new south
wales

**L. Scott and L. Burns**

# NSW TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2011
## Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

**Australian Drug Trends Series No. 83**

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

# NEW SOUTH WALES TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2011


## Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

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**Australian Drug Trends Series No. 83**

**ISBN 978-0-7334-3114-2**

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# ACKNOWLEDGEMENTS

In 2011, the NSW Ecstasy and Related Drugs Reporting System (EDRS) was funded by the Australian Government Department of Health and Ageing (AGDH&A), 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, Mr Joe Upston and colleagues 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 2011 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 2011 NSW EDRS. KE participate 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 Poppy Rourke, Monika Wadolowski, Katherine Tye, Francis Matthew-Simmons, Janneke Rijnart, Annette Keates 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 2011 the EDRS relied upon many, including:

- Mr Tony Trimmingham and Ms Jennifer Chapman, Family Drug Support (FDS);
- Mr George Bodilsen and Mr John Gross, 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 Ms Annie Malcolm, NSW Department of Health;
- Ms Lipan Rahman, Ms Brooke Black and Mr David Biddle, Australian Bureau of Statistics;
- Mr Craig Lindsay, Mr Chris Gardiner, and Mr Chris Kordzik, 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 2011 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 Service;
- 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, Natasha Sindicich and Jennifer Stafford, and to the previous National Coordinators for their guidance and support.

Finally, we are grateful to Paul McElwee from Turning Point Alcohol & Drug Centre in Victoria who created the database for the EDRS. His tireless efforts and capacity to respond to requests in a short timeframe were greatly appreciated.

# ABBREVIATIONS

| | |
|---|---|
| **1,4-B** | 1,4-butanediol |
| **2-CB** | 4-bromo-2,5-dimethoxyphenethylamine |
| **2-CE** | 2,5-dimethoxy-4-ethylphenethylamine |
| **2-CI** | 2,5-dimethoxy-4-iodophenethylamine |
| **5MEO-DMT** | 5-methyoxy-dimethyltryptamine |
| **ABCI** | Australian Bureau of Criminal Intelligence |
| **ACC** | Australian Crime Commission |
| **ACON** | AIDS Council of NSW |
| **ACPR** | Australasian Centre for Policing Research |
| **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-hydroxy butyrate |
| **GLBTQ** | gay/lesbian/bisexual/transgender/queer |
| **HBV** | hepatitis B virus |
| **HCV** | hepatitis C virus |

| | |
|---|---|
| **HIV** | human immunodeficiency virus |
| **ICD-10-AM** | International Statistical Classification of Disease and Related Problems – 10th revision, Australian Modification |
| **IDRS** | Illicit Drug Reporting System |
| **IDU** | injecting drug user(s) |
| **K10** | Kessler Psychological Distress Scale |
| **KE** | key expert(s) |
| **LSD** | *d*-lysergic acid diethylamide |
| **MDA** | 3,4-methylenedioxyamphetamine |
| **MDEA** | 3,4-methylenedioxyethylamphetamine |
| **MDMA** | 3,4-methylenedioxymethamphetamine |
| **MDPV** | 3,4-methylenedioxypyrovalerone; ivory wave |
| **MDS AODTS** | Minimum Data Set for Alcohol and Other Drug Treatment Services |
| **MPTP** | 1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine |
| **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 |
| **NSP** | Needle and Syringe Program |
| **NSW** | New South Wales |
| **PASW** | Predictive Analytics Software |
| **PDI** | Party Drugs Initiative |
| **PIED** | performance and image enhancing drugs |
| **PMA** | para-methoxyamphetamine |
| **PMK** | piperonyl methyl ketone |
| **PNS** | peripheral nervous system |
| **PSIQ** | Pittsburgh Sleep Quality Index |
| **REU** | regular ecstasy user(s) |
| **REM** | rapid eye movement |
| **ROL** | REM onset latency |
| **SDS** | Severity of Dependence Scale |
| **SPSS** | Statistical Package for the Social Sciences |
| **SSRI** | selective serotonin reuptake inhibitor(s) |
| **STI** | sexually transmitted infections |
| **THC** | delta-9-tetrahydro-cannabinol |
| **TMA** | 3,4,5-trimethoxyamphetamine |
| **QOL** | quality of life |

# GLOSSARY

| | |
|---|---|
| 1,4-B | Acronym for 1,4-butanediol. It is a GHB precursor and substitute, which metabolises into GHB in the stomach |
| 2-CB | Street term for 4-bromo-2,5-dimethoxyphenethylamine. It is a synthetic psychedelic of moderate duration |
| 2-CI | Street term for 2,5-dimethoxy-4-iodophenethylamine. It is a short-acting synthetic psychedelic |
| Bump | A bump refers to a small amount of powder, typically measured and snorted from the end of a key, the corner of a plastic card or a 'bumper' |
| Bumper | A bumper is a small glass nasal inhaler, purchased from tobacconists, used to store and administer powdered substances such as ketamine |
| Cap | Capsule |
| Cocaine | A central nervous system stimulant, obtained from the cocoa plant. Cocaine hydrochloride, the salt, is the more common form used in Australia. The freebase form is called 'crack'; little or no crack is available or used in Australia |
| Crystal | Street term for crystal methamphetamine, a potent form of methamphetamine. Also known as 'ice' |
| Daily use | Use occurring on each day in the past six months, based on a maximum of 180 days |
| Ecstasy | Street term for MDMA (3,4-methylenedioxymethamphetamine), which may contain a range of other substances. It is an hallucinogenic amphetamine |
| GBL | Acronym for gamma butyrolactone. It is a GHB precursor and substitute, which metabolises into GHB in the stomach |
| GHB | Acronym for gamma-hydroxy butyrate. It is a central nervous system depressant. Other known terms include 'GBH' and 'liquid ecstasy'; however, the latter is misleading as GHB is a depressant, not a stimulant |
| Ketamine | It is a dissociative psychedelic used as a veterinary and human anaesthetic |
| Lifetime injection | Injection (typically intravenous) on at least one occasion in the participant's lifetime |
| Lifetime use | Use on at least one occasion in the participant's lifetime via one or more of the following 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-tolylpropane-1-one), also known as 4-methylmethcathinone (4-MMC) or 4-methylephedrone, is a stimulant and entactogen drug of the phenethylamine, amphetamine, and cathinone chemical classes |
| Methamphetamine | An analogue of amphetamine, it is a central nervous system stimulant. The three main forms of methamphetamine in Australia are methamphetamine powder ('speed'), methamphetamine base ('base') and crystalline methamphetamine ('crystal', 'ice') |
| PMA | Acronym for para-methoxyamphetamine. It is an amphetamine-type drug with both stimulant and hallucinogenic properties |
| Point | 0.1 gram |
| Recent injection | Injection (typically intravenous) in the last six months |
| Recent use | Use in the last six months via one or more of the following routes of administration: inject; smoke; snort; swallow; and/or shaft/shelve |

# EXECUTIVE SUMMARY

The 2011 NSW Trends in Ecstasy and Related Drug Markets report represents the twelfth year in which data has been collected in NSW on the markets for ecstasy and related drugs. The Ecstasy and Related Drugs Reporting System (EDRS; formerly the Party Drugs Initiative, or PDI) is the most comprehensive and detailed study of ecstasy and related drug 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) 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. Regular ecstasy users are recruited as they are considered a sentinel group to detect illicit drug trends. The information from the 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 ecstasy and related drug 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.

## Demographics

- 100 REU were sampled in the 2011 EDRS (77 male and 23 female).
- Participants were young (mean age=24 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 employment status, the completion of tertiary education and income.

## Patterns of drug use among REU

- Participants had experience with a wide range of drugs; having used an average of 11 different drug types during their lifetimes and 7 different drug types over the past six months.
- One-in-ten reported having ever injected a drug.
- Increases were seen in recent use of tobacco, ketamine and magic mushrooms.
- Reductions were seen in the recent use of heroin.
- Ecstasy was the main drug of choice for one-third of the sample.
- One-third of the group had recently binged on ecstasy and related drugs (ERD). The median number of binge episodes was 4 in the past six months.

### Ecstasy

*Consumption Patterns*

- Ecstasy was used on a median of 13 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 1-12).
- Swallowing was the main route of administration (93%).
- The vast majority of REU (91%) reported using other drugs in combination with ecstasy the last time they used it, most commonly alcohol, tobacco, cannabis and cocaine.
- The majority (70%) of participants used other drugs to help them come down from ecstasy the last time they used it (most commonly cannabis, alcohol and tobacco).
- Ecstasy was most commonly last used at a nightclub (55%) and other public venues.
- The proportion of the NSW population who reported using ecstasy within the last twelve months fell significantly from 3.5% in 2007 to 3% in 2010.
- Approximately one-third (30%) of men interviewed for the Sydney Gay Community Periodic Survey reported having recently used ecstasy. A significant decline from the previous survey.
- Key experts noted that ecstasy use is common among young people and that older users are starting to regain interest in the drug as the purity reportedly has begun to increase.

*Market Characteristics*

- *Price*: $25 per tablet.
- *Purity*: Currently low and stable.
- *Availability*: Currently easy to obtain and stable.
- Several key experts had reason to believe that the purity of ecstasy was beginning to increase after a substantial period of low purity.

## Methamphetamine

The 2011 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 3 days over the preceding six months and was primarily snorted (88%).
- The frequency and quantity of use appeared to be stable from 2010 to 2011.

*Base*

- Two-fifths of the sample had ever used base and 16% had done so recently.
- Base was used on a median of 2 days over the preceding six months and was primarily swallowed (100%).
- The frequency and quantity of use appeared to be stable from 2010 to 2011.

*Crystal*

- One-third of the sample had ever used crystal and one-fifth had done so recently.
- Crystal was used on a median of 6 days over the preceding six months and was primarily smoked (84%).
- While the frequency of use was stable, the average quantities used increased slightly from 2010 to 2011.

- Speed was commonly used in public settings, crystal in private settings and base was a mix of both.
- 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 been in decline since 2007.
- KE generally agreed that speed and crystal were becoming less common and that base was quite uncommonly seen.

*Market Characteristics:*

*Speed*

- *Price*: $80 per gram and apparently increasing from 2009.
- *Purity*: Reports were variable.
- *Availability*: Currently easy to obtain and stable.

*Base*

- *Price*: $100 per gram and reportedly stable
- *Purity*: Currently medium to high and appeared to be stable.
- *Availability*: Currently difficult to obtain and stable.

*Crystal*

- *Price*: $60 per point and reportedly increasing.
- *Purity*: Generally high although variable.
- *Availability*: Currently easy to obtain and stable.

- Key experts agreed that speed and crystal had become more difficult to access and that the purity of speed was low.

## Cocaine

*Consumption Patterns*

- The majority of the group (84%) had tried cocaine at least once, and 59% had used it recently.
- Cocaine was used on a median of 4 days (i.e. less than monthly) over the preceding six months.
- The proportions using cocaine, the frequency and quantities used had all remained stable from 2010 to 2011.
- Recent use of cocaine among the NSW general population increased significantly from 1.6% in 2007 to 2.1% in 2010.
- From 2007 to 2011 there was a significant increase in the use of cocaine among participants of the Sydney Gay Community Periodic Survey.
- Key experts reported that cocaine use they saw was primarly localised among young professionals in nightclubs and was uncommon at festivals.

*Market Characteristics*

- *Price*: $300 per gram, stable.
- *Purity*: Variable although appears to have decreased.
- *Availability*: Currently easy to obtain, stable.
- Key experts had observed increases in cocaine importation from Mexico. Reduced presence of the adulterant Levamisole was also reported.

## Ketamine

*Consumption Patterns*

- Over half of the sample had tried ketamine at least once and 39% had used it recently.
- Ketamine was used on a median of 2 days (i.e. less than monthly) over the preceding six months.
- There was a significant increase in proportions reporting recent ketamine use and an apparent decrease in quantities used from 2010 to 2011.
- 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 2007-2011.
- Key experts reported ketamine use was not widespread among Sydney party goers but localised to certain groups.

*Market Characteristics*

- *Price*: $150 per gram, stable.
- *Purity*: Currently high and stable.
- *Availability*: Reports variable.
- Key experts reported that the availability of ketamine was low and it was uncommonly seen.

## GHB

*Consumption Patterns*

- One-third of the sample had tried GHB at least once and 16% had used it recently.
- GHB was used on a median of 2 days (i.e. less than monthly) over the preceding six months.
- The frequency and quantity of use of GHB remained stable from 2010 to 2011.
- Recent use of GHB among the NSW general population remained low and stable.
- From 2007 to 2011 the use of GHB among participants of the Sydney Gay Community Periodic Survey was stable.
- Key experts were concerned about the risks of alcohol pre-loading and GHB use among groups who were not well-acquainted with harm reduction strategies for central nervous system (CNS) depressants.

*Market Characteristics*

- *Price*: $10 per mL, stable.
- *Purity*: Reports variable.
- *Availability*: Currently difficult to obtain, stable.
- Key expert comments indicated that GHB purity was currently poor and that it was difficult to access.

## LSD

*Consumption Patterns*

- Three-quarters of the sample had tried *d*-lysergic acid diethylamide (LSD) at least once and almost half had used it recently.
- LSD was used on a median of 2 days (i.e. less than monthly) 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 four 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 the Sydney Gay Community Periodic Survey remained relatively low and stable over time.
- Key expert comments indicated that LSD use was increasing among certain subgroups of party goers.

*Market Characteristics*

- *Price*: $20 per tab, stable.
- *Purity*: Currently high, stable.
- *Availability*: Currently easy to obtain, stable.
- Key experts reported that the purity of LSD was variable and that it tended to be imported rather than manufactured in Australia.

## 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 declined since 2007.
- Key experts were concerned about the use of cannabis among young people and among same sex attracted women.

*Market Characteristics*

*Hydro*

- *Price*: $20 per gram; $300 per ounce, stable.
- *Potency*: Currently high, stable.

- *Availability*: Currently very easy to obtain, stable.

*Bush*

- *Price*: $20 per gram; $290 per ounce, stable.
- *Potency*: Currently medium, stable.
- *Availability*: Reports variable.

- Key experts agreed that cannabis use continues to be widespread.

## Research chemicals

- The two most common research chemicals recently used among Sydney REU were dimethyl tryptamine (DMT) (n=7) and mephedrone (n=4).
- Key experts reported that they had not heard much about mephedrone lately and that there had been a substantial drop in the availability of piperazines (mainly 1-benzylpiperazine - BZP).

## Other drug use

- Every participant reported the lifetime use of alcohol and all but one had used it recently.
- Key experts reported that alcohol continued to be one of the most problematic drugs among REU.
- The majority of REU had used tobacco at least once and 92% had smoked within the past six months.
- One-third of the group had recently used benzodiazepines. Illicit use was more common than licit use.
- One-in-ten REU had recently used antidepressants. Licit use was more common than illicit use.
- Amyl nitrite was used more commonly among this group (40%) than nitrous oxide (13%).
- The use of heroin was uncommon with only 2% reporting recent use; however, one-tenth reported having recently used other opiates.
- One-quarter of the sample had recently used mushrooms, significantly higher than in 2010 (10%).
- One-fifth of the group had recently used pharmaceutical stimulants. Illicit use was more common than licit use.
- The use of over the counter codeine-containing and stimulant products was common among REU (39% codeine and 27% stimulants); however, this included both licit and recreational use.
- The use of performance and image enhancing drugs (PIED) was uncommon in this group.

## Health-related harms associated with ecstasy and related drug use

- One-third of participants reported having overdosed on a stimulant drug throughout their lifetime.
- One-quarter reported having ever overdosed on a depressant drug.
- Deaths associated with ecstasy, ketamine and GHB have remained stable in the past year. Increases were observed in deaths associated with methamphetamines in 2010/11.

- One-quarter of the group reported that they had recently accessed a medical or health service in relation to their drug use.
- Calls to ADIS and FDS regarding ecstasy and amphetamines appear to have declined from early 2007 onward. Calls regarding cocaine, ketamine, GHB and LSD have remained relatively stable from 2010 to 2011.
- Participants commonly reported that their drug use caused repeated social problems (36%); resulted in exposure to risk of injury (40%); and/or interfered with responsibilities (43%). Recurrent drug-related legal problems were uncommon (5%).
- Hosptial admissions in which amphetamine was the principal diagnosis appear to have declined in NSW; those for cocaine have remained low and stable nationally while those where cannabis was the principal diagnosis appear to be increasing gradually.
- One-quarter of the group had recently experienced a mental health problem. Mood and anxiety disorders were those most commonly reported.
- Participants completed the Kessler 10-item Psychological Distress Scale (K10). One-quarter of the group fell into the 'high' or 'very high' distress categories.

## Risk behaviour

- One-tenth of the sample had ever injected a drug and 8% had done so recently.
- One-third of the group had completed a Hepatitis B vaccination schedule.
- Rates of testing for blood-borne viral infections (BBVI) were low with 33% having recently tested for Hepatitis C, 32% 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 that it was not mentioned, the partner was using contraception or the participant did not wish to use it.
- Over half the sample had recently driven a vehicle. Of these, two-fifths had done so while over the legal blood alcohol limit and more than half after having taken an illicit drug.
- Participants completed the AUDIT. The majority (80%) of the group fell in the 'harmful drinking' range.

## Criminal activity

- Fourteen percent of REU had reportedly been arrested over the past year.
- More than two-fifths 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 decreased from mid-to-late 2009 onward and those for ecstasy deal/trafficking likewise from early 2010. Increases were noted in the numbers of arrests for use/possession of amphetamines. The numbers of police-recorded incidents for the use or possession of cocaine and of cannabis have been increasing since mid-2007.
- The majority of participants (79%) reported that half or more of their friends had used ecstasy during the previous six months.

## Special topics of interest

- More than half of the total NSW sample smoked cigarettes daily. One fifth of daily smokers in NSW were classified as highly dependent on nicotine.
- Eleven percent of REU's responses on the SDS scale indicated ecstasy dependence.
- More than half of the group had recently gone online for a drug related activity; most commonly involving sharing information about drugs.
- Almost half the group reported that their drug use had impacted negatively on their sleep.
- The average quality of life was 7.7 out of 10 and was fairly comparable for men and women.

## 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 2011 NSW EDRS revealed ongoing fluctuations in drug markets and signs of drug related harms which are discussed below.

### *Ongoing fluctuation in ERD markets*

Over the past two 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 appears ongoing with 2011 data revealing increasing use of hallucinogens (including mushrooms and LSD) among REU and also among the general Australian population.

### *Emerging psychoactive substances*

As in 2010, the use of emerging psychoactive substances (EPS) was low among Sydney REU. While reasonable proportions of REU had experience with different EPS (mainly 4-bromo-2,5-dimethoxyphenethylamine (2CB), DMT, mephedrone and salvia) the proportions who had recently used these drugs was low. This suggests that these drugs are not yet entrenched in the Sydney market. This may reflect low user demand (due to the availability of so many other drugs in Sydney), or perhaps low availability of EPS. An alternative explanation is that use of these drugs may be more common in scattered subcultures which may not be well sampled using the EDRS methodology. It is at this stage, unclear why reports of EPS use are so low in Sydney compared to some smaller jurisdictions.

Much of the media surrounding these emerging drugs has associated their use with online purchasing practices. Data from the 'online' module included this year suggests that online purchasing of drugs may not be as common as once thought. In 2011, less than one-in-ten REU had recently bought drugs online. Furthermore, participants often commented that their online purchases usually consisted of transactions with friends or dealers in their own city as opposed to international purchases and importation. This may explain the relatively low rates of EPS use in Sydney and may suggest that the availability of these drugs is also low. Ongoing

monitoring of the use of these drugs is needed, as well as further investigation of online purchasing patterns as drug markets continue to expand on a national scale.

*Problematic use of 'party drugs'*

There is growing evidence that some people experience problematic use of ecstasy. Data from the Ecstasy Severity of Dependence Scale (SDS) suggests that, as a conservative estimate, approximately one-in-ten REU in the Sydney sample are ecstasy dependent. In addition, more than half of the group reported that they recently worried about their use of ecstasy. Each year the EDRS also reports high rates of self-reported drug related problems (such as problems maintaining responsibility, exposure to risk, interpersonal relationships and legal issues). Moderate rates of mental health concerns are also commonly observed. EDRS data also shows that substantial minorities of REU seek assistance from health professionals for drug related concerns.

Taken together, these data suggest that a small group of people who use ecstasy and other party drugs do experience an ecstasy dependence-like syndrome which may include mental health problems and negative impacts on every day activities. This group is likely to benefit from the provision of treatment or other harm reduction services. However, traditional drug rehabilitation services tend to focus on people with histories of chronic alcohol use and people who inject drugs. Strategies and interventions developed with these groups in mind may not translate well to REU whose treatment needs may differ from these groups. More work is needed to identify the treatment needs of this group and to investigate models of service provision which will be most effective.

*Alcohol and tobacco use*

High levels of harmful alcohol use have been recorded in the EDRS data for several years. In 2011, eighty percent of the sample was classified as drinking alcohol at harmful levels based on their patterns of alcohol use. This year the EDRS was able to provide data on harmful tobacco use as well. Ten percent of the sample was classified as highly dependent on tobacco. Further, more than half of the group identified themselves as daily smokers. This figure is substantially higher than that of 15.1% recorded for the general Australian population in 2010 (Australian Institute of Health and Welfare, 2011).

The pharmacokinetics of ecstasy co-administration with alcohol and tobacco are not well understood. Given that extensive polydrug use is common among REU, it becomes even more difficult to determine interactions occurring with different combinations of drugs. Nevertheless, the potential for synergistic interactions is present and could increase the risk of an acute adverse drug-related event.

The long term impacts of high levels of alcohol and tobacco consumption among regular polydrug users is also poorly understood. However, given that each of these factors provides additional stress to the cardiac system, there is reasonable cause for concern. Preventative measures such as education campaigns and interventions to reduce alcohol and tobacco intake among this group are warranted. Furthermore, ongoing monitoring will be important for early identification and treatment of any medical issues which may emerge.

### *Sexual health*

REU are at high risk of contracting BBVI and sexually transmitted infections (STI). High risk sexual practices that REU undertake include having multiple sexual partners, infrequent use of barriers during sexual intercourse and injecting drug use which can expose REU to transmission of BBVI and STI. Rates of testing for STI were low in 2010 and continued to be low in 2011. It is generally accepted that as rates of testing for infections increase, so can rates of treatment and of the adoption of safe and appropriate sexual practices. The data presented herein are concerning and relevant in the context of recent government initiatives to improve rates of testing for STI among young people in NSW. Young, male REU are an at risk group and would likely benefit from targeted interventions to improve their engagement with health service providers regarding testing for BBVI and STI.

### *Conclusions and future directions*

In a climate of changing ERD markets, the EDRS has continued to fulfill its role by providing data on market trends and acting as a responsive tool which has allowed the investigation of specific areas of interest in a timely fashion. These data are used by health providers and law enforcement agencies to assist in risk assessment and planning; they provide an evidence base for policy makers; and guide researchers in the field as they attempt to unravel increasingly complex interactions between drugs, drug users and their environment. A key priority for the EDRS has been to provide feedback to these different stakeholders in an ongoing and timely fashion through the use of regular publications, stakeholder meetings; media liason and submissions to government. These interactions in turn, help to shape future directions for the project.

In 2012, the EDRS will aim to continue to monitor changes in the ERD markets both in terms of use and market characteristics (such as price, purity and availability of different drugs). Special modules will further examine the issue of ecstasy dependence as well as gathering data on the prevalence of neurological insult; investigating concepts of body image; and examining attitudes to different areas of drug policy among this group.

# 1 INTRODUCTION

The Ecstasy and Related Drugs Reporting System (EDRS) is an ongoing monitoring system funded in 2011 by the Australian Government Department of Health and Ageing (AGDH&A). It is run in a similar manner to the Illicit Drug Reporting System (IDRS), another ongoing data collection system funded by the AGDH&A. 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, 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 L. Topp, Breen, Kaye, & Darke, 2004). Regular ecstasy users (REU) were identified as an appropriate sentinel population to investigate ecstasy and related drug markets.

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

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.

The 2011 NSW Trends in Ecstasy and Related Drug Markets report provides information regarding ecstasy and related drug trends in Sydney.

## 1.1 Aims

The aims of the 2011 NSW EDRS were:

1. to describe the demographic characteristics of a sample of current ecstasy users interviewed in Sydney in 2011;

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 (2005-2010).

# 2 METHODS

The 2011 EDRS used the methodology trialled in the feasibility study (L. Topp, et al., 2004) to monitor trends in the markets for ecstasy and related drugs. 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 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 'ecstasy and related drugs' 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 (L. Topp & Darke, 2001). Ecstasy may be the first illicit drug with which many young Australians who choose to use illicit drugs will experiment, 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 (L. Topp & Darke, 2001). A sample of this population was successfully recruited and interviewed in the two-year feasibility trial (L. Topp, et al., 2004), and was able to provide the data that

were sought. Therefore, REU have been used again in 2011 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 2011 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 (L. Topp, et al., 1998; 2000), which incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij, et al., 1992) and powder amphetamine/methamphetamine (Darke, Cohen, Ross, Hando, & Hall, 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, BBVI, sexual activity, driving and problematic alcohol use); law enforcement-related trends (including self-reported criminal activity and arrest and experiences with drug detection dogs); and trends in special areas of interest for 2011 (including ecstasy dependence, online drug related activity, sleep patterns and pleasure, happiness and quality of life).

### 2.1.4 Data analysis

For continuous, normally distributed variables, *t*-tests were employed and means reported. Where continuous variables were skewed, medians[1] are 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 2011 were compared with data collected from comparable samples of ecstasy users from 2005 onward, recruited as part of the PDI (2003-2005), and then the EDRS (2006-2010). As each of these samples was recruited using the same methods, meaningful comparisons can be made.

Differences between proportions were analysed using Newcombe-Wilson hybrid score confidence intervals without a continuity correction, based on the chi-square distribution (Tandberg, Version 1.49, available at: http://www.cebm.net/index.aspx?o=1023, see Newcombe 1998).

## 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 2011 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'.[2]

A total of 12 KE were interviewed in 2011, six were male and six were female. 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 2010 EDRS came from a wide range of occupations which fell into three major categories: law enforcement; health care provision; and hospitality industry workers.

[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] 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, O'Brien, Darke, Maher, & Hall, 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; and
- NSW Police Service – clandestine methamphetamine and MDMA laboratories.

# 3 DEMOGRAPHICS


Summary:

- 100 REU were sampled in the 2011 EDRS (77 male and 23 female).
- Participants were young (mean age=24 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 employment status, the completion of tertiary education and income.


## 3.1 Overview of the REU participant sample

There were 100 REU sampled in the 2011 NSW EDRS. Table 1 presents the demographics of the sample across time. The mean age of the group was 24 years (median 22, range 18-51). Three-quarters (77%) of the group were male. The vast majority (98%) spoke English as their first language.

The majority of participants (73%) had completed high school and the median number of years of school education was 12 years (range 10-12). Many had gone on to complete either a trade or technical qualification (21%) or a university or college degree (19%) and others were currently studying. One-quarter (26%) of the sample reported being currently employed on a full-time basis while the same proportion were currently unemployed. Very few participants reported being currently in drug treatment (3%).

The majority of the sample identified as heterosexual (76%), 9% as a gay man, 7% as a lesbian and 7% as bisexual. The majority of participants (66%) were currently single. Participants earned a median of $350/week (range $67 - $2,400).

Demographic characteristics of this group have remained stable from 2010 to 2011. The greatest variability is noted in employment status, the completion of tertiary education and income. This is perhaps unsurprising given many participants are in the process of completing tertiary study and gaining employment.

**Table 1: Demographic characteristics of REU sample, NSW 2005-2011**

| Variable | 2005 (N =101) | 2006 (N =100) | 2007 (N =100) | 2008 (N =100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Mean age (years) | 26 | 28 | 27 | 28 | 22 | 26 | **24** |
| Male (%) | 67 | 68 | 64 | 68 | 64 | 74 | **77** |
| English-speaking background (%) | 95 | 97 | 95 | 98 | 94 | 91 | **98** |
| A&TSI (%) | 3 | 2 | 2 | 3 | 0 | 1 | **1** |
| Heterosexual (%) | 61 | 57 | 60 | 63 | 91 | 78 | **76** |
| Mean number school years | 12 | 11 | 12 | 12 | 12 | 12 | **12** |
| Tertiary qualifications (%) | 54 | 58 | 66 | 72 | 33 | 51 | **40** |
| Employed full-time (%) | 35 | 36 | 33 | 54 | 21 | 28 | **26** |
| Full-time students (%)** | 29 | 21 | 11 | 10 | 13 | 6 | **11** |
| Unemployed (%) | 15 | 16 | 17 | 11 | 13 | 16 | **25** |
| Median weekly income ($) | Data not available until 2009 | | | | $400 ($50-$2115) | $500 ($0 - $4,231) | **350 ($67 - $2,400)** |
| Previous conviction(%) | 6 | 6 | 4 | 2 | 3 | 6 | **n/a** |
| Current drug treatment (%) | 5 | 5 | 10 | 3 | 4 | 5 | **3** |

**Source: EDRS regular ecstasy user interviews 2004-2010**

** Question changed in 2007; number reported in 2007 refers to those in full-time education only

# 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 11 different drug types during their lifetimes and 7 different drug types over the past six months.
- One-in-ten reported having ever injected a drug.
- Increases were seen in recent use of tobacco, ketamine and magic mushrooms.
- Reductions were seen in the recent use of heroin.
- Ecstasy was the main drug of choice for one-third of the sample.
- One-third 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[3]. Experience with a broad range of drugs was very common although the average number of drugs used within the lifetime (11, SD=3) and recently (7, SD=2.4) has remained remarkably stable over time (Table 2). Approximately one-in-ten (13%) of REU reported having ever injected a drug. While slightly lower, this figure was not significantly different to that recorded in 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 2010 to 2011 but they include:

- a significant increase in the proportion reporting recent use of tobacco ($p$=0.003)
- a significant increase in the proportion reporting recent ketamine use ($p=0.03$);
- a significant decline in recent use of heroin ($p=0.01$);
- a significant increase in recent use of mushrooms ($p=0.01$)

[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 of REU, NSW 2005-2011**

| Variable | 2005 (N =101) | 2006 (N =100) | 2007 (N =100) | 2008 (N =100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Mean no. drug types ever used | 11 | 10 | 11 | 11 | 11 | 11 | **11** |
| Mean no. drug types used recently | 7 | 7 | 7 | 6 | 7 | 7 | **7** |
| Ever inject any drug (%) | 27 | 25 | 32 | 19 | 9 | 22 | **13** |
| Alcohol | | | | | | | |
| ever used (%) | 99 | 98 | 98 | 99 | 100 | 100 | **100** |
| used last 6 mths (%) | 96 | 94 | 92 | 95 | 100 | 97 | **99** |
| Cannabis | | | | | | | |
| ever used (%) | 92 | 95 | 97 | 93 | 98 | 98 | **97** |
| used last 6 mths (%) | 82 | 73 | 74 | 71 | 83 | 78 | **83** |
| Tobacco | | | | | | | |
| ever used (%) | 82 | 86 | 92 | 95 | 95 | 92 | **95** |
| used last 6 mths (%) | 72 | 68 | 72 | 63 | 84 | 76 | **92** |
| Methamphetamine powder (speed) | | | | | | | |
| ever used (%) | 94 | 88 | 86 | 92 | 83 | 79 | **67** |
| used last 6 mths (%) | 76 | 55 | 45 | 48 | 37 | 29 | **32** |
| Methamphetamine base (base) | | | | | | | |
| ever used (%) | 63 | 50 | 54 | 53 | 51 | 53 | **41** |
| used last 6 mths (%) | 43 | 24 | 23 | 17 | 23 | 18 | **16** |
| Methamphetamine crystal (ice) | | | | | | | |
| ever used (%) | 62 | 68 | 60 | 52 | 29 | 44 | **37** |
| used last 6 mths (%) | 40 | 56 | 42 | 33 | 9 | 21 | **19** |
| Cocaine | | | | | | | |
| ever used (%) | 76 | 80 | 88 | 90 | 85 | 88 | **84** |
| used last 6 mths (%) | 55 | 45 | 62 | 51 | 64 | 60 | **59** |
| LSD | | | | | | | |
| ever used (%) | 71 | 65 | 68 | 57 | 62 | 77 | **75** |
| used last 6 mths (%) | 33 | 17 | 22 | 18 | 37 | 44 | **46** |
| MDA | | | | | | | |
| ever used (%) | 32 | 42 | 27 | 30 | 13 | 21 | **22** |
| used last 6 mths (%) | 19 | 14 | 8 | 5 | 2 | 2 | **8** |
| Ketamine | | | | | | | |
| ever used % | 65 | 57 | 62 | 65 | 53 | 64 | **56** |
| used last 6 mths (%) | 39 | 27 | 36 | 30 | 19 | 24 | **39** |
| GHB | | | | | | | |
| ever used (%) | 32 | 40 | 37 | 37 | 24 | 42 | **30** |
| used last 6 mths (%) | 13 | 21 | 23 | 24 | 6 | 17 | **16** |
| Amyl nitrite | | | | | | | |
| ever used (%) | 65 | 66 | 65 | 72 | 74 | 78 | **75** |
| used last 6 mths (%) | 37 | 37 | 31 | 37 | 38 | 46 | **40** |
| Nitrous oxide | | | | | | | |
| ever used (%) | 44 | 38 | 36 | 34 | 27 | 45 | **41** |
| used last 6 mths (%) | 13 | 6 | 14 | 8 | 5 | 15 | **13** |
| Benzodiazepines* | 51 | 47 | 59* | 52* | 47 | 64 | **57** |

**Table 2: Lifetime and recent polydrug use of REU, NSW 2005-2011**

| Variable | 2005 (N =101) | 2006 (N =100) | 2007 (N =100) | 2008 (N =100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| ever used (%) | 39 | 25 | 36* | 29* | 24 | 38 | **34** |
| used last 6 mths (%) | | | | | | | |
| Antidepressants* | | | | | | | |
| ever used (%) | 19 | 40 | 30* | 26* | 20 | 26 | **27** |
| used last 6 mths (%) | 6 | 20 | 17* | 10* | 10 | 12 | **9** |
| Pharmaceutical | | | | | | | |
| stimulants* | 43 | 39 | 42 | 38 | 52 | 48 | **50** |
| ever used (%) | 20 | 7 | 13 | 10 | 14 | 16 | **20** |
| used last 6 mths (%) | | | | | | | |
| Mushrooms | | | | | | | |
| ever used (%) | 43 | 44 | 45 | 35 | 48 | 60 | **58** |
| used last 6 mths (%) | 6 | 7 | 9 | 9 | 21 | 10 | **25** |
| Heroin | | | | | | | |
| ever used (%) | 22 | 19 | 28 | 11 | 11 | 23 | **13** |
| used last 6 mths (%) | 4 | 7 | 6 | 3 | 3 | 12 | **2** |
| Methadone | | | | | | | |
| ever used (%) | 6 | 10 | 13 | 7 | 1 | 8 | **5** |
| used last 6 mths (%) | 4 | 5 | 10 | 3 | 0 | 4 | **2** |
| Buprenorphine | | | | | | | |
| ever used (%) | 1 | 2 | 8 | 5 | 2 | 4 | **3** |
| used last 6 mths (%) | 1 | 1 | 2 | 1 | 1 | 2 | **1** |
| Other opiates* | | | | | | | |
| ever used (%) | 30 | 17 | 27 | 23 | 27 | 39 | **34** |
| used last 6 mths (%) | 20 | 6 | 11 | 8 | 2 | 8 | **14** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

*Includes licitly and illicitly obtained

Participants also reported having used other drugs such as 2-CB, DMT, BZP etc. In 2010, the EDRS began to systematically investigate these other, less commonly used, drugs. This information can be found in section 4.9 ‘Emerging psychoactive substance (EPS) use’.

In 2011, one-third (32%) of participants reported that Ecstasy was their main drug of choice. Other commonly reported drugs were cannabis (27%), cocaine (13%), LSD (9%) and alcohol (7%). Smaller proportions of the sample nominated other drugs such as crystal methamphetamine (5%), ketamine (2%), speed (2%), base (1%), GHB (1%) and heroin (1%).

One-third (33%) of participants reported bingeing on ecstasy and/or other related drugs over the past six months. Bingeing is defined as using the drug on a continuous basis for more than 48 hours without sleep (Ovendon & 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 50-336 hours). Among those who had recently binged, the majority (73%) had used ecstasy during a binge episode. Similarly, the majority (67%) had used alcohol with 61% consuming more than five standard drinks during a binge episode. Other drugs used during binge episodes included cannabis (58%), cocaine (36%), crystal (27%), speed (15%), LSD (15%), GHB (9%), base (9%), amyl nitrite (6%), ketamine (6%), and mushrooms (3%), licit antidepressants (3%), dexamphetamines (3%) and piperazienes (3%).

## 4.2 Ecstasy use


Summary:

- Ecstasy was used on a median of 13 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 1-12).
- Swallowing was the main route of administration (93%).
- The vast majority of REU (91%) reported using other drugs in combination with ecstasy the last time they used it, most commonly alcohol, tobacco, cannabis and cocaine.
- The majority (70%) of participants used other drugs to help them come down from ecstasy the last time they used it (most commonly cannabis, alcohol and tobacco).
- Ecstasy was most commonly last used at a nightclub (55%) and other public venues.
- The proportion of the NSW population who reported using ecstasy within the last twelve months fell significantly from 3.5% in 2007 to 3% in 2010.
- Approximately one-third (30%) of men interviewed for the Sydney Gay Community Periodic Survey reported having recently used ecstasy. A significant decline from the previous survey.
- Key experts noted that ecstasy use is common among young people and that older users are starting to regain interest in the drug as the purity reportedly has begun to increase.


'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-methoxyamphetamine (PMA) or 3,4-methylenedioxyethylamphetamine (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 2011 EDRS had used ecstasy for the first time at 18 years of age (median=17; range 13-35). Participants reported using ecstasy regularly (at least monthly) at a mean age of 19 years (median=18; range 15-40).

### 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 13 days (range 6-150) over the preceding six months. Half the sample had used ecstasy between monthly and fortnightly (48%), one-third (36%) had used it between fortnightly and weekly and 16% had used ecstasy more than once a week over the preceding six months.

The vast majority (85%) 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 1-12) over the preceding six months. The median number of tablets consumed in the 'heaviest' session over the preceding six months was 5 (range 1-23).

Almost all REU reported that swallowing was their main route of administration (93%) for ecstasy, however, 7% reported mainly snorting it. Participants were asked to identify each method of administration they had used over the preceding six months for ecstasy 'pills'. Swallowing (98%) and snorting (67%) were by far the most common methods of administration although smaller proportions had shelved/shafted (6%) or smoked (6%) ecstasy.

**Table 3: Patterns of ecstasy use among REU, NSW 2005-2011**

| Variable | 2005 (N= 101) | 2006 (N= 100) | 2007 (N= 100) | 2008 (N= 100) | 2009 (N= 100) | 2010 (N= 100) | **2011 (N= 100)** |
|---|---|---|---|---|---|---|---|
| Mean age first used ecstasy (years) | 20 | 18 | 19 | 20 | 17 | 18 | **18** |
| Ecstasy 'favourite' drug (%) | 38 | 44 | 38 | 30 | 45 | 32 | **32** |
| Median days used ecstasy last 6 mths | 15 | 15 | 12.5 | 12 | 15 | 12 | **13** |
| Use ecstasy weekly or more (%) | 40 | 19 | 21 | 19 | 24 | 18 | **26** |
| Median ecstasy tablets in 'typical' session | 2 | 2 | 2 | 2 | 2.5 | 2 | **2** |
| Typically use >1 tablet (%) | 77 | 69 | 84 | 82 | 91 | 84 | **85** |
| Recently binged on ecstasy (%) | 41 | 41 | 36 | 30 | 33 | 26 | **31** |
| Ever injected ecstasy (%) | 13 | 11 | 15 | 8 | 5 | 11 | **2** |
| Mainly swallowed ecstasy last 6 mths (%) | 92 | 100 | 97 | 100 | 96 | 92 | **93** |
| Mainly snorted ecstasy last 6 mths (%) | 6 | - | 2 | - | 3 | 7 | **7** |
| Mainly injected ecstasy last 6 mths (%) | 2 | - | 1 | - | 1 | 1 | **-** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

Participants were asked about their use of different forms of ecstasy (tablets, powder and capsules). Almost every participant reported having used ecstasy tablets ('pills') during the preceding six months. Approximately one-third (35%) reported having ever used ecstasy powder; and one-fifth (21%) had done so recently. Three-quarters (78%) reported having ever used ecstasy capsules ('caps') and half (55%) had used them over the preceding six months. Pills were first used at a median age of 17 years (range 13-39), powder at 20 years (range 14-35) and caps at 19 years (14-35).

The majority of REU (91%) reported using other drugs in combination with ecstasy the last time they used it. The drugs most commonly used with ecstasy were alcohol (84% of those who reported last using other drugs with ecstasy; i.e. 16% less than 5 standard drinks and 68% more than five standard drinks), tobacco (58%), cannabis (38%) and cocaine (13%).

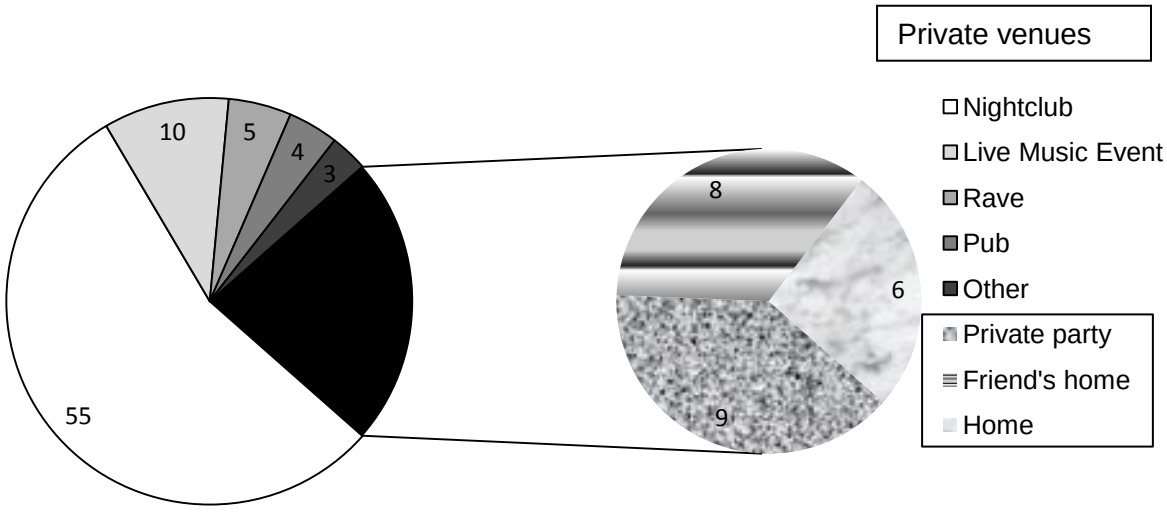
More than two-thirds (70%) of the sample used other drugs to help them come down from ecstasy the last time they used it. Among these respondents, the three most commonly reported drugs used to come down from ecstasy were cannabis (78%), alcohol (32% overall; 13% less than five standard drinks and 19% more than five standard drinks) and tobacco (32%).

Two-fifths of the group reported that most (36%) or all (6%) of their friends had used ecstasy over the last six months. One-third (35%) reported that 'about half' and 21% 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 (77%) although more than one-fifth of participants reported last using ecstasy in private venues (23%). The majority of participants last used ecstasy at a nightclub (55%).

**Figure 1: Location of last ecstasy use, NSW 2011**



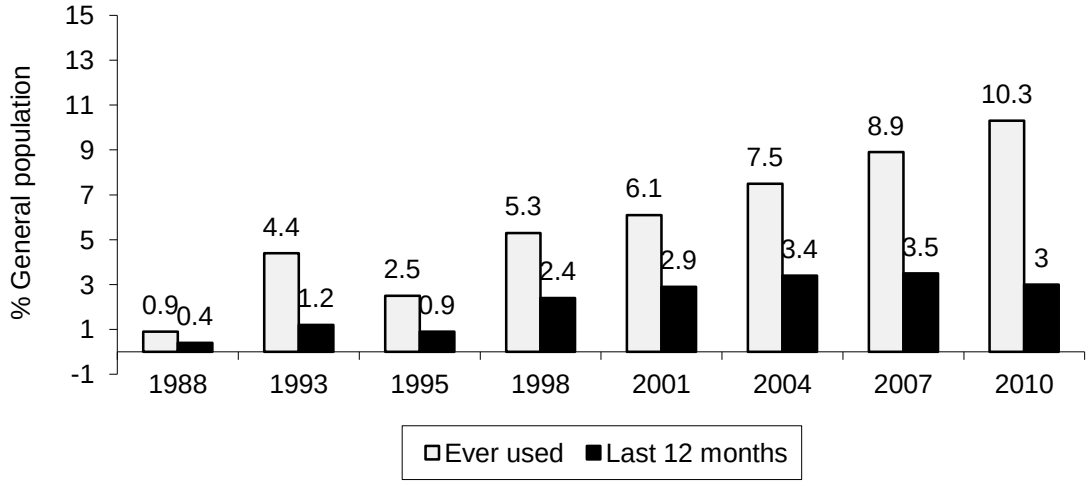

**Source: EDRS regular ecstasy user interviews 2011**

### 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 1988 (the year in which ecstasy was first included in the survey) to 2010. Over this time, the reported lifetime prevalence of ecstasy use among the general Australian population (aged 14 years and over) increased from 0.9% 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: Lifetime and recent ecstasy use in the NSW general population, 1988-2010**



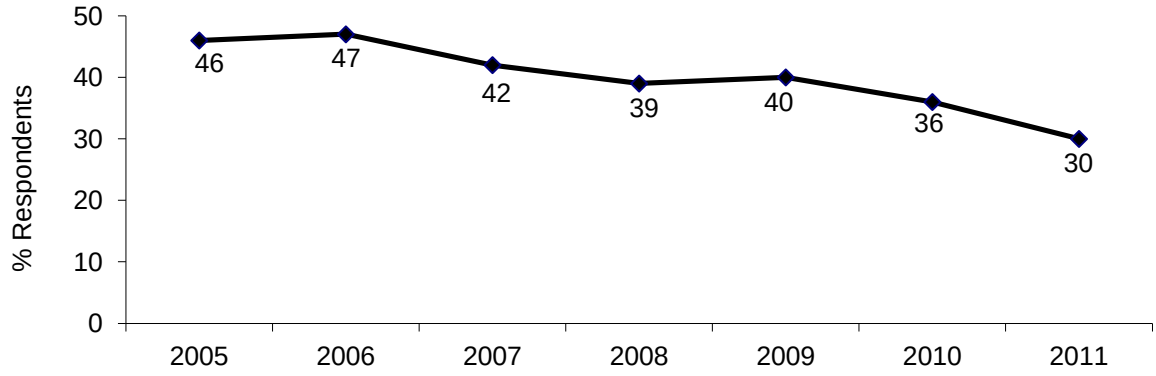

**Source: National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 1999, 2002b, 2002c, 2005a, 2005b, 2008a, 2008b, 2011)**

*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 2011 with 2,342 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 that had used ecstasy in the past six months. In 2011, approximately one-third (30%) of the sample reported having recently used ecstasy. The authors reported that, since the previous survey, there had been a significant decline in the reported use of ecstasy; which was continuing a generally declining trend from 2007 (Hull, et al., 2011)

**Figure 3: Proportion of gay men in Sydney reporting recent ecstasy use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey 2011**

### Key expert comments

Most KE agreed that ecstasy continues to be a widely used drug among Sydney party goers. The age range cited for use of ecstasy ranged from 16 years to people in their 30s. A few KE mentioned that the use of ecstasy is fairly widespread among young people in their mid-to-late teens. KE working with youth noted that frequent use of ecstasy did not appear common among the young people who entered their service. They noted that frequent stimulant use among younger clients was usually associated with extensive polydrug use and problematic alcohol and cannabis use.

One KE mentioned that with the widespread decline in ecstasy purity, many of the 'older' users (say in their early 30s) started to lose interest in the drug. However, interest among this older group of users appears to be rekindling amidst rumours of high purity 'pills' returning to the market. Another KE working in festival settings said it was very common to see REU mixing ecstasy with other drugs such as ketamine, GHB and alcohol. They had also recently noticed a trend for party goers to mix selective serotonin reuptake inhibitors (SSRI - commonly prescribed antidepressants) with ecstasy to increase the 'high'.

## 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 3 days over the preceding six months and was primarily snorted (88%).
- The frequency and quantity of use appeared to be stable from 2010 to 2011.

*Base*
- Two-fifths of the sample had ever used base and 16% had done so recently.
- Base was used on a median of 2 days over the preceding six months and was primarily swallowed (100%).
- The frequency and quantity of use appeared to be stable from 2010 to 2011.

*Crystal*
- One-third of the sample had ever used crystal and one-fifth had done so recently.
- Crystal was used on a median of 6 days over the preceding six months and was primarily smoked (84%).
- While the frequency of use was stable, the average quantities used increased slightly from 2010 to 2011.

- Speed was commonly used in public settings, crystal in private settings and base was a mix of both.
- 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 been in decline since 2007.
- KE generally agreed that speed and crystal were becoming less common and that base was quite uncommonly seen.


Throughout the 1990s, the proportion of amphetamine-type substance 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). In the financial year 2000/01, the vast majority (91%) of all seizures of amphetamine were methamphetamine hydrochloride (Australian Bureau of Criminal Intelligence, 2002). In the 2009/10 financial year, no amphetamine seizures were analysed by NSW Police, only methamphetamine seizures were made (Australian Crime Commission, 2011).

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, et al., 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 (L. Topp & Churchill, 2002), although the first crystalline methamphetamine laboratory was detected in Queensland 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, et al., 2005).

### 4.3.1 Methamphetamine use among REU

*Methamphetamine powder (speed)*

Approximately two-thirds of participants (67%) had ever used speed and one-third (32%) of the sample had used it during the preceding six months. Speed was first used at a median age of 18 years (range 15-27). Speed was used on a median of 3 days (range 1-40) over the preceding six months. The vast majority (91%) 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=23) or 'lines' (n=6). The median amount used in a 'typical' or 'average' use episode in the preceding six months was either half a gram (range 0.2-1.5) or 3 lines (range 1-4). The median amount used in the 'heaviest' use episode was very similar, either 0.6 gram (range 0.25-6) or 3 lines (range 1-8). The most common route of administration for speed users in the preceding six months was snorting (88%); however, other routes of administration included swallowing (41%), smoking (16%), shelving/shafting (3%) and injecting (3%).

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

**Table 4: Patterns of speed use among REU, NSW 2005-2011**

| Speed Variable | 2005 (N =101) | 2006 (N =100) | 2007 (N =100) | 2008 (N =100) | 2009 (N=100) | 2010 (N=100) | **2011 (N =100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 94 | 88 | 86 | 92 | 83 | 79 | **67** |
| Recently used (%) | 76 | 55 | 45 | 48 | 37 | 29 | **32** |
| **Of those who had used:** Days used last 6 mths (median, range) | 6 (1-96) | 5 (1-180) | 6 (1-90) | 4 ( 1-120) | 3 (1-30) | 2 (1-30) | **3 (1-40)** |
| **Median quantities used (grams)** Typical (range) | 1 (0.2-6) | 1 (0.5-3) | 0.50 (0.25-2) | 1 (0.2-2) | 1 (0.2-2) | 1 (0.3-2) | **0.5 (0.2-1.5)** |
| Heavy (range) | 2 (0.3-12) | 1.75 (0.50-6) | 1 (0.5-3.5) | 1 (0.2-4) | 1 (0.25-3.5) | 1 (0.3-7) | **0.6 (0.25-6)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

*Methamphetamine base*

Two-fifths (41%) of the sample had ever used base and 16% had used it over the preceding six months. The median age at which base was first used was 18 years (range 15-27). Base had been used on a median of 2 days (range 1-20) over the preceding six months. The majority (77%) of those who had recently used base had done so less than monthly, although one-quarter had used it between monthly and fortnightly and 6% between fortnightly and weekly.

Most recent users of base quantified their use in terms of 'points'; however, small proportions also referred to grams and bumps. 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 2 points (range 0.1-5) in a 'typical' session and a median of 2 points (range 0.1-10) during the heaviest occasion of use over the preceding six months. Base was most commonly swallowed (100%); however, 31% of recent users reported having smoked and snorted it respectively. One user had recently injected base.

The proportions reporting the lifetime and recent use of base have remained stable from 2010 to 2011 as have the frequency and quantities used (Table 5).

**Table 5: Pattern of base use among REU, NSW 2005-2011**

| Base variable | 2005 (N=101) | 2006 (N=100) | 2007 (N 100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 63 | 50 | 54 | 53 | 51 | 53 | **41** |
| Used last six months (%) | 43 | 24 | 23 | 17 | 23 | 18 | **16** |
| **Of those who had used:** | | | | | | | |
| Median days used last 6 mths (range) | 3 (1-96) | 3.5 (1-180) | 5 (1-90) | 2 (1-120) | 2 (1-96) | 2 (1-18) | **2 (1-20)** |
| **Median quantities used (points):** | | | | | | | |
| Typical (range) | 1.5 (0.25-9) | 1 (0.5-3) | 2 (0.5-5) | 2 (1-5) | 2 (0.3-4) | 1 (0.5-2) | **2 (0.1-5)** |
| Heavy (range) | 2.25 (0.25-25) | 1 (0.5-7) | 2 (0.5-5) | 2 (1-5) | 2 (0.5-6) | 1.25 (0.5-3) | **2 (0.1-10)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

*Crystal methamphetamine*

Just over one-third (37%) of the sample had ever used crystal, and one-fifth (19%) had used it over the six months prior to the interview. The median age of first use of crystal was 21 years (range 11-43). Crystal was used on a median of 6 days (range 1-96) over the preceding six months. Half (50%) of those who had recently used crystal had done so on a less than monthly basis, one-quarter (28%) had used it between monthly and fortnightly, 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 2 points (range 0.5-6) during 'typical' sessions of use and a median of 3 points (range 0.5-12) 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 (84%) followed by injecting (26%) and snorting (11%).

The proportions reporting the use of crystal have remained relatively stable from 2010 to 2011 (Table 6). Over time the frequency of use of crystal has fluctuated making it difficult to interpret any trends. In contrast, the average quantity used has remained relatively stable over time and rose to 2 points for the first time since 2000.

**Table 6: Patterns of crystal use among REU, NSW 2005-2011**

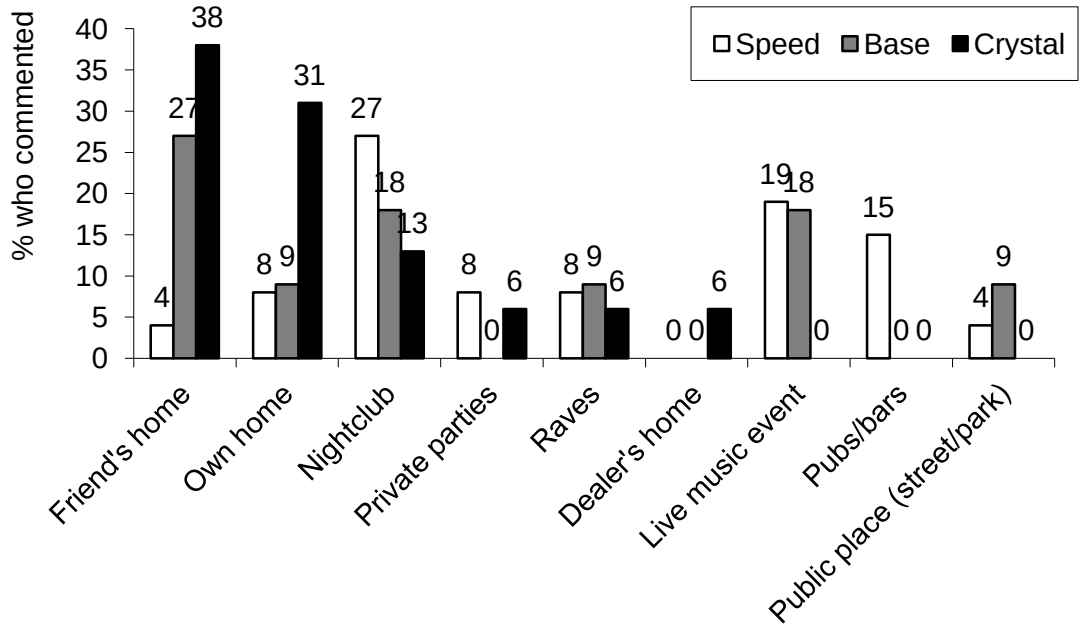
| Crystal variable | 2005 (N=101) | 2006 (N=100) | 2007 (N 100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 62 | 68 | 60 | 52 | 29 | 44 | **37** |
| Used 6 months (%) | 40 | 56 | 42 | 33 | 9 | 21 | **19** |
| **Of those who had used:** Median days used last 6 mths (range) | 4 (1-72) | 6 (1-180) | 9 (1-180) | 6 (1-170) | 12 (1-48) | 3 (1-20) | **6 (1-96)** |
| **Median quantities used (points):** Typical (range) | 1 (0.3-6) | 1 (0.5-4) | 1 (0.25-3) | 1.75 (0.5-3) | 1 (1-5) | 1 (0.5-7) | **2 (0.5-6)** |
| Heavy (range) | 2 (0.3-10) | 2 (0.5-0.7) | 3 (0.25-15) | 2 (1-6) | 3.5 (1-5) | 3 (0.5-10) | **3 (0.5-12)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

### 4.3.2 Locations of methamphetamine use

Most participants who had recently used speed reported that they had last used it at a nightclub (27%), at a live music event (19%) or at a pub/bar (15%). Among the participants who reported on the location of their last use of base, the majority had used it at their friend's home (27%), a nightclub or a live music event (18% respectively). Crystal appeared to be most commonly used in private settings with approximately three-quarters of those who used it recently reporting having used it at their own home (31%), a friend's home (38%) or their dealer's home (6%) (Figure 4).

**Figure 4: Last location methamphetamine use by form, NSW 2011** [#]



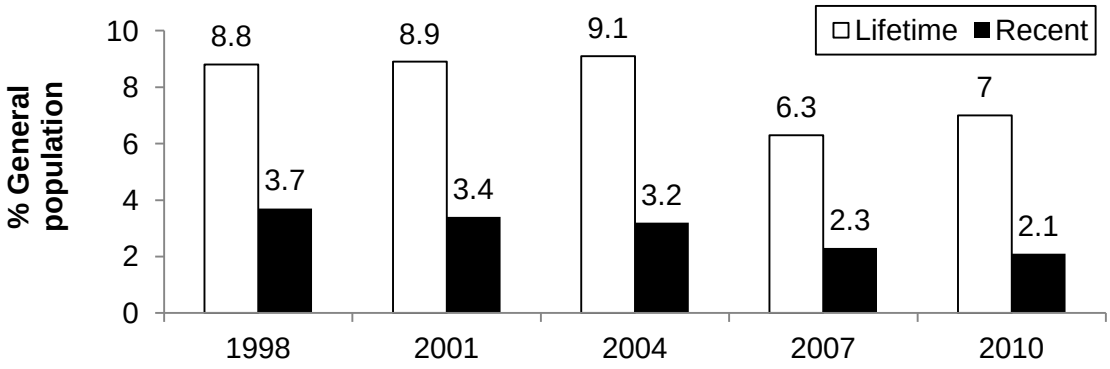

**Source: EDRS regular ecstasy user interviews 2011**
[#] Speed n=26, base n=11, crystal n=16

### 4.3.3 Methamphetamine use in other populations

*General population*

Figure 5 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 methamphetamines while the proportions reporting last year use remained relatively stable at 2.1% (Australian Institute of Health and Welfare, 2011).

**Figure 5: Recent* and lifetime meth/amphetamine use in the NSW general population, 1998-2010**



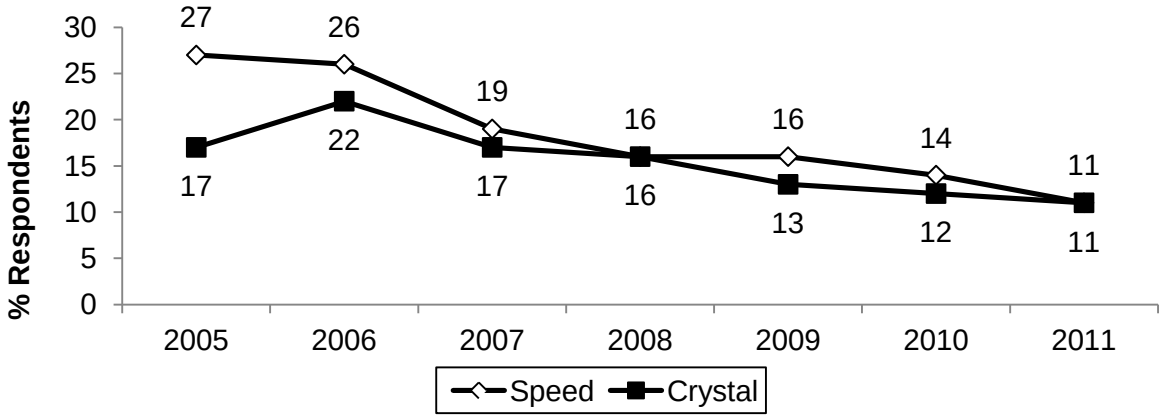

**Source: Fitzsimmons & Cooper-Stanbury (2000); Australian Institute of Health and Welfare (2002a, 2005c, 2008a, 2011)**

* Used in the last 12 months

*Sydney Gay Community Periodic Survey*

The Sydney Gay Community Periodic Survey (Figure 6) shows the proportion of gay men surveyed that had used speed and crystal in the past six months. In 2011, approximately one-in-ten men interviewed had used speed and crystal respectively. The authors reported that the use of speed had decreased significantly since the previous report (Hull, et al., 2011). They also reported an overall decline in the use of both speed and crystal since 2007.

**Figure 6: Proportion of gay men in Sydney reporting recent speed and crystal use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey, 2011**

*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**

KE generally agreed that speed used to be more commonly used than currently. KE reported that speed was used among males more commonly and usually among younger uses (aged late-teens to early-twenties). Few KE were able to comment on base and usually said it was uncommon (especially at festivals or among the gay/lesiba/bisexual/transgender/queer (GLBTQ) community). KE generally agreed that crystal was more likely to be used by young men in their twenties. A few KE mentioned having seen people who had used ice at festivals and one mentioned that this tended to occur more often in the western and northern areas of Sydney. KE usually referred to smoking as the main route of administration (as opposed to injecting). One KE reported that there was 'a lot less [crystal] around than there used to be'.

## 4.4 Cocaine use


**Summary:**

- The majority of the group (84%) had tried cocaine at least once, and 59% had used it recently.
- Cocaine was used on a median of 4 days (i.e. less than monthly) over the preceding six months.
- The proportions using cocaine, the frequency and quantities used had all remained stable from 2010 to 2011.
- Recent use of cocaine among the NSW general population increased significantly from 1.6% in 2007 to 2.1% in 2010.
- From 2007 to 2011 there was a significant increase in the use of cocaine among participants of the Sydney Gay Community Periodic Survey.
- Key experts reported that cocaine use they saw was primarly localised among young professionals in nightclubs and was uncommon at festivals.


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 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. More recently, information has become available suggesting that Columbian-run cocaine laboratories have been adding levamisole to cocaine hydrochloride (Casale, Corbeil, & Hays, 2008). Levamisole is an antihelminthic[4] drug used mainly in veterinary medicine and a known cause of agranulocytosis (Centers for Disease Control and Prevention, 2009). Agranulocytosis is an acute condition involving a severe reduction in a person's white blood cell count which can leave them at a very high risk of serious infection. There is evidence that levamisole has been recently found in Australian cocaine samples (Australian Federal Police, 2006).

The majority (84%) regular ecstasy users in 2011 had ever used cocaine, and more than half (59%) had used it during the six months prior to the interview. The median age at which cocaine was first used was 18 years (range 15-30).

[4] Drugs which expel parasitic worms from the body .

### 4.4.1 Cocaine use among REU

Participants who had used cocaine over the preceding six months had done so on a median of 4 days (range 1-120). Two-thirds (67%) had used it on a less than monthly basis, one-quarter (26%) between monthly and fortnightly and 7% on a greater than fortnightly basis. The majority 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 0.1-3) and that used on the heaviest occasion was 1 gram (range 0.1-6.5). Nine recent users quantified their use of cocaine according to 'lines'. These participants reported using a median of 2 lines (1-7) in a 'typical' session. The vast majority (98%) of recent users of cocaine reported having snorted it over the preceding six months. A significant proportion of recent users of cocaine (19%) reported having swallowed it, smoked it (3%), shelved and injected it (2% respectively) 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 2009 to 2010. The frequencies of use and quantities used have also remained stable.

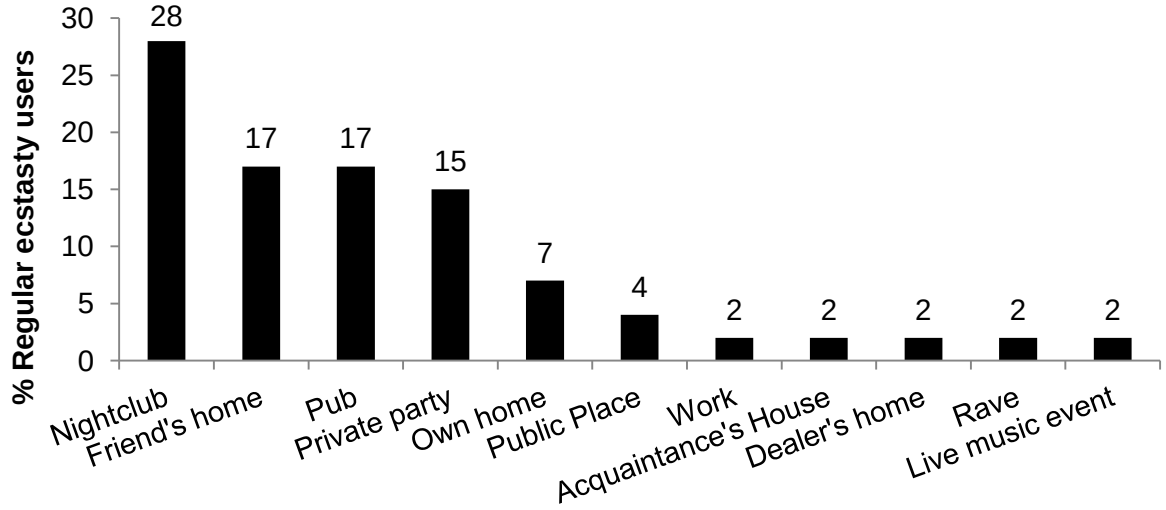
**Table 7: Patterns of cocaine use of REU, NSW 2005-2011**

| Cocaine variable | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used % | 76 | 80 | 88 | 90 | 85 | 88 | **84** |
| Used last 6 mths % | 55 | 45 | 62 | 51 | 64 | 60 | **59** |
| **Of those who had used:** Median days used last 6 mths (range) | 3 (1-84) | 2 (1-14) | 4 (1-48) | 5 (1-90) | 3 (1-30) | 5 (1-100) | **4 (1-120)** |
| **Median quantities used (grams):** Typical (range) | 1 (0.25-10) | 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)** |
| Heavy (range) | 1 (0.25-12) | 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)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

Among those who commented (n=46), 28% reported last having used cocaine at a nightclub, 17% respectively at a friend's home and a pub, 15% at a private party and smaller proportions in other venues (Figure 7).

**Figure 7: Last location of cocaine use, NSW 2011**



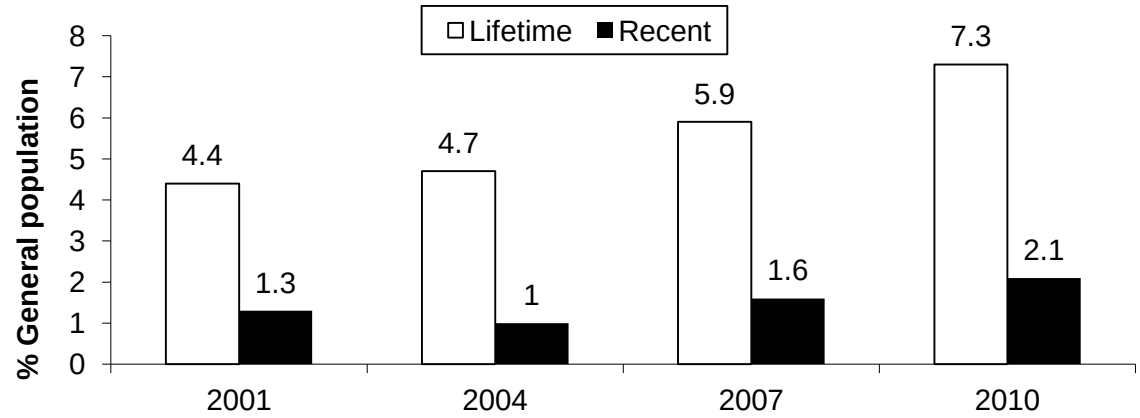

**Source: EDRS regular ecstasy user interviews 2011**

### 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 8). 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 8: Recent* and lifetime cocaine use in the NSW general population, 2001-2010**

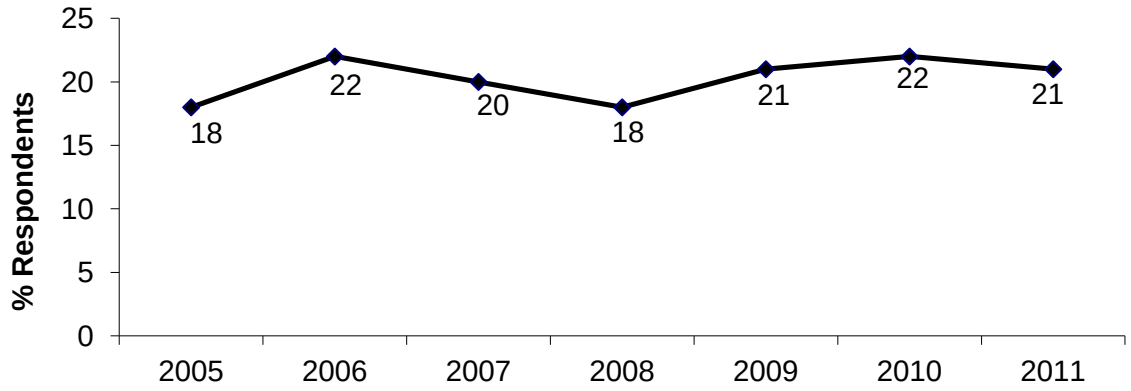



**Source: Fitzsimmons & Cooper-Stanbury (2000); Australian Institute of Health and Welfare (2002a, 2005c, 2008a, 2011)**
* Used in the last 12 months

*Sydney Gay Community Periodic Survey*

In February 2011, approximately one-fifth of gay men interviewed for the survey reported the recent use of cocaine (Figure 9). The authors reported a significant increase in the use of cocaine across time from 2007 to 2011 (Hull, et al., 2011).

**Figure 9: Proportion of gay men in Sydney reporting recent cocaine use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey 2011**

*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**

Most KE were able to comment on trends with cocaine. They generally agreed that it was most commonly used by young professionals in their mid-twenties and that it was more likely to be used in a club setting rather than a festival setting. There were two reports that cocaine use appeared to be decreasing. There were also multiple reports that the use of cocaine among young party goers was uncommon due to the high cost. Similarly, one KE referred to the use of cocaine as a 'treat' among people she knew, only used on special occasions.

## 4.5 Ketamine Use

**Summary:**

- Over half of the sample had tried ketamine at least once and 39% had used it recently.
- Ketamine was used on a median of 2 days (i.e. less than monthly) over the preceding six months.
- There was a significant increase in proportions reporting recent ketamine use although an apparent decrease in quantities used from 2010 to 2011.
- 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 2007-2011.
- Key experts reported ketamine use was not widespread among Sydney party goers but localised to certain groups.

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 two-thirds (56%) of the 2011 sample of regular ecstasy users reported having ever used ketamine and approximately two-fifths (39%) had done so recently. Ketamine was first used at a median age of 20 years (range 12-33).

### 4.5.1 Ketamine use among REU

Ketamine had been used on a median of 2 days (range 1-100) by REU who had recently used ketamine. Three-quarters (78%) had done so on a less than monthly basis, 14% between monthly and fortnightly, 3% between fortnightly and weekly and 5% on a greater than weekly basis. Nineteen recent users of ketamine reported their use in terms of

'bumps'[5]. They reported using a median of 2 bumps (range 1-10) on a typical occasion of use and 3 bumps (range 1-10) on the heaviest occasion of use over the preceding six months. Other common units included grams (n=10) and lines (n=6). These respondents reported using a median of 1 gram (range 0.25-1.5) or 2 lines (range 1-4) in an average session of use respectively. Quantities used during the heaviest episode of use were 1gram (range 0.25-3) and 3 lines (range 1-4) respectively[6].

The most common route of administration for ketamine was snorting (92%) although 15% of recent users had swallowed ketamine over the past 6 months. Twenty-two participants commented on the locations of use of ketamine. Ketamine was most commonly last used at a friend's home (32%), followed by a nightclub (27%) and the participant's own 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 increased significantly from 2010 to 2011 (95% CI:-0.27 — -0.02; $p<0.05$). 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 8: Patterns of ketamine use among REU, NSW 2005-2011**

| Ketamine variable | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 65 | 57 | 62 | 65 | 53 | 64 | **56** |
| Used last 6 mths (%) | 39 | 27 | 36 | 30 | 19 | 24 | **39** |
| **Of those who had used:** | | | | | | | |
| Median days used last 6 mths (range) | 2 (1-72) | 2 (1-48) | 2 (1-25) | 3 (1-12) | 2 (1-8) | 2.5 (1-30) | **2 (1-100)** |
| **Median quantities used (bumps):** | | | | | | | |
| Typical (range) | 3 (0.5-10) | 2 (0.5-7) | 1 (1-3) | 2 (1-4) | 4 (1-7) | 3 (1-12) | **2 (1-10)** |
| Heavy (range) | 4 (1-20) | 2.5 (0.5-7) | 2 (1-10) | 2 (1-10) | 4.5 (1-8) | 3 (1-12) | **3 (1-10)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

### 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, 2005b). 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 10) (Australian Institute of Health and Welfare, 2011).

[5] 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.

[6] Some participants reported quantities used in an average session in one unit and quantities used in their heaviest session in another unit. Thus, direct comparison between the units is not necessarily possible.

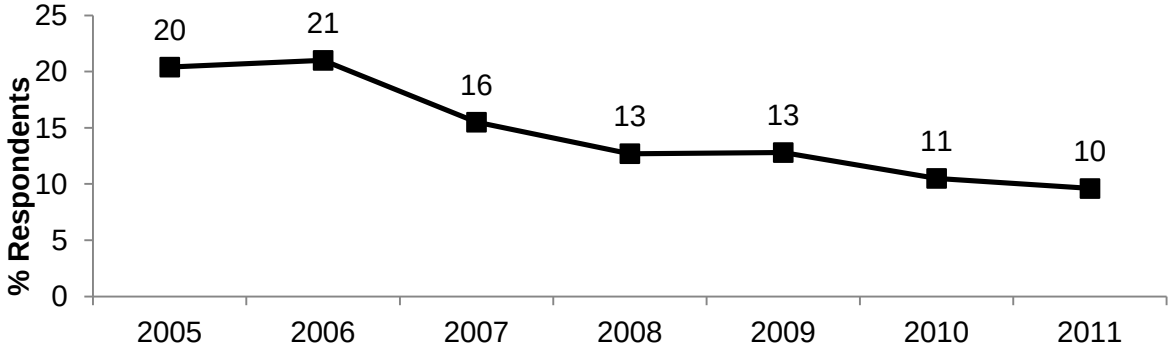
**Figure 10: Recent* and lifetime ketamine use in the NSW general population, 2004-2010**


**Source: Australian Institute of Health and Welfare 2005; 2008; 2011**
* Used in the last 12 months

*Sydney Gay Community Periodic Survey*

Figure 11 shows the proportion of men surveyed that had used ketamine in the past six months. This figure had remained relatively stable from 2010 to 2011 at approximately one-tenth of the group. The authors reported a significant decline in the use of ketamine among their sample from 2007 to 2011(Hull, et al., 2011).

**Figure 11: Proportion of gay men in Sydney reporting recent ketamine use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey, 2011**

**Key expert comments**

KE generally agreed that ketamine use tended to be localised within certain pockets of users (such as 'the coke crowd' or 'hipster kids') and in certain locations (e.g. certain festivals). KE comments suggested that ketamine use was not widespread and perhaps less common than it had previously been. There were a few references to mixing ketamine with other drugs (including ecstasy, alcohol and cocaine) to produce specific drug effects.

## 4.6 GHB use


Summary:

- One-third of the sample had tried GHB at least once and 16% had used it recently.
- GHB was used on a median of 2 days (i.e. less than monthly) over the preceding six months.
- The frequency and quantity of use of GHB remained stable from 2010 to 2011.
- Recent use of GHB among the NSW general population remained low and stable.
- From 2007 to 2011 the use of GHB among participants of the Sydney Gay Community Periodic Survey was stable.
- Key experts were concerned about the risks of alcohol pre-loading and GHB use among groups who were not well-acquainted with harm reduction strategies for CNS depressants.


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, Rangan, Bellezo, & Clark, 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 two-fifths (30%) of the sample had ever used GHB and just under one-fifth (16%) reported having done so recently. GHB was first used at a median of 21 years (range 17-34).

### 4.6.1 GHB use among REU

GHB had been used on a median of 2 days of the past six months. More than two-thirds (69%) of those who had recently used GHB had done so on a less than monthly basis, 7% between monthly and fortnightly, 13% fortnightly to weekly and 7% more than once a week.

Twelve participants commented on the quantities of GHB they used. These participants reported using a median of 2mL (range1-4) in an average episode of use and 4mL (range 1-

10) in their heaviest episode of use over the past six months. Eleven participants commented on where they had last used GHB. The majority (55%) had used it last in a nightclub, 18% in a dealer's home and 9% respectively in a friend's home or a live music event.

From 2010 to 2011 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 2005-2011**

| GHB variable | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 32 | 40 | 37 | 37 | 24 | 42 | **30** |
| Used last 6 mths (%) | 13 | 21 | 23 | 24 | 6 | 17 | **16** |
| **Of those who had used:** | | | | | | | |
| Median days used last 6 mths (range) | 2 (1-72) | 3 (1-40) | 6 (1-180) | 2.5 (1-48) | 4^ (1-72) | 3 (1-10) | **2 (1-4)** |
| **Median quantities used (mL):** | | | | | | | |
| Typical (range) | 4 (1.8-20) | 3.5 (.25-20) | 2 (1-15) | 3 (1-20) | 7^ (5.5-10) | 3.5 (1-10) | **2^ (1-4)** |
| Heavy (range) | 15 (3-43) | 6 (.25-40) | 6 (2-40) | 6 (1-20) | 8^ (5.5-15) | 5 (1-50) | **4^ (1-10)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

^ Small numbers reporting

### 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, 2005b). 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 12) (Australian Institute of Health and Welfare, 2011).

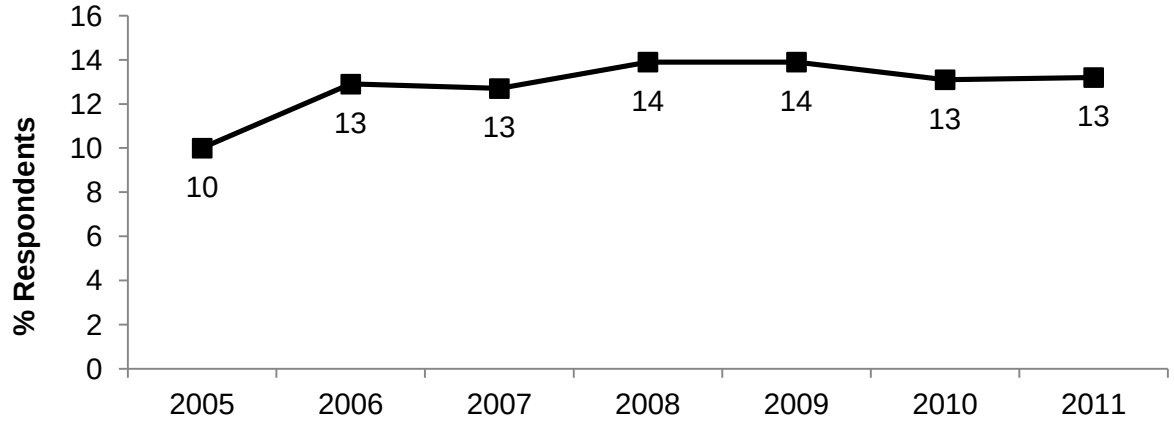
**Figure 12: Recent* and lifetime GHB use in the NSW general population, 2004-2010**


**Source: Australian Institute of Health and Welfare (2005b, 2008b, 2011)**
* Used in the last 12 months

### *Sydney Gay Community Periodic Survey*

Figure 13 shows the proportion of gay men surveyed that had used GHB in the past six months. This proportion has remained relatively stable from 2007 onward at just over one-in-ten (13% in 2011) (Hull, et al., 2011).

**Figure 13: Proportion of gay men in Sydney reporting recent GHB use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey, 2011**

### Key expert comments

Several KE reported that the use of GHB was very common among gay men, perhaps even more so than ecstasy. One KE mentioned that there had been a general increase in use of GHB since 2001.

KE generally agreed that there had been a reduction in the number of GHB related overdoses over the past 6 months and that it was uncommon for gay men to drink alcohol while using GHB. One KE had observed an increase in the use of GHB among heterosexual partygoers and reported that this group was far less educated about the risks of mixing GHB with other CNS depressants (such as alcohol).

Two KE commented on a trend for women to be more likely to use GHB in GLBTQ party environments (perhaps because they felt more relaxed and comfortable). It was also observed that women were more likely to require medical assistance for a GHB overdose.

Several KE discussed the frequency of alcohol 'pre-loading' among Sydney partygoers. One KE reported that pre-loading was especially common among same sex attracted women and that this appeared to be increasing. This KE was also concerned that this group was not well informed about the risks of mixing GHB with alcohol. If this is the case, then the high rates of alcohol pre-loading and poor awareness of harm reduction measures could leave this group particularly vulnerable to GHB overdose.

## 4.7 LSD use


Summary:

- Three-quarters of the sample had tried LSD at least once and almost half had used it recently.
- LSD was used on a median of 2 days (i.e. less than monthly) 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 four 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 the Sydney Gay Community Periodic Survey remained relatively low and stable over time.
- Key expert comments indicated that LSD use was increasing among certain subgroups of party goers.


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.

Three-quarters (75%) of the sample had ever used LSD and more than two-fifths (46%) had used it recently. Respondents had first used LSD at a median age of 18 years (range 10-29).

### 4.7.1 LSD use among REU

LSD was used on a median of 2 days (range 1-48) over the preceding six months (Table 10). Of those who had used LSD, three-quarters (73%) had done so on a less than monthly basis, one-fifth (22%) had used it 'between monthly and fortnightly' and 4% on a greater than weekly basis.

All respondents quantified their use in terms of tabs. They reported having used a median of 1 tab (range 0.25-5) during a 'typical' episode of use, and 1 tab (range 0.25-20) during the heaviest episode of use in the preceding six months (Table 10). All recent users of LSD had swallowed it and one participant had recently injected it.

Table 10 presents data across time on patterns of LSD use among REU. The proportions reporting lifetime and recent use of LSD remained stable; however, there appears to be a generally increasing trend in recent use of LSD over the past four years from less than one-fifth in 2008 to almost half in 2011. Despite this, the frequency of use and the quantities used appear to have remained stable.

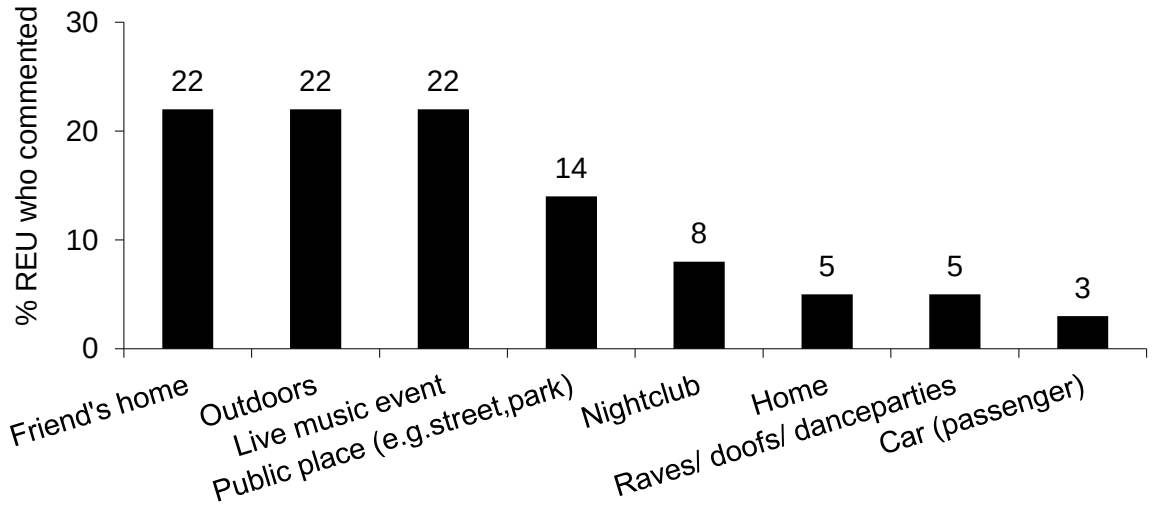
**Table 10: Patterns of LSD use of REU, NSW 2005-2011**

| LSD variable | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 71 | 65 | 68 | 57 | 62 | 77 | **75** |
| Used last 6 mths (%) | 33 | 17 | 22 | 18 | 37 | 44 | **46** |
| **Of those who had used:** Median days used last 6 mths (range) | 2 (1-72) | 2 (1-25) | 2.5 (1-20) | 2 (1-20) | 2 (1-25) | 3 (1-25) | **2 (1-48)** |
| **Median quantities used (tabs):** Typical (range) | 1 (0.50-3) | 1 (0.50-2) | 1 (0.25-4) | 1 (0.25-2.5) | 1 (0.5-3) | 1 (0.5-3) | **1 (0.25-5)** |
| Heavy (range) | 1 (0.5-15) | 2 (0.50-6) | 1 (0.25-10) | 1.75 (0.5-3) | 1 (0.5-3.5) | 1 (0.5-6) | **1 (0.25-20)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

Figure 14 presents the location of last LSD use. In contrast to many of the other drugs reported herein, LSD had been often used in outdoor, public settings such as beaches, parks, live music events etc. However, respondents had also recently used it at a friend's home (22%) and, less commonly, in other venues.

**Figure 14: Last location of LSD use, NSW 2011**



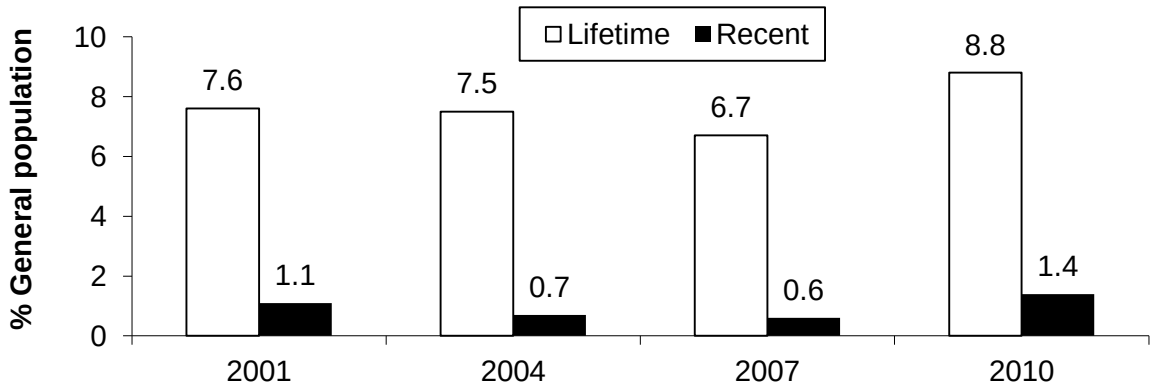

**Source: EDRS regular ecstasy user interviews 2011**

### 4.7.2 Hallucinogen use in other populations

*General population*

Figure 15 presents data across time on the recent use of hallucinogens in the NSW general population among participants aged 14 years or over. The authors report 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 15: Recent* and lifetime hallucinogen use in the NSW general population, 2001-2010**

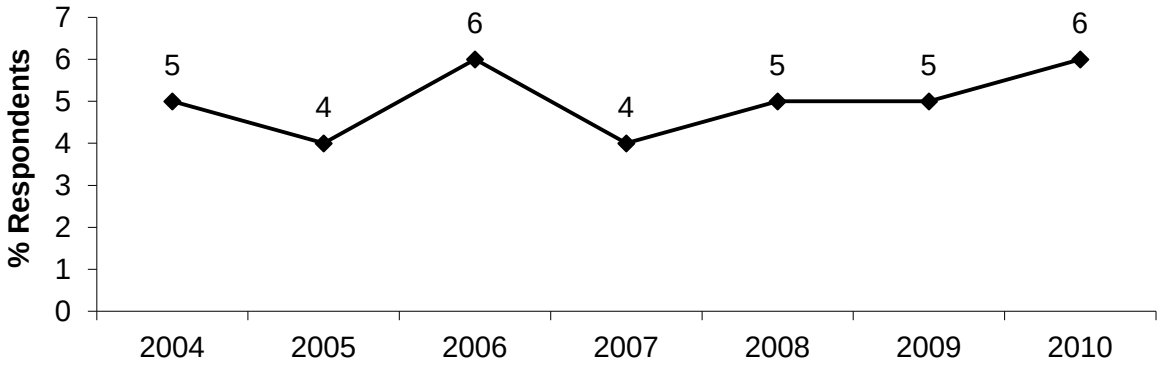



**Source: Fitzsimmons & Cooper-Stanbury 2000; Australian Institute of Health and Welfare 2002, 2005, 2008, 2011.**
* Used in the last 12 months

*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 16). This figure reportedly remained relatively stable over time (Lee, et al., 2010).

**Figure 16: Proportion of gay men in Sydney reporting the recent use of LSD/trips, 2004-2010**




**Source: Sydney Gay Community Periodic Survey, 2010**

**Key expert comments**

Many KE were able to comment on the use of LSD. There was a fairly consistent message that LSD use had increased among certain groups of party goers such as those in late adolescence, those at certain festivals and those with specific music interests (such as trance and hardstyle electronic music). A law KE reported that there had been a general increase in the seizures of hallucinogens over time which appeared to have spiked last year and to be declining currently.

## 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 declined since 2007.
- Key experts were concerned about the use of cannabis among young people and among same sex attracted women.


Cannabis is derived from the cannabis plant (C*annabis 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-tetrahydro-cannabinol (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 Center, 2008).

Almost every participant in the 2010 EDRS (97%) had ever used cannabis and the majority (83%) 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 8-24).

### 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 (27%) had used cannabis on a less than monthly basis, substantial proportions had used it more than fortnightly (12%), more than weekly (35%) or on a daily basis (16%). All recent users of cannabis had smoked it over the past six months and one-third (36%) reported having recently ingested it.

Recent users of cannabis were asked how much they had smoked on their last occasion of use. Forty one participants quantified their last use in terms of cones and reported having smoked a median of 4 cones (range 1-34) on their last occasion of use. Thirty one REU quantified their use in terms of joints and reported having smoked a median of 1 joint (range 0.1-5) 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 2010 to 2011.

**Table 11: Patterns of cannabis use of REU, NSW 2005-2011**

| Cannabis variable | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| Ever used (%) | 92 | 95 | 97 | 93 | 98 | 98 | **97** |
| Used last 6 mths (%) | 82 | 73 | 74 | 71 | 83 | 78 | **83** |
| **Of those who had used:** Median days used last 6 mths (range) | 48 (1-180) | 24 (1-180) | 48 (1-180) | 24 (1-180) | 25.5 (1-180) | 49 (1-180) | **48 (1-180)** |

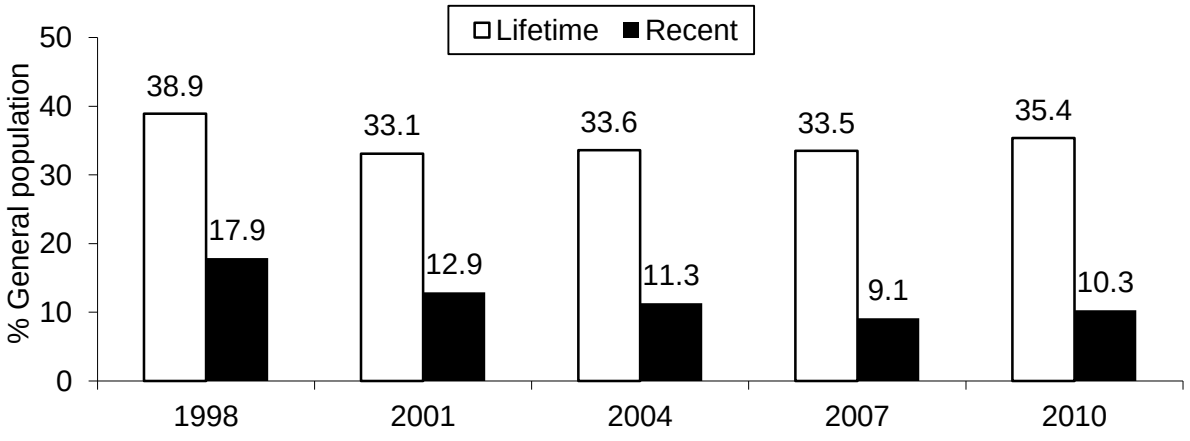
**Source: EDRS regular ecstasy user interviews 2005-2010**

### 4.8.2 Cannabis use in other populations

*General population*

The proportion of the NSW general population aged 14 years or over reporting the 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 17) (Australian Institute of Health and Welfare, 2011).

**Figure 17: Recent* and lifetime cannabis use in the NSW general population, 1998-2010**



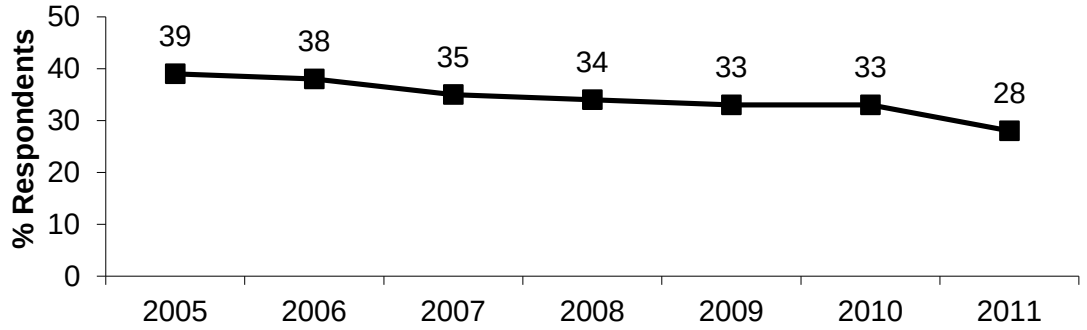

**Source: Fitzsimmons & Cooper-Stanbury 2000; Australian Institute of Health and Welfare 2002, 2005, 2008, 2011.**

* Used in the last 12 months

*Sydney Gay Community Periodic Survey*

Figure 18 shows the proportion of gay men surveyed that had used cannabis in the past six months. Just over one-quarter of the men who participated had recently used cannabis. The authors reported a significant decrease in the use of cannabis from 2010 to 2011 and also since 2007 (Hull, et al., 2011).

**Figure 18: Proportion of gay men in Sydney reporting recent cannabis use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey, 2011**

*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**

KE working in festival and nightclub settings reported that it was fairly uncommon to encounter cannabis use. KE working with young people reported that cannabis was one of the most common and most problematic drugs among this group. Approximately 30% of young people in treatment for mental health problems were regular users of cannabis. A KE working with the GLBTQ community reported that cannabis use is particularly widespread among same sex attracted women and that daily cannabis use is not uncommon among this group. This KE was concerned that this was becoming associated with high levels of depression and social isolation among these women.

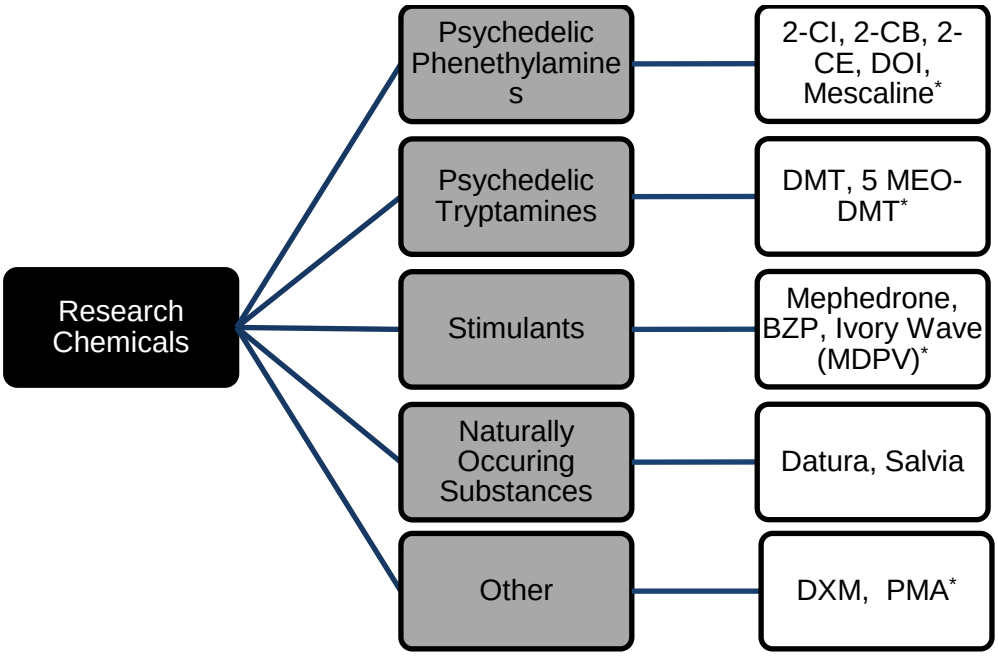
## 4.9 Emerging psychoactive substance (EPS) use


**Summary:**

- The use of EPS was low in NSW overall.
- The most common research chemicals recently used among Sydney REU were 2CB (9%), 2CE (8%) and DMT (8%).
- Key experts reported that the most common EPS they had observed in NSW recently was 2CB.


From 2010 onward, the EDRS attempted to systematically investigate a group of drugs known as 'research chemicals' (also known as analogues, legal highs, herbal highs, party pills). These drugs can be classified as outlined in Figure 19.

**Figure 19: Research chemicals investigated by the EDRS**




*For abbreviations see list on page IX.

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**

| Street Name | Chemical Name | Information on Drug | Information on use and effects |
|---|---|---|---|
| 2-CI | 2,5-dimethoxy-4-iodophenethyl-amine | A psychedelic drug with stimulant effects | Recent reports suggest that 2-CI is slightly more potent than the closely related 2-CB |
| 2-CB | 2,5-dimethoxy-4-bromophenethy-amine | A psychedelic drug with stimulant effects | 2CB is sold as a white powder sometimes pressed in tablets or gel caps |
| 2-CE | 2,5-dimethoxy-4-ethylphenethyl-amine | A psychedelic drug with stimulant effects | Commonly taken orally and highly dose-sensitive |
| DOI (Death on impact) | 2,5-dimethoxy-4-iodoamphetamine | A psychedelic phenethylamine | Requires only very small doses to produce full effects. Has been found on blotting paper and may be sold as LSD[7] |
| Mescaline | 3,4,5-trimethoxyphene-thylamine | A hallucinogenic alkaloid | First isolated in 1896 from the peyote cactus of northern Mexico |
| DMT | Dimethyl tryptamine | A hallucinogenic drug in the tryptamine family | Similar to LSD though its effects are said to be more powerful. Pure DMT is usually found in crystal form but has been reportedly sold in powder form[8] |
| 5MEO-DMT | 5-methoxy-dimethyltrypt-amine) | A naturally occurring psychedelic tryptamine present in numerous plants and in the venom of the *Bufo alvarius* toad | It is found in some traditional South American shamanic snuffs and sometimes in Ayahuasca brews. It is comparable in effects to DMT; however, it is substantially more potent. 5 MEO-DMT is mostly seen in crystalline form[9] |
| Mephedrone | 4-methyl-methcathin-one | A stimulant which is closely chemically related to amphetamines | Reportedly produces a similar experience to drugs like amphet-amines, ecstasy or cocaine. Mephedrone is a white, off-white or yellowish powder although it may also appear in pill or capsule form. Mephedrone is probably the most well known of a group of drugs derived from cathinone (a chemical found in the plant called khat)[10] |
| BZP | 1-benzylpiperazine | A piperazine; a CNS stimulant. | Gained popularity in some countries in the early 2000s as a legal alternative to amphetamines and ecstasy. One of the more common piperazines, providing stimulant effects which people describe |

[7] Erowid: http://www.erowid.org/chemicals/doi/doi.shtml.
[8] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/dmt).
[9] Erowid: http://www.erowid.org/chemicals/5meo_dmt/5meo_dmt.shtml.
[10] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/mephedrone.

| Street Name | Chemical Name | Information on Drug | Information on use and effects |
|---|---|---|---|
| | | | as a noticeably different than those of amphetamines. Not particularly popular as many people find that it has more unpleasant side effects than amphetamines[11] |
| Ivory wave | Methylenedioxypyrovalerone (3,4-methylenedioxy) or MDPV | A cathinone derivative. | More potent than other cathinones. Lidocaine (a common local anaesthetic) is frequently used as a cutting agent, to give users the numbing sensation in the mouth or nose which is associated with drugs of high purity (e.g. high-purity cocaine)[12] |
| DXM | Dextromethorphan | A semisynthetic opiate derivative which is legally available over the counter in the US | DXM is most commonly found in cough suppressants, especially those with 'DM' or 'Tuss' in their names. DXM is a dissociative drug[13] |
| PMA | Paramethoxyamphetamine; 4-methoxy-amphetamine | A synthetic hallucinogen that has stimulant effects | Ingesting a dose of less than 50 milligrams (usually one pill or capsule) without other drugs or alcohol, induces symptoms reminiscent of MDMA although PMA is more toxic than MDMA. Doses over 50 milligrams are considered potentially lethal (due to the risk of overheating) |
| Datura | (commonly *Datura inoxia* and *Datura strammonium*) Contains: Atropine and Scopolamine | Atropine is a potent anticholinergic agent. Scopolamine is a CNS depressant and has antimuscarinic properties[14] | 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[15] |
| Salvia | *Salvia divinorum* (contains Salvinorin A) | Salvia is derived from the American plant *Salvia divinorum*, a member of the mint family. | At low doses (200-500mcg) salvia produces profound hallucinations that last from 30 minutes to an hour or so. In higher doses the hallucinations last longer and are more intense[16] |
| LSA | *d*-lysergic acid amide | LSA is a naturally occurring psychedelic found in many plants such as morning | LSA has some similarities in effect to LSD, but is generally considered much less stimulating and can be sedating in larger doses. |

[11] Erowid: http://www.erowid.org/chemicals/bzp/bzp_basics.shtml.
[12] Drugscope: http://www.drugscope.org.uk/ourwork/pressoffice/pressreleases/ivory_wave_MDP.
[13] Erowid: http://www.erowid.org/chemicals/dxm/dxm_basics.shtml

[14] (Baselt, 2008)
[15] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/datura
[16] Drugscope: http://www.drugscope.org.uk/resources/drugsearch/drugsearchpages/salvia

| Street Name | Chemical Name | Information on Drug | Information on use and effects |
|---|---|---|---|
| | | glory and hawaiian baby woodrose seeds. | |
| K2/Spice | Synthetic cannabinoid | Usually sold as loose, generic plant material with a mix of chemicals on it (containing synthetic cannabinoids). | A psychoactive herbal and chemical product that, when consumed, mimics the effects of cannabis. |
| Methylone | 3,4-methylenedioxy-*N*-methylcathinone | An entactogen and stimulant of the phenethylamine, amphetamine, and cathinone classes. | Reported dosages range from 100 to 250 mg orally. Effects are primarily psychostimulant in nature. |
| MPTP | 1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine | MPTP is a contaminant that can result during the synthesis of MPPP, an illicit analogue of the opioid meperidine. | MPTP is a known industrial toxin which causes Parkinsonian symptoms un users by destroying dopaminergic neurons in the substantia nigra. It was responsible for a rash of Parkinsons-like cases in the early 1980s. |

The most common research chemicals ever used among Sydney REU were 2-CB (22%), DMT (21%), mephedrone (17%) and Salvia (15%). However, the proportions who had recently used research chemicals was low. Those most commonly used over the preceding six months were 2CB (9%), 2CE (8%), DMT (8%) and DXM (6%) (Table 13).

**Table 13: Emerging psychoactive substance use among REU, NSW 2010 & 2011**

| Emerging psychoactive substance use among REU | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|
| 2-CI | | |
| ever used (%) | 4 | **5** |
| used last 6 months (%) | 1 | **1** |
| 2-CB | | |
| ever used (%) | 16 | **22** |
| used last 6 months (%) | 2 | **9** |
| 2-CE | | |
| ever used (%) | 2 | **10** |
| used last 6 months (%) | 2 | **8** |
| DOI (Death on impact) | | |
| ever used (%) | - | **1** |
| used last 6 months (%) | - | **1** |
| Mescaline | | |
| ever used (%) | 8 | **13** |
| used last 6 months (%) | 1 | **4** |
| DMT | | |
| ever used (%) | 18 | **21** |
| used last 6 months (%) | 7 | **8** |

| Emerging psychoactive substance use among REU | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|
| 5MEO-DMT | | |
| ever used (%) | 1 | **4** |
| used last 6 months (%) | - | **1** |
| Mephedrone | | |
| ever used (%) | 4 | **17** |
| used last 6 months (%) | 4 | **4** |
| BZP | | |
| ever used (%) | 2 | **11** |
| used last 6 months (%) | - | **2** |
| Ivory Wave | | |
| ever used (%) | - | **-** |
| used last 6 months (%) | - | **-** |
| DXM | | |
| ever used (%) | 2 | **13** |
| used last 6 months (%) | - | **6** |
| PMA | | |
| ever used (%) | 2 | **5** |
| used last 6 months (%) | - | **2** |
| Datura | | |
| ever used (%) | 1 | **9** |
| used last 6 months (%) | - | **1** |
| Salvia | | |
| ever used (%) | n/a | **15** |
| used last 6 months (%) | | **1** |
| LSA | | |
| ever used (%) | n/a | **5** |
| used last 6 months (%) | | **1** |
| K2/Spice | | |
| ever used (%) | n/a | **1** |
| used last 6 months (%) | | **1** |
| Methylone | | |
| ever used (%) | n/a | **4** |
| used last 6 months (%) | | **3** |
| MPTP | | |
| ever used (%) | n/a | **-** |
| used last 6 months (%) | | **-** |
| Other synthetic cannabinoids | | |
| ever used (%) | n/a | **3** |
| used last 6 months (%) | | **3** |

**Source: EDRS regular ecstasy user interviews 2010 & 2011**

### Key expert comments

Several KE commented on emerging psychoactive substances. A law KE reported that the main EPS identified in NSW recently were 2CB, BZP, DMT, MDA and PMA. They were concerned about potential increases in MDA use following on from increasing numbers of clandestine laboratories producing MDA. Interestingly, it was one KE's impression that most ecstasy users would prefer to use high purity MDMA rather than MDMA alternatives if given the choice (based on user forum conversations).

A KE working with the GLBTQ community had observed increasing use of drugs such as mephedrone and tripstasy (likely to refer to the 2C- family of drugs) among this group and at festivals in general. A law KE had noticed a decrease in seizures of 2CB and BZP in 2010/2011 following increases for both these drugs in 2009. They had also noticed an increase in seizures of 2CE and 2CI and reported having seen MDPV capsules in 2010/2011.

Knowledge about other EPS was scarce except for one KE's suggestion that synthetic cannabinoids (such as K2 or Spice) were most commonly used among secondary school aged children rather than being widespread among party goers.

## 4.10 Other drug use


Summary:

- Every participant reported the lifetime use of alcohol and all but one had used it recently.
- Key experts reported that alcohol continued to be one of the most problematic drugs among REU.
- The majority of REU had used tobacco at least once and 92% had smoked within the past six months.
- One-third of the group had recently used benzodiazepines. Illicit use was more common than licit use.
- One-in-ten REU had recently used antidepressants. Licit use was more common than illicit use.
- Amyl nitrite was used more commonly among this group (40%) than nitrous oxide (13%).
- The use of heroin was uncommon with only 2% reporting recent use; however, one-tenth reported having recently used other opiates.
- One-quarter of the sample had recently used mushrooms, significantly higher than in 2010 (10%).
- One-fifth of the group had recently used pharmaceutical stimulants. Illicit use was more common than licit use.
- The use of over the counter codeine-containing and stimulant products was common among REU (39% codeine and 27% stimulants); however, this included both licit and recreational use.
- The use of Performance and Image Enhancing Drugs (PIED) was uncommon in this group.

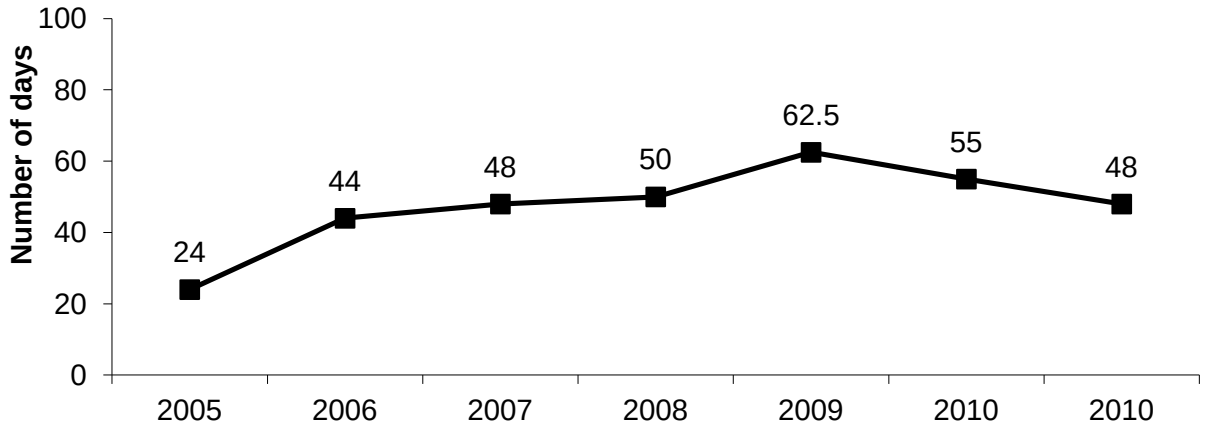

Substantial proportions of REU have reported the use of other licit and illicit drugs across sampling years.

### 4.10.1 Alcohol

The entire 2011 sample of REU reported having used alcohol at least once and almost all of these (99%) reported having done so during the past six months. Participants had first used alcohol at a median age of 14 years (range 4-19). Participants reported having consumed alcohol on a median of 48 days (range 5-180) over the preceding six months and the majority of REU (73%) had used alcohol on a greater than weekly basis.

Figure 20 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.

**Figure 20: Days of alcohol use in the last six months, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

See section 7.5 'Problematic alcohol use among REU' for a discussion of harmful alcohol use among REU in NSW.

**Key expert comments**

Almost all KE commented on the use of alcohol. KE working with a wide variety of clients (including youth, GLBTQ, women) in varied settings (including festivals, nightclubs, first aid, mental health treatment) all agreed that alcohol continued to be the most widespread and problematic drug for them to manage.

One KE reported that nightclub patrons can be prone to becoming very intoxicated (compared with festival patrons) and suggested that this may be associated with the relative ease of access to alcohol here. However, there were mixed reports on alcohol consumption at festivals. One KE reported that festival goers tended to drink less due to reduced alcohol availability, increased price and the knowledge that they would be there (at the festival) for the whole day and night. Another KE reported that festival goers tended to drink a lot, regardless of their plans for the day (such as, whether they intended to use drugs or not).

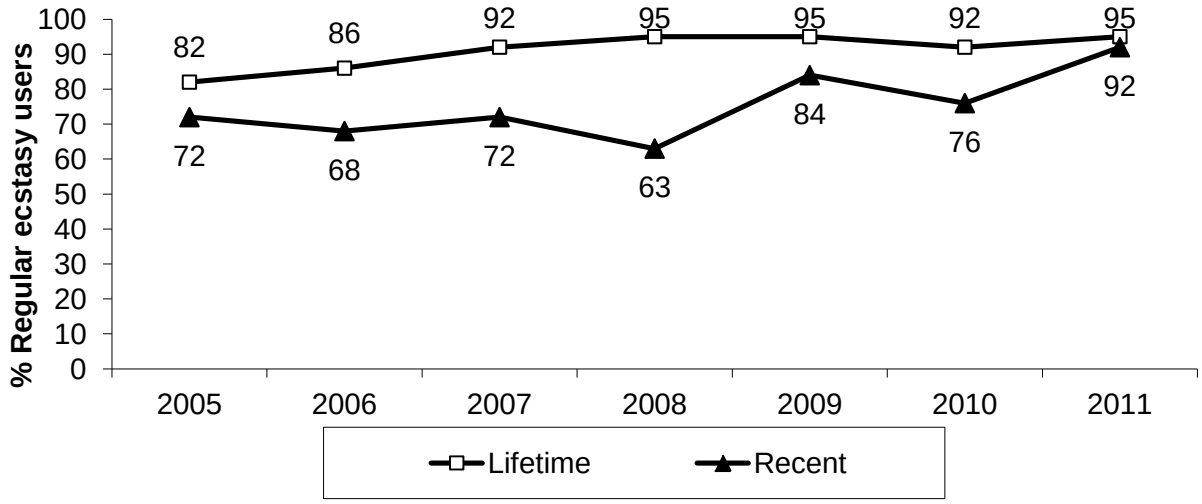
One KE had observed that there tended to be fewer intoxicated patrons at the end of the day at festivals where only mid-strength beer was available. However, this KE was also concerned about patrons who brought alcohol to the festivals (such as hip flasks) becoming heavily intoxicated and felt that increased efforts to reduce this would be beneficial.

### 4.10.2 Tobacco

The vast majority (95%) of REU interviewed in 2010 had used tobacco at some point and most (92%) reported having done so over the preceding six months. Tobacco was first used at a median age of 14 years (range 8-25). Tobacco had been used on a median of 180 days

(range 1-180) over the preceding six months and almost two-thirds half (63%) of those who had recently used tobacco were daily smokers. While the proportions reporting lifetime use of tobacco have remained stable from 2009 to 2010 (Figure 21), there has been a significant increase in recent use from 76% to 92% (95% CI:-0.26 — -0.06; *p<0.01*).

**Figure 21: Proportion of regular ecstasy users reporting lifetime and recent tobacco use, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

**Key expert comments**

A few KE commented on tobacco. One KE reported that cigarette smoking is very common among young people. Another reported that they continue to see smokers in nightclubs and a third observed that once one person started smoking in a group of friends, others quickly joined them.

### 4.10.3 Benzodiazepines

More than half (57%) of the sample reported having ever used any benzodiazepines and one-third (34%) reported having done so recently. Among those who had recently used them, benzodiazepines had been used on a median of 10 days (range 1-180). Lifetime and recent use of benzodiazepines remained stable from 2010 to 2011 (Figure 22).

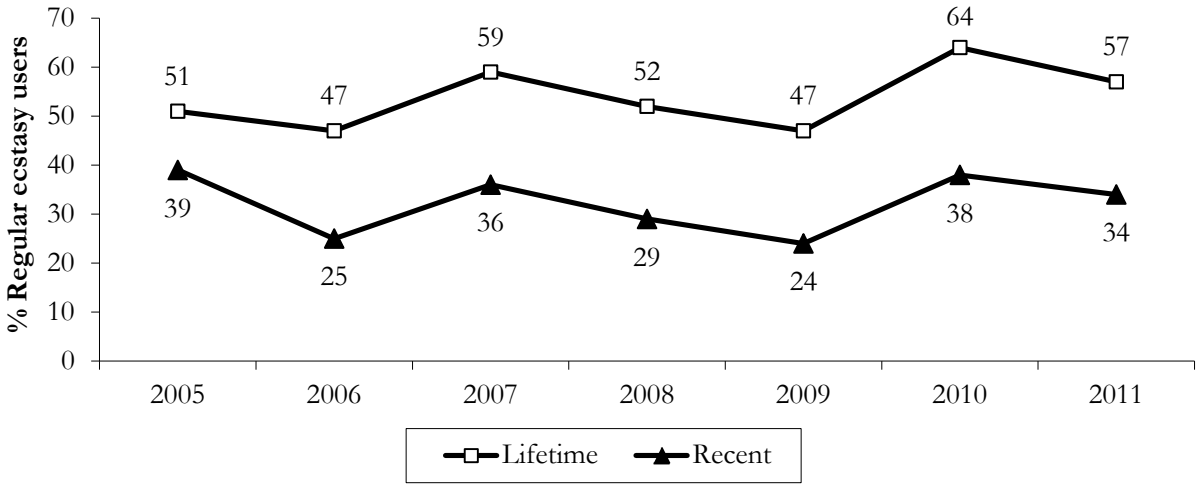
*Licit benzodiazepines*

More than one-in-ten (15%) reported having ever used licitly obtained benzodiazepines and 10% had done so recently. Licit benzodiazepines were first used at a median age of 20 years (range 18-44). They had been used on a median of 28 days (range 2-180) over the six months prior to the interview. All 10 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-quarter (25%) had done so over the preceding six months. They were first used at a median age of 19 years (range 15-30) and were most commonly swallowed. Illicit benzodiazepines had been used on a median of 6 days (range 1-24) by recent users.

**Figure 22: Proportion of regular ecstasy users reporting lifetime and recent benzodiazepine use, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

**Key expert comments**

A few KE reported having observed illicit pharmaceutical use although they generally agreed that it was not widespread. One KE working with GLBTQ clients reported that the use of Valium was common among this group.

### 4.10.4 Antidepressants

One-quarter (27%) of participants reported having ever used antidepressants and one in ten (9%) had done so over the preceding six months. Among those who had recently used them, antidepressants had been used on a median of 36 days (range 1-180).

*Licit antidepressants*

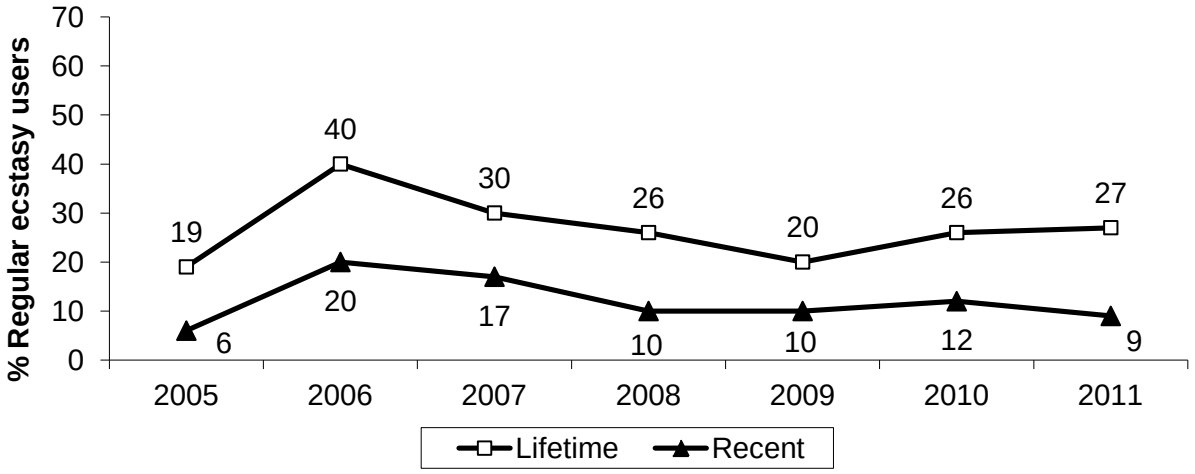
One-fifth of the sample (22%) had ever used licitly obtained antidepressants and almost one-tenth (8%) had done so over the preceding six months. Licit antidepressants were first used at a median age of 20 years (range 14-48). They had been used on a median of 60 days (range 6-180) and swallowing was the main route of administration reported.

*Illicit antidepressants*

Nine participants reported having ever used illicit antidepressants and one participant reported having used them over the past six months. Illicit antidepressants were first used at a median age of 20 years (range 16-29). Given the small sample who had recently used illicitly obtained antidepressants (n=1), data on routes of administration and the median days of use are not presented here.

Figure 23 presents data from 2005 onwards on the reported lifetime and recent use of any antidepressants. Both of these proportions have remained stable from 2010 to 2011.

**Figure 23: Proportion of regular ecstasy users reporting lifetime and recent anti-depressant use, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

## 4.10.5 Inhalants

*Amyl nitrite*

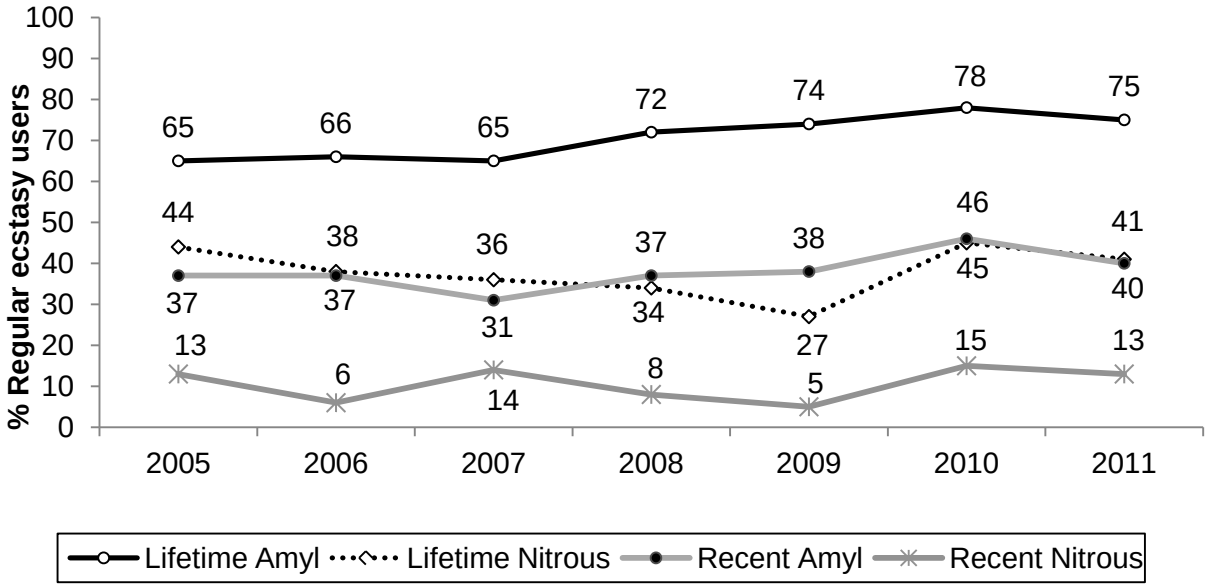
Three-quarters (75%) of REU interviewed had ever used amyl nitrite and two-fifths of the sample (40%) had used it over the preceding six months. Amyl nitrite was first used at a median age of 18 years (range 8-28). Those who had recently used it had done so on a median of 3 days (range 1-72) over the preceding six months. The majority of recent users of amyl nitrite (70%) used it on a less than monthly basis.

*Nitrous oxide*

Approximately half (41%) of the sample reported having ever used nitrous oxide and 13% had done so recently. Nitrous oxide was first used at a median age of 18 years (range 8-33). Among those who had used it over the last six months, nitrous oxide had been used on a median of 3 days (range 1-180) during this time.

Figure 24 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 2010 to 2011.

**Figure 24: Proportion of regular ecstasy users reporting lifetime and recent amyl nitrite and nitrous oxide use, NSW 2005-2011**

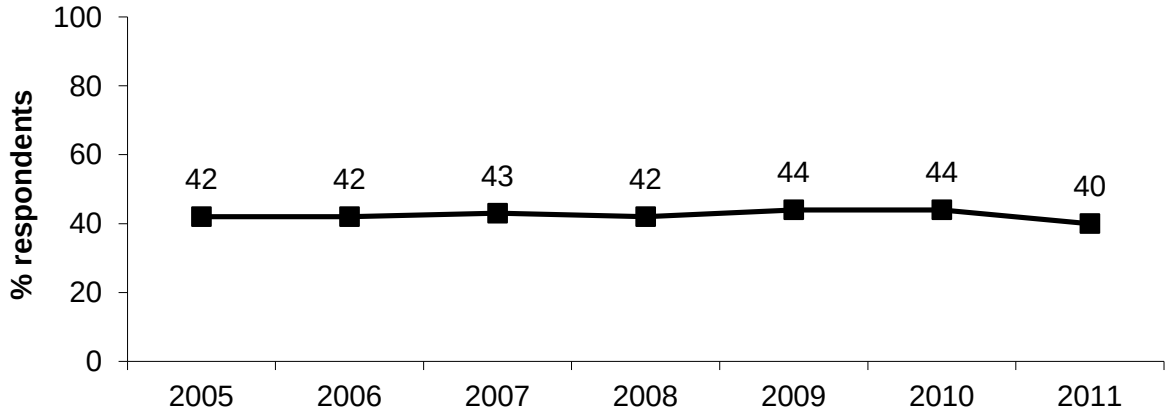



**Source: EDRS regular ecstasy user interviews 2005-2011**

*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 25). Two-fifths (40%) of participants in 2011 reported recently using amyl nitrite. This figure was significantly lower than that reported in 2010(Hull, et al., 2011).

**Figure 25: Proportion of gay men in Sydney reporting recent amyl nitrite use, 2005-2011**

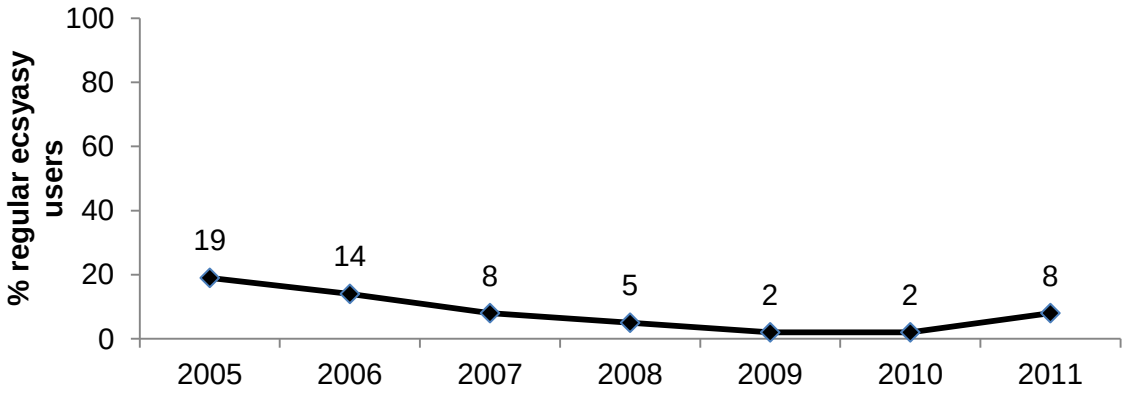



**Source: Sydney Gay Community Periodic Survey 2011**

### 4.10.6 MDA

One-fifth (22%) of participants in the 2011 EDRS reported having ever used MDA, however, only 8 participants reported they had used it over the preceding six months. MDA was first used at a median age of 18 years (range 15-32). The use of MDA has remained stable from 2010 to 2011 across time Figure 26.

**Figure 26: Proportion of regular ecstasy users reporting recent use of MDA, 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

**Key expert comments**

A few law KE commented that they had noticed an increase in the presence of MDA in the Sydney market recently. The number of seizures of MDA in NSW is apparently increasing.

### 4.10.7 Heroin and other opiates

*Heroin*

Just over one-in-ten (13%) of REU reported that they had ever used heroin but only two participants reported they had used it in the preceding six months. Given such a small sample of recent users, details regarding frequency and quantity of use are not presented.

*Methadone and buprenorphine*

Five participants reported the lifetime use of methadone and two participants had used it over the preceding six months. Three participants reported lifetime use of buprenorphine and one participant 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 (19%) of respondents had ever used a licitly obtained opiate (other than methadone or buprenorphine), only five participants had used a licitly obtained opiate

recently. One- fifth (19%) of the sample reported having ever used illicitly obtained opiates (other than heroin, methadone or buprenorphine); and nine 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**

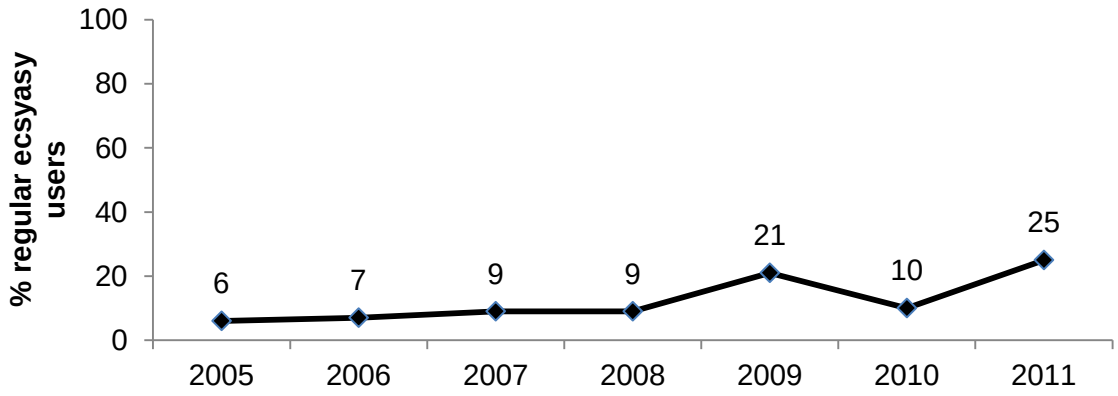
The few KE who were able to comment on heroin were in agreement that it is very rarely used among REU. Two KE reported that it was usually found within very small groups who were often not fully aware of safe injecting practices.

### 4.10.8 Mushrooms

Three-fifths (58%) of the REU interviewed in 2010 reported having ever used mushrooms and one-quarter (25%) had done so over the preceding six months. Mushrooms were first used at a median age of 18 years (range 8-25). 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.

Proportions of REU reporting the recent use of mushrooms appear to have been increasing over the past three years. There was a significant increase from 2010 (10%) to 2011 where one-quarter of the group had recently used mushrooms.

**Figure 27: Proportion of regular ecstasy users reporting recent use of mushrooms, 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

### 4.10.9 Pharmaceutical stimulants

Half (50%) of participants in 2011 reported having ever used pharmaceutical stimulants and one-fifth (20%) had done so within the six months preceding the interview. Pharmaceutical stimulants were used on a median of 5 days (range 1-180) over the preceding six months.

*Licit pharmaceutical stimulants*

While nine participants reported having used licitly obtained pharmaceutical stimulants, only three REU had used them recently. Licitly obtained pharmaceutical stimulants were first used at a median age of 17 years (range 6-30).

*Illicit pharmaceutical stimulants*

Almost half of the sample (45%) had ever used illicitly obtained pharmaceuticals and 18% had done so over the preceding six months. Illicit pharmaceutical stimulants were first used at a median age of 18 years (range 13-32). Those who had recently used them had done so on a median of 4 days (range 1-25) over the preceding six months. While the majority of those who had recently used illicitly obtained pharmaceutical stimulants had swallowed them (78%), two-fifths of this group had also recently snorted them (44%).

### 4.10.10 Over the counter drugs

*Codeine*

The majority (57%) of the sample reported having ever used over the counter codeine-containing products and two-fifths (39%) had done so over the preceding six months. These products were first used at a median age of 16 years (range 3-35). Swallowing was the most common route of administration.

*Stimulants*

Half of the sample (43%) reported having ever used over the counter stimulants (such as Sudafed and Codral) and more than one-quarter (27%) had used them recently. These products were first used at a median age of 16 years (range 3-25). Those who had used them recently had done so on a median of 5 days (range 1-20) over the preceding six months. Swallowing was the most common route of administration.

### 4.10.11 Performance and image enhancing drugs (PIED)

Five participants reported lifetime use of steroids, however; only one participant reported having used them over the preceding six months. It is notable that in some cases, participants were describing the use of prescribed steroids for injuries.

**Key expert comments**

One KE observed that pharmaceutical stimulant use was generally uncommon among their clients. They also reported hearing of people mixing Panadeine forte with alcohol to come down after a big night.

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

## 5.1 Ecstasy


Summary:

- *Price*: $25 per tablet.
- *Purity*: Currently low and stable.
- *Availability*: Currently easy to obtain and stable.
- Several key experts had reason to believe that the purity of ecstasy was beginning to increase after a substantial period of low purity.


### 5.1.1 Price

Almost all (92%) 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 7-50) (Table 14). While the majority of the group (58%) reported that the price of ecstasy tablets had remained stable, one-quarter (28%) reported that this price had increased over the six months preceding the interview.

One-fifth (28%) of the sample was able to comment on the price of ecstasy capsules (commonly referred to as caps). Caps were reportedly $38 each (range 11-50). As only two 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 2005-2011**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | **2011** |
|---|---|---|---|---|---|---|---|
| Median price /tablet | | | | | | | |
| ( $) | 30 | 30 | 30 | 30 | 20 | 25 | **25** |
| (range) | (15-50) | (20-50) | (15-40) | (15-50) | (11-40) | (10-50) | **(7-50)** |
| **Price change:** | | | | | | | |
| Increased (%) | 11 | 3 | 4 | 5 | 6 | 20 | **28** |
| Stable (%) | 54 | 69 | 71 | 68 | 58 | 61 | **58** |
| Decreased (%) | 26 | 16 | 12 | 17 | 27 | 15 | **8** |
| Fluctuated (%) | 7 | 7 | 8 | 3 | 4 | 4 | **6** |
| Don't know (%) | 3 | 5 | 5 | 7 | 5 | - | **-** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

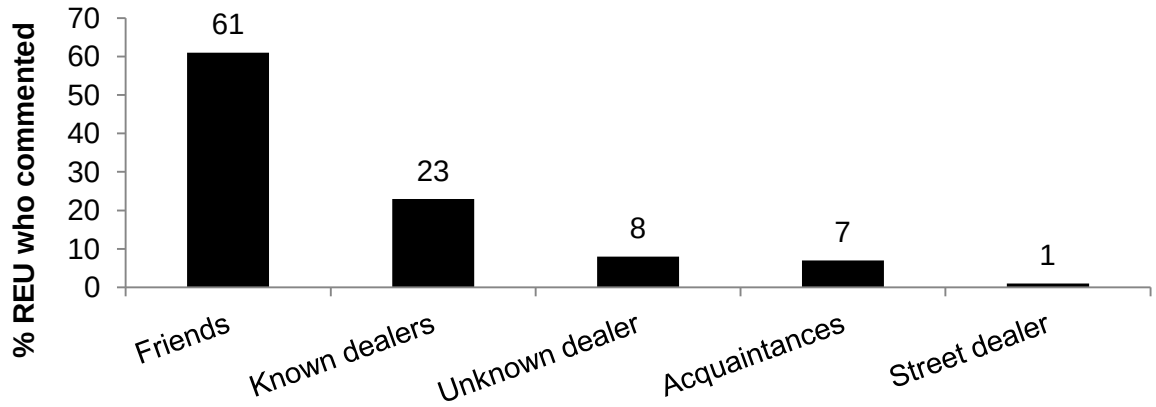
Note: Response option 'don't know' was removed from analyses from 2010 onward

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 1-10). While two-fifths (39%) 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, just under half the sample (45%) reported that they had bought it monthly or less, two-fifths (42%) fortnightly or less and 12% weekly or less. The median number of tablets purchased was 4 (range 1-10,000).

*Source person and source location of last purchase*

Participants were asked to describe the types of person they had last purchased ecstasy from (Figure 28). The majority of the group reported that they had last purchased ecstasy from a friend (61%) although almost one-quarter (23%) had last bought it from a dealer (who was previously known to them). Smaller proportions purchased ecstasy from unknown dealers, acquaintances and street dealers.

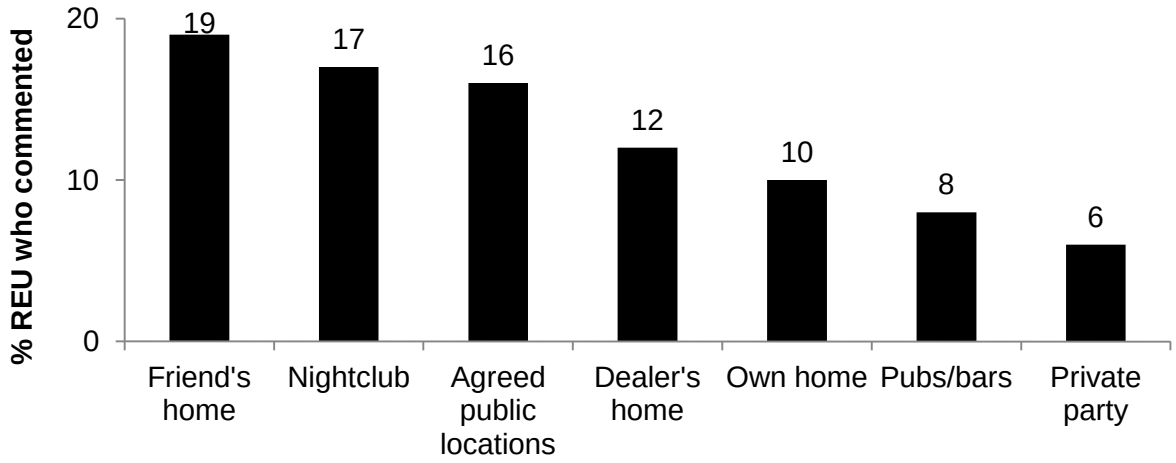
**Figure 28: People from whom ecstasy was last purchased, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**

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 nightclub (17%), at an agreed public location (16%), at a dealer's home (12%) and at the participant's own home (10%) (Figure 29).

**Figure 29: Locations at which methamphetamine was last purchased[#], NSW 2011**



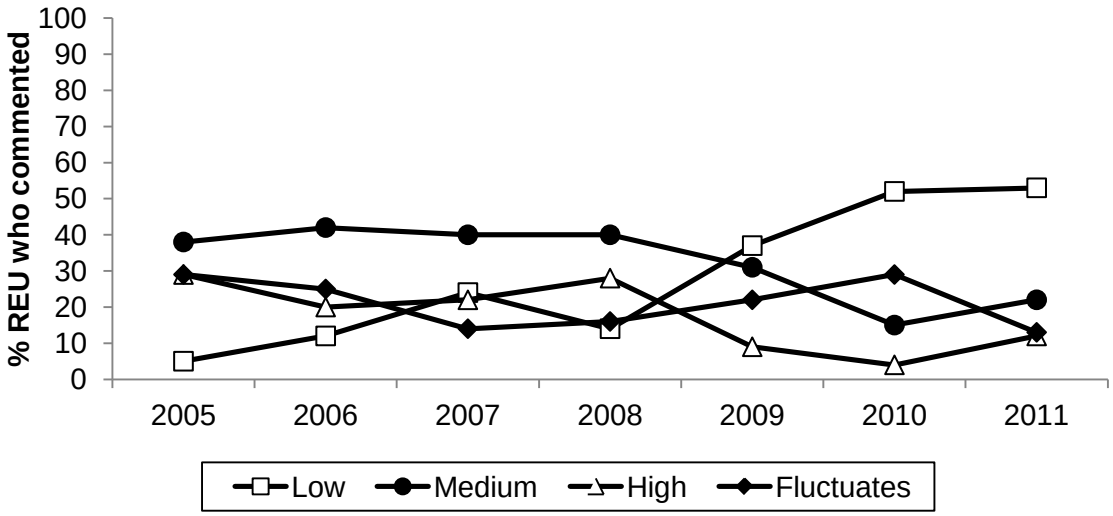

**Source: EDRS regular ecstasy user interviews 2011**
[#] Locations with <6% response were not included

### 5.1.2 Purity

*Current purity*

Figure 30 presents REU reports of ecstasy purity across time. In 2011, half the sample (53%) reported that the current purity of ecstasy was 'low', 22% that it was 'medium', 12% that it was 'high' and 13% reported that it 'fluctuates'. The data in 2011 continues to affirm the general conclusion that the purity of ecstasy available to most users is relatively low.

**Figure 30: REU reports of current ecstasy purity, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**

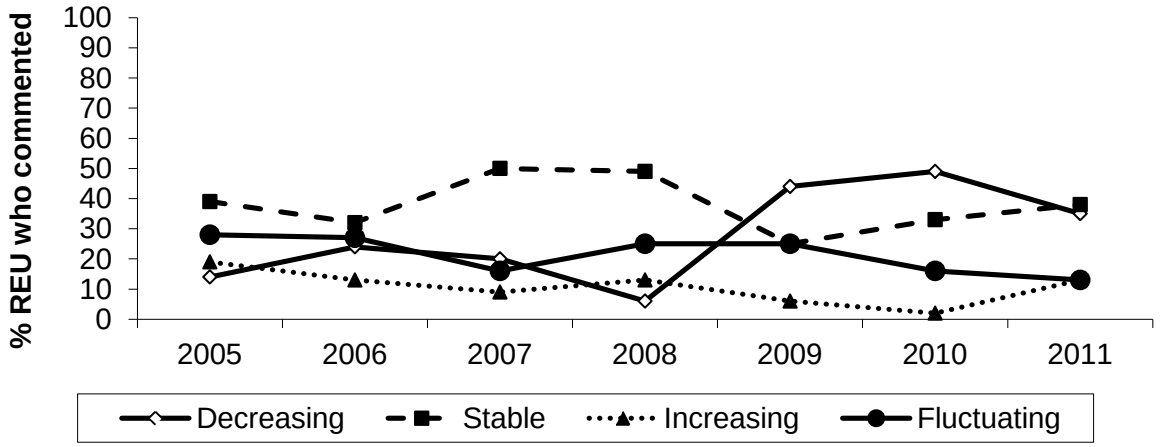
Note: Response option 'don't know' was removed from analyses from 2010 onward

*Purity change*

Figure 31 presents REU reports of changes in the purity of ecstasy over the six months prior to the interview. One-third of the sample (35%) reported that the purity of ecstasy had declined over the six months prior to the interview. Two-fifths (38%) reported that it had

remained stable and 13% respectively reported that it was fluctuating and that it had increased. These figures have remained relatively stable from 2010 to 2011.

**Figure 31: REU reports of change in ecstasy purity in the preceding six months, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews 2005-2011**
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.

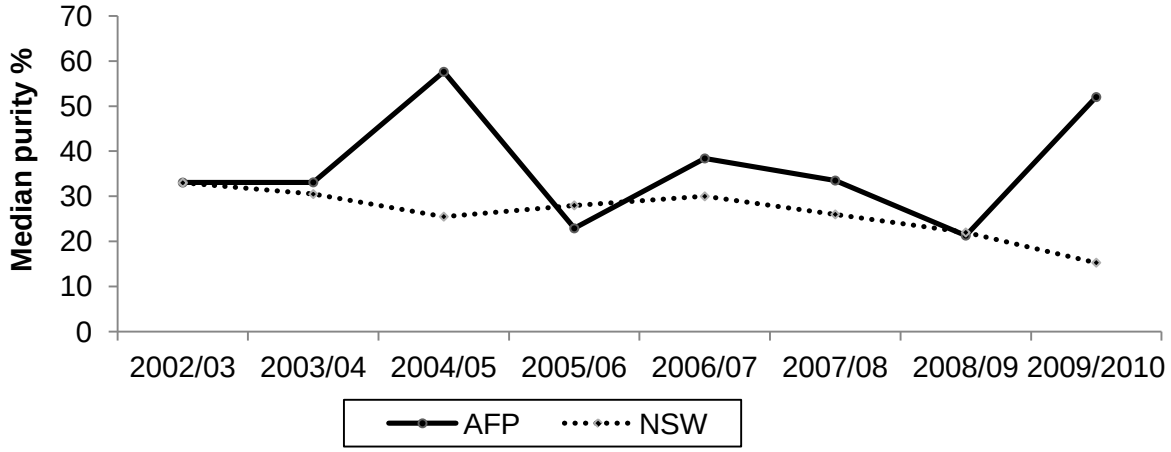
The purity data presented in this report were provided by the Australian Crime Commission (ACC), formerly the Australian Bureau of Criminal Intelligence (ABCI). The ACC reports both federal and state police seizure data, including number and weight of seizures. In 1999/00, the purity was reported as '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, DOM, MDA, MDEA, mescaline, PMA, and TMA 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 32 presents the median purity of phenethylamines seizures analysed by the NSW Police and Australian Federal Police (AFP) from 2002/03 to 2009/10. While the median purity of analysed seizures continued to decline for NSW, the median purity of phenethylamines seized by the AFP rose from 21.3% in 2008/09 to 52.2% in 2009/10.

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.

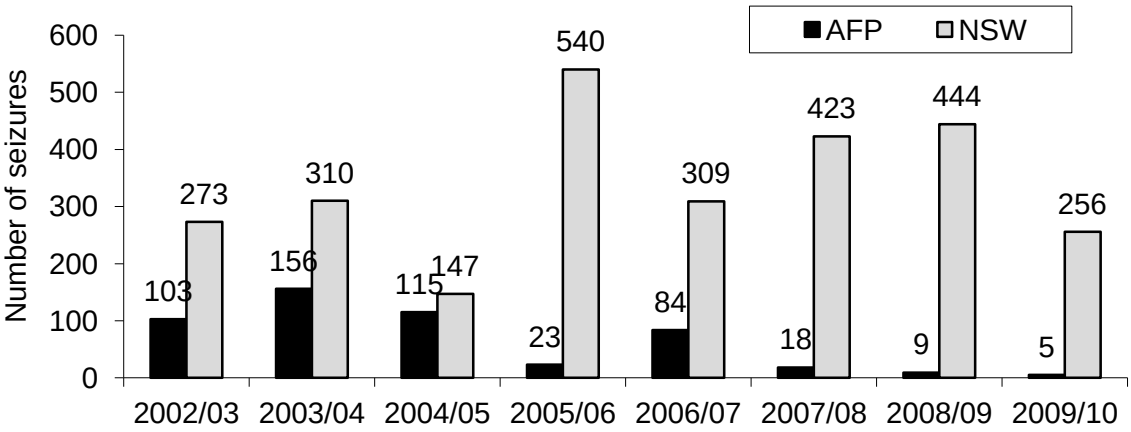
**Figure 32: Median purity of phenethylamines seizures 2002/03-2009/10***




**Source: Australian Crime Commission (2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011)**
*Data for 2010/11 were unavailable at time of publication

The number of phenethylamine seizures made by the AFP continued to decrease from 9 in 2008/09 to 5 in 2009/10 (Figure 33). There was also a decline in the number of seizures made by NSW Police with the figure almost halving from 444 in 2008/09 to 256 in 2009/10. 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 33: Number of phenethylamines seizures 2002/03-2009/10***




**Source: Australian Crime Commission (2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011)**
***** Data for 2010/11 were unavailable at time of publication

### 5.1.3 Availability

The large majority (88%) of REU interviewed in 2011 reported that it was currently 'easy' or 'very easy' to obtain ecstasy. Three-quarters (72%) of respondents indicated that the availability of ecstasy had remained 'stable' over the preceding six months (Table 15).

**Table 15: REU reports of availability of ecstasy in the preceding six months, NSW 2005-2011**

| Ecstasy variable | 2005 (N=100) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| **Current availability:** | | | | | | | |
| Very easy (%) | 73 | 60 | 72 | 74 | 52 | 41 | **51** |
| Easy (%) | 25 | 34 | 25 | 22 | 44 | 41 | **37** |
| **Availability:** | | | | | | | |
| Stable (%) | 75 | 80 | 81 | 73 | 61 | 59 | **72** |
| Easier (%) | 13 | 5 | 7 | 16 | 22 | 10 | **13** |

**Source: EDRS regular ecstasy user interviews 2005-2011**
Note: Response option 'don't know' was removed from analyses from 2010 onward

#### Key expert comments

A few KE commented in detail regarding ecstasy price, purity and availability. It was common for KE to mention that although the purity of ecstasy had been in decline for quite some time, there were some recent signs that this was changing. One KE mentioned that there has been an increase in alternative MDMA precursors being found in the Netherlands, which suggests that drug manufacturers may have found ways to circumvent laws reducing access to their primary precursors (Piperonyl Methyl Ketone (PMK) and saffrole oil). Another KE said they'd heard several reports that it was currently easier to access 'strong stuff'.

A law KE noted that there had been a very large decline in the number of ecstasy seizures analysed in NSW in 2010 and 2011 relative to the preceding years and an increase in seizures of 'other' drugs (including MDMA analogues, methcathinone and cannabinoids). One KE commented that the average purity of ecstasy which was seized and analysed in NSW was around 27% in 2011. This figure represented an increase in purity for the first time since 2007 (during which time the average purity of ecstasy samples had been declining). They also observed that the purity of ecstasy powder samples tended to be substantially higher than tablets.

## 5.2 Methamphetamine

**Summary:**

*Speed*
- *Price*: $80 per gram and apparently increasing from 2009.
- *Purity*: Reports were variable.
- *Availability*: Currently easy to obtain and stable.

*Base*
- *Price*: $100 per gram and reportedly stable.
- *Purity*: Currently medium to high and appeared to be stable.
- *Availability*: Currently difficult to obtain and stable.

*Crystal*
- *Price*: $60 per point and reportedly increasing.
- *Purity*: Generally high although variable.
- *Availability*: Currently easy to obtain and stable.

- Key experts agreed that speed and crystal had become more difficult to access and that the purity of speed was low.

### 5.2.1 Price

*Speed*

Twenty seven 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 $80 a gram (range $20-280), higher than that recorded in 2010 ($55 per gram). This continues a general increase from 2009 (Table 16).

More than half of those who commented (61%) believed the price of speed had remained stable over the preceding six months, although a substantial minority (28%) reported that it had increased. This is in keeping with the price increases noted above.

*Base*

Twelve 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. Eight participants had last purchased base by the gram and reported a median price of $100 per gram (range $60-150) (Table 16).

The majority (73%) of those who commented felt the price of base had remained stable over the preceding six months, although almost one-fifth (18%) reported that it had increased over that time.

*Crystal*

Sixteen participants were able to comment on the price of crystal over the preceding six months. The median price for a point of crystal was $60 (range $16-100), this represents the first increase in price since at least 2005.

Half of those who commented on changes to the price of crystal over this time reported that it had increased while two-fifths (42%) reported it had remained stable. This is again, in keeping with the increase noted above (Table 16).

**Table 16: Price of various methamphetamine forms purchased by REU, NSW 2005-2011**

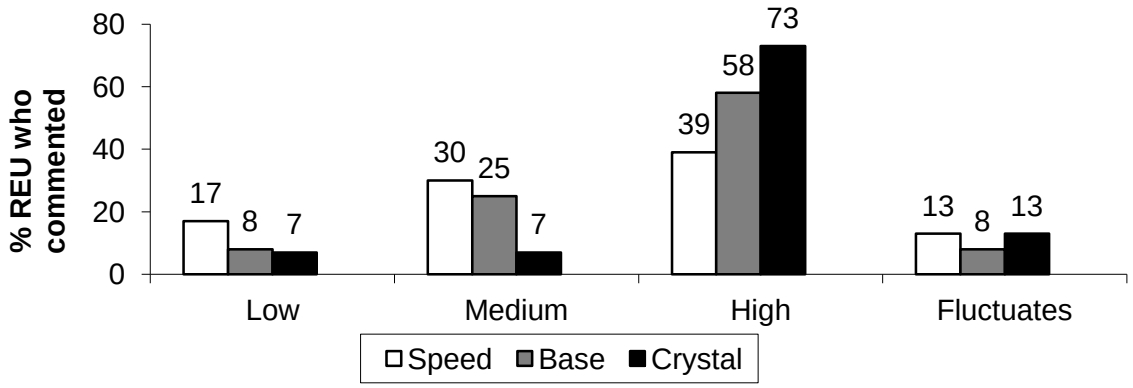
| Median price ($) (range) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | **2011** |
|---|---|---|---|---|---|---|---|
| **Speed** | n=78 | n=50 | n=23 | n=27 | n=18 | n=14 | **n=27** |
| Point | 40 (-) | 40 (30-50) | 47.5 (40-50) | - | - | - | **32.5*** **(15-50)** |
| Gram | 60 (30-200) | 60 (30-350) | 50 (30-200) | 50 (20-100) | 47.5 (10-100) | 55 (30-150) | **80 (20-280)** |
| **Base** | n=51 | n=24 | n=9 | n=13 | n=13 | n=16 | **n=12** |
| Point | 30 (10-200) | 37.5 (20-50) | 40 (15-50) | 42.5 (20-70) | 30* (20-60) | 20* (10-50) | **-** |
| Gram | 150 (100-260) | 100 (12-120) | 100 (50-200) | 150* (120-300) | 150* (100-200) | 200* (60-450) | **100*** **(60-150)** |
| **Crystal** | n=51 | n=54 | n=37 | n=27 | n=9 | n=18 | **n=16** |
| Point | 50 (20-80) | 50 (30-80) | 50 (30-60) | 50 (40-60) | 50* (50-80) | 50 (40-90) | **60 (16-100)** |
| Gram | 400 (100-500) | 350 (50-400) | 315 (280-350) | 300* (-) | - | - | **-** |

**Source: EDRS regular ecstasy user interviews 2005-2011**
*Small numbers reporting n<10

### 5.2.2 Purity

There was poor agreement among participants commenting on the current purity of speed, which implies that this could be quite variable. The majority of participants reporting on the purity of base believed it was currently of 'medium' or 'high' purity. Crystal was generally reported to be of 'high' purity (Figure 34).

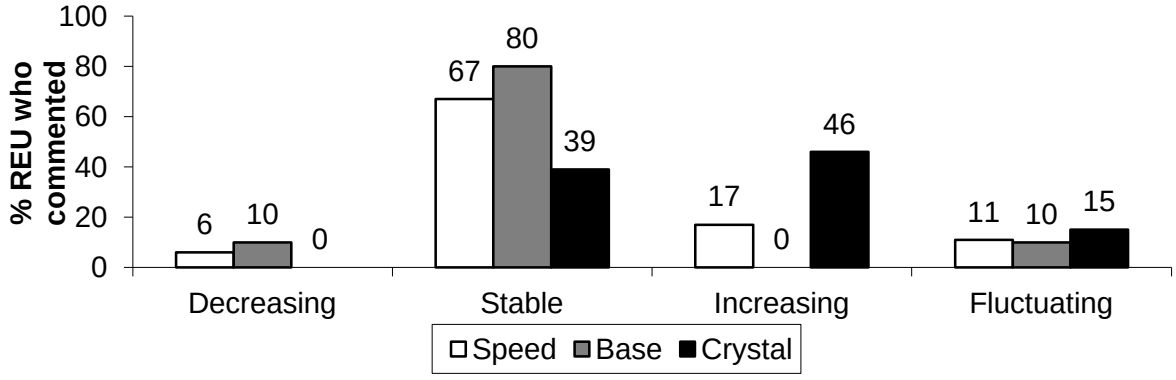
**Figure 34: REU reports* of current methamphetamine purity, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (speed n=23; base n=12; crystal n=15); 'Don't know' responses removed

Figure 35 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 although a sizeable minority felt it had increased recently. The purity of base was generally reported to have remained stable and, the purity of crystal was variable.

**Figure 35: REU reports* of changes in methamphetamine purity in the past six months, NSW 2011**



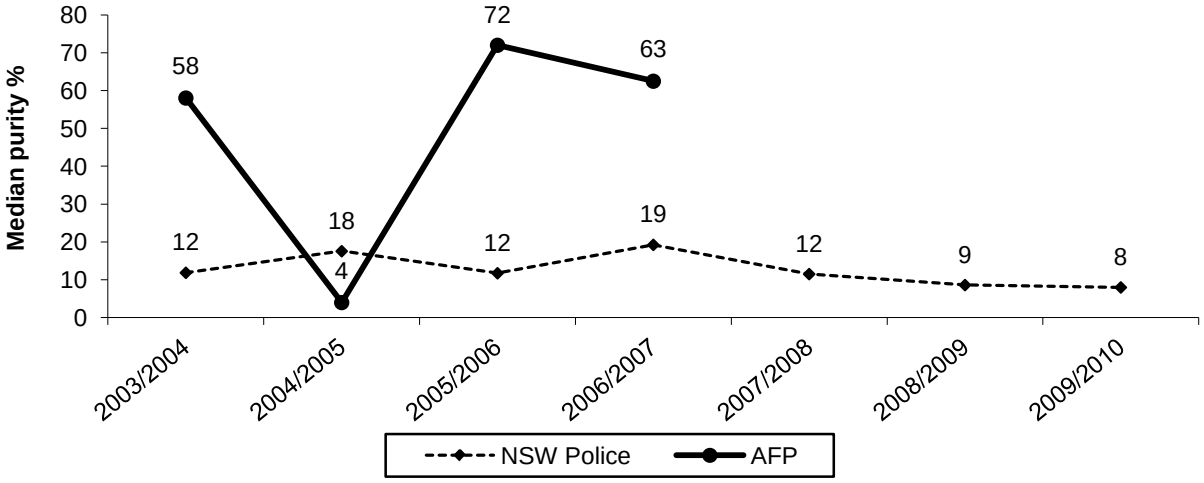

**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (speed n=18; base n=10; crystal n=13); 'Don't know' responses removed

Figure 36 shows the median purity of methylamphetamine seizures analysed in NSW for the period July 2003/June 2004 to July 2009/June 2010. The median purity of methylamphetamine seizures analysed remained relatively stable from 2008/09 to 2009/10 (Figure 36), 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 2079 to June 2010.

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.

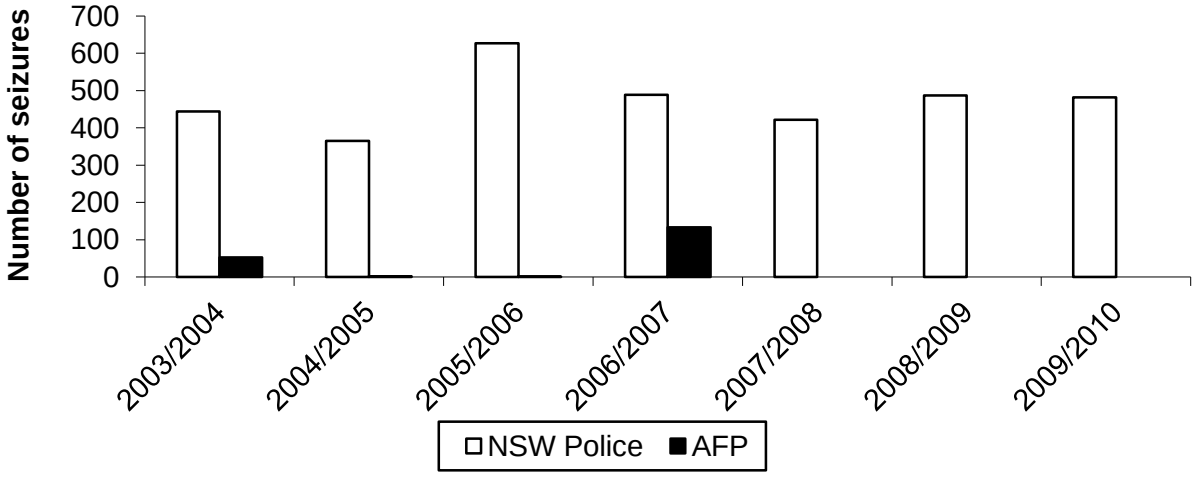
**Figure 36: Purity of methylamphetamine seizures analysed in NSW, 2003/04-2009/10**




**Source: Australian Crime Commission (2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011)**
NB: Data for 2010/11 were unavailable at time of publication

Figure 37 shows the number of methylamphetamine seizures upon which the above purity figures are based. The number of seizures analysed in NSW appears to have remained relatively stable over the past four years. No methylamphetamine seizures were reported for the AFP over the period July 2007 to June 2010.

**Figure 37: Number of methylamphetamine seizures analysed in NSW, 2003/04-2009/10.**

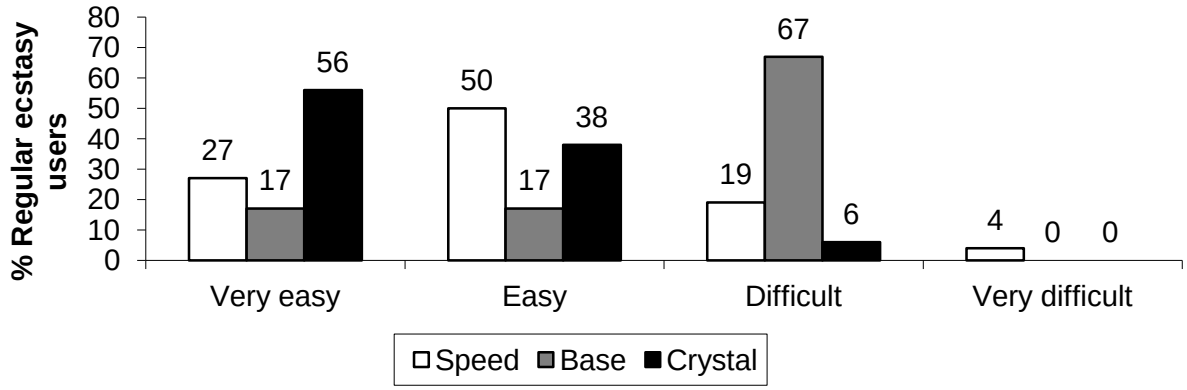



**Source: Australian Crime Commission (2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011)**
NB: Data for 2010/11 were unavailable at time of publication

### 5.2.3 Availability

Speed (77%) and crystal (94%) were generally considered 'easy' or 'very easy' to obtain at the time of interviewing in 2011 (Figure 38). In contrast, the majority of those who commented on base reported it was currently 'difficult' to obtain.

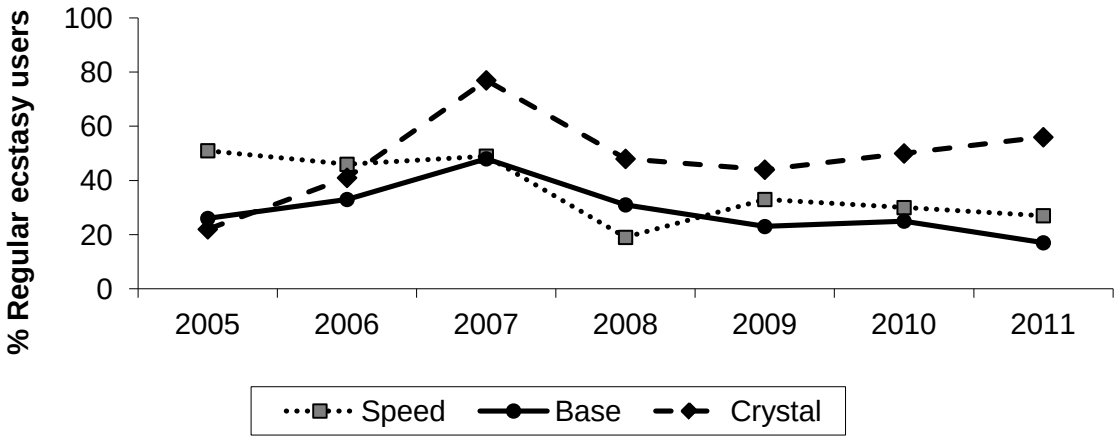
**Figure 38: REU reports* of current availability of methamphetamine forms, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (speed n=26; base n=12; crystal n=16)

Figure 39 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 2010 to 2011 across all three forms of methamphetamine investigated. This suggests that the availability of methamphetamine has remained relatively stable over this time.

**Figure 39: Proportion of REU reporting methamphetamine as 'very easy' to obtain across time, NSW 2005-2011**



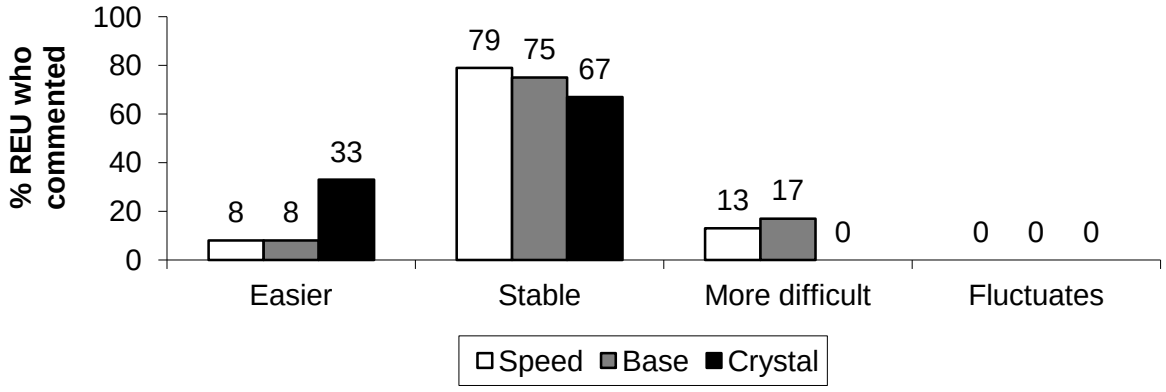

**Source: EDRS regular ecstasy user interviews 2005-2011**

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

Figure 40 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 and base had remained stable. While the majority (67%) reported that

the availability of crystal had remained stable, one-third of respondents reported that it had become easier to access.

**Figure 40: Change in the availability of various forms of methamphetamine in the preceding six months*, NSW 2011**

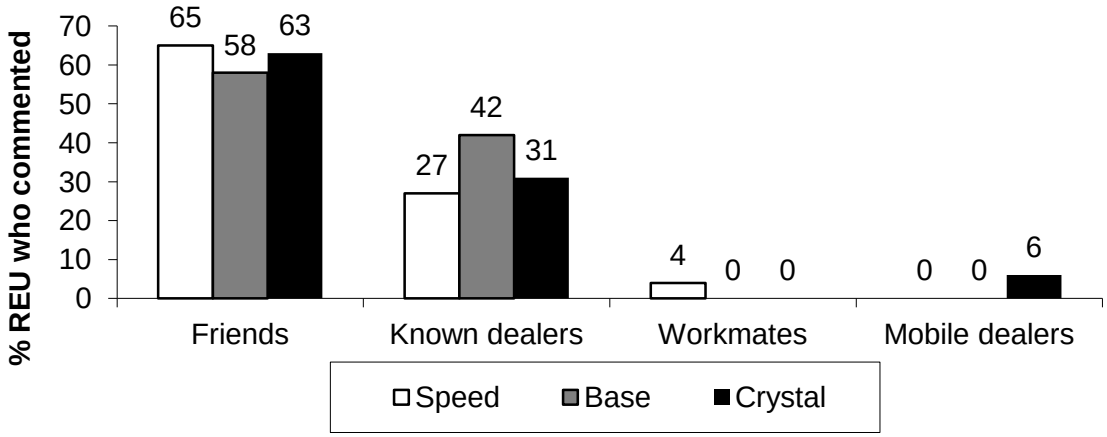



**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (speed n=24; base n=12; crystal n=15)

*Source person and source location*

Overall, methamphetamines were most commonly purchased from friends followed by known dealers. Small numbers reported having purchased methamphetamines from workmates and mobile dealers (Figure 41).

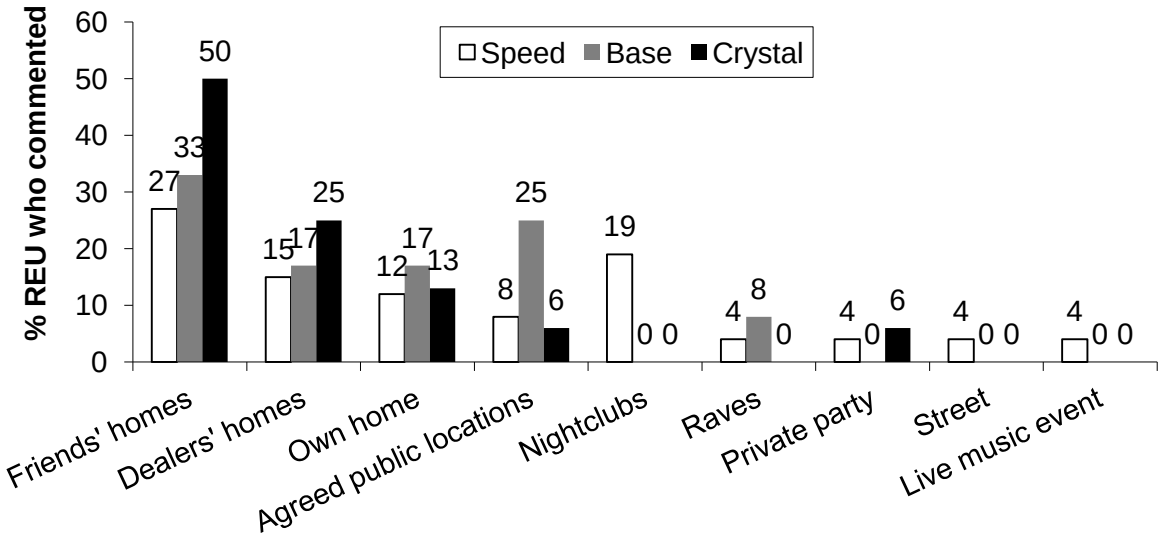
**Figure 41: People from whom methamphetamine was last purchased, NSW 2011[#]**




**Source: EDRS regular ecstasy user interviews 2011**
[#] Speed n=26; base n=12; crystal n=16

Figure 42 compares locations of last purchase across the three forms of methamphetamine. Base and crystal were most commonly purchased in private locations. Speed was the only methamphetamine which had been purchased in nightclubs and at live music events, perhaps suggesting a different pattern of use than for base and crystal.

**Figure 42: Locations at which methamphetamine was last purchased, NSW 2011[#]**




**Source: EDRS regular ecstasy user interviews 2011**
[#] Speed n=26; base n=12; crystal n=16

### Key expert comments

Few KE commented on the price, purity or availability of speed, base or ice. Most agreed that speed and crystal had become more difficult to access. KE reported that speed was currently of very low purity and quite cheap. A KE working in law enforcement reported that the purity of amphetamine tablets tended to be very low. They also reported that the average purity of speed seized and analysed in NSW has increased from 2009 onward and was approximately 30% in 2011.

## 5.3 Cocaine

Summary:

- *Price*: $300 per gram, stable.
- *Purity*: Variable although appears to have decreased.
- *Availability*: Currently easy to obtain, stable.
- Key experts had observed increases in cocaine importation from Mexico. Reduced presence of the adulterant Levamisole was also reported.

### 5.3.1 Price

Thirty-seven participants were able to comment on the price of cocaine. The median price per gram was $300 (range $80-1,000). This figure has remained stable for the past six years (Table 17).

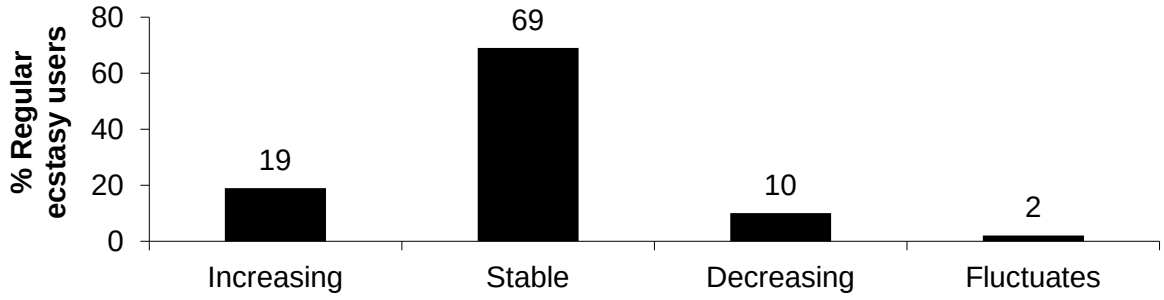
**Table 17: Price of cocaine purchased by REU, NSW 2005-2011**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | **2011** |
|---|---|---|---|---|---|---|---|
| Median price per gram ($) (range) | 270 (70-500) | 300 (100-300) | 300 (180-350) | 300 (250-400) | 300 (120-400) | 300 (200-450) | **300 (80-1,000)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

The majority (69%) of those who commented on the price of cocaine believed it had remained stable over the preceding six months (Figure 43).

**Figure 43: Recent changes in price of cocaine purchased by REU, NSW 2011**

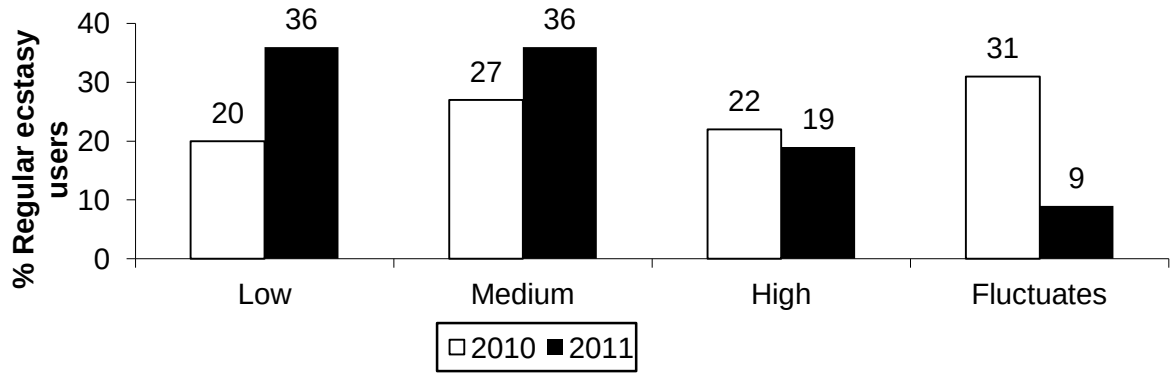



**Source: EDRS regular ecstasy user interviews 2011**

### 5.3.2 Purity

Forty-seven REU were able to comment on the purity of cocaine. The majority of respondents (72%) reported that cocaine was currently of 'low' or 'medium' purity although a substantial minority reported that it was 'high' (Figure 44). These data together suggest that the current purity of cocaine is variable.

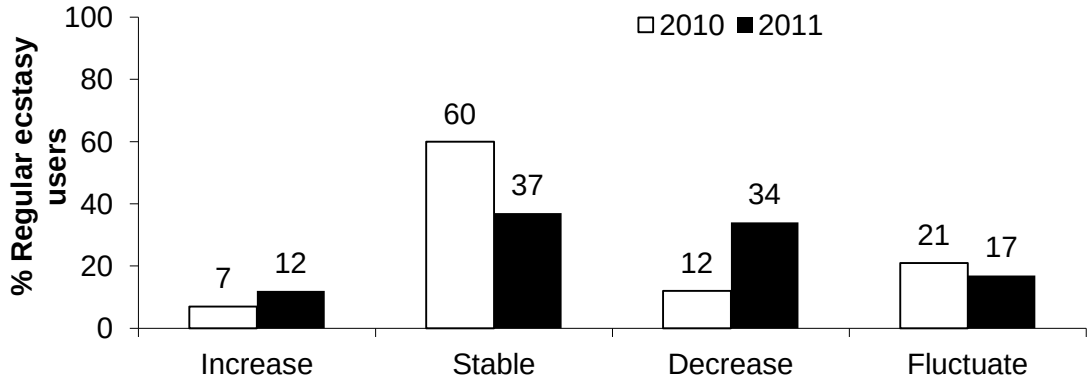
**Figure 44: User reports of current purity of cocaine, NSW 2010 & 2011**




**Source: EDRS regular ecstasy user interviews 2010 & 2011**
Note: Response option 'don't know' was removed

From 2010 to 2011 there was a 23% drop in the percentage of respondents indicating that the purity of cocaine had remained stable over the preceding six months. There was a concurrent increase in the proportions reporting that the purity of cocaine had decreased from 12% in 2010 to 34% in 2011 (Figure 45).

**Figure 45: User reports of changes in cocaine purity in the past six months, NSW 2010 & 2011**



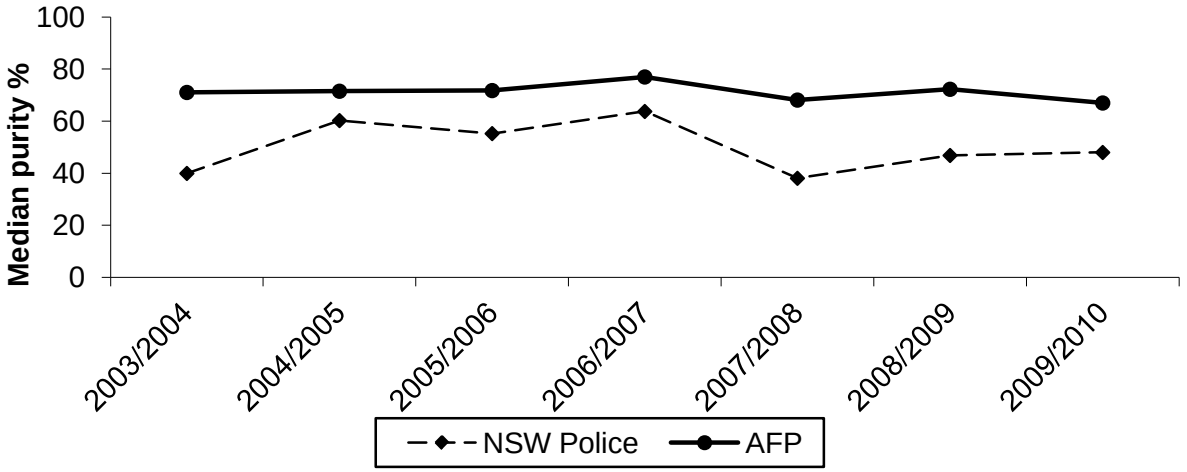

**Source: EDRS regular ecstasy user interviews 2010 & 2011**

Note: Response option 'don't know' was removed

Figure 46 presents data on the purity of cocaine seizures analysed in NSW by the AFP and NSW Police between July 2003 and June 2010. 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.

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.

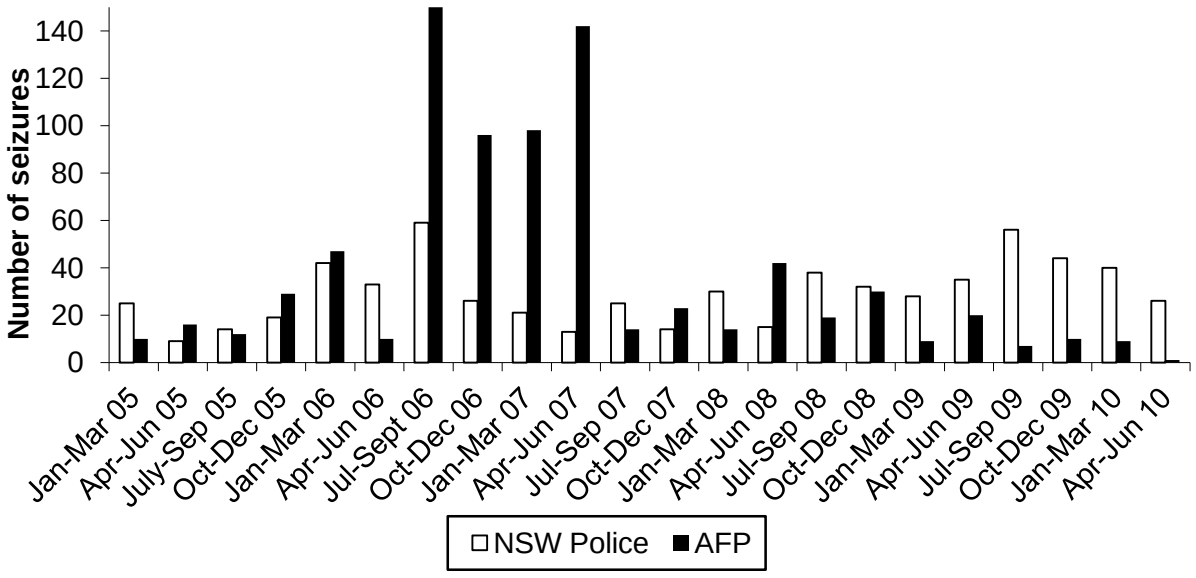
**Figure 46: Purity of cocaine seizures analysed in NSW, 2003/04-2009/10**




**Source: Australian Crime Commission (2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011)**
NB: Data for 2010/11 were unavailable at time of publication

Figure 47 shows the number of seizures analysed in NSW between January 2005 and June 2010. The number of seizures made by the NSW Police peaked in mid-to-late 2009 then returned to levels observed earlier. The number of seizures analysed by the AFP was more variable.

**Figure 47: Number of cocaine seizures analysed in NSW, by quarter, 2005-2010**



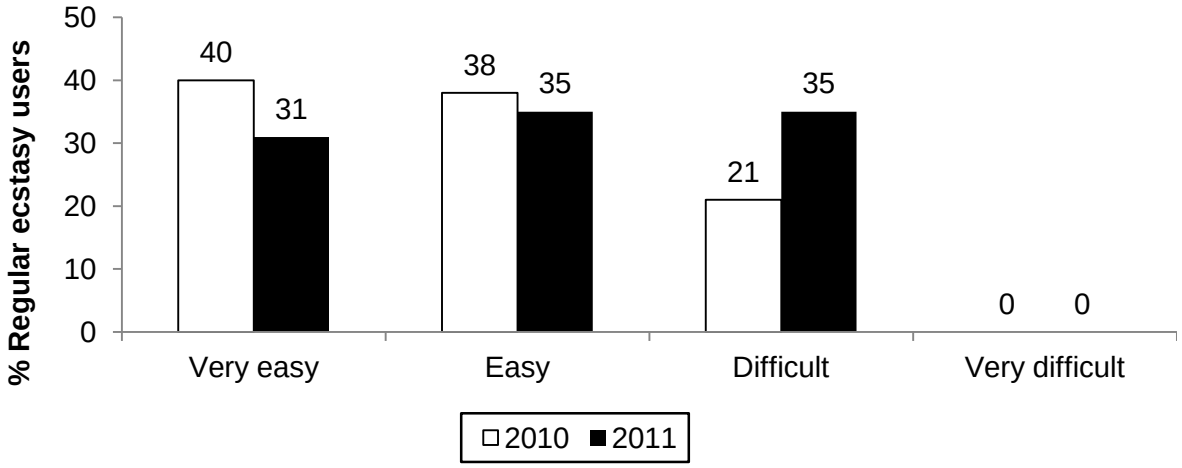

**Source: Australian Crime Commission (2006, 2007, 2008, 2009, 2010, 2011)**
NB: Data for 2010/11 were unavailable at time of publication

### 5.3.3 Availability

Forty-nine participants were able to comment on the availability of cocaine. Of these, the majority (65%) believed cocaine was currently either 'easy' or 'very easy' to obtain. However, one-third (35%) reported that it was currently 'difficult' to obtain. These figures have

remained comparable with those from 2010, aside from a significant increase in the proportions reporting that cocaine was difficult to obtain from 21% to 35% (Figure 48).

**Figure 48: Current availability of cocaine, NSW 2010-2011**

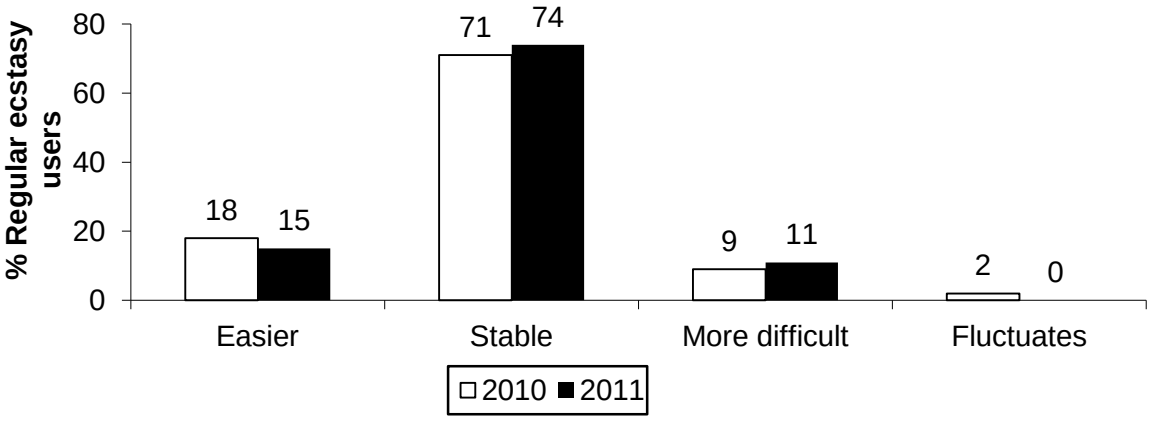



**Source: EDRS regular ecstasy user interviews 2010 & 2011**

Note: Response option 'don't know' was removed

Three-quarters of those who commented stated that the availability of cocaine had remained stable over the preceding six months (Figure 49). This figure was similar to that reported in 2010.

**Figure 49: Changes to the availability of cocaine in the preceding six months, NSW 2010 & 2011**




**Source: EDRS regular ecstasy user interviews 2010 & 2011**
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=49), the majority had purchased it from a friend (61%) or a known dealer (25%). The most common location of last purchase was at a friend's home (27%) followed by an agreed public location (14%), at their own home (12%) and at a dealer's home (10%). Smaller proportions purchased cocaine at other varied locations.

**Key expert comments**

Four key experts were able to comment on cocaine price, purity and availability. Law KE were concerned that there may be an increase in the availability of cocaine in Australia due to possible increases in importation from Mexican cartels. KE observed that given the current economic climate, Australia could be seen as a ripe market for cocaine distribution, which may explain observed increases in transport of cocaine from Mexico. One KE explained that areas with high cocaine availability also tended to experience high levels of cocaine-related violence and criminality; a concern from a law enforcement and public safety perspective.

Last year, the adulterant Levamisole had been detected in many cocaine samples examined via toxicological analysis. It was encouraging to hear from law KE that the presence of Levamisole in cocaine appeared to be less common this year. Another law KE reported that the average purity of cocaine had been traditionally high (over 40%) but that this had been declining in 2010 (38%) and 2011 (36%).

## 5.4 Ketamine


Summary:

- *Price*: $150 per gram, stable.
- *Purity*: Currently high and stable.
- *Availability*: Reports variable.
- Key experts reported that the availability of ketamine was low and it was uncommonly seen.


### 5.4.1 Price

The reported price of ketamine has remained stable for the past five 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 2011, there was one report of ketamine purchased by the point at $20, and another of ketamine purchased by the pull at $25.

Of the fifteen REU who commented, 47% reported that the price of ketamine had remained stable over the preceding six months while one-third (33%) believed it had increased.

**Table 18: Price of ketamine purchased by REU, NSW 2005-2011**

| Median Price ($) | 2005 (n=44) | 2006 (n=7) | 2007 (n=15) | 2008 (n=13) | 2009 (n=6) | 2010 (n=7) | **2011 (n=14)** |
|---|---|---|---|---|---|---|---|
| Gram (range) | 100 (20-300) | 175 (80-200) | 150 (50-280) | 150 (40-250) | 150 (140-170) | 150 (100-280) | **150 (50-200)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

### 5.4.2 Purity

Twenty participants were able to comment on the purity of ketamine. Most of these (60%) reported that ketamine was currently of 'high' purity, although one-third (35%) reported that it was currently of 'medium' purity. While 50% of respondents stated that the purity of ketamine had remained stable over the preceding six months, 31% reported that it had increased and 13 reported that it had been fluctuating.

### 5.4.3 Availability

Twenty participants commented on the availability of ketamine. There was little consensus about the current availability of ketamine with similar proportions reporting that it was currently 'easy' or 'very easy' to obtain (55%), and that it was currently 'difficult' to obtain (45%). When asked about changes in the availability of ketamine over the preceding six months, half (50%) of the group stated that it had been stable, although similar proportions reported that it had become easier (22%) and more difficult (28%) to obtain.

*Source person and source location*

The majority of those who commented (64%) reported that on the last occasion they had purchased ketamine from a friend, although one-fifth (23%) had last bought it from a known

dealer. In keeping with this, 36% reported that they had last purchased ketamine at a friend's home or their dealer's home (18%). Although, one-fifth (23%) reported having last purchased ketamine at a nightclub.

**Key expert comments**

Few KE were able to comment on ketamine. They generally agreed that the availability had been low recently. One KE reported that they had 'not seen it in a few years'. Although a KE working with the GLBT community reported that it was not unusual to see ketamine used at festivals especially to enhance the high from ecstasy.

## 5.5 GHB


Summary:

- *Price*: $10 per mL, stable.
- *Purity*: Reports variable.
- *Availability*: Currently difficult to obtain, stable.
- Key expert comments indicated that GHB purity was currently poor and that it was difficult to access.


### 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 2011, nine participants commented on the price of GHB. The median price of 1mL was $10 (range, $0-10). This is consistent with the price recorded in 2010 ($10 per mL (range $8-12)). Two participants reported purchasing 2mL for $25. Anecdotally, participants often commented that a 'fish' of GHB usually contains 2mL and this was a very common quantity purchased. The vast majority (78%) reported that the price of GHB had remained stable although 22% reported that it had increased. 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

Eleven participants were able to comment on the purity of GHB. There was little consensus between respondents with 9% reporting that it was currently low, 18% that it was medium, 36% that it was high and 36% that it was fluctuating. When asked about changes to the purity of GHB over the preceding six months, 55% reported that it had remained stable while 18% respectively reported that it had decreased and that it was fluctuating. One participant reported that the purity of GHB had been increasing.

### 5.5.3 Availability

Twelve participants were able to comment on the availability of GHB. The majority (58%) reported that GHB was currently either difficult or very difficult to obtain, although one-quarter reported that it was easy to obtain and 17% said it was very easy to obtain. More than half (55%) the group said that the availability of GHB had remained stable, while one-third stated that it had become more difficult to obtain.

*Source person and source location*

GHB had been most commonly last purchased from friends (46%), dealers (18% known and unknown respectively) or acquaintances (18%) at a friend's home (36%), a nightclub (27%) or the dealer's home (18%).

**Key expert comments**

Few KE were able to comment on GHB. One KE commented that there had been 'a bad batch' circulating toward mid-2011. Another KE had heard reports from several people that GHB was currently difficult to access.

## 5.6 LSD

**Summary:**

- *Price*: $20 per tab, stable.
- *Purity*: Currently high, stable.
- *Availability*: Currently easy to obtain, stable.
- Key experts reported that the purity of LSD was variable and that it tended to be imported rather than manufactured in Australia.

### 5.6.1 Price

Thirty-four participants reported on the price of LSD (Table 19). The median price last paid for a tab of LSD was $20 (range $6-30). The majority of those who commented (67%) reported that the price had remained stable over the preceding six months; however, one-quarter 24% reported that it had increased, 3% reported that it had decreased, and 6% reported that it had fluctuated.

**Table 19: Price of LSD purchased by REU, NSW 2005-2011**

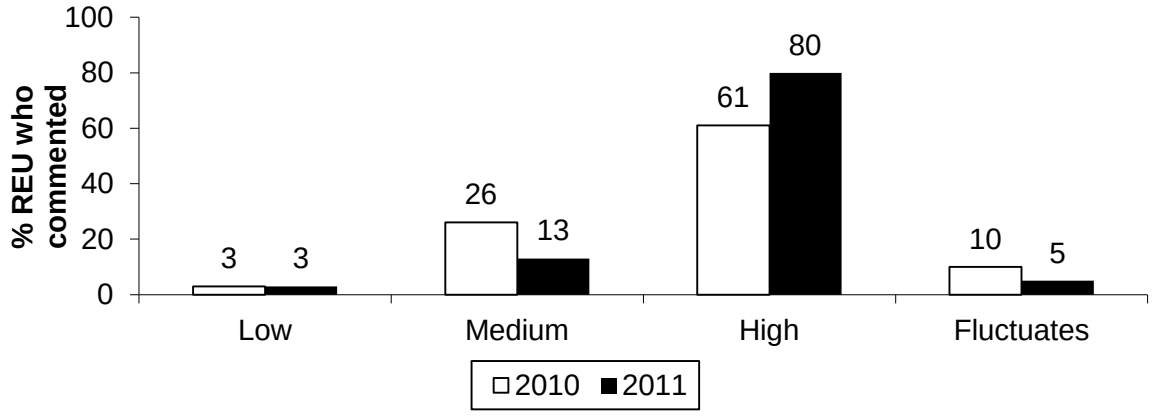
| Median price ($) | 2005 (n=38) | 2006 (n=27) | 2007 (n=34) | 2008 (n=12) | 2009 (n=30) | 2010 (n=31) | **2011 (n=34)** |
|---|---|---|---|---|---|---|---|
| Tab (range) | 20 (5-40) | 20 (10-70) | 15 (10-25) | 15 (10-50) | 20 (10-40) | 20 (2-30) | **20 (6-30)** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

### 5.6.2 Purity

Thirty-nine participants commented on the purity of LSD. Of these, the vast majority (80%) reported that LSD was currently of 'high' purity (Figure 50) and that it had remained stable (71%) over the past six months.

**Figure 50: Current purity of LSD, NSW 2010 & 2011**



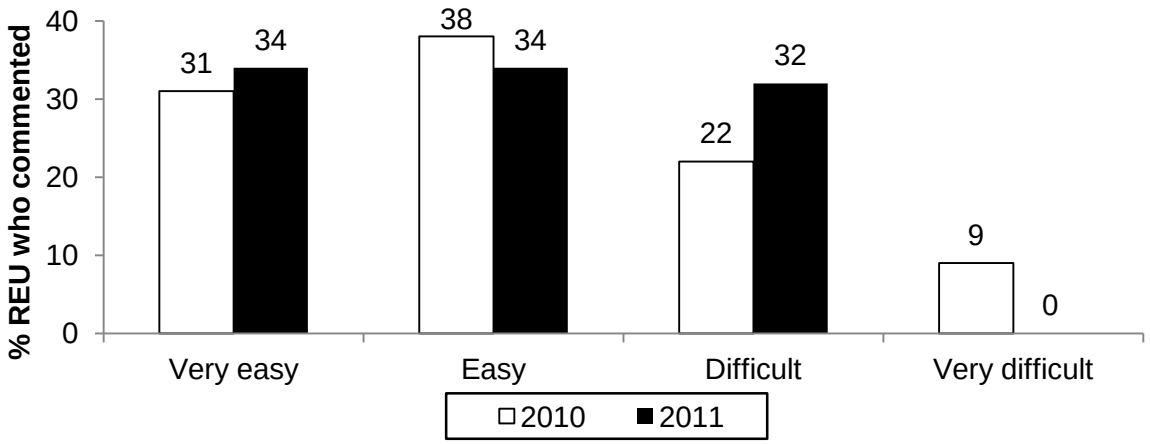

**Source: EDRS regular ecstasy user interviews 2010 & 2011**

Note: Response option 'don't know' was removed

### 5.6.3 Availability

Thirty-eight participants commented on the availability of LSD. The majority of respondents (68%) believed that LSD was currently 'easy' or 'very easy' to obtain, in keeping with data from 2010 (Figure 51). The majority of those who commented reported that the availability of LSD had remained stable (60%) and one-fifth (22%) reported that it had become easier to obtain. Smaller proportions reported that it had become more difficult (16%) to obtain or that the availability fluctuated (3%).

**Figure 51: Current availability of LSD, NSW 2010 & 2011**




**Source: EDRS regular ecstasy user interviews 2010 & 2011**
Note: Response option 'don't know' was removed

*Source person and source location*

LSD was most commonly purchased from friends (58%) or known dealers (33%) and most commonly at a friend's home (30%), a dealer's home (20%), at an agreed public location (18%) or at the participant's own home (10%).

**Key expert comments**

Few KE were able to comment on LSD price, purity and availability. One KE noted that seizures of LSD tend to be small and usually incidental to other operations. However, another law KE reported that there had been a few very significant seizures of LSD in 2010/2011 of varying purity. One KE commented that LSD is relatively affordable compared with other drugs and for this reason, more likely to be used by groups such as young people, with limited means.

A law KE reported that it was very uncommon to hear of LSD manufacture in Australia and said LSD was mainly imported from the Netherlands.

## 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 2011, 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; $300 per ounce, stable.
- *Potency*: Currently high, stable.
- *Availability*: Currently very easy to obtain, stable.

*Bush*
- *Price*: $20 per gram; $290 per ounce, stable.
- *Potency*: Currently medium, stable.
- *Availability*: Reports variable.

- Key experts agreed that cannabis use continues to be widespread.

### 5.7.1 Price

Table 20 presents the reported price for one ounce and one gram of hydro and bush cannabis[17]. 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 stable from 2010 to 2011 while the price per ounce of bush appears to be increasing over time (Table 20).

**Table 20: Median price per ounce and gram of bush and hydroponic cannabis, NSW 2008-2011**

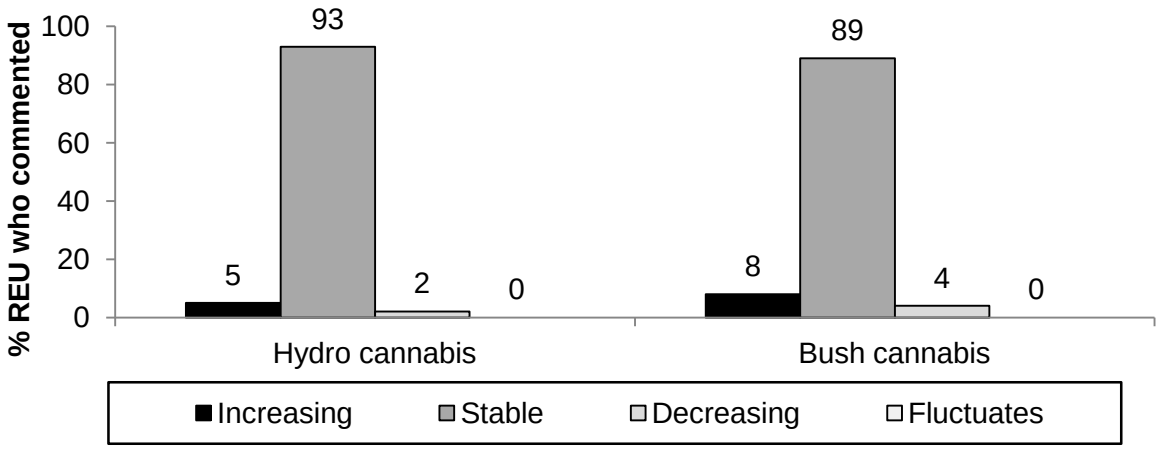
| **Median price cannabis ($)** | 2008 | 2009 | 2010 | **2011** |
|---|---|---|---|---|
| **Price ($) hydro (range)** | | | | |
| Per ounce | 300 (90-350)^ | 295 (100-350) | 300 (150-450) | 300 (230-400) |
| Per gram | 20 (20-110) ^ | 20 10-25) | 20 (20) | 20 (10-20) |
| **Price ($) bush (range)** | | | | |
| Per ounce | - | 200 (150-300)^ | 235 (150-300)^ | 290 (200-300)^ |
| Per gram | 20 (20-110) ^ | 20 (7.5-20) | 20 (5-25) | 20 (10-20) |

**Source: EDRS interviews 2008-2010**
^ Small numbers reporting (n<10)

[17] Data regarding the price of hash or hash oil in 2010 is not presented here due to small numbers reporting.

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 (92%) and bush (89%) (Figure 52).

**Figure 52: Price change of bush and hydroponic cannabis*, NSW 2011**

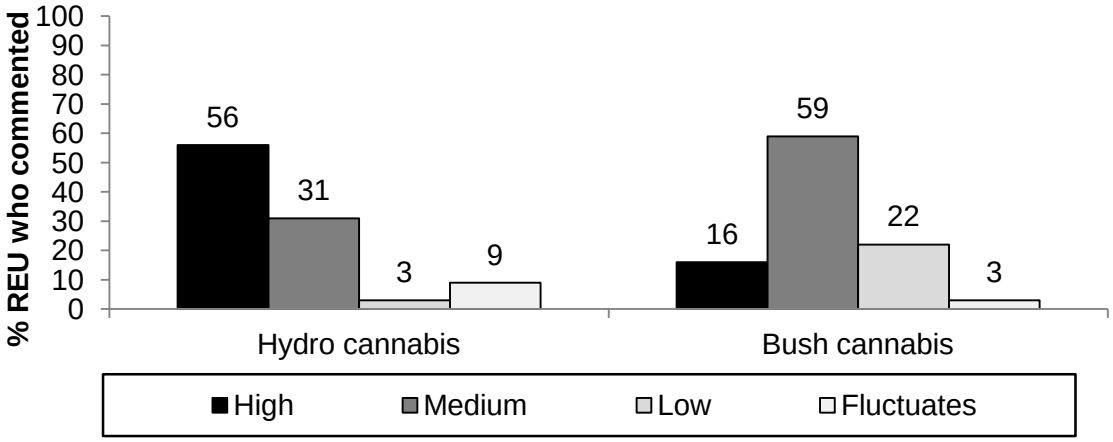



**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=26 for bush, n=60 for hydro); Don't know responses removed

### 5.7.2 Potency

Figure 53 presents participants' perceptions of the current potency of hydro and bush cannabis. The majority of those who commented reported that hydro was currently of 'high' potency and that bush was currently of 'medium' potency. This is consistent with the data from 2010.

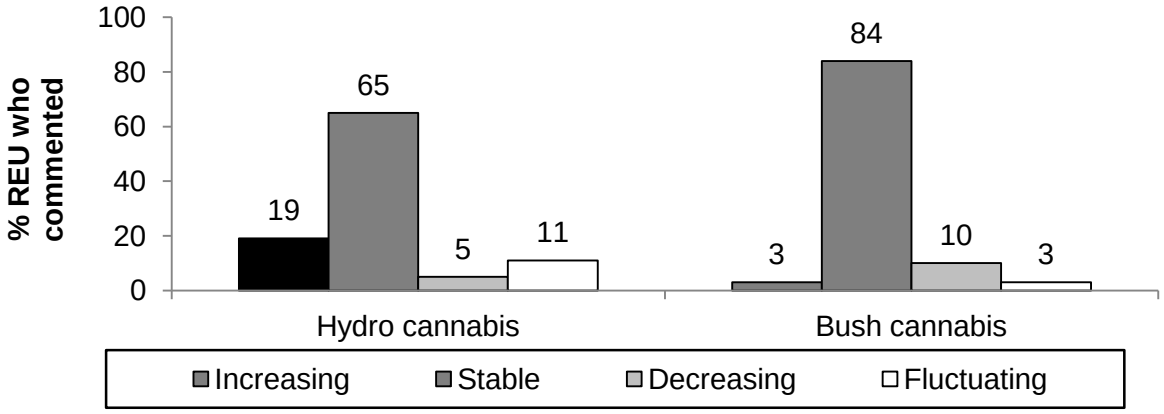
**Figure 53: Current potency of bush and hydroponic cannabis*, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=32 for bush, n=64 for hydro)

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 of bush had remained relatively stable over this time (Figure 54).

**Figure 54: Change in potency of bush and hydroponic cannabis over the last six months*, NSW 2011**

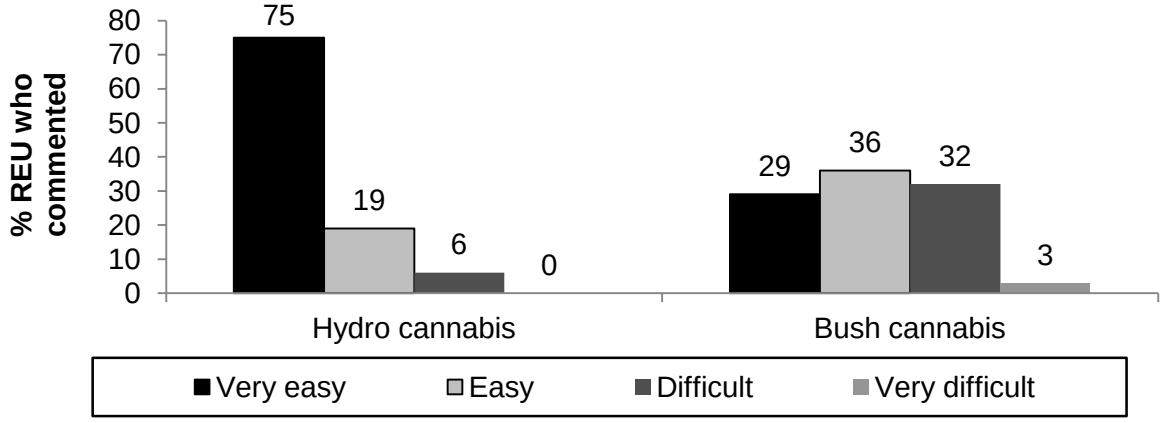



**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=31 for bush, n=62 for hydro)

### 5.7.3 Availability

Figure 55 presents data on the REU-reported current availability of bush and hydro. The majority of respondents believed that hydro was currently 'very easy' to obtain. There was less agreement about the current availability of bush with 65% reporting it was currently either 'easy' or 'very easy' to obtain and 32% reporting it was currently 'difficult' to obtain. Anecdotally, participants consistently reported that it was easier to access hydro than bush in the Sydney city area.

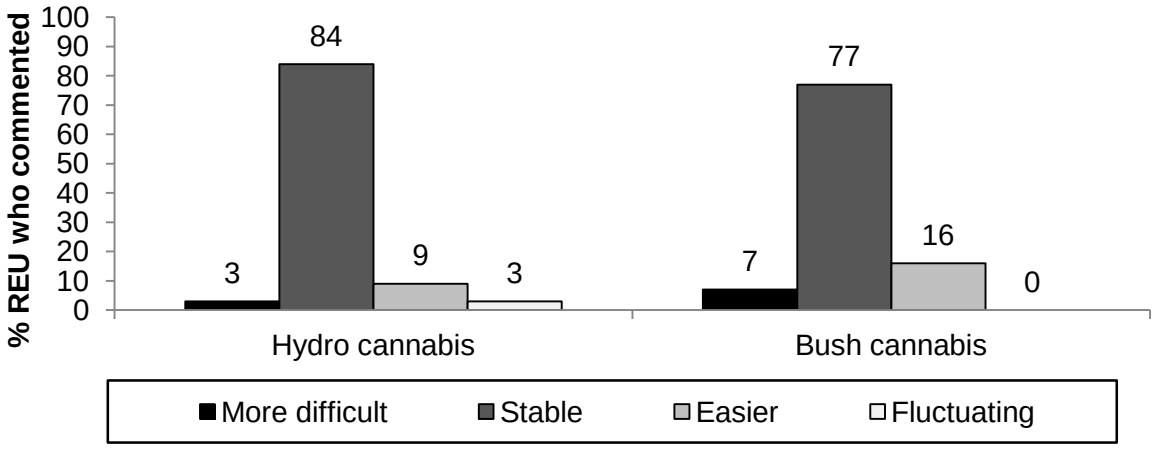
**Figure 55: Current availability of bush and hydroponic cannabis*, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=31 for bush, n=64 for hydro)

The majority of those who commented reported that the availability of both hydro and bush had remained stable over the preceding six months (Figure 56).

**Figure 56: Change in availability of bush and hydroponic cannabis over the last six months*, NSW 2011**

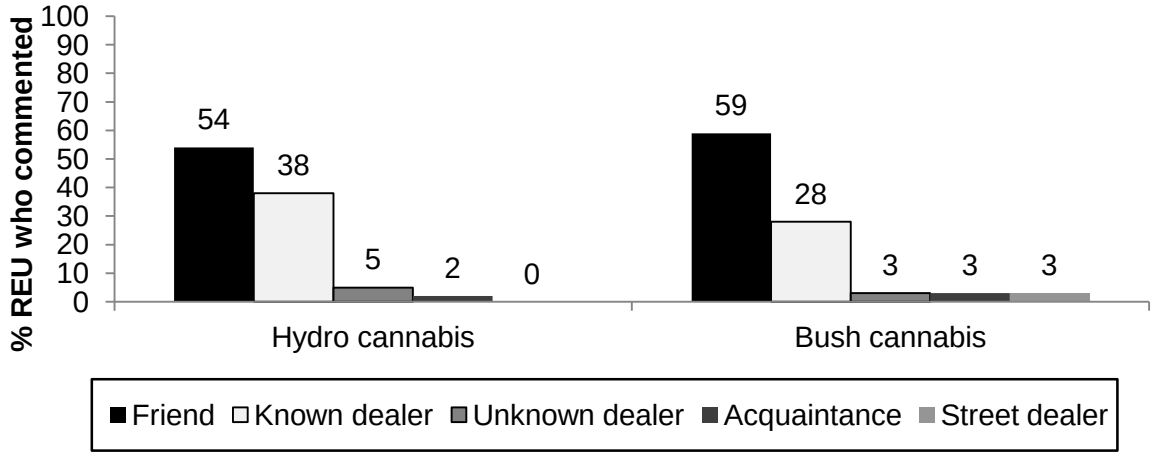



**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=31 for bush, n=64 for hydro)

*Source person and source location*

REU were asked to comment on purchasing cannabis over the six months prior to the interview. Both hydro and bush were most commonly purchased from friends; however, sizeable minorities purchased hydro (38%) and bush (28%) from a known dealer (Figure 57).

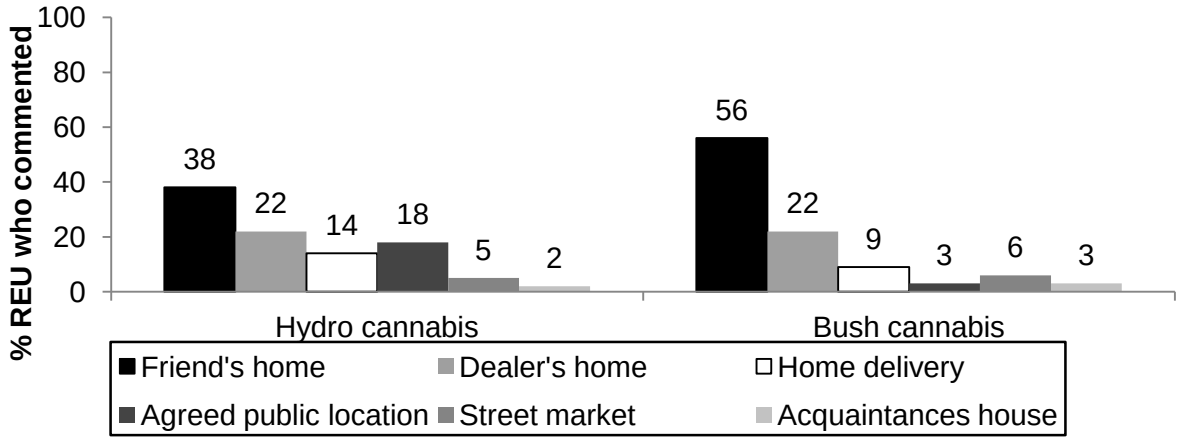
**Figure 57: Source person last time purchased bush or hydroponic cannabis *, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=32 for bush, n=63 for hydro)

Both forms of cannabis were most commonly purchased at a friend's home, however, respondents also often had it delivered to their home or bought it at an agreed public location (Figure 58).

**Figure 58: Source location last time purchased bush or hydroponic cannabis*, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**
* Of those who commented (n=32 for bush, n=63 for hydro)

### Key expert comments

KE generally agreed that cannabis use continued to be very widespread in Sydney. A law KE commented that cannabis continued to be the most common drug seized and analysed in NSW. One KE reported that cannabis is very easily accessible and cheap and tends to be commonly used among areas of the city with high proportions of people from low-income backgrounds.

# 6 HEALTH-RELATED TRENDS ASSOCIATED WITH ECSTASY AND RELATED DRUG (ERD) USE


Summary:

*Overdose, Deaths and Hospital Admissions*

- One-third of participants reported having overdosed on a stimulant drug throughout their lifetime.
- One-quarter reported having ever overdosed on a depressant drug.
- Deaths associated with ecstasy, ketamine and GHB have remained stable in the past year. Increases were observed in deaths associated with methamphetamines in 2010/11.
- Hospital admissions in which amphetamine was the principal diagnosis appear to have declined in NSW; those for cocaine have remained low and stable nationally while those where cannabis was the principal diagnosis appear to be increasing gradually.

*Service Usage*

- One-quarter of the group reported that they had recently accessed a medical or health service in relation to their drug use.
- Calls to ADIS and FDS regarding ecstasy and amphetamines appear to have declined from early-2007 onward. Calls regarding cocaine, ketamine, GHB and LSD have remained relatively stable from 2010 to 2011.

*Mental Health*

- Participants commonly reported that their drug use caused repeated social problems (36%), resulted in exposure to risk of injury (40%) and/or interfered with responsibilities (43%). Recurrent drug-related legal problems were uncommon (5%).
- One-quarter of the group had recently experienced a mental health problem. Mood and anxiety disorders were those most commonly reported.
- Participants completed the K10. One-quarter 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 or panic, hallucinations) 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 (31%) of participants reported having overdosed on a stimulant drug throughout their lifetime. Participants reported having experienced a median of 2 overdoses (range 1-20), and that their last overdose had occurred a median of 6 months ago (range 1-168). Just under one-quarter (24%) of participants reported having overdosed on a stimulant drug within the preceding 12 months. Among these, the most common location of last overdose was at a nightclub, followed by at a private party or at a rave/doof/dance party or live music event. Overall, stimulant overdoses occurred more often in public (71%) rather than private (29%) locations. However, on more than half of these occasions (58%) participants did not have a sober person present to assist them.

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 by far the drug most commonly reported to have caused the overdose (67%) followed by speed and cocaine (8% respectively). Three-quarters of those who had recently experienced a stimulant overdose had been using multiple drugs on that occasion. The most common additional drug used was alcohol (n=16), followed by cannabis (n=7) and tobacco (n=4).

Amongst those who overdosed within the preceding year, the most common symptoms reported included vomiting, extreme anxiety, delirium/confusion (n=6 respectively), dizziness, nausea (n=5 respectively), tremors, increased body temperature, increased heart rate, paranoia (n=4 respectively) and visual hallucinations (n=3). Approximately half (46%) of those who had recently overdosed on a stimulant drug did not receive any treatment. The majority of the remainder were watched or monitored by their friends (48%) and one person went to a first aid tent and a hospital emergency department respectively. Only one participant reported seeking information about stimulant overdose or treatment after their most recent stimulant overdose.

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 (range 0-120). Most respondents reported that the overdose had occurred on a heavy session (71%) rather than on a normal night out (29%).

### 6.1.2 Depressant overdose

One quarter (24%) 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 3 occasions (range 1-48) with the most recent having occurred a median of 6 months prior to the interview (range 1-240). Seventeen participants reported having overdosed on a depressant drug within the year preceding the interview.

Alcohol was the drug that participants identified most often as the main drug to which they attributed their most recent depressant overdose. Smaller proportions reported having overdosed on opiates other than heroin (12%), benzodiazepines (12%), heroin (6%) and GHB (6%). In contrast to those who recently experienced a stimulant overdose, the majority 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 was alcohol (n=3), cannabis (n=2) and cocaine (n=1).

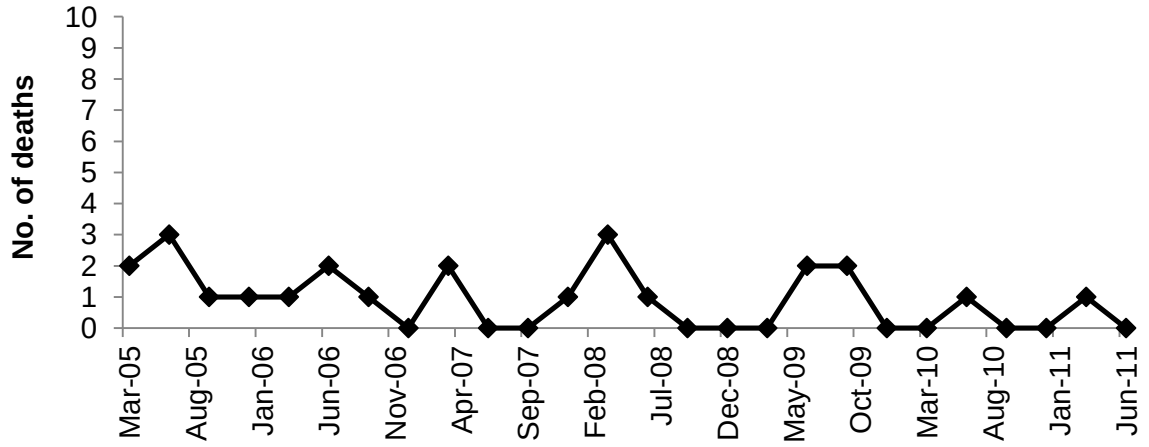
Participants were asked where they were on the last occasion of overdose within the past 12 months. The majority occurred in public locations such as a pub (18%), a public place (street/park) (18%) or a rave/doof/dance party (12%). However, a substantial proportion had experienced a depressant overdose in a private setting, most commonly at a friend's home (24%). Fortunately, the majority (77%) reported that there had been a sober person present at the time who was able to assist them.

The most commonly reported symptoms of a depressant overdose among this group were losing consciousness and vomiting. Half 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, four were monitored by friends, two were taken to a hospital emergency department, one received oxygen and one reported that an ambulance had attended. Only one participant sought information about drug overdose or treatment following their depressant overdose.

### 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 59). 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 59: Number of deaths of individuals suspected of drug use, in which MDMA was detected post-mortem, 2005-2011**

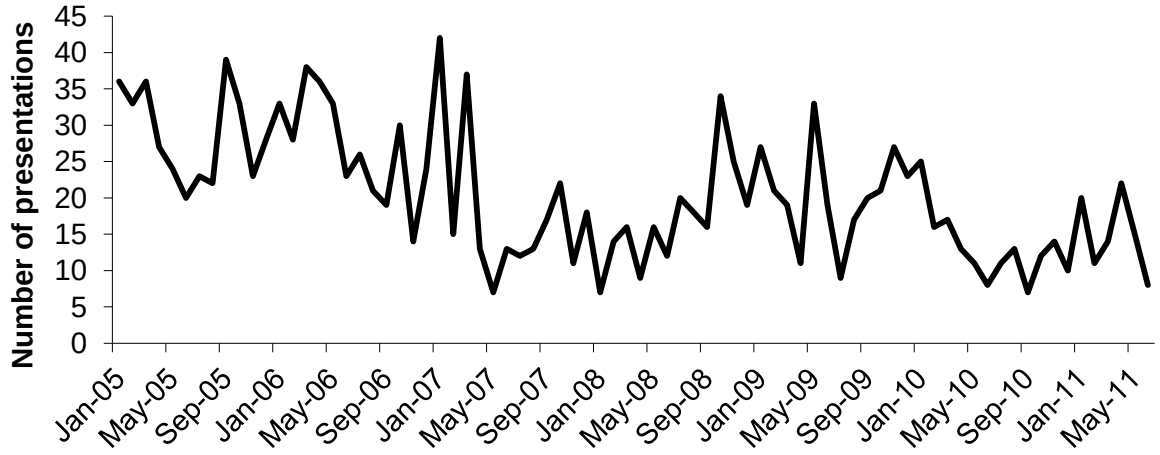



**Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories**
NB: These numbers relate to deaths in which ecstasy was detected; however, there may have also been other drugs present

### 6.1.4 Methamphetamine

While the total number of amphetamine overdose presentations to NSW emergency departments has fluctuated over time, there appears to be a generally declining trend over the past 10 years (Figure 60). The number of presentations appears to have remained relatively stable from 2010 to 2011.

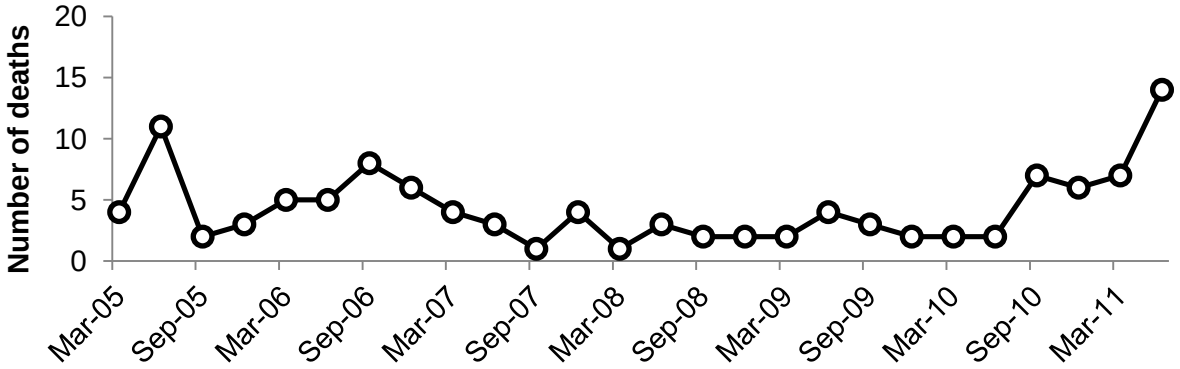
**Figure 60: Amphetamine overdose presentations to NSW emergency departments, 2005-2011.**




**Source: Emergency Department Information System, NSW Department of Health.**
NB: 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 substantially from late-2010 onward (Figure 61). 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.

**Figure 61: Number of deaths of individuals suspected of drug use, in which illicit amphetamines were detected post-mortem, 2005-2011**

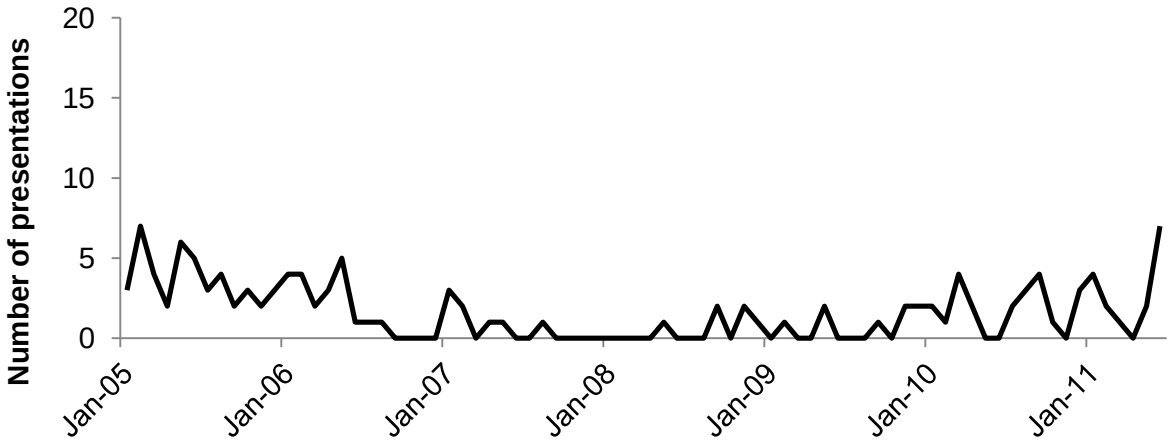



**Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories**
NB: These numbers relate to deaths in which amphetamines, including methamphetamine, were detected; however, there may have also been other drugs present

### 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 5 presentations per month and a total of 16 presentations for the first half of 2011 (Figure 62).

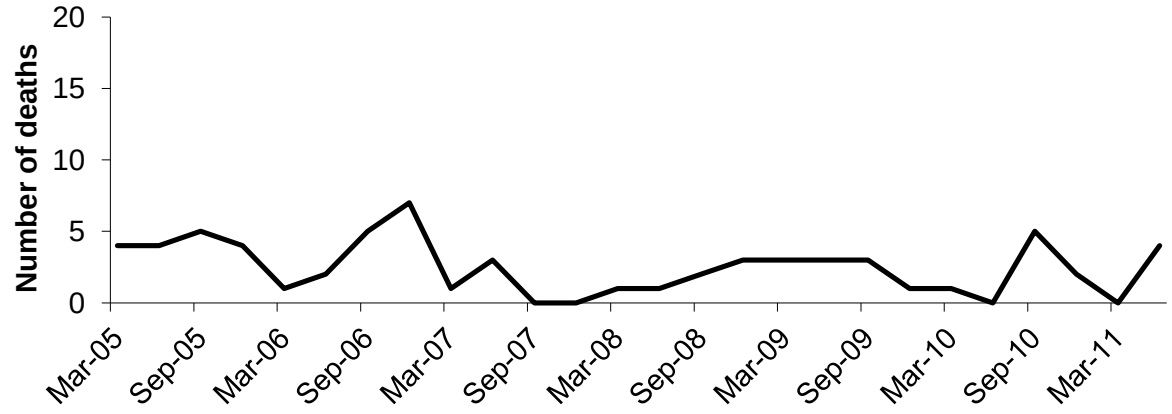
**Figure 62: Cocaine overdose presentations to NSW emergency departments, 2005-2011**




**Source: Emergency Department Information System, NSW Department of Health**
NB: Figures refer to overdose only and do not include presentations for use disorders

The number of deaths of suspected drug users where cocaine was detected post-mortem has fluctuated over time (Figure 63). A total of 11 cocaine related deaths were recorded between July 2010 and June 2011.

**Figure 63: Number of deaths of individuals suspected of drug use, in which cocaine was detected post-mortem, 2005-2011**




**Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories**
NB: 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 remained very low. Data from the Forensic Toxicology Laboratory Database at the Division of Analytical Laboratories showed that only 10 of these deaths had occurred between January 1999 and June 2010. There were no deaths during 2010/2011 where ketamine was detected.

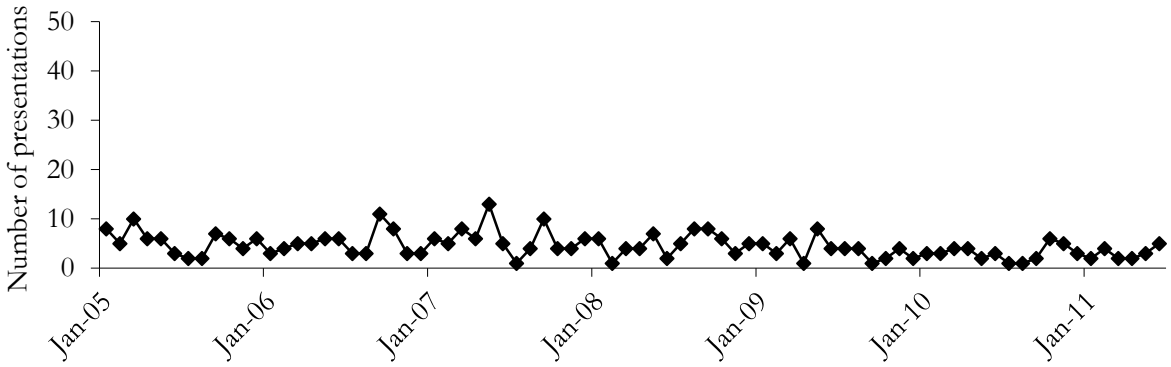
### 6.1.7 GHB

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 2010/2011 where GHB was detected.

### 6.1.8 Cannabis

The number of cannabis toxicity presentations to emergency departments have remained relatively low and stable, at 10 or less per month since 2008 (Figure 64).

**Figure 64: Cannabis toxicity presentations to NSW emergency departments, 2005-2011**

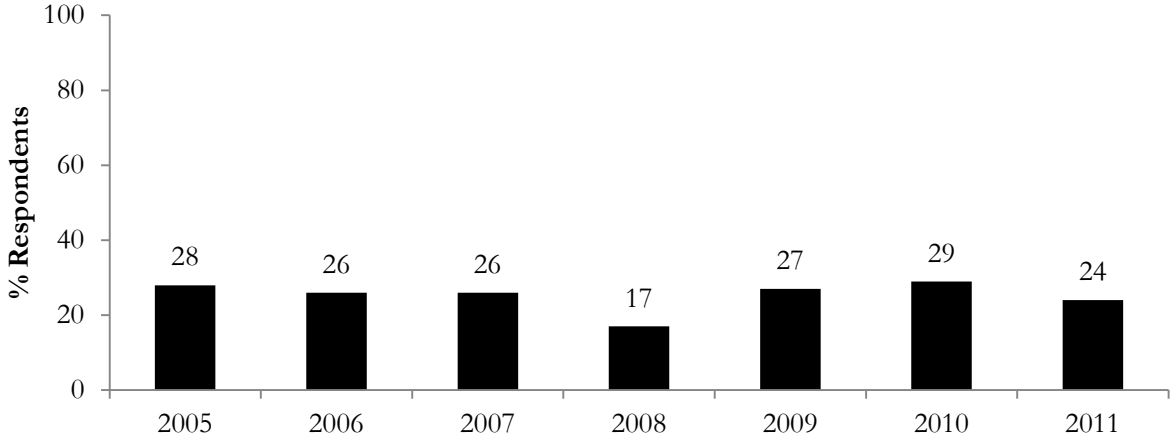



**Source: Emergency Department Information System, NSW Department of Health**
NB: Figures refer to overdose only and do not include presentations for use disorders

## 6.2 Help-seeking behaviour

Participants were asked if they had accessed any medical or health services in relation to their drug use in the last six months. One-quarter of REU (24%) interviewed in 2011 reported that they had done so. This figure has remained relatively stable over time (Figure 65).

**Figure 65: Proportion of REU who recently accessed a medical/health service in relation to drug use, NSW 2005-2011**




**Source: EDRS regular ecstasy user interviews, 2005-2011**

REU were asked what was the event or the situation which resulted in their seeking professional assistance. The most common group of concerns were ones regarding social and emotional wellbeing (including depression, anxiety, anger, social/relationship issues, etc.) for which 9% of the group sought assistance. The next most common issues were associated with dependence or cutting down on drug use for which 7% sought assistance. Five participants sought assistance regarding either acute or longer term physiological impacts of drug use and smaller proportions reported that they were seeking general information about drug use or had been required to attend for legal reasons.

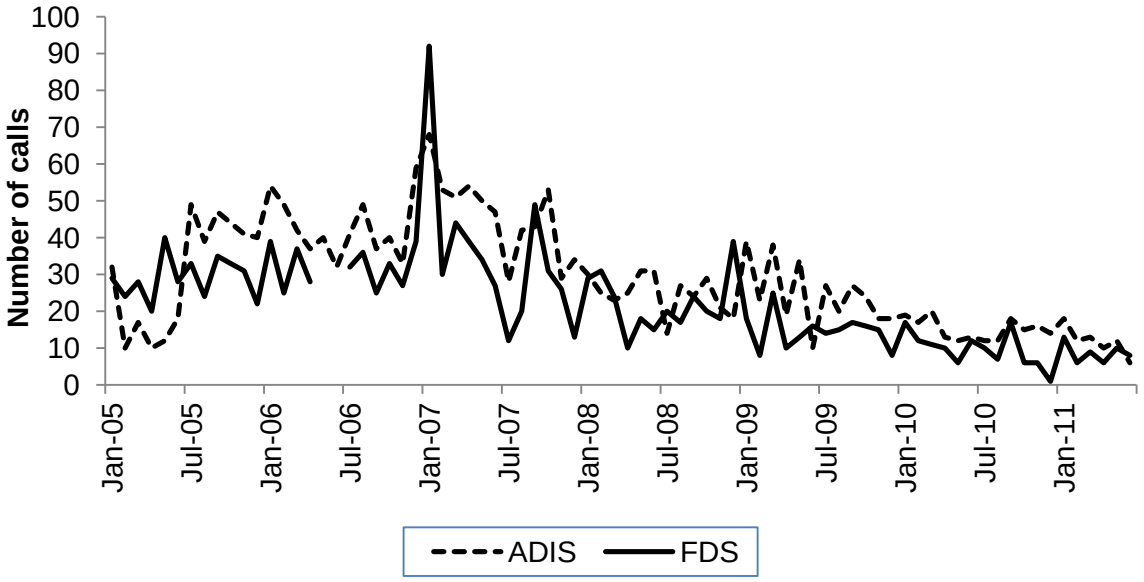
## 6.3 Drug treatment

### 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 referral. FDS data represent all calls in which ecstasy was mentioned.

Figure 66 shows the number of calls received by ADIS and FDS from January 2005. There appears to be a downward trend in calls relating to ecstasy to both services from early 2007 onward.

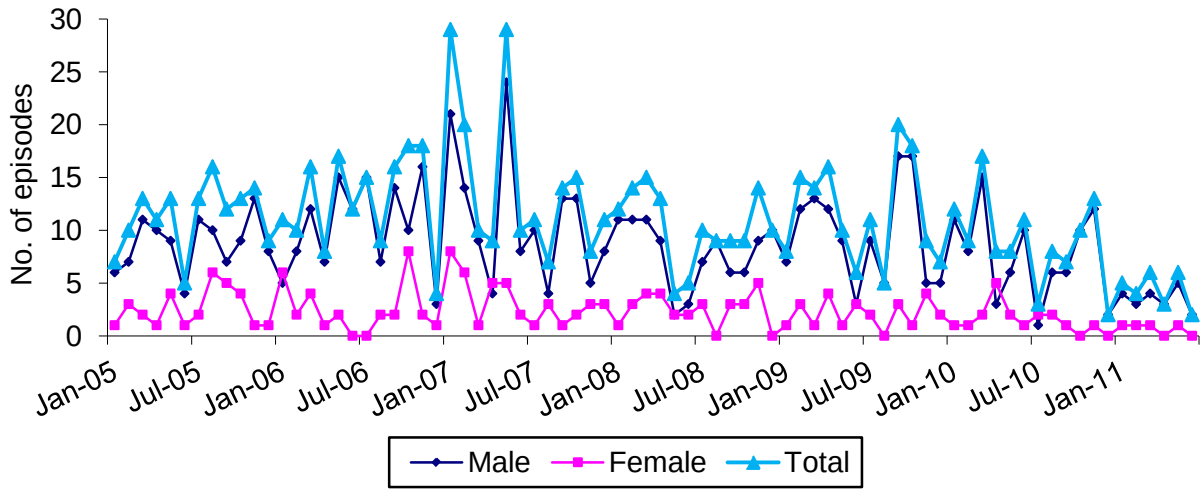
**Figure 66: Number of inquiries regarding ecstasy received by ADIS and FDS, January 2005-June 2011**




**Source: NSW Alcohol and Drug Information Service, NSW Family Drug Support**
NB: Family Drug Support data for May and June 2006 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 67). Men accounted for most of the treatment episodes.

**Figure 67: Number of ecstasy treatment episodes by gender, NSW January 2005-June 2011**



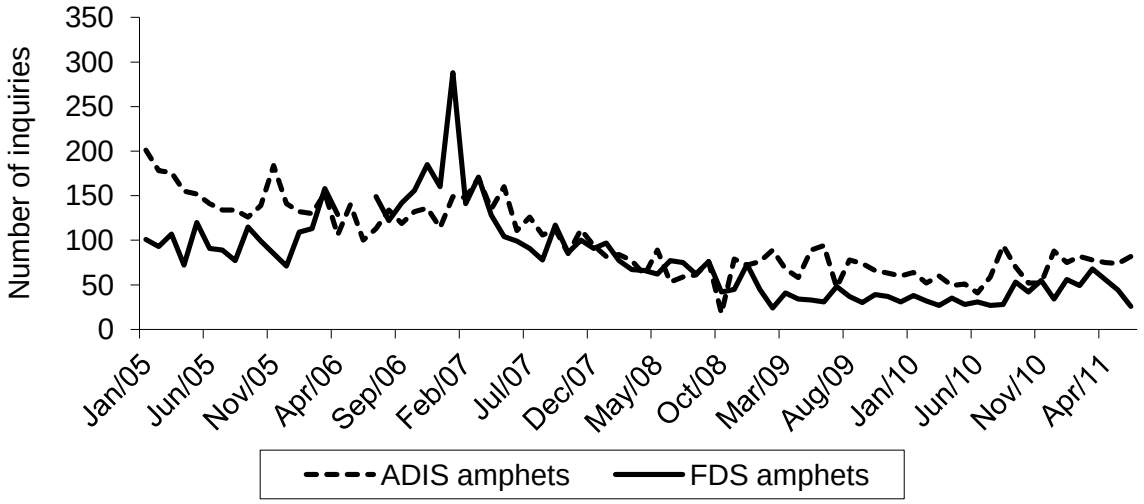

**Source: NSW MDS AODTS, NSW Department of Health**

NB: 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 68 shows the number of calls to the ADIS and FDS lines regarding methamphetamines. The number of enquiries to both ADIS and FDS has remained low over the past few years although there was some fluctuation in late-2010.

**Figure 68: Number of inquiries to ADIS and FDS regarding amphetamines, January 2005-June 2011**

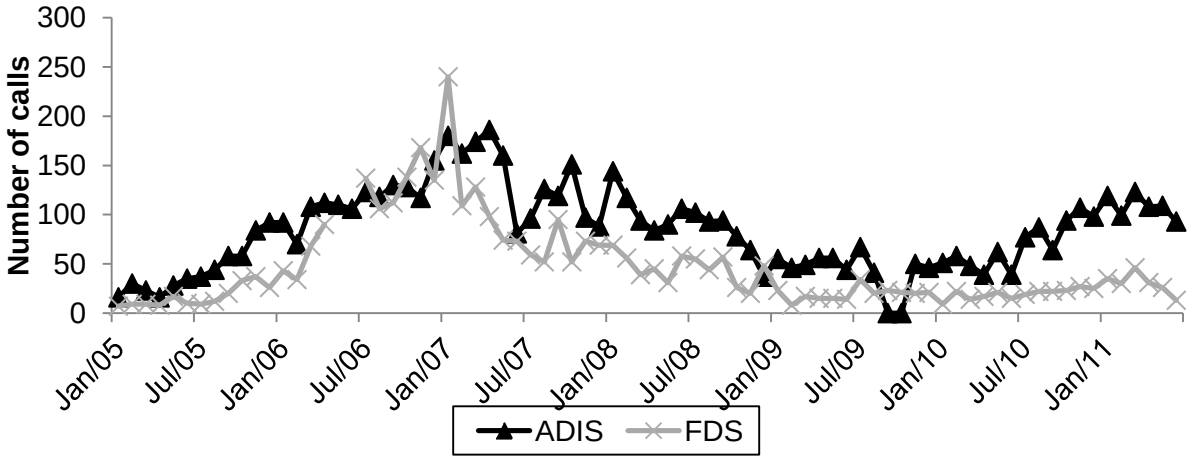



**Source: NSW Alcohol and Drug Information Service and Family Drug Support**

NB: Family Drug Support 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 were unavailable for the period May-June 2006

Figure 69 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 those to FDS have remained relatively stable.

**Figure 69: Number of enquiries to ADIS and FDS regarding ice/crystal alone, January 2005-June 2011**

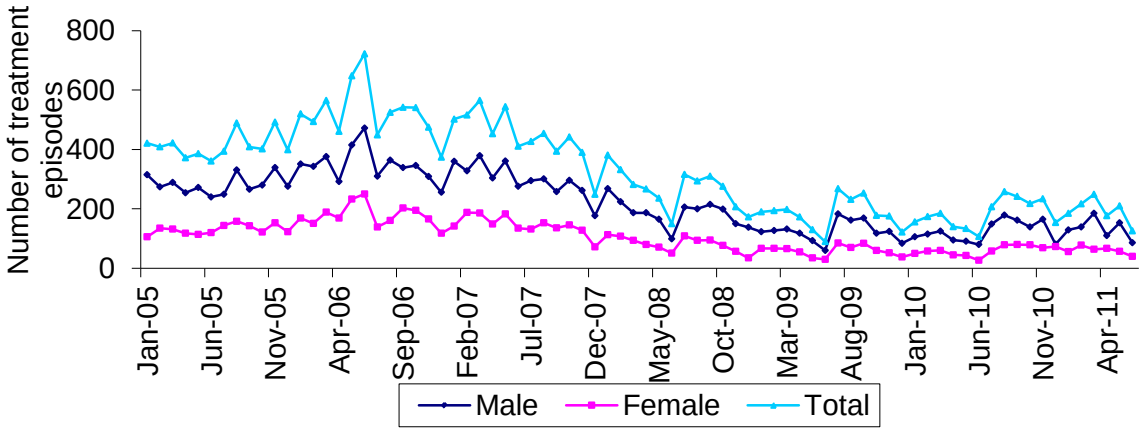



**Source: NSW Alcohol and Drug Information Service**

NB: 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. Data from FDS were unavailable for the period May-June 2006

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 71). Men continue to account for a greater proportion of this total compared to women.

**Figure 70: Number of ATS treatment episodes by gender, NSW January 2005-June 2011**



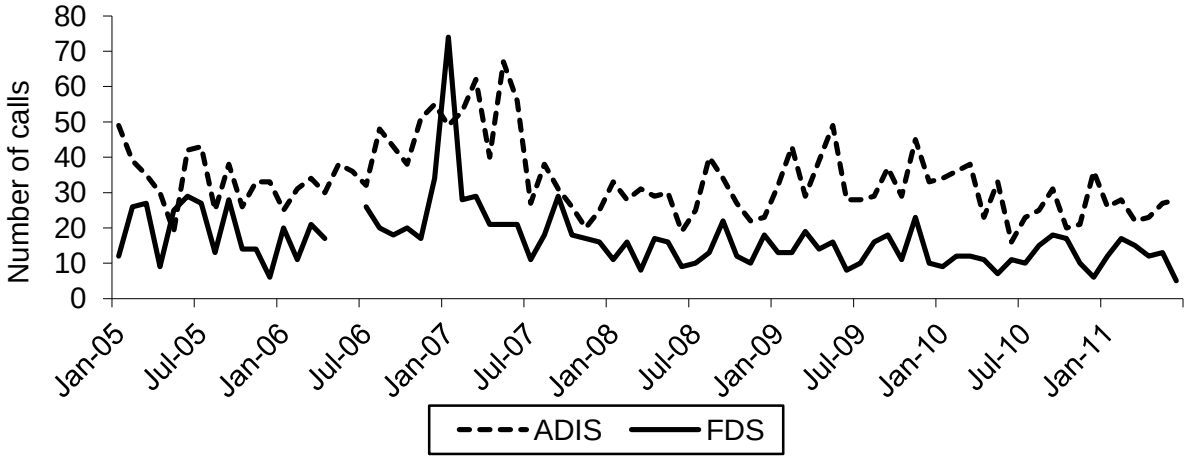

**Source: NSW MDS AODTS, NSW Department of Health**

NB: 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

### 6.3.3 Cocaine

Figure 72 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.

**Figure 71: Number of inquiries to ADIS and FDS regarding cocaine, January 2005-June 2011.**

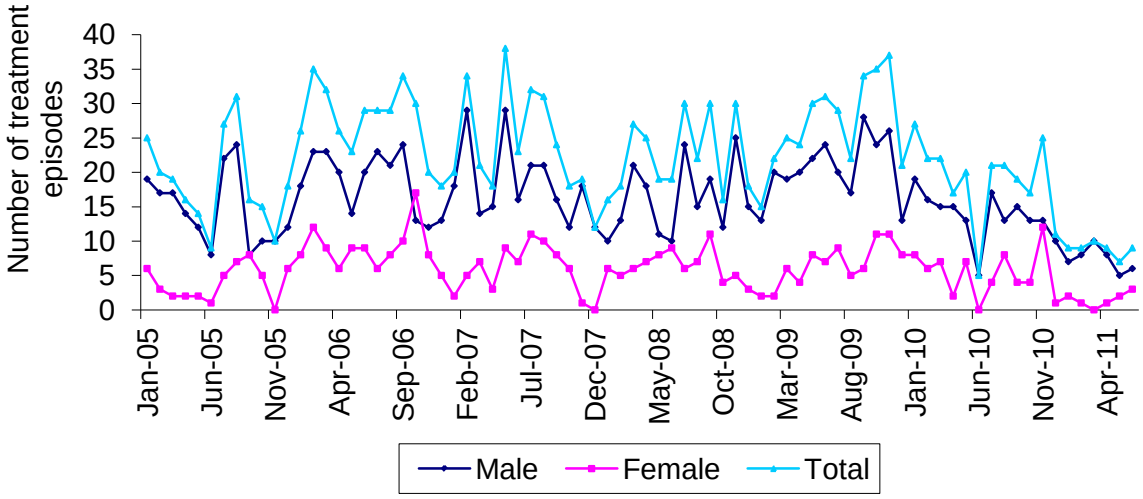



**Source: NSW Alcohol and Drug Information Service and Family Drug Support**

NB: 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 were unavailable for the period May to June 2006

The number of closed treatment episodes based on date of commencement where cocaine was the principal drug of concern appeared to decline from early 2010 to mid-2011 (Figure 73). Males continued to account for the majority of all treatment episodes.

**Figure 72: Number of cocaine treatment episodes by gender, NSW January 2005-June 2011**




**Source: NSW MDS AODTS, NSW Department of Health**

NB: 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

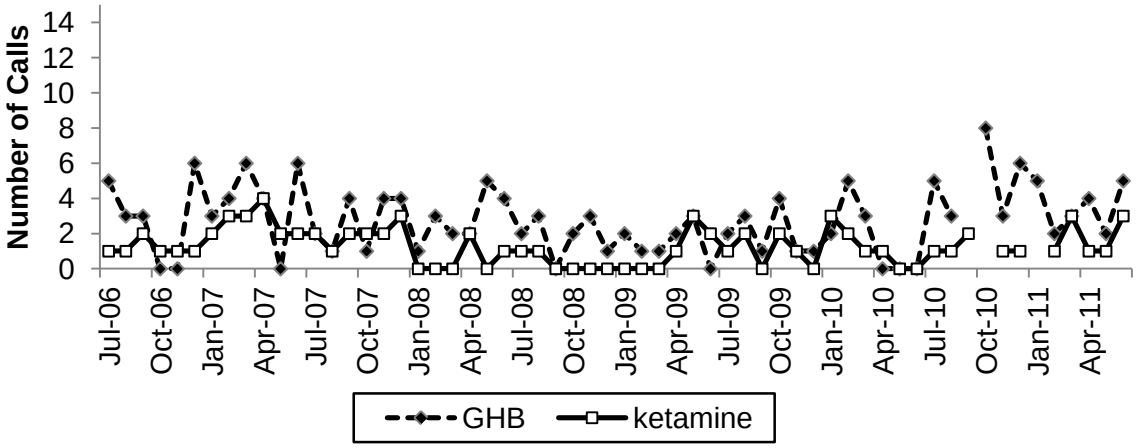
### 6.3.4 Ketamine

Treatment-seeking for problems with ketamine use is low compared to other drugs. Data from the NSW Minimum Dataset show during the period 2002-2011 there were seventeen 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 continues to be low at less than 5 calls per month (Figure 74).

**Figure 73: Number of inquiries to ADIS regarding ketamine and GHB, July 2006-June 2011**




**Source: NSW Alcohol and Drug Information Service**
NB: ADIS data include calls made in NSW and the Australian Capital Territory (ACT) and refer to the number of calls where ketamine or GHB was mentioned as any drug of concern

### 6.3.5 GHB

Data from the NSW Minimum Dataset show that during the period 2002-2011 there have been forty treatment episodes where GHB was the principal drug of concern (NSW MDS AODATS, NSW Department of Health). Five of these episodes were recorded in the 2010/11 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*

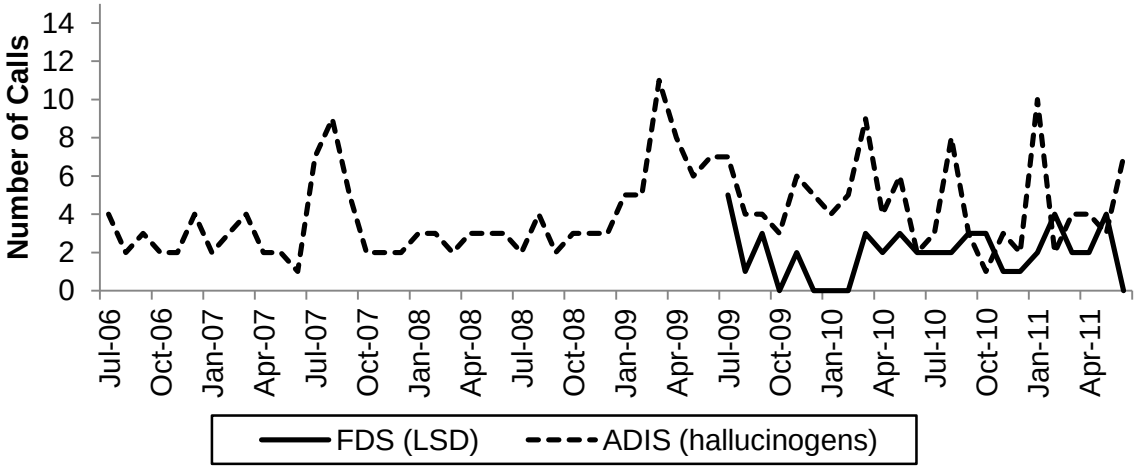
Calls to ADIS where GHB were mentioned have been fluctuating over time although they continue to be fairly low at less than 10 per month (Figure 74).

### 6.3.6 LSD

*Calls to telephone helplines*

Calls to ADIS and FDS where hallucinogens were mentioned as a drug of concern have been fluctuating although remain low at generally less than 10 calls per month (Figure 75).

**Figure 74: Number of inquiries to ADIS and FDS regarding hallucinogens, July 2006-June 2011**

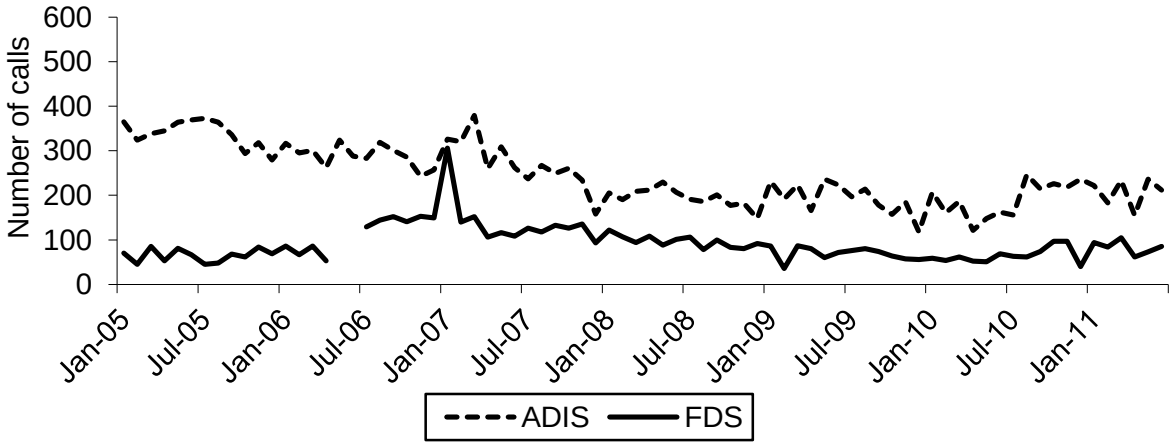



**Source: NSW Alcohol and Drug Information Service and Family Drug Support**
NB: FDS data refer to calls where any mention of cocaine was made. FDS is based in NSW but data may include some calls from interstate. ADIS data include calls made in NSW and the Australian Capital Territory (ACT) and refer to the number of calls where hallucinogens were mentioned as any drug of concern

### 6.3.7 Cannabis

Figure 75 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 from 2010 to 2011.

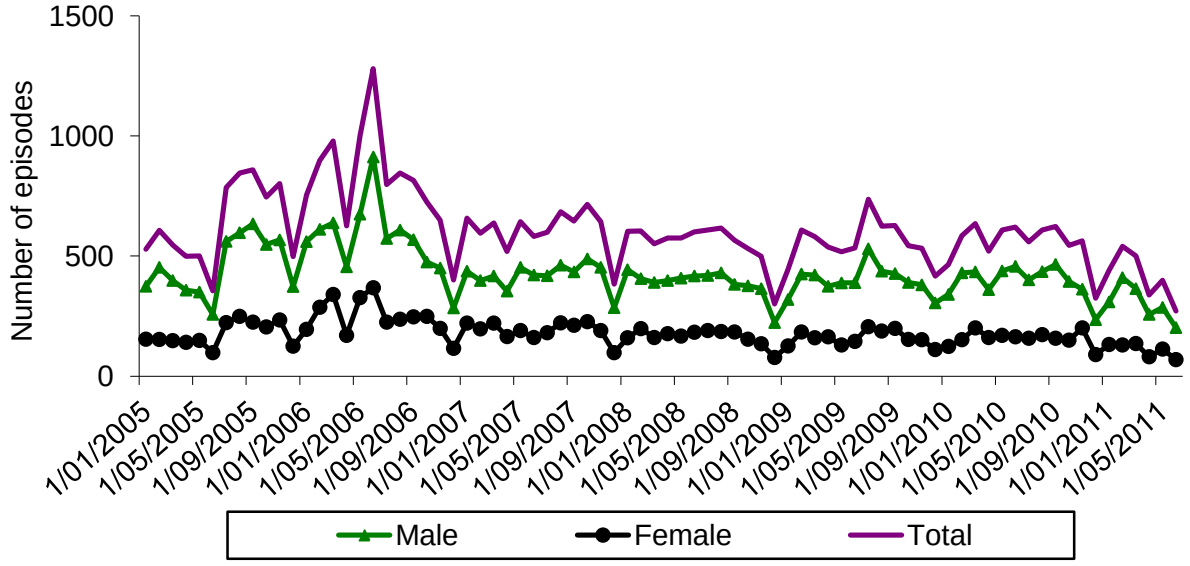
**Figure 75: Number of enquiries to ADIS and FDS regarding cannabis, January 2005-June 2011**




**Source: ADIS and FDS**
NB: FDS data refer to calls where any mention of cannabis was made. FDS is based in NSW but data may include some calls from interstate. ADIS data include calls made in NSW and the ACT and refer to the number of calls where cannabis was mentioned as any drug of concern. FDS data were unavailable for the period May-June 2006

Figure 76 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 2010 and declined moderately in early 2011.

**Figure 76: Number of cannabis treatment episodes by treatment type, NSW January 2005 – June 2011**




**Source: NSW MDS AODTS, NSW Department of Health**
NB: 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 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 (36%) 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 and ecstasy.

- Two-fifths (40%) 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.

- Two-fifths of the group (43%) in 2011 reported that their drug use had recurrently interfered with their responsibilities at home, at work or at school. Cannabis was the drug most commonly associated with these problems followed by alcohol and ecstasy.

- Only 5% of participants reported experiencing recurring legal problems due to drug use. These were primarily attributed to cannabis followed by alcohol and ecstasy.

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

**Table 21: Self-reported drug-related problems, NSW 2011**

| Problems in the following areas (last 6 months): | Any drug (N=100) (%) | Alcohol (%) | Cannabis (%) | Ecstasy (%) | Crystal (%) | LSD (%) | Cocaine (%) |
|---|---|---|---|---|---|---|---|
| **Social (%)** | 36 | 30 | 42 | 15 | 3 | - | 3 |
| **Legal (%)** | 5 | 20 | 60 | 20 | - | - | - |
| **Risk (%)** | 40 | 66 | 16 | 3 | 3 | 5 | 3 |
| **Responsibility (%)** | 43 | 33 | 43 | 15 | 5 | - | - |

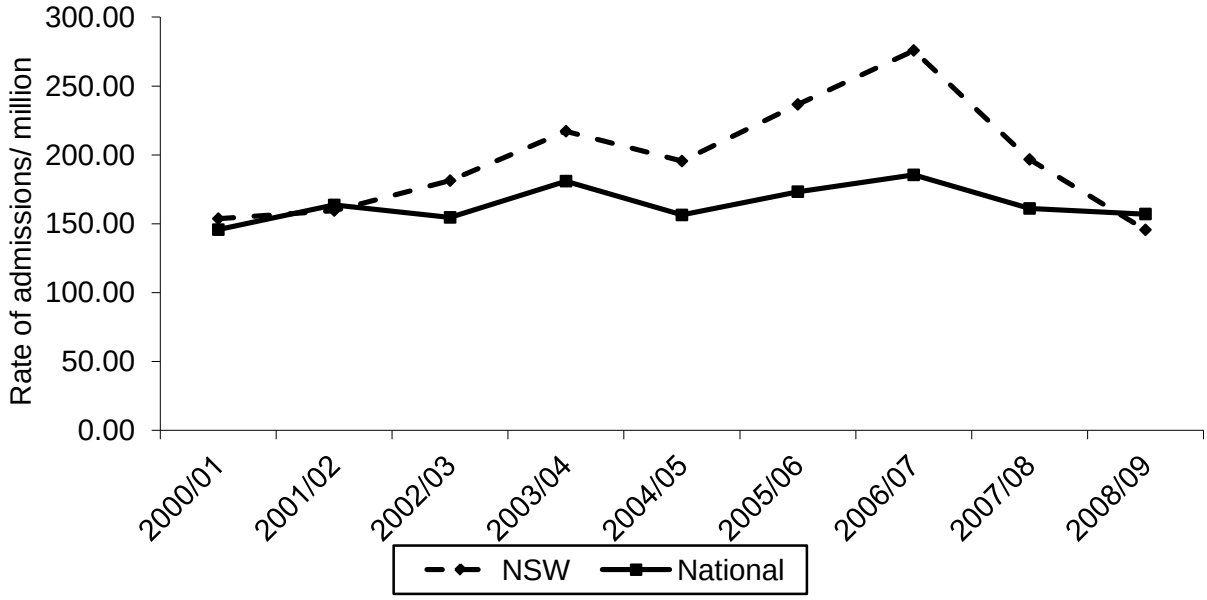
**Source: EDRS regular ecstasy user interviews 2011**

## 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 78 below. Diagnoses for the period 2000 to 2004 were recorded using the International Statistical Classification of Disease and Related Problems – 10th revision, Australian Modification (ICD-10-AM) codes. A principal diagnosis is defined as having been chiefly responsible for occasioning the patient's episode of care in hospital. National rates appear to have remained relatively stable. In contrast, those recorded in NSW appear to have increased until they peaked in 2006/07 and then to have sharply declined over the next two years, returning to levels comparable with those seen in 2000/01.

**Figure 77: Number per million persons of principal amphetamine-related hospital admissions among persons aged 15-54, NSW and nationally, 2000/01-2008/09**

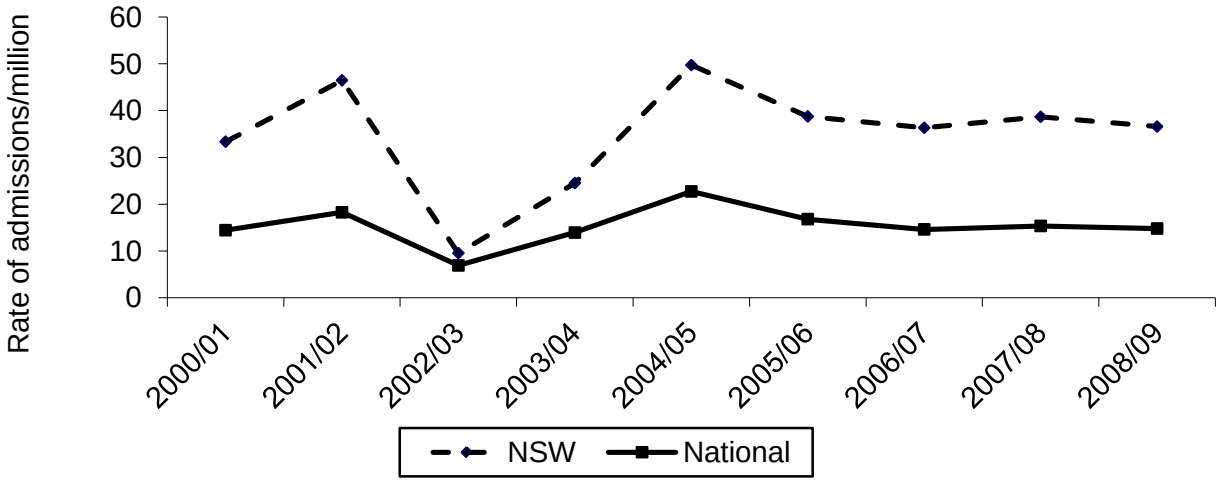



**Source: National Hospital Morbidity Database, AIHW; (Roxburgh & Burns, in press)**

### 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 79. Both the national rate and that for NSW appear to have remained relatively low and stable from 2005/06 onward.

**Figure 78: Number per million persons of principal cocaine-related hospital admissions among persons aged 15-54, NSW and nationally, 2000/01-2008/09**

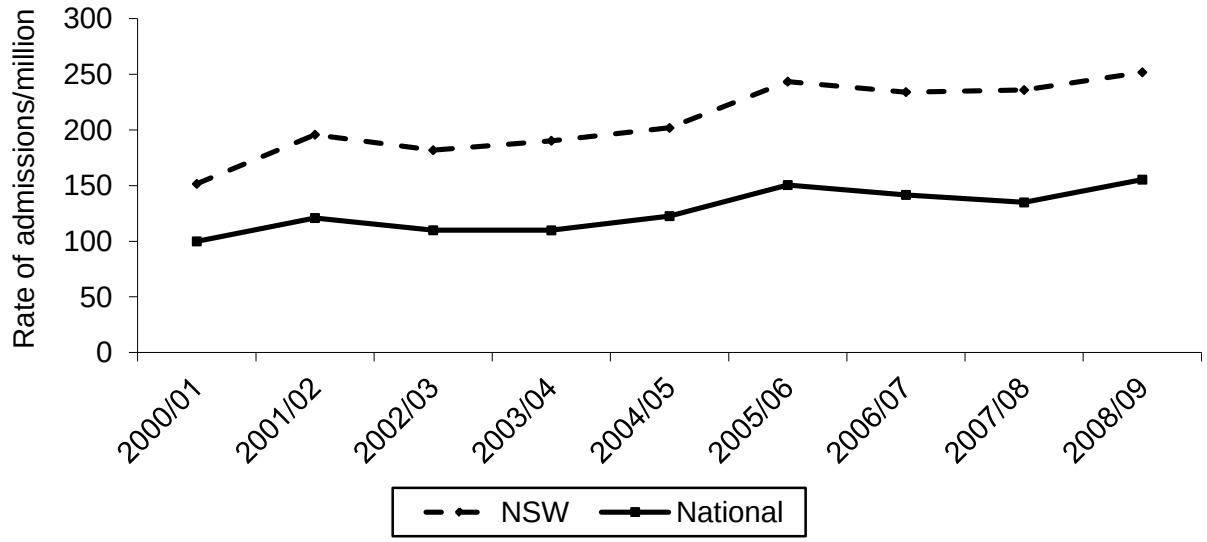



**Source: National Hospital Morbidity Database, AIHW; Roxburgh and Burns (in press)**

### 6.5.3 Cannabis

Figure 80 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 slowly over time.

**Figure 79: Number per million persons of inpatient hospital admissions where cannabis was the principal diagnosis aged 15-54 years, 2000/01-2008/09**




**Source: National Hospital Morbidity Database; Roxburgh and Burns (in press)**

## 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). Approximately one-quarter of the group had recently experienced a mental health problem, a figure comparable with 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. Almost two-thirds of those who experienced a mental health problem sought assistance from a health professional and almost two-thirds of these had been prescribed medication (most commonly antidepressants and antipsychotics).

Trends over time in self-reported mental health problems and help-seeking behaviours around these are presented in Table 22. These figures appear relatively stable from 2010 to 2011.

**Table 22: Mental health problems among REU, NSW 2008-2011**

| | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|
| Any mental health problem recently (%) | 31 | 28 | 22 | **26** |
| **Of these (%):** | | | | |
| Depression | 71 | 57 | 55 | **73** |
| Anxiety | 48 | 43 | 46 | **46** |
| Panic | 16 | 18 | - | **4** |
| Paranoia | 13 | 11 | - | **8** |
| Bipolar Disorder | 7 | 4 | 9 | **8** |
| Schizophrenia | 3 | - | - | **4** |
| Drug-Induced Psychosis | 3 | - | - | **4** |
| Obsessive Compulsive Disorder | 3 | - | 5 | **-** |
| Personality Disorder | 3 | - | - | **-** |
| Sought help from health professional (%) | 39 | 43 | 62 | **62** |
| Prescribed medication^ (%) | 19 | 29 | 45 | **35** |

**Source: EDRS regular ecstasy user interviews 2008-2011**
^% of all of those who had recently experienced a mental health problem

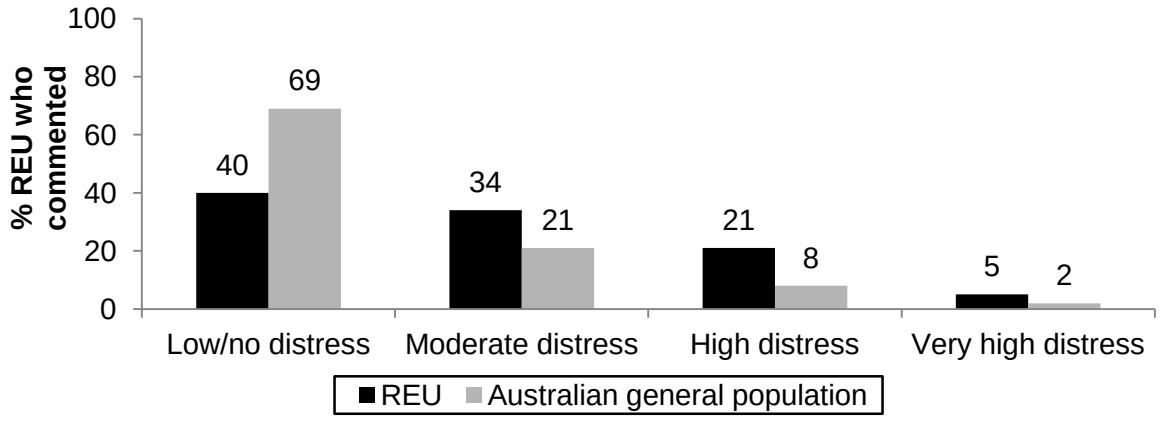
### 6.6.2 Kessler Psychological Distress Scale (K10)

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 50. Scores ranging from 10-15 are classified as 'low/no distress', 16-21 'moderate distress', 21-29 'high distress' and 30-50 'very high distress' (Australian Institute of Health and Welfare, 2008a).

The median score for participants was 17 (range 10-40). Approximately two-fifths of participants' scores fell into the 'low/no distress' category, over one-third fell into 'moderate distress', one-fifth fell into the 'high distress' category and five participants' scores fell into the 'very high' distress category (Figure 81).

Figure 81 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 two-fifths 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.

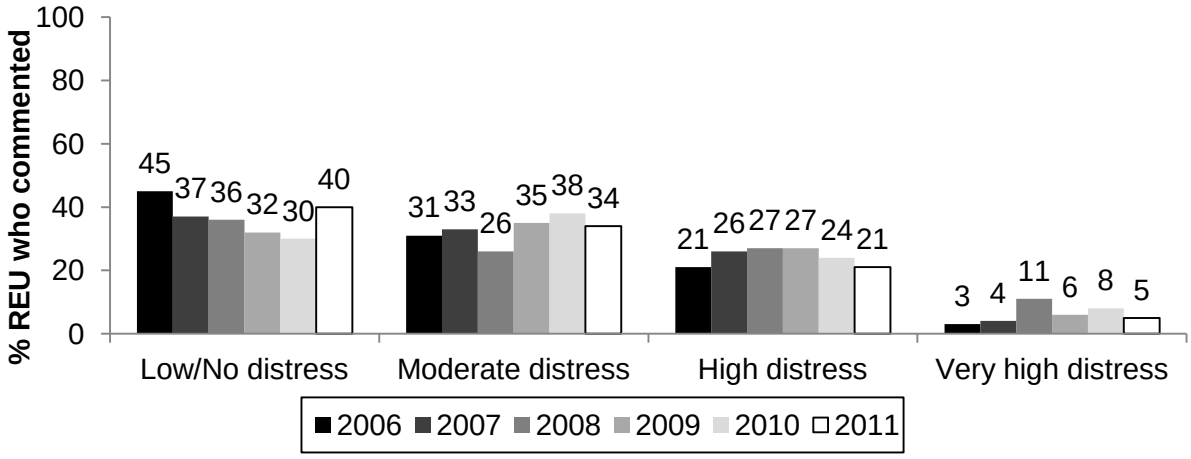
**Figure 80: K10 scores for REU compared with the general Australian population, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011; Australian Institute of Health and Welfare (2008a)**

Figure 82 presents data across time on the proportions of each sample from 2006 to 2011 that fell into each distress category. These data appear to have remained relatively stable over time.

**Figure 81: K10 scores across time for REU, NSW 2006-2011**




**Source: EDRS regular Ecstasy Interviews 2006-2011**

# 7 RISK BEHAVIOUR


Summary:

- One-tenth of the sample had ever injected a drug and 8% had done so recently.
- One-third of the group had completed a Hepatitis B vaccination schedule.
- Rates of testing for BBVI were low with 33% having recently tested for Hepatitis C, 32% 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, the partner was using contraception or the participant did not wish to use it.
- Over half the sample had recently driven a vehicle. Of these, two-fifths had done so while over the legal blood alcohol limit and more than half after having taken an illicit drug.
- Participants completed the Alcohol Use Disorders Identification Test (AUDIT). The majority (80%) of the group fell in the 'harmful drinking' range.


## 7.1 Injecting risk behaviour

Just over one-in-ten participants had ever injected a drug and less than 10 had done so within the past six months. Among those who had ever injected, the median number of drug types injected[18] was 3 (range 1-9) and, among recent injectors, the median number of drug types injected was 2 (range 1-4) (Table 23).

**Table 23: Injecting risk behaviour among REU, NSW 2009-2011**

| Variable | 2009 (N=100) | **2010 (N=100)** | **2011 (N=100)** |
|---|---|---|---|
| Ever injected (%) | 9 | **22** | **13** |
| Median number of drugs ever injected* (range) | 2 (1-9) | **4 (1-15)** | **3 (1-9)** |
| Injected last 6 mths (%) | 6 | **15** | **8** |
| Median number of drugs injected last 6 mths** (range) | 2 (1-4) | **2 (1-7)** | **2 (1-4)** |

**Source: EDRS regular ecstasy user interviews 2010**
* Of those who had ever injected
** Of those who had injected in the last 6 mths

[18] 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 17-32). A wide range of drug types had ever been injected; however, those most frequently reported were heroin, cocaine, and methamphetamine (speed, base, crystal) (Table 24). The most common drugs first injected were crystal and steroids (23%) followed by speed and heroin (15% respectively) and cocaine (8%).

**Table 24: Injecting drug use history among REU injectors, NSW 2010 & 2011**

| Drug | Ever injected (%) | | Ever injected (n) | |
|---|---|---|---|---|
| | 2010 | **2011** | 2010 | **2011** |
| Crystal | 55 | **39** | 12 | **5** |
| Heroin | 68 | **31** | 15 | **4** |
| Cocaine | 68 | **31** | 15 | **4** |
| Speed | 55 | **31** | 12 | **4** |
| Base | 41 | **31** | 9 | **4** |
| Ecstasy pills | 50 | **15** | 11 | **2** |
| Methadone | 27 | **15** | 6 | **2** |
| Other opiates | 23 | **8** | 5 | **1** |
| LSD | 18 | **8** | 4 | **1** |
| Ketamine | 14 | **8** | 3 | **1** |
| MDA | 14 | **8** | 3 | **1** |
| Buprenorphine | 9 | **8** | 2 | **1** |
| Benzodiazepines (illicit) | 9 | **-** | 2 | **-** |
| Ecstasy capsules | 9 | **-** | 2 | **-** |
| Alcohol | 9 | **8** | 2 | **1** |
| Ecstasy powder | 5 | **-** | 1 | **-** |
| Pharmaceutical stimulants (illicit) | 5 | **8** | 1 | **1** |

**Source: EDRS regular ecstasy user interviews 2010-2011**

### 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 reported having injected any drug a median of 11 times (range 4-180) over this period. Participants were asked about the last time they had injected a drug. Crystal methamphetamine was the drug

most commonly last injected (n=4) followed by melanotan[19] (n=2), heroin (n=1) and steroids (n=1). The majority of those who had injected recently had done so in their own home (75%).

*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, 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=6). Only two of the eight recent injectors had injected while under the influence of ecstasy and other drugs over the past six months.

*Obtaining needles*

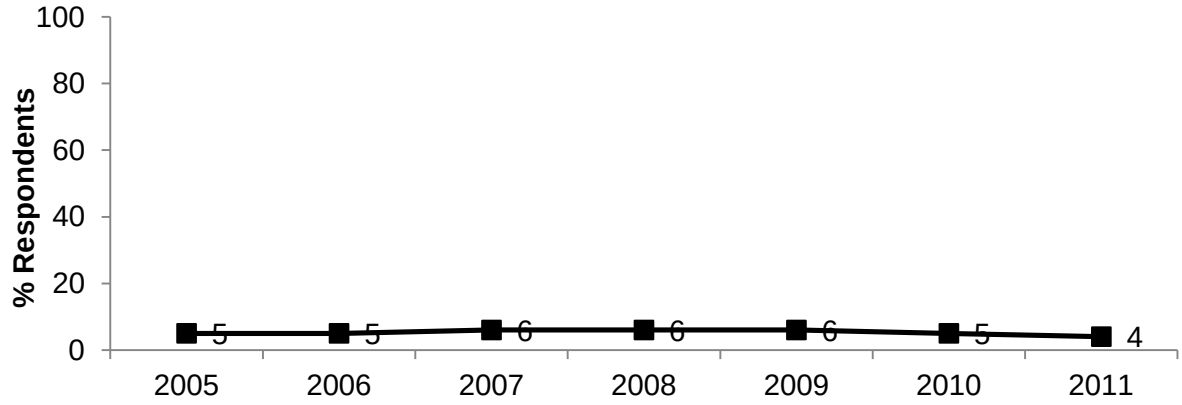
Respondents were asked to identify where they had obtained needles over the preceding six months. Needles were most commonly obtained from either chemists (n=5), friends (n=4), or needle and syringe programs (n=3). Smaller proportions reported having obtained needles from vending machines (n=1), dealers (n=1), hospitals (n=1) or outreach programs (n=1).

### 7.1.3 Injecting drug use in other populations

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).

Data collected from the Sydney Gay Community Periodic Survey shows that, across sampling years, less than one in ten had injected any drug in the six months prior to interview (Figure 83). In 2011, four percent of the sample had recently injected any drug.

**Figure 82: Proportion of gay men in Sydney reporting injecting drug use, 2005-2011**




**Source: Sydney Gay Community Periodic Survey, 2005-2011**

[19] Melanotan is a synthetic dug which induces skin pigmentation through melanogenesis. It is sometimes used (illicitly) to produce a false tan.

## 7.2 Blood-borne viral infections (BBVI)

Almost half (48%) of REU in 2011 reported that they had never been vaccinated for hepatitis B virus (HBV). One-third (31%) had completed the vaccination schedule and 11% had begun, but not completed the schedule. One-in-ten (10%) were uncertain whether or not they had been vaccinated for HBV.

Of those who had either begun or completed HBV vaccination (n=42), the majority (37%) reported travelling overseas as the main reason for vaccination. Other reasons included being vaccinated as a child (34%), for work (12%) and at risk due to sexual exposure (10%).

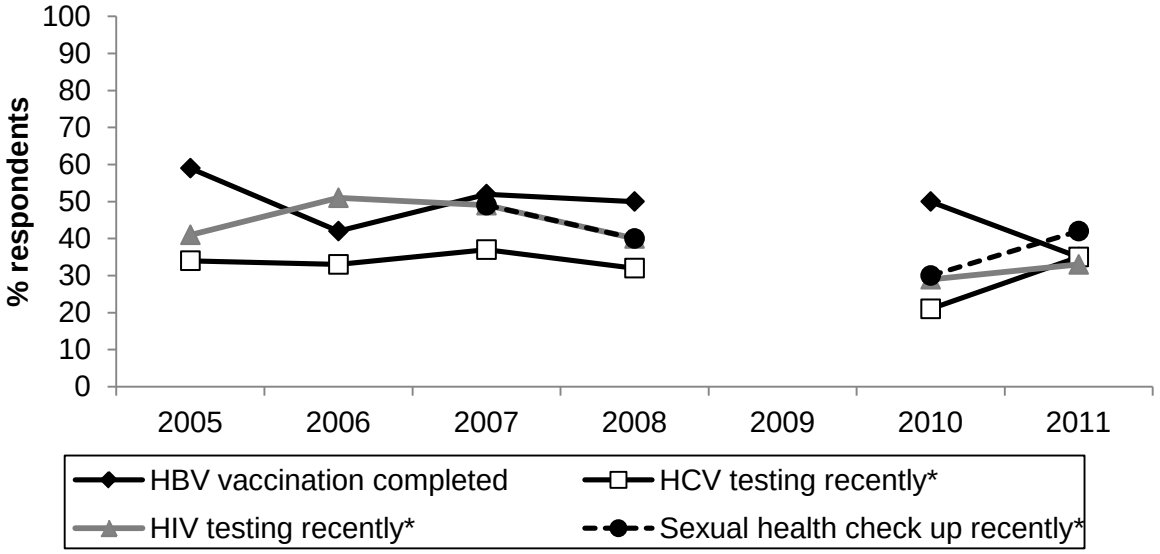
Half of the sample (53%) had reportedly never been tested for the hepatitis C virus (HCV). One-third (33%) had been tested within the past year, and 8% more than one year ago. Only one participant reported a positive result on their last HCV test.

Half the sample (55%) reported they had never been tested for HIV. One-third (32%) reported having been tested within the last year, and 11% had reportedly been tested for HIV more than one year ago. One participant reported a positive result on their last HIV test.

Two-fifths of the sample (40%) had reportedly never had a sexual health checkup while an equal proportion (42%) had completed one within the past year. Approximately one-fifth (17%) had been tested more than one year ago. Nine participants reported they had been diagnosed with a sexually transmitted infection (STI) more than one year ago, and three participants had been diagnosed within the last year.

Figure 84 presents the rates of testing for BBVI and HBV vaccination among REU across time. From 2010 to 2011 there was a significant decline in the proportion reporting having completed HBV vaccination throughout their lifetime and there was a significant increase in the proportion reporting a recent sexual health check up.

**Figure 83: BBVI testing and vaccination, NSW 2005-2011**



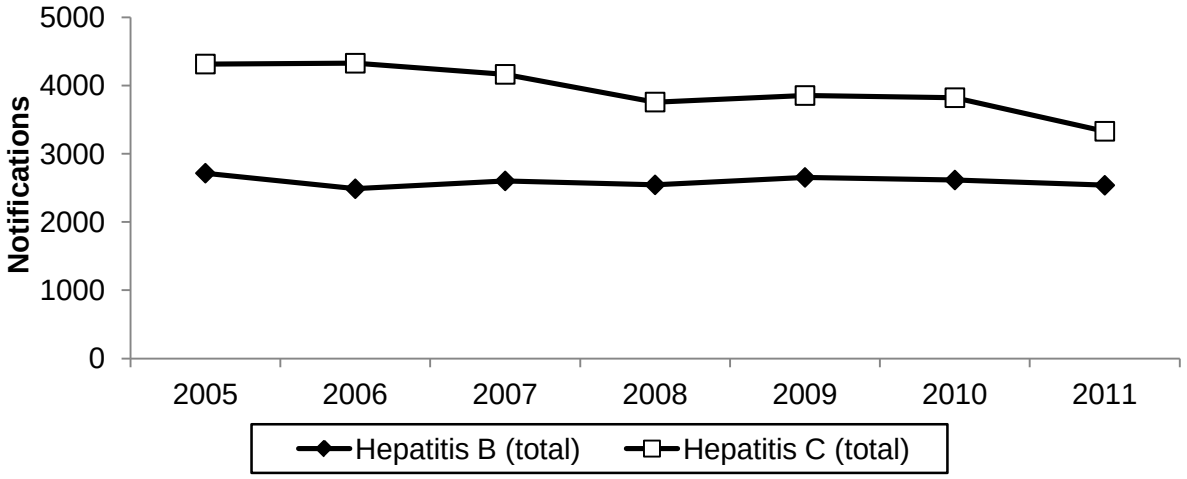

**Source: EDRS Regular ecstasy user interviews 2005-2011**
* In the last year
Note: response option 'don't know' was removed from analyses from 2010 onward; Questions not asked in 2009

On further analysis, there was a trend for participants who reported having completed HBV vaccination to have higher odds of having been recently tested for HCV and HIV although neither of these reached significance (*p=0.062* respectively).

People with a history of injecting drug use are at greater risk of acquiring HBV, HCV and HIV than the general population (NCHECR, 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, recent injectors did not appear more likely to have recently completed major BBVI vaccination and testing than participants who did not inject drugs.

Figure 85 shows the total number of notifications for HBV and HCV in NSW (Communicable Diseases Network Australia, 2008). 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 84: Total notifications for (incident and unspecified) HBV and HCV infections, NSW 2005-2011**

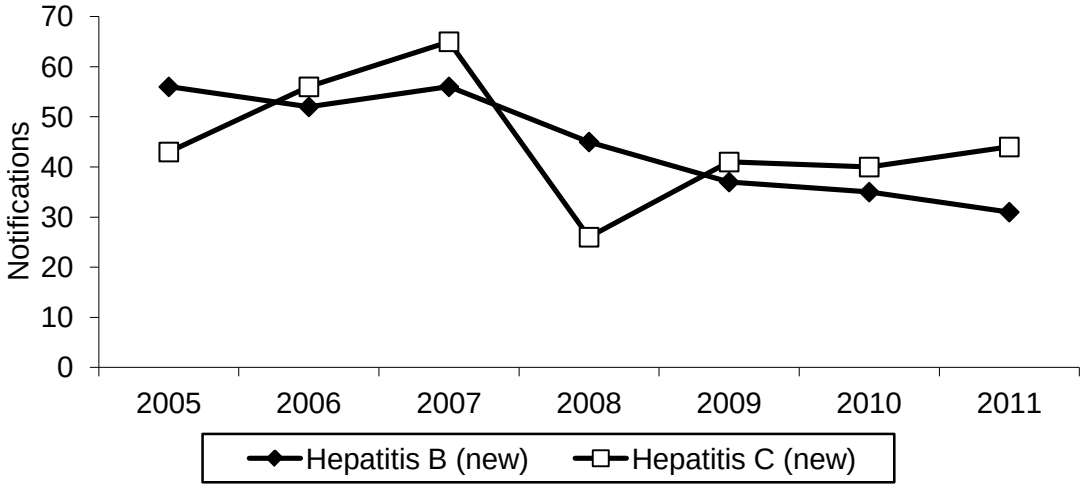



**Source: Communicable Diseases Network – Australia – National Notifiable Diseases Surveillance System (NNDSS)**[20]

Trends in the number of incident notifications for HBV and HCV in NSW are shown in Figure 86. The number of incident HBV infections has declined since 2007. Incident HCV infections appear to have remained relatively stable from 2009 onward.

[20] There are several caveats to the NNDSS data that need to be considered. As no personal identifiers are collected, duplication in reporting may occur if patients move from one jurisdiction to another and are notified in both. In addition, notified cases are likely to represent only a proportion of the total number of cases that occur, and this proportion may vary between diseases, between jurisdictions, and over time.

**Figure 85: Total notifications for incident HBV and HCV infection, 2005-2011**




**Source: Communicable Diseases Network – Australia – NNDSS**

## 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 (73%) 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. The majority (n=64, 89%) of those who reported penetrative sex with a casual partner reported having done so while under the influence of alcohol or drugs (Table 25). The drugs most commonly used were alcohol, ecstasy, cannabis, cocaine and crystal.

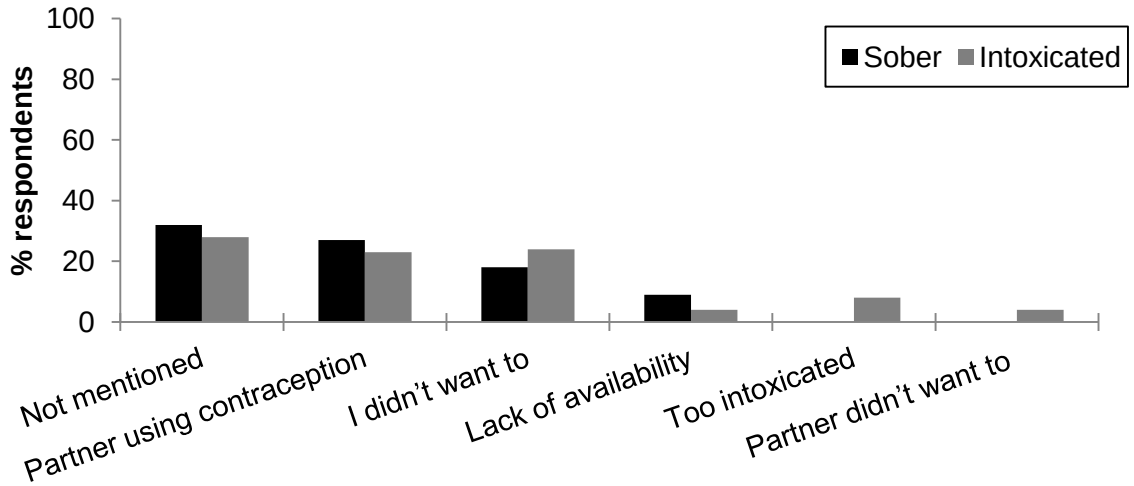
**Table 25: Trends in sexual activity with casual partners in the preceding six months, NSW 2009-2011**

| Variable | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|
| **Casual penetrative sex (%)** | 65 | 60 | **73** |
| **No. of sexual partners (%):*** | | | |
| One person | 17 | 35 | **18** |
| Two people | 23 | 10 | **19** |
| 3-5 people | 45 | 37 | **41** |
| 6-10 people | 9 | 12 | **12** |
| 10+ people | 6 | 7 | **8** |
| **Penetrative sex with casual partner while on drugs** | n=57 | n=47 | **n=64** |
| **Drugs used (%):** | | | |
| Alcohol | 83 | 72 | **81** |
| Ecstasy | 64 | 55 | **48** |
| Cannabis | 42 | 47 | **48** |
| Cocaine | 21 | 11 | **23** |
| Crystal | 5 | 6 | **14** |
| LSD | 5 | 9 | **9** |
| Amyl nitrite | 7 | 6 | **5** |
| Ketamine | 4 | 9 | **5** |
| Speed | 4 | 6 | **5** |
| GHB | 2 | 9 | **3** |
| Base | 4 | 9 | **2** |
| Benzodiazepines | 2 | 4 | **2** |

**Source: EDRS regular ecstasy user interviews 2009-2011**
* Of those who had penetrative sex in the last 6 mths

Participants were also asked whether they had used a protective sexual barrier the last time they had penetrative sex with a casual partner. When sober two-thirds (65%) had done so and while under the influence of drugs or alcohol more than half (59%) had done so. The major reasons for not using protection were either that it was not mentioned or that the sexual partner was using contraception (Figure 87).

**Figure 86: Reasons for not using protective barriers, NSW 2011**




**Source: EDRS regular ecstasy user interviews 2011**

## 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 (57%) of participants in 2011 had driven a car, motorcycle or other vehicle in the preceding six months. Half of these (50%) had driven under the influence of alcohol during this time. Just under two-fifths (38%) of all those who had driven had done so over the legal blood alcohol limit[21]. Those who had driven over the legal limit reported having done this on a median of 3 occasions (range 1-48) in the preceding six months. Two-fifths (45%) 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 (55%) of those who had recently driven had done so after using an illicit drug on a median of 11 occasions (range 1-180). The drugs most commonly used prior to driving included cannabis (68%), ecstasy (48%) and cocaine (19%) (Table 26).

**Table 26: Drug driving in the last six months among REU, NSW 2008-2010**

| Variable | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|
| Driven a car in the past six months (%) | 66 | 75 | 65 | **57** |
| Driven under the influence of alcohol* (%) | 65 | 49 | 49 | **50** |
| Driven over the limit of alcohol* (%) | 51 | 40 | 37 | **38** |
| Driven after taking an illicit drug* (%) | 53 | 68 | 59 | **55** |
| **Of those who had driven after taking a drug:** | | | | |
| **Drug (%)** | n=35 | n=50 | n=38 | **n=31** |
| Cannabis | 43 | 64 | 68 | **68** |
| Ecstasy | 63 | 60 | 40 | **48** |
| Cocaine | 20 | 8 | 13 | **19** |
| Speed | 17 | 8 | 5 | **7** |
| LSD | - | 6 | 5 | **7** |
| Crystal | 23 | 4 | 5 | **3** |
| Ketamine | 3 | 4 | 3 | **3** |
| Base | 6 | 8 | - | **3** |
| Mushrooms | 3 | 2 | - | **7** |
| GHB | 9 | - | - | **3** |
| Amyl nitrite | 6 | - | - | **-** |

**Source: EDRS regular ecstasy user interviews 2008-2011**

*Of those who had driven a car in the last 6 mths

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 (68% of respondents), ecstasy (23%) and cocaine

[21]Participants reported according to their own perception of their blood alcohol content.

(10%). Participants reported having driven a median of 1 hour (range 0-12) after taking an illicit drug.

When asked how they thought having recently taken a drug had impacted on their driving on the last occasion, one-third of respondents believed that it had been impaired (10% 'quite impaired' and 23% 'slightly impaired'). Half (55%) believed that there had been no impact on their driving ability and more than one-tenth believed that it had been improved (10% 'slightly improved' and 3% 'quite improved'). Five participants had been tested by a police roadside drug testing van. In three cases the last result was negative and in one case it was positive for cannabis.

## 7.5 Problematic alcohol use among REU

### 7.5.1 Alcohol Use Disorders Identification Test (AUDIT)

The Alcohol Use Disorders Identification Test (AUDIT) (Saunders, Aasland, Babor, de la Fuente, & Grant, 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, de la Fluente, Saunders, & Grant, 1992). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor, et al., 1992).

The median score on the AUDIT for the 2010 sample was 14 (range 0-35). The majority (80%) of REU scored in the harmful range (i.e. total score of 8 or more). There was no significant difference between men and women (14 vs. 13; $U=888,\ p>0.05$). The AUDIT guidelines (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001) indicate four 'zones' into which total scores on the test can be divided. In the current sample, one-fifth (20%) scored in zone 1 (low risk drinking or abstinence), two-fifths (39%) scored in zone 2 (alcohol in excess of low-risk guidelines), one-fifth (17%) scored in zone 3 (harmful or hazardous drinking) and one-quarter (24%) 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 percent of REU had reportedly been arrested over the past year.
- More than two-fifths 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 decreased from mid-to-late 2009 onward and those for ecstasy deal/trafficking likewise from early 2010. Increases were noted in the numbers of arrests for use/possession of amphetamines. The numbers of police-recorded incidents for the use or possession of cocaine and of cannabis have been increasing since mid-2007.
- The majority of participants (79%) reported that half or more of their friends had used ecstasy during the previous six months.


## 8.1 Reports of criminal activity among REU

Approximately one-in-ten (14%) of REU interviewed in 2011 had reportedly been arrested over the preceding 12 months. There had been five arrests made for violent crimes, three for property crimes and two for use/possession of illicit substances.

Approximately one-quarter (26%) of participants had dealt drugs in the month leading up to the interview. Of these, the majority of respondents (n=15) had done so less than once a week. One-quarter (26%) of REU had committed property crime over the last month, again, mostly less than once per week (n=16). Five participants had engaged in violent crime over this period (four less than once per week) and one participant had engaged in fraud.

Table 27 presents data across time on both self-reported criminal activity and arrests among samples of REU. In 2011, approximately two-fifths 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 2011 an equal proportion reported recently committing a property crime. These data (recent crime and recent arrest) have been stable from 2010 to 2011.

**Table 27: Criminal activity reported by REU, NSW 2005-2011**

| **Criminal activity in the last month** | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=99) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| *Any crime* | *29* | *27* | *23* | *24* | *36* | *35* | ***44*** |
| Drug dealing | 23 | 21 | 15 | 15 | 21 | 26 | **26** |
| Property crime | 8 | 13 | 13 | 11 | 18 | 18 | **26** |
| Fraud | 2 | 4 | 1 | 2 | 3 | 4 | **1** |
| Violent crime | 1 | 2 | 2 | 1 | 8 | 4 | **5** |
| **Arrested last 12 months** | 6 | 7 | 14 | 5 | 11 | 24 | **14** |

**Source: EDRS regular ecstasy user interviews 2005-2011**

Participants were asked about their use of alcohol and other drugs on the last occasion they committed a property or a violent crime. Half (55%) of those who had recently committed a property crime reported they were under the influence at the time. Among this group, the drugs most commonly used were alcohol (75%) and cannabis (50%). Smaller proportions reported having used ecstasy (8%), crystal (8%) and GHB (8%). Over half the group (55%) reported the last property crime they committed was shoplifting; 18% vandalism, 14% larceny, 9% theft and 5% burglary.

Three of the five who had recently committed a violent crime reported that they were under the influence at the time. Each of these reported being under the influence of alcohol. Assault was the most common form of violent crime last committed.

## 8.2 Perceptions of police activity towards REU

The majority of REU interviewed reported that police activity toward REU had either remained stable (46%) or increased (40%) in the preceding six months (Table 28).

**Table 28: Perceptions of police activity by REU, NSW 2005-2011**

| Perception | 2005 (N=101) | 2006 (N=100) | 2007 (N=100) | 2008 (N=100) | 2009 (N=100) | 2010 (N=100) | **2011 (N=100)** |
|---|---|---|---|---|---|---|---|
| **Recent police activity:** | | | | | | | |
| Decreased | 2 | 10 | 0 | 3 | 2 | 2 | **1** |
| Stable | 36 | 29 | 40 | 38 | 44 | 50 | **46** |
| Increased | 49 | 32 | 47 | 33 | 44 | 39 | **40** |
| Don't know | 14 | 28 | 13 | 25 | 10 | 9 | **13** |

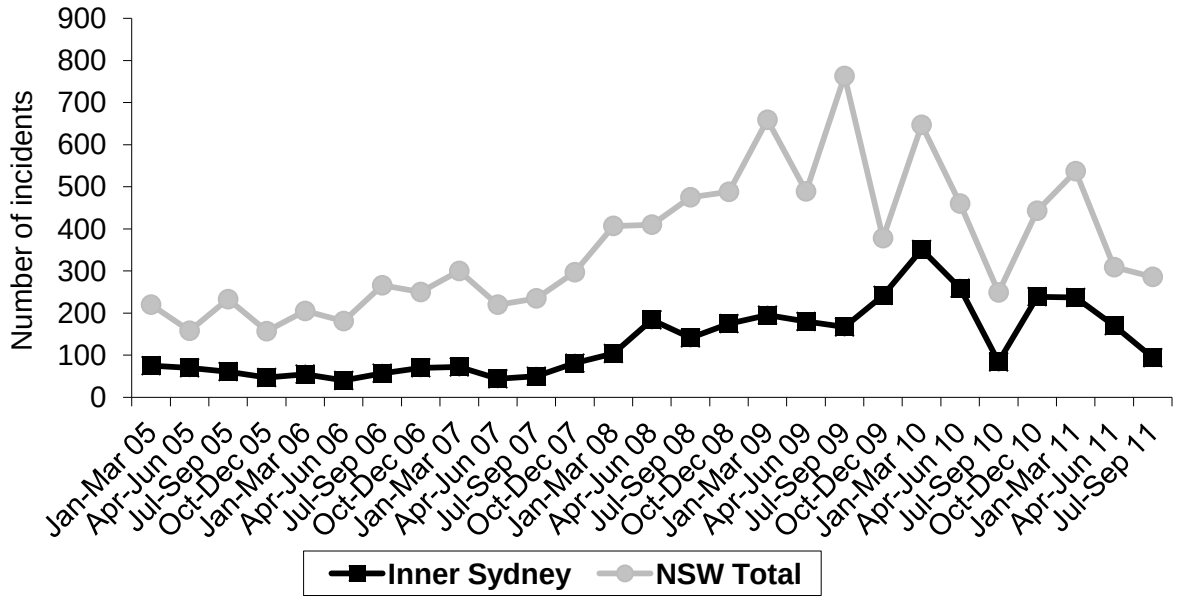
**Source: EDRS regular ecstasy user interviews 2005-2011**

## 8.3 Arrests

### 8.3.1 Ecstasy

Figure 88 presents the number of police-recorded criminal incidents for ecstasy possession and use in inner Sydney and NSW. While number of incidents per month is highly variable, there has been a declining trend from mid-to-late 2009 which has continued through to late-2011.

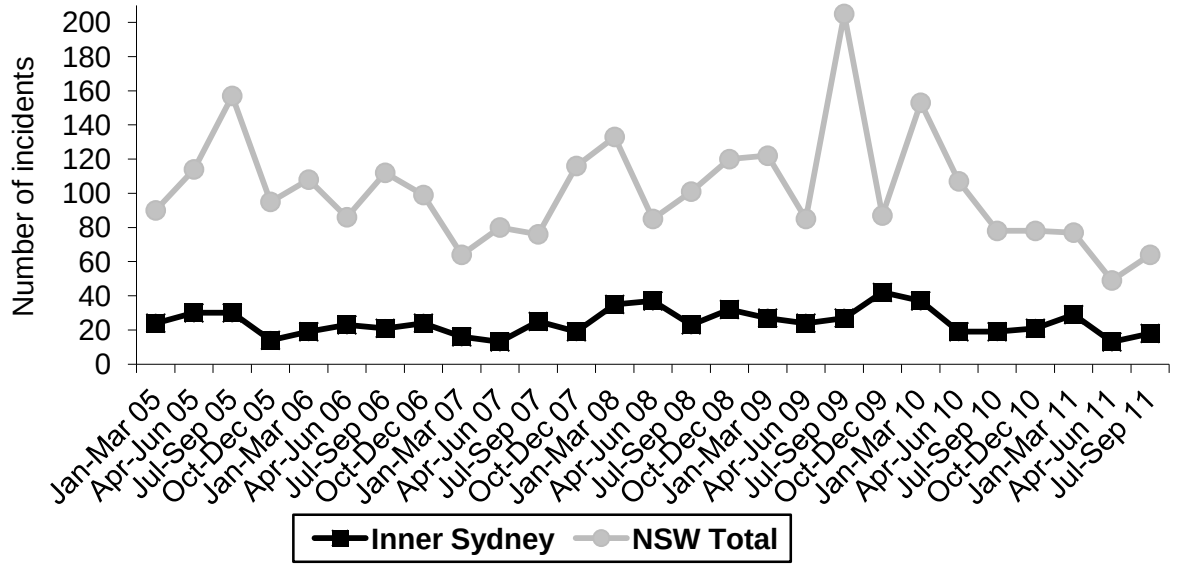
**Figure 87: Number of police incidents recorded for ecstasy possession/use, quarterly, 2005-2011**




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

Figure 89 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 88: Number of police incidents recorded for ecstasy deal/traffic, quarterly, 2005-2011**

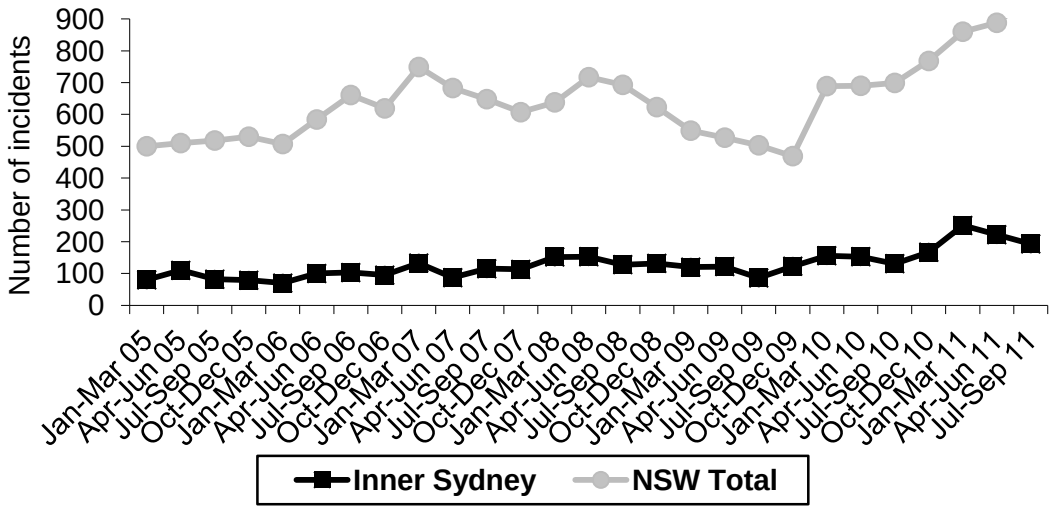



**Source: NSW Bureau of Crime Statistics and Research (BOCSAR)**

### 8.3.2 Methamphetamine

Figure 90 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.

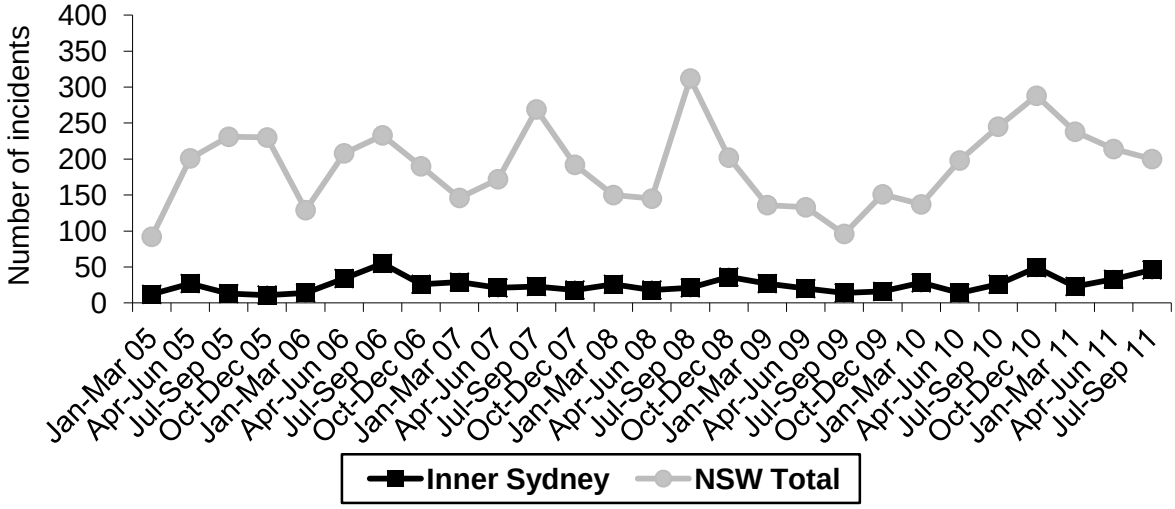
**Figure 89: Recorded incidents of amphetamine possession/use per quarter, inner Sydney and NSW, quarterly, 2005-2011**




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

Figure 91 shows the number of police-recorded criminal incidents for amphetamine deal/trafficking in the inner Sydney area and NSW. After increasing from mid-2009 to late-2010, these figures began to fall away in NSW during 2011. In contrast, figures have remained relatively stable in the inner Sydney region over this time.

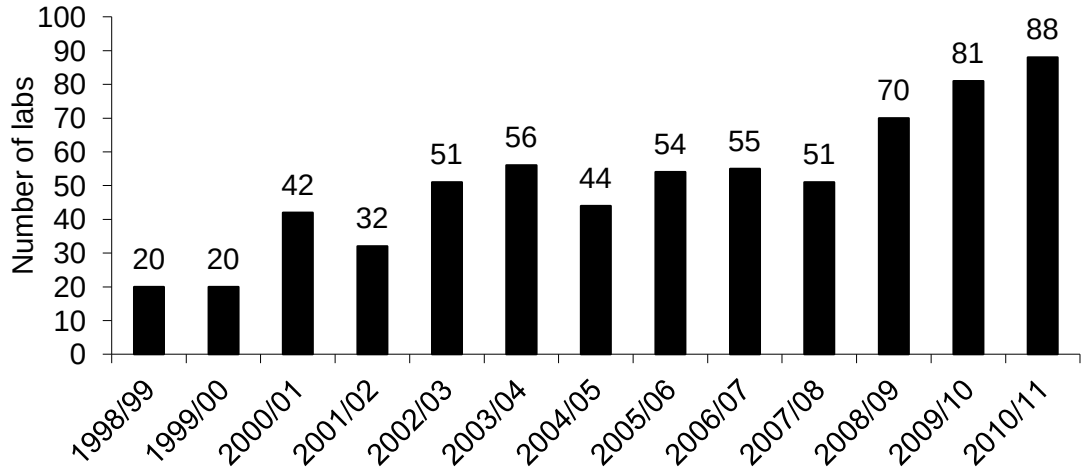
**Figure 90: Recorded incidents of amphetamine deal/traffic per quarter, inner Sydney and NSW, 2005-2011**




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

The number of clandestine methamphetamine and MDMA laboratories detected in NSW continued to increase in 2010/11. In this year, there were 88 detections which included three laboratories producing hallucinogens and one laboratory producing PMA (Figure 92).

**Figure 91: Number of clandestine methamphetamine and MDMA laboratories detected by NSW police 1998/99-2010/11**

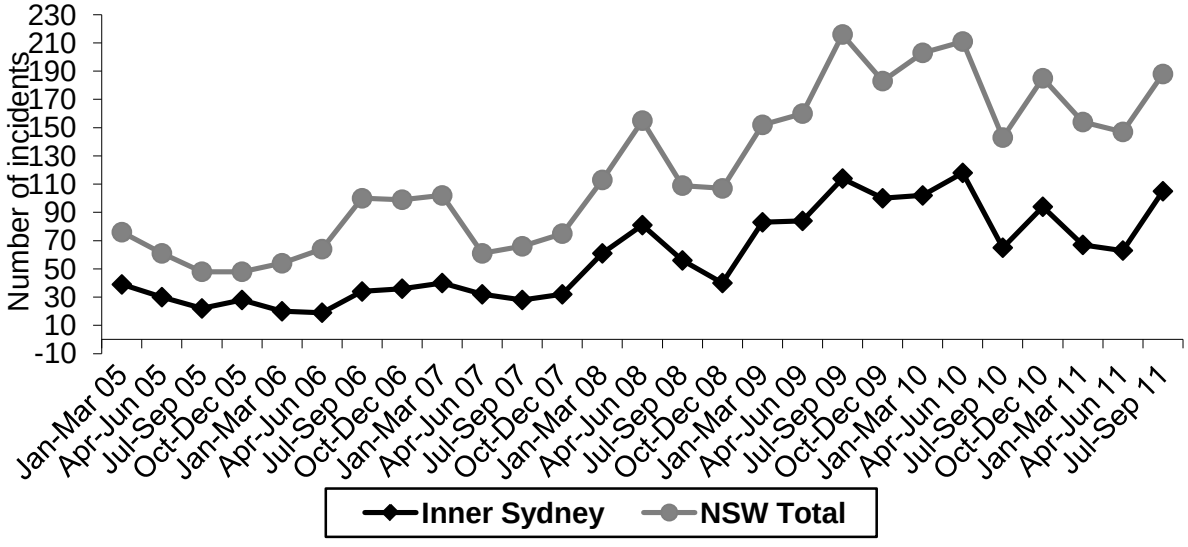



**Source: NSW Police Service**
NB: **D**ata may include active, non-active and historical laboratories as well as storage sites

### 8.3.3 Cocaine

The number of police-recorded incidents for cocaine possession/use have been increasing since approximately mid-2007 (Figure 93). Incidents reported in Inner Sydney represent approximately half of all incidents recorded in NSW, and have continued to do so over time.

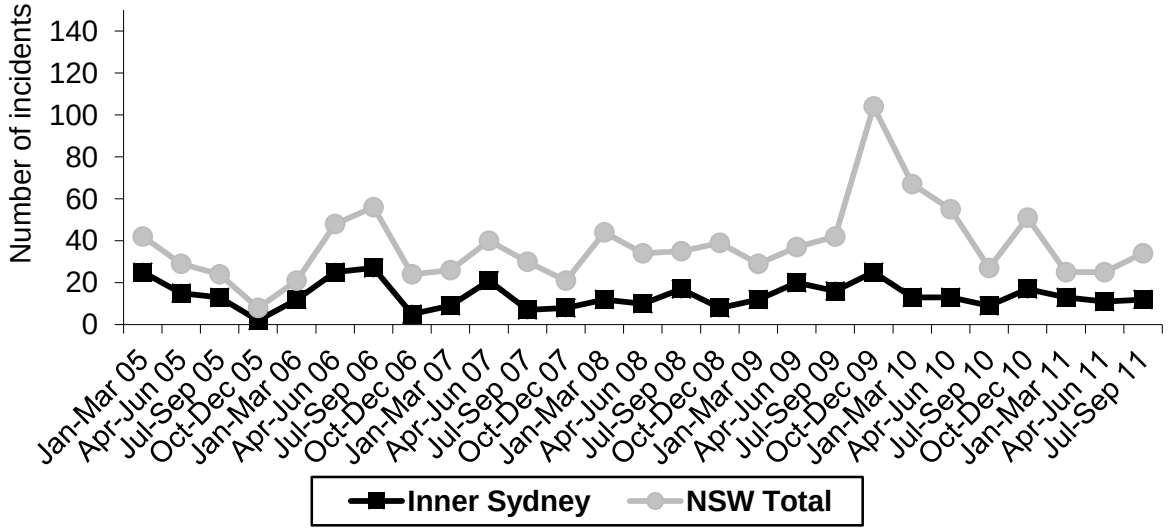
**Figure 92: Recorded incidents of cocaine possession/use per quarter, 2005-2011**




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

Figure 93 shows the number of police-recorded criminal incidents for cocaine deal/trafficking in the inner Sydney area and NSW. There appeared to be a spike in the number of arrests made in late-2009, however, these figures returned to baseline by mid-late-2010 and continued to remain relatively stable into 2011.

**Figure 93: Recorded incidents of cocaine deal/traffic per quarter, inner Sydney and NSW, 2005-2011**




**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.

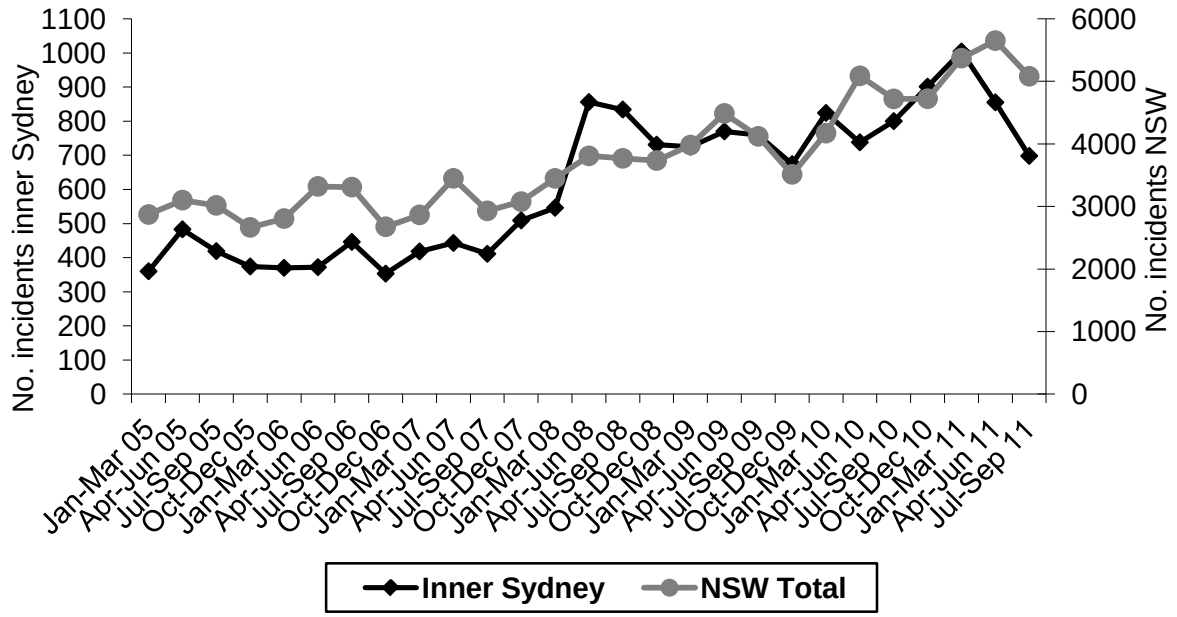
### 8.3.5 GHB

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 were unavailable at the time of printing.

### 8.3.6 Cannabis

Figure 95 shows the number of police-recorded incidents of cannabis possession/use per quarter in the inner Sydney area and NSW overall. The number of incidents reported in inner Sydney appears to have increased from mid-2007 to late-2010, reflecting a general increase noted across the same time frame in NSW as a whole. However, both inner Sydney and state-wide figures appear to have been declining in 2011.

**Figure 94: Recorded incidents of cannabis possession/use per quarter, inner Sydney and NSW, 2005-2011**




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

## 8.4 Perceptions of changes in peer drug use

The majority of participants (79%) reported that half or more of their friends had used ecstasy during the previous six months (6% 'all'; 37% 'most'; 36% 'about half'). One-fifth (21%) of participants reported that 'a few' of their friends had used ecstasy.

Two-fifths (44%) of participants had perceived changes in drug use amongst their social group. Some of the more common themes in participant's comments included:

- increasing experimentation with 'new drugs' including hallucinogens (mushrooms, DMT and LSD), inhalants (nitrous oxide and butane), ketamine and cocaine. A few participants specifically mentioned exploring the use of 'research chemicals' such as 2CB, 2CI etc.;

- increasing use of pharmaceutical drugs such as benzodiazepines (including xanax, valium and serapax) and antipsychotics (commonly seroquel). One participant expressed concern at the practice of mixing these drugs with alcohol and other drugs (such as cannabis). They said they had witnessed people overdose in private settings by doing this and noticed that most of the other people present were unaware how to react to this (this person had prior experience with drug overdoses and was able to intervene);

- several participants had noticed an increase in the use of cocaine among their group of friends. One person commented that this was likely due to their group of friends earning more money and becoming disillusioned with ecstasy because it had been of low purity 'for so long'; and

- comments regarding the use of ecstasy were mixed. While some participants commented that the purity of ecstasy continued to be low, others said that there had been a recent increase in the purity of ecstasy pills and growing interest among their groups. One person said they were buying pills less often and preferring to buy caps.

# 9 SPECIAL TOPICS OF INTEREST


Summary:

- More than half of the total NSW sample smoked cigarettes daily. One fifth of daily smokers in NSW were classified as highly dependent on nicotine.
- Eleven percent of REU's responses on the SDS scale indicated ecstasy dependence.
- More than half of the group had recently gone online for a drug related activity; most commonly involving sharing information about drugs.
- Almost half the group reported that their drug use had impacted negatively on their sleep.
- The average quality of life was 7.7 out of 10 and was fairly comparable for men and women.


## 9.1 Heavy Smoking Index nicotine dependence

For the first time in 2011, EDRS participants who smoked daily were asked two questions from the Fagerstrom test for nicotine dependence, known as the Heavy Smoking Index (HSI). These questions included 'How soon after waking do you smoke your first cigarette?' and 'How many cigarettes a day do you smoke?'. The responses were then scored on a four category scheme (0,1,2,3) for both time to the first cigarette of the day (≤5, 6-50, 31-60 and 61+ minutes) and average daily consumption of cigarettes (1-10, 11-20, 21-30, 31+ cigarettes). The sum of these scores was computed and a cut-off score of ≥4 used to indicate high nicotine dependency (Heatherton, Kozlowski, Frecker, Rickert, & Robinson, 1989).

Table 29 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 smoked a cigarette within the first 5 minutes of waking and more than half smoked 10 cigarettes or less per day. The mean HSI score was 2(SD=1.7). One fifth of daily smokers in NSW scored 4 or above indicating high nicotine dependence. These results were fairly comparable with national data.

**Table 29: Heavy Smoking Index for nicotine dependence, nationally and among NSW REU, 2011**

| | National % (n=275) | **NSW % (n=55)** |
|---|---|---|
| **Time to first cigarette (mins)** | | |
| ≤5 | 21 | **15** |
| 5-30 | 34 | **38** |
| 31-60 | 16 | **16** |
| 60+ | 30 | **31** |
| **Number of cigarettes smoked daily** | | |
| ≤10 | 51 | **58** |
| 11-20 | 33 | **24** |
| 21-30 | 14 | **15** |
| 31+ | 3 | **4** |
| **High Dependence** | 24 | **20** |

**Source: EDRS regular ecstasy user interviews 2011**

## 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 2011, participants were asked the five questions from the Severity of Dependence Scale to investigate ecstasy dependence. A total score was created by summing responses to each of the five questions. Possible scores range from 0 to 15. A cut-off score of 4 was used to determine those whose scores were suggestive of dependence (Bruno, Gomez, & Matthews, 2011).

The median score was 1 (range 0-8). Eleven percent of participants' scores fell over the cut off of 4 suggesting ecstasy dependence. The majority of participants (i.e. 75% and over) reported 'never or almost never' thinking their use of ecstasy was out of control, becoming anxious or worried about the prospect of missing a dose or wishing they could stop using ecstasy. Similarly, 84% reported that it would not be difficult to stop using or to go without ecstasy. Interestingly, substantially smaller proportions reported never worrying about their use of ecstasy (58%). This suggests that just under half the group showed some concern recently regarding their use of ecstasy.

## 9.3 Online drug-related activity

For many, use of the internet has become part of everyday life. It is routinely used to find out information, communicate with others, and undertake commercial transactions. It is perhaps unsurprising then, that there is growing concern that those who use illicit drugs will undertake these types of activities with respect to their drug use. Evidence of increasing sales of illicit substances through websites in recent years adds further weight to these concerns:

> *'In recent years, the volume of illicit sales of narcotic drugs and psychotropic substances through websites has risen, making the internet a major source of drugs for drug abusers.' (United Nations, 2009)*

However, little is known about the extent to which illicit drug users in Australia use the internet to find out information about drugs, share information, buy drugs and drug ingredients. Understanding the use of online marketing and knowledge sharing has become more pressing with the increasing trend towards so called 'designer drugs' or research chemicals and drugs marketed as 'legal highs'. Uninformed users may incur health and legal consequences (Schmidt, Sharma, Schifano, & Feinmann, 2011).

Furthermore, there is great potential for the internet and other electronic media to be used as a way of relating health and safety messages (Belenko, et al., 2009). The success of such messages will rely heavily on an increased understanding of the online drug market.

In 2011, REU were asked about online drug-related activity. To place this activity in context, participants were first asked how often they got drugs (in general, not necessarily online) and how often they went online (i.e. generally and not specifically about drugs). The vast majority of participants (81%) reported using the internet daily in the six months preceding

the interview. However, few REU purchased drugs daily. Half of the group purchased them at least weekly, one-quarter purchased them fortnightly and one-fifth monthly.

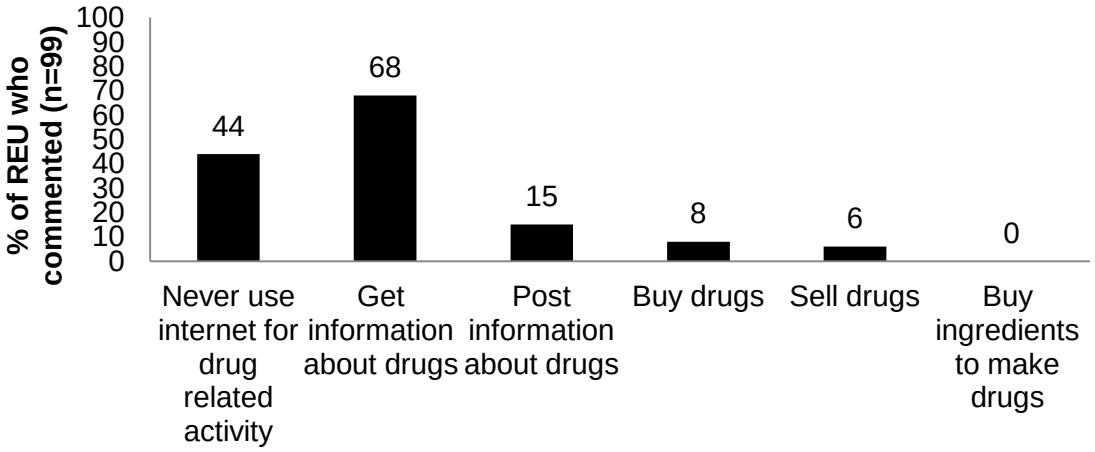
**Table 30: Frequency of obtaining drugs and going online in the previous six months, NSW REU, 2011**

| | Obtained drugs* | Went online |
|---|---|---|
| **Never** | - | 4 |
| **Daily** | 9 | 81 |
| **At least weekly** | 50 | 9 |
| **At least fortnightly** | 23 | 2 |
| **At least monthly** | 18 | 3 |

**Source: EDRS regular ecstasy user interviews 2011**
* In general, that is not necessarily online

Just under half of all participants reported never engaging in any online activity related to drugs in the six months preceding the interview. The majority of those who did use the internet for drug related activity reported using it to gather information about drugs, while some also posted information about drugs. Smaller proportions reported having bought or sold drugs.

**Figure 95: Online drug-related activity in the previous six months, NSW REU, 2011.**




**Source: EDRS regular ecstasy user interviews 2011**
Note: Multiple responses permitted if internet was used for drug-related activities

Among those who did get information about drugs online, the majority (70%) did so monthly or less. The drug most commonly investigated was ecstasy (60%). Those who reported posting information about drugs recently had usually done so on a less than monthly basis. The most common drug which participants wrote posts about was also ecstasy (64%).

**Table 31: Frequency of engaging in online drug related activity in the previous six months among REU, NSW, 2011**

| | Daily | At least Weekly | At least fortnightly | At least monthly | Less than monthly |
|---|---|---|---|---|---|
| **Get information about drugs** | 3 | 13 | 14 | 32 | 38 |
| **Post information about drugs** | 0 | 7 | 7 | 21 | 64 |

**Source: EDRS regular ecstasy user interviews 2011**

Websites were the most commonly used medium for online drug related activity, followed by search engines, online forums and Facebook. Those who used websites were asked what their favourite website was for finding information about drugs and why. Pillreports (www.pillreports.com) was by far the most commonly used website. The most commonly reported reasons for using a particular website were that they were credible (56%), easy to use (50%), up-to-date (49%) and comprehensive (46%).

## 9.4 Sleep

Ecstasy users have differing sleep patterns to controls (Allen, McCann, & Ricaurte, 1993; Carhart-Harris, Nutt, Munafò, & Wilson, 2009). Decreased stage 2 sleep, decreased total sleep time and decreased rapid eye movement (REM) onset latency (ROL) have been recorded in two relatively large samples of ecstasy users (Allen, et al., 1993; McCann, Peterson, & Ricaurte, 2007) .

In 2011, the Pittsburgh Sleep Quality Index (PSQI) combined with additional sleep pattern questions was administered. These questions assess the type of sleep problems experienced within this sample, the extent to which different areas of life are being affected by sleep problems and to examine which medications or substances are being used to treat sleep problems. In a study by Carhart-Harris et al. (2009) ecstasy users scored significantly higher on the global PSQI than controls, however, they were found not to have suffered significant serotonergic damage as indexed by sleep.

The majority of REU in 2011 reported that their overall quality of sleep over the past month had been at least good (63%) and appeared relatively satisfied with their sleep during the week (Table 32). There was a small drop in level of satisfaction with sleep on the weekend which may be associated with changes in routine such as late nights partying, taking drugs etc.

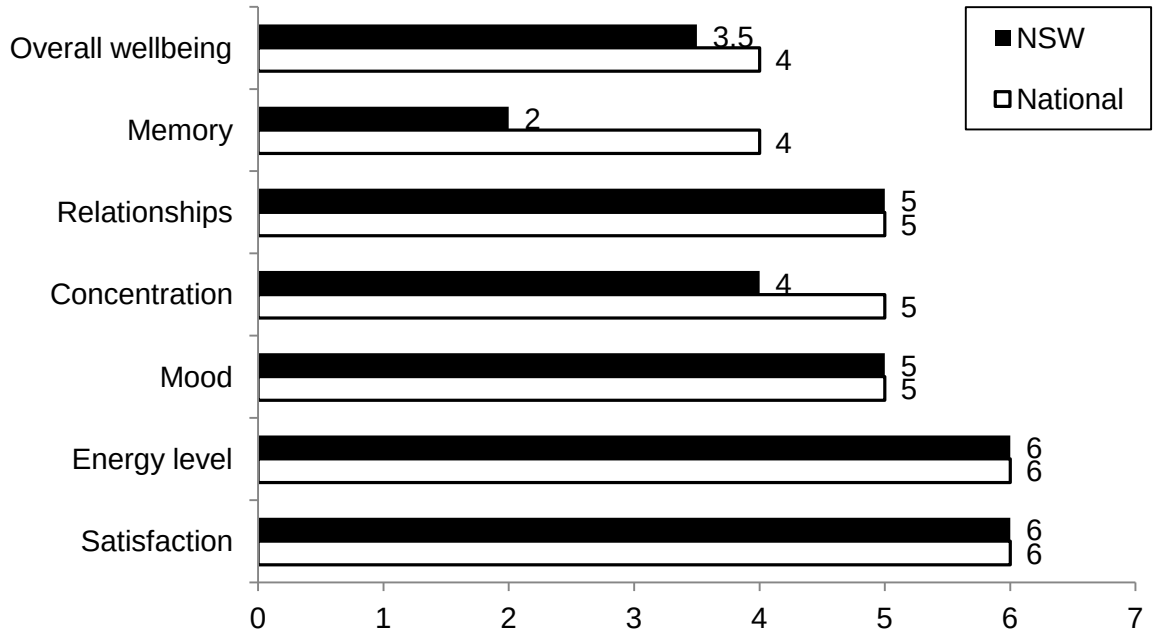
**Table 32: Sleep quality nationally and among NSW REU, 2011**

| | National N=545 | **NSW n=99** |
|---|---|---|
| **Quality of sleep past month (%)** | | |
| Very poor | 5 | **5** |
| Poor | 16 | **10** |
| Fair | 22 | **21** |
| Good | 32 | **38** |
| Very good | 20 | **21** |
| Excellent | 4 | **4** |
| **Satisfaction with Sleep (median out of 10)[#]** | | |
| Weekdays | 7 | **7** |
| Weekends | 6 | **6** |
| **Usual hours of sleep (median; range)** | | |
| Weeknights | 7.5 (1.5-20) | **7.5 (3-14)** |
| Weekends | 6 (3-10) | **7 (0-12)** |
| **Number of hours needed not to feel sleepy (median; range)** | 8 (2-12) | **8 (2-11)** |

**Source: EDRS regular ecstasy user interviews 2011**
[#] 1 very dissatisfied to 10 very satisfied

Almost two-fifths (39%) of the sample reported having a problem with their sleep. The areas most affected by this were their energy levels and overall life satisfaction, and to a lesser extent mood and relationships (Figure 96).

**Figure 96: Self reported problem with sleep and ratings of areas of daily living affected by sleep problems, nationally and among NSW REU, 2011**




**Source: EDRS REU interviews, 2011**
[#] 1 (not at all) through to 10 (to a great extent)

Participants were asked whether they believed their drug use had impacted negatively on the quality of their sleep. Almost half the group (46%) said it had. More than one-fifth (22%) of the group had used sleep medication over the past month. Benzodiazepines (Xanax (n=6) and Valium (n=2)) were commonly used.

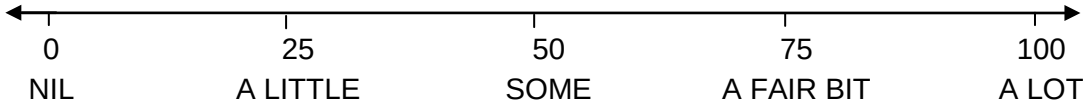
## 9.5 Pleasure, happiness and quality of life scale

There is need to understand more about the extent to which drug use fits into the broader life experiences of the individuals who use drugs. Repeated studies of community samples suggest that family life, close personal relationships and social networks are important factors which are associated with a better or worse quality of life (e.g. Myers and Diener 1996). Little is known about how a person's quality of life might be influenced by their drug use; although there is reason to suspect the effect may be negative (Ventegodt and Merrick 2003), possibly because drug use has a negative impact on family life and social networks.

Drugs are used to enhance the pleasure of the user. The type of pleasure may vary with the drug involved but it would seem evident that using drugs is intended to achieve a particular desired experience (relaxation, stimulation, a feeling of warmth and disinhibition). However, there have been few studies which have documented the extent to which actual use is associated with greater pleasure. Pleasure itself is associated with some related concepts such as happiness and quality of life. Thus experiences of pleasure should lead to greater happiness which, in turn, should lead to a better quality of life. Of course, it is possible that some activities which lead to pleasure may reduce happiness (happiness being a longer

term experience) and even the quality of life. It is possible that drug use enhances the experience of pleasure, has little impact on happiness and a negative impact on the quality of life.

In 2011, REU were asked to complete a scale assessing their overall quality of life from 0 'very bad' to 5 'average' to 10 'excellent'. They were then asked about the extent to which fifteen different aspects of everyday living contributed to their experiences of pleasure, happiness and quality of life[22]. Each aspect was rated on the following a scale from 1-100




The average quality of life (QOL) was 7.7 out of 10 and was fairly comparable for men and women. Table 33 shows the relative contributions of 15 different aspects of daily living to pleasure, happiness and quality of life. The highest ranked activities across all three categories were listening to music, being with friends, having sex, and travel to new places. The lowest ranked activity was cooking. Interestingly, taking drugs and drinking alcohol received comparatively low ranks which decreased as the categories increased in importance (i.e. while drinking alcohol received a median rating of 75 for its contribution to pleasure, it only received a rating of 50 for its contribution to overall quality of life).

**Table 33: Self-reported rating of pleasure, happiness, and quality of life attributed to different aspects of living among REU, NSW, 2011**

| Pleasure Ranking (median, range) | Pleasure | Happiness | QOL |
|---|---|---|---|
| Listening to music | 100 (25-100) | 100 (25-100) | 90 (25-100) |
| Being with friends | 90 (50-100) | 90 (25-100) | 90 |
| Having sex | 90 | 90 | 85 |
| Eating a good meal | 90 | 80 | 80 |
| Having lots of money | 90 | 80 | 78 |
| Travel to new places | 90 | 90 | 80 |
| Good sleep | 80 | 80 | 80 (10-100) |
| Personal achievement | 80 | 80 | 80 |
| Being with my partner | 80 | 80 | 75 |
| Taking drugs | 75 (20-100) | 75 | 60 |
| Being with my family | 75 | 70 | 75 |
| Doing physical activity/exercise | 75 | 75 | 75 |
| Drinking alcohol | 75 | 70 | 50 |
| Work/education/study | 65 | 70 | 75 |
| Cooking | 60 | 50 | 50 |

**Source: REU EDRS interviews, 2011**
Note: Range is 0-100 for all medians unless otherwise stated

[22] The scales were constructed from interview data with university students in which they were asked to report the most important things that influence their pleasure, happiness and quality of life.

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