded between July 2011 and June 2012.

**Figure 68: Amphetamine overdose presentations to NSW emergency departments, January 2006 to June 2012**

![Amphetamine overdose presentations to NSW emergency departments](image)

**Source: Emergency Department Information System, NSW Department of Health**

**Note:** Figures refer to overdose only and do not include presentations for use disorders.

The number of deaths of individuals suspected of drug use where amphetamines were detected post-mortem in NSW appears to have increased from late-2010 onward, however, they still remain under 20 per quarter (Figure 69). These figures do not include methylenedioxymethamphetamine, methylenedioxyamphetamine, or p-methoxyamphetamine. Also excluded are pseudoephedrine and ephedrine, as only deaths related to illicit amphetamines are presented.
6.1.5 Cocaine

Since mid-2008, there has been a slight upward trend in the number of cocaine overdose presentations to NSW emergency departments. However, these figures remain low with fewer than five presentations per month (Figure 70).

The number of deaths of suspected drug users where cocaine was detected post-mortem has remained low over time (Figure 71). A total of seven cocaine related deaths were recorded between July 2011 and June 2012.
Figure 71: Number of deaths of individuals suspected of drug use, in which cocaine was detected post-mortem, March 2006 to June 2012

Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories
Note: These numbers relate to deaths in which cocaine was detected; however, there may have also been other drugs present

6.1.6 Ketamine

Deaths of suspected drug users where ketamine was detected post-mortem remain very low. Data from the Forensic Toxicology Laboratory Database at the Division of Analytical Laboratories showed that 12 of these deaths had occurred between January 1999 and June 2012.

6.1.7 GHB

Data from the Forensic Toxicology Laboratory Database at the Division of Analytical Laboratories showed that, since 2000, only four deaths had occurred where GHB was detected post-mortem. There were no deaths during 2011/12 where GHB was detected.

6.1.8 Cannabis

The number of cannabis toxicity presentations to emergency departments have remained relatively low and stable, at ten or less per month since mid-2007 (Figure 72).

Figure 72: Cannabis toxicity presentations to NSW emergency departments, January 2006 to June 2012

Source: Emergency Department Information System, NSW Department of Health
Note: Figures refer to overdose only and do not include presentations for use disorders
6.2 Help-seeking behaviour

Participants were asked if they had accessed any medical or health services in relation to their alcohol and/or drug use in the last six months. Sixteen per cent of REU interviewed in 2012 reported that they had done so. It is concerning to note that the 2012 sample had the lowest recorded proportion of REU who recently accessed medical or health services in the last seven years (Figure 73).

Figure 73: Proportion of REU who recently accessed a medical/health service in relation to drug use, NSW 2006-2012

REU were asked what was the event or the situation which resulted in their seeking professional assistance. The most common concerns were associated with dependence or cutting down on drug use, for which seven respondents sought assistance. The next most common group of concerns were ones regarding social and emotional well-being (including depression, anxiety, anger, aggression, violent behavioural issues) for which four respondents sought assistance. Smaller proportions reported that they were seeking assistance for both immediate and long-term physical accidents, overdose and weight loss.
6.3 Drug treatment

6.3.1 Ecstasy

The NSW Alcohol and Drug Information Service (ADIS) provides a telephone information and referral service in NSW. ADIS data reflect calls in which ecstasy was the primary drug of concern. Similarly, the NSW Family Drug Support (FDS) provides over-the-phone support and referrals. FDS data represent all calls in which ecstasy was mentioned.

Figure 74 shows the number of calls received by ADIS and FDS from January 2006. Although there appeared to be a downward trend in calls relating to ecstasy to both services since early 2007, there seems to have been an increase in the number of ecstasy related calls recorded by FDS from late-2011.

Figure 74: Number of inquiries regarding ecstasy received by ADIS and FDS, January 2006 to June 2012

Source: NSW Alcohol and Drug Information Service and NSW Family Drug Support
Note: FDS data for May 2006 and June 2006 were not available. ADIS data after October 2011 were not available.

The number of closed treatment episodes based on the date of commencement where the principal drug of concern was ecstasy has been declining since late-2009 (Figure 75). Men accounted for most of the treatment episodes.
Figure 75: Number of ecstasy treatment episodes by gender, NSW January 2006 to June 2012

Source: NSW MDS AODTS, NSW Department of Health
Note: The NSW Minimum Data Set for Alcohol and Other Drug Treatment Services (MDS AODTS) is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period. Figures are presented by the commencement date for treatment.

6.3.2 Methamphetamine

Figure 76 shows the number of calls to the ADIS and FDS lines regarding methamphetamines. The number of enquiries to both ADIS and FDS appears to have gradually increased since early 2010.

Figure 76: Number of inquiries to ADIS and FDS regarding amphetamines, January 2006 to June 2012

Source: NSW Alcohol and Drug Information Service and Family Drug Support
Note: FDS data refer to calls where any mention of amphetamines was made. ADIS data refer to the number of calls where amphetamines were mentioned as any drug of concern. FDS data for May 2006 and June 2006 were not available. ADIS data after October 2011 were not available.
Figure 77 presents calls to ADIS and FDS coded as those where ice/crystal specifically had been mentioned. Calls to ADIS have been increasing from mid-2009 onward, while call numbers to FDS have increased since mid-2011.

Figure 77: Number of enquiries to ADIS and FDS regarding ice/crystal alone, January 2006 to June 2012

![Graph showing calls to ADIS and FDS](image)

Source: NSW Alcohol and Drug Information Service and Family Drug Support

Note: Data is presented on calls coded as relating to crystal. Calls may not fall exclusively into either category and it is possible that there is some overlap. FDS data for May 2006 and June 2006 were not available. ADIS data after October 2011 were not available.

The number of closed treatment episodes based on date of commencement where amphetamine was the principal drug of concern has remained relatively stable from mid-2010 onward (Figure 78). There appeared to be a rise in the number of treatment episodes reported in mid-2011. Men continued to account for a greater proportion of these treatment episodes compared to women.

Figure 78: Number of ATS treatment episodes by gender, NSW January 2006 to June 2012

![Graph showing treatment episodes by gender](image)

Source: NSW MDS AODTS, NSW Department of Health

Note: The NSW Minimum Data Set for Alcohol and Other Drug Treatment Services (MDS AODTS) is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period. Figures are presented by the commencement date for treatment.
6.3.3 Cocaine

Figure 79 shows the number of calls to the ADIS and FDS lines regarding cocaine. Calls to both ADIS and FDS appear to have remained relatively stable from early-2008, with the exception of the notable spike in calls to FDS recorded at the end of the 2011.

**Figure 79: Number of inquiries to ADIS and FDS regarding cocaine, January 2005 to June 2011**

Source: NSW Alcohol and Drug Information Service and Family Drug Support

Note: FDS data refer to calls where any mention of cocaine was made. FDS is based in NSW but data may include some calls from interstate. ADIS data include calls made in NSW and ACT and refer to the number of calls where cocaine was mentioned as any drug of concern. FDS data for May 2006 and June 2006 were not available. ADIS data after October 2011 were not available.

The number of closed treatment episodes based on date of commencement where cocaine was the principal drug of concern appeared to decline from late-2011 to mid-2012 (Figure 80). Males continued to account for the vast majority of all treatment episodes.

**Figure 80: Number of cocaine treatment episodes by gender, NSW January 2006 to June 2012**

Source: NSW MDS AODTS, NSW Department of Health

Note: The NSW MDS AODTS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period. Figures are presented by the commencement date for treatment.
6.3.4 Ketamine

Treatment-seeking for problems with ketamine use was low compared to other drugs. Data from the NSW Minimum Data Set (MDS) show during the period 2002-2012 there were nineteen closed treatment episodes based on the date of commencement where the principal drug of concern was ketamine (NSW MDS AODTS, NSW Department of Health). The NSW MDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period.

Calls to telephone helplines

The number of calls to ADIS where ketamine was mentioned as a drug of concern continued to be low at less than 5 calls per month (Figure 81).

Figure 81: Number of inquiries to ADIS regarding ketamine and GHB, July 2006 to October 2011

Source: NSW Alcohol and Drug Information Service and Family Drug Support
Note: ADIS data include calls made in NSW and ACT and refer to the number of calls where ketamine or GHB was mentioned as any drug of concern. ADIS data after October 2011 were not available.

6.3.5 GHB

Data from the NSW MDS showed that during the period 2002-2012 there have been 40 treatment episodes where GHB was the principal drug of concern (NSW MDS AODATS, NSW Department of Health). There were no GHB episodes recorded in the 2011/12 period. The NSW MDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period.

Calls to telephone helplines

Calls to ADIS where GHB was mentioned have been fluctuating over time although they continue to be fairly low at less than ten per month (Figure 81).
LSD
Calls to telephone helplines

Calls to ADIS and FDS where hallucinogens were mentioned as a drug of concern has fluctuated over time, although these figures have remained low at generally less than ten calls per month (Figure 82).

Figure 82: Number of inquiries to ADIS and FDS regarding hallucinogens, July 2006 to June 2012

Source: NSW Alcohol and Drug Information Service and Family Drug Support

Note: FDS data refer to calls where any mention of cocaine was made. FDS is based in NSW but data may include some calls from interstate. ADIS data include calls made in NSW and ACT and refer to the number of calls where hallucinogens were mentioned as any drug of concern. ADIS data after October 2011 were not available.

6.3.6 Cannabis

Figure 83 presents data on calls to the ADIS and FDS services where cannabis was mentioned as a drug of concern. The numbers of calls to ADIS and FDS have remained fairly stable since 2009, however, a notable increase in calls to FDS was recorded at mid-2012.
Figure 83: Number of enquiries to ADIS and FDS regarding cannabis, January 2006 to June 2012

Source: NSW Alcohol and Drug Information Service and Family Drug Support
Note: FDS data refer to calls where any mention of cocaine was made. FDS is based in NSW but data may include some calls from interstate. ADIS data include calls made in NSW and ACT and refer to the number of calls where hallucinogens were mentioned as any drug of concern. ADIS data after October 2011 were not available.

Figure 84 shows the number of closed treatment episodes based on the date of commencement where the principal drug of concern was cannabis, by gender. These data remained relatively stable in 2011 and declined throughout early to mid-2012.

Figure 84: Number of cannabis treatment episodes by treatment type, NSW January 2006 to June 2012

Source: NSW MDS AODTS, NSW Department of Health
Note: The NSW MDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period. Figures are presented by the commencement date for treatment.
6.4 Other self-reported problems associated with ERD use

Participants were asked about a range of other problems associated with their drug use. Participants were asked if, in the past six months, their drug use had caused repeated problems with family, friends or people at work or school; if they had any recurrent drug-related legal problems; if they had recurrently found themselves in situations where they were under the influence of any drug and could have gotten themselves or others hurt, or put themselves or others at risk; or if their drug use had recurrently interfered with their responsibilities at home, work or school (Table 21).

- One-third (33%) reported that their use of drugs had caused repeated problems with family, friends or people at work or school in the six months prior to the interview. Cannabis was the drug most commonly identified as causing these problems, followed by alcohol, ecstasy and crystal.
- Only 6% of participants reported experiencing recurring legal problems due to drug use. These were primarily attributed to alcohol followed by cannabis, GHB and cocaine.
- One-third (30%) of the sample reported recurrently finding themselves in situations where they were under the influence of a drug and could have caused injury either to themselves or others, or put themselves or others at risk. Respondents most commonly identified alcohol as the main drug causing these problems followed by ecstasy and cannabis.
- Over two-fifths of the 2012 sample (45%) reported that their drug use had recurrently interfered with their responsibilities at home, at work or at school. Alcohol was the drug most commonly associated with these problems followed by cannabis and ecstasy.

Overall, it was evident that a sizeable proportion of REU experienced problems associated with their drug use across multiple domains and that these were most commonly associated with the use of alcohol, cannabis and ecstasy.

**Table 21: Self-reported drug-related problems among REU, NSW 2012**

<table>
<thead>
<tr>
<th>Problems in the following areas (last 6 mths):</th>
<th>Any drug (N=100)</th>
<th>Alcohol</th>
<th>Cannabis</th>
<th>Ecstasy</th>
<th>Crystal</th>
<th>GHB</th>
<th>LSD</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social (%)</td>
<td>33</td>
<td>24</td>
<td>30</td>
<td>15</td>
<td>15</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Legal (%)</td>
<td>6</td>
<td>50</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Risk (%)</td>
<td>30</td>
<td>50</td>
<td>13</td>
<td>27</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Responsibility (%)</td>
<td>45</td>
<td>33</td>
<td>29</td>
<td>20</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012
6.5 Hospital admissions

6.5.1 Methamphetamine

The rate per million of inpatient hospital admissions among persons aged 15-54 years in which amphetamines were the principal diagnosis is shown in Figure 85 below. A principal diagnosis is defined as having been chiefly responsible for occasioning the patient’s episode of care in hospital. Both NSW and national rates appear to have remained relatively stable from 2008/09 to 2009/10.

Figure 85: Number per million persons of principal amphetamine-related hospital admissions among persons aged 15-54, NSW and nationally, 2004/05-2009/10

![Graph showing hospital admissions per million persons for NSW and National from 2004/05 to 2009/10]

Source: National Hospital Morbidity Database, AIHW; Roxburgh & Burns (in press)

*Data for 2010/11 and 2011/12 were unavailable at time of publication

6.5.2 Cocaine

The rates of inpatient hospital admissions where cocaine was the principal diagnosis per million people aged 15-54 years are shown in Figure 86. Both the NSW and national rates appear to have increased from 2008/09 to 2009/10.
6.5.3 Cannabis

Figure 86 shows the rates of hospital admissions where cannabis was the principal diagnosis per million people aged 15-54 years. Rates in NSW remained higher than nationally, and had been so for the duration of the study. Since 2000/01, NSW accounted for between 50-60% of Australian inpatient hospital admissions where cannabis was the principal diagnosis. These rates appear to be rising over time.

Figure 87 shows the rates of principal cocaine-related hospital admissions among persons aged 15-54, NSW and nationally, 2004/05-2009/10.

Source: National Hospital Morbidity Database, AIHW; Roxburgh & Burns (in press)

Data for 2010/11 and 2011/12 were unavailable at time of publication.
6.6 Mental health and psychological distress

6.6.1 Self-reported mental health

Participants were asked whether they had experienced any mental health problems over the previous six months (Table 22). Almost one-third (30%) of the group had recently experienced a mental health problem, a figure which is slightly higher than that recorded among the general population of a similar age range (16-24 years (26%) and 25-34 years (25%)) (Australian Bureau of Statistics, 2007). Mood and anxiety disorders were those most commonly reported by far. Two-thirds (67%) of those who experienced a mental health problem sought assistance from a health professional, and almost three-quarters (73%) had been prescribed medication (most commonly antidepressants and benzodiazepines).

Trends over time in self-reported mental health problems and help-seeking behaviours around these are presented in Table 22. Overall, these figures appear relatively stable from 2011 to 2012, however, there are two notable trends. First, there was a decrease in the proportion of respondents who self-reported depression as a recent mental health problem to levels previously observed prior to 2011. Second, there was a distinct increase in the proportion of respondents who were prescribed medication for their mental health problem in the previous 12 months compared to prior years.

Table 22: Mental health problems among REU, NSW 2008-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any mental health problem recently (%)</td>
<td>31</td>
<td>28</td>
<td>22</td>
<td>26</td>
<td>30</td>
</tr>
<tr>
<td>Of these (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>71</td>
<td>57</td>
<td>55</td>
<td>73</td>
<td>53</td>
</tr>
<tr>
<td>Anxiety</td>
<td>48</td>
<td>43</td>
<td>46</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td>Panic</td>
<td>16</td>
<td>18</td>
<td>-</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>7</td>
<td>4</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Mania</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Paranoia</td>
<td>13</td>
<td>11</td>
<td>-</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Personality Disorder</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Drug-Induced Psychosis</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>3</td>
<td>-</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sought help from health professional (%)</td>
<td>39</td>
<td>43</td>
<td>62</td>
<td>62</td>
<td>67</td>
</tr>
<tr>
<td>Prescribed medication(^{1}) (%)</td>
<td>19</td>
<td>29</td>
<td>45</td>
<td>35</td>
<td>73</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2008-2012
\(^{1}\) Percentage of all of those who had recently experienced a mental health problem

6.6.2 Kessler Psychological Distress Scale (K10)

From 2006, the EDRS has included the 10-item Kessler Psychological Distress Scale (K10) (Kessler et al., 2002), which is a questionnaire designed to measure the level of distress and severity associated with psychological symptoms in population surveys. The minimum score is 10 and the maximum is 50. Scores ranging from 10-15 are classified as ‘low/no distress’,

The median score for participants was 18 (range 10-42). The majority of participants’ scores fell into the ‘low/no distress’ (30%) and ‘moderate distress’ (35%) categories. However, the remaining one-third fell into the ‘high distress’ (24%) or ‘very high distress’ (11%) categories (Figure 88).

Figure 88 compares the spread of REU scores across these four categories with those of the general Australian population. While more than two-thirds of the general population fell into the low/no distress category, only one-third of REU in the current sample fell into this category. This places a much higher proportion of REU into the categories indicative of at least some level of psychological distress. Overall, REU appear to experience a higher level of psychological distress than the wider Australian public.

**Figure 88: K10 scores for REU compared with the general Australian population, NSW 2012**

![Graph showing K10 scores comparison](image)

Source: EDRS regular ecstasy user interviews 2012; Australian Institute of Health and Welfare (2011)

Figure 89 presents data across time on the proportions of each sample from 2006 to 2012 that fell into each distress category. While data appear to have remained relatively stable over time, there was a notable increase in the proportion of respondents scoring ‘very high distress’ in 2012 compared to prior years.
Figure 89: K10 scores across time for REU, NSW 2006-2012

Source: EDRS regular ecstasy user interviews 2006-2012
7 RISK BEHAVIOUR

Summary:
- One-fifth of the sample had ever injected a drug and 13% had done so recently.
- Half of the group had completed a hepatitis B vaccination schedule.
- Rates of testing for BBVI were low with 19% having recently tested for hepatitis C, 20% for HIV and 42% having recently had a sexual health check-up.
- Three-quarters of the sample had recently had penetrative sex with a casual partner. Approximately two-fifths did not use a sexual barrier on the last occasion (regardless of whether or not they were intoxicated). The main reasons were either that it was not mentioned or the partner was using contraception.
- Over half the sample had recently driven a vehicle. Of these, two-thirds had done so while over the legal blood alcohol limit and more than half had driven after having taken an illicit drug.
- Participants completed the Alcohol Use Disorders Identification Test (AUDIT). The majority (78%) of the group fell in the ‘harmful drinking’ range.

7.1 Injecting risk behaviour

Two-in-ten participants had ever injected a drug and one-in-ten had done so within the past six months. Among those who had ever injected, the median number of drug types injected\(^{16}\) was 5 (range 1-10) and, among recent injectors, the median number of drug types injected was 2 (range 1-7) (Table 23).

Table 23: Injecting risk behaviour among REU, NSW 2009-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever injected (%)</td>
<td>9</td>
<td>22</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Median number of drugs ever injected(^{a}) (range)</td>
<td>2 (1-9)</td>
<td>4 (1-15)</td>
<td>3 (1-9)</td>
<td>5 (1-10)</td>
</tr>
<tr>
<td>Injected last 6 mths (%)</td>
<td>6</td>
<td>15</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Median number of drugs injected last 6 mths(^{b}) (range)</td>
<td>2 (1-4)</td>
<td>2 (1-7)</td>
<td>2 (1-4)</td>
<td>2 (1-7)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2009-2012

\(^{a}\) Of those who had ever injected
\(^{b}\) Of those who had injected in the last 6 months

\(^{16}\) This figure was calculated without combining licit and illicit benzodiazepines, pharmaceutical stimulants or antidepressants and may be higher than previous years where these drug types had been combined.
7.1.1 Lifetime injectors

Patterns of lifetime injecting drug use
The median age of initiation for respondents who had ever injected was 21 years (range 15-47). A wide range of drug types had ever been injected, however, those most frequently reported were crystal, speed, heroin and cocaine (Table 24). The most common drugs first injected were speed (35%), crystal (30%), heroin (15%), cocaine (10%) and steroids (5%).

Table 24: Injecting drug use history among REU injectors, NSW 2010-2012

<table>
<thead>
<tr>
<th>Drug variable</th>
<th>Ever injected (%)</th>
<th>Ever injected (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystal</td>
<td>55</td>
<td>39</td>
</tr>
<tr>
<td>Heroin</td>
<td>68</td>
<td>31</td>
</tr>
<tr>
<td>Cocaine</td>
<td>68</td>
<td>31</td>
</tr>
<tr>
<td>Speed</td>
<td>55</td>
<td>31</td>
</tr>
<tr>
<td>Base</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Ecstasy pills</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Methadone</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Other opiates</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>LSD</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Ketamine</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>MDA</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Benzodiazepines (licit)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Benzodiazepines (illicit)</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Ecstasy capsules</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Alcohol</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Ecstasy powder</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Pharmaceutical stimulants (licit)</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Antidepressants (licit)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2010-2012

7.1.2 Recent injectors

Patterns of recent injecting drug use
Participants who had injected a drug in the six months prior to the interview (n=13) reported having injected any drug a median of 12 times (range 1-288) over this period. Participants were asked about the last time they had injected a drug. Crystal methamphetamine (n=6) and heroin (n=6) were the two drugs most commonly last injected. Most participants who had injected recently had done so either in their own home (46%), a friend's home (23%) or in the dealer's home (15%).
**Injecting risk behaviour**

No respondents reported having used a needle after someone else in the past six months. Three participants had used injecting equipment (including spoons/mixing containers, filters, tourniquets and water) after someone else.

**Context of injecting**

Most participants reported usually injecting with others over the preceding six months, most commonly close friends (n=5) or a regular sex partner (n=4). Nine of the thirteen recent injectors had injected while under the influence of ecstasy and other drugs over the past six months, with the majority doing so while ‘coming down’ from ecstasy or related drugs (n=6).

**Obtaining needles**

Respondents were asked to identify where they had obtained needles from over the preceding six months. Needles were most commonly obtained from either needle and syringe programs (n=8), vending machines (n=4), chemists (n=4) or friends (n=4). Smaller proportions reported having obtained needles from outreach programs (n=2), partners (n=1) or dealers (n=1).

### 7.1.3 Injecting drug use in other populations

**General population**

The 2010 National Drug Strategy Household Survey report indicates that the proportion of the general population in NSW aged 14 years or over who had injected a drug in the past 12 months had remained relatively stable at 0.4% (versus 0.5% in 2007).

**Sydney Gay Community Periodic Survey**

Data collected from the Sydney Gay Community Periodic Survey showed that, across sampling years, less than one-in-ten had injected any drug in the six months prior to interview (Figure 90). In 2012, 5% of the sample had recently injected any drug.

**Figure 90: Proportion of gay men in Sydney reporting recent injecting drug use, 2006-2012**

Source: Sydney Gay Community Periodic Survey 2006-2012
**Sydney Women and Sexual Health Survey**

Data collected from the Sydney Women and Sexual Health Survey showed that recent injecting drug use is relatively low and stable among this group, with 1.2% of the sample injecting any drug in the six months prior to interview (Figure 91) (Mooney-Somers, Deacon & Parkhill, in press).

**Figure 91: Proportion of LBQ women in Sydney reporting recent injecting drug use, 2006-2012**

![Graph showing proportion of LBQ women reporting recent injecting drug use from 2006 to 2012. The graph indicates a relatively low and stable trend with percentages remaining around 1.3% to 1.6% over the years.](source)

*Source: Sydney Women and Sexual Health Survey 2006-2012*
7.2 Blood-borne viral infections (BBVI)

Half (50%) of REU in 2012 reported that they had completed the vaccination schedule for hepatitis B virus (HBV) and 12% had begun but not completed the schedule. Close to one-third (29%) had never been vaccinated for HBV, and about one-in-ten (9%) were uncertain whether or not they had been vaccinated for HBV.

Of those who had either begun or completed HBV vaccination (n=61), the majority (38%) reported travelling overseas as the main reason for vaccination. Other common reasons included being vaccinated as a child (18%), for work (8%) and that it was offered at school (5%).

Over half of the sample (59%) had reportedly never been tested for the hepatitis C virus (HCV). One-fifth (19%) had been tested within the past year, and an additional 15% had been tested more than one year ago. Of those who had been tested (n=40), nine participants reported a positive result on their last HCV test.

The majority of the sample (60%) reported that they had never been tested for HIV. One-fifth (20%) reported having been tested within the last year, and 19% had reportedly been tested for HIV more than one year ago. Five participants reported a positive result on their last HIV test.

Two-fifths of the sample (41%) had reportedly never had a sexual health check-up, while a similar proportion (42%) had completed a sexual health check-up within the past year. Approximately one-fifth (16%) had been checked more than one year ago. Seven participants reported they had been diagnosed with a sexually transmitted infection (STI) more than one year ago, and four participants had been diagnosed within the last year.

Figure 92 presents the rates of BBVI testing and vaccination and sexual health check-ups among REU. From 2011 to 2012 there was a significant increase in the proportion reporting having completed HBV vaccination throughout their lifetime and there was a significant decrease in the proportion who had been tested for HCV in the last 12 months.

Figure 92: BBVI testing and vaccination among REU, NSW 2006-2012

Source: EDRS regular ecstasy user interviews 2006-2012

Note: No data for these questions were collected in 2009. Response option ‘don’t know’ was removed from 2010 onward

* In the last year
People with a history of injecting drug use are at greater risk of acquiring HBV, HCV and HIV than the general population (National Centre in HIV Epidemiology and Clinical Research, 2002). This is because BBVI can be transmitted through the sharing of needles, syringes and other equipment. BBVI vaccination and testing may be considered a marker of awareness of the risks involved with injecting. Therefore, those who had a history of injecting drug use were compared with those who had never injected to investigate whether they were more likely to report HBV vaccination and HCV and HIV testing. Unfortunately, it appears that of those NSW EDRS participants who have ever injected, they are significantly less likely to have recently been tested for HCV ($p=0.01$) or HIV ($p=0.003$). Injectors did not appear more likely to have recently completed major BBVI vaccinations than participants who had never injected drugs.

Figure 93 shows the total number of notifications for HBV and HCV in NSW (Communicable Diseases Network Australia, 2013). Incident (newly acquired) infections and unspecified infections (i.e. notifications where the timing of the disease acquisition is unknown) are presented. HCV continues to be more commonly reported than HBV. Both figures appear to have remained relatively stable over time.

Figure 93: Total notifications for (incident and unspecified) HBV and HCV infections, NSW 2006-2012

Source: Communicable Diseases Network – Australia – National Notifiable Diseases Surveillance System (NNDSS)\textsuperscript{17}

Note: Data accessed on 11 February 2013. Figures are updated on an ongoing basis.

\textsuperscript{17} The quality and completeness of data compiled in the National Notifiable Diseases Surveillance System are influenced by various factors. Notifications may be required from treating clinicians, diagnostic laboratories or hospitals. In addition, the mechanism of notification varies between States and Territories and in some cases different diseases are notifiable by different mechanisms. The proportion of cases seen by health care providers which are the subject of notification to health authorities is not known with certainty for any disease, and may vary among diseases, between jurisdictions and over time.
Trends in the number of incident notifications for HBV and HCV in NSW are shown in Figure 94. The number of incident HBV infections has continued to gradually decline since 2007. Incident HCV infections appear to have remained relatively stable in recent years.

Figure 94: Total notifications for incident HBV and HCV infection NSW, 2006-2012

Source: Communicable Diseases Network – Australia – National Notifiable Diseases Surveillance System (NNDSS)

Note: Data accessed on 11 February 2013. Figures are updated on an ongoing basis.
7.3 Sexual risk behaviour

Participants were asked questions about their recent sexual activity, particularly with regards to penetrative sex. This was defined as ‘penetration by penis or fist of the vagina or anus’. Given the sensitive nature of these questions, participants were given the option of self-completing this section of the questionnaire.

Approximately three-quarters (71%) of the sample reported having had penetrative sex with at least one causal partner (i.e. someone who was not a regular partner) over the preceding six months. Of the 71 participants who reported penetrative sex with a casual partner, 65 participants (92%) reported having done so while under the influence of alcohol or drugs (Table 25). The drugs most commonly used were ecstasy, alcohol, cannabis, cocaine and crystal.

Table 25: Trends in sexual activity with casual partners in the past six months among REU, NSW 2009-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casual penetrative sex (%)</td>
<td>65</td>
<td>60</td>
<td>73</td>
<td>71</td>
</tr>
<tr>
<td>No. of sexual partners (%):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 person</td>
<td>17</td>
<td>35</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>2 people</td>
<td>23</td>
<td>10</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>3-5 people</td>
<td>45</td>
<td>37</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>6-10 people</td>
<td>9</td>
<td>12</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>10+ people</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Penetrative sex with casual partner while on drugs</td>
<td>n=57</td>
<td>n=47</td>
<td>n=64</td>
<td>n=65</td>
</tr>
<tr>
<td>Drugs used (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecstasy</td>
<td>64</td>
<td>55</td>
<td>48</td>
<td>63</td>
</tr>
<tr>
<td>Alcohol</td>
<td>83</td>
<td>72</td>
<td>81</td>
<td>48</td>
</tr>
<tr>
<td>Cannabis</td>
<td>42</td>
<td>47</td>
<td>48</td>
<td>43</td>
</tr>
<tr>
<td>Cocaine</td>
<td>21</td>
<td>11</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>Crystal</td>
<td>5</td>
<td>6</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>LSD</td>
<td>5</td>
<td>9</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Amyl nitrite</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ketamine</td>
<td>4</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Speed</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>GHB</td>
<td>2</td>
<td>9</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Base</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Pharmaceutical stimulants</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Heroin</td>
<td>-</td>
<td>7</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2009-2012

* Of those who had penetrative sex in the last 6 months
Participants were also asked whether they had used a protective sexual barrier the last time they had penetrative sex with a casual partner. More than half of the sample had done so when they were sober (61%) and while under the influence of drugs or alcohol (55%). The major reasons for not using protection were either that it was not mentioned or the sexual partner was using contraception (Figure 95).

Figure 95: Reasons for not using protective barriers among REU, NSW 2012

Source: EDRS regular ecstasy user interviews 2012
7.4 Driving risk behaviour

Participants were asked a series of questions regarding driving and the use of alcohol and other drugs (Table 26). More than half (65%) of participants in 2012 had driven a car, motorcycle or other vehicle in the preceding six months. Approximately one-third (35%) had driven under the influence of alcohol during this time. Of these participants who had driven, two-thirds (65%) had done so over the legal blood alcohol limit. Those who had driven over the legal limit reported having done this on a median of 2 occasions (range 1-50) in the preceding six months. Two-fifths (43%) of those who had driven during the last six months had been subject to a roadside breath test within that time. One participant reported having tested over the legal blood alcohol limit at least once.

Over half (59%) of those who had recently driven had done so after using an illicit drug on a median of 3 occasions (range 1-120). The drugs most commonly used prior to driving included cannabis (74%) and ecstasy (40%) (Table 26).

Table 26: Drug driving in the last six months among REU, NSW 2008-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driven a car in the past six months (%)</td>
<td>66</td>
<td>75</td>
<td>65</td>
<td>57</td>
<td>65</td>
</tr>
<tr>
<td>Driven under the influence of alcohol * (%)</td>
<td>65</td>
<td>49</td>
<td>49</td>
<td>50</td>
<td>35</td>
</tr>
<tr>
<td>Driven over the limit of alcohol * (%)</td>
<td>51</td>
<td>40</td>
<td>37</td>
<td>38</td>
<td>65</td>
</tr>
<tr>
<td>Driven after taking an illicit drug * (%)</td>
<td>53</td>
<td>68</td>
<td>59</td>
<td>55</td>
<td>59</td>
</tr>
</tbody>
</table>

Of those who had driven after taking a drug:

<table>
<thead>
<tr>
<th>Drug (%)</th>
<th>n=35</th>
<th>n=50</th>
<th>n=38</th>
<th>n=31</th>
<th>n=38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis</td>
<td>43</td>
<td>64</td>
<td>68</td>
<td>68</td>
<td>74</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>63</td>
<td>60</td>
<td>40</td>
<td>48</td>
<td>40</td>
</tr>
<tr>
<td>Cocaine</td>
<td>20</td>
<td>8</td>
<td>13</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>LSD</td>
<td>-</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Crystal</td>
<td>23</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Heroin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Ketamine</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>GHB</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>MDA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Nitrous oxide</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Speed</td>
<td>17</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Base</td>
<td>6</td>
<td>8</td>
<td>-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Amyl nitrite</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2008-2012

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

*Participants reported according to their own perception of their blood alcohol content.
Participants were asked a series of questions focussing on the last occasion on which they drove after taking an illicit drug. The drugs most commonly reported as having been taken on the last occasion were cannabis (74% of respondents), ecstasy (40%), cocaine (11%), LSD (11%) and crystal (8%). Participants reported having driven a median of 2 hours (range 0.5-8) after taking an illicit drug.

When asked how they thought their recent use of drugs had impacted on their driving ability on the last occasion, over half believed that they had been impaired (10% 'quite impaired' and 42% 'slightly impaired'). One-third (37%) believed that there had been no impact on their driving ability and more than one-tenth believed that it had been improved (8% 'slightly improved' and 3% 'quite improved'). Interestingly, no participants in the 2012 NSW sample had ever been tested by a police roadside drug testing van.
7.5 Problematic alcohol use among REU

7.5.1 Alcohol Use Disorders Identification Test (AUDIT)

The Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1993) was designed by the World Health Organization as a brief screening scale to identify individuals with alcohol problems, including those in early stages. It is a 10-item scale, designed to assess three conceptual domains: alcohol intake; dependence; and adverse consequences (Reinert & Allen, 2002).

Total scores of eight or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence (Babor et al., 1992). Higher scores indicate greater likelihood of hazardous and harmful drinking; higher scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor et al., 1992).

The median score on the AUDIT for the NSW 2012 sample was 12 (range 0-33). The majority (78%) of REU scored in the harmful range (i.e. total score of 8 or more). There was no significant difference between male and female median scores (12 versus 13). The AUDIT guidelines (Babor et al., 2001) indicate four ‘zones’ into which total scores on the test can be divided. In the current sample, one-fifth (21%) scored in zone 1 (low risk drinking or abstinence), two-fifths (43%) scored in zone 2 (alcohol in excess of low-risk guidelines), one-fifth (19%) scored in zone 3 (harmful or hazardous drinking) and the remaining one-fifth (17%) scored in zone 4 (possible alcohol dependence—may be referred for evaluation and possible treatment).
8 LAW ENFORCEMENT-RELATED TRENDS ASSOCIATED WITH ERD USE

Summary:
- Fourteen per cent of REU had reportedly been arrested over the past year.
- One-third of REU had committed a crime within the past month; most commonly drug dealing and property crimes.
- The number of arrests for ecstasy use/possession seemed to have increased since mid-2011. Increases were also noted in the number of arrests for use/possession of amphetamines and cocaine. The number of arrests for use/possession of cannabis in both inner Sydney and NSW appeared to decline mid-2011, which was followed by an increase in 2012.
- The majority of participants (86%) reported that half or more of their friends had used ecstasy during the previous six months.
- The vast majority (94%) believed that the quantity of drugs possessed would affect the type of criminal charge received.

8.1 Reports of criminal activity among REU

Approximately one-in-ten (14%) REU interviewed in 2012 had reportedly been arrested over the preceding 12 months. There had been three arrests for use/possession of illicit substances, two arrests for dealing/trafficking and two arrests for property crimes.

One-fifth (20%) of participants had dealt drugs in the month leading up to the interview. Of these, the majority of respondents (n=12) had done so less than once a week. Almost one-fifth (18%) of REU had committed a property crime over the last month, again, mostly less than once per week (n=11). For both fraud and violent crime, four participants had engaged in these crimes respectively, typically less than once per week (n=3 respectively).

Table 27 presents data across time on both self-reported criminal activity and arrests among samples of REU. In 2012, one-third of participants reported having committed any crime in the month preceding the interview. Drug dealing has been the most commonly reported crime across time, although in 2012 a similar proportion reported recently committing a property crime. These data have been relatively stable from 2011 to 2012.
Table 27: Criminal activity reported by REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=99)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any criminal activity in the last month</td>
<td>27</td>
<td>23</td>
<td>24</td>
<td>36</td>
<td>35</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Drug dealing</td>
<td>21</td>
<td>15</td>
<td>15</td>
<td>21</td>
<td>26</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Property crime</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>18</td>
<td>18</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>Fraud</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Violent crime</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Arrested last 12 months</td>
<td>7</td>
<td>14</td>
<td>5</td>
<td>11</td>
<td>24</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012
8.2 Perceptions of police activity towards REU

Over half of the REU interviewed reported that police activity toward REU had remained stable (52%) in the preceding six months (Table 28).

Table 28: Perceptions of police activity by REU, NSW 2006-2012

<table>
<thead>
<tr>
<th>Perception</th>
<th>2006 (N=100)</th>
<th>2007 (N=100)</th>
<th>2008 (N=100)</th>
<th>2009 (N=100)</th>
<th>2010 (N=100)</th>
<th>2011 (N=100)</th>
<th>2012 (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent police activity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decreased</td>
<td>10</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Stable</td>
<td>29</td>
<td>40</td>
<td>38</td>
<td>44</td>
<td>50</td>
<td>46</td>
<td>52</td>
</tr>
<tr>
<td>Increased</td>
<td>32</td>
<td>47</td>
<td>33</td>
<td>44</td>
<td>39</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>Don’t know</td>
<td>28</td>
<td>13</td>
<td>25</td>
<td>10</td>
<td>9</td>
<td>13</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2006-2012
8.3 Arrests

8.3.1 Ecstasy

Figure 96 presents the number of police-recorded criminal incidents for ecstasy possession and use in inner Sydney and NSW. While the number of incidents per month was highly variable, in the previous 12 months there appeared to be an increasing trend.

Figure 96: Number of police incidents recorded for ecstasy possession/use per quarter, inner Sydney and NSW, January 2006 to September 2012

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)

Figure 97 presents the number of police-recorded incidents for ecstasy dealing and trafficking for inner Sydney and NSW. The number of incidents involving dealing or trafficking of ecstasy has been fluctuating, although there appears to be a declining trend within NSW overall from early-2010.

Figure 97: Number of police incidents recorded for ecstasy deal/traffic per quarter, inner Sydney and NSW, January 2006 to September 2012

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)
8.3.2 Methamphetamine

Figure 98 shows the recorded incidents of amphetamine possession or use for inner Sydney and NSW. There appears to have been an increase in the number of arrests in NSW from late 2009 onward. Figures for the inner Sydney region also show a slight increasing trend over this time.

Figure 98: Recorded incidents of amphetamine possession/use per quarter, inner Sydney and NSW, January 2006 to September 2012

![Graph showing recorded incidents of amphetamine possession/use per quarter, inner Sydney and NSW, January 2006 to September 2012.](image)

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)

Figure 99 shows the number of police-recorded criminal incidents for amphetamine dealing or trafficking in the inner Sydney and NSW. After increasing from mid-2009 to late-2010, these figures began to fall slightly in 2011, but have stabilised since in NSW. In contrast, figures have remained relatively stable in the inner Sydney region over this time.

Figure 99: Recorded incidents of amphetamine deal/traffic per quarter, inner Sydney and NSW, January 2006 to September 2012

![Graph showing recorded incidents of amphetamine deal/traffic per quarter, inner Sydney and NSW, January 2006 to September 2012.](image)

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)
The number of clandestine methamphetamine and MDMA laboratories detected in NSW in 2011/12 has remained relatively stable since 2010/11. In the 2011/12 financial year, there were 92 detections in NSW, two of which were tabletting process (MDMA) detections (Figure 100).

**Figure 100: Number of clandestine methamphetamine and MDMA laboratories detected by NSW police 2005/06-2011/12**

![Graph showing number of lab detections, with years 2005/06 to 2011/12, and detections ranging from 54 to 93.](image)

Source: NSW Police Force  
**Note:** Data may include active, non-active and historical laboratories as well as storage sites. Data accessed on 13 February 2013.

### 8.3.3 Cocaine

The number of police-recorded incidents for cocaine possession/use have been increasing since approximately mid-2007 (Figure 101). Incidents reported in inner Sydney represent approximately half of all incidents recorded in NSW, and have continued to do so over time.

**Figure 101: Recorded incidents of cocaine possession/use per quarter, inner Sydney and NSW, January 2006 to September 2012**

![Graph showing recorded incidents, with years Jan-Mar 06 to Jul-Sep 12, and incidents ranging from 0 to 250.](image)

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)
Figure 102 shows the number of police-recorded criminal incidents for cocaine dealing or trafficking in the inner Sydney region and NSW. There appeared to be a spike in the number of arrests made in NSW in late-2009, however, these figures returned to prior levels by mid-to late-2010 and continued to remain relatively stable into 2012. A noticeable spike in cocaine dealing or trafficking incidents in inner Sydney was recorded in early 2012, however, these figures have now returned to prior levels.

Figure 102: Recorded incidents of cocaine deal/traffic per quarter, inner Sydney and NSW, January 2006 to September 2012

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)

8.3.4 Ketamine

Although it is an offence in jurisdictions such as NSW to be in possession of ketamine for personal use or in amounts suggesting an individual is supplying others, ketamine is not separately recorded in police databases. Therefore, no data were available on the number of police apprehensions for possession or supply of this controlled substance.

8.3.5 GHB

GHB, GBL and 1,4-B are controlled substances in Australia, and possession of them is an offence. GHB has been separately recorded in the NSW Police database since 2007, however, data on the number of police apprehensions for possession or supply were unavailable at the time of printing.

Very few GHB/GBL labs have been detected in NSW in the past six years. Since 2005/06, three GHB/GBL labs have been identified (one in 2005/06, one in 2009/10 and one in 2011/12). Further to this, one suspected GHB/GBL lab was detected in 2012/13, however, forensic analyses to confirm this were still being undertaken at the time of printing.

8.3.6 Cannabis

Figure 103 shows the number of police-recorded incidents of cannabis possession/use per quarter in the inner Sydney region and NSW. The number of incidents reported in inner Sydney appeared to increase from mid-2007 to early-2011, reflecting a general increase noted across the same timeframe in NSW as a whole. However, both inner Sydney and state-wide figures appeared to decline mid-2011, which was followed by an increase in 2012.
Figure 103: Recorded incidents of cannabis possession/use per quarter, inner Sydney and NSW, January 2006 to September 2012

Source: NSW Bureau of Crime Statistics and Research (BOCSAR)

8.3.7 2C-B

There were no NSW data available on the number of possession or supply offences of 2C-B or other EPS. However, it has been confirmed that two 2C-B labs have been detected in recent years (one in 2008/09 and one in 2011/12).
8.4 Perceptions of changes in peer drug use

The majority of participants (86%) reported that half or more of their friends had used ecstasy during the previous six months (11% ‘all’; 41% ‘most’; 34% ‘about half’). Less than one-fifth (14%) of participants reported that ‘a few’ of their friends had used ecstasy.

One-third (35%) of participants had perceived changes in drug use amongst their social group. Some of the more common themes in participant’s comments included the following:

- an increase in overall drug use, with two participants specifically commenting on the increase in the number of people taking drugs and the quantities taken in a session. Additionally, one participant reported that there had been an increase in polydrug use because users were becoming more confident. In terms of administration, it was reported that there had been an increase in snorting due to the faster effect;
- increasing experimentation with ‘new drugs’ including hallucinogens (mushrooms, MDA, LSD) crystal, ketamine, cocaine, bath salts (ivory wave) and methylone. A number of participants specifically mentioned exploring the use of ‘research chemicals’ such as 2C-B, 2C-I and ‘tripstacy’, which is believed to be part of the 2C family. One participant suggested that the increased use of EPS was due to easier access;
- increasing use of pharmaceutical drugs such as benzodiazepines. It was noted that people were using prescribed drugs for recreational purposes;
- comments regarding the use of ecstasy were mixed. One participant reported that their friends were taking more ecstasy due to a renewed interested, while another participant reported that many users were now using cocaine and caps instead of pills. There was also a complaint made about the current quality of ecstasy; and
- a trend that kids were taking party drugs and cannabis at a younger age, and that it was the norm to experiment with party drugs after school.
8.5 Perceptions and knowledge about drug law thresholds

Drug trafficking thresholds are used throughout every state and territory in Australia and often reverse the onus of proof onto users who exceed the nominated threshold quantity to prove they did not possess drugs for the purposes of trafficking. For the first time in 2012, EDRS participants were asked two questions about their perceptions and knowledge of drug law thresholds. The aim of these questions was to find out whether regular users were aware of the existence of drug trafficking thresholds.

Participants were firstly asked hypothetically, ‘Imagine you are caught by police and have drugs on you, do you think the quantity of drugs will affect the type of charge you will get?’ The vast majority (94%) of NSW REU believed that the quantity of drugs possessed would affect the type of charge received. Of those participants who responded ‘yes’, they were then asked, ‘What quantity would you need to possess to be charged with sell or supply (as opposed to possession for personal use), for heroin, methamphetamine, MDMA, cocaine and cannabis?’. The median quantities that REU perceived would attract a charge for drug sell or supply is outlined in Table 29.

Table 29: Drug trafficking thresholds by REU, NSW 2012

<table>
<thead>
<tr>
<th></th>
<th>2012 (n=96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believe quantity of drugs caught with would affect type of charge (%)</td>
<td>94</td>
</tr>
<tr>
<td>Median quantities required for charge of sell or supply:</td>
<td></td>
</tr>
<tr>
<td><em>Heroin</em></td>
<td></td>
</tr>
<tr>
<td>points</td>
<td>2</td>
</tr>
<tr>
<td>grams</td>
<td>3</td>
</tr>
<tr>
<td><em>Methamphetamine</em></td>
<td></td>
</tr>
<tr>
<td>points</td>
<td>4'</td>
</tr>
<tr>
<td>grams</td>
<td>2</td>
</tr>
<tr>
<td><em>MDMA</em></td>
<td></td>
</tr>
<tr>
<td>pills</td>
<td>4</td>
</tr>
<tr>
<td>grams</td>
<td>1</td>
</tr>
<tr>
<td><em>Cocaine</em></td>
<td></td>
</tr>
<tr>
<td>grams</td>
<td>2</td>
</tr>
<tr>
<td><em>Cannabis</em></td>
<td></td>
</tr>
<tr>
<td>ounces</td>
<td>1</td>
</tr>
<tr>
<td>grams</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012

'Small numbers, interpret with caution
9 SPECIAL TOPICS OF INTEREST

Summary:
- More than half of the total NSW sample smoked cigarettes daily. One-tenth of daily smokers in NSW were classified as highly dependent on nicotine.
- Using the Severity of Dependence Scale (SDS), ecstasy dependence was reported by 25% of REU when using a cut-off score of three or more, or by 14% of REU when using a cut-off score of four or more.
- The majority of participants supported the legalisation of cannabis for personal use, and about half supported the legalisation of ecstasy for personal use.
- One-third had ever lost consciousness due to a knock to the head.
- One-tenth of REU reported ever using illicit psychostimulants (IPS) to lose or maintain weight, with methamphetamine being the most commonly used IPS.

9.1 Fagerstrom Test for Nicotine Dependence

For the second consecutive year, EDRS participants who smoked daily were asked two questions from the Fagerstrom Test for Nicotine Dependence (FTND). This test includes questions such as, ‘How soon after waking do you smoke your first cigarette?’, and, ‘How many cigarettes a day do you smoke?’ The sum of these scores was computed and a cut-off score of more than 5 was used to indicate high to very high nicotine dependency (Heatherton et al., 1991).

Table 30 shows the results for NSW REU compared with the national sample. More than half of the total NSW sample smoked cigarettes daily. Of these, less than one-fifth (17%) smoked their first cigarette within five minutes of waking and one-third (30%) between five to 30 minutes of waking. Most daily smokers did not find it difficult to refrain from smoking in smoke free areas. Two-fifths of the sample (38%) reported they would find the first cigarette in the morning the most difficult to give up. The majority of NSW EDRS participants (60%) reported smoking 10 or fewer cigarettes per day. One-fifth (21%) reported that they smoke more frequently in the morning, and two-fifths (38%) reported that they still smoke while sick in bed. The mean nicotine dependence severity score was 2.8 (SD 2.2). Eleven per cent of daily smokers scored above five, indicating high to very high nicotine dependence.
Table 30: Fagerstrom test for nicotine dependence, nationally and among NSW REU, 2012

<table>
<thead>
<tr>
<th>Variable (%)</th>
<th>National (N=294)</th>
<th>NSW (n=53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to first cigarette after waking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 5 mins</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>5-30 mins</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>31-60 mins</td>
<td>22</td>
<td>15</td>
</tr>
<tr>
<td>60+ mins</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>Difficulty refraining from smoking in forbidden places</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>What cigarette would you hate to give up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First in the morning</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>60</td>
<td>62</td>
</tr>
<tr>
<td>Number of cigarettes smoked daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 or less cigarettes</td>
<td>48</td>
<td>60</td>
</tr>
<tr>
<td>11-20 cigarettes</td>
<td>51</td>
<td>32</td>
</tr>
<tr>
<td>21-30 cigarettes</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>31 or more cigarettes</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Smoke more frequently in the morning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>Smoke in bed even when sick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>38</td>
</tr>
<tr>
<td>High dependence</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Mean score</td>
<td>3.2</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012
*Score of above 5
9.2 Ecstasy dependence

It has been traditionally believed that dependence on MDMA (the active ingredient in ecstasy) is unlikely given the relatively infrequent use patterns exhibited by ecstasy users (i.e. fortnightly or weekly). However, there is nonetheless, evidence from animal research of a dependence potential for MDMA which is relatively attenuated and displays unique characteristics compared with other drugs. Little work has been done to characterise a dependence syndrome among ecstasy users (Bruno et al., 2009).

In 2012, participants were asked questions from the Severity of Dependence Scale (SDS) adapted to investigate ecstasy dependence. The SDS is a five-item questionnaire designed to measure the degree of dependence on a variety of drugs. The SDS focuses on the psychological aspects of dependence, including impaired control of drug use, and preoccupation with, and anxiety about, use. The SDS appears to be a reliable measure of the dependence construct. It has demonstrated good psychometric properties with heroin, cocaine, amphetamine and methadone maintenance patients across five samples in Sydney and London (Dawe et al., 2002). A total score was created by summing responses to each of the five questions. Possible scores range from 0 to 15.

Two cut off scores are presented below of three or more and four or more. A cut-off score of three or more was used as these scores have been recently found in the literature to be a good balance between sensitivity and specificity for identifying problematic dependent ecstasy use (Bruno, Gomez & Matthews, 2011). Twenty-five per cent of REU recorded a score of three and above. The cut off of four and above is a more conservative estimate which has been used previously in the literature as a validated cut-off for methamphetamine dependence (Topp & Mattick, 1997; Bruno et al., 2009). Fourteen per cent of EDRS participants scored four or above.

The median SDS score was 1 (range 0-12). One-third of participants (35%) obtained a score of zero on the ecstasy SDS, and over one-quarter (28%) obtained a score of 1 on the scale; that is, the majority of respondents reported no or few symptoms of dependence in relation to ecstasy use. These findings are supported by responses of the majority of participants (78%) reporting ‘never or almost never’ thinking that their use of ecstasy was out of control and 72% reporting that they would find it ‘not difficult to stop or miss a prospective dose of ecstasy’.
9.3 Drug policy attitudes

Public opinion can play an important role in determining social policy and informing political processes (Matthew-Simmons, Love & Ritter, 2008). The vast majority of public opinion data regarding attitudes to drug policy in Australia is collected at the broader population level. In 2012, additional questions in the EDRS were asked to provide data about how people who use drugs perceive Australian drug policy, building on research undertaken as part of the wider Drug Policy Modelling Program (DPMP) project “Public opinion and drug policy: engaging the ‘affected community’” (Lancaster, Ritter & Stafford, 2012).

The policy questions were drawn from the National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2008a) to ensure comparability with general population responses. Participants in the 2012 EDRS were asked three policy questions (1) ‘Thinking about the problems associated with heroin use, to what extent would you support or oppose measures such as…’, (2) ‘To what extent would you support or oppose the personal use of the following drugs being made legal?’ and (3) ‘To what extent would you support or oppose the increased penalties for sale or supply of the following drugs?’.

Table 31 presents the collated ‘strongly support’ and ‘support’ response findings from NSW REU compared with the national sample. The majority of participants in the NSW sample commented (n=98), with 91% supporting needle and syringe programs to reduce problems associated with heroin use. The majority of the participants also supported regulated injecting rooms, methadone/buprenorphine maintenance programs and treatment with drugs (other than methadone).

The majority of the NSW sample supported the legalisation of cannabis (80%) for personal use and just under half (48%) supported the legalisation of ecstasy for personal use.

Small numbers supported the increased penalties for sale or supply of cannabis (10%). About half supported the increased penalties for sale or supply of heroin and around one-third to one-quarter for methamphetamine or cocaine. Overall, the various levels of support were comparable across national and NSW samples.
Table 31: Support for measures to reduce problems associated with heroin, for legalisation of illicit drugs, and the increase of penalties for illicit drugs, nationally and among NSW REU, 2012

<table>
<thead>
<tr>
<th>Variable (%)</th>
<th>National (N=598)</th>
<th>NSW (n=98)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support measures to reduce problems associated with heroin use:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needle syringe programs</td>
<td>85</td>
<td>91</td>
</tr>
<tr>
<td>Methadone/Buprenorphine maintenance program</td>
<td>68</td>
<td>74</td>
</tr>
<tr>
<td>Treatment with drugs (not methadone)</td>
<td>65</td>
<td>62</td>
</tr>
<tr>
<td>Regulated injecting room</td>
<td>65</td>
<td>78</td>
</tr>
<tr>
<td>Trial of prescribed heroin</td>
<td>34</td>
<td>48</td>
</tr>
<tr>
<td>Rapid detoxification therapy</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Use of naltrexone</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Support legalisation (personal use) of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis</td>
<td>79</td>
<td>80</td>
</tr>
<tr>
<td>Heroin</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Cocaine</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td><strong>Support increased penalties for sale or supply of illicit drugs:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Heroin</td>
<td>49</td>
<td>54</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>37</td>
<td>36</td>
</tr>
<tr>
<td>Cocaine</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012
9.4 Neurological history

People with a neurological illness or injury may be at greater risk of experiencing adverse effects associated with drug use. Existing research indicates that there is an association between traumatic brain injury (TBI) and drug use (Corrigan, Bogner & Holloman, 2012). This may be due to greater exposure to violence, mental illness, poor nutrition and poor sleep among other factors. TBI is a major cause of morbidity and mortality in developed countries (Bruns & Hauser, 2003) and can result in long-term physical and cognitive impairments, as well as negatively impact upon psychological well-being, social and occupational outcomes (Tait, Anstey & Butterworth, 2010). The cognitive, emotional and functional impairments associated with drug use could potentially compound those associated with TBI (Kelly et al., 1997). In 2012, the EDRS examined the prevalence of selected neurological illnesses and also of TBI among REU. Table 32 outlines the results of this investigation for the NSW and national samples.

Table 32: Incidence of selected neurological conditions, nationally and among NSW REU, 2012

<table>
<thead>
<tr>
<th>Variable (%)</th>
<th>National (N=601)</th>
<th>NSW (n=99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epilepsy</td>
<td>0.8</td>
<td>0</td>
</tr>
<tr>
<td>Stroke</td>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>Hypoxia</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>40</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012

The lifetime prevalence of epilepsy in the NSW sample was nil, which is comparable with the Australian population estimate (0.7%) obtained in the 2007-08 National Health Survey (Australian Bureau of Statistics, 2010). Data from the same survey estimates the Australian prevalence of cerebrovascular disease (including stroke) as approximately 1.2%, substantially higher than the proportion reported in the current sample. This is likely due to the fact that this sample was largely young and that the category used in the national survey included all forms of cerebrovascular illness. It is difficult to estimate the prevalence of hypoxic brain injury because it can result from a range of different situations (including drowning, carbon monoxide poisoning, heart attack, etc.). Nonetheless, none of the 2012 NSW REU reported being diagnosed with this neurological condition.

In contrast, one-third of the group (33%) reported a lifetime history of TBI. In a recent study, Perkes et al. (2011) estimated the lifetime prevalence of TBI with loss of consciousness (LOC) as 35% among a community sample of males in Australia. Similarly, a cohort study conducted in Christchurch, New Zealand demonstrated that approximately 32% of the community sample had experienced at least a mild traumatic brain injury by 25 years of age (McKinlay et al., 2008). Both of these prevalence estimates are comparable to that recorded in the NSW sample. However, caution should be used when directly comparing these figures due to differences in sampling techniques and data collection.

20 Three quarters of all new stroke events occur in people aged 65 years and older (Bonita, 1992).
21 TBI was measured as a knock on the head resulting in loss of consciousness.
### Table 33: Traumatic Brain Injury (TBI) among REU, NSW 2012

<table>
<thead>
<tr>
<th>Variable</th>
<th>NSW (n=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median number of TBI (range)</td>
<td>2 (1-30)</td>
</tr>
<tr>
<td>For most severe TBI:</td>
<td></td>
</tr>
<tr>
<td><em>Median LOC</em> (mins)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Injury severity:</strong></td>
<td></td>
</tr>
<tr>
<td>Mild TBI</td>
<td>85</td>
</tr>
<tr>
<td>Moderate/Severe TBI#</td>
<td>15</td>
</tr>
<tr>
<td><strong>Median age (years)</strong></td>
<td>19</td>
</tr>
<tr>
<td><strong>Under influence of alcohol (%)</strong></td>
<td>24</td>
</tr>
<tr>
<td><strong>Under influence of drugs (%)</strong></td>
<td>21</td>
</tr>
<tr>
<td><strong>Main drug</strong>:</td>
<td>n=7</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>57</td>
</tr>
<tr>
<td>Cannabis</td>
<td>43</td>
</tr>
<tr>
<td>Heroin</td>
<td>33</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>17</td>
</tr>
<tr>
<td>Speed</td>
<td>17</td>
</tr>
</tbody>
</table>

**Source:** EDRS regular ecstasy user interviews 2012

- LOC = Loss of consciousness
- *LOC<30 minutes
- # LOC≥ 30 minutes

Multiple TBI were the norm with the median number of TBI experienced over the lifetime equalling 2 (range 1-30) (Table 33). Participants were asked further details about the most severe occasion. The vast majority of participants who had experienced a TBI reported that the LOC on the most severe occasion lasted only a few minutes (consistent with a mild injury). However, a reasonable proportion (15%) of this group reported a LOC of greater than half an hour (consistent with a moderate to severe TBI). The most severe TBI had usually occurred during the late-teens at a median of 19 years of age (range 0-39). Approximately one-quarter (24%) of the group were under the influence of alcohol at the time of the injury and approximately one-fifth (21%) were under the influence of at least one drug. Of these, approximately three-fifths (57%) reported they had taken ecstasy and two-fifths (43%) had been under the influence of cannabis.

Some people experience neuropsychological sequelae (symptoms such as cognitive, motor and behavioural changes) following a TBI which can complicate recovery. As outlined in Table 34, a large proportion of the group (63%) reported having experienced neurological sequelae immediately following the injury. The most common complaints were poor concentration (65%), memory loss (60%) and poor coordination/balance (50%). Ongoing complaints were less common (n=8). Participants who had experienced ongoing issues complained mostly of ongoing memory deficits (n=5), ongoing poor concentration (n=5) and ongoing headaches (n=4).
<table>
<thead>
<tr>
<th>Variable</th>
<th>NSW (n=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience any effects' following the injury (%)</td>
<td>63</td>
</tr>
<tr>
<td>Experienced at the time (%):</td>
<td>n=20</td>
</tr>
<tr>
<td>Poor concentration</td>
<td>65</td>
</tr>
<tr>
<td>Memory loss</td>
<td>60</td>
</tr>
<tr>
<td>Poor coordination/balance</td>
<td>50</td>
</tr>
<tr>
<td>Functional weakness</td>
<td>35</td>
</tr>
<tr>
<td>Personality change</td>
<td>30</td>
</tr>
<tr>
<td>Mood/anxiety issues</td>
<td>25</td>
</tr>
<tr>
<td>Word finding problems</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012

*Neurological, cognitive, behavioural or psychiatric effects
9.5 Body image

Research has highlighted a link between psychostimulant use and body image, suggesting that adolescent girls and young women with negative weight perceptions are more likely to engage in both licit and illicit substance use (Leventhal, 1983; Nieri et al., 2005; Weathers & Billingsley, 1982). Negative weight perceptions are of particular concern for psychostimulant users, because in addition to acting as mood enhancers, psychostimulant drugs suppress the appetite. Other studies have found that female stimulant users exhibit higher levels of body image distortions and disordered eating behaviours than non-users (Curran & Robjant, 2006; Parkes et al., 2008), and some young women report using these drugs specifically to lose weight (Boys, Marsden & Strang, 2001). For example, a recent Australian case report found that crystal methamphetamine or ‘ice’ use was associated with the onset of disordered eating and used as an efficient weight losing behaviour in an established eating disorder (Neale, Abraham & Russell, 2009). The aim of this module is to enhance understanding of the relationship between illicit psychostimulant (IPS) drug use and body image. Characteristics of REU who reported ever using IPS for weight management are presented in Table 35.

Approximately one-tenth of REU reported ever using IPS to lose or maintain weight, of which 43% were female. The most commonly reported drug used for losing or maintaining weight was methamphetamine (57%). The majority of respondents who reported using IPS for weight loss or maintenance were concerned that they had lost too much weight from using IPS (71%). Although the majority were not concerned that abstaining from IPS may result in weight gain (57%), almost all respondents reported that weight gain due to stopping IPS use was not a desirable outcome (86%). It is worth noting that due to the small sample numbers, caution should be used when interpreting these results.
Table 35: Characteristics of REU who reported ever using an illicit psychostimulant (IPS) for weight management compared to those who did not, NSW 2012

<table>
<thead>
<tr>
<th>Have you ever used IPS to help lose or maintain weight? n (%)</th>
<th>Yes (n=7)</th>
<th>No (n=92)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4 (57)</td>
<td>59 (64)</td>
</tr>
<tr>
<td>Female</td>
<td>3 (43)</td>
<td>32 (35)</td>
</tr>
<tr>
<td>BMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18.5 (Underweight)</td>
<td>1 (20)</td>
<td>8 (9)</td>
</tr>
<tr>
<td>≥18.5 (≥Normal)</td>
<td>4 (80)</td>
<td>80 (91)</td>
</tr>
<tr>
<td>Which IPS have you ever used to help lose or maintain weight?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>4 (57)</td>
<td>-</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>2 (29)</td>
<td>-</td>
</tr>
<tr>
<td>Cannabis</td>
<td>1 (14)</td>
<td>-</td>
</tr>
<tr>
<td>Which IPS did you last use to help lose/maintain weight?*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>4 (57)</td>
<td>-</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>2 (29)</td>
<td>-</td>
</tr>
<tr>
<td>Cannabis</td>
<td>1 (14)</td>
<td>-</td>
</tr>
<tr>
<td>Are you concerned you have lost too much weight because of your IPS use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5 (71)</td>
<td>11 (12)</td>
</tr>
<tr>
<td>No</td>
<td>2 (29)</td>
<td>78 (88)</td>
</tr>
<tr>
<td>Are you concerned that if you stop using IPS you will gain weight?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3 (43)</td>
<td>6 (7)</td>
</tr>
<tr>
<td>No</td>
<td>4 (57)</td>
<td>83 (93)</td>
</tr>
<tr>
<td>Would weight gain be a desirable outcome should you cease or stop your IPS use?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1 (14)</td>
<td>17 (19)</td>
</tr>
<tr>
<td>No</td>
<td>6 (86)</td>
<td>72 (81)</td>
</tr>
</tbody>
</table>

Source: EDRS regular ecstasy user interviews 2012

* Small numbers, interpret cautiously

# Of those who used IPS to lose or maintain weight during the past 6 months
REFERENCES


