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J. Miller, C. Rainsford, and S. Lenton

WA TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2010

Findings from the Ecstasy and related Drugs Reporting System (EDRS)

NDARC Technical Report No. 70

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

Jessica Miller, Candice Rainsford and Simon Lenton

National Drug Research Institute

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ABBREVIATIONS

2C-B	2,5-dimethoxy-4-bromophenethylamine
2C-E	2,5-dimethoxy-4-ethylphenethylamine
2C-I	dimethoxy-4-iodophenethylamine
5MEO-DMT	5-methoxy-dimethyltryptamine
ABS	Australian Bureau of Statistics
ABCI	Australian Bureau of Criminal Intelligence
ACC	Australian Crime Commission
ACT	Australian Capital Territory
ADIS	Alcohol and Drug Information Service
AGDH&A	Australian Government Department of Health and Ageing
AIHW	Australian Institute of Health and Welfare
AQFV	Alcohol Quantity Frequency and Variability assessment
AUDIT	Alcohol Use Disorders Identification Test
BBVI	blood-borne viral infections
BZP	benzylpiperazine
CI	confidence interval
DMA	dimethoxyamphetamine
DMT	dimethyltriptamine
DOI	"death on impact"; 2,5-dimethoxy-4-iodoamphetamine
DXM	dextromethorphan
EDRS	Ecstasy and Related Drugs Reporting System
GHB	gamma-hydroxy-butyrate
GP	general practitioner
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
IDRS	Illicit Drug Reporting System
KE	key expert
LSD	*d*-lysergic acid
MDA	3,4-methylenedioxyamphetamine
MDEA	3,4-methylenedioxyethylamphetamine
MDMA	3,4-methylenedioxymethamphetamine
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NSW	New South Wales
PDI	Party Drugs Initiative
PMA	paramethoxyamphetamine
REU	regular ecstasy user
STI	sexually transmitted infection
WA	Western Australia
WHO	World Health Organization

EXECUTIVE SUMMARY

This report presents the results of the Western Australian Ecstasy and Related Drugs Reporting System (EDRS), an ongoing study monitoring ecstasy and related drug markets within WA. It is part of a nationwide study, which commenced in New South Wales, Queensland and Victoria in 2000, with the addition of other states and territories in 2003. The survey design was informed by and modelled upon the pre-existing Illicit Drug Reporting System (IDRS), designed to monitor use of the main illicit drugs in Australia, developing a new survey for monitoring trends in the ecstasy and related drugs market. The current report provides findings for the eighth year of data collection in WA obtained from three sources:

1. quantitative interviews with 100 current regular ecstasy users (REU) residing in the Perth metropolitan area;

2. qualitative interviews with five key experts who have regular contact with ecstasy users and are employed in areas including health, outreach, and law enforcement;

3. analysis of various indicator data from health and law enforcement sources.

Demographic characteristics of regular ecstasy users

For the purpose of this study, REU are a population defined by the use of ecstasy pills, powder or capsules on at least a monthly basis. The sample recruited for the current survey was largely similar to those of previous years. In 2010, 100 regular ecstasy users were interviewed over the scheduled recruitment time.

In the 2010 sample, statistical tests of significance have been conducted between the 2009 and current sample to indicate recent trends in the data. The current sample exhibits demographic characteristics consistent with the 2009 sample, the only exceptions being a decreased proportion of males and an increased mean number of school years.

In 2010, there was a significant decrease in the male proportion of the sample, from 65% in 2009 to 48% in 2010. This is similar to the more equally proportionate numbers of male and female participants as seen in 2008, although historically the WA EDRS sample has been dominated by male respondents. Note that the data were not routinely weighted to control for this change in sample profile as this is not part of the EDRS protocol. However, where there were significant changes in observed drug use patterns and other data from the 2009 to 2010 samples, the data were reanalysed with the sample weighted to control for the gender ratio changes to check that the observed changes were not due to the larger proportion of females in the sample. Where this reanalysis has been done it has been noted in the text.

Almost the entire sample was of English speaking background (99%) and four respondents reported being of Aboriginal and/or Torres Strait Islander descent. There was no change in the mean age (23 years) between the 2009 and 2010 sample.

On average, respondents had completed 11.7 years of schooling, which increased from 11.5 years in 2009 and, controlling for the gender changes in the sample, suggested this was not due to these sample differences. Close to half of the current sample had completed a post-secondary school course (48%), which was comparable to 2009. The proportion of current full-time students was 8%, which was also comparable to 2009.

The proportion of the current sample reporting both studying and being employed remained statistically comparable to last year, from 27% in 2009 to 17% in 2010. Respondents' employment status was also comparable to 2009.

There was no significant change in the proportion reporting current drug treatment from 5% in 2009 to 3% in 2010.

Patterns of drug use among REU

Across survey years, REU represent a sample that consistently engages in polydrug use. In addition to ecstasy use, the majority of the current sample reported use of alcohol (98%), cannabis (81%), tobacco (67%) and pharmaceutical stimulants (58%) in the last six months, with rates of use remaining largely unchanged from last year. Lifetime use of speed, base and crystal methamphetamine represents the lowest proportions since data collection began in 2003. However, controlling for the gender changes in the sample suggested that this may be due to these sample differences.

Lifetime and recent use of cocaine, LSD, MDA, ketamine and GHB remained comparable from 2009 to 2010. Similarly, no significant changes were observed for lifetime or recent use of heroin, methadone, buprenorphine and 'other opiates'.

For the first time in 2009, respondents were asked to report on their use of over-the-counter stimulants, such as cold and flu medications containing pseudoephedrine, for recreational purposes. In 2010, lifetime use of over-the-counter stimulants significantly increased from 19% in 2009 to 36% in 2010, and recent use also increased from 8% in 2009 to 26% of the current sample.

A lifetime history of injection was reported by 10%, and, of these respondents, injection in the last six months was reported by 60% (n=6), neither of which represented a significant change from 2009.

Ecstasy

Some notable changes in patterns of ecstasy use were found in comparison to last year's sample; in particular, decreases were observed in frequency of use and quantities of ecstasy used in a typical session. The proportion reporting use of ecstasy on a weekly basis or more decreased significantly from 29% in 2009 to 14% in 2010. The average amount used in a 'typical' session also decreased significantly from two and a half tablets to approximately two tablets. Controlling for the gender changes in the sample suggested this was not due to these sample differences. There was no significant change in the proportion that reported typically using more than one tablet in a session.

As found in previous years, pills were by far the most common form of ecstasy used and almost the entire sample (94%) nominated swallowing as the main route of administration of ecstasy.

The proportion of the sample reporting use of other drugs to 'come down' from ecstasy decreased significantly, from 54% in 2009 to 39% in the 2010 sample; however, controlling for the gender changes in the sample suggested that this was due to these sample differences. The drugs most commonly used in this context were cannabis, alcohol and tobacco.

In 2010, 'nightclubs' were most commonly reported by respondents as the last location where most time was spent under the influence of ecstasy. The proportion nominating 'nightclubs' was comparable to last year's findings, with 41% in both 2009 and 2010. This was followed by those nominating 'live music events' (14%), 'own home' (12%) and 'private parties' (10%) as the last location of recent ecstasy use.

The greatest proportion of REU (38%) nominated 'enhanced mood' as the biggest benefit they perceived to be associated with their ecstasy use.

Price, purity and availability of ecstasy

In 2010, the median price of a tablet was again $35, which decreased from $40 to $35 for the first time in 2009 and again represents the lowest median ecstasy price per pill since data collection began in 2003. In current and previous years, price during the previous six months was rated as 'stable' by the majority of respondents (56% in 2010). The greatest proportion of the current sample rated the current purity of ecstasy 'low' (45%) compared to the greatest proportion reporting 'fluctuates' in 2009 (45%). Purity during the previous six months was rated by the greatest proportion of current respondents as 'decreasing' (42%) compared to 'fluctuating' in 2009 (39%). Currently ecstasy is predominantly perceived as 'easy' to obtain, compared to 'very easy' last year. Availability over the last six months was rated as 'stable' by 54% of the current sample.

'Friends' have consistently been the most common person from whom ecstasy is obtained, with 63% of the current sample reporting the last person they purchased from was a 'friend'. Accordingly, 'friend's home' is the most commonly reported last location for obtaining ecstasy, as reported by 36% of the current sample. Among the current sample, ecstasy was purchased from a median of three people in the previous six months with a median of five tablets being purchased at a time. Ecstasy was most commonly purchased for 'self and others' (69%).

Methamphetamine

In 2010, lifetime use of speed (60%), base (8%) and crystal methamphetamine (40%) all represent the lowest proportions since data collection began. However, controlling for the gender changes in the sample suggested that the decline in 2010 was due to these sample differences. Recent use of speed powder (38%) and base (4%) and crystal methamphetamine (22%) remained comparable to 2009. The average number of days speed was used in the previous six months was comparable to last year, with seven days in 2009 compared to six days in 2010. This represents the lowest average number of days used rates since data collection began and controlling for the gender changes in the sample suggested this was not due to these sample differences. Crystal methamphetamine was used approximately eight days in the last six months, which did not significantly differ from approximately nine days in 2009. The median amount of speed used in a 'typical' session significantly decreased from one gram in 2009 to 0.5 grams in 2010 and the median amount of crystal methamphetamine used in a 'typical' session also significantly decreased from two points in 2009 to one point in 2010. Controlling for the gender changes in the sample suggested that this was not due to these sample differences. These findings suggest that a pattern of declining methamphetamine use may be occurring.

Methods of use differed across forms, as found in previous years. Snorting remained the most common route of administration for speed (84%), with the proportion nominating this route remaining comparable to 2009 (87%). Injecting and swallowing were the most

common routes of administration for base, each reported by two each of the four recent users of this form. Smoking remained the most common route of administration for crystal methamphetamine, reported by 82% of current respondents which was similar to figures reported in 2009. There were no notable differences in the proportion reporting injecting as a route of administration for all forms of methamphetamine from last year's sample.

The median price per 'point' (0.1 gram) for speed and crystal methamphetamine has consistently remained at $50 across all survey years. The median price for a gram of speed was $300 compared with $275 in 2009. Two participants commented on the price of a gram of base, with a median cost of $300. The median price of a gram of crystal methamphetamine was $400, which was comparable to last year. With regards to changes in the price of methamphetamine during the previous six months, the majority of respondents reported the price as 'stable' for speed and crystal methamphetamine.

Current purity of speed was rated as 'medium' and crystal methamphetamine was rated as 'high' by the greatest proportion of those responding. With regards to changes to purity in the last six months, the majority of respondents reported the purity as 'stable' for both speed and crystal forms. Base purity was not reported due to only a small sample size. 'Friends' were the most common last persons from whom methamphetamine was purchased across all forms and 'friend's home' was the most common location for purchasing for speed; however, 'dealer's home' was more commonly reported for crystal methamphetamine. The greatest proportion of the current sample rated current availability of speed and crystal as either 'easy' or 'very easy' (86% and 93% respectively).

Cocaine

Lifetime use of cocaine was reported by 49% of the current sample, which was comparable to 52% in 2009, and recent use was reported by 26% of the current sample, which was comparable to 24% in 2009. The average number of days cocaine was used in the last six months amongst those recent users was 11 days; this did not significantly differ from last year. Almost all respondents reported snorting as the most common method of administration (92%), and 'nightclubs' were reported by the greatest proportions as the last location where most time was spent under the influence (71%).

The median price per gram of cocaine was $365 in 2010 compared to $375 in 2009. The majority of current respondents reported the current price of cocaine was 'stable' (60%), which was comparable to 2009. The greatest proportion reported the purity of cocaine as 'medium' (57%) compared to the greatest proportion reporting 'low' in 2009 (44%). The greatest proportion of the sample reported cocaine purity over the six months preceding interview to be 'fluctuating' (43%). In 2010 current cocaine availability was equally nominated as 'very easy' and 'easy' by 43% of the sample. Among the current sample, 'friends' were reported as the most common person from whom cocaine was purchased and 'own home' and 'nightclub' were equally reported as the location of purchase.

Ketamine

Rates of ketamine use have been consistently low among REU in WA with less than one in seven respondents reporting lifetime use. In 2010, lifetime use (14% in 2010 versus 18% in 2009) and recent use (4% in 2010 versus 6% in 2009) of ketamine remained relatively unchanged. Of the four respondents who used ketamine in this period, the average number of days of use was approximately three in 2010, compared to

approximately one in 2009. Only one respondent commented on price, purity and availability of ketamine.

LSD

There was a significant decrease in lifetime use of LSD from 69% in 2009 to 48% in 2010 and controlling for the gender changes in the sample suggested this was not due to these sample differences. There was no significant change in recent use of LSD, reported by 35% in 2010 compared with 31% in 2008. The median number of days LSD was used in the preceding six months was two days in 2010 compared to three days in 2009. All REU who had used LSD in the last six months nominated swallowing and no other routes of administration were reported in 2010. 'Own home' (30%) was reported as the most common last location where most time was spent under the influence.

The median price of LSD remained unchanged at $25 per tab. Ratings of current LSD purity were also comparable across years, with more than half the samples rating it as 'high' (43%). In 2010, 52% of respondents nominated the current availability of LSD as 'easy' to obtain. 'Friends' were nominated by the majority as the most common person for purchasing LSD across years.

Cannabis

Prevalence of cannabis use has been consistently high among REU samples in WA across survey years. Patterns of cannabis use among the current sample were comparable to those found last year. In 2010, lifetime use was reported by 99%, the same proportion as the 2009 sample, and recent use by 81% (85% in 2009). Frequency of use significantly decreased from an average of 81 days in 2009 to 60 days in 2010; however, controlling for the gender changes in the sample suggested this was due to these sample differences.

The median price per ounce of hydroponic cannabis was $350 in 2009 and 2010, and the median price per ounce of bush cannabis was $280 in both 2009 and 2010. Price during the last six months was reported as 'stable' by 67% for hydroponic cannabis and 84% for bush cannabis. Current purity of hydroponic was rated by the majority as 'high' (55%) and for bush as 'medium' (52%). Purity of both forms was rated by the majority as 'stable' (69% for hydroponic versus 60% for bush). The greatest proportion of the sample reported current availability of both forms of cannabis as 'very easy', 53% for hydroponic and 48% for bush. Availability of both forms of cannabis during the last six months was rated as 'stable' by 79% of the sample for hydroponic and 70% for bush cannabis. 'Friends' and 'friend's home' were the most common person and locations for purchasing both forms of cannabis. 'Home' was reported by over half of recent cannabis users as the most common last location where most time was spent under the influence of both forms of cannabis.

Patterns of other drug use

Across survey years, alcohol use has been reported by almost the entire sample and remained prevalent among current REU. In 2010, lifetime use of alcohol was reported by 100% of the sample and use during the last six months by 98%. During this period, alcohol was used a median of 48 days, which equates to twice a week.

For the first time in 2009, the Alcohol Quantity Frequency and Variability Assessment (AQFV) was included in the EDRS to measure quantity and frequency of alcohol use while taking into account variability of this over the course of the year. It has three categories: a) typical drinking; b) regular changes, e.g. weekends; and c) occasional

changes, e.g. festivals, parties. Each drinking day was then defined as either: a) low risk (up to six drinks for males or four for females); b) risky (from seven to ten drinks for males or five to six for females); or c) high risk (11 drinks and above for males or seven and above for females) according to NHMRC guidelines (National Health and Medical Research Council 2001). A significant difference was found between men and women and the number of days per year for low risk drinking (104 and 53 days respectively). No significant difference was found in the number of high risk and risky drinking between males and females, although males did consume significantly more drinks per drinking session than females.

The AUDIT (Saunders et al. 1993) was completed by REU participants in 2010. The AUDIT was designed by the World Health Organization (WHO) as a brief screening scale to identify individuals with alcohol problems. Total scores of eight or more are recommended as indicators of hazardous and harmful alcohol use. Four-fifths of males (81%) and three-fifths of females (62%) scored eight or more.

In 2010, the EDRS included questions examining the use of energy drinks in the context of alcohol and/or ecstasy and other illicit substance use. Just over half (54%) of the 2010 sample reported consuming energy drinks with alcohol in the last six months. This represents a significant decrease from 2009 when 72% of the sample reported consuming energy drinks with alcohol. On the last occasion, respondents had consumed an average of three energy drinks mixed with alcohol. In the REU sample, of recent energy drink and alcohol consumers, the majority (72%) had reported consuming energy drinks with an illicit substance, primarily ecstasy. Many (56%) also reported the practice of combining energy drinks, an illicit substance and alcohol at least some of the time. Seventy percent of the sample reported that they had experienced a negative effect which they related to the consumption of energy drinks with alcohol, energy drinks with ecstasy or all three substances. The most common negative symptoms across all three groups were headaches, heart palpitations and being 'on edge'.

In regards to tobacco, both lifetime and recent use remained comparable to the 2009 sample with 84% in 2010 reporting lifetime use of tobacco compared to 92% in 2009, and 67% in 2010 reporting use of tobacco in the last six months compared to 76% in 2009. Among those that used tobacco in the last six months, the median number of days used was 90, which decreased by half the median number of days reported in 2009. Controlling for the gender changes in the sample suggested this was not due to these sample differences.

Rates of GHB use remained low among REU in WA. In 2010, three respondents reported lifetime use of GHB and no respondents reported use of GHB in the last six months.

In 2010, lifetime and recent use of MDA has remained relatively unchanged from the previous year. Lifetime use was reported by 11% of the current sample compared to 9% in 2009, and recent use was reported by 5% of the current sample compared to 2% in 2009.

Pharmaceutical stimulants, such as dexamphetamine and methylphenidate, were included in the survey as a distinct drug class in 2005 and separated into illicit and licit (i.e. prescribed) use in 2007. In 2010, lifetime use of any pharmaceutical stimulants remained stable with 84% in 2010 compared to 82% in 2009. Among these respondents, 99%

reported illicit use and 7% reported licit use. Use of pharmaceutical stimulants during the last six months (illicit and licit) was also comparable to last year, with 61% of the current sample reporting use in the last six months compared to 60% in 2009. Among those reporting lifetime use and recent use of pharmaceutical stimulants, 95% used illicitly (i.e. without prescription). Frequency of use during this period also remained comparable with a median of six says in 2010 compared to four days in 2009.

With regards to use of other pharmaceutical medicines, there was no significant change seen in both lifetime and recent use of benzodiazepines. Lifetime use was reported by 44% in 2009 (41% in 2009) and recent use was reported by 28% in 2009 (22% in 2009). Use of benzodiazepines was also separated into illicit and licit use, with illicit use more common than licit use.

Use of anti-depressants was similar across survey years, with lifetime use reported by 24% of current REU (21% in 2009) and use in the last six months by 10% of current REU (6% in 2009). The median number of days used during the past six months remained comparable at 180 days (165 days in 2009). Unlike pharmaceutical stimulants and benzodiazepines, anti-depressant use was predominately licit.

Participants were also asked about the use of inhalants amyl nitrate and nitrous oxide. Use of amyl nitrate remained similar across years, with lifetime use reported by 20% of the sample in both 2009 and 2010 and use in the last six months by 5% of current REU (6% in 2009). Lifetime use of nitrous oxide was reported by 39% of the sample in both 2009 and 2010 and use in the last six months by 16% of current REU (13% in 2009).

Use of opiates remained generally uncommon. In 2010, there were no significant differences seen in lifetime and recent use of heroin from last year, with only 4% reporting lifetime use of heroin compared to 6% in 2009. Use of heroin in the last six months was also comparable with 3% reporting use in 2010, compared to 2% in 2009. There were no significant changes in either lifetime or recent use of methadone and buprenorphine. In 2010, 3% reported lifetime use of methadone compared to 4% in 2009. Two current respondents had used methadone in the last six months, compared to one in 2009. In 2010, 2% reported lifetime use of buprenorphine, the same proportion as in 2009. One respondent reported use of buprenorphine in the last six months in 2010, compared to none in 2009. Use of 'other opiates', such as morphine, pethidine and over-the-counter medications containing codeine, has fluctuated over survey years. In 2010 no significant changes occurred, with 27% reporting lifetime use of 'other opiates' compared to 20% in 2009. In 2010, 10% of the sample reported use of 'other opiates' in the last six months, the same proportion as in 2009. Lifetime use of over-the-counter codeine was reported by 29% of respondents in 2010, compared to 20% in 2009. From the current sample, 22% reported use of over-the-counter codeine in the six months preceding interview, compared to 15% in 2009.

Rates of lifetime and recent use of hallucinogenic mushrooms among current REU were similar to that reported last year. Lifetime use was reported by 43% of current REU (50% in 2009) and use during the last six months was reported by 12% of current REU (15% in 2009).

For the first time in 2009, respondents were asked to report on their use of over-the-counter stimulants, such as cold and flu medications containing pseudoephedrine, for recreational use. In 2010, 36% reported lifetime use of over-the-counter stimulants; a

significant increase from 19% in 2009. From the current sample, 26% reported use of over-the-counter stimulants in the last six months. This was a significant increase from only 8% in 2009. Controlling for the gender changes in the sample suggested this was not due to these sample differences.

For the first time in 2010, REU were asked to report on steroid use. Only one respondent reported ever using steroids and no respondents reported recent use.

The most common recently used research chemicals reported in 2010 were BZP (25%), mephedrone (16%) and DMT (8%). The 2010 WA EDRS sample had the highest recent use of BZP (25%) compared to other states (4.5%). It is unclear whether this is due to the current purity and availability in WA or due to issues with reporting.

Health-related issues

Since 2007, REU were asked about overdose on a stimulant drug and on a depressant drug. Overdose on a stimulant drug in the last 12 months was reported by 21% of the current sample compared to 16% last year, and overdose on a depressant drug was reported by 29% in 2010, which was a significant increase compared to 15% in 2009 and controlling for the gender changes in the sample suggested this was not due to these sample differences. The most commonly implicated stimulant drug was ecstasy, while the most commonly implicated depressant drug was alcohol.

In 2010, 17% of REU reported accessing a medical or health service in relation to their drug use during the last six months. The most common services accessed were GP (44%) and psychologist (31%).

The Kessler Psychological Distress Scale was included in the EDRS from 2006 as a screening tool for symptoms of depression and anxiety. In comparison to the 2009 sample, there was a significant increase in the proportion in the 'no or low distress' category, from 43% in 2009 to 58% in 2010 and controlling for the gender changes in the sample suggested this was not due to these sample differences.

Questions regarding mental health problems were included for the first time in the 2008 EDRS. This included asking participants whether they had had any mental health problems (including self-diagnoses) in the last six months. In 2010, 27% of respondents reported having a mental health problem in the last six months. From these respondents, the most common mental health issue specified was depression (78%). Of the 27 respondents who identified with having a mental health problem in the past six months, 14 (52%) had attended a health professional and eight had been prescribed anti-depressant medication in the last six months.

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

For the first time in 2010, participants were asked their height and weight. With this information Body Mass Index (BMI) was calculated among the sample. BMI is divided into 4 groups: (1) 'underweight' – less than 18.5, (2) 'normal weight' – 18.5 to less than 25.0, (3) 'overweight' – 25.0 to less than 30.0, or (4) 'obesity' – 30.0 and greater. The mean BMI for the sample was 24.6, which is at the higher end of the 'normal weight' range.

In 2010, REU participants were asked if they had been tested for sexually transmitted infection (STI) in the last two years. Among the sample who commented, over half (54%) reported that they had been tested in the last two years for a STI by means of a blood test, urine sample or swab, while one-third (36%) reported that they had not considered taking a sexual health test. Two-thirds of the female sample (67%) reported obtaining a pap smear test in the last two years.

Risk behaviours

Respondents reported on risk behaviours related to injecting, blood-borne viruses, sexual practices, driving behaviour and alcohol use. In 2010, the proportions reporting lifetime and recent injection were comparable to last year. Lifetime injection was reported by 10% of the current sample (11% in 2009) and injecting in the last six months was reported by 60% (n=6) of those who had ever injected compared to 46% in 2009. In 2010, the most common drug ever injected and recently injected was speed followed by crystal methamphetamine, which was comparable to previous samples.

Fifty-eight percent of the sample reported that they have never been vaccinated for hepatitis B virus (HBV). Of the sample, 74% reported that they had never been tested for either HCV or HIV.

In 2010, respondents were asked to report how often condoms or gloves were used with regular and/or casual partners in the last six months. Of the current sample, more than half (65%) reported engaging in penetrative sex with a regular partner in the last six months and 58% reported engaging in penetrative sex with a casual partner in the last six months. The greatest proportion of those who had had penetrative sex with a casual partner reported having two partners in the last six months. Of those who had regular partners 51% reported 'never' using a protective barrier during penetrative sex, whereas 57% of those who had regular partners reported 'never' using a protective barrier when under the influence of drugs and alcohol. Of those engaging in penetrative sex with a casual partner, the greatest proportion reported using a protective barrier 'every time' by 41% whilst sober and 34% whilst under the influence of drugs and alcohol.

Of the current sample, 84% had driven a car in the last six months. Among these respondents, 61% reported driving whilst affected by alcohol and 73% reported driving over the legal alcohol limit, findings which were comparable to the previous year. The median number of times these respondents had driven over the alcohol limit in the last six months was four times, (i.e. on average once every six weeks). Just under half reported that they had undergone roadside breath testing in this period (44%) and, of these respondents, 14% (n=5) reported being over the legal blood alcohol limit when tested, compared to 18% in 2009.

Of the current sample that had driven in the last six months, 58% reported driving within one hour of taking a drug. Of these respondents, the median number of times driven under the influence of a drug was five times. The most commonly reported drugs were ecstasy (71%, n=35) and cannabis (55%, n=27). Of those who had driven soon after taking drugs, 43% (n=21) reported their drug use had 'no impact' on their driving. In 2010, four respondents were roadside drug tested and all results were negative.

Criminal and police activity

The proportion of REU reporting criminal activity in 2010 was 35%, compared to 38% last year. Of these respondents, 'drug dealing' was the most commonly reported activity (24%) and, of those that had dealt drugs, most engaged in this activity less than once a week (54%). Of the current sample, 13% had been arrested in the last 12 months, compared to 19% in 2009. Among current respondents, the most common reasons for arrest reported were property crime and alcohol and driving offences.

The greatest proportion of the sample perceived police activity to have 'increased' (37%) in the last six months, compared to 42% reporting it had 'increased' in 2009. The majority of the sample (71%) reported that police activity did not make scoring drugs more difficult.

Commencing in 2006, REU were asked about the use of sniffer dogs by law enforcement personnel. In 2010, 51% of the sample reported seeing sniffer dogs in the last six months compared to 42% in 2009. The majority of respondents in both years had seen sniffer dogs on one occasion during this period. Of those who had seen sniffer dogs, 34 respondents reported being in possession of drugs when they saw a sniffer dog. Of these respondents, 65% (n=22) reported that they kept going about their business. No respondents reported being positively identified for drugs by a dog.

Implications

Many demographic characteristics of the 2010 sample were similar to those of the 2009 sample; however, there was a significant decrease in the male proportion of the sample. Historically the WA EDRS sample has been dominated by male respondents. Because of this significant change, where significant results were found, the impact of the gender change in the sample was controlled for by weighting the sample.

In 2010, decreases were observed in the frequency of use and quantities of ecstasy used by the sample. The proportion reporting ecstasy use on a weekly basis or more decreased significantly, as did the average amount used in a 'typical' session, and controlling for the gender changes in the sample suggested this was not due to these sample differences. The greatest proportion of the current sample rated current ecstasy purity as 'low' and purity during the previous six months as 'decreasing' and this may have contributed to REU using ecstasy less and in smaller quantities.

Despite the significant reduction in the frequency of use and reported purity of ecstasy, there has been no decrease in its price, and while ecstasy may remain the 'drug of choice' among the current sample, they rate it as less easily available than did the 2009 sample. How these market and drug use variables relate to each other is unclear at present. If ecstasy purity remains low, it is possible that a shift to other stimulant drugs like cocaine and emerging psychoactive substances such as BZP and mephedrone may be seen in the future. While 2010 is the first year these emerging psychoactive substances have been looked at in detail, it will be interesting to monitor trends in coming years. If a trend away from ecstasy use does eventuate, this may have implications for recruiting participants to the EDRS.

It appears that the proportion of the sample reporting use of other drugs to 'come down' from ecstasy may be significantly lower than 2009 because of the larger proportion of

females in the 2010 sample compared to previous years, as males were significantly more likely than females to use other drugs during 'comedown'.

In 2010, lifetime use of speed, base and crystal methamphetamine all represent the lowest proportions since data collection began; however, this appeared to largely be due to the increased proportion of females in the 2010 sample compared to previous years.

The high level of alcohol use among the current REU sample is of concern. The majority of the sample obtained AUDIT scores that indicate hazardous and harmful use of alcohol. Alcohol was the main drug reported for depressant overdose, which increased significantly in 2010 compared to 2009. Reported symptoms included vomiting, losing consciousness and collapsing. In addition, almost three-quarters of the sample reported using alcohol with ecstasy and, among these respondents, the majority reported consuming more than five standard drinks.

Among the sample who had recently consumed energy drinks with alcohol, the majority reported consuming energy drinks with an illicit substance, primarily ecstasy. Many also reported the practice of combining energy drinks, an illicit substance and alcohol at least some of the time. Seventy percent of the sample reported that they had experienced a negative effect which they related to the consumption of energy drinks with alcohol, energy drinks with ecstasy or all three substances. The most common negative symptoms across all three groups were headaches, heart palpitations and being 'on edge'.

Despite the negative symptoms associated with alcohol and combining it with stimulants such as ecstasy and energy drinks this practice appears common among current REU. These findings have implications for harm reduction strategies directed at regular ecstasy users to reduce stimulant overdose and/or dehydration from combining ecstasy with energy drinks and alcohol.

In 2010, there was a significant increase in the proportion of REU using over-the-counter stimulants, such as cold and flu medications containing pseudoephedrine, for recreational purposes. This has implications for public education and targeted campaigns about the risks of using over-the-counter preparations among regular ecstasy users and other groups.

1. INTRODUCTION

The Ecstasy and Related Drugs Reporting System (EDRS) is an ongoing project funded by the Australian Government Department of Health and Ageing modelled upon the more established Illicit Drugs Reporting System (IDRS). As the focus of the IDRS was upon injecting drug users, it did not directly acknowledge the distinct population regularly using ecstasy and related drugs. Consequently, in 2000, NDLERF funded a two year, two state trial of the feasibility of monitoring emerging trends in the markets for ecstasy and related drugs using the extant IDRS methodology. The EDRS terms of reference are the drugs that are routinely associated in the context of entertainment venues such as nightclubs or dance parties. This includes drugs such as ecstasy, amphetamines, cocaine, LSD, ketamine, MDA (3-4methylenedioxyamphetamine) and GHB (gamma-hydroxy butyrate). This marked the beginning of the Party Drugs Initiative (PDI), which became a national survey in 2003 and was re-named the Ecstasy and Related Drugs Reporting System (EDRS) in 2006.

The current report presents the findings of the eighth year of data collection for the PDI/EDRS in WA. Like the IDRS, results are based on three data sources: interviews with current illicit drug users (in this case regular ecstasy users); key expert interviews with professionals who have contact with these users; and the collation of secondary indicator data. Also consistent with the paradigm of the IDRS as an 'early warning system', participants resided in the capital city, reflecting the likelihood that emerging trends in illicit drug markets are more likely to occur initially in large cities rather than regional centres or rural areas.

1.1. Study aims

The specific aims of the WA EDRS 2010 were to:

1. describe the characteristics of a sample of current, regular ecstasy users in Perth;
2. examine patterns of ecstasy and other drug use among this sample;
3. document market aspects of ecstasy and related drugs in Perth, such as price, purity and availability;
4. examine participants' experiences of the nature and incidence of ecstasy-related harm including physical, psychological, financial, social and legal harms;
5. compare key findings of this study with those reported in previous years (2003-2009); and
6. identify emerging trends in the ecstasy and related drug markets that may require further investigation.

2. METHOD

A triangulated approach was used for the EDRS to provide an indication of emerging trends in use of ecstasy and related drug markets. Using such multiple data sources minimises the impact of biases inherent in each source and permits validation of observed trends across the different data sources. The three main sources of information used to document trends were:

1. a survey of regular ecstasy users comprised of face-to-face interviews;
2. a key expert survey of professionals working in the field using semi-structured qualitative interviews; and
3. examination of existing indicator data, such as statistical data collected from legal and health services.

2.1. Survey of regular ecstasy users

There is an established market for ecstasy (tablets that are purported to contain 3, 4-methylenedioxymethamphetamine; MDMA) that has existed for more than a decade. According to the 2007 National Drug Strategy Household Survey (NDSHS) (AIHW 2008), its use among Australians over 14 years of age has increased from 0.9% in 1995 to 3.5% in 2007; however, ecstasy use has not changed significantly from the 2004 survey. In Western Australia, 4.1% of the general population reported use of ecstasy during this time period, making it the state with the second highest use of ecstasy after the ACT (4.7%). For the purposes of the present study, the sentinel population consisted of regular users of pills, powder or capsules sold as 'ecstasy'.

2.1.1. Recruitment

One hundred regular ecstasy users were interviewed for the 2010 EDRS in WA, all of whom reported they had lived in the Perth metropolitan area for more than 12 months. Participants were recruited through a purposive sampling strategy (Kerlinger 1986), which included: advertisements in entertainment street press; flyers distributed at cafes, music stores, clothing stores and universities; dance scene related websites and online forums; and participant snowballing techniques as described by Barnard (1995). Ethics approval was granted from the Curtin University Human Research Ethics Committee (HR25/2007) with a stipulation that interviews be conducted with participants aged 16 years or older.

2.1.2. Procedure

In 2010, potential participants contacted the research coordinator by either telephone, SMS (trialled for the first time in 2009) or by a generic email address and were then screened for eligibility only on the telephone. Participants were asked to leave either a first name/or pseudonym and a contact phone number if they contacted the coordinator via SMS or email. Three criteria were to be met for participation:

1. use of ecstasy at least monthly over the previous 6 months;
2. aged 16 years or older; and
3. resident in the Perth metropolitan area for minimum of 12 months prior to interview.

Participants meeting these criteria were informed that the study consisted of a confidential face-to-face interview conducted at a public place of convenience for both

parties. It was explained that the structured interview would take approximately 45 to 60 minutes to complete, and that all data were collected anonymously. In 2010, participant reimbursement remained at $40 to cover participants' time and travel expenses to attend the interview. Upon meeting the interviewer, the nature and purpose of the study was again explained to participants, and informed consent was obtained. All interviewers were trained in administration of the specific interview schedule.

2.1.3. Measures

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

2.1.4. Data analysis

Quantitative data from the regular ecstasy user survey were analysed using PASW Statistics 18 for Windows. For continuous variables, t-tests were conducted and, for categorical variables, confidence intervals (CI) were calculated using an Excel spreadsheet available at http://www.cebm.net/index.aspx?o=1023 (Tandberg 2010). Higher and lower CI results which crossed over the value of zero were not significant. This calculation tool was an implementation of the optimal methods identified by Newcombe (Newcombe 1998). Qualitative data collected from the regular ecstasy users and 'key experts' were analysed using the word processing and table-making options of Microsoft Word 2003. As there was a significant increase in the proportion of females in the 2010 sample compared to 2009, where significant results were found, the impact of the gender change in the sample was controlled for by weighting the sample to produce a M:F gender ratio of 65:35.

2.2. Survey of key experts

To maintain consistency with the central IDRS, eligibility criterion for 'key experts' (KE) participating in the EDRS was regular contact in the course of employment with a range of ecstasy users. Regular contact was defined as average weekly contact and/or contact with ten or more ecstasy users throughout the past six months. Five KE from professions in law enforcement, health and counselling participated in the WA EDRS 2010.

2.3. Other indicators

Secondary data sources were examined to complement and validate the data collected from both the REU and KE interviews. Data sources included in this report are from:

- the 2007 National Drug Strategy Household Survey (NDSHS);
- Australian Crime Commission (ACC) – drug purity and seizure data, arrest data;

- Australian Institute of Health and Welfare (AIHW) – hospital admissions; and
- telephone advisory service data from the Alcohol and Drug Information Service (ADIS).

3. OVERVIEW OF REGULAR ECSTASY USERS

3.1. Demographic characteristics of the regular ecstasy users sample

Interviews were conducted with 100 regular ecstasy users (REU) in the Perth metropolitan area between May and August 2010. Table 1 presents key demographic data for the current and previous samples of REU recruited in WA. Demographic characteristics of the 2010 REU sample were mostly similar to those of the 2009 sample. The mean age of the REU sample was approximately 23 years in both 2009 and 2010. There was a significant decrease in the proportion of males in the 2010 sample (48%) compared with 2009 (65%) (95%CI 0.06, 0.33). This is similar to the more equally proportionate numbers of male and female participants as seen in 2008, although historically the WA EDRS sample has been dominated by male respondents (see Table 1). Like in previous samples, the majority of participants across the years have been heterosexual in orientation. Approximately half of the 2010 sample reported their relationship status as 'single' (53%), compared to 60% in 2009. Also consistent is the minimal representation of participants of Aboriginal and/or Torres Strait Islander descent and almost the entire sample across years spoke English as their main language. Similar to last year, approximately half the sample reported residing in rented premises (45%), followed by living in their parents' or family's house (44%). Proportions of the sample with a previous conviction or in current drug treatment have remained low across sample years.

One characteristic related to education varied from those found last year. The mean number of school years in the current sample increased from 11.5 years in 2009 to 11.7 years in 2010 ($t=-2.903$, $df=99$, $p=.005$) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Fewer than half the sample (48%) had completed a tertiary qualification with 23% possessing a university/college degree and 23% a trade/technical qualification. The number of full-time students in the sample was comparable to last year, with 13% in 2009 compared to 8% in 2010. The proportion of the sample currently both employed and studying was also comparable to last year, with 27% in 2009 compared to 17% in 2010.

In the 2009 EDRS sample, respondents were asked for the first time to report their average wage/salary (before tax) per week. From the current sample, $467 was the average income per week. The proportion of the 2010 sample currently in drug treatment was comparable to last year, with 5% in 2009 and 3% in 2010.

Key expert comments

Key experts tended to talk about ecstasy use in relation to young people. One health key expert commented that in the last year an increase in emergency department presentations had been observed due to an adulterated ecstasy pill causing serious medical and cardiac issues.

Table 1: Demographic characteristics of WA REU samples, 2003-2010

Variable	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Mean age (years)	21.4	22	22.7	24.7	26.4	22.9	23.1	**23.4**
Male (%)	53	59	58	60	55	48	65	**48***
English speaking background (%)	99	97	99	95	95	98	97	**99**
ATSI (%)	9	1	3	2	1	0	2	**4**
Heterosexual (%)	83	89	90	86	88	97	84	**86**
Mean number school years	12.1	11.5	11.5	11.5	11.5	11.8	11.5	**11.7***
Tertiary qualifications (%)	48	49	57	51	52	59	46	**48**
Full-time students (%)	16	21	14	19	3	3	13	**8**
Employed full-time (%)	33	31	33	52	24	55	22	**31**
Employed part-time (%)	16	22	35	13	38	12	23	**29**
Both studying and employed	-	-	-	-	-	24	27	**17**
Unemployed (%)	22	24	15	14	25	5	15	**13**
Mean income per week	-	-	-	-	-	-	$425	**$467**
Previous imprisonment (%)	4	16	2	8	8	3	8	**2**
Current drug treatment (%)	5	6	6	5	8	3	5	**3**

Source: WA PDI/EDRS regular ecstasy user interviews 2003-2010
* Significant at alpha level 0.05

3.2. Drug use history and current drug use

Respondents were asked about lifetime (ever used) and recent use (last 6 months) of a variety of drugs, as presented in Table 2. Polydrug use has been common among REU samples and the average number of drugs used by the current sample was comparable to that of the previous year. The majority of the sample reported recent use of alcohol (98%), cannabis (81%), tobacco (67%) and pharmaceutical stimulants (58%); although no notable changes occurred from the 2009 sample with any of these drug forms.

The prevalence of use of different drugs in the current sample remained similar compared to last year's sample. Lifetime use of speed (60%), base (8%) and crystal (40%) represent the lowest prevalence of methamphetamine use since data collection began in WA in 2003. However, controlling for the gender changes in the sample suggested that this may be due to these sample differences. (See Section 5 on methamphetamine for more detailed analyses.)

Lifetime and recent use of cocaine, LSD, MDA, ketamine and GHB remained comparable from 2009 to 2010. Similarly, no significant changes were observed for lifetime or recent use of heroin, methadone, buprenorphine and 'other opiates'.

For the first time in 2009, respondents were asked to report on their use of over-the-counter stimulants, such as cold and flu medications containing pseudoephedrine, for recreational purposes. In 2010, lifetime use of over-the-counter stimulants significantly increased from 19% in 2009 to 36% in 2010 (95%CI -0.29, -0.05), and recent use also increased from 8% in 2009 to 26% of the current sample (95%CI -0.28, -0.08) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Small proportions of REU samples have reported use of drugs other than those listed in Table 2. In 2010, recent use of other drugs such as BZP (25%), mephedrone (16%) and DMT (8%) were also reported (see Section 10 on 'other drugs' for more detailed analyses).

Respondents were also asked about their injecting history for which no notable changes were observed. The proportion ever injected in 2010 (10%) was similar to last year (11%) and the proportion of these who had recently injected did not significantly increase compared to last year, from 46% in 2009 to 60% in 2010 (See Section 12.1, 'Injecting risk behaviours', for further analyses.)

Table 2: Lifetime and recent polydrug use of WA REU samples, 2003-2010

	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever inject any drug (%)	21	22	22	20	27	10	11	**10**
Alcohol								
ever used (%)	99	99	99	100	97	100	100	**100**
used last 6 months (%)	94	92	98	99	92	98	99	**98**
Cannabis								
ever used (%)	99	97	99	100	96	100	99	**99**
used last 6 months (%)	91	85	83	86	80	85	85	**81**
Tobacco								
ever used (%)	83	84	86	97	79	90	92	**84**
used last 6 months (%)	70	73	72	74	52	69	76	**67**
Methamphetamine powder (speed)								
ever used (%)	93	88	94	87	72	72	63	**60**
used last 6 months (%)	83	78	85	65	46	38	37	**38**
Methamphetamine base (base)								
ever used (%)	54	46	59	56	22	22	13	**8**
used last 6 months (%)	32	31	38	32	10	5	3	**4**
Crystal methamphetamine (crystal)								
ever used (%)	91	89	88	89	69	62	41	**40**
used last 6 months (%)	77	80	69	77	52	36	20	**22**
Pharmaceutical stimulants								
ever used (%)	-	-	89	92	71#	85#	82#	**83#**
used last 6 months (%)	-	-	74	60	53#	53#	60#	**58#**
Cocaine								
ever used (%)	44	36	57	55	56	66	52	**51**
used last 6 months (%)	17	16	35	29	27	40	24	**26**

Table 2: Lifetime and recent polydrug use of WA REU samples, 2003-2010 (continued)

LSD								
ever used (%)	62	50	71	67	49	47	55	**48**
used last 6 months (%)	22	11	35	25	23	21	31	**35**
MDA								
ever used (%)	12	19	19	6	22	16	9	**11**
used last 6 months (%)	1	6	11	0	3	5	2	**5**
Ketamine								
ever used (%)	25	21	25	14	22	21	18	**14**
used last 6 months (%)	12	10	11	4	2	3	6	**4**
GHB								
ever used (%)	20	11	10	5	8	7	7	**3**
used last 6 months (%)	8	5	3	2	0	2	2	**0**
Amyl nitrate								
ever used (%)	43	36	46	34	27	21	20	**20**
used last 6 months (%)	16	15	17	8	7	3	6	**5**
Nitrous oxide								
ever used (%)	65	62	63	57	46	48	39	**39**
used last 6 months (%)	43	43	34	23	20	21	13	**16**
Mushrooms								
ever used (%)	-	-	53	53	46	45	50	**43**
used last 6 months (%)	-	-	14	13	14	10	15	**12**
Benzodiazepines								
ever used (%)	48	35	49	57	48#	36#	41#	**44#**
used last 6 months (%)	32	29	39	32	37#	24#	22#	**28#**
Anti-depressants								
ever used (%)	30	25	32	29	26#	17#	21#	**24#**
used last 6 months (%)	17	13	13	14	13#	9#	6#	**10#**

Table 2: Lifetime and recent polydrug use of WA REU samples, 2003-2010 (continued)

Heroin								
ever used (%)	10	13	15	10	16	3	6	**4**
used last 6 months (%)	1	8	6	1	10	2	2	**3**
Methadone								
ever used (%)	1	4	8	4	12	5	4#	**3#**
used last 6 months (%)	1	1	3	2	6	0	1#	**2#**
Buprenorphine								
ever used (%)	6	4	5	3	10	3	2#	**2#**
used last 6 months (%)	4	1	2	1	4	2	-#	**1#**
Other opiates								
ever used (%)	31	18	41	24	35	24	20	**17**
used last 6 months (%)	17	10	27	13	21	12	10	**10**
Over-the-counter codeine								
ever used (%)	-	-	-	-	-	-	20	**29**
used last 6 months (%)							15	**22**
Over-the-counter stimulants								
ever used (%)	-	-	-	-	-	-	19	**36***
used last 6 months (%)							8	**26***
Steroids								
ever used (%)	-	-	-	-	-	-	-	**1**
used last 6 months (%)								**0**

Source: WA PDI/EDRS regular ecstasy user interviews 2003-2010

includes licit and/or illicit use

* Comparison with last year's results significant at alpha level 0.05

3.3. Summary of polydrug use trends in regular ecstasy users

- As found in previous survey years, polydrug use was prevalent among the current sample of regular ecstasy users.
- Over half the current sample reported recent use of alcohol, cannabis, tobacco and pharmaceutical stimulants. Lifetime and recent use rates for all these drug forms were comparable to last year's findings.
- There was a significant increase in both lifetime and recent use of over-the-counter stimulants compared to 2009 and controlling for the gender changes in the sample suggested this was not due to these sample differences.

4. ECSTASY

Ecstasy is the term used in popular street culture for the drug MDMA, or 3, 4-methylendioxymethamphetamine. This drug is classed as a hallucinogenic amphetamine and commonly associated with what was previously termed the 'party drug' scene.

4.1. Ecstasy use among regular ecstasy users

Presented in Table 3 are key findings regarding ecstasy use in the samples recruited over the last eight years in WA. The average age at which participants first used ecstasy has remained at 18 years since 2008. The proportion reporting ecstasy as their 'drug of choice' remained similar this year, with 45% in 2010 compared to 42% in 2009. The second most commonly nominated 'drug of choice' was alcohol (14%), followed by cannabis (11%).

Some changes in patterns of ecstasy use were found in comparison to last year's sample; in particular, decreases were observed in frequency of use and quantities of ecstasy used by the 2010 sample. The proportion reporting use of ecstasy on a weekly basis or more decreased significantly from 29% in 2009 to 14% in 2010 (95%CI 0.04, 0.26) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The average amount used in a 'typical' session also decreased significantly from two and a half tablets to approximately two tablets (t=-5.341, df=99, p=.000) and controlling for the gender changes in the sample suggested this was not due to these sample differences. There was no significant change in the proportion that reported typically using more than one tablet in a session.

Swallowing was consistently reported as the main route of administration and was reported by 94% of the sample in 2010; the remaining respondents reported 'snorting' (5%) and 'injecting' (1%) as the main route of administration. Similar to the 2009 sample, only 6% of the sample reported ever injecting ecstasy; however, numbers currently reporting ever injecting ecstasy were significantly less than those found in samples prior to 2008.

As found in previous years, the vast majority of the sample (84%) reported using other drugs with ecstasy; however, the proportion of the sample reporting use of other drugs to 'come down' from ecstasy decreased significantly, from 54% in 2009 to 39% in the 2010 sample (95%CI 0.01, 0.28) (Table 3). Controlling for the gender changes in the sample suggested this was due to these sample differences.

Table 3: Patterns of ecstasy use among REU, 2003-2010

	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Mean age first used ecstasy (years)	18	18	18	19	20	18	18	**18**
Mean days used ecstasy last 6 months#	16	16	20	21	16	13	12	**14**
Ecstasy 'favourite' drug (%)	52	44	51	41	46	38	42	**45**
Use ecstasy weekly or more (%)	25	21	30	35	27	10	29	**14***
Mean ecstasy tablets in 'typical' session	1.7	2.2	1.7	2.0	1.8	2.1	2.5	**2.1***
Typically use >1 tablet (%)	57	61	68	70	54	74	86	**81**
Recently binged on ecstasy or related drugs (%) ~	38	38	40	45	29	22	40	**27**
Ever injected ecstasy (%)	10	14	10	12	14	7	4	**6**
Main route of administration of ecstasy in the last 6 months (%) Swallow Snort Inject Shelve/shaft^	 90 - - -	 93 - - -	 95 3 2 -	 98 1 - 1	 95 5 - -	 91 9 - -	 99 1 - -	 **94** **5** **1** **-**

Table 3: Patterns of ecstasy use among REU, 2003-2010 (continued)

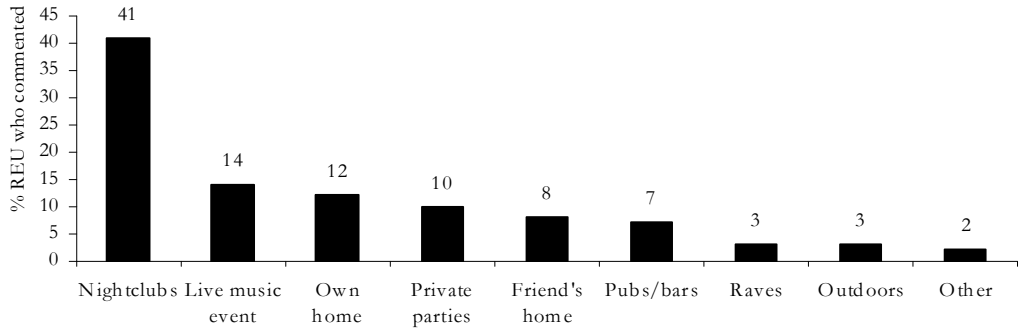
Typically use other drugs in conjunction with ecstasy (%)	85	86	90	94	93	97	73	**84**
Typically use other drugs to 'come down' from ecstasy (%)	76	80	86	86	86	90	54	**39***

Source: WA PDI/EDRS regular ecstasy user interviews 2003-2008
~ 'Binge' defined as use of ecstasy for more than 48 hours continuously without sleep
^ 'Shelve/shaft' defined as use via insertion into vagina (shelving) or the rectum (shafting)
# Used ecstasy pills and/or powder
* Significant at alpha level 0.05

4.2. Last location of ecstasy use

For the first time in 2009, respondents were asked to report on the last location (where most time is spent under the influence) of most recent ecstasy use, as shown in Figure 1. 'Nightclubs' were reported by the majority as the last location of use for ecstasy. This was followed by those nominating 'live music events' (14%), 'own home' (12%) and 'private parties' (10%) as the last location of recent ecstasy use.

Figure 1: Last location where most time was spent intoxicated by ecstasy by REU, WA 2010



Source: EDRS REU interviews 2010

4.3. Perceived benefits of ecstasy use

In 2010, participants were asked for up to three of the biggest benefits they perceived to be associated with their ecstasy use; this data is presented in Table 4. The most commonly reported benefits to taking ecstasy were 'enhanced mood' by 38% of the sample. This was closely followed by 'enhanced appreciation of music and/or dance' by 37% of respondents and 'enhanced closeness/bonding/empathy with others' by 36%. The responses gained were very similar to the perceived benefits to ecstasy use described

in the PDI (subsequently the EDRS) reports between 2003 and 2006 which can be located at http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/EDRS.

Table 4: Perceived benefits of ecstasy use, WA 2010

Variable	2010 (N=100)
Enhanced mood (e.g. euphoria/wellbeing/happiness)	38
Enhanced appreciation of music and/or dance	37
Enhanced closeness/bonding/empathy with others	36
Enhanced communication/talkativeness/more social	33
The high/rush/buzz	33
Increased energy/stay awake	23
Fun (enjoyable night/good time)	22
Increased confidence/decreased inhibitions	14
Drug effects (e.g. hallucinations/insight/creativity/heightened senses)	9
Relax/escape/release	7
Enhanced sexual experience	6
Feeling in control/focused	5
Cheap	2
Other	1

Source: EDRS REU interviews 2010

4.4. Use of other drugs with ecstasy and during comedown

Among REU reporting use of other drugs with ecstasy (n=84), those most typically used were alcohol (86%, n=72), tobacco (38%, n=32) and cannabis (37%, n=31). Among those reporting they use drugs to 'come down' from ecstasy (n=39) the most common were cannabis (82%, n=32), alcohol and tobacco (both 28%, n=11) and benzodiazepines (18%, n=7).

Almost three-quarters of the current sample (72%) reported using alcohol with ecstasy in the last six months, compared to 58% in 2009. Among these respondents, 31% (n=22) reported usually consuming less than five standard drinks with ecstasy, with the remaining 69% (n=50) reported consuming more than five standard drinks with ecstasy. During comedown, 11% of the sample reported drinking alcohol, which was the same in 2009. Among these respondents in 2010, 55% (n=6) reported typically consuming less than five standard drinks, whilst the remaining 45% (n=5) reported consuming more than five standard drinks whilst coming down from ecstasy.

Almost one-third of the 2010 sample (32%) reported using tobacco with ecstasy compared to 49% last year. Of those reporting use of drugs during 'comedown', 28% (n=11) reported tobacco use compared to 22% last year. Approximately one-third of the current sample (31%) reported using cannabis with ecstasy, compared to 30% in 2009. Among those reporting use of drugs during 'comedown' from ecstasy, 82% (n=32) reported using cannabis compared to 41% in 2009.

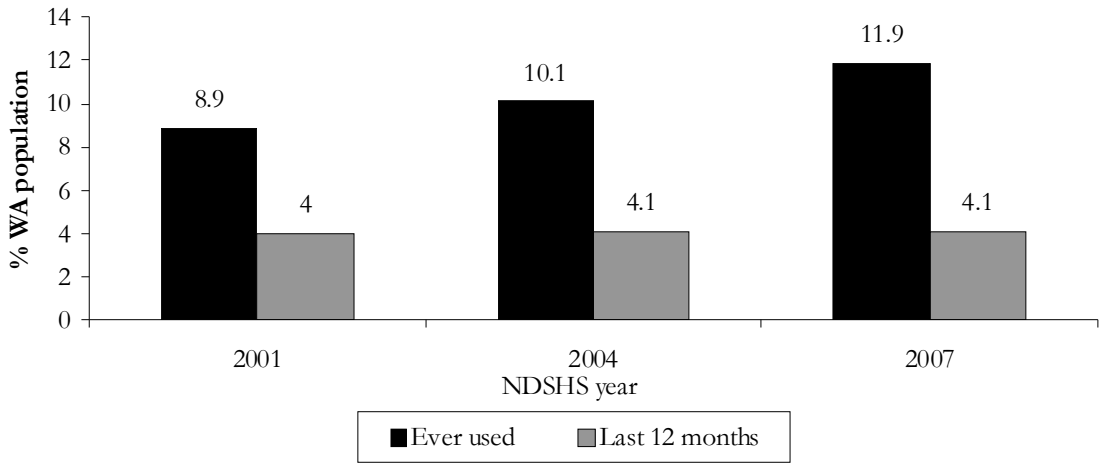
Among those reporting use of pharmaceutical stimulants with ecstasy, 17% of the 2010 sample reported use in the last six months, which was the same as in 2009. In 2010, no respondents reported use of pharmaceutical stimulants to come down from ecstasy. No respondents reported using amyl nitrate with ecstasy or during comedown. One respondent reported using nitrous oxide with ecstasy and one respondent reported using nitrous oxide during comedown.

One respondent reported using heroin with ecstasy and one respondent reported use of heroin during comedown from ecstasy. No respondents reported using benzodiazepines whilst under the influence of ecstasy. In contrast, 7% of those reporting use of other drugs to come down from ecstasy reported using benzodiazepines at this time, which is the same as in 2009.

4.5. Use of ecstasy in the general population

The National Drug Strategy Household Survey (NDSHS) has been conducted at various intervals in Australia since 1988. As shown in Figure 2, in Western Australia lifetime use of ecstasy reported in this survey has steadily increased from 2001 to 2007, whereas recent use has remained comparable. In Western Australia (WA), ecstasy was reported as a drug used in the last 12 months by 4% of those aged 14 years and over. WA was the state with the second highest use of ecstasy in the general population after ACT (4.7%) (AIHW 2008).

Figure 2: Prevalence of ecstasy use among the population aged 14 years and over in Western Australia, 2001-2007



Source: National Drug Strategy Household Survey State and Territory supplement 2001-2007

4.6. Summary of patterns of ecstasy use

- The mean age of first ecstasy use in the EDRS sample was approximately 18 years which did not alter from the mean age of the 2009 sample.
- The proportion reporting ecstasy as their favourite drug was comparable to last year, with 45% in 2010 compared to 42% in 2009.
- 94% of the entire sample consumed ecstasy orally.
- There was a significant decrease in the proportion reporting use of ecstasy on a weekly basis or more (29% in 2009 versus 14% in 2010) and controlling for the gender changes in the sample suggested this was not due to these sample differences.
- There was also a significant decrease in the average amount of ecstasy pills used in a 'typical' session, from two and a half tablets in 2009 to approximately two tablets on average in 2010 and controlling for the gender changes in the sample suggested this was not due to these sample differences.
- Of those reporting use of other drugs with ecstasy (n=84), 86% (n=72) reported alcohol use and, among these, 69% (n=50) reported consuming more than five standard drinks.
- Of those who reported using other drugs with ecstasy (n=84), 37% (n=31) reported use of cannabis while 82% (n=32) of those who reported using other drugs during 'comedown' (n=39) reported use of cannabis.
- 'Nightclubs' were the most common last location that ecstasy was used.
- The greatest proportion of REU (38%) nominated 'enhanced mood' as the biggest benefit they perceived to be associated with their ecstasy use.

4.7. Price

In 2010, all 100 respondents reported on the price of ecstasy tablets in Perth and three reported on the price of ecstasy capsules. Median price per tablet and perceived price change across data collections in WA are shown in Table 5. In 2010, the median price of a tablet was $35 (range $20-$50), which was reported for the first time in 2009 and again represents the lowest median ecstasy price per pill since data collection began in 2003. In 2010, 56% reported the price over the previous six months was 'stable', followed by smaller proportions nominating 'increased' and 'decreased' (both 18%) and 'fluctuated' (5%). Those three respondents that also commented on ecstasy capsules reported a median price of $35 per capsule (range $24-$35), which was comparable to 2009 ($35, n=6).

Table 5: Price of ecstasy tablets purchased by REU and price variations, 2003-2010

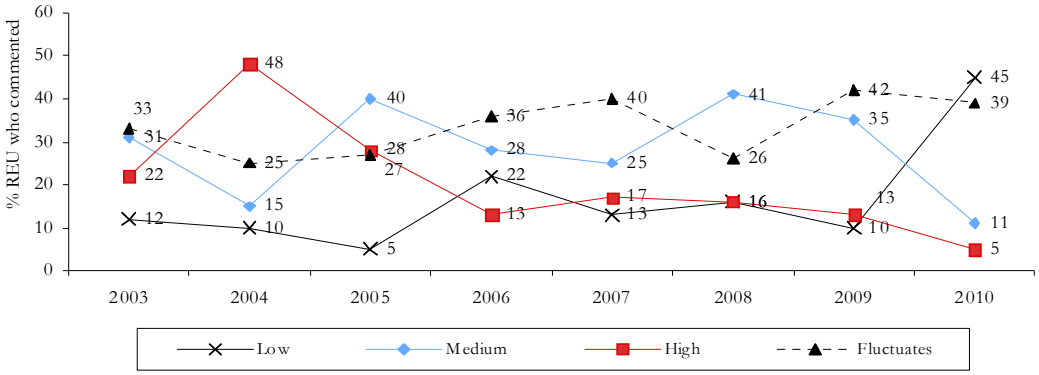
	2003	2004	2005	2006	2007	2008	2009	**2010**
Median price per tablet (range)	$40 (25-50)	$50 (25-60)	$40 (30-50)	$40 (25-50)	$40 (30-50)	$40 (20-45)	$35 (17-50)	**$35 (20-50)**
Price change:								
Increased (%)	10	4	5	6	11	17	9	**18**
Stable (%)	68	62	66	61	59	48	52	**56**
Decreased (%)	12	19	22	19	16	19	25	**18**
Fluctuated (%)	6	13	7	12	9	10	9	**5**
Don't know (%)	4	2	-	2	5	5	5	**3**

Source: WA PDI/EDRS REU interviews 2003-2009

4.8. Purity

As shown in Figure 3, the highest proportion of respondents in 2010 (45%) rated the current purity of ecstasy as 'low' unlike last year when 'fluctuates' was most commonly rated by respondents. After 'low', participants rated current purity of ecstasy as 'fluctuates' (39%), 'medium' (11%) and then 'high' (5%).

Figure 3: User reports of current ecstasy purity, 2003-2010

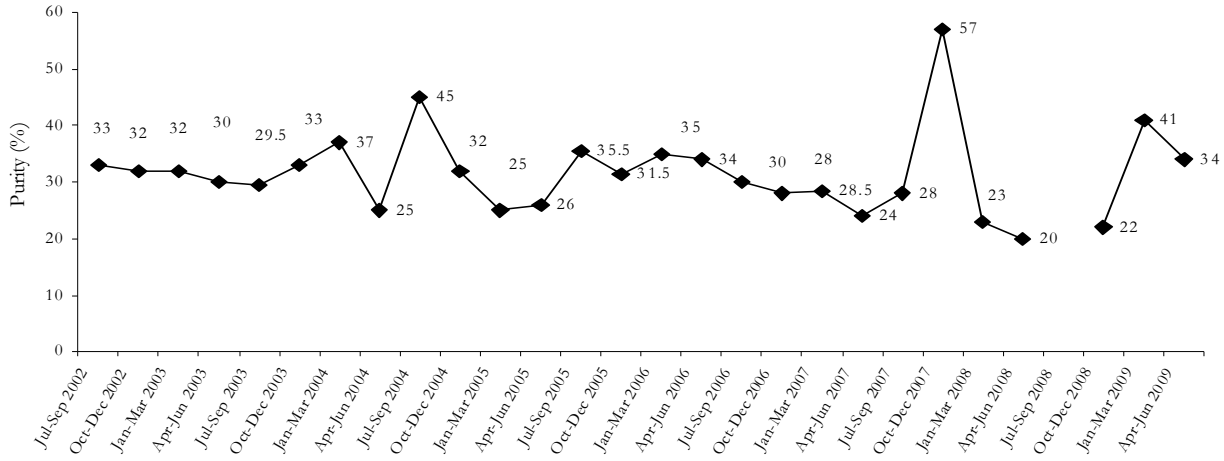


Source: WA PDI/EDRS REU interviews 2003-2010

REU were asked about changes in purity over the preceding six months. In 2010, the greatest proportion rated purity as 'decreasing' (42%) during this period, 29% rated purity as 'fluctuating' followed by 'stable' (21%), then 'increasing' (4%) and by 'don't know' (4%). Overall, it may be suggested that purity of ecstasy in the current Perth drug market is viewed as low and decreasing, which may have contributed to REU using ecstasy less frequently and in smaller quantities.

Purity estimates by users are subjective perceptions and laboratory analyses of ecstasy seizures provide a more objective assessment. However, it must be noted that seizures analysed do not represent a random or comprehensive sample of all seizures made. Figure 4 shows the median purity of phenethylamine seizures in WA according to data provided by the WA State Police and Australian Crime Commission (figures from July-September 2008 were not available). Interestingly, purity levels dramatically increased during October-December 2007 to a median of 57%, more than doubling the purity of the previous quarter and representing the highest purity level so far. In saying that however, the lowest purity level (20%) was observed during April-June 2008. There is some indication in the two most recent quarters that purity may have slightly increased in the first half of 2009. These figures suggest that a diverse range in purity levels of phenethylamines exist in WA and reflect the perceptions of REU in the 2010 sample.

Figure 4: Median purity of phenethylamines seizures in WA by quarter, July 2002 to June 2009



Source: Australian Crime Commission (latest figures: Australian Crime Commission 2010)

4.9. Availability

All respondents commented on the availability of ecstasy in 2010 and responses across survey years are presented in Table 6. In 2010 a significantly lower proportion of respondents rated the current availability of ecstasy as 'very easy', with 22% reporting in 2010 compared to 61% in 2009 (95%CI 0.26, 0.50). The most common response for the current availability of ecstasy was 'easy' by 58% of the current sample. In 2010, over half the sample (54%) rated availability over the last six months as 'stable' which was comparable to 62% in 2009.

Table 6: REU reports of ecstasy availability in the preceding six months, 2003-2010

	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (n=99)	2008 (N=58)	2009 (n=98)	**2010 (N=100)**
Current availability								
Very easy (%)	61	54	62	47	30	52	61	**22**
Easy (%)	26	38	35	42	59	41	35	**58**
Availability								
Stable (%)	63	64	72	55	65	59	62	**54**
Easier (%)	16	15	16	17	10	24	20	**7**

Source: WA PDI/EDRS REU interviews 2003-2010

Across survey years, 'friends' were most frequently reported as the most common person from whom ecstasy was obtained from on the last purchase occasion, nominated by 63% of the current sample, compared to 79% in 2009 (95%CI 0.03, 0.28). This was followed by reporting 'acquaintances' (17%), 'known dealers' (15%), and 'workmates' (2%) as the last person to obtain ecstasy from. Consistent with the above, 'friend's home' was the most commonly reported last location for scoring (36%), followed by 'own home' (18%), 'agreed public location' (14%), 'nightclub' (10%) and 'dealer's home' (8%).

As shown in Table 7, the median number of people ecstasy was purchased from in the preceding six months was three in 2010, as it was in 2009. A median of five tablets was purchased at a time in 2010, which was the same in 2009. Reports of who REU purchased tablets for 'self and others' were similar across the survey years with the majority buying ecstasy for 'self and others' (69%). There has been an evident downward trend towards less frequent purchasing in the last six months with the greatest proportion reporting purchasing ecstasy one to six times in the last six months, compared to the greatest proportion purchasing seven to twelve times (46%) in 2009. In 2010, the next greatest proportion (31%) reported purchasing ecstasy seven to twelve times in the last six months. There was also a decrease in the proportion reporting purchasing ecstasy 13-24 times in the last six months from 21% in 2009 to 8% in 2010.

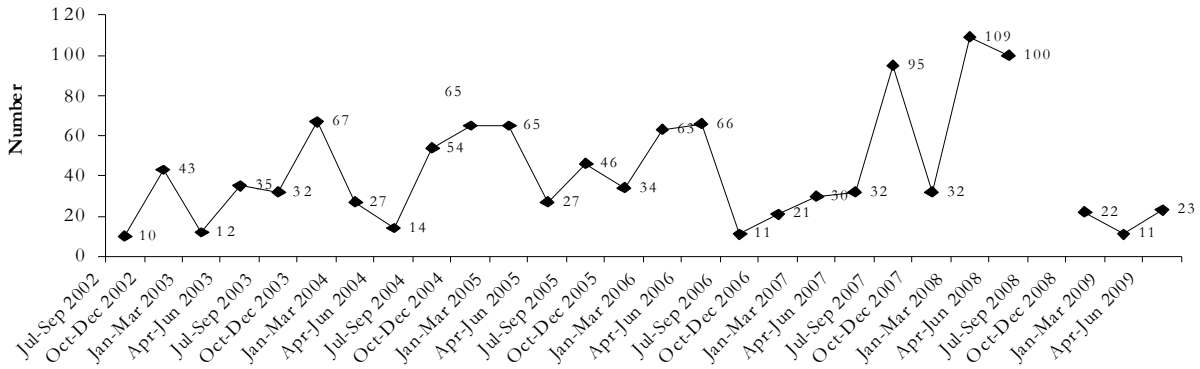
Table 7: Patterns of purchasing ecstasy, 2005-2010

	2005 (N=100)	2006 (N=100)	2007 (n=98)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Median no. of people purchased from	4 (0-20)	3 (0-30)	3 (0-20)	4 (1-15)	3 (1-55)	**3 (1-20)**
Median no. of ecstasy tablets purchased	4 (1-100)	5 (1-100)	6 (1-100)	6(1-100)	5 (1-100)	**5 (1-100)**
Purchased for (%)						
Self only	26	22	25	22	22	**30**
Self and others	71	77	70	78	75	**69**
Others only	1	-	-	-	3	**1**
Didn't buy ecstasy	-	1	5	-	-	**-**
No. of times purchased in the last 6 months (%)						
1-6	35	37	53	60	31	**61**
7-12	42	32	25	35	46	**31**
13-24	17	28	16	5	21	**8**
25 +	3	1	1	-	2	**-**
None	-	-	5	-	-	**-**

Source: WA PDI/EDRS REU interviews 2005-2010

Figure 5 shows the number of phenethylamine seizures analysed by WA State Police, which has fluctuated over time (figures from July-September 2008 were not available). The latest figures indicate a decrease in the number of seizures of phenethylamines analysed from October 2008 to June 2009 compared to those from early 2008.

Figure 5: Number of phenethylamines seizures in WA by quarter, July 2002 to June 2009



Source: Australian Crime Commission

Key expert comments

In regards to the price, purity and availability of ecstasy in Perth over the 12 months preceding interview, KE commented that pills sold as ecstasy, or that look like ecstasy, often contained amphetamine or were BZP.

A key expert from a law enforcement background reported they had been informed from REU that the price of ecstasy is $50 if purchased on their own, but can be as low as $20 if purchased in bulk and that more young people are becoming involved in the justice system as a result of purchasing large quantities of ecstasy to distribute.

One KE reported that recent seizures of ecstasy in Australia may have contributed to overall decreases in ecstasy purity in the Perth metropolitan area in the last 12 months. This KE suggested that, as a result of these seizures, cocaine and emerging psychoactive substances such as BZP and mephedrone may have compensated for this gap in the market.

It was reported by a KE from a law enforcement background that increased quantities of the ecstasy available in Perth are arriving from the eastern states.

4.10. Summary of ecstasy trends

- The median price of ecstasy was $35 a tablet.
- Just over half the sample (56%) rated price as 'stable' in the previous 6 months.
- The greatest proportion of the current sample rated current ecstasy purity as 'low' and purity during the previous six months as 'decreasing'. This proportion had significantly increased from 2009, suggesting a perceived decrease in the purity of ecstasy in the previous 12 months.
- Availability was most commonly reported as 'easy'.
- Of the current sample, 54% rated availability over the last six months as 'stable'.
- 'Friends' (63%) and 'friend's home' (36%) remained the most commonly nominated most recent persons and locations for purchasing ecstasy.
- The majority of the current sample reported usually buying ecstasy for 'themselves and others' (69%).
- Ecstasy was purchased from a median of three people in the last six months, and a median of five tablets was obtained per occasion.
- The most common number of times ecstasy was reportedly bought in the last six months was 1-6 times (61%), suggesting a decreasing trend in the frequency of purchasing ecstasy since 2009.

5. METHAMPHETAMINE

Methamphetamine became a primary focus of the IDRS in 2001, in recognition of its increasing prevalence over amphetamine during the 1990s. These drug types differ in molecular structure but have a similar effect of stimulating the release of monoamines such as dopamine, noradrenaline, adrenaline and serotonin in the body (Seiden, Sobol & Ricaurte 1993). Throughout the 1980s, amphetamine sulfate was the dominant form of illicit amphetamine in Australia but, due to legislative controls on the availability of primary precursor chemicals, there was a shift toward alternative recipes for 'cooking' amphetamine (Wardlaw 1993). During the 1990s, the proportion of amphetamine-type substance seizures that were methamphetamine (rather than amphetamine) steadily increased until methamphetamine clearly dominated the market (ABCI 1999; ABCI 2000; ABCI 2001). Across Australia today, the powder traditionally known as 'speed' is almost exclusively methamphetamine rather than amphetamine. For example, in the 2006/07 financial year, of the 4,396 seizures of (non-phenethylamine) amphetamine-type seizures analysed for purity in Australia, 97.9% (by number) were methamphetamine rather than amphetamine (ACC 2008).

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

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

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

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

5.1. Methamphetamine use among regular ecstasy users

5.1.1. Methamphetamine powder

Table 8 presents patterns of use of methamphetamine powder, or 'speed', since data collection began in WA in 2003. Lifetime use of speed (60%) represents the lowest prevalence of use since data collection began in WA in 2003. Recent use, at 38%, has remained stable since 2008. The average number of days speed was used in the previous six months was comparable to last year, with seven days in 2009 compared to six days in 2010. This represents the lowest average number of days used rates since data collection began.

The median amount of speed used in a 'typical' session significantly decreased from one gram in 2009 to 0.5 grams in 2010 ($t=-4.525$, $df=13$, $p=.001$) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The median amount used in a heavy session did not significantly differ from one gram in 2009 to 1.5 grams in 2010. Among those who reported recent use of speed (38%), snorting was the most common method of use reported by 84% (n=32), which was comparable to 2009 findings. Reported use by swallowing significantly increased, from 24% in 2009 to 34% in 2010 (95%CI -0.42, -0.06) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The proportion reporting injecting as a route of administration did not significantly change from 11% in 2009 to 13% in 2010. There was no significant change in reporting smoking of speed powder as a route of administration with 32% reporting in 2009 and 29% in 2010.

Table 8: Patterns of methamphetamine powder (speed) use of REU, 2003-2010

Speed	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used (%)	93	88	94	87	72	72	63	**60**
Used preceding six months (%)	83	78	85	65	46	38	37	**38**
Of those who had used Mean days used last 6 months	16	18	15	13	19	15	7	**6**
Median quantities used (grams)								
Typical (range)	0.2 (0.01-2)	0.5 (0.1-5)	0.5 (0.1-2)	0.35 (0.1-1)	0.1 (0.1-1)	0.4(0.2-.50)	1(0.25-1)	**0.5(0.1-1)***
Heavy (range)	0.6 (0.1-10)	0.5 (0.1-20)	1 (0.1-6)	0.5 (0.1-8)	0.3 (0.1-7)	0.5(0.25-7)	1(.25-10)	**1.5(0.25-4)**

Source: WA PDI/EDRS REU interviews 2003-2010
* Comparison with 2009 significant at alpha level 0.05

5.1.2. Methamphetamine base

Lifetime and recent use rates of methamphetamine base did not significantly differ from 2009. In 2010, 8% reported lifetime use of base compared to 13% in 2009, and 22% in 2008. Recent use was not significantly different to last year, from 3% in 2009 to 4% in the current sample. Base was used on a median of 2.5 days in the last six months (range 1-12).

The median amount used in a typical session was one point in both 2009 and 2010, as was the median amount used in a heavy session. Among those who had used in the last six months, the most common routes of administration reported were injecting and swallowing, each reported by 50% (n=2) respondents. Smoking was also reported by one respondent. No further analysis was performed for base amphetamine due to extremely small sample numbers.

5.1.3. Crystal methamphetamine

As shown in Table 9, both lifetime and recent use of crystal methamphetamine remained similar to 2009. The average number of days used in the last six months was approximately eight days in 2010 compared with approximately nine days in 2009; however, this was not a significant decrease. The median number of days crystal was used in the last six months was six (range 1-24) compared to 2.5 days in 2009 (range 1-48).

The median amount used in a typical session halved from two points in 2009 to one point in 2010 (t=-3.098, df=13, p=.008) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The amount used in a heavy session remained at two points. Of those who reported use of crystal in the preceding six months (22%), the most common route of administration remained smoking, reported by 82% (n=18) compared with 80% in 2009. Snorting was the next most common route of administration, reported by 41% (n=9) in 2010, compared to 50% (n=10) in 2009. Swallowing was reported by 27% (n=6), compared to 10% (n=2) in 2009. Injecting was reported by 18% (n=4) in 2010 compared with 20% (n=4) in 2009.

Table 9: Patterns of crystal methamphetamine use of REU, 2003-2010

Crystal	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used (%)	91	89	88	89	69	62	41	**40**
Used last six months (%)	77	80	69	77	52	36	20	**22**
Of those who had used								
Mean days used last 6 months	17.4	22.2	14.1	13.6	27.7	11.9	9.2	**7.9**
Median quantities used (points)								
Typical (range)	1 (0.1-10)	2 (0.33-10)	1 (0.1-40)	1 (0.5-10)	1 (0.1-5)	1(0.1-3)	2(0.25-5)	**1(0.1-4)***
Heavy (range)	2.5 (0.1-50)	2 (0.33-48)	3 (0.25-40)	2 (0.5-40)	2 (0.2-5)	1(0.1-8)	2(0.25-8)	**2(0.4-8.5)**

Source: WA PDI/EDRS REU interviews 2003-2010
*Comparison with 2009 significant at alpha level 0.05

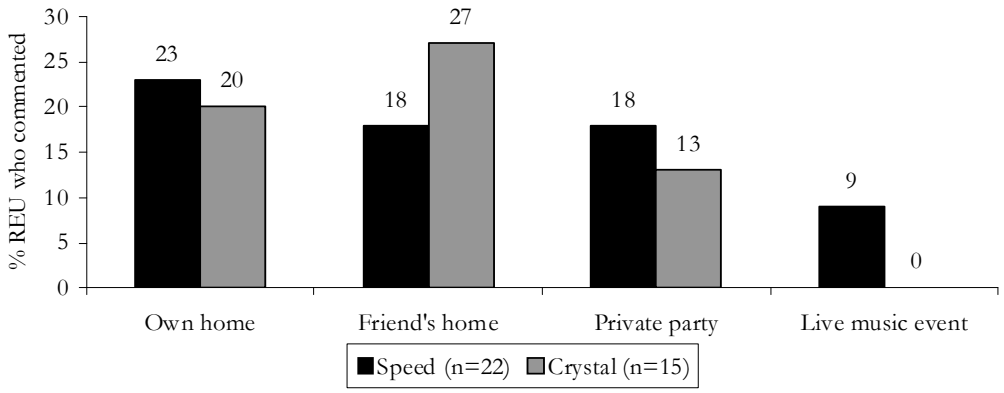
In sum, data from the current sample indicated that, for the most part, use of all forms of methamphetamine has remained stable since 2009. There was no significant difference observed in the frequency of speed or crystal methamphetamine use in the last six months; however, the amount used in a typical session significantly decreased compared to 2009. For all forms of methamphetamine, no significant differences were found in the proportions reporting injecting the drug in the last six months.

5.2. Last location of methamphetamine use

Participants who reported using any form of methamphetamine in the last six months were asked about the last locations where they spent most of their time under the influence. Due to the small number of those who responded for base (n=4), results are not reported for this form of methamphetamine.

Figure 6 presents the most common last location spent under the influence for speed and crystal. In 2010, the most common last location spent under the influence of speed was at 'nightclubs' by 27% (n=6); this was followed by a similar proportion nominating 'own home' (23%, n=5), 'friend's home' and 'private party' (each 18%, n=4) then 'live music event' (9%, n=2). Similar findings were reported for crystal, with the most commonly reported last location where most time was under the influence being 'nightclubs' by 33% (n=5), followed by 'friend's home' (27%, n=4), 'own home' (20%, n=3) and 'private party' (13%, n=2).

Figure 6: Last location where most time was spent under the influence of methamphetamine by form, 2010*



Source: WA EDRS REU interviews 2010

* Figures reported are percentages of those REU who commented, excluding cases that hadn't used last 6 months

Key expert comments

It was reported that crystal is common and the preferred form for amphetamine, but it is also seen in the powdered form. It was either smoked or injected, with one health KE commenting that more new users are going straight to injecting.

KE commented on methamphetamine users' violence and that these individuals are difficult patients for hospital staff. An increase in bingeing was also mentioned, particularly among younger users, and the increased risk this poses both to the user themselves and to service staff.

5.3. Methamphetamine use in the general population

According to Western Australian figures from the 2007 National Drug Strategy Household Survey (NDSHS) State and Territory supplement, (meth)amphetamine is the third most frequently used illicit drug after cannabis and ecstasy (Australian Institute of Health and Welfare, 2008). Of the 2,426 participants from the 2007 NDSHS Western Australian findings, approximately 9% had ever used (meth)amphetamine and 4% had used (meth)amphetamine in the last 12 months. This data, as well as the national data, is found in Table 10.

Methamphetamine use in the past year was reported by 4.2% of the Western Australian sample compared to 2.3% of the national sample (Table 10). Past year amphetamine use was highest in the 20-29 year old age group for both males and females (12.4% and 14.8% respectively) (Table 10).

Table 10: Use of methamphetamine in the National and Western Australian population, 2007

	Period	14-19 years (%)	20-29 years (%)	30-39 years (%)	40+ years (%)	Males (%)	Females (%)	**Total (%)**
National (N=23,356)	**Lifetime**	2.1	16.0	11.4	2.5	7.7	4.9	6.3
	Last 12 months	1.6	7.3	3.9	0.4	3.0	1.6	2.3
Western Australia (n=2,426)	**Lifetime**	3.8	26.6	14.9	7.6	9.7	8.1	8.9
	Last 12 months	3.3	13.6	5.8	3.1	4.5	4.0	4.2

Source: 2007 National Drug Strategy Household Survey – Detailed Findings and State and Territory Supplement, Western Australia.

5.4. Price

Participants in the EDRS were asked about the cost of the various forms of methamphetamine (Table 11). Seven participants reported on the price of a gram of speed powder and the median cost was $300 (range $50-400) which is comparable with $275 (range $50-400) in 2009. Fifteen participants reported on the price of a point of speed and the median was $50 (range $50-100). The median price of a point has been reported at $50 since data collection began in 2003.

No participants reported on the price of a point of base methamphetamine. Two participants commented on the price of a gram of base, with a median cost of $300, which has remained relatively unchanged over survey years and based on a very small number of participants reporting.

Nine participants reported on the price of a point of crystal methamphetamine and the median cost remained unchanged at $50 (range $50-$100). Five participants commented on the price of a gram of crystal methamphetamine, with a median cost of $400 (range $280-700) which was directly comparable to a median of $400 (range $50-$500) in 2009. However, these results should be interpreted with caution due to the small number of participants reporting. This data is shown in Table 11.

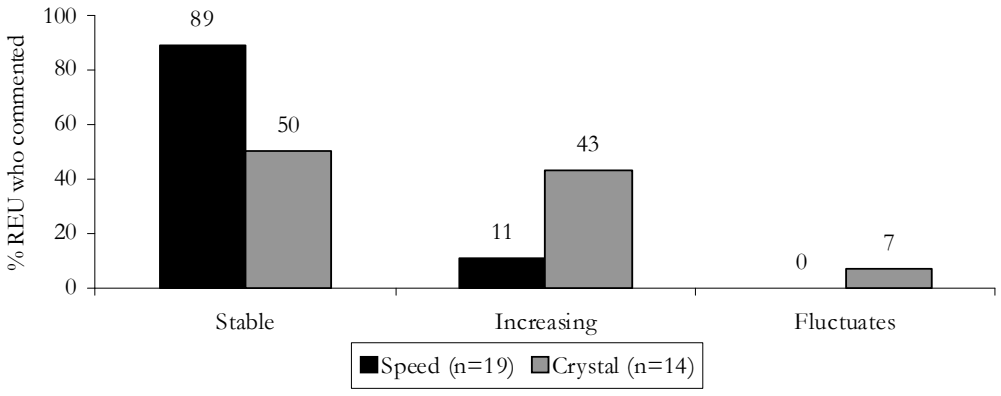
Table 11: Price of various methamphetamine forms purchased by REU, 2003-2010

Median price ($)	2003	2004	2005	2006	2007	2008	2009	2010
Speed								
Point	50	50	50	50	50	50	50^	**50^**
Gram	200	300	300	300	350	100	275	**300^**
Base								
Point	50	50	50	50	50	50	50^	**-**
Gram	-	300	325	350	380	-	400^	**300^**
Crystal								
Point	50	50	50	50	50	50	50^	**50^**
Gram	-	400	350	400	400	425	400^	**400^**

Source: WA PDI/EDRS REU interviews 2003-2010
^ Price reported by < 10 respondents

Participants were also asked about their perceptions of recent changes in the price of methamphetamine (see Figure 7). Again, results are not reported for base methamphetamine due to the small number of those who responded for this form (n=4). The majority of respondents reported the price of both speed and crystal methamphetamine as 'stable' during the last six months. No respondents reported the price of speed or crystal to be decreasing.

Figure 7: Recent changes in price of various methamphetamine forms purchased by REU who commented, 2010



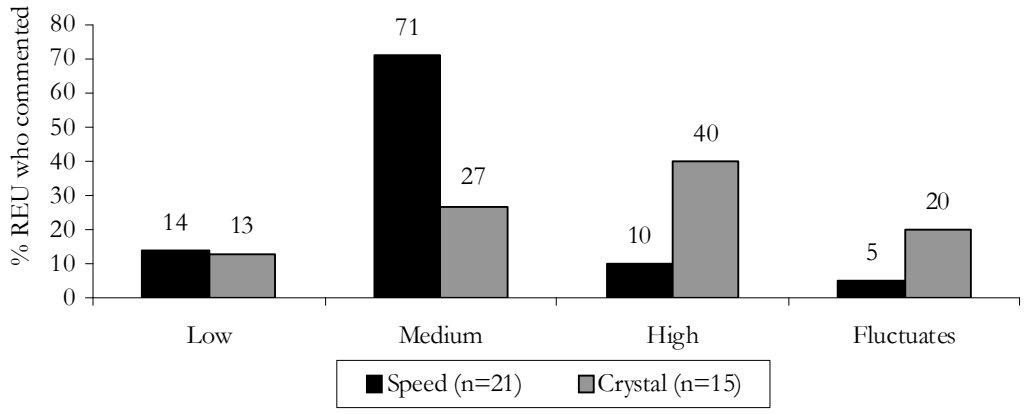
Source: WA EDRS REU interviews 2010

5.5. Purity

Participants also commented on the current purity of methamphetamine (Figure 8) and perceived changes in purity over the preceding six months (Figure 9). Current purity of speed was rated as 'medium' by the greatest proportion of those responding (71%, n=15), followed by 'low' by 14% (n=3). In 2009 purity was reported as either 'low' or 'medium' by 50% and 33% of respondents respectively. From the 2010 sample, the greatest proportion responding reported purity of crystal to be 'high' (40%, n=6), compared to 2009, when the greatest proportion reported purity of crystal to be 'low'

(55%). This suggests an increase in the perceived purity of crystal from last year with only 18% (n=2) rating purity as 'high' in 2009. Base is not reported due to small numbers reporting its recent use (n=4).

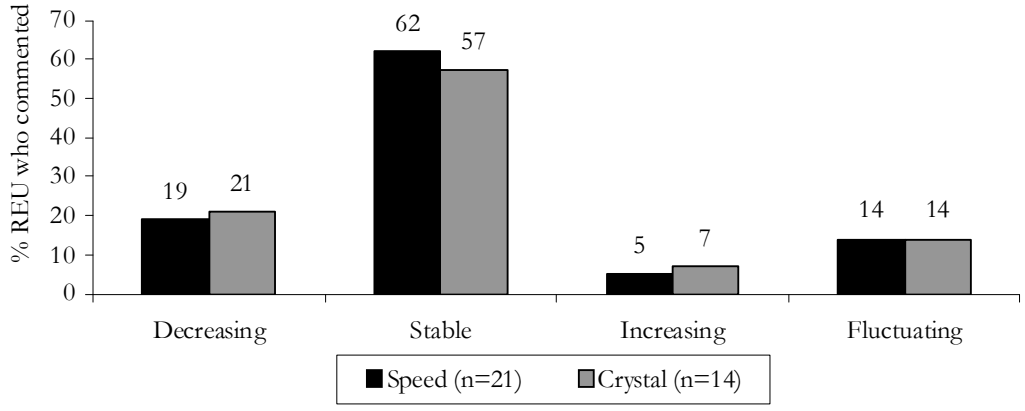
Figure 8: User reports of current methamphetamine purity, 2010



Source: WA EDRS REU interviews 2010

Of those respondents who commented, speed purity was rated over the last six months as 'stable' by 62% (n=13) and 'decreasing' by 19% (n=4) compared to 'decreasing' and 'stable' each by 41% (n=7) in 2009. In regards to crystal, more than half (57%, n=8) rated it as 'stable' compared to 27% in 2009, while 36% (n=4) rated it is 'decreasing'.

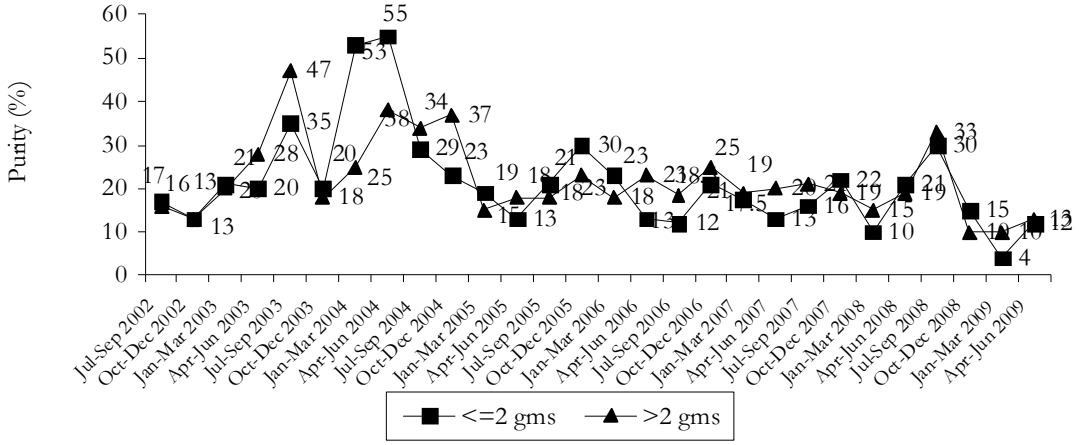
Figure 9: User reports of changes in methamphetamine purity in the past six months, 2010



Source: WA EDRS REU interviews 2010

Figure 10 shows data provided by the Australian Crime Commission regarding the median purity of methylamphetamine in WA. It is evident that purity has varied across time, with a peak in the first half of 2004. However, since that time, purity has decreased and began to stabilise except in the second half of 2008 when there was another peak in purity. In January-March 2009 there was a decline to the lowest purity since 2002.

Figure 10: Median purity of methylamphetamine seizures analysed in WA by quarter, July 2002 to June 2009

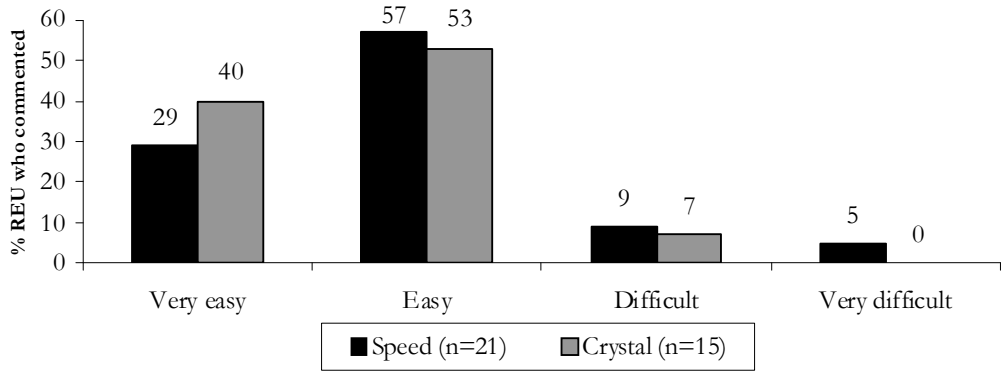


Source: Australian Crime Commission 2010

5.6. Availability

Figure 11 presents user reports of current availability of the different forms of methamphetamine, except base due to the small number of respondents who commented (n=2). Speed was nominated as either 'easy' or 'very easy' by 88% in 2009 and by 86% in 2010. Ratings of crystal availability were 82% (n=9) in 2009 compared to 93% of current respondents rating it as 'easy' or 'very easy'.

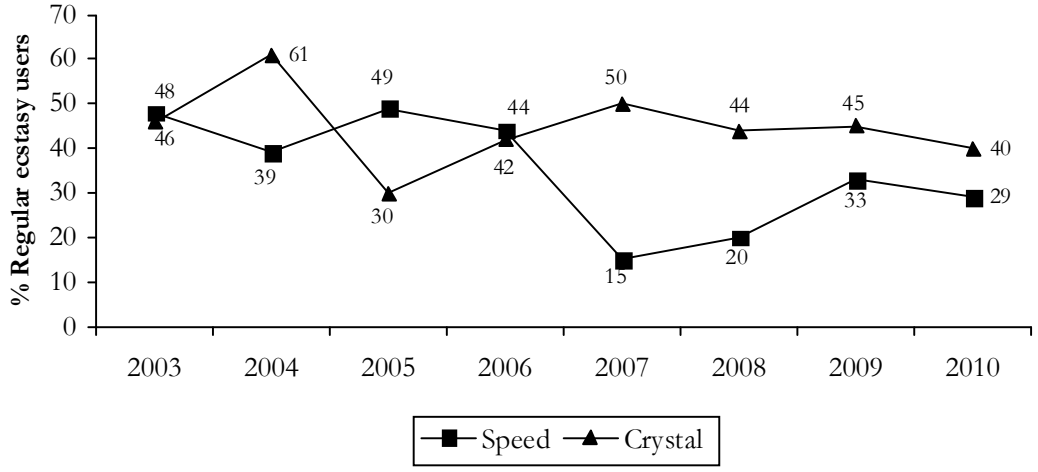
Figure 11: Current availability of methamphetamine forms, 2010



Source: WA EDRS REU interviews 2010

Figure 12 shows that reports of availability as 'very easy' for the various forms of methamphetamine were similar to last year. Ratings were comparable across years for both speed and crystal, with ratings of crystal availability 45% in 2009 and 40% in 2010, and ratings for speed 33% in 2009 and 29% in 2010.

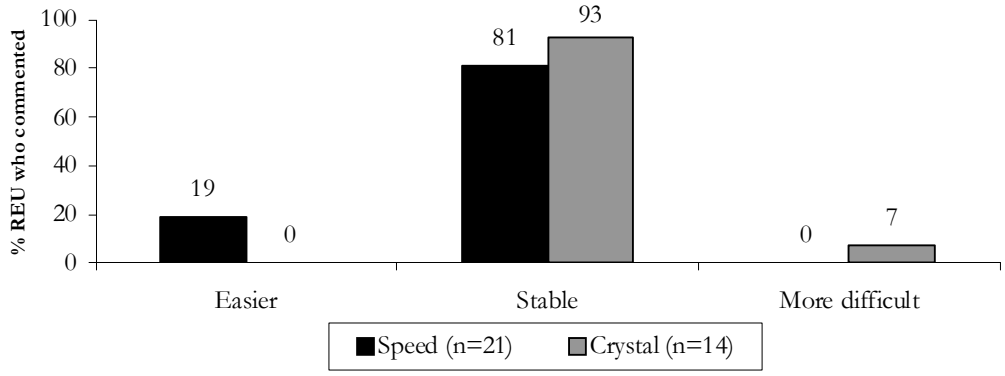
Figure 12: Changes to current availability over time: proportion of REU who report various forms of methamphetamine as 'very easy' to obtain in the six months preceding interview, 2003-2010



Source: WA PDI/EDRS REU interviews 2003-2010

With regards to perceived changes in availability over the preceding six months (Figure 13), the overwhelming majority of those who commented reported it as 'stable' for both speed and crystal. Proportions rating availability of speed as 'stable' were 94% in 2009 compared to 81% (n=17) in 2010, while 19% (n=4) of current respondents rated it as 'easier' compared to no respondents last year. The proportion rating availability of crystal as 'stable' in the six months prior to the survey was 93% (n=13) in 2010 compared to 82% in 2009. Interestingly, no respondents in 2010 rated availability of crystal in the six months prior to the survey as 'easier'. No respondents reported the availability of either speed or crystal to 'fluctuate'.

Figure 13: Change in the availability of various forms of methamphetamine in the preceding six months, 2010

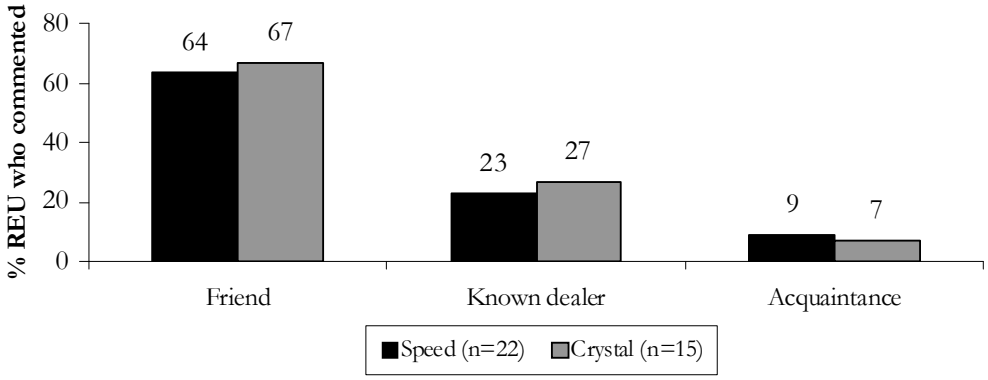


Source: WA EDRS REU interviews 2010

The last person from whom all forms of methamphetamine were predominantly obtained was 'friends' (see Figure 14); this was also found in previous survey years. Of those who commented for speed (n=22), 64% (n=14) reported the last purchase as being from 'friends' followed by 23% (n=5) purchasing from 'known dealer'. Respondents for crystal (n=15) reported the most common last person purchased from was 'friends'

(67%, n=10) followed by 27% (n=4) purchasing from 'known dealer'. Again, only two respondents reported on base, with these respondents reporting purchasing base from 'friends'.

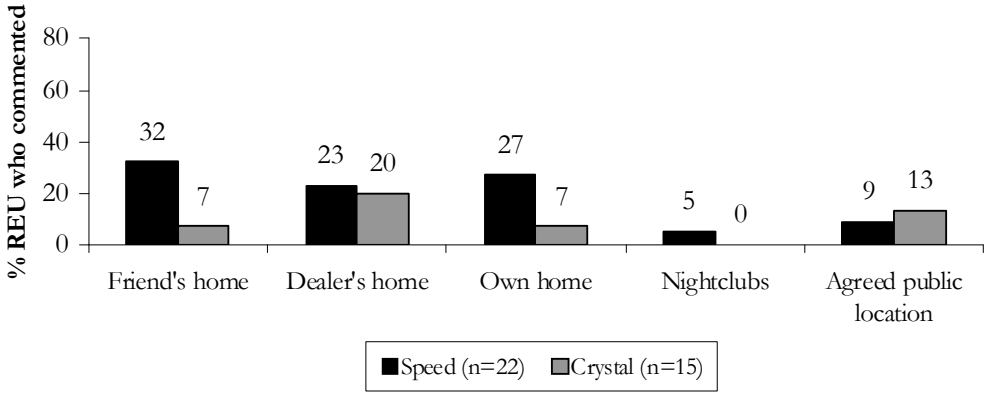
Figure 14: Last person from whom methamphetamine powder and crystal was purchased in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

Locations for purchasing methamphetamine were largely consistent with sources of purchase reported above. As shown in Figure 15, 'friend's home' was reported as the most common last location of purchase for speed. Nearly one-third (32%, n=7) of those who responded for speed reported last purchasing from 'friend's home', followed by 27% (n=6) purchasing from 'own home'. For those that commented for crystal (n=15), 20% (n=3) reported last purchasing from 'dealer's home', followed by 13% (n=2) reporting purchasing from an 'agreed public location'.

Figure 15: Last locations where methamphetamine was purchased in the preceding six months, 2010

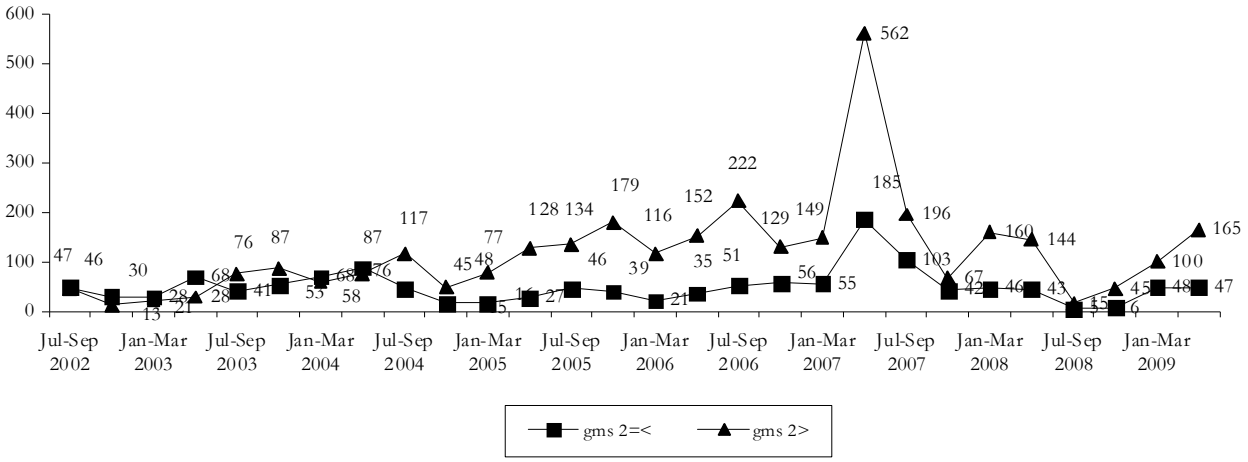


Source: WA EDRS REU interviews 2009

Figure 16 indicates the number of methylamphetamine seizures analysed in WA. From the period July-September 2007 to April-June 2009, numbers were more comparable than those found prior to the quarter April-June 2007 when seizures analysed surged to 562. This was the highest number of seizures analysed since data collection began. The

underlying reasons behind this surge are unclear, but are likely a reflection of both events in the methamphetamine market and police activity.

Figure 16: Number of methylamphetamine seizures analysed in WA by quarter, July 2002 to June 2009



Source: Australian Crime Commission

The most recent Illicit Drug Data Report (Australian Crime Commission 2010) reports on seizures of amphetamine-type stimulants (ATS) in the period 2008-09. In WA, state police and Australian Federal Police were responsible for 3,581 seizures totalling 212,852 grams, which increased by 66% from 128,318 grams in 2007-08. This represented approximately 27% of the total number of seizures (13,300) by state and federal police across all jurisdictions, with WA second to NSW (5,071).

Key expert comments

A KE from a law enforcement background reported an overall increase in the number of clandestine labs detected in Perth in the last 12 months, although a number of these are small cooks producing for personal use.

Despite the increased detection of labs, methamphetamine is reported to be readily available and of high quality, although KE also mentioned that there has been an increase in price in the last six to 12 months.

5.7 Summary of methamphetamine trends

- Recent use remained relatively stable for all forms of methamphetamine.
- Median quantities used in a typical session were significantly lower for both speed and crystal. Speed decreased from a median of one gram used in 2009 to half a gram in 2010 and crystal from a median of two grams in 2009 to one gram in 2010. Controlling for the gender changes in the sample suggested this was not due to these sample differences.
- The most common routes of administration for speed were snorting, injecting and swallowing for base (n=2) and smoking for crystal.
- Last location where most time was spent intoxicated was reported to be 'nightclubs' by the greatest proportion of those who had used speed and crystal recently, followed by 'own home' as the second most reported last location for speed and 'friend's home' for crystal.
- The median price per point for speed and crystal was $50 and this has remained consistent across survey years.
- In 2010, participants reported that a gram of speed cost $300, and a gram of crystal cost $400, and the majority rated price as 'stable' for both speed and crystal. There was insufficient data to draw meaningful conclusions regarding the price of base.
- Current purity of speed was rated by the majority as 'medium' and as 'high' for crystal. There was insufficient data to draw conclusions regarding the purity of base. The majority rated availability of both speed and crystal as 'easy' to obtain.
- 'Friends' were the most common persons reported for last purchasing all forms of methamphetamine from and 'friend's home' was the most common last purchasing location for speed, while 'dealer's home' was most common for crystal.

6. COCAINE

6.1. Cocaine use among regular ecstasy users

As shown in Table 12, there was no significant difference in the proportions reporting lifetime use of cocaine, with 49% in 2010 versus 52% in 2009. Of those who used cocaine in the last six months (n=26), the average number of days used in this period was 11 days, the same number reported in 2009. The median number of days cocaine was used in this period was two, the same as last year, with a range from 1 to 180 days.

The vast majority of those that had used cocaine recently reported snorting as the main route of administration (92%) followed by 27% reporting swallowing cocaine in the last six months. Injecting, smoking and shelving were not reported as a mode of administration in the last six months for those that had used cocaine recently. Twelve respondents who had used cocaine in the last six months reported on amounts used in grams. The median quantity reported for a typical session was 0.5 grams, which was comparable to last year's sample. The median quantity reported for a heavy session was one gram, which was not significantly different to 2009.

Table 12: Patterns of cocaine use of REU, 2003-2010

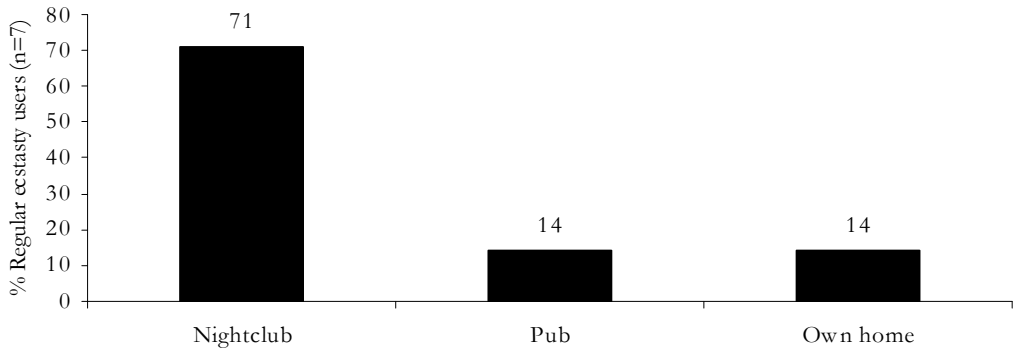
Cocaine	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used %	44	36	57	55	56	66	52	**49**
Used last six months %	17	16	35	29	27	40	24	**26**
Of those who had used in preceding 6 months Mean days used last 6 months	3	4	3	2	6	3	11	**11**
Median quantities used (grams) Typical (range)	0.5 (0.1-2.5)	0.25 (0.1-0.8)	0.5 (0.1-1.75)	0.4 (0.1-4)	1.0 (0.1-3.5)	0.5 (0.5-1)	0.5 (0.25-2)	**0.5 (0.5-1)**
Heavy (range)	0.5 (0.1-2.5)	0.5 (0.1-6.25)	0.6 (0.1-6.5)	0.5 (0.1-6)	1.0 (0.1-5)	0.5 (0.5-1)	0.5 (0.25-5)	**1.0 (0.5-3.75)**

Source: WA PDI/EDRS REU interviews 2003-2010

There were seven respondents who commented on last location (Figure 17) of cocaine use where most time was spent intoxicated. In 2010, the greatest proportion of those responding (71%, n=5) nominated 'nightclubs', with the second largest proportions (14%, n=1) nominating both 'pub' and 'own home' as the last location where most time

was spent while intoxicated by cocaine. In 2009, 'nightclubs' and 'private party' were the most common recent location of cocaine use reported by 33% each (n=3).

Figure 17: Last use venue where most time spent whilst intoxicated by cocaine, 2010*



Source: WA EDRS REU interviews 2010
* Figures reported are percentages of those REU who commented, excluding cases that hadn't used last 6 months

6.2. Price

Like in previous years, in 2010 only a small sub-sample of four respondents commented on the price of cocaine (see Table 13), therefore these reported findings should be interpreted with some caution. The median cost for a gram of cocaine was $365 compared to $375 in 2009.

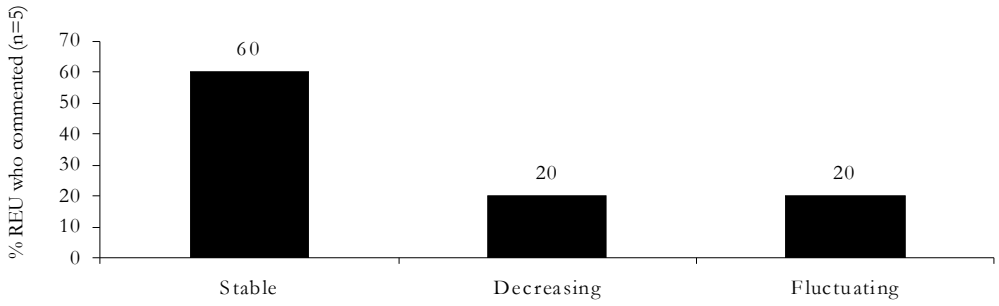
Table 13: Price of cocaine purchased by REU, 2003-2010

Cocaine	2003 (n=6)	2004 (n=7)	2005 (n=14)	2006 (n=14)	2007 (n=8)	2008 (n=8)	2009 (n=9)	**2010 (n=4)**
Median price cocaine per gram	$325	$300	$350	$350	$390	$325	$375	**$365**
Price range	($250-$400)	($250-$400)	($300-$450)	($210-$600)	($200-$500)	($300-$400)	($200-$1300)	**($300-$500)**

Source: WA PDI/EDRS REU interviews 2003-2010

Figure 18 shows that, of five respondents, more than half (60%, n=3) reported the price of cocaine to be 'stable'. Of the remainder, 14% (n=1) equally reported the price of cocaine in the previous six months as 'fluctuating'. However, it must be emphasised that extreme caution must be taken in drawing conclusions from these data which are based on small numbers of respondents.

Figure 18: Recent changes in price of cocaine purchased by REU, 2010

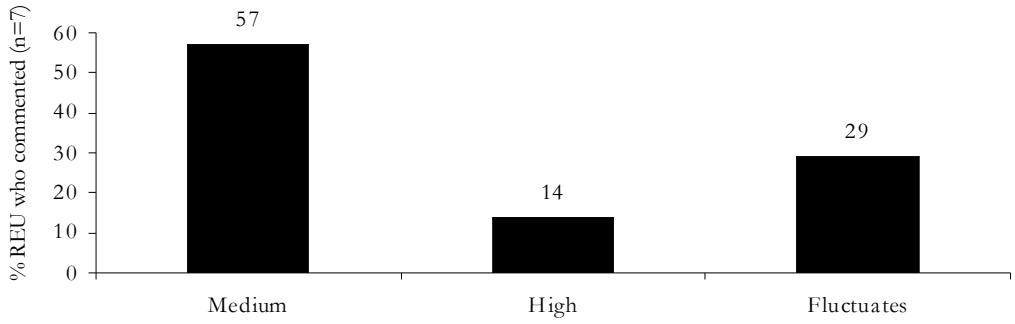


Source: WA EDRS REU interviews 2010

6.3. Purity

There were seven respondents who commented on cocaine purity, with the greatest proportion rating it as 'medium' (57%, n=4) whereas last year the greatest proportion rated purity as 'low' (50%, n=5). The next most common response in 2010 was 'fluctuates' reported by 29% (n=2), followed by 'high' nominated by 14% (n=1). This data is displayed in Figure 19. The very small number of respondents here precludes drawing any meaningful conclusions from 2010 data.

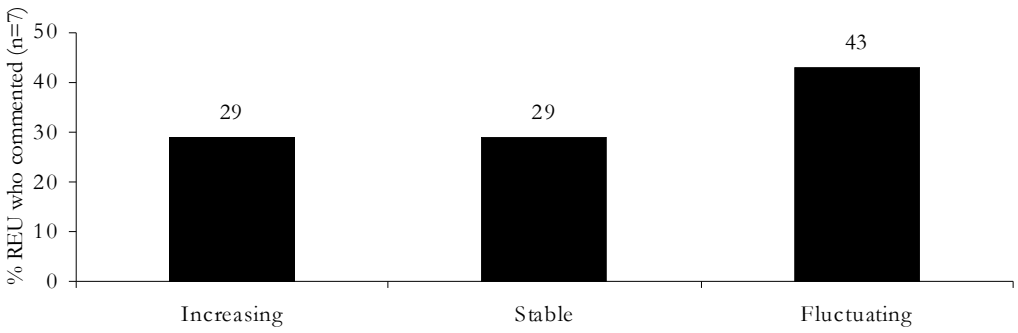
Figure 19: User reports of current purity of cocaine, 2010



Source: WA EDRS REU interviews 2010

Of the seven REU who responded to perceived purity of cocaine in the six months prior to interview, 43% (n=3) said it fluctuated, followed by 29%, (n=2) of respondents equally nominating 'increasing' and 'stable' cocaine purity in the past six months. This data is shown in Figure 20. Again, the very small number of respondents here precludes drawing any conclusions based on these data.

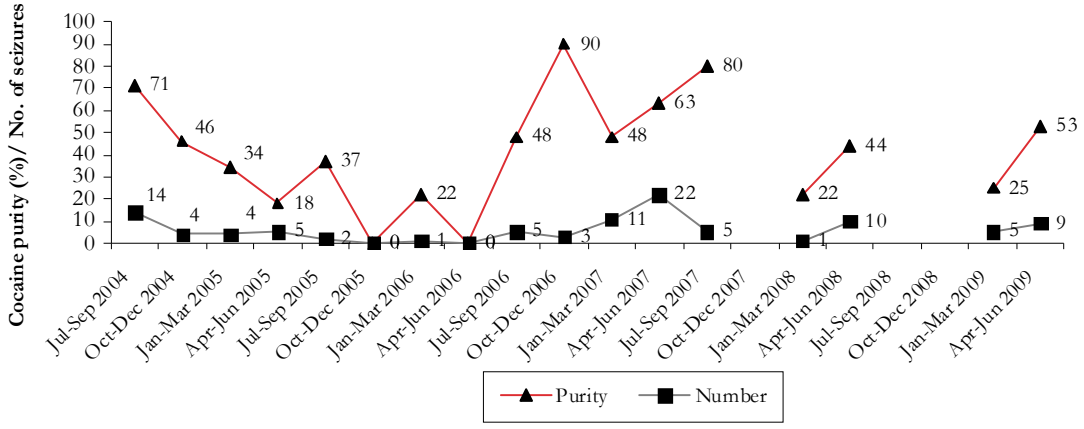
Figure 20: User reports of changes in cocaine purity in the past six months, 2010



Source: WA EDRS REU interviews 2010

Figure 21 shows Australian Crime Commission data for the median purity and number of cocaine seizures in WA. It is difficult to interpret meaningful findings due to number of seizures being extremely low in WA. The median purity between July-September 2007 was 80%, which is the highest purity since October-December 2006, although this was based on only five cases. No cocaine seizures occurred in WA during October-December 2007, July-September 2008 and October-December 2008. Five seizures were analysed in January-March 2009, with a median purity of 25%. In April-June 2009, nine cocaine seizures were analysed with a median purity of 53% reported. It must also be emphasised that the weights (grams) of cocaine seized in WA were relatively low. For example, in 2008-09 2,992 grams of cocaine was seized in WA; in comparison the cocaine seized in NSW during this period weighed 341,883 grams (ACC 2010).

Figure 21: Median purity and number of cocaine seizures analysed in WA by quarter, July 2004 to June 2009

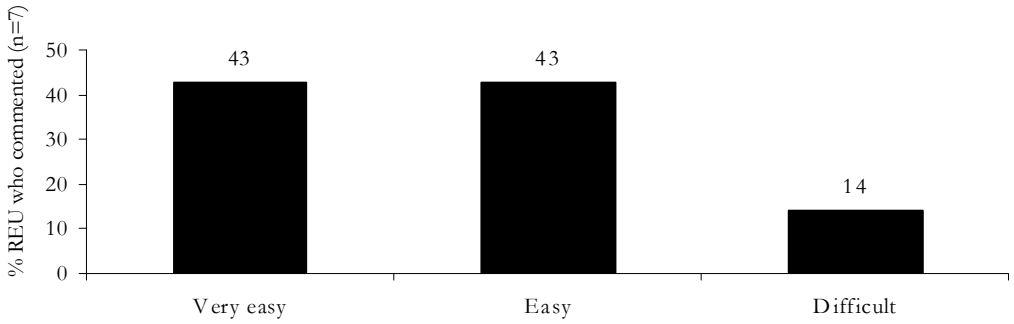


Source: Australian Crime Commission 2010

6.4. Availability

There were seven respondents who commented on cocaine availability in WA with 43% (n=3 each) rating current availability as 'very easy' or 'easy'. One respondent reported cocaine availability to be difficult (14%), compared to 22% (n=2 each) nominating both 'difficult' and 'very difficult' in 2009. This data appears in Figure 22.

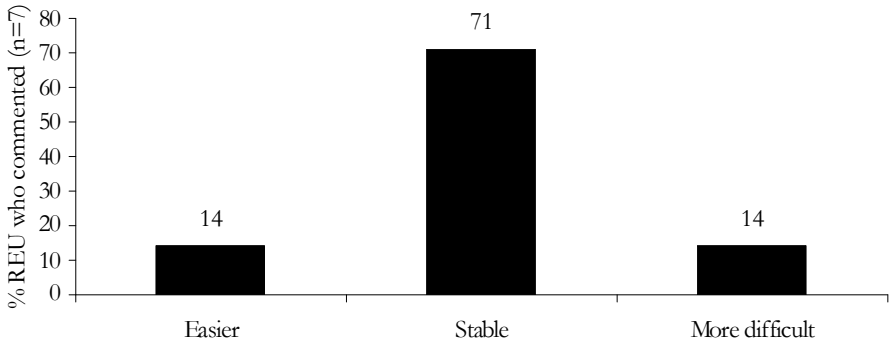
Figure 22: Current availability of cocaine, 2010



Source: WA EDRS REU interviews, 2010

With regards to changes in availability over the preceding six months (Figure 23), more than two-thirds of those who commented (71%, n=5) reported changes in availability to be 'stable' over the last six months. This was followed by equal proportions (14%, n=1) nominating availability as 'easier' and 'more difficult'. This data appears in Figure 23. Again, the very small number of respondents here precludes drawing any conclusions based on these data.

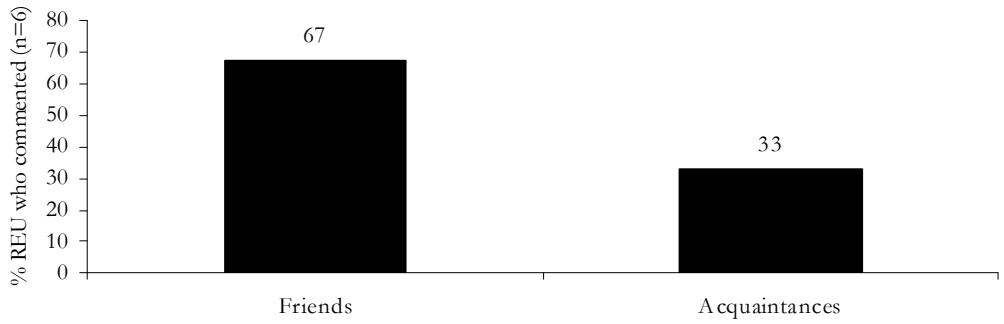
Figure 23: Changes in cocaine availability in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

Asked to describe the last person who they had purchased cocaine from, 'friends' were reported by the majority (67%, n=4) of those who responded as the most common last person from whom cocaine was purchased. One-third (33%, n=2) of current respondents nominated 'acquaintances'. These findings are portrayed in Figure 24. Again, the very small number of respondents here precludes drawing any conclusions based on these data.

Figure 24: Last person from whom cocaine was purchased the last time, 2010*

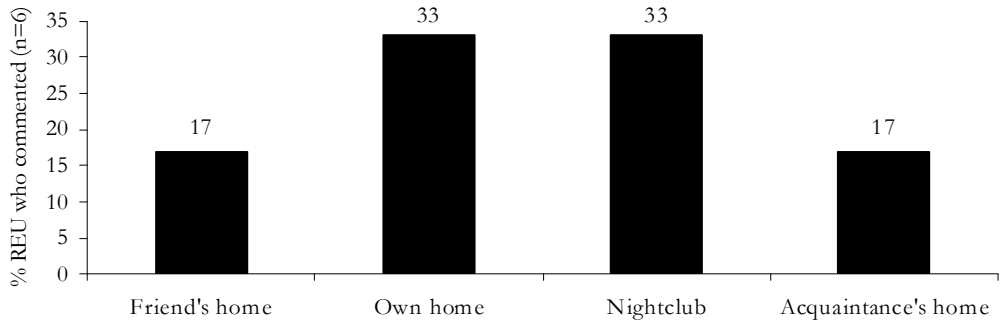


Source: WA EDRS REU interviews 2010

* Figures reported are percentages of those REU who commented, excluding cases that hadn't used last 6 months

Figure 25 shows usual locations of purchase, with 'own home' and 'nightclub' nominated by the greatest proportion of respondents (33%, n=2), compared to 2009 when the greatest proportion was 'friend's home' and 'own home' (44%). This was followed by equal proportions nominating 'friend's home' and 'acquaintance's home' (17%, n=1). Again, the very small number of respondents here precludes drawing any conclusions based on these data.

Figure 25: Locations where cocaine had been purchased in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

* Figures reported are percentages of those REU who commented, excluding cases that hadn't used last 6 months

Key expert comments

Three KE reported that there has been an increase in availability of cocaine and a decrease in price. Although the data suggests some increase in perceived purity from last year, the low numbers preclude any firm conclusions being drawn.

6.5. Summary of cocaine trends

- Lifetime use of cocaine did not significantly change in comparison to last year; from 52% in 2009 to 49% in 2010. Recent use rates were not significantly different to last year with 26% of the sample reporting cocaine use in the previous six months.
- Among recent users, cocaine was used on a median of two days in the previous six months, which was the same as found last year.
- The amount of cocaine used in a typical session was 0.5 grams, which was the same amount reported in last year's sample. The amount of cocaine used in a heavy session was 1 gram.
- 'Nightclubs' were the most common last locations of cocaine use, reported by 71% (n=5).

The number of EDRS respondents who had recently used cocaine and considered them selves able to report on cocaine market trends was extremely small (n=7). As such we recommend extreme caution in interpreting the data presented here:

- The median price of a gram of cocaine was $365.
- Change in price over the last six months was rated as 'stable' by over half the sample.
- Current purity was rated as 'medium' by 57% of respondents, whereas in 2009 the greatest proportion rated purity as 'low'. Although this suggests some increase in perceived purity from last year's modal ratings of 'low', the low numbers here preclude any firm conclusions being drawn. In regards to changes in purity in the last six months, the greatest proportion 43% nominated 'fluctuating'.
- Current availability was rated as 'easy' or 'very easy' equally by 43% of those who commented, compared to only 33% nominating 'easy' in 2009. These changes in availability over the last six months preceding interview were nominated as 'stable' by the greatest proportion of the sample.
- 'Friends' were the most common person from whom cocaine was purchased, reported by 57%; however, 'nightclubs' and 'own home' were the most common last location where cocaine was purchased by 33% of the sample.

7. KETAMINE

Ketamine is a rapid acting, dissociative anaesthetic that is used in veterinary surgery and less commonly in human surgery. Ketamine produces a dissociative state in the user, commonly eliciting an out-of-body experience. Ketamine is also known as 'k', 'special k' or 'vitamin k'.

7.1. Ketamine use among regular ecstasy users

Presented in Table 14 are patterns of ketamine use among REU for the period 2003-2010. Lifetime and recent use of ketamine remained consistent with 2009 data, with lifetime use in 2010 reported by 14% compared to 18% in 2009. Recent use of ketamine was comparable to the previous year, with 4% in 2010, compared with 6% in 2009. Other data pertaining to ketamine use needs to be considered in the light of the very small number of respondents able to provide information. Of the four respondents who used ketamine in this period, the average number of days of use was approximately three in 2010, compared to approximately one in 2009. Four respondents reported on amounts of ketamine used in 'bumps', with a median of 1.5 'bumps' used for a typical session and 2 for a heavy session. One respondent reported using ketamine in lines, with half a line being used in both a typical and heavy session. One respondent also reported using ketamine in grams with 0.5 grams being used in a typical session and 1 gram in a heavy session. Of those respondents who had used ketamine in the last six months, two reported swallowing and three reported snorting as routes of administration. One respondent commented on price, purity and availability of ketamine in the last six months. The respondent reported the last price per gram of ketamine to be $250 and that the price of ketamine in the previous six months had been 'fluctuating'. This respondent rated the perceived current purity of ketamine as 'medium' and as being 'stable' over the past six months. The participant rated ketamine availability as currently 'very easy' and that changes in availability over the preceding six months were 'stable'. No respondents have commented on price, purity and availability of ketamine in the past six months in 2008 or 2009.

Table 14: Patterns of ketamine use of REU, 2003-2010

Ketamine	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used (%)	25	21	25	14	22	21	18	**14**
Used last six months (%)	12	10	11	4	2	3	6	**4**
Of those who had used in the preceding 6 months Mean days used last 6 months	4.1	1.4	3.0	2.5	2.5	2.5#	1.2	**2.8**
Median quantities used (bumps)								
Typical (range)	1.5 (1-4)	1(.5-1.5)	2 (1-6)	4#	1#	0.5#	3(1-5)	**1.5(1-2)**
Heavy (range)	1.5 (1-4)	1 (1-5)	2 (1-12)	4#	1#	0.5#	3(1-5)	**2(1-3)**

Source: WA PDI/EDRS REU interviews 2003-2010
Based on two respondents

Key expert comments

Two KE commented that ketamine was rare.

7.2. Summary of ketamine trends

- Lifetime use of ketamine remained consistent with findings found in previous years' samples.
- Prevalence of recent ketamine use remained low with no significant difference found in comparison to last year.
- In 2010, 14% reported ever using ketamine and 4% reported using ketamine in the previous 6 months.
- The number of EDRS respondents who had recently used ketamine and considered themselves able to report on market trends was extremely small (n=4). As such, we recommend extreme caution in interpreting the data presented here.
- The average number of days of use was approximately three in 2010, compared to approximately one in 2009

8. LSD

Lysergic acid diethylamide is commonly known as LSD, 'trips' or 'acid', which became popular in the 1960s. It is a powerful hallucinogen which can produce significant changes in perception, mood and thought. LSD is usually sold in perforated sheet form (Australian Crime Commission 2007). Small paper squares ('tabs') are detached from these sheets and usually decorated with designs which can often be culturally specific to the user group. However, there have been a small number of participants reporting purchasing LSD in a liquid form.

8.1. LSD use among regular ecstasy users

As evident from Table 15, lifetime use of LSD was reported by 48% of the 2010 sample which decreased significantly from 69% in 2009 (95%CI 0.07, 0.34) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Recent use of LSD was reported by 31% in 2009 and 35% in 2010. The average number of days LSD was used during this period was five days in 2010 compared with six days in 2009. The median number of days LSD was used in the preceding six months was two days (range one to 45) in 2010 compared to three days in 2009.

The median amount of LSD used in a typical session was one tab, which was unchanged from last year. The median amount used in a heavy session was approximately 1.5 tabs in 2010, compared to approximately two tabs in 2009. All REU who had used LSD in the last six months nominated swallowing (100%, n=35) and no other routes of administration were reported in 2010. Interestingly, two respondents from the 2010 sample reported using LSD in the form of liquid as apposed to the more familiar paper tab form.

Table 15: Patterns of LSD use of REU, 2003-2010

LSD	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used (%)	62	50	71	67	49	47	69	**48***
Used last six months (%)	22	11	35	25	23	21	31	**35**
Of those who had used in the preceding 6 months Mean days used last 6 months	3	3	5	3	5	8	6	**5**
Median quantities used (tabs)								
Typical (range)	1(.5-3)	1 (.33-3)	1.3 (0.5-3)	1 (.25-2)	1(.25-4)	1(.50-2)	1(1-2.5)	**1(1-2)**
Heavy (range)	1 (.25-7)	1.5 (.33-8)	2.1 (0.5-9)	1 (.25-3)	1 (.25-5)	1(.50-2)	1.75(1-7)	**1.5(1-5)**

Source: WA PDI/EDRS REU interviews 2003-2010
* Significant at alpha level 0.05

8.2. Price

As shown in Table 16, the median price for a tab of LSD was $25, which was consistent with the previous year's findings. Of those current REU that responded, 66% (n=21) reported the price of LSD as 'stable' during the previous six months. The next greatest proportion of those who commented on price change in the last six months reported 'increased' (11%, n=3).

Table 16: Price of LSD purchased by REU, 2003-2010

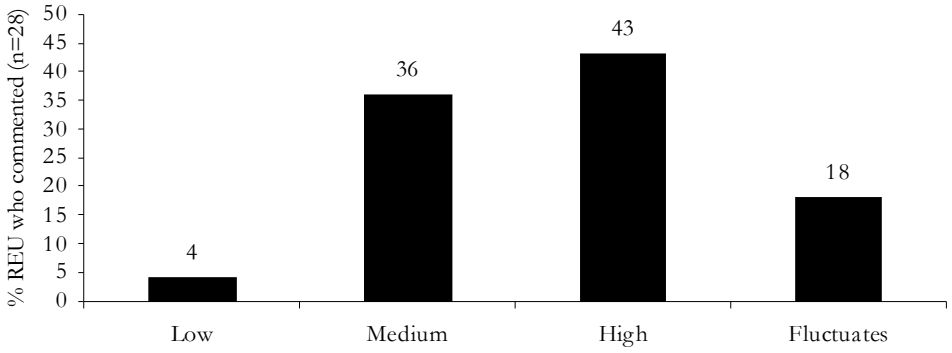
LSD	2003 (n=28)	2004 (n=12)	2005 (n=35)	2006 (n=20)	2007 (n=16)	2008 (n=9)	2009 (n=25)	**2010 (n=32)**
Median price ($) tab (range)	$20 (15-40)	$25 (7-40)	$25 (15-40)	$20 (10-50)	$25 (10-30)	$25 (20-45)	$25 (5-40)	**$25 (10-40)**
Price change:	(n=30)	(n=17)	(n=29)	(n=13)	(n=10)	(n=7)	(n=19)	**(n=27)**
Increased (%)	30	41	38	15	0	29	21	**11**
Stable (%)	53	29	34	69	90	57	74	**78**
Decreased (%)	7	6	17	8	10	14	5	**7**
Fluctuated (%)	10	24	10	8	0	0	0	**4**

Source: WA PDI/EDRS REU interviews 2003-2010

8.3. Purity

There were 28 respondents in the current REU who commented on the purity of LSD. Ratings of current purity were comparable to last year with the greatest proportions rating it as 'high' by 43% (n=12) in 2010 compared to 52% in 2009; this was followed by nominating 'medium' by 36% (n=10), compared to 24% in 2009. This data is shown in Figure 26.

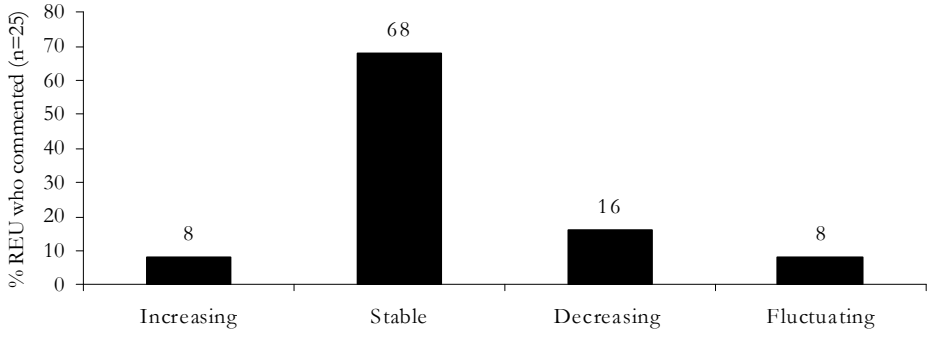
Figure 26: User reports of current LSD purity, 2010



Source: WA EDRS REU interviews 2010

Of those who responded (n=25), LSD purity over the previous six months was rated by the greatest number of respondents to be 'stable' (68%, n=17), compared to 2009 when the greatest proportion reported 'increasing' (41%). The next greatest proportion of those that commented on changes in purity reported 'decreasing' (16%, n=4), followed by equal proportions reporting 'increasing' and 'fluctuating' (8%, n=2). This data is displayed in Figure 27.

Figure 27: User reports of changes in LSD purity in the past six months, 2010



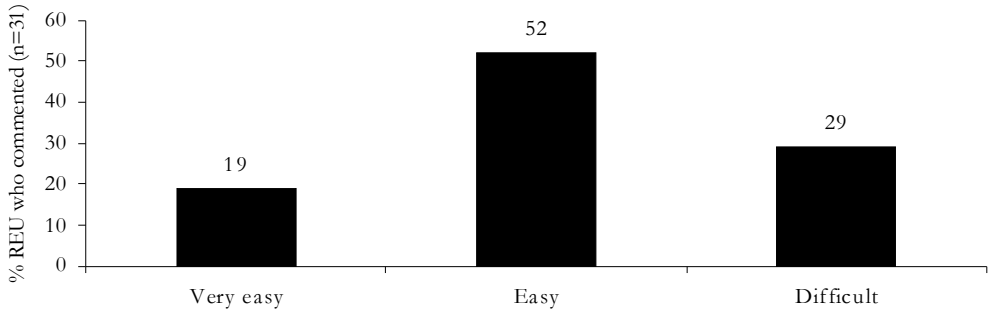
Source: WA EDRS REU interviews 2010

8.4. Availability

Figure 28 shows the reported current availability of LSD, with the greatest proportion nominating current availability as 'easy' (52%, n=16), followed by nominating current

availability as 'difficult' (29%, n=9) then 'very easy' (19%, n=6). No respondents nominated current availability of LSD as 'very difficult'.

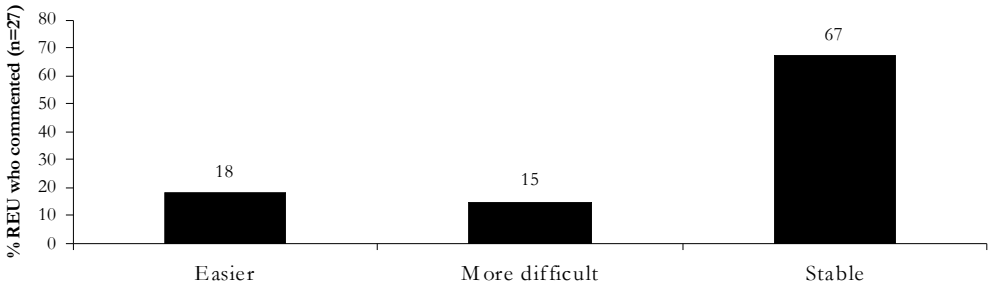
Figure 28: Current availability of LSD, 2010



Source: WA EDRS REU interviews 2010

In regards to recent changes in availability (see Figure 29), most of the current REU who commented reported availability as 'stable' (67%, n=18), compared to 33% nominating both 'stable' and 'more difficult' in 2009. In 2010, 18% (n=5) of respondents reported the availability of LSD as 'easier', followed by 'more difficult' (15%, n=4). No respondents reported 'fluctuates'.

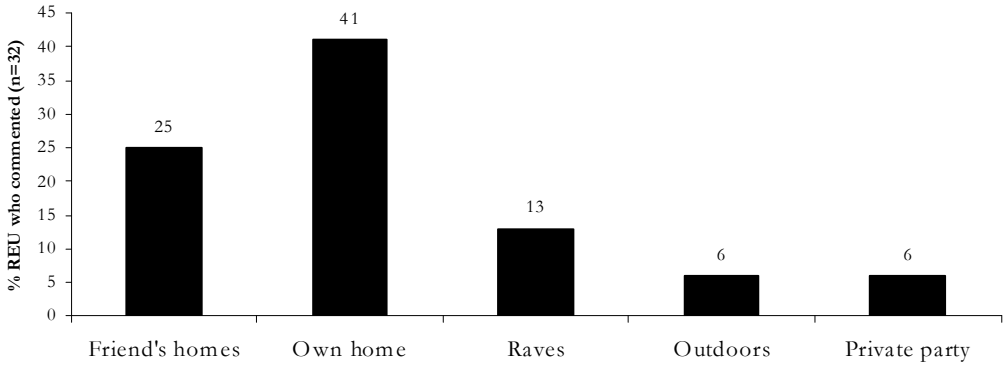
Figure 29: Changes in availability of LSD during the past six months, 2010



Source: WA EDRS REU interviews 2010

From the current sample, 32 respondents commented on questions relating to the last location where most time was spent under the influence of LSD. As shown in Figure 30, 'own home' was the most commonly reported last location spent under the influence by respondents (41%, n=13), which was comparable to the 2009 sample. Of the current sample, 25% (n=8) reported using LSD at 'friend's home', the remainder of respondents reported use at 'raves' (13% n=4), 'outdoors' and at 'private parties' (6%, n=2).

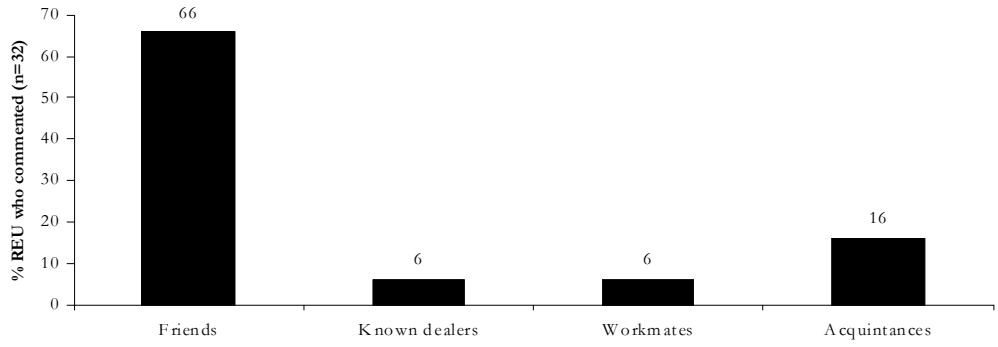
Figure 30: Last location where most time was spent under the influence of LSD, 2010



Source: WA EDRS REU interviews 2010

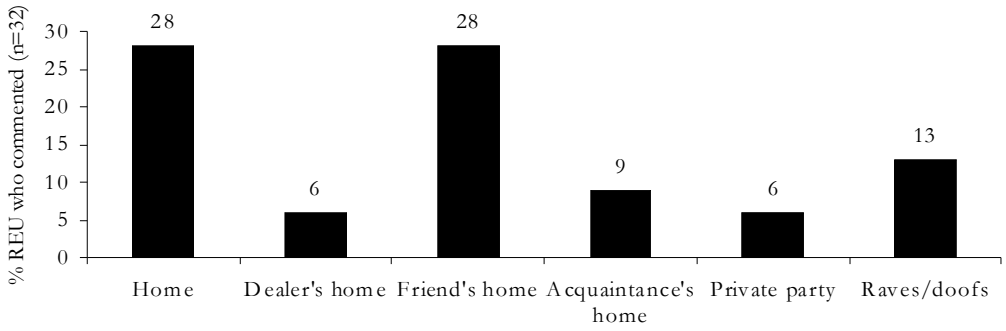
There were 32 respondents who commented on the last person and last locations for purchasing LSD in the previous six months (Figure 31). 'Friends' were the most common source for purchasing LSD, reported by 66% (n=21), followed by 'acquaintances' reported by 16% (n=5) (Figure 31). Accordingly, the most common last location for purchasing were 'friend's home' and 'own home' reported by 28% (n=9) each (see Figure 32).

Figure 31: Last person from whom LSD was purchased the last time, 2010



Source: WA EDRS REU interviews 2010

Figure 32: Locations where LSD had been purchased in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

Key expert comments

One outreach KE commented that there has been more LSD than in previous years, but law enforcement noted there have been no big seizures of LSD in the last 12 months.

8.5. Summary of LSD trends

- Lifetime use of LSD was significantly lower than reported last year, with 48% reporting ever-used LSD in the current sample compared to 69% in 2009. Controlling for the gender changes in the sample suggested this was not due to these sample differences.
- Recent use of LSD was similar to that reported last year, with 35% in 2010 compared to 31% in 2009.
- The average days used in this period was also similar to last year, with 5 days in 2010 compared to 6 days in 2009.
- The average amount of LSD used during a typical session was one tab, and a heavy session was 1.5 tabs.
- 'Own home' was the most commonly reported last location for using LSD.
- The median price was $25 a tab; as found in previous years' samples.
- Price of LSD during the last six months was rated as 'stable' by 66% of REU who commented.
- More than two-thirds of those who commented rated current purity of LSD as 'stable' (68%).
- The greatest proportion rated current availability as 'easy' (52%) compared to 36% rating both 'stable' and 'difficult' last year.
- The majority reported 'friends' (66%) as the most common person from whom LSD was obtained and 'friend's home' and 'own home' (28% each) as the most common locations of purchase.

9. CANNABIS

9.1. Cannabis use among regular ecstasy users

As shown in Table 17, nearly the entire sample of REU in 2010 reported lifetime use of cannabis and this rate is comparable to that found in previous years. Rates of recent use are also similar across years, with 81% of the current sample reporting use of cannabis in the previous six months. The average number of days cannabis was used in this period decreased significantly from 81 days in 2009 to 60 days in 2010 (t=-2.611, df=80, p=.011); however, controlling for the gender changes in the sample suggested this was due to these sample differences. In 2010, 19 respondents reported daily use of cannabis compared to 30 respondents in 2009 and seven respondents in 2008.

Table 17: Patterns of cannabis use of REU, 2003-2010

Cannabis	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Ever used %	99	97	99	100	96	100	99	**99**
Used last six months %	91	85	83	86	80	85	85	**81**
Of those who had used in preceding 6 months								
Mean days used last 6 months	61	69	85	77	75	49	81	**60**

Source: WA PDI/EDRS REU interviews 2003-2010

Among current REU, the median age of first use for cannabis was 15 years (range 10 to 19). The greatest proportion of those who had used cannabis in the last six months reported smoking (94%, n=76) and swallowing was reported by 33% (n=27). In 2010, respondents were asked how much cannabis they consumed during their last session. Of those who reported on 'cones' (n=49), the median was two cones (range 1-10) which was half the median number of cones in 2009. Controlling for the gender changes in the sample suggested that this was due to these sample differences. Of those who reported on 'joints' (n=27), the median was one joint (range 0.5-4) which was comparable to 2009.

In 2010, cannabis was the third most nominated drug of choice, following ecstasy and alcohol, and was nominated by 11% of the sample. This represents a significant decrease from 2009 when cannabis was nominated by 25% of the sample as their drug of choice (95%CI 0.03, 0.24) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Of the 84% of the sample who reported using other drugs with ecstasy, cannabis was reported in this context by 37% (n=31). Among

those reporting use of other drugs during 'comedown' from ecstasy (39%), 82% (n=32) reported using cannabis in this context.

9.2. Price

Commencing in 2006, data was collected from REU regarding aspects of the cannabis market. Consistent with the IDRS, a distinction was made between indoor cultivated 'hydroponic' cannabis and outdoor cultivated 'bush' cannabis.

Table 18 presents REU reports of the price of one ounce of cannabis. An ounce of hydroponic cannabis cost a median of $350 in 2010, which is consistent with 2009. An ounce of bush cannabis cost a median of $280, which remains comparable to 2008 and 2009 findings. Responses were also given for a gram. The median price for a gram of both hydroponic (n=13) and bush (n=8) was $25 (range $25-$50).

Only one respondent was able to comment on the price of hash, which was $35 for a cap of hash oil. In 2009, ten respondents commented on the price of hash, which had a median price of $35 for a gram.

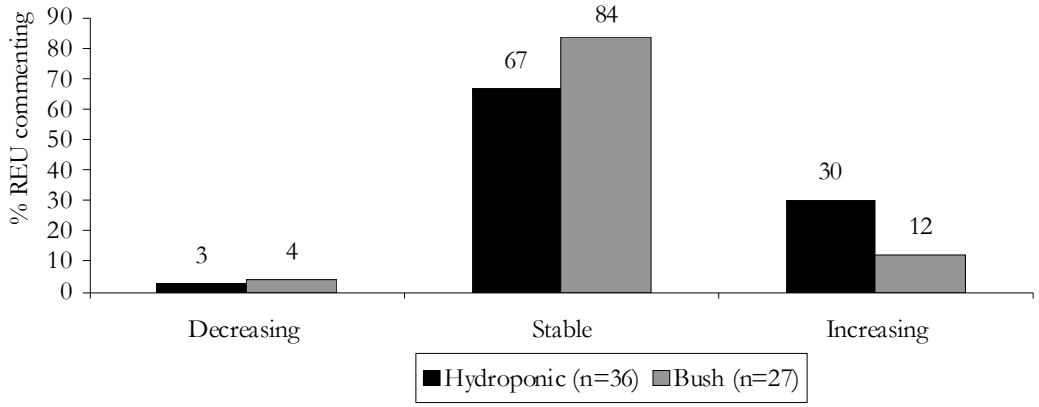
Table 18: Median reported price of cannabis ounce, 2006-2010

Form of cannabis	2006	2007	2008	2009	**2010**
Hydroponic	(n=42)	(n=33)	(n=24)	(n=23)	**(n=25)**
	$280	$300	$305	$350	**$350**
Bush	(n=28)	(n=20)	(n=16)	(n=16)	**(n=16)**
	$250	$250	$275	$280	**$280**

Source: WA EDRS REU interviews 2006-2010

Respondents were also asked to report on perceived changes in the price of cannabis in the previous six months (Figure 33). Of those who commented, the majority reported the price of hydroponic as 'stable' (67%, n=24), followed by 30% (n=11) reporting 'increasing', and 3% (n=1) as 'decreasing'. There was not much variation in price reported for bush, with the vast majority of 84% (n=21) reporting it as 'stable'; this was followed by 12% (n=3) reported 'increasing' and 4% (n=1) reported 'decreasing'. This data is presented in Figure 33. No respondents reported recent changes in the price of cannabis to be 'fluctuating'.

Figure 33: Recent changes in price of cannabis purchased by REU, 2010

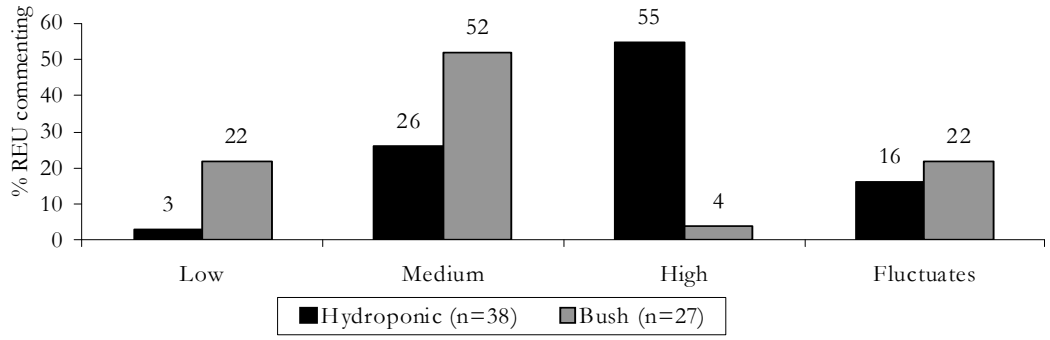


Source: WA EDRS REU interviews 2010

9.3. Purity

Respondents also reported on the current purity of cannabis and perceived changes in purity during the previous six months. As shown in Figure 34, over half of those who commented on hydroponic reported current purity as 'high' (55%, n=21), which was comparable to 59% in 2009. Similar proportions reported purity of bush as 'medium' (52%, n=14) which was comparable to 60% in 2009.

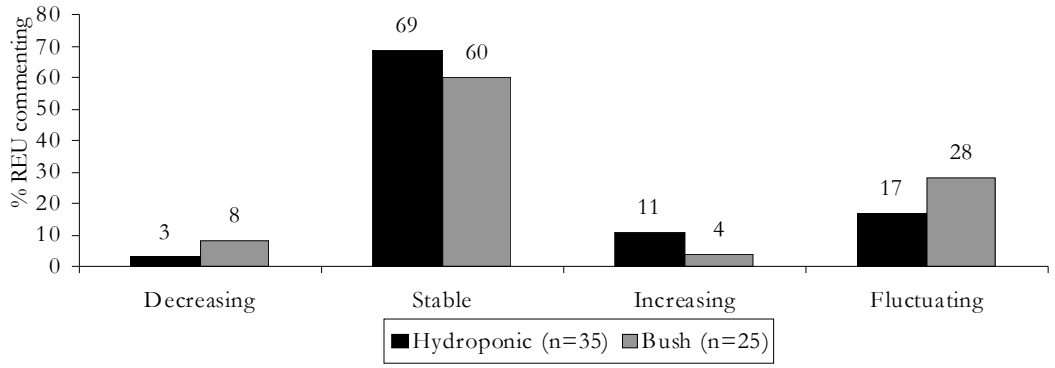
Figure 34: User reports of current purity of cannabis, 2010



Source: WA EDRS REU interviews 2010

Figure 35 presents recent perceived changes to cannabis purity with the majority of respondents for both hydroponic (69%, n=24) and bush (60%, n=15) reporting purity as 'stable', which was comparable to last year's sample.

Figure 35: User reports of changes in cannabis purity in the past six months, 2010

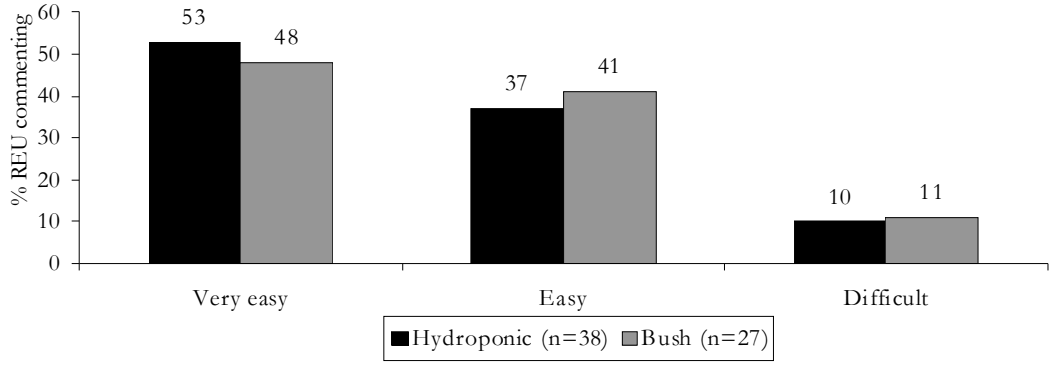


Source: WA EDRS REU interviews 2010

9.4. Availability

Similar to last year's sample, in 2010 there was a high proportion of the sample nominating current availability of both forms of cannabis as 'very easy' and 'easy' (Figure 36). The greatest proportion of the sample nominated hydroponic as 'very easy' by 53% (n=20) compared to 44% in 2009. In regards to bush cannabis, the greatest proportion of those who commented nominated 'very easy' (48%, n=13) compared to 'easy' by 38% in 2009. No respondents nominated the availability of either form of cannabis as 'very difficult'.

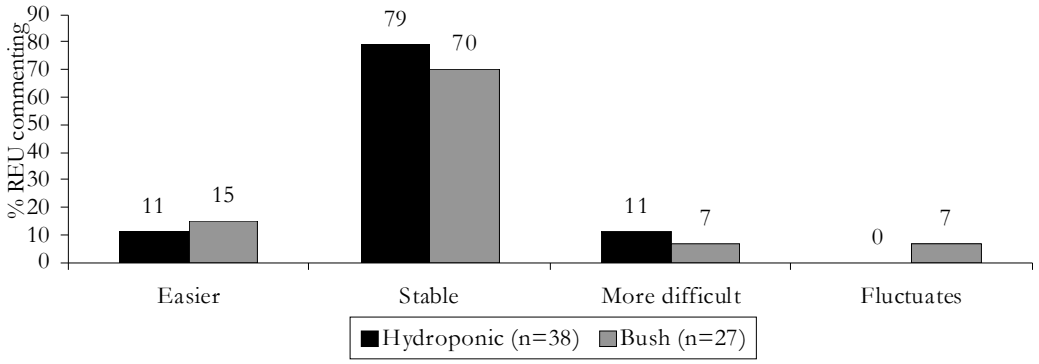
Figure 36: Current availability of cannabis, 2010



Source: WA EDRS REU interviews 2010

Changes to cannabis availability in the preceding six months was perceived as 'stable' by the greatest proportion of the sample (see Figure 37).

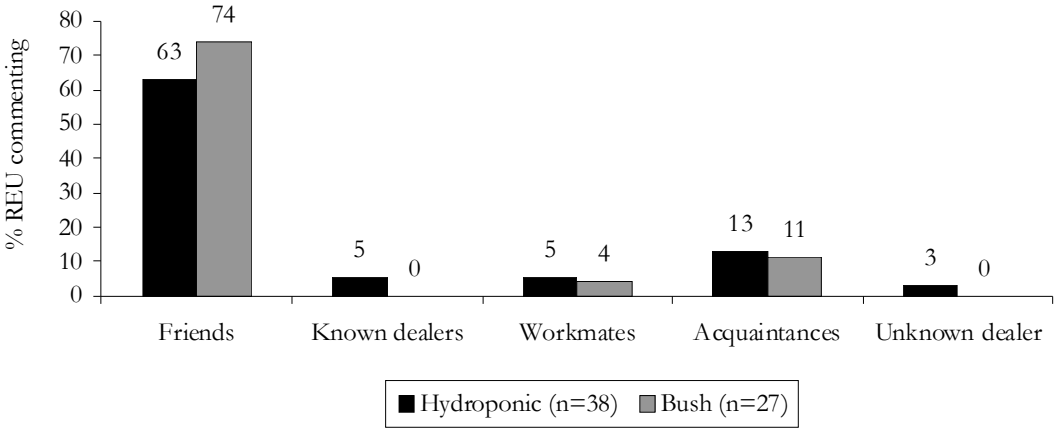
Figure 37: Changes in cannabis availability in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

As shown in Figure 38, 'friends' were the most common last source of cannabis for both hydroponic (63%, n=24) and bush (74%, n=20). This was followed by 'acquaintances' for both hydroponic (13%, n=5) and bush (11%, n=3).

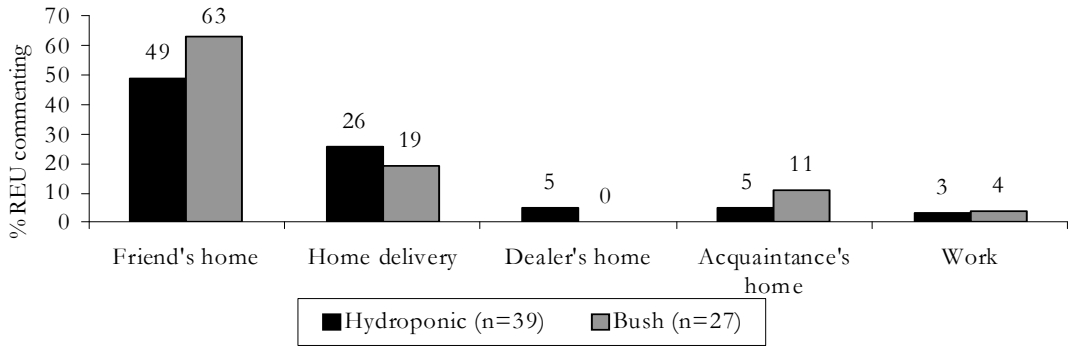
Figure 38: Last person from whom cannabis usually purchased in the preceding six months, 2010



Source: WA EDRS REU interviews 2010

With regards to last locations for obtaining cannabis, 'friend's home' was the most common location, reported equally by 49% for hydroponic and 63% for bush cannabis (Figure 39). This was followed by 'home delivery' for hydroponic (26%, n=10) and for bush (19%, n=5), which was comparable to last year's findings.

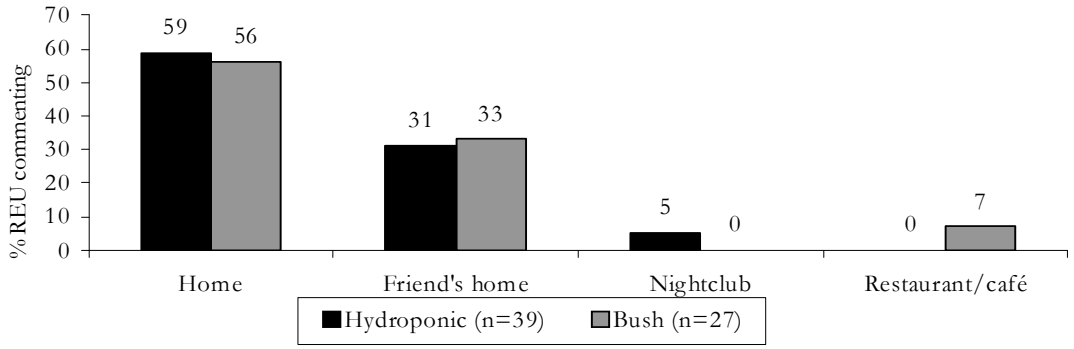
Figure 39: Location where cannabis was last purchased, 2010



Source: WA EDRS REU interviews 2010

When asked about the last location where most time was spent under the influence of cannabis, the greatest proportion of those who responded reported 'home' for both hydroponic (59%, n=23) and bush (56%, n=15). This data is shown in Figure 40.

Figure 40: Last use venue most intoxicated by cannabis at the time, 2010



Source: WA EDRS REU interviews 2010

Key expert comments

Two KE commented that cannabis use is high, but that it has been less available. One health KE commented on an increase of the phenomenon called cannabinoid hyperemesis syndrome over the past two years. Cannabinoid hyperemesis syndrome is reportedly characterised by recurrent nausea and vomiting. These symptoms have been reported to be alleviated temporarily by taking a hot shower or bath. This KE thought that the phenomenon could most likely be linked to a form of hydroponic cannabis.

9.5 Summary of cannabis trends

- Both lifetime and recent use of cannabis have consistently been high among REU across survey years.
- In 2010, 99% of respondents reported lifetime use of cannabis and 81% reported use in the last six months.
- In 2010, 19 respondents reported daily use of cannabis.
- After ecstasy and alcohol, cannabis was the third most commonly nominated 'drug of choice' by 11% of the current sample.
- The median price of an ounce of hydroponic was $350 compared to $280 for an ounce of 'bush'.
- More than half rated current purity of hydroponic as 'high' (55%). The greatest proportion of those who could answer on bush cannabis reported it to be of 'medium' quality (52%).
- In 2010 the majority of respondents rated current availability of both hydroponic and bush as either 'very easy' or 'easy'. In addition, the greatest proportion for both hydroponic and bush rated availability over the previous six months as 'stable'.
- 'Friends' and 'friend's home' were the last person and last location rated by the majority of respondents as most common sources of purchase for both forms.

10. OTHER DRUGS

10.1. Alcohol

Both lifetime (100%) and recent (98%) use of alcohol were reported by almost the entire REU sample, with similar proportions to previous years (see Table 2). The median age of first use of alcohol was 14 (as found in 2006, 2007, 2008 and 2009), with a range from one to 19 years. Of those who used alcohol in the six months preceding interview, use was a median of 48 days (range 6-180), which equates to approximately twice a week. Nine respondents reported drinking alcohol daily.

10.1.1. The Alcohol Quantity Frequency and Variability Assessment (AQFV)

In 2009, a new measure of alcohol consumption was included in the EDRS as a way of more accurately measuring the quantity and frequency of alcohol use while taking into account variability of this over the course of the past year. The measure was retained in the 2010 EDRS questionnaire. The Alcohol Quantity Frequency and Variability assessment (AQFV) is a self-report measure which examines alcohol use over the preceding six months. It has three categories: a) typical drinking; b) regular changes, e.g. weekends; and c) occasional changes, e.g. festivals, parties. Respondents are able to indicate a range for the number of drinks they consume for each section and then indicate on how many days per week, month or year they drink this amount. For example, a participant may report for the 'typical drinking' section that they consume 'two-three standard drinks, three days per week' or 'five-six standard drinks, two days per month' etc.

Using the information gleaned from the AQFV assessment, the number of days that each participant consumed alcohol over the course of a year and the amount of alcohol consumed on each drinking day was computed. Each drinking day was then defined as either: a) low risk (up to six drinks for males or four for females); b) risky (from seven to ten drinks for males or five to six for females); or c) high risk (11 drinks and above for males or seven and above for females) according to NHMRC guidelines (NHMRC 2001). The categories have been derived based on the 2003 National Alcohol Strategy guidelines.

Table 19 presents the frequency and quantity of alcohol consumption for male and female REU in WA in 2010. Males have significantly more low risk drinking days per year than females ($t=2.898$, $df=47$, $p=.006$) and consumed a significantly greater number of drinks per drinking session overall than women did (7 vs. 9) ($t=2.488$, $df=44$, $p=0.017$).

Table 19: Frequency and quantity of alcohol consumption among REU, WA 2010

	Men	Women
Median number of drinking days/year (range):		
Low Risk	104 (0-365)	53 (0-208)
Risky	2.5 (0-208)	13 (0-214)
High Risk	24 (0-321)	44 (0-365)
Average no. drinks per session	9 (1.8-27)	7 (1.5-22.5)

Source: EDRS interviews 2010

10.1.2. The Alcohol Use Disorders Identification Test (AUDIT)

The AUDIT (Saunders et al. 1993) was completed by REU participants in 2010. The AUDIT was designed by the WHO 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 and may also indicate alcohol dependence (Babor et al. 1992). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor & Higgins-Biddle 2000).

The overall sample mean score on the AUDIT was 13.6 for males (median=13, range=0-28) and 11.5 for females (median=10, range=1-23). There was no significant difference between the male and female mean AUDIT total scores. Four-fifths of males (81%) and three-fifths of females (62%) scored eight or more; these are levels at which alcohol intake may be considered hazardous. These results are presented in Table 20.

The total AUDIT score places respondents into one of four 'zones' or risk levels. Significantly more females than males scored in Zone 1 (low-risk drinking or abstinence) (95%CI -0.55, -0.20) and significantly more males scored in Zone 2 (alcohol use in excess of low-risk guidelines) (95% CI 0.25, 0.56); however, there were no significant differences in the proportion that scored in Zone 3 (harmful or hazardous drinking) and Zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence). These results are presented in Table 20.

Table 20: AUDIT total scores and proportion of REU scoring above recommended levels indicative of hazardous alcohol intake, WA 2010

	Men	Women
Mean AUDIT total score	13.6	11.5
SD	7.0	6.8
(range)	(0-28)	(1-23)
Score 8 or above (%)	81	62
Risky Drinking 'Zone' (%)		
Zone 1	17	39
Zone 2	45	27
Zone 3	17	15
Zone 4	21	19

Source: EDRS interviews 2010

Key expert comments

One KE commented that a large proportion of presentations to hospital emergency departments are alcohol-related.

10.2. Energy drink consumption

Caffeinated energy drinks came onto the world market in 1997 with the introduction of 'Red Bull'®. The drinks are marketed at the 18-35 age group, claiming to deliver a jolt of energy through the combination of stimulant ingredients, primarily caffeine, herbal extracts (such as guarana, and ginseng) and amino acids (such as taurine). Sugar or artificial flavouring is added for taste as caffeine is a bitter ingredient.

Research suggests energy drinks do deliver on their promise of more "energy" with the strongest energising effects being 30 to 60 minutes after consumption and lasting at least 90 minutes. However, while caffeine in smaller doses has been shown to improve cognitive performance and mood (Beyrer et al. 2004), it can also have detrimental health consequences. Acute caffeine consumption reduces insulin sensitivity (Kalyoncu et al. 2005) and increases mean arterial blood pressure (Bichler, Swenson & Harris 2006). High caffeine consumption is associated with chronic daily headaches particularly in women aged less than 40 years and has been known to be associated with central nervous system, cardiovascular, gastrointestinal and renal dysfunction (Carrillo & Benitez 2000). Caffeine intake more generally can promote diuresis[1] and natriuresis[2] (Riesenhuber et al. 2006). Daily caffeine intake remains safe at fewer than 600 mg per day; however, doctors recommend during times of stress, anxiety or pregnancy that caffeine intake be limited to less than 200 mg per day. Energy drinks on average can now contain between 80-160 mg per serving.

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

[1] *Diuresis* is the increased production of urine by the kidney.

[2] *Natriuresis* is the process of excretion of sodium in the urine via action of the kidneys.

In 2010, the EDRS included questions examining the use of energy drinks (e.g. 'V'® and 'Red Bull'®) in the context of alcohol and/or ecstasy and other illicit substance use. Just over half (54%) of the 2010 sample reported consuming energy drinks with alcohol in the last six months. This represents a significant decrease from 2009 when 72% of the sample reported consuming energy drinks with alcohol (95%CI 0.05, 0.31) and controlling for the gender changes in the sample suggested this was not due to these sample differences.

In relation to frequency, it is apparent that, of recent consumers of energy drinks and alcoholic cocktails, most engage in the practice between fortnightly (30%) to monthly (33%) and less often (28%). On their last occasion, respondents had consumed a mean of three (range 1-10) energy drinks mixed with alcohol.

The studies that have been conducted would suggest that consumers hold beliefs that consuming energy drinks will reduce the fatigue, cognitive and motor impairments of alcohol and as a result they may be more likely to engage in risky behaviours such as operating a car or a motorcycle, in the erroneous belief that they are alert (Ferreira, de Mello & Formigoni 2004; Ferreira et al. 2004). The motivation recent REU energy drink and alcohol consumers gave for choosing that beverage over another was mainly because they were feeling tired (30%) or because they like the taste (28%). See Table 21.

Despite suggested negative consequences of consuming energy drinks in combination with other substances, to date there has been minimal research on the topic. In the REU sample, of recent energy drink and alcohol consumers, the majority had reported consuming energy drinks with an illicit substance, primarily ecstasy (72%), followed by cannabis and ice (both 13%). Many also reported the practice of combining energy drinks, an illicit substance and alcohol at least some of the time (56%). See Table 21.

Table 21: Use of energy drinks, alcohol and/or ecstasy and other illicit substance among REU, 2010

	2010 N=100
Proportion of REU who had consumed energy drinks with alcohol in the last 6 months (%)	54
How often consume energy drink with alcohol (%)	(n=54)
More than weekly	0
Weekly	9
Fortnightly	30
Monthly	33
Less than monthly	28
Mean number of energy drinks with alcohol used last time	3 (range 1-10)
Main reason for mixing energy drink with alcohol (%)	(n=54)
Taste	28
Combined effect	11
Helps party longer	9
Lessens hangover	0
Keep me straight	4
Feeling tired	30
Other	19
Recent consumption of energy drinks and another substance (not including alcohol) (%)	(n=54)
None	15
Ecstasy	72
Speed	7
Base	0
Ice	13
Cocaine	2
Cannabis	13
LSD	2
Other	9
Use of energy drinks with another substance and alcohol (%)	(n=43)
All of the time	23
Most of the time	7
Some of the time	56
A little of the time	14
None of the time	0

Source: EDRS interviews 2010

Seventy percent of the sample reported that they had experienced a negative effect which they related to the consumption of energy drinks with alcohol, energy drinks with ecstasy or all three substances. The most common negative symptoms across all three groups were headaches, heart palpitations and being 'on edge'. See Table 22.

Table 22: Negative effects experienced related to energy drink consumption among recent energy drink consumers, 2010

	2010 n=54
Any negative effects from consuming energy drinks and/or alcohol and/or ecstasy (%)	70
Energy drinks mixed with alcohol (%)	
Headaches	22
Heart palpitations	20
Nausea	11
Vomiting	17
On edge	22
Heart burn	2
Stressed out	6
Other	7
Energy drinks mixed with ecstasy (%)	
Headaches	11
Heart palpitations	11
Nausea	7
Vomiting	6
On edge	15
Heart burn	0
Stressed out	7
Other	6
Energy drinks mixed with ecstasy and alcohol (%)	
Headaches	19
Heart palpitations	28
Nausea	7
Vomiting	11
On edge	32
Heart burn	2
Stressed out	15
Other	9

Source: EDRS interviews 2010

Currently there is very little data available on quantity of general caffeinated energy drink consumption (without alcohol or other substances). Among REU who had recently consumed energy drinks with alcohol, three-quarters (76%) reported consuming energy drinks outside the party scene in their daily routine. Of those, the majority reported the frequency of consuming solely energy drinks as less than monthly (33%), followed by weekly and fortnightly (20% each) (see Table 23). The median number of cans consumed was one (range 0.5-6).

Table 23: Consumption patterns of energy drinks only in daily routine among recent energy drink consumers, 2010

	2010 n=54
Recent consumption of energy drinks outside the party scene (%)	76
Frequency of consumption (%)	
More than weekly	13
Weekly	20
Fortnightly	20
Monthly	15
Less than monthly	33

Source: EDRS interviews 2010

10.3. Tobacco

Lifetime use of tobacco was reported by 84% of the current sample, compared to 92% in 2009. Use of tobacco in the previous six months was reported by 67% of the current sample, compared to 76% in 2009. Of those reporting lifetime use of tobacco, the median age of first use was 15 years (range seven to 28). Among those that used tobacco in the last six months, the median number of days used was 90 (range one to 180) compared to a median of 180 days in last year's sample, and controlling for the gender changes in the sample suggested this was not due to these sample differences. In 2010, 45% (n=30) of those that used tobacco in the last six months were daily smokers.

10.4. GHB

In 2010, 3% of respondents reported lifetime use of GHB and no respondents reported use in the last six months. In 2009, 7% of respondents reported lifetime use and two respondents reported use in the last six months. No respondents were able to comment on quantities used, locations of use, or market aspects such as price, purity and availability, or persons and venues for scoring.

10.5. MDA

MDA (3,4-methylenedioxyamphetamine) is part of the phenethylamine family and like ecstasy is classed as a stimulant hallucinogen. There was no significant difference in the prevalence of lifetime use of MDA (11% in 2010 versus 9% in 2009). Recent use has also remained comparable to last year's findings (5% in 2010 versus 2% in 2009). Of the five respondents who had used in the preceding six months, the mean number of days of MDA use was three days in 2010, compared to two days in 2009. All five respondents reported 'swallowing' as the route of administration, although snorting was also reported as another route of administration by one of the five respondents. Respondents were not asked to report on price, purity and availability information for MDA due to consistently low numbers of users in the sample.

10.6. Pharmaceutical stimulants

Pharmaceutical stimulants have been included as a separate drug class since the 2005 survey. This category includes dexamphetamine and methylphenidate drugs, such as Ritalin and Attenta. Since 2007, licit use (i.e. prescribed) has been distinguished from illicit use. In 2010, lifetime use of any pharmaceutical stimulant remained stable from

82% in 2009 to 84% in 2010. Among current REU reporting lifetime use of pharmaceutical stimulants, illicit use was reported by 99% (n=83) and 7% (n=6) reported licit use. The median age for first illicit use was 17 years and for licit use was 15 years.

Recent use of any pharmaceutical stimulant was reported by similar proportions of last year's sample, with more than half the current sample (61%) reporting recent use compared to 60% in 2009. Among current REU reporting recent use of pharmaceutical stimulants, 95% reported illicit use (n=58) compared to 7% reporting licit use (n=4).

Table 24 presents a comparison of those reporting recent illicit versus licit use of pharmaceutical stimulants. Illicit pharmaceutical stimulants were used a median of six days in the last six months, which was comparable to four days in 2009. In regards to illicit use, the median amount used in a typical session was three tabs (range 1-13) and just over four tabs for a heavy session (range 1-24). For licit use, the median amount used in a typical session was four and a half tabs (range 2-6) and 11 tabs for a heavy session (range 4-15), although licit use findings should be interpreted with extreme caution due to the small sample numbers (n=4). Swallowing was reported as the usual method of use by all respondents for licit use (n=4) and for illicit use (n=58). Approximately one-fifth (21%) of illicit users also reported snorting and a small proportion (2%) reported both smoking and injecting as a route of administration. Injecting of pharmaceutical stimulants had not been reported in 2008 or 2009.

Table 24: Comparison of recent illicit versus licit use of pharmaceutical stimulants reported by REU, 2010

Use of pharmaceutical stimulant	Illicit (n=58)	Licit (n=4)
Days used last six months (median)	6	180
Amount typically used (median tabs)	3	4.5
Amount heavy session (median tabs)	4.25	11
Route of administration		
Swallowed	100%	100%
Snorted	21%	25%
Smoked	2%	0%
Injected	2%	0%

Source: WA EDRS REU interviews 2010

10.7. Benzodiazepines

Use of benzodiazepines was also divided into licit and illicit use in 2009. Taken together (those using any benzodiazepine), there was no significant change in lifetime use from 41% in 2009 to 44% in 2010. Of these respondents, 80% (n=35) reported lifetime illicit use of benzodiazepines and 32% (n=14) reported lifetime licit use of benzodiazepines. The median age of first licit use was 23 years and illicit use was 20 years.

Proportions using any benzodiazepine in the last six months remained comparable to those found in last year's sample, 28% in 2010 compared to 22% in 2009. The median

number of days benzodiazepines were used during this period was 14 days for licit use, with an average of 45 (range 3-180 days), and a median of two days, with an average of seven days (range 1-48 days), for illicit use. Of those using benzodiazepines in the last six months, 75% (n=21) reported illicit use and 36% (n=10) reported licit use. Three respondents reported both licit and illicit use.

10.8. Anti-depressants

Use of anti-depressants was also divided into licit and illicit use. Lifetime use of any anti-depressant was reported by 24% of the current sample compared to 21% last year. Of these current respondents, 79% (n=19) reported lifetime licit use of anti-depressants compared to 29% (n=7) reporting lifetime illicit use of anti-depressants. Thus, unlike pharmaceutical stimulants and benzodiazepines that were mostly used illicitly, anti-depressant use was predominantly licit. Two respondents reported both licit and illicit use. The median age of first licit use was 22 years (range 11-37) and the median age of first illicit use was 17 years (range 16-24).

Proportions reporting use in the last six months were comparable between survey years, with 6% in 2009 compared to 10% in 2010. Among respondents reporting recent use, one respondent reported illicit use. Among current respondents, licit anti-depressants were used a median of 180 days during this period (range 12-180), with six respondents reporting daily use. No respondents reported using anti-depressants with ecstasy and one respondent reported using anti-depressants during comedown.

10.9. Inhalants

REU reported on use of the inhalants amyl nitrate and nitrous oxide (see Table 2). Lifetime use of amyl nitrate is comparable across years, and was reported by 20% of the sample in both 2009 and 2010. The median age of first use of amyl nitrate among current REU was 21 years (range 14-33 years). Use in the last six months was reported by 5% of the current sample compared with 6% in 2009. Amyl nitrate was used a median one day (range one to 15 days) during this period. The amounts used in a typical session have not been recorded since 2009's REU questionnaire.

Lifetime use of nitrous oxide was comparable across years, as reported by 39% of the sample in both 2009 and 2010. The median age of first use was 16 years (range 14-28 years). Prevalence of use in the last six months remained comparable to previous years with 13% in 2009 and 16% in 2010. The median number of days used during this period was seven days (range 1-180 days). The median amount used in a typical session was ten bulbs (range 3-60 bulbs) and the median amount used in a heavy session was 24 bulbs (range 7-200 bulbs) which is three times the median heavy amount used in a session of that reported in 2009 (eight bulbs).

10.10. Heroin and other opiates

10.10.1. Heroin

Among current REU, 4% reported ever using heroin, which was comparable to 6% in 2009. The median age of first use was 18 years (range 15-24 years), which was comparable to a median age of 23 years last year. Among the four REU who reported lifetime use of heroin, all four reported ever injecting, and one reported ever smoking the drug.

In 2010, three respondents reported use of heroin in the last six months, which was comparable to two in 2009. The median number of days heroin was used by these three respondents was 30 days with injecting the only method of use reported.

Two KE commented that there was an increase in high purity heroin available.

10.10.2.Methadone and buprenorphine

There were no significant changes in either lifetime or recent use of methadone and buprenorphine; however, these numbers remained low (See Table 2). In 2010, 3% reported lifetime use of methadone, which was comparable to 4% in 2009. The median age of first use of methadone was 22 years (range 18-34 years) compared to 25 years in 2009. Among those reporting ever using methadone, all (n=3) reported swallowing and one respondent also reported injecting. Of those that had ever used methadone, two respondents had used in the last six months compared to one in 2009. Both participants reported swallowing and one reported injecting. The median number of days used was two and a half days (range one to four).

In 2010, 2% reported lifetime use of buprenorphine, the same proportion as in 2009. The median age of first use of buprenorphine was 25.5 years (range 25-26 years) compared to 29 years in 2009. Among those reporting ever using buprenorphine, both respondents reported injecting the drug and one reported swallowing. One respondent reported use of buprenorphine in the last six months in 2010, compared to none in 2009. They reported both injecting and swallowing as routes of administration and had used the drug on 96 days in the last six months.

No respondents reported use of methadone or buprenorphine with ecstasy or to 'come down' from ecstasy.

10.10.3.Other opiates: illicit and licit

Use of 'other opiates' was divided into illicit and licit use for the first time in the 2009 EDRS. As with methadone and buprenorphine, there were no significant changes in lifetime or recent use of 'other opiates'. This drug class includes morphine, pethidine, oxycodone and various preparations containing codeine. In 2010, 27% of respondents reported lifetime use of 'other opiates' compared to 20% of respondents in 2009. The median age of first use was 20 years (range 13-34 years) for licit use and 20 years for illicit use (range 17-31).

In 2010, 10% of the sample reported use of 'other opiates' in the last six months, the same proportion as in 2009. Of these, 50 % (n=5) reported licit use and 60% (n=6) reported illicit use in the last six months. One respondent reported both licit and illicit use. The median number of days used in the last six months was two days for illicit use (range 1-6) and seven days for licit use (range 1-90). Of the 10 recent opiate users, the most common route of administration was 'swallowed' (70%), followed by 'injected' (30%) and then 'smoked' (10%). No respondents reported use of 'other opiates' with ecstasy or to 'come down' from ecstasy.

10.10.4. Over-the-counter codeine

For the first time in 2009, REU were questioned about their use of over-the-counter codeine. Lifetime use of over-the-counter codeine was reported by 29% of respondents in 2010, compared to 20% in 2009. The median age of first use was 16 years (range 6-25 years). From the current sample, 22% reported use of over-the-counter codeine in the six

months preceding interview, compared to 15% in 2009. Only one respondent reported using over-the-counter codeine for use other than to relieve pain.

One KE commented that use of over-the-counter codeine in products such as ibuprofen tablets is an emerging problem. Users make no effort to split the codeine from the ibuprofen and are uneducated on the harms it can cause. When taken in high doses, ibuprofen can lead to renal failure and gastrointestinal bleeding. This emerging trend has implications for harm reduction strategies.

10.11. Mushrooms

The proportion of REU reporting lifetime use of mushrooms was not significantly different from the previous year, reported by 43% of current REU in 2010 compared to 50% in 2009. The median age of first use was 19 years (range 10-31 years). Rates of use in the last six months were similar, reported by 12% in 2010 compared to 15% in 2009. For those who reported recent uses in the current sample, mushrooms were used a median of one day (range 1-6 days). All respondents reported swallowing as the route of administration. No respondents reported use of mushrooms with ecstasy and no respondents reported use of mushrooms during comedown from ecstasy.

10.12. Over-the-counter stimulants

For the first time in 2009, REU were questioned about their use of over-the-counter stimulants for recreational use. This drug class includes cold and flu medication containing pseudoephedrine. Thirty-six respondents (36%) reported lifetime use of over-the-counter stimulants; a significant increase from 19% in 2009 (95%CI -0.29, -0.05) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The median age of first use was 16 years (range 6-35 years). From the current sample, 26% reported use of over-the-counter stimulants in the last six months. This was a significant increase from only 8% in 2009 (95%CI -0.28, -0.08) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The median number of days used in the last six months was four days (range 1-24 days). Among the current REU reporting lifetime and recent use, 100% reported swallowing as the route of administration.

10.13. Steroids

For the first time in 2010, REU were asked to report on steroid use. Only one respondent reported ever using steroids and no respondents reported recent use.

10.14. Emerging psychoactive substances

10.14.1. Psychedelic phenethylamines

10.14.1.1 2C-I, 2C-B and 2C-E

2C-I (2,5-dimethoxy-4-iodophenethylamine) is a psychedelic drug with stimulant effects. A standard oral dose of 2C-I is between 10-25 mg. Recent reports suggest that 2C-I is slightly more potent than its closely related cousin 2C-B (see below). One participant reported using 2CI in the last six months and reported the price to be $20 per tab.

Closely related is the psychedelic phenethylamine 2C-B (2,5-dimethoxy-4-bromophenethylamine), the dosage range is listed as 16-24 mg. 2C-B is sold as a white powder sometimes pressed in tablets or gel caps. The drug is usually taken orally, but can

also be snorted. Five percent of the sample had lifetime experience of consuming 2CB; two percent had consumed the drug in the past six months (Table 25). The price was reported to be $15-$25 per tab.

2C-E (2,5-dimethoxy-4-ethylphenethylamine) is also in this class of psychedelic drugs. It is commonly active in the 10-20 mg range, taken orally, and highly dose-sensitive. Snorting requires a much lower dose, typically not exceeding 5 mg, but this method of consumption elicits a noticeably painful or uncomfortable sensation in the nasal cavity for 10 minutes or so. There was no reported use of 2C-E in this sample.

10.14.1.2 DOI (death on impact)

DOI ('death on impact'; 2,5-dimethoxy-4-iodoamphetamine) is also a psychedelic phenethylamine. It requires only very small dosages to produce full effects. It is uncommon as a substance for human ingestion but common in research. It has been found on blotter and may be sold as LSD (Erowid: http://www.erowid.org/chemicals/doi/doi.shtml). There was no use of DOI reported in this sample.

10.14.1.3 Mescaline

Mescaline is a psychoactive phenethylamine chemical which comes from the peyote cactus. It has hallucinogenic properties. Recent use was reported by 4% of participants (Table 25). Swallowing was reported by all recent users. Median days is 1.5 (range 1-14 days) over the last six months.

10.14.2. Psychedelic tryptamines

10.14.2.1 5MEO-DMT

5MEO-DMT (5-methoxy-dimethyltryptamine) is a psychedelic tryptamine. Only one respondent reported using 5MEO-DMT in the last six months and the route of administration reported was smoking.

10.14.2.2 DMT

DMT (chemical name dimethyltriptamine) is a hallucinogenic drug in the tryptamine family, which is similar to LSD though its effects are said to be more powerful. It can be injected, smoked or sniffed and the effects rarely last more than two hours. Eight percent of the sample reported recently using DMT (see Table 25). The main route of administration reported by users was smoking. No other ROA was reported. Median days used was 2.5 (range 1-12) among recent users.

10.14.3. Stimulant emerging psychoactive substances

10.14.3.1 Mephedrone

Recent use of mephedrone was reported by 16% of the sample (Table 25). Swallowing (79%) and snorting (64%) were the main routes of administration, followed by small numbers reporting smoking (8%). Median days use in the last six months is one day (range 1-100). Only four respondents commented on the price of mephedrone. The median cost for a gram of mephedrone was $45.

10.14.3.2 BZP

BZP (1-benzylpiperazine) is a stimulant which gained popularity in some countries in the early 2000s as a legal alternative to amphetamine, methamphetamine, and MDMA. The

most popular route of administration reported was swallowing (n=25). Snorting (n=4) was the only other ROA reported. Median days of use was two (range 1-24 days) in the last six months. The median price for a tab of BZP was $30.

In comparison to national findings (4.5%), the 2010 WA EDRS sample had the highest recent use of BZP (25%) compared to other states. It is unclear whether this is due to the current purity and availability in WA or due to issues with reporting. One law enforcement KE commented on a recent seizure in Perth that looked like ecstasy pills, but was actually BZP. At least one respondent who reported recent use of BZP also commented that they had purchased it thinking it was ecstasy.

10.14.3.3 Ivory wave (MDPV)

There was no reported use of ivory wave in WA.

10.14.4. Natural occurring substances

10.14.4.1 Datura/angel's trumpet

There are many different species in the Datura genus. Probably the two most well-known are the devil's weed (*Datura inoxia*) and the thornapple or jimson weed (*Datura strammonium*). 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 easily cause unconsciousness and death. No participants reported recent use of Datura. See Table 25.

10.14.5. Other drugs

10.14.5.1 DXM

Dextromethorphan is a semi synthetic opiate derivative which is legally available over-the-counter in the United States. It is most commonly found in some cough suppressants. It is almost always used orally, although pure DXM powder is occasionally snorted. The effects of DXM generally fall into the category of dissociatives, along with ketamine, PCP, and nitrous. As with many psychoactive substances, dosages of DXM vary greatly, depending on the individual and the desired level of effects. Recreational doses range from 100 mg to 1,200 mg or more. DXM was swallowed by all recent users in the last six months, and this was the only ROA reported. Median days of recent use was two (range 1-4 days) in the last six months.

10.14.5.2 PMA

PMA has been used as a recreational psychoactive drug, primarily in the 1970s, and in Australia since late 1994. More recently, it has been sold as MDA or MDMA (ecstasy). Pure PMA is a white powder, but street products can also be beige, pink or yellowish. Today it is usually made into pressed pills.

The effects of PMA include increase in energy, visual distortions and a general change in consciousness. Symptoms after ingestion can be pupil dilation, erratic eye movements, muscles spasms, increase in body temperature, nausea and vomiting. In some cases ingestion can lead to convulsions, coma and death. PMA has caused a number of deaths in Canada and Australia and has been implicated in two recent deaths in Chicago, USA. Most PMA deaths have been in users who have taken tablets sold as 'ecstasy'.

No recent use of PMA was reported in this sample.

Table 25: Lifetime and recent use of emerging psychoactive substances, WA 2010

	N=100
2CI	
ever used (%)	9
used last 6 months (%)	1
2CB	
ever used (%)	5
used last 6 months (%)	2
2CE	
ever used (%)	0
used last 6 months (%)	0
DOI	
ever used (%)	0
used last 6 months (%)	0
Mescaline	
ever used (%)	7
used last 6 months (%)	4
5MEO-DMT	
ever used (%)	4
used last 6 months (%)	1
DMT	
ever used (%)	13
used last 6 months (%)	8
Mephedrone	
ever used (%)	19
used last 6 months (%)	16
BZP	
ever used (%)	37
used last 6 months (%)	25
Ivory wave	
ever used (%)	0
used last 6 months (%)	0
Datura	
ever used (%)	4
used last 6 months (%)	0
DXM	
ever used (%)	7
used last 6 months (%)	3
PMA	
ever used (%)	7
used last 6 months (%)	0

Source: EDRS REU interviews

10.15. Summary of other drug use

- The entire sample of REU in 2010 reported lifetime use of alcohol (100%) and 98% reported recent use. These rates were consistent with those found in previous survey years.
- In the last six months, alcohol was used a median of 48 days, which equates to twice a week. This finding was comparable to last year.
- In 2009, respondents were asked for the first time about their use of energy drinks with alcohol and ecstasy. Energy drinks with alcohol were consumed by 54% of the sample in the last six months. In addition, 45% of the sample reported consuming energy drinks with alcohol and used ecstasy in the same session.
- In 2010, 84% of REU reported lifetime use of tobacco compared to 92% in 2009, while 67% reported use in the last six months compared to 76% in 2009.
- Lifetime use of pharmaceutical stimulants remained comparable to last year, from 82% in 2009 to 84% in 2009, while recent use remained comparable with 61% in 2009 (versus 60% in 2009).
- Among those reporting lifetime use and recent use of pharmaceutical stimulants, 99% used illicitly (i.e. without prescription).
- Overall, lifetime and recent use of benzodiazepines remained comparable to last year, with lifetime use reported by 44% (41% in 2009) and recent use by 28% (22% in 2009).
- Of those reporting lifetime use of benzodiazepines, 83% used illicitly and, of those reporting recent use, 80% used illicitly.
- Lifetime and recent use of anti-depressants remained comparable to last year, with lifetime use reported by 24% and recent use by 10%.
- In contrast to pharmaceutical stimulants and benzodiazepines, 29% of lifetime anti-depressant users reported illicit use and one recent user reported illicit use.
- Both lifetime use of amyl nitrate (20% in 2009 and 2010) and recent use of amyl nitrate (5% in 2010 versus 6% in 2009) were similar to last year.
- Lifetime and recent use of nitrous oxide was similar to last year, with 39% in both 2009 and 2010 reporting lifetime use, and 16% reporting recent use in 2010 (versus 13% in 2009).
- Lifetime and recent use of heroin remained comparable to last year, with lifetime use reported by 4% in 2010 compared to 6% in 2009, while recent use was reported by 3% in 2010 and 2% in 2009.
- Lifetime and recent use of methadone, buprenorphine and other opiates remained very uncommon amongst REU and did not significantly change in comparison to last year.
- Use of mushrooms was comparable to the previous year, with lifetime use reported by 43% in 2010 (50% in 2009) and recent use by 12% (15% in 2009).
- For the first time in 2009, respondents were asked about recreational use of over-the-counter stimulants. Lifetime use was reported by 36% of the sample and recent use was reported by 26%. This was a significant increase compared to 19% and 8% last year and controlling for the gender changes in the sample suggested this was not due to these sample differences.
- For the first time in 2010, respondents were asked about steroid use. Only one respondent reported ever using steroids and no respondents reported recent use.

- The most common recently used emerging psychoactive substances reported in 2010 were BZP (25%), mephedrone (16%) and DMT (8%).

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

11.1. Overdose and drug-related fatalities

Since 2007, respondents were asked separately about overdose on a stimulant drug and on a depressant drug. Overdose on a stimulant drug in the last 12 months was reported by 21% of the current sample compared to 16% last year, and overdose on a depressant drug was reported by 29% in 2010, which was a significant increase compared to 15% in 2009 (95%CI -0.25, -0.02) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Of those who had overdosed on a stimulant drug in the last 12 months, the median number of times was one (range one to three) and the most recent overdose was a median of 18 months ago (range one month to 120 months), Of those who had overdosed on a depressant drug in the last 12 months, the median number of times was two (range one to 72) and the most recent overdose was a median of 12 months ago (range one month to 180 months). Those respondents who had not experienced either form of overdose in the last 12 months were excluded from further questioning. The most common location of stimulant overdose was 'friend's home' for stimulant (44%) and depressant (75%) overdose.

Table 26: Reported overdose on stimulant and depressant drugs in the last 12 months, 2010

Overdose	Stimulant	Depressant
Ever overdosed	21%	29%
Of those that had overdosed:	(n=21)	(n=29)
Median number of times (range)	1 (1-3)	2 (1-72)
Most recent overdose (median months)	18	12
Location of overdose being 'home'	11%	13%

Source: WA EDRS REU interviews 2010

Of the ten respondents who commented on stimulant overdose in the last 12 months, the greatest proportion reported 'ecstasy' (60%, n=6) as the main drug taken. Five respondents reported taking another drug in combination with a stimulant when the overdose occurred. Of the 16 participants who commented on depressant overdose in the last 12 months, the main drug reported was alcohol (88%, n=14), followed by cannabis and ketamine (6%, n=1 each). Other drugs taken when depressant overdose occurred were most commonly cannabis (n=6) and anti-depressants (n=2). It must be emphasised that only a small number of participants are represented in these overdose samples and therefore these samples may not be representative of trends occurring within the general population of party drug users. It may also be important to note that the drugs that influence these overdoses may be more a reflection of the drug preferences of the sample than the various substances' relative potential to result in overdose.

Respondents were also asked what symptoms they experienced when overdosed. For stimulant drugs, 60% (n=6) reported 'nausea' and 'increased heart rate'; 50% (n=5) reported dizziness; 40% (n=4) reported 'vomiting', 'increased body temperature',

'headache' and 'extreme anxiety'. In contrast, the most commonly reported symptoms for depressant overdose were 'vomiting' (75%, n=12), 'losing consciousness' (62%, n=10) and 'collapsing' (31% (n=5). Treatment response for stimulant overdose was reported as 'none' by 57% of respondents who commented (n=7). Three respondents reported being monitored or watched by friends. Two-fifths of the depressant overdose sample also nominated 'none' for treatment (40%, n=6). Six respondents also reported being monitored or watched by friends (40%).

11.2. 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, and this was reported by 17% of current REU. Table 27 presents the proportion of respondents who accessed various health services. The most common services accessed were general practitioners (44%, n=7). There were a variety of issues nominated as the main issue including 'dependence/addiction', 'anxiety', 'depression', 'other psychological problems', 'acute physical problems', 'information/advice on drug effects' and 'cutting down drug use' (14%, n=1). The most common drug a general practitioner was seen in relation to was ecstasy (43%, n=3) which is not surprising considering the selection criteria for the EDRS is regular ecstasy use. The most common drug a psychologist was seen in relation was also ecstasy (40%, n=2) and the main issues included 'overdose', 'dependence/addiction', 'anxiety', 'other psychological problems' and 'cutting down drug use' (20%, n=1). The issues for seeing a counsellor were 'depression', 'other psychological problems' and 'cutting down drug use' (33%, n=1), and the main corresponding drugs involved for seeking treatment were ecstasy, crystal meth and heroin (each 33%). It must be emphasised that of those that did access these services, sample size was extremely small and therefore must be viewed objectively.

Table 27: Proportion of REU who accessed health services, 2010

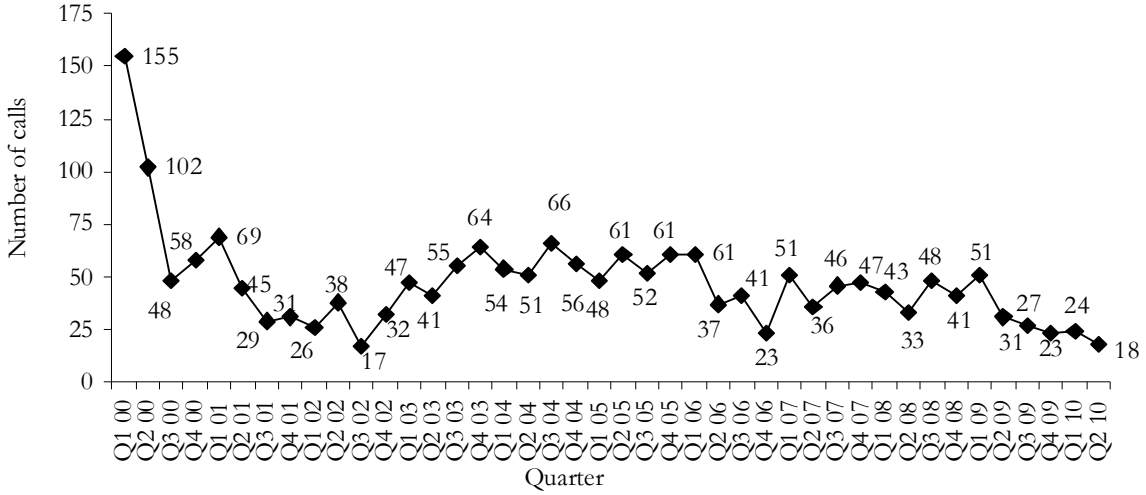
Service	2010 n=96
Accessed medical/health service (%)	17
Of those who accessed service	(n=16)
Service (%)	
GP	44
Psychologist	31
Counsellor	19
First aid	19
Emergency	19
Ambulance	6
Drug/alcohol worker	6

Source: WA EDRS REU interviews 2010

The WA Alcohol and Drug Information Service (ADIS) provides a telephone information and referral service in WA. As such, calls to ADIS provide a general indicator of the levels of use and concerns experienced by users of different drugs. Figure 41 presents data on calls where ecstasy was the primary drug of concern. In the last year,

numbers have declined from a peak of 51 calls in the first quarter of 2009. The second quarter in 2010 (n=18) represents the lowest number of calls since quarter four 2006 (n=23). Inquiries to ADIS regarding ecstasy use have generally constituted only a small proportion of the total number of inquiries received. Ecstasy-related call comprised less than one percent of total enquiries for the periods January-March 2010 (n=5,081) and April-June 2010 (n=5,161).

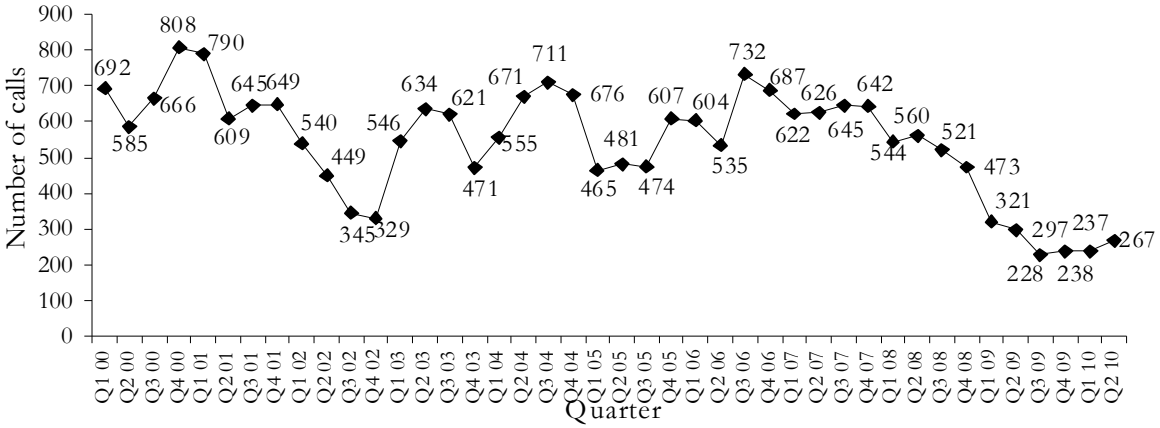
Figure 41: Number of inquiries regarding ecstasy to ADIS, WA January 2000 to June 2010



Source: WA Alcohol and Drug Information Service

Figure 42 presents the number of inquiries to ADIS regarding (meth)amphetamines. This figure shows an overall decline in calls from the third quarter in 2006 (n=732) to the most recent quarters. Quarter three in 2009 is the lowest number of inquiries made to ADIS regarding amphetamines since 2000, supporting EDRS findings that amphetamine use may be declining in Perth. In the most recently reported quarters, amphetamine-related calls comprised approximately 5% of calls received in the first two quarters of 2010.

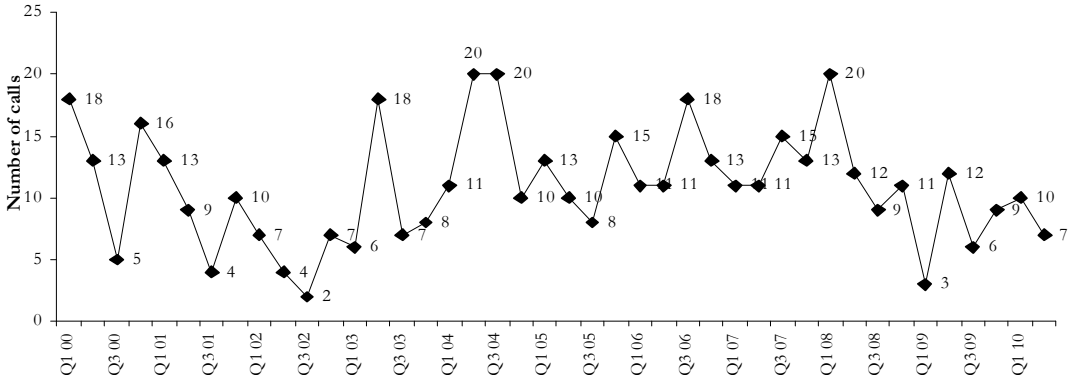
Figure 42: Number of inquiries regarding amphetamines to ADIS, WA January 2000 to June 2010



Source: WA Alcohol and Drug Information Service

The number of cocaine-related calls received by ADIS (see Figure 43) has fluctuated but continuously remained low. There was a marked decrease during the first quarter 2009 (n=3) although this stabilised to findings more comparable to previous quarters in the second quarter 2009 (n=12). Calls to ADIS regarding cocaine have consistently represented less than one percent of total calls received in a quarter.

Figure 43: Number of inquiries regarding cocaine to ADIS, WA January 2000 to June 2010



Source: WA Alcohol and Drug Information Service

11.3. Other self-reported problems

In previous years, EDRS respondents were asked if they perceived their use of ecstasy and related drugs to cause any relationship/social, financial, legal/police and/or work/study problems in the last six months. Since 2007, this has been changed to problems in 'social', 'legal', 'risk' and 'responsibility' categories (see Table 28).

The most common problem reported was in the area of 'risk' (42%). This was followed by 36% nominating 'responsibility', 22% nominating 'social', and a small proportion reporting 'legal' problems (8%). Of those who reported a 'risk' problem, such as driving while intoxicated, the greatest proportion of those identifying this problem attributed it to alcohol (57%, n=24), followed by ecstasy (29%, n=12). Of those reporting a 'responsibility' problem (e.g. absences from work), the greatest proportion equally attributed the problem to ecstasy and alcohol (28%, n=10), followed by cannabis (17%, n=6) then crystal meth (11%, n=4). Of those who reported a 'social' problem, nearly a third attributed the problem to ecstasy (32%, n=7) which was closely followed by alcohol (27%, n=6), then crystal (14%, n=3). 'Legal' problems were attributed by the greatest proportion to alcohol (63%, n=5) followed by crystal and cannabis (13%, n=1). It is likely that the apparent frequency with which ecstasy is implicated here has been affected by regular consumption of ecstasy being a prerequisite for participation in the survey.

Table 28: Self-reported drug-related problems, 2010

	Any drug (N=100)#	Ecstasy (%)*	Speed (%)*	Crystal (%)*	Cannabis (%)*	Alcohol (%)*
Social (%)	22	32	5	14	9	27
Legal (%)	8	0	0	13	13	63
Risk (%)	42	29	2	2	2	57
Responsibility (%)	36	28	6	11	17	28

Source: WA EDRS REU interviews 2010

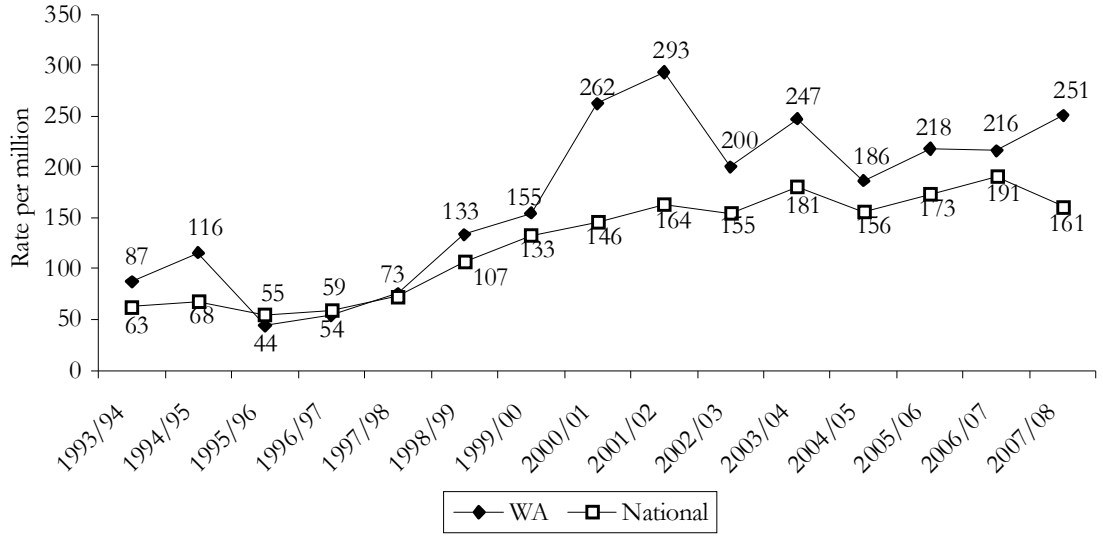
* Of those who nominated the problem

Respondents could select multiple categories of problems allowing percentage totals to exceed 100

11.4. Hospital admissions

Figure 44 presents the rate of hospital admissions in WA and nationally in which (meth)amphetamines were identified as the primary diagnosis. The AIHW defines primary diagnosis as the diagnosis established (after study) to be chiefly responsible for occasioning the patients episode of care in hospital. It is evident that rates of admissions per million people for WA continue to remain above the national rates, and although some increase was observed in 2007/2008, rates remain below the WA peak reported in 2001/2002. At the time of printing, data was not available for 2008/2009.

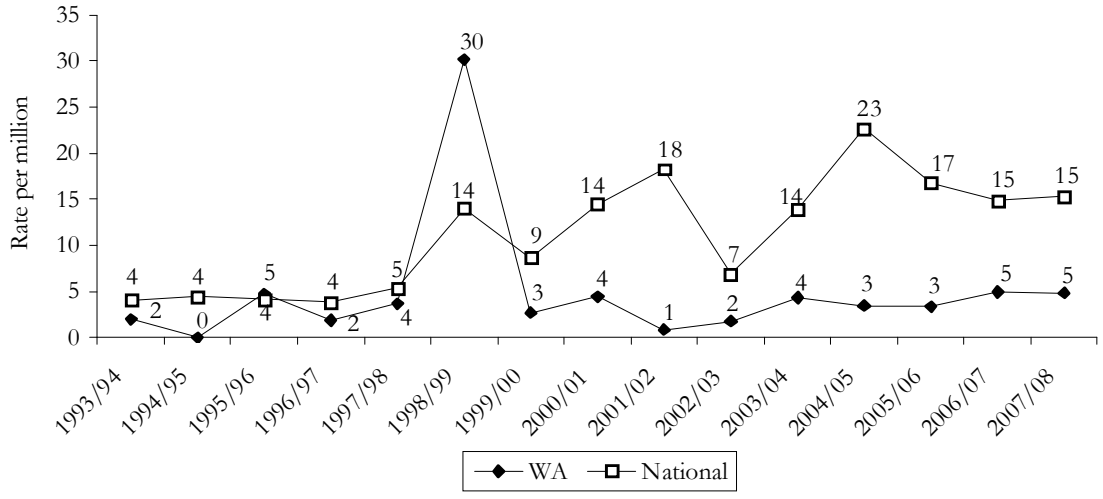
Figure 44: Rate of in-patient hospital admissions where (meth)amphetamines were the primary diagnosis in persons aged 15-54 in WA and nationally, July 1993-June 2008



Source: Australian Institute of Health and Welfare

Figure 45 shows that the rates of hospital admissions in WA where cocaine was the primary diagnosis have remained consistently low over the preceding decade except in 1998/99. Since then WA rates of cocaine-related hospital admissions have remained substantially lower than national rates.

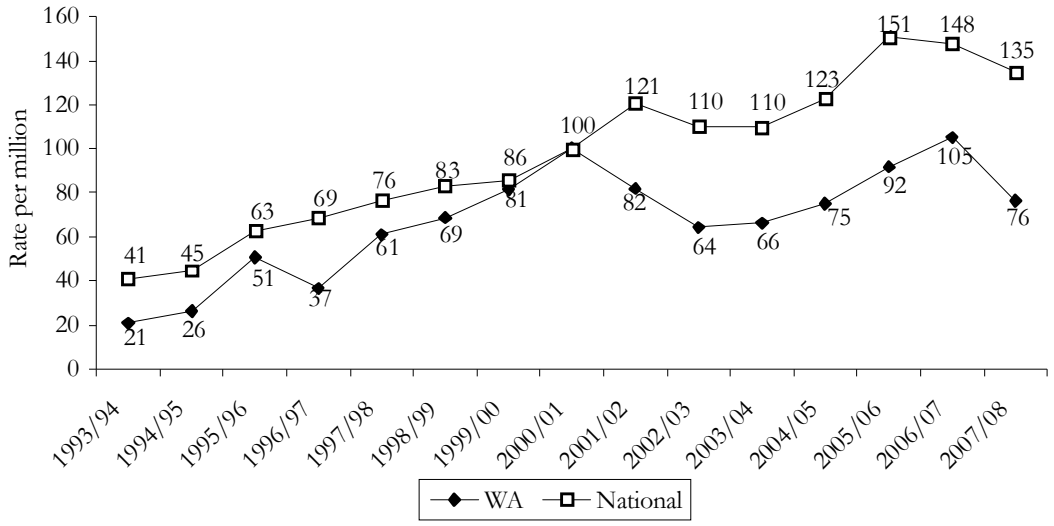
Figure 45: Rate of hospital admissions where cocaine was the primary diagnosis in persons aged 15-54 years, WA and nationally, July 1993-June 2008



Source: Australian Institute Health and Welfare

Figure 46 shows rates per million for cannabis related admissions to hospitals. Not only was a considerable decrease observed in WA admissions during 2007/2008, but the situation where WA rates are substantially less than the national rates remains unchanged since 2000/2001.

Figure 46: Rate of hospital admissions where cannabis was the primary diagnosis in persons aged 15-54 years, WA and nationally, July 1993-June 2008



Source: Australian Institute Health and Welfare

All data used to report on rates of hospital admissions can be located in Roxburgh and Burns (in press).

11.5. Mental health problems

11.5.1. Mental health problems and psychological distress (K10)

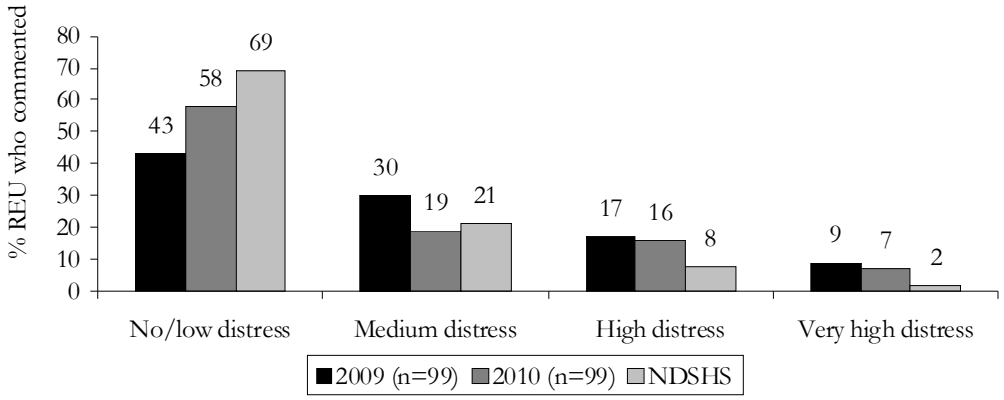
The Kessler 10 (K10) was also administered to obtain a measure of psychological distress. It is a 10-item standardised measure that has been found to have good psychometric properties and to identify clinical levels of psychological distress as measured by the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV)/the Structured Clinical Interview for DSM disorders (Andrews & Slade 2001; Furukawa et al. 2003).

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

The K10 was included in the EDRS for the first time in 2006 and scores are presented by risk category for 2009 and 2010 in Figure 47. Of the 99 respondents, the mean total score in 2010 was 17 (range 10-39) compared to 18 in 2009. In 2010, more than half the sample (58%) scored in the 'no or low distress' range (10-15), while 19% scored at 'medium distress' (16-21), 16% at 'high distress' (22-29) and 7% at 'very high distress'

(30-50). In comparison to the 2009 sample, there was a significant increase in the proportion in the 'no or low distress' category, from 43% in 2009 to 58% in 2010 (95%CI -0.28, -0.01) and controlling for the gender changes in the sample suggested this was not due to these sample differences.

Figure 47: Total K10 scores by risk category among REU, 2009-2010



Source: WA EDRS REU interviews 2009-2010

11.5.2. Self-reported mental problems and medication

Questions regarding mental health problems were included for the first time in the 2008 EDRS. Participants were asked whether they had had any self-reported mental health problems in the last six months, including those issues that they hadn't spoken to a health professional about. From the current sample of REU, 27% of respondents reported having had mental health problems in the past six months. Of these respondents, the main mental health problem specified in the past six months was 'depression' (78% n=21), and this was followed by 'anxiety' (48% n=13), manic-depression/bipolar disorder, phobias, panic and paranoia (7% n=2). Of the 27 respondents who identified with having a mental health problem in the past six months, 14 (52%) had attended a health professional in the past six months.

Of those respondents who identified with having a mental health problem, the most commonly prescribed medications for these mental health problems were anti-depressants (30%, n=8), usually 'Pristiq'® (25%, n=2), 'Endep'®, 'Dothep'®, 'Prozac'®, 'Zoloft'®, 'Efexor'®, or 'Xydep'® (13% each, n=1).

11.6. Ecstasy dependence

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

11.7. Body Mass Index

Eating disorders and drug use disorders are significant public health problems. However, epidemiological research examining their associations yields ambiguous results. Evidence on a relationship between obesity and alcohol use is found in some studies (Wannamethee, Shaper & Whincup 2005). As to the relationships between overweight/obesity and nicotine dependence, some studies have found overweight and obese men, but not women, were more likely to be former daily smokers than non-

smokers (John et al. 2006; Zimlichman et al. 2005). In a nationally representative sample, overweight, obesity and extreme obesity were associated with lower risk for past-year nicotine dependence in men but not in women (Pickering et al. 2007).

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

For the first time in 2010, participants were asked their height and weight. With this information BMI was calculated among the sample to determine the relationship between BMI, drug use and the risk of disease. BMI is calculated from height and weight information, using the formula weight (kg) divided by the square of height (m). BMI is divided into 4 groups ((1) 'underweight' – less than 18.5, (2) 'normal weight' – 18.5 to less than 25.0, (3) 'overweight' – 25.0 to less than 30.0 or (4) 'obesity' – 30.0 and greater) in adults to measure prevalence. BMI values are grouped according to the groups reported by the World Health Organization (WHO 2011).

Among the EDRS sample the mean height was 1.71 metres and weight 71.8 kilograms. The mean BMI for the sample was 24.6. Of those who commented, 5.7% had a BMI which was considered 'underweight' (BMI <18.5); this compares to 2.6% of the general population aged 18-64 years (ABS 2009). Males were more likely to be 'overweight' compared to females (26.4% versus 8.9%). Both genders reported a higher percentage as 'underweight' compared to the general population (Table 29).

Table 29: Self-reported height, weight and Body Mass Index

	National Health Survey 2007-2008	WA
Mean height (metres)	-	n=91 1.71
Mean weight (Kilograms)	-	n=88 71.8
Mean Body Mass Index (BMI)	-	n=87 24.6
BMI - Males (%)		n=42
Underweight	1.4	7.1
Normal range	35.8	42.9
Overweight	40.2	45.2
Obese	22.6	4.8
BMI - Females (%)		n=45
Underweight	3.7	4.4
Normal range	49.1	64.4
Overweight	27.2	8.9
Obese	20.0	22.2
BMI - All (%)		n=87
Underweight	2.6	5.7
Normal range	42.2	54.0
Overweight	33.9	26.4
Obese	21.3	13.8

Source: EDRS participant interviews 2010; Australian Bureau of Statistics 2009

11.8. Sexual health

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

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

In 2010, REU participants were asked if they had been tested for a sexually transmitted infection (STI) in the last two years. Among the sample who commented, over half (54%) reported that they had been tested in the last two years for a STI by means of a blood test, urine sample or swab, while one-third (36%) reported that they had not considered taking a sexual health test (Table 30).

Among those who were tested, the main reasons given for testing were; to be clear of an infection after a relationship had ended (39%), due to unprotected sex (25%) and because a health provider had suggested it (15%). The majority of participants (79%) were tested by a general practitioner (GP) (Table 30).

Table 30: Sexual health testing among REU, 2010

	N=100
Tested for a sexually transmitted infection (STI) last two years?	n=97
No, don't think about it	36
No, I didn't want to be tested	3
No, another reason	7
Yes, I was tested by means of a blood test, urine sample or swab	54
Reason for test*	n=52
Clear of infection after relationship	39
Clear of infection before new relationship	8
Unprotected sex	25
Symptoms of infection	10
Health provider suggested	15
Friend suggested	0
Partner suggested	2
Partner had symptoms	4
Ex-partner told me to get tested	0
Access to clinic was easy	0
Routine/general check up	6
Other	6
Place last tested for STI*	
GP	79
Sexual Health Clinic	19
Hospital	0
Other	2

Source: EDRS interviews

* among those who were tested for a sexually transmitted infections in the last 2 years

Two-thirds of the female sample (67%) reported obtaining a pap smear test in the last two years. The main reasons given for not having a pap smear test were 'didn't think of it' (56%) or 'embarrassed/uncomfortable' (19%). The main reasons for having a pap smear test were 'due for a test' (46%), 'reminder letters' (24%) and 'health provider suggested it' (21%). The majority of participants (88%) were tested by a GP (Table 31).

Table 31: Pap smear testing among REU, 2010

	N=100
Had a pap smear test last two years**	n=49 67
Reasons for no pap smear test last two years#	
Wasn't sexually active	0
No symptoms	13
Don't like them	0
Didn't think of it	56
Embarrassed/uncomfortable	19
Financial cost	13
Other	6
Reasons for having a pap smear test##	
Symptoms	9
Reminder letters	24
Health provider suggested	21
Friend suggested	0
Partner suggested	0
Due for a test	46
Family history of cervical cancer	6
Other	15
Place last tested for pap smear##	
Sexual Health Clinic	12
GP	88
Hospital	0
Other	0

Source: EDRS interviews
** among females only
# among those who had not had a pap smear test in the last 2 years
among those who had a pap smear test in the last 2 years

11.9. Summary of health-related trends

- Twenty-one respondents reported overdosing on a stimulant and 29 respondents on a depressant drug in their lifetime.
- In screening for psychological distress, the greatest proportion of the sample was at 'no/low risk' (58%), while 19% were at 'medium risk' and 16% were at 'high risk'.
- Twenty-seven respondents (27%) reported either being diagnosed or self-diagnosed with a mental health problem in the past six months. Of these respondents, the main mental health problem identified was depression reported by 78%, followed by anxiety by 48%.
- The most commonly reported problems were in the area of 'risk' (42%), followed by 'responsibility' problems (36%), then 'social' problems (22%) and 'legal' problems (8%).
- Nearly one-fifth of current REU (17%) reported accessing medical or health services in relation to their ecstasy and related drug use in the last 6 months.
- The mean BMI for the sample was 24.6. Males were more likely to be 'overweight' compared to females (26.4% versus 8.9%). Both genders reported a higher percentage as 'underweight' compared to the general population.
- More than half of REU (54%) reported that they had been tested in the last two years for a STI.
- Two-thirds (67%) of the female sample reported obtaining a pap smear test in the last two years.

12. RISK BEHAVIOURS

12.1. Injecting risk behaviours

Table 31 presents responses pertaining to injecting practices among the current REU sample. In 2010, 10% of respondents reported injecting a drug in their lifetime which was comparable to findings in 2009 (11%). There was no significant change among those who had recently injected, with six respondents in 2010 (60%) reporting injecting in the last six months compared to five in 2009 (46%).

Table 31: Injecting risk behaviour among REU, 2010

	2010 (N=100)
Ever injected (%)	10 (n=10)
Injected last 6 months*	60 (n=6)

Source: WA EDRS REU interviews 2010
* Of those who had ever injected

12.1.1. Lifetime injectors

Context of initiation to injecting

Just over half of those who had injected in their lifetime were male (60%, n=6), compared to 2009 when 45% (n=5) were male. The mean age of these lifetime injectors was 31 years (range 18-40).

Patterns of injecting drug use

Table 32 presents figures for the types of drugs injected among those in the current sample who reported lifetime and recent injection. Lifetime injectors (n=10) had injected a range of drugs, with the most common drug ever injected being speed with 80% (n=8), followed by crystal and ecstasy pills reported by 60% (n=6) of lifetime injectors. Lifetime injecting of ecstasy pills was reported by 36% in 2009. Ever injected base was reported by 20% (n=2) in 2010 compared to 46% in 2009. Lifetime injecting of heroin was reported by 40% (n=4) of respondents in 2010 compared to 46% (n=5) in 2009. Respondents in 2010 also reported lifetime injecting of pharmaceutical stimulants (30%), buprenorphine (20%), benzodiazepines (10%) and methadone (10%).

Table 32: Injecting drug use history among REU injectors, 2010

Drug	Ever injected (%) n=10	Recently injected (%) n=6
Speed	80	83
Crystal	60	67
Base	20	33
Ecstasy pills	60	33
Ecstasy capsules	10	0
Heroin	40	50
Methadone	10	17
Pharmaceutical stimulants	30	17
Buprenorphine	20	17
Benzodiazepines	10	0
Other opiates	40	33

Source: WA EDRS REU interviews 2010

12.1.2. Recent injectors

Patterns of injecting drug use

Of the six respondents who reported injecting in the last 6 months, four were male and two were female, and their average age was 32 years (range 21 to 40). In the last six months, 83% (n=5) reported injecting speed, 67% (n=4) reported injecting crystal. Of these respondents, three reported injecting speed the last time, two reported last injecting 'other opiates' and one reported last injecting crystal. All six recent injectors reported last injecting at their 'own home'.

Injecting risk behaviour

In regards to risky injecting and needle and equipment sharing behaviours, one recent injector reported using a needle after or before someone else in the last six months. Four respondents reported to have shared injecting equipment. Two respondents reported sharing spoons or mixing containers, one respondent reported sharing each of filters and tourniquets.

Context of injecting

Four recent injectors reported usually injecting by themselves and two respondents reported usually injecting with a 'regular sex partner'. The median number of times recent injectors had injected a drug in the last six months was 15 (range 10 to 180 times) compared to 32 in 2009. This equates to injecting approximately every twelfth day compared to 2009 when it equated to fifth or sixth. There were two out of six recent injecting respondents reported to have injected while either under the influence of/or coming down from drugs compared to four out of five respondents in 2009. This occurred at a median of six times (range 1 to 10 times) in the last six months. Due to the extremely small sample of six recent injectors, interpretation of this data should be done with caution.

Obtaining needles

The greatest proportion of the recent injecting respondents reported obtaining needles from a 'needle and syringe program' (83%, n=5), followed by from a 'chemist' (17%, n=1) (compared to 80% obtaining needles from a 'chemist in 2009, n=4). However,

these findings should be interpreted with caution due to only a small number of respondents.

12.2. Blood-borne viral infections (BBVI)

Fifty-eight percent of the sample reported that they have never been vaccinated for hepatitis B virus (HBV), 20% reported that they had completed the vaccination schedule, 4% did not finish the vaccination schedule and 17% did not know if they had been vaccinated. Reasons for seeking HBV vaccination included being vaccinated as a child (n=8), going overseas (n=7) and at risk due to injecting drug use (n=3).

Participants were asked if they have been tested for hepatitis C virus (HCV). Of the sample, 74% reported that they had never been tested for HCV, while 7% had been tested in the last year, 7% were tested more than a year ago and 11% did not know or did not get their result. Among those who had ever injected, 20% had never been tested, 40% had been tested in the last year, and 40% had been tested more than a year ago. No respondents reported that they were positive for HCV.

Participants were asked if they had been tested for human immunodeficiency virus (HIV). Of the sample, 74% had never been tested for HIV, 11% had been tested in the past year, 11% had been tested more than one year ago and 3% did not know or did not get their result. Among those who had ever injected, 30% had never been tested, 40% had been tested in the last year and 30% had been tested more than a year ago. No participants reported that they were HIV positive.

Forty-three percent of the sample reported having a sexual health check-up (such as a swab, urine, or other blood test) in the past year, while 26% reported having had their last sexual health check-up more than one year ago. Thirty-two percent had never had a sexual health check-up.

The majority (78%) reported that they had never been diagnosed with a sexually transmitted infection (STI); 5% had been diagnosed with an STI in the past year. In the past year, four participants had been diagnosed with Chlamydia and one participant had been diagnosed with HPV.

Table 33: Blood-borne virus vaccination and testing among REU, 2010

	N=100
Vaccinated for hepatitis B (%)	n=81
No	70
Yes, didn't complete	5
Yes, completed	25
Main reason or hepatitis B vaccination (%)*	
At risk (IDU)	13
At risk (sexual)	0
Going overseas	29
Vaccinated as a child	33
Work	8
Don't know/can't remember	8
Other	8
Tested for hepatitis C (%)	n=87
No	84
Yes, in last year	8
Yes, > year ago	8
Hepatitis C positive (%) **	0
Tested for HIV (%)	n=95
No	77
Yes, in last year	12
Yes, > year ago	12
HIV positive (%) #	0
Other sexual health checkups (%)	n=98
No	32
Yes, in last year	43
Yes, > year ago	26
Sexually transmitted infection (STI) positive (%)	n=97 22
STI diagnosis (%) ##	
Gonorrhoea	0
Chlamydia	80
Syphilis	0
HPV (genital warts)	20
Other	0

Source: EDRS REU interviews

* among those who had been vaccinated for hepatitis B

** among those tested for hepatitis C

among those tested for HIV

among those who tested positive for STI in the last year

12.3. Sexual risk behaviour

Penetrative sex was defined as 'penetration of penis or hand 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.

Recent sexual activity

Unlike in previous years' samples when participants were asked how many people they had had penetrative sex with in the last six months, in 2009 and 2010 participants were only asked to report on how often barriers were used with regular and/or casual partners either under the influence of alcohol and drugs, or not under the influence in the last six months. 'Casual partner' is defined as referring to anyone participants had penetrative sex with who is not a regular partner. As presented in Table 34, more than half the current sample (65%) had engaged in penetrative sex with a regular partner in the last six months and more than half of the current sample (58%) reporting engaging in penetrative sex with a casual partner in the last six months. In regards to those respondents that had penetrative sex with a casual partner in the last six months, the greatest proportion reported two casual partners in the past six months (25%, n=23), followed by participants nominating one casual partner (17%, n=16). Protective barriers were defined as 'condoms, dams or gloves'. The greatest proportion reported 'never' using a protective barrier with a *regular* partner both not under the influence of alcohol and other drugs (51%, n=33) or under the influence of alcohol and drugs (57%, n=37). The greatest proportion of those who had had penetrative sex with casual partners reported using a protective barrier 'every time' by 41% (n=24) whilst not under the influence of alcohol and other drugs (see Table 34), and by 34% (n=16) whilst under the influence of alcohol and other drugs (see Table 35).

Table 34: Prevalence of sexual activity and number of sexual partners in the preceding six months, 2010

	2010 (N=100)
With a regular partner (%) not UI# of AOD	(n=65)
Use a protective barrier every time	12
Use a protective barrier often	18
Use a protective barrier sometimes	11
Use a protective barrier rarely	8
Never use a protective barrier use	51
With a regular partner (%) UI# of AOD	(n=65)
Use a protective barrier every time	14
Use a protective barrier often	15
Use a protective barrier sometimes	5
Use a protective barrier rarely	9
Never use a protective barrier use	57
Had casual sex in the last six months	n=58
No. of casual sexual partners (%)	(n=94)
None	38
One person	17
Two people	25
3-5 people	14
6-10 people	6
With a casual partner (%)+	(n=58)
Use a protective barrier every time	41
Use a protective barrier often	14
Use a protective barrier sometimes	19
Use a protective barrier rarely	5
Never use a protective barrier use	19
Not applicable to me	2

Source: WA EDRS REU interviews 2009
+ Of those who had a casual partner
# under the influence

Drug use during sex

Presented in Table 35 are findings related to sexual behaviour and drug use. Of those who had engaged in penetrative casual sex in the last six months (n=58), 81% (n=47) had done so under the influence of drugs. Of these respondents, (45%, n=21) reported doing so three to five times in the last six months. The most common responses were under the influence of alcohol, which remained comparable from 75% (n=35) in 2010 to 72% in 2009. The second most commonly reported drug for both 2009 and 2010 was ecstasy, with 62% (n=29) reporting use with a casual partner in 2010 compared to 71% in 2009; this was followed by 36% (n=17) reporting being under the influence of cannabis whilst having penetrative sex with a casual partner in 2010. Around one-third (34%, n=16) of those with a casual sex partner reported using protective barriers 'every time' they had penetrative sex while on drugs; this was significantly higher than last year (22%) (95%CI -0.42, -0.05) and controlling for the gender changes in the sample suggested this was not due to these sample differences.

Table 35: Drug use during casual sex in the preceding six months, 2010

	2010 (n=58)
Penetrative casual sex while on drugs* (%)	81
Of those who had penetrative casual sex under the influence of drugs	*n=47*
Number of times (%)	
Once	11
Twice	21
3-5 times	45
6-10 times	4
Ten +	19
Drug used (%)	(n=47)
Ecstasy	62
Cannabis	36
Alcohol	75
Speed	13
Crystal	9
Base	2
Cocaine	11
Pharmaceutical stimulants	11
LSD	9
Nitrous oxide	4
Heroin	2
Ketamine	2
Benzodiazepines	2
Mushrooms	2
With a casual partner while using drugs (%)+	(n=47)
Use a protective barrier every time	34
Use a protective barrier often	17
Use a protective barrier sometimes	21
Use a protective barrier rarely	11
Never use a protective barrier use	17

Source: WA EDRS REU interviews 2010
* Of those who had penetrative sex in the last 6 months
+ Of those who had used drugs with a casual partner

12.4. Driving risk behaviour

In 2010, 84% of respondents reported driving a car in the last six months, as shown in Table 36. Of these, 61% (n=51) reported having driven under the influence of alcohol in the last six months with the majority (73%, n=37) reporting to have driven over the legal alcohol limit. This was similar to 2009 results.

The median number of times respondents had driven over the alcohol limit was four (equating to once every one and a half months) (range one to 24 times). Of all those who had driven a car in the last six months, 44% (n=37) reported having been breathalysed in

the last six months; of these, five respondents (14%) reported being over the legal blood alcohol limit when tested, which is comparable to last year (18%).

Similarly prevalent was the rate of driving within one hour of taking a drug, reported by 58% (n=49) of those who had driven a car in the last six months. However, this was significantly lower than the proportion report in 2009 (75%) (95%CI 0.13, 0.36) and controlling for the gender changes in the sample suggested this was not due to these sample differences. The median number of times reported was five (range one to 180). The most commonly reported drugs used prior to driving were ecstasy (71%, n=35) and cannabis (55%, n=27) which was comparable to the previous year's findings. Rates of driving after consuming speed and crystal remained comparable, reported by 18% each in 2010 compared to 12% last year. The median number of hours after which respondents reported driving was two (range 0-30).

Respondents who reported driving after drug use were asked about their perceived level of impairment and the risk of accident. Of these, 43% (n=21) reported their drug use had 'no impact' on their driving which was significantly higher than 28% last year (95%CI -0.55, -0.24) and controlling for the gender changes in the sample suggested this was not due to these sample differences. Nearly half of those who reported driving after drug use reported their driving was 'slightly impaired' (45%, n=22) which was the same as last year, while 6% (n=3) stated that their driving was 'quite impaired' followed by 'slightly improved' (4%, n=2).

Drug driving testing was introduced in WA in October 2007 to allow police to randomly stop motorists and motorcyclists and test them for illicit drugs. Since the 2008 EDRS, REU have been asked if they had ever been tested for drug driving by the police roadside drug testing, and from the current sample four respondents (5%) reported to have been tested for drug driving in the last six months compared to 6% in 2009 (n=5), of which all reported a negative result.

Table 36: Drug driving in the last six months among REU, 2010

	2009 N=100	2010 N=100
Driven a car in last 6 months (%)	80	84
Driven under influence of alcohol# (%)	69	61
Driven soon after* taking a drug# (%)	75	58
Of those who'd driven soon after	(n=60)	(n=49)
Drug (%)		
Ecstasy	72	71
Cannabis	63	55
Speed	12	18
Crystal	12	18
LSD	10	6
Pharmaceutical stimulants	7	4
Cocaine	7	16
Benzodiazepines	3	0
Mushrooms	2	0
Nitrous oxide	2	2
Heroin	0	0
Base	0	0
Other opiates	-	2

Source: WA EDRS REU interviews 2010
*within one hour of taking
# of those who had driven a car in the last 6 months
- data not collected

12.5. Bingeing behaviour

No change was observed in 'bingeing' behaviour; that is, use of substances for more than 48 hours without sleep. From the current 2010 sample, 37% reported bingeing on ecstasy and related drugs in the last six months compared to 40% from the 2009 sample. Those reporting bingeing on any stimulant or party drug in the 2010 sample reported an average of approximately four occasions (range one to 20) during this six-month period; this was significantly less than the average six occasions reported in 2009 ($t=-3.312$, $df=36$, $p=.002$) and controlling for the gender changes in the sample suggested this was not due to these sample differences.

12.6. Summary of risk behaviour

- Prevalence of lifetime and recent injection remained comparable to 2009. In 2010, 10% reported ever injecting (11% in 2009) and 6% reported injecting in the last six months (5% in 2009).
- Speed was the most common drug ever injected by 80% of injectors, and the most common drug recently injected by 50% of those who had injected in the last six months.
- One recent injector reported using a needle before or after someone else during the last six months.
- Four recent injectors reported usually self-injecting and two recent injectors reported usually injecting with a regular sex partner.
- Over half the sample (58%) had engaged in penetrative sex with a casual partner in the six months preceding interview, with the greatest proportion having two casual partners (25%).
- Nearly half the sample (47%) had engaged in penetrative sex with a casual partner while using drugs and, of these respondents, the most commonly reported drug was alcohol (75%) closely followed by ecstasy by 62%. Of these respondents, 17% reported 'never' using a protective barrier.
- Of those participants who had driven a car in the last six months, 61% had done so under the influence of alcohol and 58% had done so within an hour of taking a drug or drugs. The most common drugs consumed prior to driving were ecstasy (71%) and cannabis (55%).
- 'Binge' ecstasy use was comparable to last year: 40% in 2009 compared to 37% this year.

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

13.1. Reports of criminal activity among regular ecstasy users

Table 37 presents the proportion of respondents reporting criminal activity in the month preceding interview across survey years. Rates have remained similar across samples; the proportion reporting criminal activity in 2010 was 35%, compared to 38% last year. Furthermore, like in previous years' studies, drug dealing remained the most common crime reported by 24% compared to 32% in 2009. Property crime was reported by 13% in 2010 compared to 6% in 2009. Of those who reported 'drug dealing', 54% (n=13) reported doing so 'less than once a week' and 77% (n=10) of those reporting 'property crime' did so 'less than once a week'. In 2010, 13 respondents had been arrested in the previous year compared to 19 respondents in 2009. The greatest proportion were arrested for offences involving 'property crime' and 'alcohol and driving' offences (31% each, n=4), followed by 'drunk and disorderly' (15%, n=2) and 'use/possession' and 'public nuisance' (8% each, n=1).

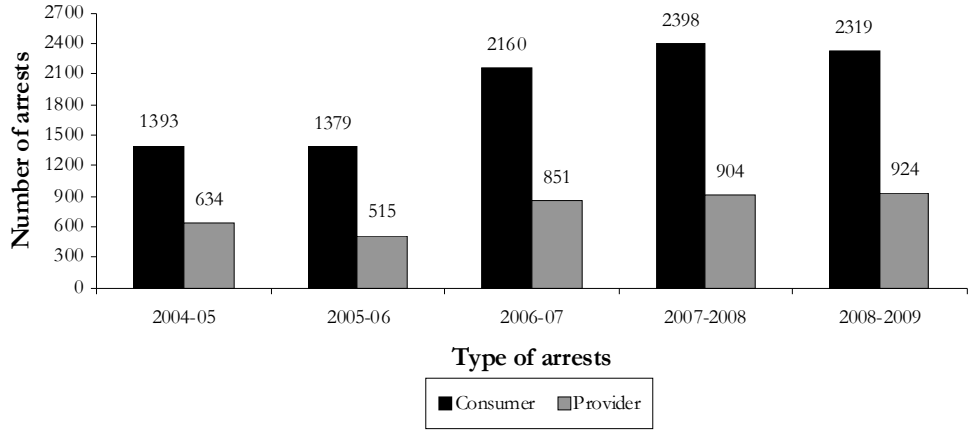
Table 37: Criminal activity reported by REU, 2003-2010

Criminal activity in the last month	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Any crime (%)	38	30	32	26	39	31	38	**35**
Drug dealing (%)	36	25	24	23	31	24	32	**24**
Property crime (%)	5	10	9	9	16	7	6	**13**
Fraud (%)	2	4	6	2	4	2	0	**2**
Violent crime (%)	0	4	2	1	5	3	3	**3**
Arrested last 12 months (%)	**9**	**13**	**14**	**14**	**12**	**5**	**19**	**13**

Source: WA PDI/EDRS REU interviews 2003-2010

Figure 48 presents the number of consumer and provider arrests for amphetamine-type stimulants in WA from 2004 to 2009 (most recent data available). 'Amphetamine-type stimulants' refers to amphetamine, methyl amphetamine, crystalline methyl amphetamine, and phenethylamines such as 3,4-methylenedioxymethamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA), 3,4-methylenedioxyamphetamine (MDA), dimethoxyamphetamine (DMA) and paramethoxyamphetamine (PMA). The numbers of both consumer and provider arrests in 2008-2009 were comparable to 2007-2008. In 2008-09, WA had the fourth highest number of consumer arrests following Queensland (3,579), NSW (2,880) and Victoria (2,465). WA also had the third highest number of provider arrests (n=924) following NSW (1,236) and Victoria (1,125).

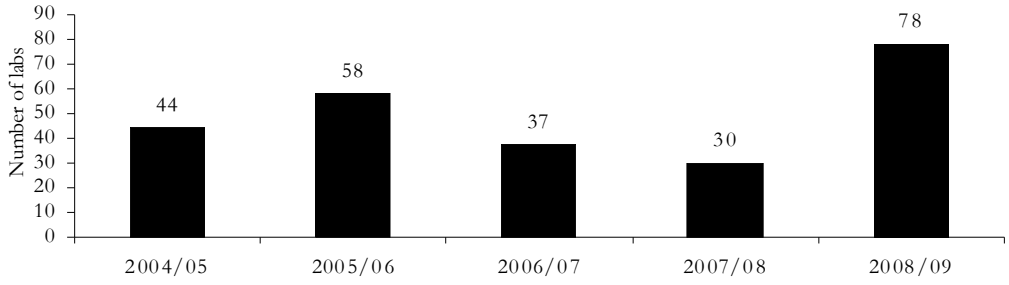
Figure 48: Number of consumer and provider arrests for 'amphetamine-type stimulants' in WA, 2004-05 to 2008-09



Source: Australian Crime Commission 2010

In 2008-09 clandestine (meth)amphetamine laboratory detections increased from 30 laboratories in 2007/08 to 78 in 2008/09, an increase of 160 per cent (Figure 49).

Figure 49: Number of clandestine (meth)amphetamine laboratories detected by WA police 2004/05-2008/09



Source: Australian Crime Commission

Key expert comments

One KE mentioned that more young people are buying ecstasy in bulk and dealing or distributing. As a result, the justice system is increasingly dealing with people who have no previous contact with the system.

One KE from law enforcement also reported an overall increase in the number of clandestine labs detected in Perth in the last 12 months. It is unclear whether this is due to a genuine increase in clandestine labs or a change in focus by organised crime.

13.2. Regular ecstasy users' perceptions of police activity

As shown in Table 38, there was some change in participant perceptions of police activity across survey years, with an increased proportion of the current sample reporting that police activity towards REU in the last six months had been stable, from 22% in 2009 to 34% in 2010. The greatest proportions of respondents reported an 'increased' perception in police activity toward REU in the last 6 months reported by 37% of respondents in 2010 compared to 42% in 2009. More than one-quarter (27%) of current respondents were unable to comment ('don't know'). While the majority of REU did not perceive police activity to make scoring drugs more difficult (71%), this was significantly lower than 2009 findings (85%) (95%CI 0.02, 0.25).

Table 38: Perceptions of police activity by REU, 2003-2010

Recent police activity	2003 (N=100)	2004 (N=100)	2005 (N=100)	2006 (N=100)	2007 (N=100)	2008 (N=58)	2009 (N=100)	**2010 (N=100)**
Decreased	6	4	0	0	6	0	0	**2**
Stable	34	38	36	41	33	35	22	**34**
Increased	29	29	43	34	24	26	42	**37**
Don't know	31	29	21	25	37	39	36	**27**
Did not make scoring more difficult	82	89	80	73	73	88	85	**71**

Source: WA PDI/EDRS regular ecstasy user interviews 2003-2010

13.3. Experiences with drug detection 'sniffer' dogs

Commencing in 2006, REU were asked questions about the use of sniffer dogs. Half of the current sample (51%, n=51) reported seeing sniffer dogs in the last six months compared to 42% of the 2009 sample. The largest proportion had seen sniffer dogs once during this period (39% in 2010 versus 41% in 2009). Of those who had seen a sniffer dog, 86% reported seeing them at a festival/live music event, 31% reported seeing them at a nightclub and 20% reported seeing them on or near public transport. Of those who had seen sniffer dogs, 34 respondents (67%) reported being in possession of drugs at the time, compared to 24 respondents (57%) in 2009. Of these respondents, 65% (n=22) reported that they kept going about their business, 9% (n=3 each) reported consuming their drugs or giving their drugs to someone else to carry and 18% reported other responses such as 'left the area' (n=2). Two respondents reported being searched by the police due to a positive notification from a sniffer dog in the last six months. The outcome of both of these searches was that police did not find anything and let the respondent go.

13.4. Summary of law enforcement-related issues

- There was no significant change in the proportion reporting engagement in criminal activity during the last month from 38% in 2009 to 35% in 2010.
- Of these respondents, drug dealing was the most common activity reported (24%).
- In 2010, 13 respondents had been arrested in the previous year compared to 19 respondents in 2009. The most common offences were 'property crime' and 'alcohol and driving' offences
- The greatest proportions of respondents reported an 'increased' perception in police activity toward REU in the last 6 months (37% in 2010 vs. 42% in 2009).
- The greatest proportion of the sample (71%) reported that police activity did not make scoring drugs more difficult.
- 51 respondents reported seeing sniffer dogs during the previous six months compared to 42 respondents in 2009.

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