A. Matthews and R. Bruno

TASMANIAN TRENDS IN ECSTASY AND RELATED DRUG MARKETS 2009
Findings from the Ecstasy and Related Drugs Reporting System (EDRS)

Australian Drug Trends Series No. 50

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ABBREVIATIONS

1,4B	1,4 butanediol
2CB	4-bromo-2,5-dimethoxyphenethylamine
2CE	2,5-dimethoxy-4-ethylphenethylamine
2CI	2,5-dimethoxy-4-iodophenethylamine
ABCI	Australian Bureau of Criminal Intelligence
ACC	Australian Crime Commission
ADF	Australian Drug Foundation
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AGDH&A	Australian Government Department of Health and Ageing
AOSD	Amphetamines and other synthetic drugs
AUDIT	Alcohol Use Disorders Identification Test
AIHW	Australian Institute of Health and Welfare
A&TSI	Aboriginal and/or Torres Strait Islander
BBVI	blood-borne viral infections
BZP	benzylpiperazine
CIDI	Comprehensive International Diagnostic Interview
DACAS	Drug and Alcohol Clinical Advisory Service
DHHS	Department of Health and Human Services
DSM	Diagnostic and Statisical Manual (of mental disorder)
DXM	dextromethorphan
DUI	driving under the influence
ERD(s)	ecstasy and related drug(s)
EDRS	Ecstasy and Related Drugs Reporting System
GBL	gamma-butyrolactone
GHB	gamma-hydroxy-butyrate
GLBT	gay lesbian bisexual transgender
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
ICD	International Classification of Diseases
IDRS	Illicit Drug Reporting System
IDU	injecting drug user
K10	Kessler Psychological Distress scale
KE	key expert(s) (previously 'key informant')
LSD	*d*-lysergic acid
N	(or n) number of participants
NSP	Needle and Syringe Program
NDS	National Drug Strategy
NDSHS	National Drug Strategy Household Survey
NMDS	National Minimum Data Set for Alcohol and other Drug Treatment Services
M	mean
MAOI	monoamine oxidase inhibitor
MDA	3,4-methylenedioxyamphetamine
MDMA	3,4-methylenedioxymethamphetamine (ecstasy)
MDEA	3,4-methylenedioxyethamphetamine

MDPV	Methylenedioxypyrovalerone
MSM	methylsulfonylmethane
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NMDS	National Minimum Data Set
NSP	Needle and Syringe Programs
PDI	Party Drugs Initiative (Now EDRS)
PCP	phencyclidine
PMA	paramethoxyamphetamine
PWI	Personal Wellbeing Index
REU	regular ecstasy user(s) (previously 'party drug user')
SD	standard deviation
SDS	Severity of Dependence Scale
SPSS	Statistical Package for the Social Sciences
SSRI	specific serotonin reuptake inhibitor
TASPOL	Tasmania Police
TAS	Tasmania
95%CI	95% confidence interval

EXECUTIVE SUMMARY

Demographic characteristics of REU

The sample of 100 regular ecstasy users (REU) interviewed in 2009 were typically in their early- to mid-twenties, with ages ranging from 18 to 42 years. Participants were generally well educated and either employed on a full- or part-time/casual basis or currently engaged in study. Few participants had come into contact with the criminal justice system or drug treatment agencies. These demographic characteristics are generally consistent with those reported among REU in the previous years of the study.

Patterns of polydrug use over time

Polydrug use was the norm among the REU interviewed, with most having used a range of drug classes in the preceding six months. Recent use of alcohol, tobacco, cannabis, amyl nitrite and methamphetamine powder was most common. Relative to 2008, a significantly greater proportion of the 2009 sample reported recent use of amyl nitrite (51% vs. 15%), and significantly fewer reported recent use of other opioids such as morphine, codeine or opium poppies (6% vs. 17%). There were also trends for less recent use of methamphetamine powder (46% vs. 59%), and benzodiazepines (24% vs. 37%), and more recent use of 2,5-dimethoxy-4-iodophenethylamine (2CI; 9% vs. 2%).

Over the seven years of the study there have been notable trends in the use of some drug types. Between 2003 and 2006 there was a steady increase in the recent use of cocaine (from 7% to 33%), but this remained stable at around one-third of the sample since this time, with 31% of the 2009 sample reporting recent use The proportion of the sample reporting recent cannabis use was substantially lower between 2007 and 2009 (68-76%) relative to the 2003-2005 cohorts (89-91%). Recent use of crystal methamphetamine was greatest among the 2003 cohort (52%) relative to all other cohorts, and significantly greater than that seen in the current cohort (7%).

Ecstasy

Data from the National Drug Strategy Household Survey (NDSHS) suggest a steady increase in the national prevalence of ecstasy use in Australia between 1995 and 2007, where 8.9% of the population are estimated as ever trying the drug, and 3.5% were estimated as using the drug in the preceding 12 month period. The estimated prevalence of recent ecstasy use in Tasmania has increased significantly from 1.6% (95%CI 1.3-1.8%) in 2004 to 2.4% (95%CI 2.2-2.6%) in 2007, but is still significantly lower than the national estimate in 2007 (3.5%, 95%CI 3.4-3.6%).

On average, the participants interviewed in the present study had first started to use ecstasy on a regular basis at 19 years and had been using ecstasy for a period of four years. The entire sample had recently used ecstasy in tablet form but use of ecstasy in capsule (48%) and powder (12%) form was also common. The proportion reporting recent use of ecstasy capsules was significantly greater relative to the 2008 cohort (18%).

Although ecstasy was typically swallowed, snorting of ecstasy was also common. There was a wide variation in the frequency of ecstasy use among the sample, ranging from monthly to several times a week. On average, ecstasy had been used fortnightly with a median of two tablets taken in a typical session.

There were some concerning patterns of use among the sample from a health perspective. One-fifth (17%) had used ecstasy on a weekly basis or more frequently. A large majority (81%) usually used more than one tablet in a typical session of use and one-quarter (26%) had recently used ecstasy in a 'binge session' (a continuous 48 hour period of drug use without sleep). Whereas the long-term effects and risks of extended ecstasy use are largely unknown, evidence from toxicology studies in rats and neuropsychological studies in humans indicate that the safest pattern of use is to use the drug infrequently and in small amounts. Thus, those using the drug frequently or in large amounts for extended periods of time may be at a greater risk of neurological and neuropsychological harm.

Ecstasy was typically consumed in combination with other drugs – in a typical session, alcohol, cannabis, and tobacco were commonly used. A large majority (87%) reported drinking alcohol when last under the influence of ecstasy and three-quarters of the sample (79%) had consumed more than five standard drinks. Around one-half (52%) reported use of energy drinks in the same session as ecstasy. High levels of coincident binge alcohol and ecstasy use is an issue of concern. There is an increased risk of dehydration when alcohol is combined with ecstasy, and larger quantities of alcohol can be consumed when under the influence of psycho-stimulants without experiencing immediate effects of intoxication; however, the harms associated with this use still occur. Moreover, there is emerging evidence from animal studies that alcohol may dramatically alter the pharmacology of 3,4-methylenedioxymethamphetamine (MDMA) in the brain, which may exacerbate the potential for neurological harm from the drug (Hamida et al., 2008).

Ecstasy was typically last used at music-related venues including nightclubs and live music events or private residences.

Price, purity and availability of ecstasy

The median market and last purchase price for one tablet of ecstasy was $35 and the median market price for 10 tablets was reported to be $320 or $32 per tablet. No notable price changes were reported from 2008.

REU typically reported that ecstasy was medium or fluctuating in purity, with purity having either remained stable or fluctuated during the six months preceding the interview.

REU indicated that ecstasy is 'easy' or 'very easy' to obtain and that recent availability had remained stable. The proportion of REU indicating that ecstasy was 'very easy' to obtain has gradually reduced between 2004 (68%) and 2009 (21%).

Ecstasy markets and patterns of purchasing

Consistent with previous years, ecstasy was typically purchased from friends and obtained from a friend's home, the respondent's own home or a nightclub. Three-fifths (61%) indicated they typically purchased ecstasy both for themselves and others, with a median of five tablets purchased per occasion.

Although the ecstasy market is predominantly based on individuals sourcing the drug for other friends while making no cash profit, those that purchase ecstasy in larger quantities may be putting themselves at risk of being arrested as a provider rather than a consumer of the drug. Under Tasmanian legislation, the offences of possession, supply, and trafficking of a controlled substance are based on various factors including 'intent' and are not necessarily determined by the quantity of the seized substance. However, the offence of trafficking, which carries the largest penalty, may be determined by possession of a trafficable amount of a controlled substance. For ecstasy (MDMA), this trafficable amount is 10 grams.

Methamphetamine

Use of methamphetamine was common among REU in 2009, with just over one-half (52%) reporting recent use of some form of methamphetamine in the preceding six months, compared to 63% in 2008, and significantly greater proportions in previous years (70-82%).

Recent use of methamphetamine was significantly more common among older (those aged 23 or above; 62%) relative to younger (40%) participants. Methamphetamine was used on a median of three days during this period (once every two months) in relatively small amounts (1-2 points).

Recent use of methamphetamine powder was most common (46%) followed by methamphetamine base (14%) and crystal methamphetamine (7%).

The proportion reporting recent use of methamphetamine powder (46%) trended towards being less than the proportion in 2008 (59%) and was significantly less than the years prior to this (62-77%) and the median frequency of use was significantly lower in 2009 (2 days) relative to 2008 (3 days).

Methamphetamine powder was typically swallowed or snorted, base was typically swallowed, whereas crystal was typically injected, smoked, or snorted.

The median last purchase price for one 'point' (0.1 g) of all methamphetamine forms was $40. These prices are generally consistent with those reported in previous years and no recent price changes were noted. However, the median last purchase price for one gram of methamphetamine powder ($255) was significantly lower than that reported in 2008 ($300).

The majority of REU who commented indicated that methamphetamine was medium in purity (63% powder, 46% base, 60% crystal).

All methamphetamine forms were considered to be 'easy' or 'very easy' to obtain among those who commented.

Small sample sizes in relation to crystal and base and low levels of recent use among the current cohort both indicate very low availability of these forms to this demographic in 2009.

Cocaine

Consistent with drug use trends in the general population, the recent use of cocaine increased among the REU cohorts between 2003 (7%) and 2006 (33%), but has remained stable since this time with 31% reporting recent use in 2009.

Cocaine was typically snorted and was used on a median frequency of two days (range 1-24 days) in the six months preceding the interview, with an average of 0.2 to 0.25 grams used in a typical session. Cocaine was last used at nightclubs, live music events and private residences.
The median last purchase price for one gram of cocaine was $300 (range $300-650) which has remained stable since 2005. No consistent trends in terms of recent price changes were noted.

Cocaine was typically considered to be 'low' or 'medium' in purity and this purity was reported to have remained 'stable' or 'decreased' in the last six months.The majority of those who commented on the availability of cocaine, indicated that it was currently 'difficult' or 'very difficult' to obtain, and no recent changes in the availability of the drug were noted. Cocaine had typically been purchased from friends or dealers at private residences on the last occasion.

LSD and other psychedelics

Consistent with data from previous years, over one-half (52%) of the 2009 REU sample had used *d*-lysergic acid (LSD) at some stage of their lives and one-third (34%) had used LSD in the six months preceding the interview. Consistent with previous EDRS samples, lifetime and recent use of LSD was more common among males relative to females.

One tab or one drop of liquid LSD (range 0.5-3) was taken orally in a typical session of use and LSD had been used on a median of 2 days (range 1-15 days) in the preceding six months.

LSD was last used at private residences such as the consumer's own home, a friend's home, or a private party, as well as dance-related events, outdoor locations, nightclubs, or live music events.

The median last price for one tab of LSD in 2009 was $20 (range $10-45) which is consistent with the price reported in 2008.

The purity of LSD was considered by REU to be 'medium' (31%) to 'high' (56%) and to have remained stable during the six months preceding the interview.

A significantly greater proportion of the 2009 sample indicated that LSD was 'easy' or 'very easy' to obtain relative to 2008, with over half of those who commented indicating that the availability of LSD had recently increased. Several REU (n=9) also noted an anecdotal increase in the recent use of LSD among themselves or their friends.

LSD was typically last obtained from friends and was most commonly last obtained from private residences but also from nightclubs or dance-related events.

One-fifth (21%) of the 2009 sample had recently used psychedelic mushrooms. Recent use was more common among males than females. Mushrooms had been used on a median of 2 days in the last six months. Two-fifths of the sample (41%) had recently used some form of psychedelic drug (either LSD and/or mushrooms) in the last six months.

Cannabis

Almost three-quarters (76%) had used cannabis during the six months preceding the interview. Recent use was more common among males relative to females and 'younger' (those under 23) relative to 'older' participants.

Cannabis had typically been smoked, with around one-quarter recently ingesting the drug. The median frequency of cannabis use was 15 days (range 1-180) or approximately fortnightly. The median quantities used on the last day of use during this time were 4 cones (range 0.5-30) or 1 joint (range 0.5-6). Daily cannabis smoking was relatively uncommon (6%).

Consistent with the decline in cannabis use seen among the general population nationally, there has been less recent use, and a lower median frequency of use among the EDRS cohorts between 2007 and 2009 relative to previous years.

The median last purchase price for one ounce of 'hydro' was $280 (range $100-350) compared to $225 ($150-250) for 'bush'. The median weight for one $25 bag of hydro was 1.4 grams (range 1-2 grams), compared to 1.5 grams (1-3 grams) for bush. The median weight for one $50 bag of hydro was 3 grams (range 2-3.5 grams), compared to 4 grams (2-5 grams) for bush.

The potency of 'hydro' was reported to be high and stable, and the potency of 'bush' was reported to be medium and stable in the preceding six months.

Both 'bush' and 'hydro' were reported to be 'easy' or 'very easy' to obtain, and this level of availability was perceived as remaining stable during the six months preceding the interview.

Alcohol

The entire 2009 REU sample had recently consumed alcohol, on an average of two to three days per week in the last six months. A large majority (90%) had used alcohol at least weekly (but not daily) during this time, which is substantially higher the estimate of prevalence in the general population (47.8%, among those aged 20-29 nationally – a comparable age group to the current REU cohort).

Tobacco

Tobacco had recently been smoked by three-quarters (77%) of the sample, with over one-third (32%) of these smoking tobacco on a daily basis in the last six months. The proportion of daily smokers was much greater than the national (21.4%) but similar to Tasmanian (30.4%) smoking prevalence among those aged 20-29 in the general population.

Patterns of other drug use

Consistent with the low levels of use reported in previous years, less than one-tenth of the sample reported recent use of MDA (8%), ketamine (5%), or GHB/GBL/1,4B (3%).

One-quarter (24%) of the 2009 REU sample had used benzodiazepines during the six months preceding the interview, which trended towards being fewer relative to 2008 (37%). Almost one-fifth (19%) reported recent illicit use of benzodiazepines, much higher than recent estimates of prevalence in the general population (1-1.4%). However, the use of illicit benzodiazepines was relatively low frequency, at four days in the last six months.

Almost one-tenth (9%) of the REU sample were prescribed anti-depressants, and illicit use of such drugs was almost non-existent (1%).

A significantly greater proportion of the sample reported recent use of amyl nitrite in 2009 (51%) relative to 2008 (15%), with recent use more common among younger relative to older participants. Frequency of use was relatively low at less than once a month in the last six months.

Almost one-third (32%) of the 2009 sample reported low frequency use (less than once a month) of nitrous oxide, with recent use more common among males relative to females.

Small proportions of the sample reported recent use of research chemicals such as 2CI, 2CB and 2CE. In 2009, 14% of the sample reported use of capsules known locally as 'Israelis'. These capsules are thought to have contained 4-methylmethcathinone.

The use of other pharmaceuticals and opioid drugs was relatively rare among the regular ecstasy users interviewed in the current study, and those that had recently used these drugs had generally done so infrequently. One-tenth (10%) of REU reported recent illicit use of pharmaceutical stimulants (such as dexamphetamine or methylphenidate) in 2009. The median frequency of pharmaceutical stimulant use was low, at 2 days in the last six months. Only small proportions of the 2009 sample had recently used heroin (3%), methadone (4%), buprenorphine (1%) or other opioids (pharmaceuticals and alkaloid poppy derivatives) (6%). A significantly smaller proportion of the sample reported recent use of such other opioids in 2009 (6%) relative to 2008 (17%),

Drug information-seeking behaviour

Whereas one-third (29%) of the regular ecstasy users interviewed in 2009 actively and regularly sought information about the content/purity of 'batches' of ecstasy pills, the remainder did so half the time or less (47%) or 'never' (23%). Participants typically obtained this information from friends or websites (particularly www.pillreports.com).

The majority of the sample (86%) reported that they had bought a drug and it turned out to have different effects than they expected in the last six months. A majority of those who commented (91%) indicated that the ecstasy that they had recently taken appeared subjectively to contain substances other than MDMA, most commonly perceived to be methamphetamine (60%), ketamine (18%), caffeine (17%), MDA (12%), or 2CI/2CB (8%).

Risk behaviour

Injecting drug use. Consistent with the low levels of intravenous drug use among previous REU cohorts, only a small proportion (12%) of the 2009 REU sample had recently injected. This was more common among older relative to younger participants. Methamphetamine was typically the first drug ever injected and the most common drug recently injected. While several participants reported sharing of needles and other injecting equipment, this was not common. Injecting equipment had been obtained from chemists, NSP outlets or friends in the preceding six months.

Sexual risk behaviour. One-half (54%) of REU reported penetrative sex with a casual partner during the six months preceding the interview and almost one-half (49%) reported sex with a casual partner while under the influence of drugs, most commonly alcohol or ecstasy. Regardless of whether under the influence of ERDs, only around one-fifth reported 'always' using protective barriers with a casual partner and around one-third 'never' used protective barriers.

Drug driving. Of those who had driven a car, over one-half (59%) reported driving at a time when they perceived themselves to be over the legal alcohol limit during the last six months and one-half (51%) reported driving within an hour of taking illicit drugs in the last 6 months. Most commonly, participants reported driving under the influence of ecstasy, cannabis and/or methamphetamine. The proportion reporting that they had been random breath tested in 2009 (56%) was significantly greater relative to 2008 (40%)

Alcohol Use Disorders Identification Test (AUDIT). Just over ten percent (13%) of the REU that completed the AUDIT scored in zone 1 (low-risk drinking or abstinence). Almost one-half (48%) scored in zone 2 (alcohol use in excess of low-risk guidelines), a further 20% scored in zone 3 (harmful or hazardous drinking), and almost one-fifth (18%) scored in zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence).

Binge drug use. One-quarter (27%) had recently 'binged' on ecstasy or related drugs (a continuous period of use for more than 48 hours without sleep), similar to proportions in previous samples. Substances most commonly used in a binge session of use were ecstasy, alcohol, methamphetamine, cannabis, and cocaine.

Health-related issues

Overdose. Less than one-tenth of the 2009 REU sample (7%) reported an overdose episode in the last six months, with 1% reporting a recent overdose episode on a stimulant drug (e.g., methamphetamine, ecstasy) and 6% reporting a recent overdose on a depressant drug (e.g., alcohol, GHB). While these symptoms of overdose were not medically trivial, most participants had not received any formal medical treatment in relation to an overdose episode.

Ecstasy dependence. Almost one-fifth (18%) of REU reported experiencing significant symptoms of dependence in relation to ecstasy.

Methamphetamine dependence. Almost one-tenth (8%) of those who had recently used methamphetamine had experienced significant symptoms of dependence in relation to methamphetamine.

Access to health services. Despite regular substance use, just one-sixth (13%) of the 2009 REU sample had accessed health services in relation to drug use in the preceding six months, most commonly a GP (69%). Participants were most likely to access services in relation to the use of ecstasy (62%), cannabis (39%), other opioids (39%) or GHB (23%).

Mental health problems. Almost one-third (30%) of the 2009 REU sample self reported experience of mental health problems during the six months prior to the interview, most commonly depression (67%) and/or anxiety (73%). Just over one-half (53%) of those who had experienced mental health problems had attended a health professional in relation to these problems during this time.

Psychological distress. Mean scores on the Kessler Psychological Distress Scale (K10) were slightly higher among the current sample of REU relative to the general Australian population. The proportion of the sample with scores categorised as 'very high' was similar to the general Australian population; however, the proportion of REU with scores classified as 'high' or 'moderate' was significantly greater than the general population. Those with 'high' scores on this test have increased rates of mental health problems and may benefit from interventions with a health professional.

Personal Wellbeing Index (PWI). The mean PWI scores of REU were similar to those seen in the general population and within the normal range (between 60 and 90 percentage points) of wellbeing scores for each domain.

Chronic physical conditions. Asthma (39%) was the most common chronic physical condition reported followed by hay fever (35%), skin problems (22%), vision problems (22%), back/neck problems (20%) and migraine (14%). A significantly higher proportion of the EDRS sample reported having been diagnosed with asthma compared to the general population (39% vs. 25%).

Other problems. Two-fifths (42%) reported any recurrent drug-related problem, suggestive of possible substance abuse. One-quarter of the 2009 sample (26%) reported that drug use had recurrently interfered with their responsibilities at home, work, or school during the six months preceding the interview. One-fifth had recurrently put themselves or others at risk (19%) and smaller proportions had experienced recurrent social/relationship (15%) problems or legal/police problems (5%) in relation to drug use. Problems were most commonly attributed to ecstasy, alcohol, or cannabis. Males were more likely to experience risk problems relative to females.

Drug treatment data
While a consistent number of calls (approximately 15 per annum) have been made to the Tasmanian Alcohol and Drug Information Service over the last few years in relation to ecstasy, these account for a small percentage (~2%) of the calls made to this service.

Data from the National Minimum Data Set (NMDS) for alcohol and other drug treatment services in Tasmania shows that while ecstasy was the principal drug of concern in only 1.7% of all treatment episodes in the 2007/08 period, this is a significantly greater proportion relative to 2004/05 (0.7%), suggesting a gradual increase.

In 2005/06, Tasmanian hospital admission rates for cannabis were higher than the national rate (179 vs. 151 admissions per million persons respectively), with a further substantial increase seen in 2006/07 (232 vs. 142 admissions per million population). There was a reduction in Tasmanian admission rates in 2007/08 such that they are more comparable with those seen nationally but still slightly higher (156 vs. 135 admissions per million population).

Tasmanian hospital admission rates for methamphetamine increased steadily between 1999/00 and 2002/03 followed by a plateau between 2003/04 and 2005/06. In 2006/07, there was a substantial increase in methamphetamine-related admissions, to a level that is considerably higher than the national rate (244 vs. 185 admissions per million persons respectively). There was a reduction in the Tasmanian admission rates in 2007/08 but they still remain above the national admission rate for this period (210 vs. 161 admissions per million population).

There has been very few hospital admissions recorded in Tasmania in relation to cocaine.

Criminal activity, policing and market changes
The self-reported level of criminal activity among the 2009 REU sample was relatively low. With the exception of dealing drugs (18%), around one-tenth of the REU interviewed had committed other criminal offences during the one month preceding the interview and one-tenth (10%) had been arrested during the preceding 12 months, generally for reasons unrelated to drug use. Just over one-tenth of the REU sample (15%) perceived that there had been an increase in police activity towards ecstasy users in the last six months.

Law enforcement data
A substantial increase in the number of ecstasy tablets seized by Tasmania Police and the number of both consumer and provider arrests in relation to ecstasy was observed between the 2006/07 and 2008/09 reporting periods relative to any previous years. While the number of methamphetamine-related arrests substantially increased in the 2006/07 and 2007/08 periods relative to previous years, there was a substantial reduction in the 2008/09 reporting period. The number of methamphetamine-related seizures has also increased over the years, with a large increase in the total number of seizures in the 2006/07 period. While there were declines in the number of seizures in 2007/08 and 2008/09, there was a substantial increase in the weight of seizures in 2008/09. The number of cannabis-related arrests and cautions made by Tasmania police has increased since 2005/06, and remained relatively stable in 2008/09. An increase in the number of cannabis-related seizures was also observed in 2006/07, with seizures remaining relatively stable since this time.

The number of individuals before the Magistrates Court for possession and use offences increased from a range of 414-517 individuals per annum between 2002/03 to 2007/08 to 886 in 2008/09. There was also a slight increase in the number of individuals incarcerated at Hobart Prison in relation to drug offences in 2008/09 relative to previous years.

Implications

It is important to note that the aim of the EDRS is to investigate the patterns of drug use, drug markets, and associated risks and harms among a sentinel group of participants that use ecstasy on a regular basis; as such, this population is not necessarily representative of all consumers of ecstasy and related drugs, and the prevalence of ecstasy and other drug use can not be inferred from this study. However, the study is designed to identify emerging trends and important issues, and the findings of the 2009 EDRS suggest the following key areas for consideration in future policy.

1. Funding of specific health programs to meet the needs of local consumers

There are currently no services that specifically cater to users of ecstasy and related drugs in Hobart, and aside from volunteer organisations at predominantly large-scale events there is currently very little dissemination of harm-reduction information to these populations. This indicates a clear need for funding and a proactive response in terms of the implementation of harm-reduction strategies. Although approximately one-third of the REU interviewed in the current study were actively seeking harm-reduction information in relation to the substances that they chose to use, these messages were not necessarily reaching other consumers.

Considering that drug information was typically sought from peers or peer-run organisations (e.g., harm-reduction-based websites such as www.pillreports.com or www.bluelight.ru), responses to overdose incidents were typically handled by peers, and the fact that REU do not typically come into contact with traditional health services, it is likely that harm-reduction programs will attain maximum impact if delivered through peer-based organisations and mediums appropriate to the target group such as internet sites and outreach workers or information at events. By contrast, illicit-drug education campaigns based around 'fear arousal' have been shown to be ineffective or to even have contradictory effects (Ashton, 1999; Skiba, Monroe & Wodarski, 2004; West & O'Neal, 2004), and these programs, and associated sensationalised reporting of drug use in the media, run the real risk of undermining the potential for successfully reducing health harms amongst this population.

Consistent with this recommendation, a recent parliamentary inquiry into the manufacture, importation and use of amphetamines and other synthetic drugs (AOSD) in Australia recommended that harm-reduction strategies and programs receive more attention and resources in the execution of the National Drug Strategy (Commonwealth of Australia, 2007). The committee also recommended that public education and demand-reduction campaigns for illicit drugs be factual, informative and appropriately targeted, seek input from young people and take account of user experiences (Secretariat of the Parliamentary Joint Committee on the Australian Crime Commission, 2007).

2. Focused interventions to reduce the harm associated with high risk patterns of drug use, polydrug use, and binge drinking (including binge drinking in combination with ecstasy)

Whereas the long-term effects and risks of extended ecstasy use are largely unknown, evidence from toxicology studies in rats and neuropsychological studies in humans indicate that the safest pattern of use is to use the drug infrequently and in small amounts. Thus, those using the drug frequently or in large amounts for extended periods of time may be at a greater risk for neurological and neuropsychological harm. Among the REU cohort in the present study, one-fifth (17%) had used ecstasy on a weekly basis or more frequently, a large majority (81%) usually used more than one tablet in a typical session of use, and one-quarter (26%) had recently used ecstasy in a 'binge session' (a continuous 48-hour period of drug use without sleep).

Given that ecstasy was typically consumed in combination with other drugs among the current REU cohort, polydrug use is also an issue of concern in this population. Concomitant use of different drugs may have potentially harmful interactions, thus dissemination of information regarding the negative effects of specific drug combinations may be beneficial. Of particular concern is the high level of coincidental ecstasy and binge alcohol use among the REU interviewed in the present study. Three-quarters of the REU sample (79%) typically consumed more than five standard drinks when under the influence of ecstasy. There is an increased risk of dehydration when alcohol is combined with ecstasy. Additionally, larger quantities of alcohol can be consumed when under the influence of psychostimulants without experiencing the immediate effects of intoxication; however, the harms associated with this use still occur. Moreover, there is emerging evidence from animal studies that alcohol may dramatically alter the pharmacology of MDMA in the brain, in particular increasing the concentration of the drug and its metabolite in particular regions, which may exacerbate the potential for neurological harms or problems such as dependence, arising from use of the drug (Hamida et al., 2008).

Hazardous drinking practices are also an issue of general concern in this population. A large majority (90%) of the 2009 REU sample had used alcohol at least weekly during the six months preceding the interview, which is substantially higher than both the Tasmanian (40.5%) and national (41.3%) estimates of prevalence for the general population, and among those aged 20-29 nationally (47.8%). A large majority of REU (87%) scored 8 or more on the Alcohol Use Disorders Identification Test (AUDIT), suggestive of hazardous and harmful alcohol use and the possibility of alcohol dependence. Additionally, the majority of overdose episodes reported by REU in the current study involved alcohol and/or polydrug use.

3. Increased awareness of and access to health, mental health and emergency services in this population

The level of harm experienced by the majority of participants was relatively low, with few recent overdose episodes, recent experience of mental health problems, or high levels of psychological distress, few people accessing health services in relation to drug use, and most not experiencing significant symptoms of dependence in relation to either ecstasy or methamphetamine.

However, there was a subset of this cohort that experienced notable symptoms of dependence, recent mental health problems and clinically significant levels of psychological distress. Over one-quarter (30%) of the 2009 REU sample reported recent experience of mental health problems (most commonly depression and/or anxiety), but just one-half (53%) of these had attended a health professional in relation to these problems. This finding suggests under-recognition of mental health problems in this population and a need to improve the recognition of and access to treatment for mental health problems in this population.

Similarly, despite regular substance use, just one-sixth (13%) of the sample had recently accessed health services in relation to drug use. The service most commonly accessed by REU was a GP, and presentations were typically for acute health issues only, and as such there may be some benefit in increasing awareness among primary health care practitioners in regard to ecstasy and related drugs and associated problems.

Very few participants had accessed health services in relation to overdose episodes. Less than one-tenth of the sample reported a recent overdose but a majority had not received any formal medical treatment, with most indicating that they were monitored/watched by friends. Thus peer education on how to help friends in an emergency, or increased access to emergency services, may also be of benefit for this group.

4. Interventions aimed at increasing awareness of safe sexual practices

One-third of those who had had sex with a casual partner reported that they 'never' used protective barriers when either under the influence or not under the influence of alcohol and drugs, and the majority (around two-fifths) had not consistently used barriers. Use of protective barriers among this population is an issue of concern given the rapidly increasing notifications of sexually transmitted infections in the general population – for example, the rate of notified cases of chlamydia infections have *almost doubled* in the four year period between 2002 and 2005 from 122.4 per 100,000 population to 202.5 per 100,000 (Australian Institute of Health and Welfare, 2006).

5. The provision of pill testing kits

While there are some limitations to the use of commercially available ecstasy 'testing kits', currently there is often very little information available to consumers in regard to the substances contained within the tablets that are sold on the local market, and a majority of the participants in the current study indicated that they had sometimes bought a drug and it turned out to have different effects than expected. Limitations aside, use of these kits may allow consumers to be more informed about the tablets that they choose to use, and it is apparent that the consumers interviewed would act on information from testing kits – not taking a pill if it appeared to have an unexpected content such as potentially harmful substances such as PMA or DXM (Matthews & Bruno, 2008; Johnston et al., 2006). Testing kits can be purchased via the internet but are currently not available from any local source. There may be some benefit in making these available locally on a not-for-profit or cost-recovery basis, or facilitating provision of testing at dance and related events. The use and/or supply of testing kits under these circumstances would also allow for the limitations of these kits to be conveyed more effectively to consumers.

While noting some concerns about the potential limitations of pill testing kits, the recent parliamentary inquiry into the manufacture, importation and use of amphetamines and other synthetic drugs (AOSD) in Australia noted that a feasibility study on an illicit-tablet monitoring service is underway in Victoria, and that the results of the evaluation of this study will be informative for future policy decisions in relation to pill testing (Secretariat of the Parliamentary Joint Committee on the Australian Crime Commission, 2007). The authors of this report concur with this view and would encourage Tasmanian services and consumers to support this feasibility study wherever possible.

6. Increased awareness of legislation among local consumers with regard to possession, supply, and trafficking of controlled substances.

Although the ecstasy market is predominantly based on individuals sourcing the drug for other friends while making no cash profit, those that purchase ecstasy in larger quantities may be putting themselves at greater risk of being arrested as a provider rather than a consumer of the drug. Three-fifths (61%) indicated that when they purchased ecstasy, they typically purchased the drug both for themselves and others, and a median of five tablets were purchased per occasion. This indicates a need for increased awareness among REU in Tasmania of the risks associated with supplying ecstasy to friends, so that they are able to make informed choices with regard to this.

7. Evaluation of the impact of, and further targeting of, drug driving interventions among regular drug consumers

A substantial proportion of the consumers interviewed in the EDRS study in 2009 reported driving while affected by alcohol (three-fifths of those with access to a vehicle) or drugs (over one-half of those with access to a vehicle). Education and law enforcement interventions designed to reduce the prevalence of drug driving are constantly evolving and monitoring of the impact of such strategies is recommended, particularly where such evaluation could be used to tailor interventions to this demographic.

8. Basic science research in relation to emerging drugs (amyl nitrite, 2CI, 2CB, 2CE, 4-methylmethcathinone) in order to establish best-practice harm reduction information.

A notable proportion of the Tasmanian EDRS sample reported recent use of substances such as 2CI (2,5-dimethoxy-4-iodophenethylamine), 2CB (4-bromo-2,5-dimethoxyphenethylamine), 2CE (2,5-dimethoxy-4-ethylphenethylamine), and 'israelis' (possibly 4-methylmethcathinone). There exists a paucity of information about the physiological or neuropharmacological effects of these drugs, and importantly, virtually no information about how these drugs may interact with other illicit substances, pharmaceuticals or existing medical issues. This poses substantial risk of harm to the health of consumers. Similarly, half of the sample reported recent use of amyl nitrite, which also has a limited research base in regard to its use as an intoxicant. Notably, the rates of use of these substances was greater than drugs such as GHB or ketamine, both of which have received substantially greater media and research attention, and for which harm reduction information is relatively widely available. While the use of such substances may fluctuate due to the changing legal status of these drugs, basic science research in regard to the actions of these drugs in the body and brain, particularly in relation to the most well-established of these drugs, would be a crucial first step for the development of evidence-based harm reduction information that could contribute to maintaining the health of consumers of these drugs.

1.0 INTRODUCTION

The Ecstasy and Related Drugs Reporting System (EDRS, formerly the Party Drugs Initiative or PDI) is a companion project to the Illicit Drug Reporting System (IDRS). The IDRS has been conducted in every Australian state and territory annually since 1999, following successful trials in 1996 and 1997. The IDRS is currently funded by the Australian Government Department of Health and Ageing and was designed to monitor trends and emerging issues in illicit drug use in order to provide a timely early warning system for health and law enforcement services, to provide direction for subsequent further research, and to provide an evidence base for policy. The IDRS focuses on drugs such as methamphetamine, opioids, cannabis, and cocaine, and issues that pertain particularly to the intravenous use of drugs in Australia. The methodology of the IDRS involves the triangulation of three data sources including a survey of people who regularly inject illicit drugs, a survey of 'key experts' (KE) who have regular contact with injecting drug users, and an examination of 'indicator data' or available existing data sources.

The EDRS uses the same triangulated methodology as the IDRS, but aims to examine emerging trends in the use, price, purity and availability of 'ecstasy and related drugs' (ERDs) in Australia. For the purpose of the present study, ERDs are defined as drugs commonly used recreationally in the context of venues such as nightclubs and dance- or music-related events. These drugs primarily include ecstasy, methamphetamine, cocaine, LSD, ketamine and GHB. The feasibility of the EDRS was assessed with a two-state trial funded by the National Drug Law Enforcement Research Fund (NDLERF) in 2000 (Breen, Topp, & Longo, 2002). It was clear from the feasibility study that the EDRS could adequately capture the emerging population of ecstasy and related drug users in Australia, a demographic which was largely distinct from that accessed within the methods of the IDRS, and NDLERF provided additional funding for a two year project in every Australian state and territory beginning in 2003. The EDRS was funded by the Australian Government Department of Health and Ageing and the Ministerial Council on Drug Strategy as a project under the cost-shared funding arrangement in 2005 and by the Australian Government Department of Health and Ageing since 2006. The current report contains new data collected in Tasmania in 2009 and Tasmanian trends between 2003 and 2008 (Bruno & McLean, 2004b; Matthews & Bruno, 2005, 2006, 2007, 2008, 2009). National reports including jurisdictional comparisons are available as technical reports from the National Drug and Alcohol Research Centre, University of New South Wales (Black et al., 2008; Breen et al., 2004; Dunn et al., 2007; Sindicich et al., 2009; Stafford et al., 2005, 2006).[1]

1.1 Aims

The aims of the Tasmanian EDRS are: to describe the demographic characteristics and patterns of ecstasy and other drug use among a sample of regular ecstasy users (REU) in Hobart and surrounding areas; to examine and identify trends in the price, purity, and availability of ERDs in Hobart; to examine the nature and incidence of risk behaviours among the group of participating REU (e.g., injecting drug use, driving risk, sexual risk, agression); to examine health-related harms associated with ERD use including overdose, help-seeking behaviour, dependence, psychological distress physical health and other potential problems (occupational, social, risk to self/others, legal); to investigate other emerging trends in local ERD markets that may warrant further investigation or monitoring; to examine the incidence of drug information-seeking behaviour; and to identify issues that are pertinent to developing harm-reduction strategies in Hobart. An overarching aim is to, where possible, incorporate converging data from KE and indicator data and to identify emerging trends through comparison with EDRS data collected in Hobart between 2003 and 2008 (Bruno & McLean, 2004b; Matthews & Bruno, 2005, 2006, 2007, 2008, 2009).

[1]These reports are available electronically at the National Drug and Alcohol Research Centre website: http://ndarc.med.unsw.edu.au/

2.0 METHODS

The EDRS uses a convergent validity methodology involving the triangulation of data from three different sources. The three components include a survey of regular ecstasy users (REU) in Hobart, interviews with key experts (KE) who have regular contact with ecstasy users in Hobart through the nature of their work or role in the community, and an examination of existing data sources that pertain to ecstasy and related drugs in Tasmania. Focusing on convergent trends among the three data sources allows the validity of each data set to be established. Specific information about the three data sources used in the present study is outlined below.

2.1 Survey of regular ecstasy users (REU)

2.1.1 Recruitment

One hundred regular ecstasy users were interviewed using a structured face-to-face interview between April and June 2009. Interviews were conducted at locations such as cafes, bars, the University of Tasmania, and, where appropriate, private residences such as participants' and interviewers' homes. Inclusion criteria for the study included at least monthly use of ecstasy in the last six months and having resided in the greater Hobart area for at least twelve months prior to the interview. Participants were recruited through posters and flyers distributed in the Hobart area at various locations (cafes, bars, nightclubs, clothing stores, music stores, universities, youth services, hairdressers), internet forums, and through snowball methods (word of mouth and recruitment through friends and associates).

2.1.2 Procedure

Participants contacted the researchers through voicemail, email, or SMS to leave their contact details and were subsequently contacted by one of the interviewers. Upon initial contact, participants were asked questions to establish their eligibility for the study and, if inclusion criteria were met, were given information about the aims and rationale for the study, the interview content and process, and issues pertaining to confidentiality and anonymity. Following verbal consent to participate, interviewers arranged to meet participants at a mutually acceptable time and place. Prior to commencing the interview, participants were given further information about the study through a written information sheet describing the study and the interview content and process in more detail. Participants were also informed that the information they gave was strictly confidential, that they could not be personally identified in any way, and that they were free to withdraw at any time without prejudice, or decline to answer any questions. Participants signed a consent form to indicate that they had read and understood the information given to them and that any questions had been answered to their satisfaction. Interviews took a median of 60 minutes to complete (range 33-110 minutes) and participants were reimbursed a sum of $40 for their travel and out of pocket expenses.

2.1.3 Measures

The structured interview focused on the six-month period preceding the interview and assessed information in regard to demographic characteristics; patterns of ecstasy and other drug use including frequency, quantity and route of administration; the price, purity, and availability of different drugs; patterns of purchasing; symptoms of dependence; information and help seeking; injecting drug use; overdose; driving under the influence; safe sex; problems associated with drug use (e.g., work/study, risk to self/others, social, legal problems); psychological distress; mental health; aggression, physical health; self-reported criminal activity; perceptions of police activity; and general trends in party drug markets.

2.1.4 Data analysis

Differences between the means of continuous normally-distributed variables were analysed using t-tests. The non-parametric Mann-Whitney *U* test was used to analyse differences on continuous variables that did not follow a normal distribution. Chi-square tests and 95% confidence intervals (95%CI) were used to analyse differences between categorical variables. Confidence intervals for the difference between two proportions were determined according to Tandberg[2] using an implementation of the optimal methods identified in Newcombe (1998). A categorical variable for age was created using a median split, resulting in a 'younger' group (aged below 23 years, n=44) and an 'older' group (aged 23 years and over, n=56). All statistical analyses were conducted using Statistical Package for the Social Sciences (SPSS) 17.0 for Windows (SPSS Inc., 2008).

2.2 Survey of key experts (KE)

Key experts (KE) who had regular contact with ecstasy users in the six months preceding the interview were eligible to participate in the study. Twenty KE participated in semi-structured face-to-face interviews at either their place of work, private residences, locations such as coffee shops or bars or over the phone between July and September 2009. KE included youth workers (n=9), law enforcement personnel (n=4), ambulance/emergency workers (n=2), alcohol and drug counsellors/workers/psychologists (n=2), venue/event managers or staff (n=2), and a lawyer (n=1).

The semi-structured KE interview included sections on demographic characteristics, drug use patterns and price/purity/availability of ecstasy and other drugs, criminal behaviour and health issues, and was particularly focused on indicating any recent changes in these areas. Interviews took approximately 60 minutes to complete. Questions were generally open-ended and interviewers wrote verbatim responses at the time of the interview. Interviews were later transcribed in full and recurring themes were identified using Microsoft Excel and are included in the text of the report. Information from single KE are also included in the report where deemed reliable by the interviewer and/or pertinent to the explanation of particular trends. Some closed-ended questions were asked in relation to the price/purity/availability of ecstasy and analysed using SPSS 17.0 for Windows (SPSS Inc., 2008).

2.3 Other indicators

Data from existing sources such as survey, health and law enforcement data were collated to provide contextual information and to complement and validate the data obtained from the survey of both REU and KE. The pilot study for the IDRS (Hando et al., 1998) recommended that such data should be available at least annually; include 50 or more cases; provide brief details of illicit drug use; be collected in the main study site (Hobart or Tasmania for the current study); and include details on the main illicit drugs under investigation. However, due to the relatively small size of the illicit drug-using population in Tasmania (in comparison to other jurisdictions involved in the EDRS), and a paucity of available data, the above recommendations have been used as a guide only. Indicators not meeting the above criteria should be interpreted with due caution and the relevant limitations of each data-source are noted in the text.

Data sources that fulfil the majority of these criteria and have been included in this report are as follows.

[2] Tandberg, D. *Improved confidence intervals for the difference between two proportions and Number Needed to Treat (NNT).* available on the University of Oxford Center for Evidence Based Medicine website: www.cebm.net

National Drug Strategy Household Surveys (1998, 2001, 2004, 2007). The National Drug Strategy Household Survey aimed to determine the prevalence of the use of illicit drugs such as cannabis, methamphetamine, hallucinogens, cocaine, and ecstasy/designer drugs among the general community. Tasmanian participants were English-speaking individuals, over the age of fourteen, who lived in private residences in Tasmania during 1998 (n=1,031), 2001 (n=1,349), 2004 (n=1,208), and 2007 (n=1,143) (Australian Institute of Health and Welfare, 1999, 2000, 2002a,b, 2005a,b, 2008a,b). Participants were asked to indicate whether they had used each type of illicit drug at some stage in their life or during the 12 months preceding the interview.

Telephone Advisory Services Data. The Tasmanian Alcohol and Drug Information Service (ADIS), a confidential drug and alcohol counselling, information and referral service, has been serviced by Turning Point Alcohol and Drug Centre in Victoria since May 2000. Turning Point systematically records data for each call received; however, data have been reported over differing time periods due to the requirements of the Department of Health and Human Services. Thus, for comparative purposes (and since these annual data are the only information available to the authors), these slightly differing reporting periods will each be treated as financial year periods. The number of calls made to ADIS have slowly declined in recent years: there were 2,422 calls made to the service between 15May, 2000 and 30 June, 2001; 2,208 in the 2000/01 financial year; 1,827 in 2001/02; 1,984 during the period April 2002-March 2003; 1,837 during 2003/04; 1,498 in 2004/05; 1,469 in 2005/06; 1,474 in 2006/07; and 1,556 calls in the 2008/09 financial year (Turning Point, 2001-2009).

Police data. Information on drug seizures, charges, price and purity were obtained from Australian Illicit Drug Reports produced by the Australian Bureau of Criminal Intelligence (ABCI) (1999, 2000, 2001, 2002) and Illicit Drug Data Reports provided by the Australian Crime Commission (ACC) (2003, 2004, 2005, 2006, 2007, 2008, 2009). The ABCI and ACC reports do not necessarily report seizure and arrest data separately for drugs such as ecstasy. This is provided by Tasmania Police State Intelligence Services where possible. Data on the purity of drugs seized were also provided through the ACC; however, not all drug seizures are analysed for purity. ACC data for the 2008/09 financial year were unavailable at the time of publication but, where possible, data were provided by Tasmania Police State Intelligence Services.

Public hospital admission data – Australian Institute of Health and Welfare. The Australian Institute of Health and Welfare has provided hospital morbidity data for 'principal' and 'additional' diagnoses in relation to drug use from the year 1999/00 to 2007/08. These data relate to public hospital admissions, for individuals aged between 15 and 54 years. Diagnoses were coded based on the International Classification of Diseases (ICD) 10, second edition. A 'principal diagnosis' refers to the instance where it is established upon examination that the drug was principally responsible for the patient's episode in hospital. An 'additional diagnosis' refers to the case where the condition or complaint is either co-morbid with the principal diagnosis or arises during the course of the episode in hospital. It should be noted that data from Tasmania's only public detoxification centre were included only from June 2002 onwards. Hospital admissions are reported separately for amphetamines, cannabis, and cocaine.

The National Minimum Data Set for Alcohol and other Drug Treatment Services (NMDS). The National Minimum Data Set for Alcohol and other Drug Treatment Services (NMDS) was developed as a nationally consistent response to data collection for alcohol and other drug treatment services. Data collection began on 1 July, 2000 and is available for the financial years between 2000/01 and 2007/08. Data for the 2008/09 financial year were not available at the time of publication.

3.0 OVERVIEW OF REGULAR ECSTASY USERS

3.1 Demographic characteristics of the REU sample

One-third (35%) of the 2009 cohort had participated in the EDRS in previous years. The majority of participants (65%) were recruited through 'snowballing' methods (peer referral), followed by flyers (31%) and via the internet (4%).

Table 1 shows the demographic characteristics of the sample of 100 REU interviewed for the EDRS between 2003 and 2008. In 2009, three-fifths of the sample was male (64%). The mean age of the sample was 24 years (range 18-42 years), and there was no significant difference between the mean age of males (23.7 years) and females (24.2 years) ($p>.05$). The majority of participants nominated their sexual identity as heterosexual (98%), and spoke English as their main language (100%). No participants were of Aboriginal and/or Torres Strait Island (A&TSI) descent. The majority lived in their own (owned or rented) accommodation (77%) or lived in their parents' or family's home (21%).

The mean number of years of school education completed by participants was 12 (range 10-12 years), and the majority of participants (85%) had completed year 12. Almost one-half (46%) had completed courses after school, with over one-fifth each having completed a university degree (24%) or a trade/technical qualification (22%). One-quarter of participants were employed on a full-time basis (27%), two-fifths were currently students (22% full-time, 20% part-time), almost one-fifth were employed on a part-time/casual basis (16%), and around one-tenth were currently unemployed (14%). Over one-half (53%) of participants reported an annual income between $13,000 and $31,199. Three REU were receiving drug treatment at the time of interview (3%) and none had received a custodial sentence for a previous criminal conviction.

These demographic characteristics are generally similar to those reported among the cohorts between 2003 and 2008. However, there were substantially lower levels of current drug treatment among the latter samples in comparison to 2003.

KE descriptions of the ecstasy users with whom they had regular recent contact were generally consistent with the characteristics of the REU sample. KE described groups as being of both sexes with age estimates ranging between 16 and 50 years, with most being in their late-teens to mid-20s. KE noted contact with individuals from a wide range of backgrounds. The majority of ecstasy users that KE were familiar with were well educated and either employed or currently studying. However, several KE noted high rates of unemployment among the group that they had regular contact with, probably reflecting the nature of their role within government health services rather than being characteristic of REU per se. Few KE were aware of any drug treatment among the groups that they were familiar with, though three KE with roles in health services noted that a large proportion of the group they were familiar with were currently in drug treatment. The majority of KE indicated low levels of criminal activity among the group that they were familiar with, with some KE (with roles in health services) noting that some proportion of the groups that they were familiar with had come into contact with the criminal justice system.

Table 1: Demographic characteristics of REU sample, 2003-2009

	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Mean age (range)	24 (18-45)	23 (18-32)	24 (18-44)	25 (18-61)	23 (17-40)	24 (18-47)	**24 (18-42)**
Sex (% male)	61	61	55	58	54	60	**64**
Heterosexual (%)	85	93	94	91	93	91	**98**
English speaking (%)	100	100	100	99	100	99	**100**
A&TSI (%)	6	2	2	2	0	1	**-**
Accommodation							
Own home/rented (%)	75	82	73	80	70	74	**77**
Live with family (%)	22	17	27	19	21	26	**21**
Boarding house/hostel (%)	2	1	-	1	9	-	**1**
Refuge (%)	1	-	-	-	-	-	**-**
No fixed address (%)	-	-	-	-	-	-	**1**
Mean school years* (range)	12 (8-12)	12 (10-12)	12 (10-12)	12 (9-12)	12 (8-12)	12 (10-12)	**12 (10-12)**
Tertiary qualifications							
Trade/technical (%)	23	21	25	28	29	26	**22**
University (%)	21	35	26	19	23	27	**24**
Employment							
Full-time (%)	27	28	41	33	27	36	**27**
Part-time/casual (%)	17	26	19	21	19	23	**16**
Full-time student (%)	40	37	31	32	33	19	**22**
Part-time student (%)	0	1	2	-	9#	16#	**20#**
Home duties (%)	-	-	2	-	-	-	**1**
Not employed (%)	16	8	5	14	11	6	**14**
Total annual income							
$1-7,799 (%)							**3**
$7,800-12,999 (%)							**11**
$13,000-20,799 (%)							**26**
$20,800-31,199 (%)							**27**
$31,200-41,599 (%)							**11**
$41,600-$51,999 (%)							**9**
$52,000+ (%)							**12**
Current drug treatment (%)	10	1	2	2	-	1	**3**
Prison conviction (%)	3	1	3	3	1	3	**-**

Source: EDRS interviews

*Question changed from 'How many years of school did you complete?' to 'What grade of school did you complete?'

#Question changed to 'both studying and employed'

3.2 Drug use history and current drug use

Ecstasy was the preferred or favourite drug for over one-half of the participants (56%). Smaller proportions preferred cocaine (17%), cannabis (6%), methamphetamine (6%), alcohol (5%), LSD (5%) or other drugs (4%).

The proportion of the sample reporting lifetime and recent (in the last six months) use of each drug type examined is shown in Table 2. The majority of REU had used alcohol (100%), cannabis (98%), and tobacco (92%) at some stage of their lives, and substantial proportions had ever used methamphetamine powder (69%), amyl nitrite (67%), psychedelic mushrooms (56%), LSD (52%), cocaine (51%), and nitrous oxide (54%).

Similarly during the six months preceding the interview, a majority had used alcohol (99%), tobacco (77%) and cannabis (76%), around one-half had used amyl nitrite (51%), and methamphetamine powder (46%), and around one-third had used LSD (34%), nitrous oxide (32%), and cocaine (31%).

Compared to 2008, a significantly greater proportion of the 2009 sample reported recent use of amyl nitrite (51% vs. 15%), χ^2=3.46, p<.05, and significantly fewer reported recent use of other opioids (opioids other than heroin, methadone or buprenorphine, such as codeine, morphine or opium poppies: 6% vs. 17%), χ^2=4.91, p<.05. There were also trends for less recent use of methamphetamine powder (46% vs. 59%), χ^2=2.89, p=.09, and benzodiazepines (24% vs. 37%), χ^2=3.39, p=.07, and more recent use of 2CI (9% vs. 2%), χ^2=3.46, p=.06.

The proportion of the sample reporting recent cannabis use was substantially lower among cohorts in 2007 (68%, 95%CI 59-77%), 2008 (74%, 95%CI 65-83%), and 2009 (76%, 95%CI 67-83) relative to the 2003-2005 cohorts (89%-91%).

Between 2003 and 2006 there was a steady increase in the proportion of the EDRS sample reporting recent use of cocaine, from less than one-tenth (7%, 95%CI 2-12%) in 2003 to one-third in 2006 (33%, 95%CI 26-44%), representing a statistically significant increase that is beyond that expected by sampling fluctuation. Recent use of cocaine has remained stable at around one-third among the 2007 (35%), 2008 (35%), and 2009 (31%) cohorts.

Recent use of crystal methamphetamine was greatest among the 2003 cohort (52%, 95%CI 48-68%) relative to all other cohorts, and significantly greater than that seen in the current cohort (7%, 95%CI 3-14%, χ^2=46.54, p<.05).

Table 2: Lifetime and recent polydrug use of REU, 2003-2009

Variable	2003 (n=100)	2004 (n=100)	2005 (n=100)	2006 (n=100)	2007 (n=100)	2008 (n=100)	**2009 (n=100)**
Alcohol							
Ever used (%)	100	100	100	100	100	100	**100**
Used last 6 months (%)	98	98	98	95	99	100	**99**
Cannabis							
Ever used (%)	100	98	100	100	96	97	**98**
Used last 6 months (%)	90	91	89	82	68	74	**76**
Tobacco							
Ever used (%)	96	89	89	94	90	96	**92**
Used last 6 months (%)	81	77	83	81	74	86	**77**
Methamphetamine powder							
Ever used (%)	90	82	89	83	74	84	**69**
Used last 6 months (%)	67	68	77	62	65	59	**46**
Methamphetamine base (base)							
Ever used (%)	36	32	35	49	43	31	**25**
Used last 6 months (%)	24	20	23	40	30	16	**14**
Crystal methamphetamine							
Ever used (%)	58	36	29	42	23	33	**29**
Used last 6 months (%)	52	16	10	27	7	15	**7**
Pharmaceutical stimulants[#]							
Ever used (%)	n/a	39	44	50	40	42	**31**
Used last 6 months (%)	n/a	14	16	12	19	16	**10**
Cocaine							
Ever used (%)	44	32	43	55	54	61	**51**
Used last 6 months (%)	7	10	20	33	35	35	**31**
LSD							
Ever used (%)	62	51	54	52	40	56	**52**
Used last 6 months (%)	24	32	31	29	20	41	**34**
MDA							
Ever used (%)	32	20	8	14	8	15	**10**
Used last 6 months (%)	21	15	3	3	5	3	**8**
Ketamine							
Ever used (%)	38	23	24	23	23	26	**21**
Used last 6 months (%)	24	5	11	6	14	6	**5**
GHB/GBL/1,4B							
Ever used (%)	11	7	7	9	4	7	**11**
Used last 6 months (%)	7	3	2	3	1	1	**3**
Amyl nitrite							
Ever used (%)	78	52	49	41	43	38	**67**
Used last 6 months (%)	43	23	16	10	20	15	**51**
Nitrous oxide							
Ever used (%)	47	57	69	69	64	62	**54**
Used last 6 months (%)	25	34	41	39	46	29	**32**
Benzodiazepines							
Ever used (%)	52	34	40	48	41	51	**36**
Used last 6 months (%)	35	23	25	33	25	37	**24**
Anti-depressants							
Ever used (%)	32	14	21	20	24	22	**16**
Used last 6 months (%)	14	4	12	9	11	6	**10**
Heroin							
Ever used (%)	20	4	8	10	5	6	**6**
Used last 6 months (%)	6	0	-	2	-	1	**3**

Source: EDRS interviews

[#] Pharmaceutical stimulants were not included prior to 2004

Table 2: Lifetime and recent polydrug use of REU, 2003-2009 (continued)

Variable	2003 (n=100)	2004 (n=100)	2005 (n=100)	2006 (n=100)	2007 (n=100)	2008 (n=100)	**2009 (n=100)**
Methadone							
Ever used (%)	14	2	5	9	6	3	**8**
Used last 6 months (%)	13	2	1	5	1	2	**4**
Buprenorphine							
Ever used (%)	5	-	2	3	1	2	**2**
Used last 6 months (%)	3	-	1	2	1	1	**1**
Other opioids							
Ever used (%)	35	19	25	33	23	29	**19**
Used last 6 months (%)	13	8	13	14	8	17	**6**
Psychedelic mushrooms							
Ever used (%)	54	60	63	74	66	61	**56**
Used last 6 months (%)	38	41	40	55	39	31	**21**
2CI							
Ever used (%)	-	5	2	25	20	11	**11**
Used last 6 months (%)	-	5	1	23	12	2	**9**
Over the counter codeine							
Ever used (%)	n/a	n/a	n/a	n/a	n/a	n/a	**17**
Used last 6 months (%)							**9**
Over the counter stimulants							
Ever used (%)	n/a	n/a	n/a	n/a	n/a	n/a	**10**
Used last 6 months (%)							**6**

Source: EDRS interviews

3.3 Summary of demographic and polydrug use trends in REU

- The sample of 100 REU interviewed in 2009 were typically in their early- to mid-twenties, with ages ranging from 18 to 42 years. There were slightly more males (64%) than females.
- Most of the participants were well educated, with the majority having completed year 12, and one-half (46%) having completed tertiary qualifications (university or trade/technical). Two-fifths (43%) were employed either full-time or part-time/casual and two-fifths (42%) were currently students.
- Few participants had come into contact with the criminal justice system or drug treatment agencies.
- Polydrug use was the norm among the REU interviewed, with most having used a range of drug classes in the preceding six months. Recent use of alcohol, tobacco, cannabis, amyl nitrite and methamphetamine powder was most common.
- Relative to 2008, a significantly greater proportion of the 2009 sample reported recent use of amyl nitrite (51% vs. 15%), and significantly fewer reported recent use of other opioids such as morphine, codeine or opium poppies (6% vs. 17%). There were also trends for less recent use of methamphetamine powder (46% vs. 59%), and benzodiazepines (24% vs. 37%), and more recent use of 2CI (9% vs. 2%).
- The proportion of the sample reporting recent cannabis use was substantially lower between 2007 and 2009 (68-76%) relative to the 2003-2005 cohorts (89-91%).
- Between 2003 and 2006 there was a steady increase in the recent use of cocaine (from 7% to 33%), but this remained stable at around one-third of the sample since this time, with 31% of the 2009 sample reporting recent use.
- Recent use of crystal methamphetamine was greatest among the 2003 cohort (52%) relative to all subsequent cohorts, and significantly greater than that seen in the current cohort (7%).

4.0 ECSTASY

The mean age of first ecstasy use was 19 years (range 11-30). The mean age of first use for females (20.0 years, SD=2.3) was significantly greater relative to males (18.8 years, SD=2.9), $F(1,98)=4.44$, $p<.05$. The mean age at which participants had first started to use ecstasy on a regular (at least monthly) basis was 21 years (range 13-32) and there were no significant sex differences. Ecstasy had been used by this group for a median of 4 years (range 0-17 years) and only three participants had been using ecstasy for less than one year.

4.1 Ecstasy use among REU

All of the participants had recently used ecstasy in tablet form (100%), followed by capsule (48%) and powder (12%) forms (Table 3). The proportion reporting recent use of ecstasy capsules was significantly higher among the 2009 (48%, 95%CI 38-58%) relative to the 2008 cohort (18%, 95%CI 12-27%) but similar to that observed in 2007 (47%, 95%CI 37-57%).

Overall, ecstasy (tablets, powder, capsules) had been used by REU on a median of 12 days (range 6-96 days), or, on average, fortnightly in the six months preceding the interview (Table 3). The median frequency of use for males (12 days, range 6-96) was significantly greater relative to females (10 days, range 6-35), Mann-Whitney $U=805.5$, $p<.05$. There was no significant difference between the frequency of use for 'younger' and 'older' participants (based on a median split for age). One-quarter of the sample (26%) had recently 'binged' on ecstasy (used ecstasy for more than 48 hours continuously without sleep) which is similar to the proportion of cohorts in previous years. Binge drug use is explored in further detail in Section 11.5.

The majority of REU reported that they had most commonly ingested ecstasy orally (90%) in the six months preceding the interview while smaller proportions reported that they had mainly snorted (10%), or injected (1%) the drug during this time.

Ecstasy tablets had recently been swallowed (100%) or ground up and snorted (71%), while smaller proportions had recently shafted/shelved (2%), smoked (2%) or injected (2%) tablets. The median frequency of use for ecstasy tablets was 12 days (range 2-96) or approximately fortnightly during the six months preceding the interview.

The median number of ecstasy tablets consumed in a typical session of use in the past six months (Table 3) was 2 tablets (range 1-6), which is similar to the median number reported in previous years (1.5-2 tablets). A large majority (81%) of the 2007 sample typically used more than one tablet per session. The median number of ecstasy tablets consumed in the heaviest session of use in the past six months was 4 tablets (range 1-15), which is consistent with previous years. There was no significant sex or age difference in the typical quantity of ecstasy tablets used in a typical or heavy session of use.

Ecstasy capsules had been swallowed (98%), snorted (38%), shelved/shafted (2%) or injected (2%), on a median of 2 days (range 1-70) during the last six months.

Ecstasy powder had been snorted (78%), swallowed (58%), or smoked (17%), on a median of 2.5 days (range 1-40) during the six months preceding the interview.

The comments of KE were generally consistent with reports of REU. The majority who commented noted that ecstasy was typically used in tablet form (n=8). However, some KE noted infrequent use of ecstasy in either capsule (n=3) or powder form (n=1). Those who commented indicated that ecstasy was typically swallowed (n=4), although snorting (n=1) and injection of ecstasy rare (n=1) were also mentioned by single KEs.

Table 3: Patterns of ecstasy use among REU, 2003-2009

Variable	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Mean age first used ecstasy (range)	20 (14-40)	20 (15-32)	20 (14-42)	20 (14-55)	19 (14-32)	19 (14-42)	**19 (11-30)**
Form used in last 6 mths							
Tablets/pills	n/a	n/a	100	100	100	100	**100**
Capsules	n/a	n/a	28	19	47	18	**48**
Powder	n/a	n/a	18	13	5	6	**12**
Days used last 6 mths (all forms)							
Median days#	14	12	15	12	12	12	**12**
Use weekly or more (%)#	38	24	29	22	23	17	**17**
Recently binged on ecstasy* (%)	41	34	37	43	38	33	**26**
Quantity of ecstasy use (pills)							
Median pills 'typical' session	1.5	2	2	2	2	2	**2**
(range)	(0.5-7.5)	(0.5-12)	(1-6)	(1-6)	(1-7)	(0.5-6)	**(1-6)**
Median pills 'biggest' session	3	3	4	4	3.5	4	**4**
(range)	(1-60)	(1-30)	(1-15)	(1-20)	(1-15)	(1-12)	**(1-15)**
Used > 1 pill in typical session (%)	41	69	67	79	65	77	**81**
Main route of admin. last 6 mths							
Swallowed (%)	89	94	96	95	96	93	**89**
Snorted (%)	6	6	3	4	3	6	**10**
Injected (%)	5	-	1	1	-	-	**1**
Shelved/shafted (%)	n/a	-	-	-	1	1	**-**
Location last used in last 6 mths							
Home (%)	8	10	13	20	10	11	**10**
Dealer's home (%)	3	-	-	1	-	-	**-**
Friend's home (%)	11	15	13	22	17	20	**7**
Rave/doof/dance party (%)	33	37	16	18	11	7	**7**
Nightclub (%)	37	22	40	18	37	36	**46**
Pub (%)	4	2	3	-	-	4	**7**
Private party (%)	4	10	8	14	19	6	**5**
Outdoors (%)	-	1	1	2	-	1	**2**
Live music event (%)	n/a	1	4	2	6	14	**14**
Public place	-	-	-	-	-	-	**1**
Other (%)	-	2	2	1	-	-	**-**

Source: EDRS interviews

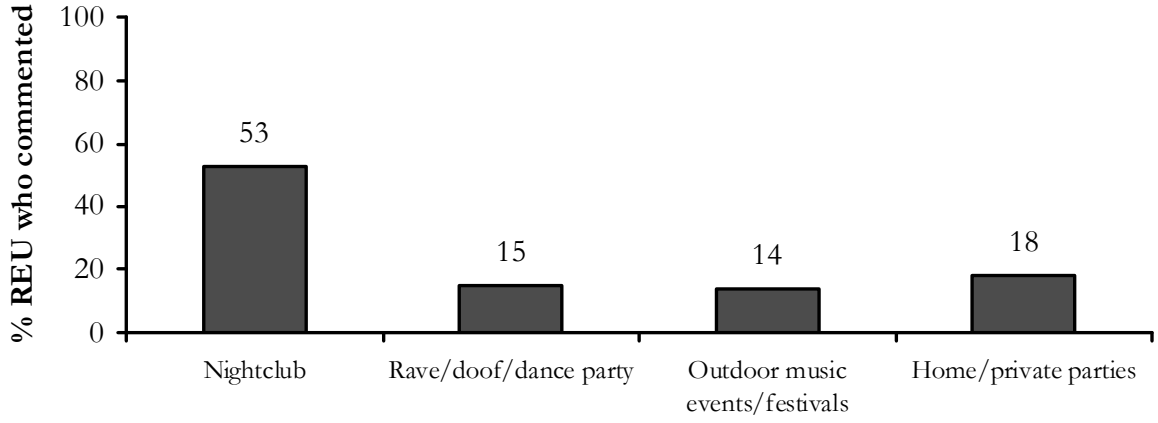
* Binged defined as the use of stimulants for more than 48 hours continuously without sleep

Includes pills, powder and capsules

4.1.1 Locations of ecstasy use

The most common last location of ecstasy use (Table 3) were a nightclub (46%), private residences (a friend's home or the respondents own home: 17%), or a live music event (14%). When participants were asked where they had most frequently spent their time while using ecstasy (Figure 1), Over one-half reported having done so in nightclubs, while around one in five respectively reported most commonly using ecstasy at 'raves/doofs/dance parties', 'home or private parties' or at 'outdoor music events or festivals'.

Figure 1: Location of most frequent ecstasy use reported by REU, 2009



Source: EDRS interviews

4.1.2 Reasons for ecstasy use

Participants were asked open-ended questions about their main reasons for using ecstasy at an event (Table 4). The most common reasons were 'to feel great', for the 'high/rush/buzz', 'to be able to dance all night' and 'enhanced appreciation of music'.

Table 4: Main reasons for deciding to use ecstasy at an event, 2009

Variable	2009 n=97
To feel great	**76**
The high/rush/buzz	**56**
To be able to dance all night	**49**
Enhanced appreciation of music	**47**
Drug effects (e.g. hallucinations/insight/creativity)	**22**
Enhanced closeness/bonding/empathy with others	**24**
Because it's not fun being sober when your friends are all high	**17**
To forget hassles/problems or have fewer worries	**18**
To make it easier to talk/flirt with people	**21**
To increase my self-insight	**5**
To enhance sexual experiences	**5**
Other	**4**

Source: EDRS interviews

4.1.3 Polydrug use among REU

During the six months preceding the interview, the majority of the 2009 REU sample (95%) reported that they had typically used other drugs when under the influence of ecstasy and two-fifths (41%) reported using other drugs when 'coming down' from ecstasy (Table 5). The drugs most commonly used when last under the influence of ecstasy were alcohol (87%), tobacco (38%), and cannabis (24%). Notably, almost four-fifths (79%) of the sample reported drinking more than five standard drinks the last time that they were under the influence of ecstasy. The drugs most commonly used when coming down from ecstasy on the last occasion were cannabis (28%), tobacco (18%) and alcohol (14%).

Table 5: Drugs used when under the influence of ecstasy and when coming down on last occasion in the last six months, 2009

	Under the influence of ecstasy	Coming down from ecstasy
	2009 n=87	2009 n=87
None (%)	5	59
Methamphetamine powder (%)	3	-
Methamphetamine base (%)	5	-
Crystal methamphetamine (%)	2	-
Pharmaceutical stimulants (%)	2	-
Cocaine (%)	2	1
LSD (%)	6	-
Ketamine (%)	-	-
GHB (%)	-	-
Amyl nitrite (%)	6	-
Nitrous oxide (%)	8	1
Cannabis (%)	24	28
Alcohol		
Usually drink (%)	87	14
> 5 std drinks (%)	79	6
Methadone (%)	1	-
Other opioids (%)	-	2
Tobacco (%)	38	18
Anti-depressants (%)	-	-
Benzodiazepines (%)	-	6
Mushrooms (%)	2	-
Other (%)	2	2

Source: EDRS interviews

4.1.4 Use of energy drinks among REU

REU were asked about there use of energy drinks in 2009. Two-thirds of participants (64%) reported that they had consumed energy drinks with alcohol in the last six months, with a median of 3 energy drinks (range 1-10) consumed on the last occasion of use. Over one-half of participants (52%) had consumed energy drinks in the same episode as ecstasy during the last six months.

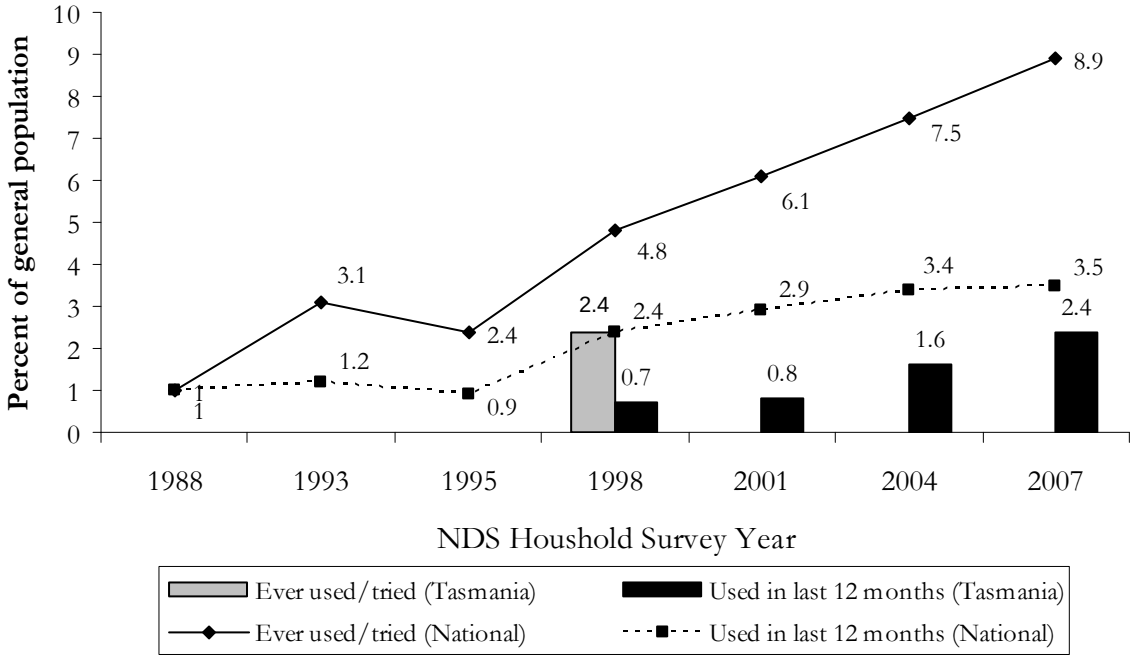
4.2 Use of ecstasy in the general population

Figure 2 shows the prevalence of lifetime and recent ecstasy use in the general population and in Tasmania based on data collected by the National Drug Strategy Household Survey (NDSHS) between 1988 and 2007 (Australian Institute of Health and Welfare, 1999, 2000, 2002a, b, 2005a, b, 2008a, b).

The lifetime prevalence of ecstasy use among the general population increased from 1% in 1988 to 8.9% in 2007. The proportion of the Tasmanian sample reporting lifetime use of ecstasy was not included in the 2001, 2004, and 2007 reports due to a change in the way this question was asked between surveys.

The proportion of the national sample that had used ecstasy in the preceding 12 months also increased from 1% in 1988 to 3.5% in 2007. The estimated prevalence of recent ecstasy use in Tasmania has increased significantly from 1.6% (95%CI 1.3-1.8%) in 2004 to 2.4% (95%CI 2.2-2.6) in 2007, but is still significantly lower than that seen nationally in 2007 (3.5%, 95%CI 3.4-3.6%).

Figure 2: Prevalence of ecstasy use in Australia and Tasmania among those aged 14 years and over, 1988-2007



Source: National Drug Strategy Household Survey 1988-2007

4.3 Other trends and features of ecstasy use

Ecstasy use was common among the social networks of the regular ecstasy users who participated in the study. Almost one-half of the REU interviewed (47%) indicated that most of their friends use ecstasy, and two-fifths (38%) indicated that about half of their friends used ecstasy. Smaller proportions indicated that only a few (12%) or all (3%) of their friends used ecstasy.

One-half of the respondents (51%) indicated that there had been some recent change in drug use among themselves or friends. REU comments on the changes in the use of ecstasy among themselves and their friends were varied. Many REU noted increases in the number of people using ecstasy (n=7), or increases in the frequency (n=1) or quantity (n=1) of ecstasy use, and others noted increased use among older (n=3) or younger (n=2) people. Other REU noted increased use of other drugs, in particular, LSD (n=9), 'Israelis' (n=6), mushrooms (n=3), amyl nitrite (n=2) and research chemicals (n=2).

4.4 Summary of patterns of ecstasy use

- Most participants had first used ecstasy at around 19 years of age. On average the 2009 REU sample had been using ecstasy for four years.
- The entire sample had recently used ecstasy in tablet form, but use of ecstasy in capsule (48%) and powder (12%) form were also common. The proportion reporting recent use of ecstasy capsules was significantly greater relative to the 2008 cohort (18%).
- Ecstasy was typically swallowed, but snorting of ecstasy was also common.
- On average, ecstasy had been used fortnightly with a median of two tablets taken in a typical session. One-fifth (17%) had used ecstasy on a weekly basis or more frequently. A large majority (81%) usually used more than one tablet in a typical session of use and one-quarter (26%) had recently used ecstasy in a 'binge session' (a continuous 48 hour period of drug use without sleep).
- Ecstasy was typically last used at music-related venues including nightclubs and live music events or private residences.
- The majority of REU (95%) had used other drugs when last under the influence of ecstasy and two-thirds (41%) used other drugs when last coming down from ecstasy. Alcohol, cannabis, and tobacco were the drugs most commonly used.
- A large majority (87%) reported drinking alcohol when last under the influence of ecstasy and three-quarters of the sample (79%) had consumed more than five standard drinks.
- Around one-half (52%) reported use of energy drinks in the same session as ecstasy.
- Data from the NDSHS suggests a steady increase in the national prevalence of ecstasy use in Australia between 1995 and 2007. The estimated prevalence of recent ecstasy use in Tasmania has increased significantly from 1.6% (95%CI 1.3-1.8%) in 2004 to 2.4% (95%CI 2.2-2.6) in 2007, but is still significantly lower than that seen nationally in 2007 (3.5%, 95%CI 3.4-3.6%).

4.5 Price

The median price for one ecstasy tablet and the last purchase price were both $35 in 2009, which is the same as the prices reported in 2008 (Table 6). The median price for 10 ecstasy pills was reported to be $320 ($100-400, n=98), or $32 per pill, which is also consistent with the price reported in 2008. The median price per pill was reported to be lower for larger quantities: 20 pills ($30, range $15-35, n=114); 50 pills ($27, range $10-35, n=9); 100 pills ($22.5, range $5-30, n=8).

The median last purchase price for one ecstasy capsule was $30 in 2009 compared to $35 in 2008. The median last purchase price for one gram of powder was $250 (range $100-300). Single participants reported that 1 point (0.1 of gram) of ecstasy powder was $20 and that 0.5 of a gram was $90.

Over one-half (52%) of the 2009 cohort indicated that the price of ecstasy had been stable in the six months preceding the interview.

Table 6: Price of ecstasy purchased by REU and price variations, 2003-2009

	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Pill/Tablet							
Median price per ecstasy tablet (range)	$50 (30-50) n=65	$40 (30-50) n=100	$45 (35-50) n=100	$40 (30-60) n=100	$40 (26-50) n=99	$35 (20-40) n=100	**$35 (25-50) n=92**
Median price of last tablet purchased (range)	$45 (15-68) n=98	$40 (30-50) n=100	$40 (20-50) n=95	$35 (20-50) n=97	$40 (15-50) n=99	$35 (15-40) n=96	**$35 (18-40) n=98**
Median price 10 ecstasy tablets (range)	$375 (350-400) n=2*	-	$350 (250-400) n=12	$350 (350-350) n=2*	$300 n=1*	$320 (170-400) n=73	**$320 (100-400) n=78**
Median last price 10 ecstasy tablets (range)	$350 (300-400) n=2*	$300 n=1*	$355 (350-360) n=4*	$350 n=1*	$310 (300-340) n=4*	-	**-**
Powder							
Median last price 1 gram powder (range)	-	-	-	-	$350 n=1*	-	**$250 (100-300) n=3***
Capsule							
Last price per capsule (range)	-	-	-	-	-	$35 (30-50) n=9*	**$30 (20-40) n=25**
Price change							
Don't know (%)	-	2	-	-	2	-	**8**
Increased (%)	5	6	7	5	18	14	**10**
Stable (%)	72	64	67	54	65	55	**52**
Decreased (%)	15	15	10	28	7	18	**12**
Fluctuated (%)	8	13	16	13	8	13	**17**

Source: EDRS interviews
*n<10

KE comments on the price of ecstasy were generally consistent with those of REU. The price for one ecstasy pill was reported to range from $20 to $60 (n=9), with most estimates ranging from $30 to $50 (n=8). Three KE commented that the price per pill was lower if bought in larger amounts. Nine KE commented on changes in the price of ecstasy in the preceding six months. The majority of those who commented on recent price changes indicated that prices had remained stable during the past six months (n=4), but some KE noted a recent price decrease (n=2).

The price of ecstasy reported by Tasmania Police has varied substantially over the past decade (Table 7). A price range of $30-45 was reported in 2007/08 which is relatively consistent with the median price of $35 reported by REU in 2009. At the time of publication, data was not available for the 2008/09 financial year.

Table 7: Price per tablet of ecstasy reported by Tasmania Police 1997/98-2007/08

	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	**07/08**
Price per tablet	$60-80	$15-25	$15-25	$50-60	$50-70	$30-70	$30-70	$40-50	$25-40	$40	**$30-45**

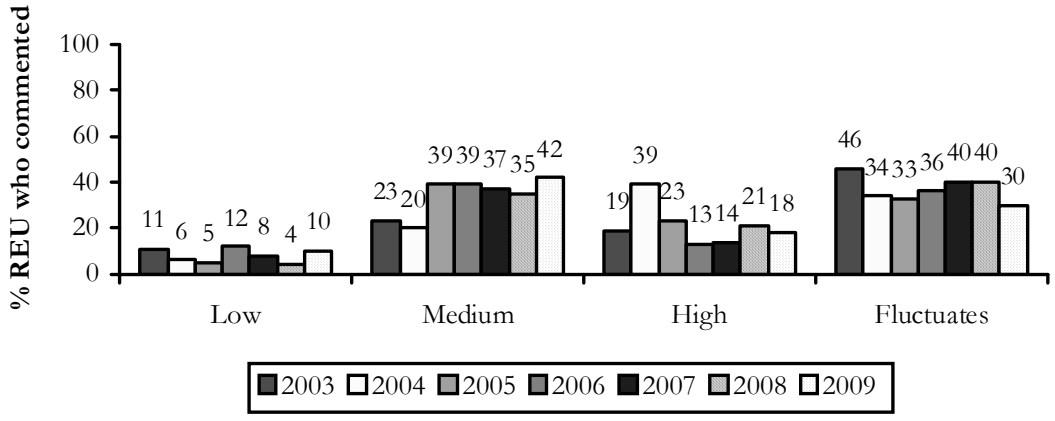
Source: Australian Bureau of Criminal Intelligence (1998, 1999, 2000, 2001, 2002); Australian Crime Commission (2003, 2004, 2005, 2006, 2007, 2008, 2009)

4.6 Purity

Consistent with previous years, the purity of ecstasy was typically reported to be medium (42%) or fluctuating (30%) in the last six months (Figure 3). REU were also asked if there had been any changes in the purity of ecstasy in the six months preceding the interview (Figure 4). Consistent with previous years, the majority of participants indicated that the purity of ecstasy had either fluctuated (52%) or had remained stable (27%) during this time.

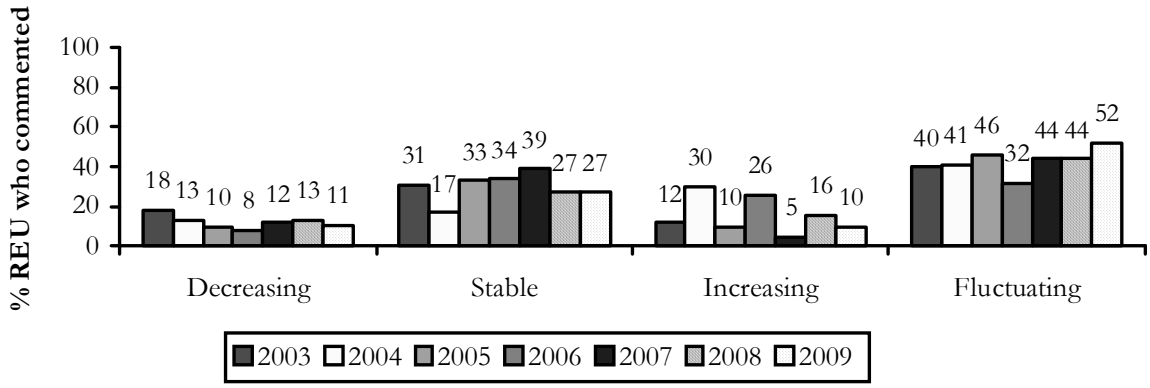
The majority of KE who commented on purity did not know about the current purity of ecstasy (n=6), while others indicated that purity fluctuated (n=2) or was medium to low (n=2). Several KE (n=3) reported a perception that ecstasy pills often contained other substances including methamphetamine, ketamine, and 2CB or that they contained no active ingredients.

Figure 3: REU reports of current ecstasy purity, 2003-2009



Source: EDRS interviews

Figure 4: REU reports of change in ecstasy purity in the last six months, 2003-2009



Source: EDRS interviews

There is little objective data on the purity of phenethylamines (the class of drugs including ecstasy, or MDMA, and drugs such as MDA, MDEA and mescaline) in Tasmania, as only a proportion of seizures are analysed for purity by Tasmania police. Table 8 shows the median purity and number of phenethylamine seizures analysed, reported by Tasmania Police from 1999/00 to 2007/08. The median purity of seizures ranged from 22.9% to 28.5% between 2001/02 and 2007/08, but these were based on relatively small sample sizes. In 2007/08 a median purity of 24.6% (range 6.4%-26.6%) was reported from three samples. Data for the 2008/09 reporting period was not available at the time of publication.

Table 8: Median purity of phenethylamine seizures 1990/00 - 2007/08

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	**2007/08**
Median % purity	-	3.4 n=1	22.9 n=1	28.5 n=3	26.0 n=33	-	-	27.1 n=4	**24.6 n=3**

Source: Australian Bureau of Criminal Intelligence (2001, 2002); Australian Crime Commission (2003, 2004, 2005, 2006, 2007, 2008, 2009)

4.7 Availability

The majority of REU interviewed in 2009 indicated that ecstasy was 'very easy' (21%) or 'easy' (62%) to obtain (Table 9). The proportion of REU indicating that ecstasy was 'very easy' to obtain has gradually become lower between 2004 (68%) and 2009 (21%). Over one-half (52%) of the 2009 cohort indicated that the availability of ecstasy had remained stable in the preceding six months, and smaller proportions indicated that ecstasy had recently become more difficult (15%) or easier (21%) to obtain.

The sample of REU was asked who they had last obtained ecstasy from and the location where they had last obtained the drug in the six months preceding the interview (Table 9). A large majority indicated that they last obtained ecstasy from friends (80%), most typically from a friend's home (37%), a nightclub (21%) or at the respondent's own home (19%).

Those KE who commented on the availability of ecstasy typically noted that it was 'very easy' or 'easy' to obtain (n=4), with no changes in availability noted during the six months preceding the interview.

Table 9: REU reports of availability of ecstasy in the preceding six months, 2003-2009

Ecstasy	2003	2004	2005	2006	2007	2008	**2009**
Ease of obtaining ecstasy	n=100	n=100	n=100	n=99	n=99	n=98	**n=99**
Very easy (%)	43	68	57	52	42	28	**21**
Easy (%)	29	25	40	46	46	58	**62**
Moderately easy (%)	26	n/a	n/a	n/a	n/a	n/a	**n/a**
Difficult (%)	2	7	3	2	11	12	**17**
Very difficult (%)	-	-	-	-	-	2	**-**
Changes in availability last 6 mths	n=99	n=97	n=98	n=97	n=98	n=98	**n=97**
Stable (%)	53	44	50	70	56	49	**52**
Easier (%)	20	35	25	13	12	18	**21**
More difficult (%)	19	10	14	13	23	20	**15**
Fluctuates (%)	7	10	9	3	7	12	**12**
Persons last scored last 6 mths*							**n=100**
Used not scored (%)							**-**
Friends (%)							**80**
Known dealers (%)							**7**
Acquaintances (%)							**7**
Workmates (%)							**2**
Unknown people (%)							**1**
Street/Mobile dealers (%)							**3**
Location last scored last 6 mths*							**n=99**
Used not scored (%)							**-**
Friend's home (%)							**37**
Dealer's home (%)							**2**
Home (%)							**19**
Nightclub (%)							**21**
Rave/doof/dance party							**2**
Private party (%)							**2**
Pub (%)							**6**
Street (%)							**2**
Agreed public location (%)							**6**
Work (%)							**1**
Acquaintance's house (%)							**1**

Source: EDRS interviews
*Question was not asked prior to 2009

4.8 Ecstasy markets and patterns of purchasing ecstasy

REU interviewed in 2009 reported purchasing ecstasy from a median of 3 people (range 1-20 people) in the preceding six months (Table 10). Three-fifths of the sample (61%) indicated that they typically purchased ecstasy for themselves and others, and one-third (36%) typically purchased ecstasy only for themselves. Most commonly, ecstasy was purchased monthly or less frequently (49%) or fortnightly to monthly (38%) during this time with a median of 5 tablets (range 1-100) purchased in a singe transaction.

Table 10: Patterns of purchasing ecstasy in the last six months, 2005-2009

	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Median no. of people purchased from (range)	4 (1-25)	4 (1-30)	3 (1-15)	4 (1-15)	**3 (1-20)**
Purchased for (%)					
Didn't purchase	-	2	-	3	**-**
Self only	34	44	35	31	**36**
Self and others	66	54	65	66	**61**
Others only	-	-	-	-	**3**
No. of times purchased (%)					
1-6	38	43	44	34	**49**
7-12	36	42	36	45	**38**
13-24	25	10	18	15	**9**
25 +	-	4	2	5	**4**
Median no. of ecstasy pills usually purchased (range)	3 (1-100)	3 (1-100)	3 (1-50)	5 (1-100)	**5 (1-100)**

Source: EDRS interviews

4.9 Summary of ecstasy trends

- The median market and last purchase price for one tablet of ecstasy was $35 and the median market price for 10 tablets was reported to be $320 or $32 per tablet. No notable price changes were reported from 2008.
- Ecstasy was typically considered to be medium or fluctuating in purity, with purity having either remained stable or fluctuated during the six months preceding the interview.
- REU indicated that ecstasy is 'easy' or 'very easy' to obtain and that recent availability had remained stable. The proportion of REU indicating that ecstasy was 'very easy' to obtain has gradually become lower between 2004 (68%) and 2009 (21%).
- Ecstasy was typically purchased from friends and obtained from a friend's home, the respondent's own home or a nightclub. Three-fifths (61%) indicated they typically purchased ecstasy both for themselves and others, with a median of five tablets purchased per occasion.

5.0 METHAMPHETAMINE

Throughout the 1980s, the form of illicit amphetamine most available in Australia was amphetamine sulphate (Chesher, 1993). Following the legislative controls introduced in the early 1990s on the distribution of the main precursor chemicals for the production of amphetamine sulphate (Wardlaw, 1993), illicit manufacturers were forced to rely on different procedures for the preparation of amphetamine. During the 1990s, the proportion of amphetamine-type substance seizures that were methamphetamine[3] (rather than amphetamine) steadily increased until methamphetamine clearly dominated the market (ABCI, 1999, 2000, 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. These more potent forms may be known by terms such as ice, shabu, base, paste and crystal meth, but they are all methamphetamine in basis. While there is some disagreement among both consumers and researchers as to the nature of these forms, it is clear that these are marketed differently to injecting drug users (IDU) and REU, and often sold on differing price scales. As such, trends in regard to each of these forms will be discussed separately where appropriate, and the term methamphetamine will be used in the EDRS to refer to the drugs available in this class. With the exception of methamphetamine-based tablets marketed as 'ecstasy', and pharmaceutical stimulants such as dexamphetamine and methylphenidate, it appears there are three dominant 'preparations' of methamphetamine used within the Tasmanian (and Australian) drug market – each falling at three points along a continuum of form, but, again, all of which are essentially the same substance.

Powder form methamphetamine[4] 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. Consumers interviewed for the 2009 IDRS survey reported that methamphetamine powder sometimes contained small crystals amongst the powder, with the powder generally appearing white in colour, or alternatively brown, beige or pink (de Graaff & Bruno, 2010). The presence of crystals in powder methamphetamine may represent higher purity methamphetamine, or alternatively it may be explained by the use of an adulterant (methylsulfonylmethane, MSM) in the late stages of production. This introduction of MSM forms crystals, giving the powder methamphetamine a crystalline appearance (Fetherston & Lenton, 2006).

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 & Churchill, 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

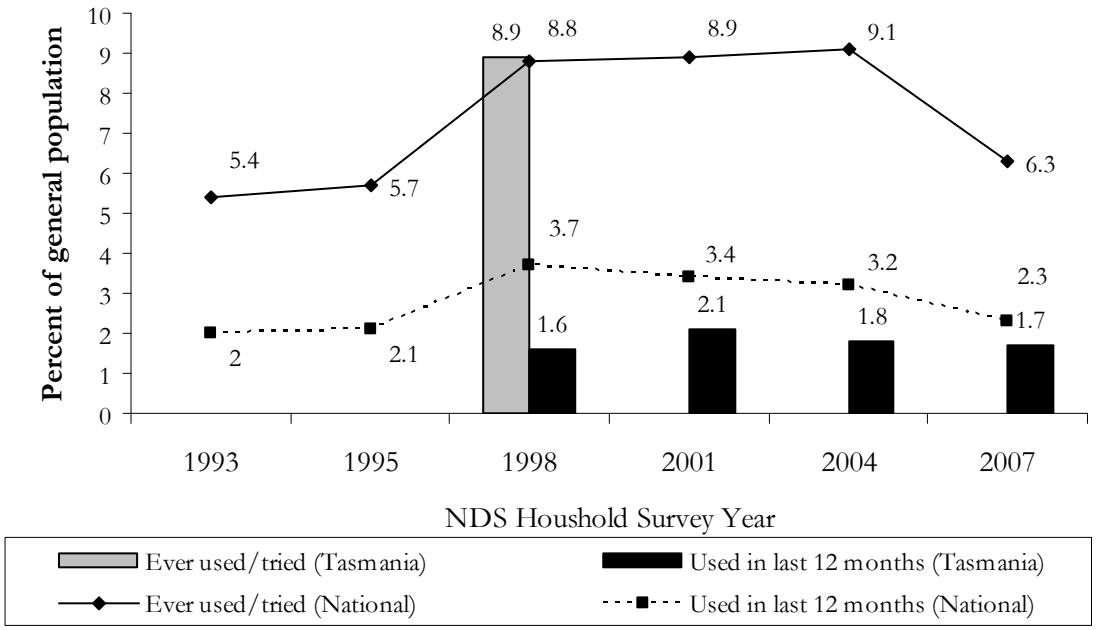
[3] Methamphetamine is an abbreviation of the name methylamphetamine, and, as such, both terms are interchangeable.
[4] Powder form methamphetamine is also referred to in national and other jurisdiction IDRS and EDRS reports as 'speed'.

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). In the 2009 IDRS study, participants that had recently purchased this form of the drug locally commonly described it as 'gluggy', and reported the colour as ranging from clear, white, beige, brown to yellow, orange or pink (de Graaff & Bruno, 2010).

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. However, as previously noted, methylsulfonylmethane (MSM) is an adulterant that can be used to give lower purity powder methamphetamine the appearance of higher purity crystal methamphetamine (although it should be noted that there is currently no forensic validation that this has been present in drugs used in Tasmania). Consumers in the current and previous IDRS studies have generally described this form as white/clear crystals or rocks, looking like crushed glass or rock salt (with crystals commonly larger than sugar crystals) (de Graaff & Bruno, 2010).

According to the findings of the 2007 National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2008) the lifetime and recent use of meth/amphetamine (6.3% and 2.3% respectively) had declined significantly in the general population relative to the 2004 (9.1% and 3.2% respectively) sample (Figure 5). In 2007, 1.7% of surveyed Tasmanian residents reported using meth/amphetamine in the preceding year, compared to 2.3% nationally (Figure 5).

Figure 5: Prevalence of meth/amphetamine use in Australia and Tasmania among those aged 14 years and over, 1993-2007



Source: National Drug Strategy Household Survey 1993-2007

5.1 Methamphetamine use among REU

The proportion of the sample reporting lifetime use of methamphetamine in 2009 (72%, 95%CI 63-80%) was significantly lower relative to 2008 (85%, 95%CI 77-91%), χ^2=4.27, p<.05. Similarly, just over one-half (52%) of the 2009 sample had used methamphetamine during the six months preceding the interview, compared to 63% in 2008 and significantly greater proportions in previous years (70-82%). There was no significant difference in the proportion of males (50%) and females (56%) that had recently used any form of methamphetamine. However, a significantly greater proportion of older (62%) relative to younger (40%) participants had recently used methamphetamine (based on a median split for age), χ^2=4.42, p<.05. The median frequency of use of any form of methamphetamine over the last six months was 3 days (range 1-72) compared to 3 days (range 1-41) in 2008.

Some KEs commented on the forms of methamphetamine currently available in Hobart. Powder (n=3) or a wet powder substance (n=2) were most commonly noted, while ice was considered rare (n=4). Two KE noted that the methamphetamine was typically low purity.

5.1.1 Methamphetamine powder (speed)

The proportion of the sample reporting lifetime use of methamphetamine powder (Table 11) in 2009 (69%, 95%CI 59-77%) was significantly lower relative to 2008 (84%, 95%CI 76-90%), χ^2=5.45, p<.05. The median age of first use was 20 years, and there was no significant difference between the age of first use for males and females.

Less than one-half (46%) had used methamphetamine powder during the six months preceding the interview compared to a slightly greater proportion in 2008 (59%, χ^2=2.89, p=.09) and significantly greater proportions in the years prior to this (62-77%). There was no significant difference between the proportion of males (45%) and females (47%), or the proportion of 'older' (52%) and 'younger' (38%) participants (based on a median split for age) reporting recent use of methamphetamine powder.

The majority of those who had recently used methamphetamine powder had swallowed (59%) or snorted (78%) the drug during the six months preceding the interview, and smaller proportions reported injecting (17%), or smoking (2%) the drug.

The median frequency of methamphetamine powder use during the six months preceding the interview was 2 days (range 1-48 days), or once every three months, which is significantly lower than the median of 3 days in 2008, Mann-Whitney U=1,018, p<.05 (Table 11). A majority (91%) of those who had recently used methamphetamine powder had done so once monthly or less. The median frequency of use for males (2 days) was the same as the median frequency of use for females (2 days), and there was no significant difference in the median frequency of use of 'older' and 'younger' participants.

The usual amount of methamphetamine powder used by REU was a median of 2 points (0.2 of a gram, n=37), and 2 points (n=34) in the biggest session of use in the last six months. However, others reported using 0.2-3.5 grams (n=6) or 1-2 lines (n=2) in a typical session and 0.5-3.5 grams (n=9) or 1-2 (n=2) lines in the biggest session of use during this time. There were no significant sex or age differences in the median number of points used in a typical or biggest session.

Table 11: Patterns of methamphetamine powder (speed) use among REU, 2003-2009

Methamphetamine powder	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	90	82	89	83	74	84	**69**
Median age of first use (range)	19 (16-31)	20 (15-27)	20 (13-44)	20 (15-60)	20 (13-32)	20 (15-44)	**20 (14-30)**
Used last 6 mths (%)	67	68	77	62	65	59	**46**
Of those who used last 6 mths							
Median days use (range)	4 (1-120)	5 (1-48)	4 (1-90)	3 (1-48)	4 (1-115)	3 (1-24)	**2 (1-48)**
Route of administration							
Smoked (%)	4	4	8	8	8	9	**2**
Snorted (%)	63	63	56	63	49	58	**78**
Swallowed (%)	79	85	86	89	85	78	**59**
Injected (%)	16	9	6	8	9	10	**17**
Shafted/shelved (%)	-	-	-	2	2	-	**-**
Median points used							
Typical session (range)	1 (0.5-5)	1 (.25-3)	1 (0.2-5)	1 (0.25-4.5)	1 (0.25-5)	1 (0.5-4)	**2 (0.25-4)**
Biggest session (range)	1 (0.5-40)	1 (.25-6)	1.5 (0.2-5)	2 (0.13-6)	2 (0.25-5)	2 (0.5-6)	**2 (0.5-6)**

Source: EDRS interviews

5.1.2 Methamphetamine base

One-quarter of the 2009 sample (25%) had used methamphetamine base at some stage of their lives (Table 12), which is comparable to 2008 (31%). The median age of first use of methamphetamine base was 21 years and there was no significant difference of the average age of first use for males and females.

Just over one-tenth of the 2009 sample (14%) had used methamphetamine base in the six months preceding the interview, which is similar to 2008 (16%). There was no significant difference in the proportion of males (11%) and females (19%) that had recently used methamphetamine base. Recent use was more likely among older (25%) relative to younger (2%) participants (based on a median split for age), $\chi^2=10.64$, $p<.01$.

The majority of those who had recently used methamphetamine base had swallowed (79%) or injected (50%) the drug, and smaller proportions had smoked (14%) or snorted (14%) the drug.

The median frequency of use in the six months preceding the interview was three days (range 1-14), or once every two months, which is similar to the median frequency of use among the 2008 cohort (2 days). There was no significant difference between the median frequency of use for males and females or for 'older' and 'younger' participants. The majority of those who had recently used methamphetamine base (79%) had used the drug less than monthly in the preceding six months.

The median quantity of methamphetamine base used in the preceding six months was 1 point (0.1 of a gram) in a typical session of use and 2 points in the biggest session of use. There were no significant sex or age differences in the median number of points used in a typical or biggest

session. A single participant reported using 1 gram in a typical session of use in the last six months.

Table 12: Patterns of methamphetamine base use among REU, 2003-2009

Methamphetamine base	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	36	32	35	49	43	31	**25**
Median age of first use (range)	21 (16-31)	22 (16-29)	20 (17-29)	21 (15-32)	20 (13-37)	20 (17-28)	**21 (16-31)**
Used last 6 months (%)	24	20	23	40	30	16	**14**
Of those who used last 6 mths							
Median days use (range)	3 (1-96)	3 1-24)	4 (1-70)	4 (1-150)	2 (1-70)	2 (1-35)	**3 (1-14)**
Route of administration							
Smoked (%)	-	5	-	3	3	-	**14**
Snorted (%)	50	15	39	15	13	25	**14**
Swallowed (%)	71	85	91	88	90	88	**79**
Injected (%)	38	30	22	20	7	19	**50**
Shafted/shelved (%)	-	-	4	-	-	-	**-**
Median points used							
Typical session	1	1	1	2	2	2	**1**
(range)	(0.5-5)	(0.25-2.5)	(0.25-5)	(0.5-3)	(0.5-3)	(0.5-4)	**(0.25-5)**
Biggest session	1	1	1	2	2	2	**2**
(range)	(1-40)	(0.25-2.5)	(0.25-10)	(0.5-10)	(0.5-6)	(0.5-5)	**(0.5-5)**

Source: EDRS interviews

5.1.3 Crystal methamphetamine

Almost one-third (29%) of the REU interviewed in 2009 had ever used crystal methamphetamine compared to a similar proportion in 2008 (33%) (Table 13). The median age of first use of crystal methamphetamine was 21 years and there was no significant difference between males and females in terms of the age of first use.

Less than one-tenth (7%) of the 2009 REU sample had recently used crystal methamphetamine which is slightly fewer compared to 2008 (15%). There was no significant difference in the proportion of males (9%) and females (3%) or the proportion of 'older' (10%) and 'younger' (4%) participants reporting recent use.

Those who had recently used crystal methamphetamine had typically injected (43%), smoked (29%) or snorted (29%) the drug. The median frequency of crystal methamphetamine use in the preceding six months was 6 days (range 1-55) compared to 2 days in 2008. Over one-half of those who had recently used crystal methamphetamine (57%) had used the drug monthly or less during this time.

The average quantity used in a typical session of use in the six months preceding the interview was 1.5 points or 0.15 of a gram (n=5). However, a single participant reported using 0.5 of a gram in a typical session of use. In the biggest session of use, the median amount used was 3 points (n=5), but a single participant reported using 1 gram. There was no significant difference in the average number of points used in a typical session for 'older' and 'younger' participants or for males and females.

Table 13: Patterns of crystal methamphetamine use among REU, 2003-2009

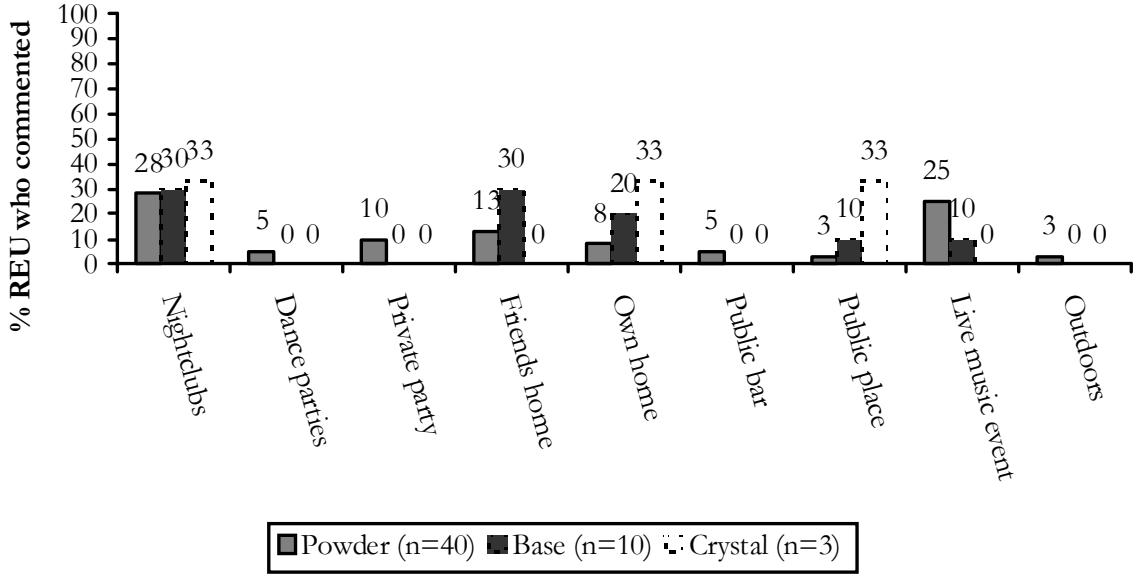
Crystal methamphetamine	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	58	36	29	42	23	33	**29**
Median age of first use (range)	22 (17-45)	22 (16-29)	23 (15-29)	23 (15-34)	23 (16-31)	20 (16-30)	**21 (13-35)**
Used last 6 mths (%)	52	16	10	27	7	15	**7**
Of those who used last 6 mths							
Median days use (range)	3 (1-72)	1 (1-18)	3.5 (1-30)	5 (1-50)	1 (1-20)	2 (1-6)	**6 (1-55)**
Route of administration							
Smoked (%)	62	69	20	78	43	53	**29**
Snorted (%)	14	13	20	15	14	40	**29**
Swallowed (%)	38	31	40	48	71	33	**14**
Injected (%)	25	6	50	22	14	13	**43**
Shafted/shelved (%)	-	-	-	-	-	-	**-**
Median points used							
Typical session (range)	0.5 (0.2-2)	1 (0.25-2)	1 (0.5-3)	1 (0.5-3.5)	2 (0.5-3)	1 (1-4)	**1.5 (0.2-4)**
Biggest session (range)	1 (0.25-10)	1 (.25-2.5)	1 (0.5-10)	2 (0.5-10)	2 (1-3)	1 (1-3)	**3 (0.2-8)**

Source: EDRS interviews

5.1.4 Locations of methamphetamine use

Figure 6 shows the last location of use for each methamphetamine form for those who had used the drug during the six months preceding the interview. Data refers to locations where participants spent most of their time while be under the drug's influence (rather than the place of ingestion). Data for crystal and base methamphetamine should be treated with caution due to small sample sizes. The most common locations of last use included nightclubs, private residences and public places.

Figure 6: Location of most recent methamphetamine use by form, 2009



Source: EDRS interviews

5.2 Price

REU participants were asked to indicate the last purchase for the three major forms of methamphetamine (see Table 14). A greater number of respondents were able to report confidently on the price of methamphetamine powder relative to methamphetamine base and crystal methamphetamine. As such, prices reported for the latter two methamphetamine forms should be interpreted with caution.

The median last purchase price for one point (0.1 of a gram) of methamphetamine powder was $40 (range $20-60), which is consistent with the median price of $40 reported among previous samples. The last purchase price for one gram of methamphetamine powder was $255 (range $170-300) which is significantly lower than the median last price reported in 2008 ($300), Mann-Whitney U=27.5, p<.01.

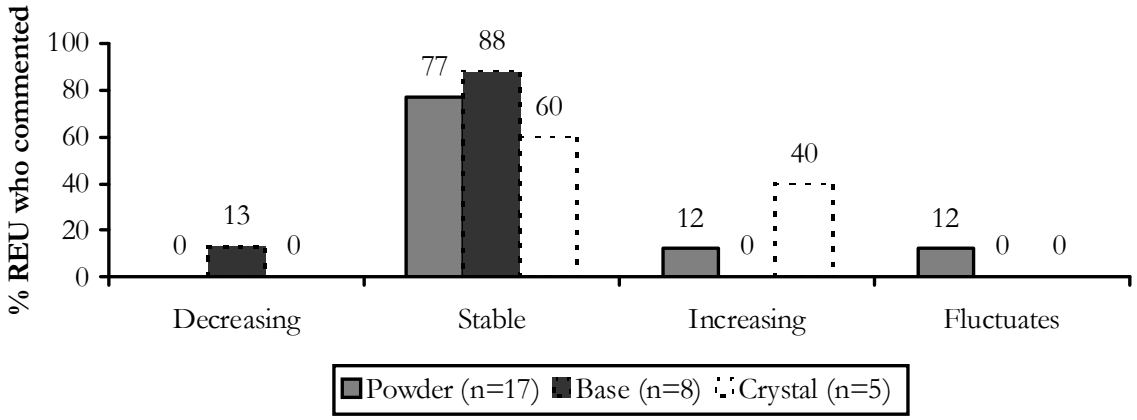
A greater proportion of the REU sample were able to comment on recent price changes of methamphetamine powder (17%) in comparison to methamphetamine base (8%) and crystal methamphetamine (5%). The majority of those who commented on recent changes in methamphetamine price (Figure 7) indicated that the price of each form had recently been stable (powder 77%, base 88%, and crystal 60%).

Table 14: Price of various methamphetamine forms purchased by REU, 2003-2009

Median last purchase price ($)	2003	2004	2005	2006	2007	2008	**2009**
Powder							
Point	$40 (3-65) n=47	$40 20-50) n=41	$40 25-50) n=36	$40 (30-50) n=27	$40 (30-60) n=23	$40 (25-50) n=20	**$40 (20-60) n=16**
Gram	$300 (30-320) n=9	$300 (50-400) n=11	$300 (200-400) n=14	$350 (45-400) n=11	$350 (200-380) n=16	$300 (200-350) n=13	**$255 (170-300) n=12**
Base							
Point	$40 (20-50) n=14	$50 (30-55) n=14	$45 (30-50) n=8	$40 (10-300) n=25	$40 (30-50) n=21	$40 (35-50) n=9	**$60 (50-80) n=5**
Gram	$275 (200-300) n=4	$300 (250-350) n=3	$300 (250-400) n=3	$350 (300-350) n=7	$375 (350-400) n=4	$300 (300-300) n=3	**$400 n=1**
Crystal							
Point	$50 (35-100) n=22	$50 (40-50) n=6	$50 (50-60) n=3	$50 (40-50) n=8	$45 (35-50) n=4	$40 n=1	**$50 n=1**
Gram	$450 (400-450) n=3	$350 (350-350) n=2	$375 (350-400) n=2	$150 n=1	$300 n=1	$300 (300-300) n=2	**$450 (300-600) n=2**

Source: EDRS interviews

Figure 7: Recent changes in price of various methamphetamine forms purchased by REU, 2009



Source: EDRS interviews

Tasmania Police Drug Investigation Services gather regular information regarding current prices of illicit drugs. This data has been provided to the authors through the Australian Bureau of Criminal Intelligence (ABCI), now the Australian Crime Commission (ACC) (Table 15). During the 2007/08 financial year, Tasmania Police reported prices as being $30-50 per 'point' (0.1 g) of methamphetamine, $200-300 per gram, and $5,000-8,000 per ounce (Table 15). Although data for the 2008/09 reporting period was unavailable at the time of publication, the prices reported by police for one point (0.1 g) and one gram of methamphetamine are relatively consistent with the price reported by REU in the current survey.

Table 15: Methamphetamine prices in Tasmania reported by Tasmania Police Drug Investigation Services, 2003/04-2007/08

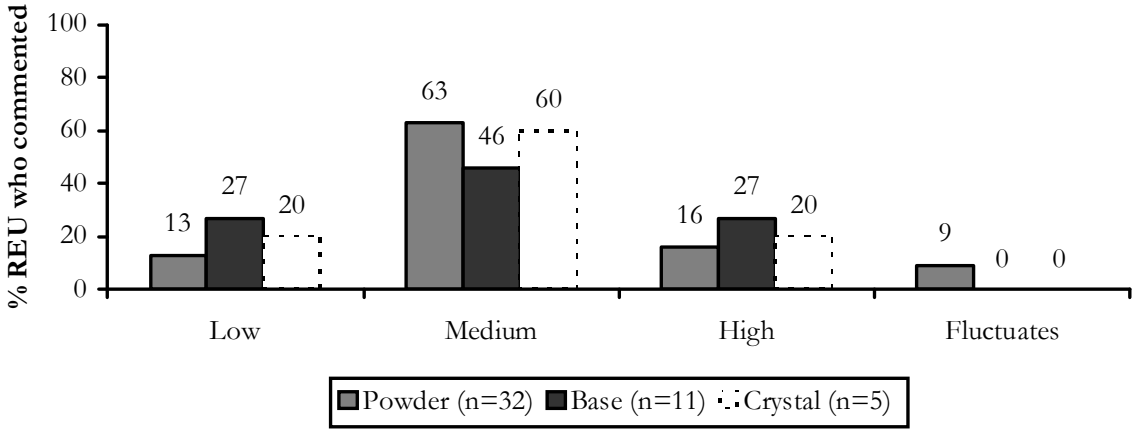
	Point (~0.1 g)	Street gram (0.6-0.8 g)	Full gram (1.0 g)	Ounce (28 g)
2003/04	$50-60	$100-300	$200-400	$3,500-6,000
2004/05	$50	*price not reported*	*price not reported*	$5,000
2005/06	*price not reported*	*price not reported*	*price not reported*	$5,000
2006/07	$50	*price no reported*	$270-380	$4,000-5,000
2007/08	**$30-50**	**$100-150**	**$200-300**	**$5,000-8,000**

Source: Australian Crime Commission
Note: Data for 2008/09 financial year were not available at the time of publication

5.3 Purity

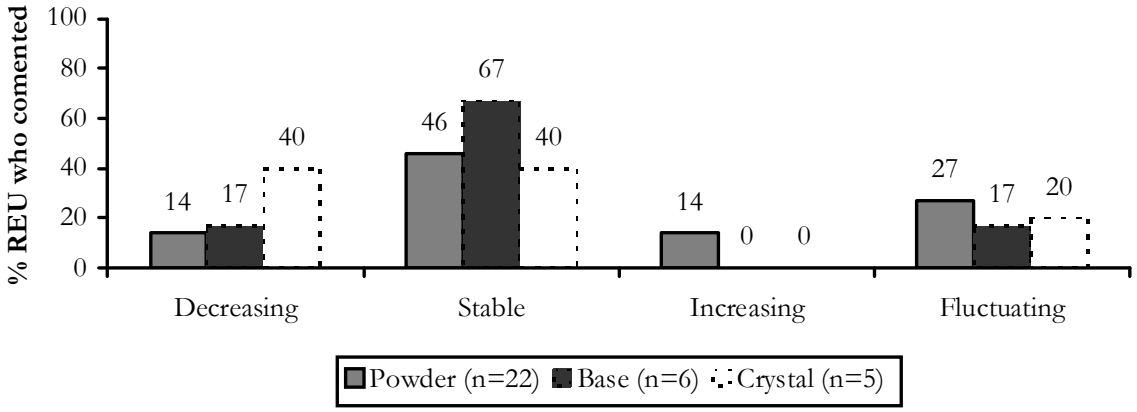
A greater proportion of the 2009 REU sample was able to comment on the current purity (Figure 8) and changes in purity (Figure 9) for methamphetamine powder relative to methamphetamine base and crystal methamphetamine. As such, the purity estimates of the latter forms should be interpreted with caution. The majority of REU who commented indicated that methamphetamine was medium in purity (63% powder, 46% base, 60% crystal; Figure 8). The purity of methamphetamine was typically reported to have remained stable or to have fluctuated or decreased during the six months preceding the interview (Figure 9).

Figure 8: User reports of current methamphetamine purity, 2009



Source: EDRS interviews

Figure 9: User reports of changes in methamphetamine purity in the past six months, 2009



Source: EDRS interviews

Data for purity of methamphetamine received at police analytical laboratories have been provided for the 1997/98 to 2007/08 financial years (Table 16). Data for the 2008/09 financial period was not available at the time of publication. All amphetamine-type stimulants tested for purity between 2003/04 and 2007/08 in Tasmania were methylamphetamine rather than amphetamine. Drugs seized by Tasmania Police are not routinely tested for purity, thus data for some reporting periods should be interpreted with caution due to small sample sizes and non-random selection of seizures for analysis.

In the 2007/08 reporting period, the total average purity of analysed methamphetamine seizures was relatively low (8.5%) which is consistent with the low average purity of seizures analysed in the previous two reporting periods (12.4%-13%). While, again, it is difficult to make inferences from small numbers of analysed seizures, it is notable that the upper-bound purity range of analysed seizures, which had been steadily increasing between 2000/01 and 2003/04, has declined in recent years. The particularly high-purity seizures in previous years are also uncommon by national standards (ACC, 2005) and may reflect the selection of particularly unusual seizures of the drug for analysis by police.[5]

[5]Anecdotal reports from Tasmania Police in previous IDRS surveys have suggested that these particularly high-purity samples may have been seizures of small amounts of crystal methamphetamine.

Table 16: Purity of seizures of methamphetamine made by Tasmania Police received for laboratory testing, 1997/98-2007/08

	1997 /98	1998 /99	1999 /00	2000 /01	2001 /02	2002 /03	2003 /04	2004 /05	2005 /06	2006 /07	**2007 /08**
≤2 g											
n	*4*	*31*	*9*	*10*	*20*	*30*	*9*	*10*	*6*	*15*	***7***
Avg% purity	5 %	5 %	7.4 %	10.4%	26.6%	12.7%	25.6%	32.3%	15%	24.6%	**7.6%**
> 2 g											
n	*2*	*8*	*11*	*14*	*28*	*13*	*14*	-	*3*	*23*	***32***
Avg% purity	7 %	21 %	6.6 %	3.6 %	19.2%	11.2%	9.8%	-	6.9%	6.5%	**8.5%**
Total											
n	*6*	*39*	*20*	*24*	*48*	*43*	*23*	*10*	*9*	*38*	***39***
Avg% purity	6 %	8 %	7 %	6.4 %	22.2%	12.2%	16.9%	32.3%	13%	12.4%	**8.5%**
Range	3-8%	2-59%	2-26%	0.5-50%	0.1-70.6%	1.9-78.5%	2.4-80.5%	18.5-35.5%	1.7-58.7%	2.4-27.7%	**1.9-39.5%**

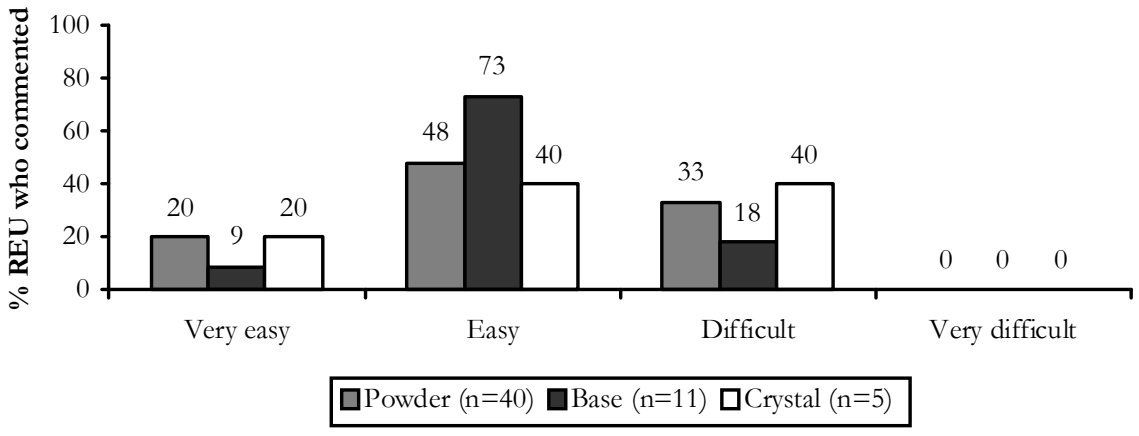
Source: Australian Bureau of Criminal Intelligence; Australian Crime Commission; Tasmania Police State Intelligence Services.

Note: No seizures made by the Australian Federal Police in the state were analysed during these reporting periods. Data for the 2008/09 period were unavailable at time of publication

5.4 Availability

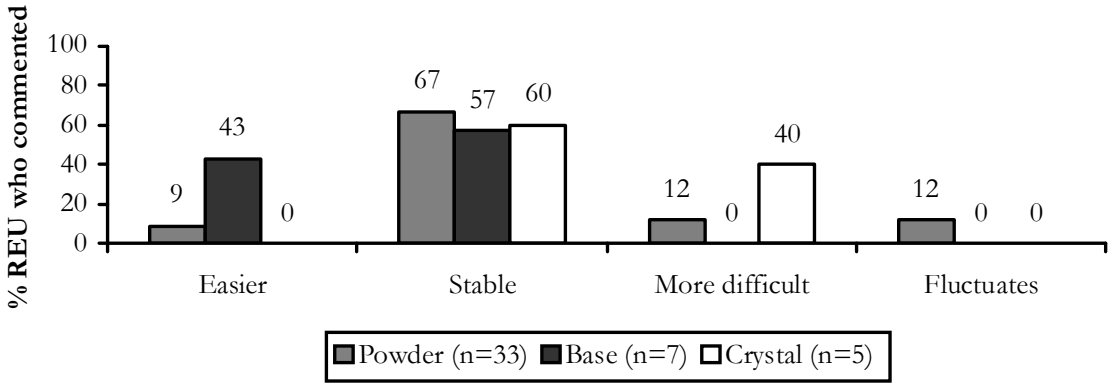
A greater proportion of the REU sample was able to comment on the availability and changes in availability for methamphetamine powder relative to methamphetamine base and crystal methamphetamine (Figures 10 & 11). Methamphetamine was typically reported to be 'easy' or 'very easy' to obtain and this availability had remained stable during the six months preceding the interview. Figure 12 shows the proportion of the REU sample who indicated that each methamphetamine form was 'very easy' or 'easy' to obtain across the seven years of the study. The majority of those who commented on powder (68%) and base (82%) 2009 indicated that these forms were easy or very easy to obtain.

Figure 10: Current availability of methamphetamine forms, 2009



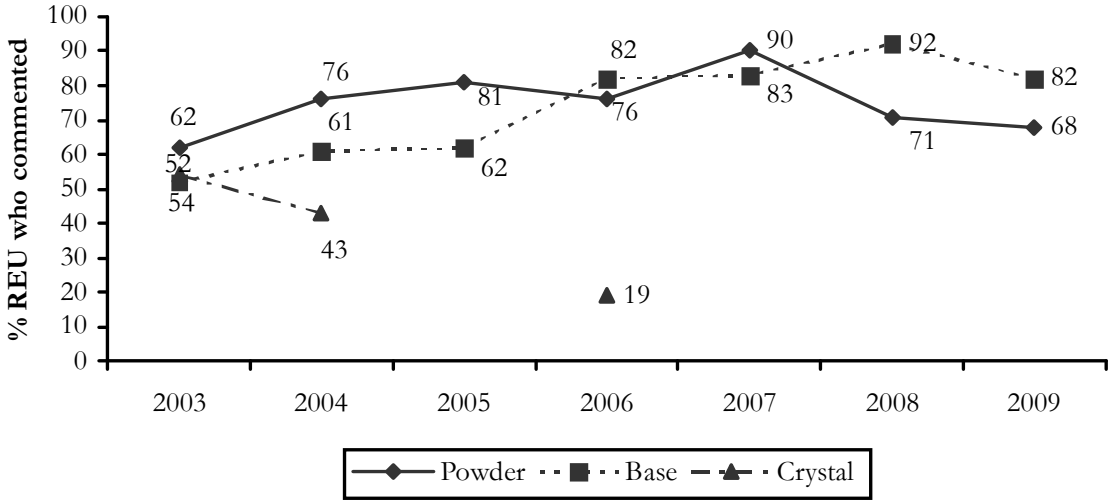
Source: EDRS interviews

Figure 11: Change in the availability of various forms of methamphetamine in the preceding six months, 2009



Source: EDRS interviews

Figure 12: Proportion of REU reporting various forms of methamphetamine as 'very easy' or 'easy' to obtain in the six months preceding interview, 2003-2009

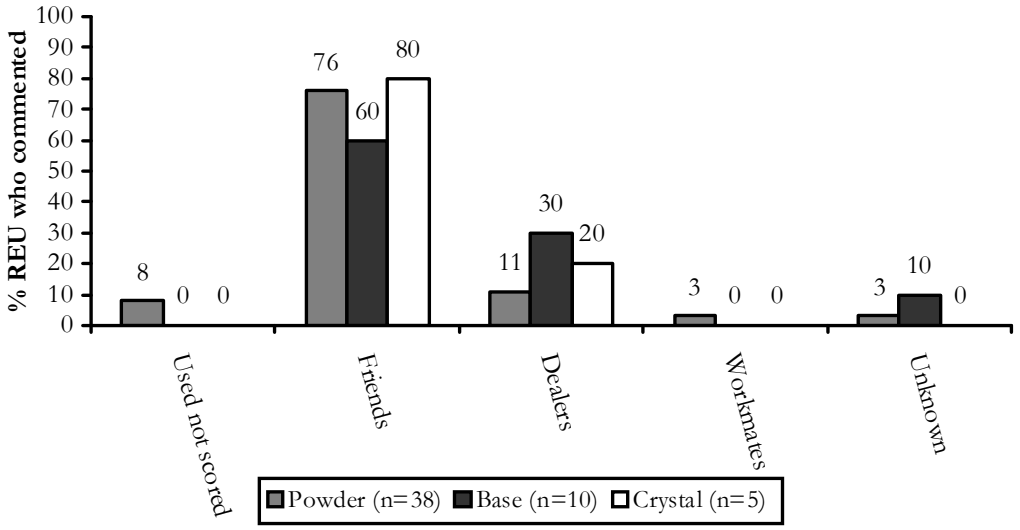


Source: EDRS interviews
Note: Data not reported where n<10

REU were asked who they had obtained each methamphetamine form from on the last occasion in the last six months, and at which locations they had obtained the drug (see Figure 13 and Figure 14). The data are based on small sample sizes for methamphetamine base and crystal methamphetamine and should be interpreted with caution.

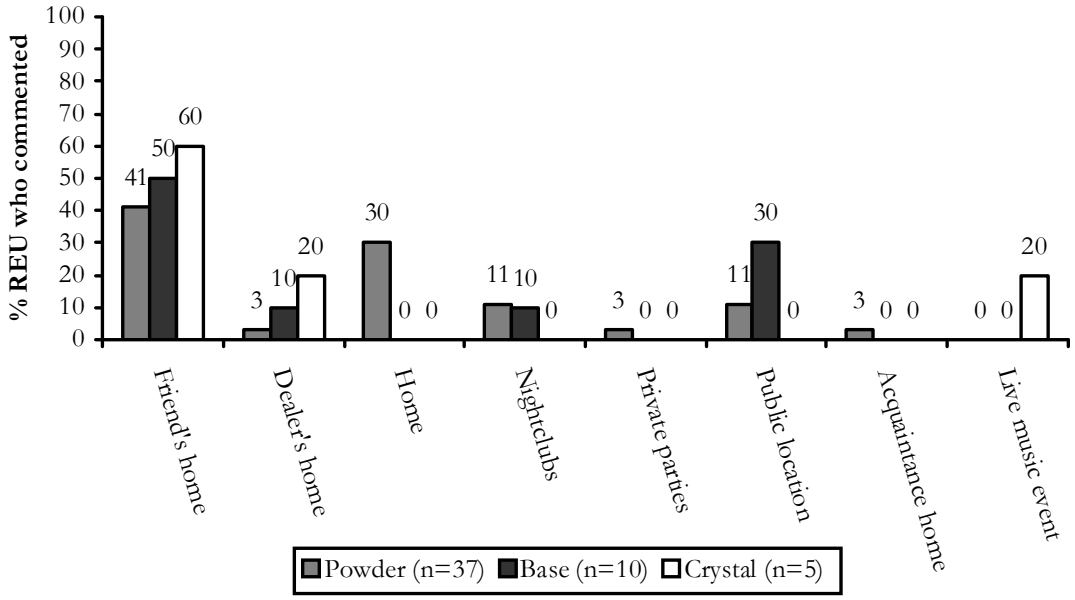
For all forms of methamphetamine, participants were most likely to have last obtained the drug from friends (76% powder, 60% base, 80% crystal), with less than one-third having last obtained the drug from a known dealer (Figure 13). The most common location for the last purchase of methamphetamine was a friend's home for all forms of the drug. Other locations included the respondent's own home, public locations, dealer's home, nightclub and live music event.

Figure 13: People from whom methamphetamine powder, base and crystal were last purchased in the preceding six months, 2009



Source: EDRS interviews

Figure 14: Locations where methamphetamine powder, base and crystal were last purchased in the preceding six months, 2009



Source: EDRS interviews

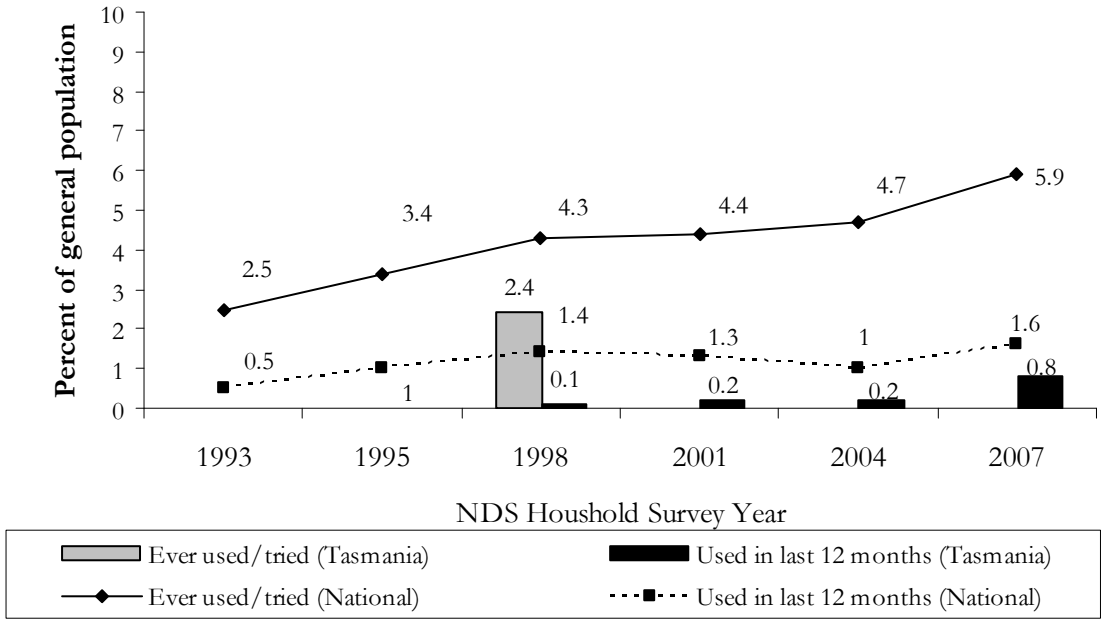
5.5 Summary of methamphetamine trends

- Use of methamphetamine was common among REU in 2009, with just over one-half (52%) reporting recent use of some form of methamphetamine in the preceding six months, compared to 63% in 2008, and significantly greater proportions in previous years (70-82%). Recent use of methamphetamine was significantly more common among older (62%) relative to younger (40%) participants. Methamphetamine was used on a median of three days during this period (once every two months) in relatively small amounts (1-2 points).
- Recent use of methamphetamine powder was most common (46%) followed by methamphetamine base (14%) and crystal methamphetamine (7%).
- The proportion reporting recent use of methamphetamine powder (46%) which trended towards being less than the proportion in 2008 (59%) and was significantly less than the years prior to this (62-77%), and the median frequency of use was significantly lower in 2009 (2 days) relative to 2008 (3 days).
- Methamphetamine powder was typically swallowed or snorted, base was typically swallowed, whereas crystal was typically injected, smoked, or snorted.
- The median last purchase price for one 'point' (0.1 g) of all methamphetamine forms was $40. These prices are generally consistent with those reported in previous years and no recent price changes were noted. However, the median last purchase price for one gram of methamphetamine powder ($255) was significantly lower than that reported in 2008 ($300).
- The majority of REU who commented indicated that methamphetamine was medium in purity (63% powder, 46% base, 60% crystal).
- All methamphetamine forms were considered to be 'easy' or 'very easy' to obtain among those who commented.
- Small sample sizes in relation to crystal and base and low levels of recent use among the current cohort both indicate very low availability of these forms to this demographic in 2009.

6.0 COCAINE

According to the findings of the 2007 National Drug Strategy Household Survey (Figure 15; Australian Institute of Health and Welfare, 2008a,b) 0.8% (95%CI 0.6-0.9%) of surveyed Tasmanian residents reported using cocaine in the preceding year, which is significantly greater than the proportion of the 2004 Tasmanian sample (0.2%, 95%CI 0.1-0.3%), but significantly lower relative to the national sample in 2007 (1.6%, 95%CI 1.55-1.64%). A significantly greater proportion of the 2007 national sample also reported lifetime (5.9%) and past year use (1.6%) of cocaine relative to the 2004 sample (4.7% and 1% respectively).

Figure 15: Prevalence of cocaine use in Australia and Tasmania among those aged 14 years and over, 1993-2007



Source: National Drug Strategy Household Survey 1993-2007

6.1 Cocaine use among REU

In 2009, over one-half of REU (51%) had ever used cocaine (see Table 17). There was no significant difference in the proportion of the male (50%) and female (53%) samples that had ever used cocaine. Based on a median split for age, a significantly greater proportion of 'older' participants had ever used cocaine in comparison to 'younger' participants (67% vs. 32%); χ^2=12.37, p<.001. The median age of first use of cocaine was 22 years (range 16-31 years) and there was no significant difference between the average age of first use for females (M=22.6, SD=2.0) and males (M=21.5, SD=2.9).

Almost one-third (31%) of the 2009 REU sample had used cocaine during the six months preceding the interview (see Table 17), similar to the proportion between 2006 and 2008 (33-35%). However, these are comparably greater proportions than seen in earlier years of the study, (7-20%). There was no significant difference in the proportion of males (31%) and females (31%) or older (37%) and younger (23%) participants who had recently used cocaine.

The median frequency of cocaine use was 2 days (range 1-24 days) in the preceding six months. One-third (35%) of those who had recently used cocaine had done so on only one occasion in the preceding six months. There was no significant difference in the median frequency of use for males (2 days, range 1-24) and females (2 days, range 1-5).

Those that had recently used cocaine reported using a median of 0.25 grams (range 0.25-5 gram) or a median of 2 'points' (range 0.5-2 points) in a typical session, and 0.25 grams (range 0.25-5 grams) or 2 'points' (range 0.5-8) in the biggest session of use in the six months preceding the interview. The majority of those who had used cocaine in the preceding six months had snorted the drug (94%), while over one half had swallowed the drug (55%).

The most common locations for last use of cocaine (Table 17) were at a nightclub (36%), a live music event (18%), or at the consumer's own home (18%).

Table 17: Patterns of cocaine use among REU, 2003-2009

Cocaine	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	44	32	43	55	54	61	**51**
Median age first used (range)	21 (15-30)	21 (16-32)	20 (15-30)	22 (17-30)	22 (17-31)	21 (18-46)	**22 (16-31)**
Used last six months (%)	7	10	20	33	35	35	**31**
Of those used last 6 mths							
Median days use (range)	2 (1-10)*	2 (1-20)	1 (1-5)	2 (1-6)	2 (1-72)	2 (1-10)	**2 (1-24)**
Route of administration							
Smoked (%)	14	-	15	-	3	-	**3**
Snorted (%)	71	70	90	94	74	94	**94**
Swallowed (%)	14	30	10	39	51	31	**55**
Injected (%)	-	10	-	6	-	-	**3**
Shafted/shelved (%)	-	-	-	-	-	-	**-**
Median amounts used							
Grams typical session (range)	0.1 (.1-.5)*	0.5 (0.5-1.5)*	0.5 (0.5-1)*	0.5 (0.2-2)	0.5 (0.5-1)	0.5 (.25-1)	**0.25 (0.1-5)**
Grams biggest session (range)	0.5 (.1-.5) *	1.0 (0.5-5)*	0.5 (0.5-1)*	1 (0.2-4)	0.5 (0.5-4)	0.5 (.25-3)	**0.25 (0.1-5)**
Points typical session (range)	-	1.0 (0.5-2) *	2 (0.25-3)	2 (1-5)	2 (0.25-4)	2 (1-4)*	**2 (0.5-2)***
Points biggest session (range)	-	0.75 (0.5-1) *	2 (0.25-4)	2 (1-7)	2 (0.25-6)	2 (1-4)*	**2 (0.5-8)***
Location last used	n=5	n=6	n=11	n=21	n=19	n=28	**n=11**
Home (%)	20	17	18	19	16	7	**18**
Dealer's home (%)	-	-	-	5	-	4	**-**
Friend's home (%)	40	33	9	33	32	21	**9**
Rave/doof/dance party	20	17	9	-	5	4	**9**
Nightclub (%)	20	33	18	19	11	25	**36**
Pub (%)	-	-	18	-	-	7	**9**
Private party (%)	-	-	-	14	16	29	**-**
Outdoors (%)	-	-	-	5	-	-	**-**
Live music event (%)	-	-	-	-	11	-	**18**
Public place (%)	-	-	9	-	11	4	**-**
Work (%)	-	-	9	-	-	-	**-**
Other	-	-	9	5	-	-	**-**

Source: EDRS interviews

* n<10

6.2 Price

Table 18 shows median prices and price variations reported by REU for cocaine between 2003 and 2009. The median last purchase price for one gram of cocaine in 2009 was $300 (range $300-600). Although this is lower than the price of $350 reported in 2008, this estimate is based on a relatively small sample size. Over one-half (56%) indicated that the price of cocaine had remained stable in the last six months and one-third (33%) reported a recent price increase.

Table 18: Price of cocaine purchased by REU and price variations, 2003-2009

Median Price	2003	2004	2005	2006	2007	2008	**2009**
Median last price							
Point (0.1 gram)	$60*	-	$65*	$45*	$30*	$90*	**$100***
(range)	n=1		(60-70)	(40-50)	(20-60)	(n=1)	**(n=1)**
Half gram	$125*	-	$180*	$250*	-	-	**-**
(range)							
Gram	$270*	$300*	$350*	$310	$320*	$350	**$300***
(range)	(200-400)	(200-400)	(180-400)	(250-400)	(250-380)	(200-450)	**(300-600)**
Price change last 6 mths	n=10	n=8	n=4	n=11	n=12	n=17	**n=9**
Increased (%)	10	13	25	-	25	18	**33**
Stable (%)	50	75	75	73	25	59	**56**
Decreased (%)	10	-	-	27	17	24	**11**
Fluctuated (%)	30	13	-	-	33	-	**-**

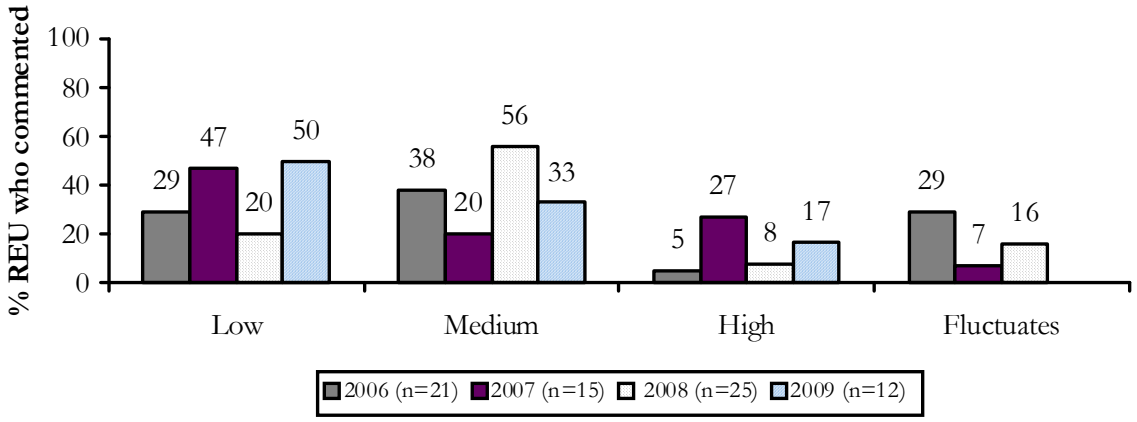
Source: EDRS interviews
* n<10

In the 2007/08 ACC report, the price for one gram of cocaine in Tasmania was reported to be $350 (ACC, 2009), which is the same as the price reported by the REU sample in 2008. Data for the 2008/09 financial year was unavailable at the time of publication.

6.3 Purity

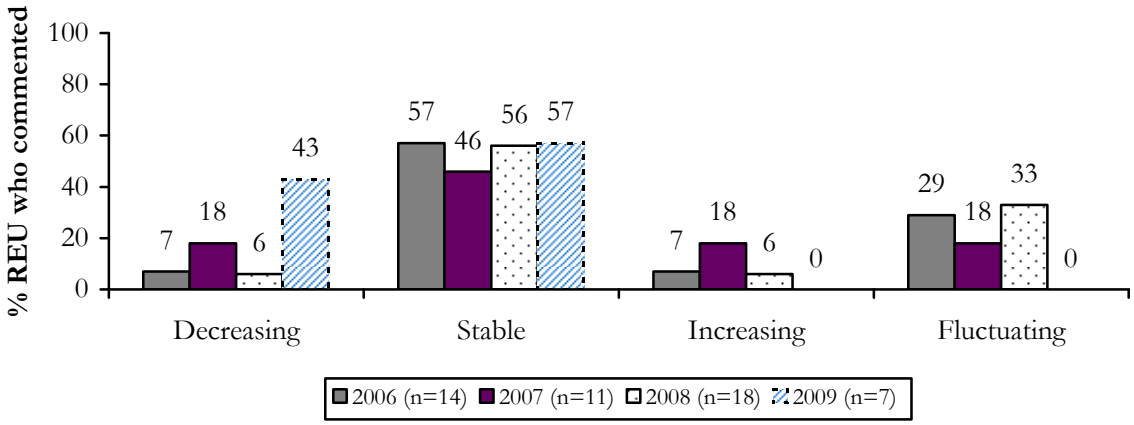
REU were asked about the current purity of cocaine (Figure 16) and any changes in purity in the six months preceding the interview (Figure 17). One-half of those who commented indicated that cocaine was currently low in purity (50%), and one-third indicated that cocaine was currently medium (33%) in purity. Those that commented on changes in the purity of cocaine in the last six months indicated that it had remained stable (57%) or had recently decreased (43%).

Figure 16: User reports of current purity of cocaine, 2006-2009



Source: EDRS interviews
Note: Data prior to 2006 is not reported due to small sample sizes (n<10)

Figure 17: User reports of changes in cocaine purity in the past six months, 2006-2009



Source: EDRS interviews
Note: Data prior to 2006 is not reported due to small sample sizes (n<10)

The last analysed sample of cocaine seized within the state by Tasmania Police was from the first quarter of 2001. This was an amount of less than two grams, and was analysed during the first quarter of 2002 at 44.0% purity. Data for the 2008/09 financial year was unavailable at the time of publication.

6.4 Availability

The majority of those who commented on the current availability of cocaine (see Table 19) indicated that cocaine was currently difficult (50%) or very difficult (25%) to obtain. This availability was reported to have remained stable (50%) or to have become more difficult to obtain (30%) during the preceding six months. Cocaine had last been purchased from friends (73%) or dealers (18%), and had been last obtained from a friend's home (55%) or the respondent's own home (36%).

Table 19: REU reports of availability of cocaine in the preceding six months, 2003-2009

Cocaine	2003	2004	2005	2006	2007	2008	**2009**
Ease of obtaining cocaine	n=32	n=9	n=13	n=24	n=22	n=33	**n=12**
Very easy (%)	3	11	-	13	-	3	**-**
Easy (%)	3	-	23	38	5	24	**25**
Moderately easy (%)	16	n/a	n/a	n/a	n/a	n/a	**n/a**
Difficult (%)	34	44	31	33	68	61	**50**
Very difficult (%)	44	44	46	17	27	12	**25**
Changes in availability	n=23	n=8	n=10	n=18	n=21	n=26	**n=10**
Stable (%)	83	63	90	61	57	69	**50**
Easier (%)	4	13	-	33	14	23	**20**
More difficult (%)	9	25	10	-	10	4	**30**
Fluctuates (%)	4	-	-	6	19	4	**-**
Last person scored from*							**n=11**
Used not scored (%)							**-**
Friends (%)							**73**
Dealers (%)							**18**
Acquaintances (%)							**9**
Unknown dealers (%)							**-**
Last location scored*							**n=11**
Used not scored (%)							**-**
Home (%)							**36**
Friend's home (%)							**55**
Dealers' home (%)							**9**
Rave/doof/dance parties (%)							**-**
Nightclubs (%)							**-**
Pubs (%)							**-**
Private party (%)							**-**
Agreed public location (%)							**-**
Acquaintance's house (%)							**-**

Source: EDRS interviews
*Question was not asked prior to 2009

6.5 Summary of cocaine trends

- Consistent with drug use trends in the general population, the recent use of cocaine increased among the REU cohorts between 2003 (7%) and 2006 (33%), but has remained stable since this time with 31% reporting recent use in 2009.
- Cocaine was typically snorted and was used on a median frequency of two days (range 1-24 days) in the six months preceding the interview, with an average of 0.2 to 0.25 grams used in a typical session. Cocaine was last used at nightclubs, live music events and private residences.
- The median last purchase price for one gram of cocaine was $300 (range $300-650) which has remained stable since 2005. No consistent trends in terms of recent price changes were noted.
- Cocaine was typically considered to be 'low' or 'medium' in purity and this purity was reported to have remained 'stable' or 'decreased' in the last six months.
- The majority of those who commented on the availability of cocaine, indicated that it was currently 'difficult' or 'very difficult' to obtain, and no recent changes in the availability of the drug were noted.
- Cocaine had typically been purchased from friends or dealers at private residences on the last occasion.

7.0 LSD

In the 2007 National Drug Strategy Household Survey, it was estimated (from the sample of 1,143 participants) that approximately 1% of Tasmanians had used hallucinogens in the year prior to interview, compared with 0.6% of Australians nationally (Australian Institute of Health and Welfare, 2008).

7.1 LSD use among REU

Table 20 shows that over one-half (52%) of the 2009 EDRS sample had used LSD at some stage of their lives. A significantly greater proportion of the male sample (59%) had ever used LSD in comparison to the proportion of the female sample (39%), $\chi^2=3.87$, $p<.05$, but there was no significant difference in the proportion of 'younger' (49%) and 'older' (54%) participants. The median age of first use was 20 years (range 14-30 years, SD=3.4 years), and there was no significant difference between the age of first use for males (20 years) and females (20 years).

One-third (34%) of the 2009 sample reported use of LSD during the six months preceding the interview (Table 20) which was not significantly different to the proportion in 2008 (41%). A significantly greater proportion of the male sample (44%) had recently used LSD in comparison to the proportion of the female sample (17%), $\chi^2=7.53$, $p<.01$. There was no significant difference in the proportion of 'younger' (40%) and 'older' (29%) participants that had recently used LSD (based on a median split for age). All of those who had recently used LSD had taken the drug orally, and a single participant also reported recent injection of the drug.

Of those who had recently used LSD, the median frequency of use was 2 days (range 1-15 days) and there was no significant difference in the median frequency of use for males and females. The median number of tabs/drops of LSD used in a typical session was 1 (range 0.5-3) and the number of tabs/drops used in the biggest session of use was 2 (range 0.5-10). The median frequency and quantities of use were similar to those observed among previous cohorts.

REU were asked which locations they had last used LSD (to be under the influence of the drug, not necessarily the location of ingestion) during the 6 months preceding the interview (Table 20). LSD was last used at private residences such as the consumer's own home, a friend's home, or a private party, as well as dance-related events, outdoor locations, nightclubs, or live music events.

Table 20: Patterns of LSD use among REU, 2003-2009

LSD	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	62	51	54	52	40	56	**52**
Median age of first use (range)	18 (14-25)	19 (14-32)	18 (15-31)	19 (14-35)	19 (13-32)	20 (16-47)	**20 (14-30)**
Used last 6 mths (%)	24	32	31	29	20	41	**34**
Of those used last 6 mths							
Median days use last 6 mths (range)	1 (1-15)	2.5 (1-12)	1 (1-15)	2 (1-15)	2 (1-25)	2 (1-15)	**2 (1-15)**
Route of administration							
Smoked (%)	-	3	-	3	-	-	**-**
Snorted (%)	-	-	-	3	-	-	**-**
Swallowed (%)	100	100	100	100	100	100	**100**
Injected (%)	-	-	-	-	-	-	**3**
Median tabs/drops used							
Typical session (range)	1.25 (1-2)	1 (.25-2.5)	1 (0.5-3)	1 (1-3)	1 (0.5-3)	1 (0.5-2.5)	**1 (0.5-3)**
Biggest session (range)	3 (1-4)	1.25 (0.25-3)	1 (0.5-6)	2 (1-16)	2 (0.5-4)	2 (0.5-5)	**2 (0.5-10)**
Location last used LSD	n=27	n=30	n=30	n=26	n=15	n=40	**n=31**
Home (%)	22	17	13	23	27	28	**23**
Dealer's home (%)	4	-	-	-	-	-	**-**
Friend's home (%)	19	17	40	15	-	20	**26**
Rave/doof/dance party	22	17	10	31	27	20	**7**
Nightclub (%)	26	17	13	4	13	3	**7**
Pub (%)	-	3	-	-	-	-	**-**
Restaurant/café (%)	-	3	-	-	-	-	**-**
Private party (%)	7	3	-	12	13	3	**10**
Outdoors (%)	n/a	13	10	12	20	18	**23**
Live music event (%)	n/a	7	7	-	-	8	**7**
Public place (%)	-	-	3	4	-	3	**-**
Other (%)	-	3	-	-	-	-	**-**

Source: EDRS interviews

7.2 Price

The last purchase price for one tab of LSD and perceived price changes over the six months preceding the interview are shown in Table 21. The median last purchase price for one tab of LSD was $20 (range $10-45) in 2009 which is consistent with the market price reported in previous years. The median last purchase price for one drop of liquid LSD was $20 (15-25). A majority (77%) of those who commented on the price of LSD indicated that it had remained stable during the six months preceding the interview.

Table 21: Prices of LSD purchased by REU, 2003-2009

LSD	2003	2004	2005	2006	2007	2008	**2009**
Median last price							
Tab (range)	$20 (2-40) n=21	$20 (5-40) n=24	$25 (10-40) n=30	$20 (10-50) n=29	$15 (10-25) n=14	$20 (12-60) n=27	**$20 (10-45) n=27**
Price change	n=39	n=31	n=31	n=30	n=19	n=28	**n=26**
Increased (%)	13	10	13	10	11	14	**-**
Stable (%)	79	77	68	53	74	68	**77**
Decreased (%)	-	3	10	13	16	11	**12**
Fluctuated (%)	8	10	10	23	-	7	**12**

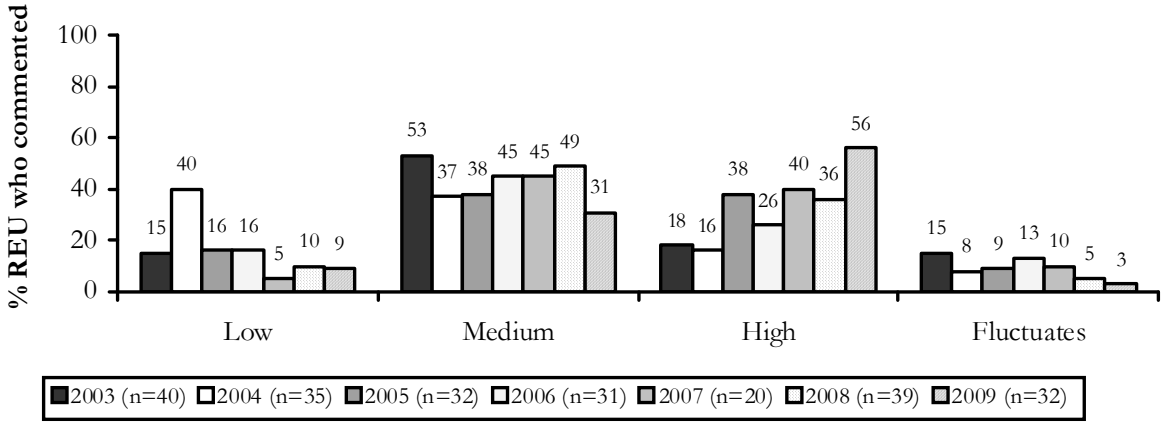
Source: EDRS interviews

Tasmania Police reported prices of LSD tabs as $20-25 during the 2001/02 and 2000/01 financial years, a potential decrease on the $15-30 reported during 1999/00 (ABCI, 2001, 2002; ACC, 2003). Price information in regard to LSD is no longer reported by the ACC in their annual reports.

7.3 Purity

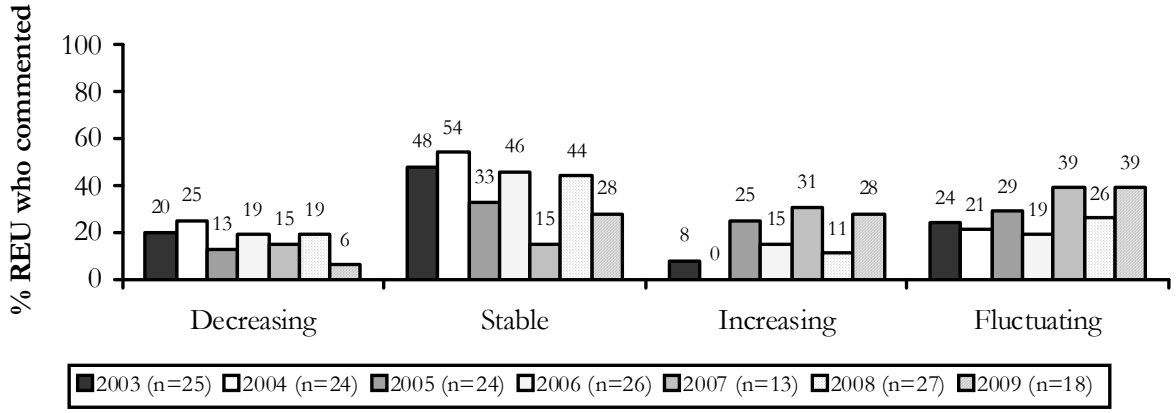
LSD was typically reported to be high (56%) or medium (31%) in purity (see Figure 18), and this purity was reported to have fluctuated, increased or remained stable during the six months preceding the interview (Figure 19).

Figure 18: Current purity of LSD, 2003-2009



Source: EDRS interviews

Figure 19: Recent change in purity of LSD, 2003-2009



Source: EDRS interviews

7.4 Availability

A large majority of those who commented in 2009, reported that LSD was currently 'easy' or 'very easy' to obtain (see Table 22), and this proportion was significantly greater than the proportion among the 2008 sample (89% vs. 59%), $\chi^2=8.52$, $p<.01$, with over half of those who commented (52%) indicating that the availability of LSD had recently increased.

The persons and locations from which LSD was last obtained are shown in Table 22. A majority indicated that LSD had last been obtained from friends, most commonly at private residences, but also at nightclubs or dance-related events.

Table 22: REU reports of availability of LSD in the preceding six months, 2003-2009

LSD	2003	2004	2005	2006	2007	2008	**2009**
Ease of obtaining LSD	n=54	n=38	n=35	n=31	n=25	n=42	**n=37**
Very easy (%)	4	18	20	26	20	26	**32**
Easy (%)	13	29	49	42	48	33	**57**
Moderately easy (%)	24	n/a	n/a	n/a	n/a	n/a	**n/a**
Difficult (%)	46	40	29	26	32	38	**8**
Very difficult (%)	13	13	3	7	-	2	**3**
Change in availability	n=45	n=31	n=29	n=30	n=22	n=34	**n=29**
Stable (%)	49	58	41	53	41	59	**45**
Easier (%)	7	13	38	23	36	21	**52**
More difficult (%)	36	23	17	17	14	15	**-**
Fluctuates (%)	9	6	3	7	9	6	**3**
Person last scored*							**n=30**
Used not scored (%)							**6**
Friends (%)							**77**
Dealers (%)							**7**
Workmates (%)							**-**
Acquaintances (%)							**7**
Unknown persons (%)							**3**
Location last scored*							**n=30**
Used not scored (%)							**3**
Home (%)							**30**
Friend's home (%)							**27**
Dealer's home (%)							**7**
Rave/doof/dance party (%)							**13**
Nightclub (%)							**10**
Pub (%)							**-**
Street (%)							**-**
Agreed public location (%)							**-**
Private party (%)							**10**
Acquaintance's home (%)							**-**
Other (%)							**-**

Source: EDRS interviews
*Question was not asked prior to 2009

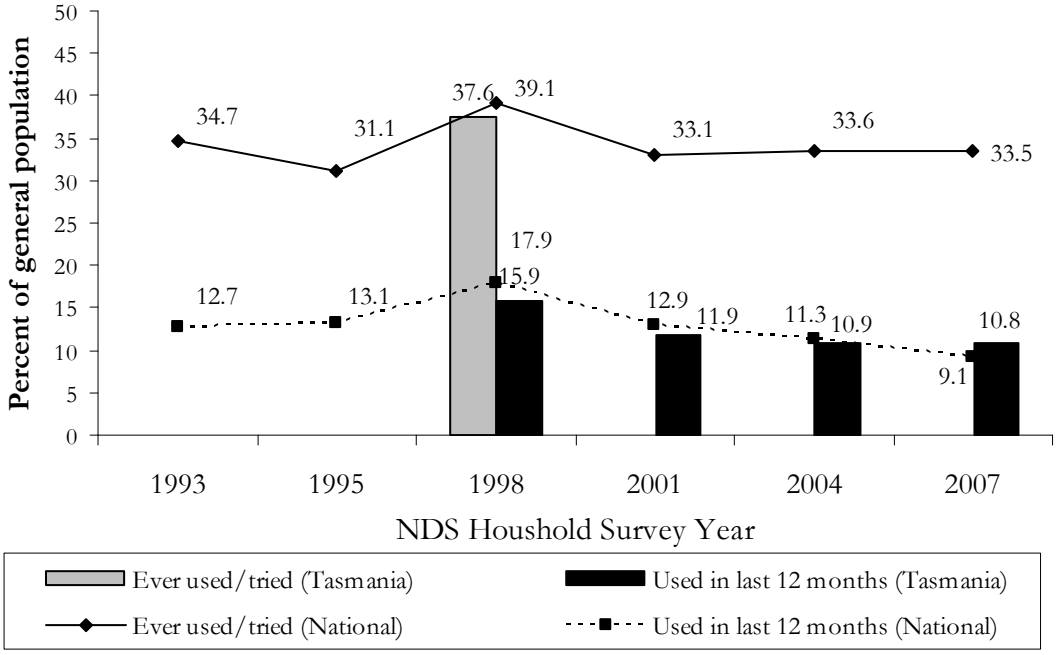
7.5 Summary of LSD trends

- Consistent with data from previous years over one-half (52%) of the 2009 REU sample had used LSD at some stage of their lives and one-third (34%) had used LSD in the six months preceding the interview. Consistent with previous EDRS samples, lifetime and recent use of LSD was more common among males relative to females.
- One tab or one drop of liquid LSD (range 0.5-3) was taken orally in a typical session of use and LSD had been used on a median of 2 days (range 1-15 days) in the preceding six months.
- LSD was last used at private residences such as the consumer's own home, a friend's home, or a private party, as well as dance-related events, outdoor locations, nightclubs, or live music events.
- The median last price for one tab of LSD in 2009 was $20 (range $10-45) which is consistent with the price reported in 2008.
- The purity of LSD was considered by REU to be 'medium' (31%) to 'high' (56%) and to have remained stable during the six months preceding the interview.
- A significantly greater proportion of the 2009 sample indicated that LSD was 'easy' or 'very easy' to obtain relative to 2008, with over half of those who commented indicating that the availability of LSD had recently increased.
- LSD was typically last obtained from friends and was most commonly last obtained from private residences but also from nightclubs or dance-related events.

8.0 Cannabis

In the 2007 National Drug Strategy Household Survey (AIHW, 2008a,b), it was estimated (from the sample of 1,143 participants) that approximately 10.8% of Tasmanians (aged 14 years and over) had used cannabis in the year prior to interview, compared with 10.9% in 2004 (Figure 20). However, nationally recent use (in the last year) of cannabis declined significantly from 11.3% in 2004 to 9.1% in 2007.

Figure 20: Prevalence of cannabis use in Australia and Tasmania among those aged 14 years and over, 1993-2007



Source: National Drug Strategy Household Survey 1993-2007

8.1 Cannabis use among REU

A large majority (98%) of regular ecstasy users surveyed in 2009 had used cannabis at some stage of their lives (Table 23). The median age of first cannabis use was 15 years (range 11-23 years), and there was no significant difference in the age of first use for males and females.

Three-quarters of respondents (76%, 95%CI 67%-83%) had used cannabis during the six months preceding the interview, which is similar to the proportion of the sample between 2006 and 2008 (68-82%), but lower relative to that among the 2003-2005 cohorts (e.g., 2005: 89%, 95%CI 81-94%, χ^2=4.99, p<.05).

A significantly greater proportion of males (83%) had recently used cannabis in comparison to the proportion of females (64%), χ^2=4.52, p<.05. Based on median split for age, a significantly greater proportion of younger (89%) relative to older (64%) participants had recently used cannabis, χ^2=9.02, p<.01. All of those reporting recent use had smoked cannabis (100%) and around one-quarter (26%) had ingested cannabis during the six months preceding the interview.

The median frequency of cannabis use during this six month period was 15 days (range 1-180 days), or approximately once a fortnight, which is similar to 2008 (15 days) and 2007 (11 days) but lower relative to previous years (24-48 days). Less than one-tenth (6%) of the sample reported daily use of cannabis during the last six months.

Those who had recently used cannabis were asked how many cones (smoked through a water pipe or bong) or joints (rolled into a cigarette) they had smoked on the last day that they had smoked the drug (Table 23). Participants were equally likely to have last smoked cones (n=38) or joints (n=36). The median number of cones smoked on the last day of use was 4 (range 0.5-30) and the median number of joints was 1 (range 0.5-6).

Table 23: Patterns of cannabis use of REU, 2003-2009

Cannabis	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	100	98	100	100	96	97	**98**
Median age first used (range)	15 (9-26)	15 (9-22)	15 (10-21)	15 (8-27)	15 (12-22)	15 (11-24)	**15 (11-23)**
Used last 6 mths (%)	99	91	89	82	68	74	**76**
Used daily last 6 mths (%)	26	9	17	13	5	8	**6**
Of those used last 6 mths							
Median days used (range)	48 (1-180)	24 (1-180)	24 (1-180)	25 (1-180)	11 (1-180)	15 (1-180)	**15 (1-180)**
Median cones last session (range)	n/a	n/a	n/a	n/a	4 (1-40) n=39	3 (.25-50) n=37	**4 (0.5-30) n=38**
Median joints last session (range)	n/a	n/a	n/a	n/a	1 (0.5-4) n=23	1 (0.5-3) n=31	**1 (0.5-6) n=36**

Source: EDRS interviews

8.2 Price

REU reported last purchase prices for both hydroponically-grown ('hydro') and bush-grown ('bush') cannabis (Table 24). It should be noted that many of the price estimates for cannabis were based on very small sample sizes, thus only prices based on sufficient sample sizes will be reported in the following description.

The median last purchase price for one ounce (28 g) of hydroponically-grown cannabis was reported to be $280 (range $100-350) which is slightly higher than the last purchase price of $250 reported in previous years. The median last purchase price for a quarter of an ounce (7 g) of 'hydro' was $80 (range $25-110) compared to $90 in 2008. Three-quarters (74%) of those who commented on recent price changes indicated that the price of hydro had recently remained stable.

The median last purchase price for one ounce of 'bush' cannabis was reported to be $225 (range $150-250), which is relatively consistent with prices reported in previous years. The median last purchase price for a quarter of an ounce was $67.50 (range $50-90) which is relatively consistent with the last purchase price reported in 2008 ($70). A majority (83%) of those who commented indicated that the price of bush had recently remained stable during the preceding six months.

Based on previous evidence that smaller amounts of cannabis are often purchased for a set price which may vary in weight, the weight of $10, $25 and $50 'bags' was also examined (Table 24). The median weight for one $25 bag of hydro was 1.4 grams (range 1-2 g), compared to a median of 1.5 grams (1-3 g) for bush. The median weight for one $50 bag of hydro was 3 grams (range 2-3.5 g), compared to a median of 4 grams (2-5 g) for bush.
Three REU were able to comment on the price of hashish, indicating that they had bought a gram of hash for a median of $40 (range 10-50) during the six months preceding the interview.

Table 24: Price and weights of cannabis purchased by REU, 2006-2009

	Hydro				Bush			
Last purchase price	2006	2007	2008	**2009**	2006	2007	2008	**2009**
One gram (range)	$15* ($10-25)	$25* ($25-25)	$15* ($10-20)	**$20* ($15-25)**	$15* ($10-25)	$10* ($10-10)	$15* ($10-20)	**$15* ($10-25)**
1/4 ounce (range)	$85 ($70-100)	$80 ($70-90)	$90 ($80-270)	**$80 ($25-110)**	$65 ($40-80)	$60 ($50-85)	$70 ($35-80)	**$67.50 ($50-90)**
1/2 ounce (range)	$155* (140-180)	$145* (125-180)	$180* (170-180)	**$150 (50-300)**	$100* (70-150)	$100* (100-120)	$150* (150-150)	**$115* (50-140)**
One ounce (range)	$250 (200-300)	$250 (230-300)	$250 (250-350)	**$280 (100-350)**	$200 (50-350)	$190 (150-260)	$200* (180-250)	**$225 (150-250)**
Grams per $10 bag (range)	n/a	0.85 (0.8-0.9)*	1* n=1	**0.75* (0.6-0.9)**	n/a	0.9 (0.9-0.9)*	1* n=1	**1* n=1**
Grams per $25 bag (range)		1.55 (1.5-1.6)*	1.6 (1.3-2)*	**1.4 (1-2)**		1.6 (1.5-1.7)*	1.8 (1.3-2)*	**1.5 (1-3)***
Grams per $50 bag (range)		-	3.1 (2.5-4)	**3 (2-3.5)**		-	3.6 (2.5-4.5)*	**4 (2-5)**
Price change	n=48	n=30	n=34	**n=39**	n=53	n=32	n=27	**n=35**
Increased (%)	4	17	24	**15**	-	-	11	**9**
Stable (%)	81	67	53	**74**	81	88	67	**83**
Decreased (%)	6	3	9	**3**	8	13	7	**6**
Fluctuated (%)	8	13	15	**8**	11	-	15	**3**

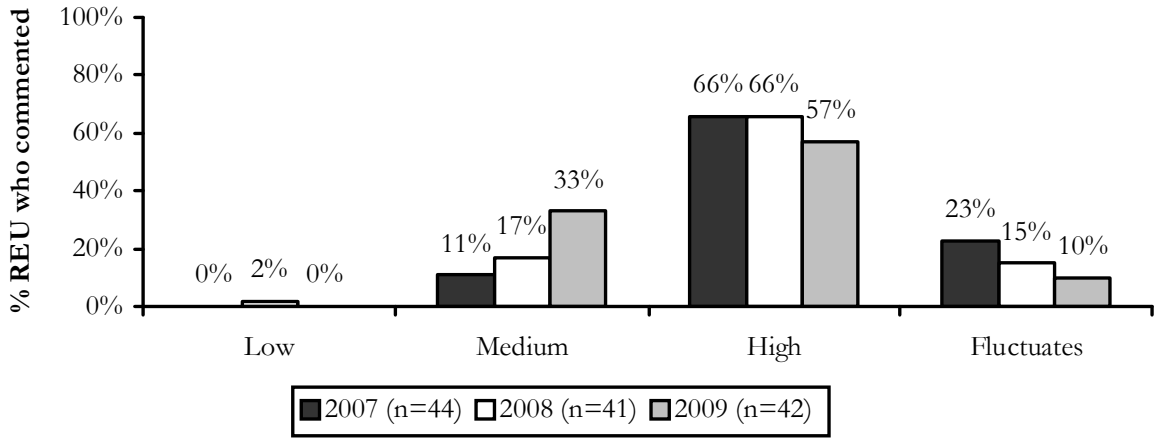
Source: EDRS interviews
*n<10

According to cannabis prices reported by the ACC in 2007/08, the price for one deal (approximately 1 gram) of both bush and hydro was $25, the price for one ounce of hydro ranged from $300-350 and the price for one ounce of bush ranged from $250-300. These prices are slightly higher than the last purchase prices reported by REU in the in the 2008 study. Data for the 2008/09 financial year was unavailable at the time of publication.

8.3 Potency

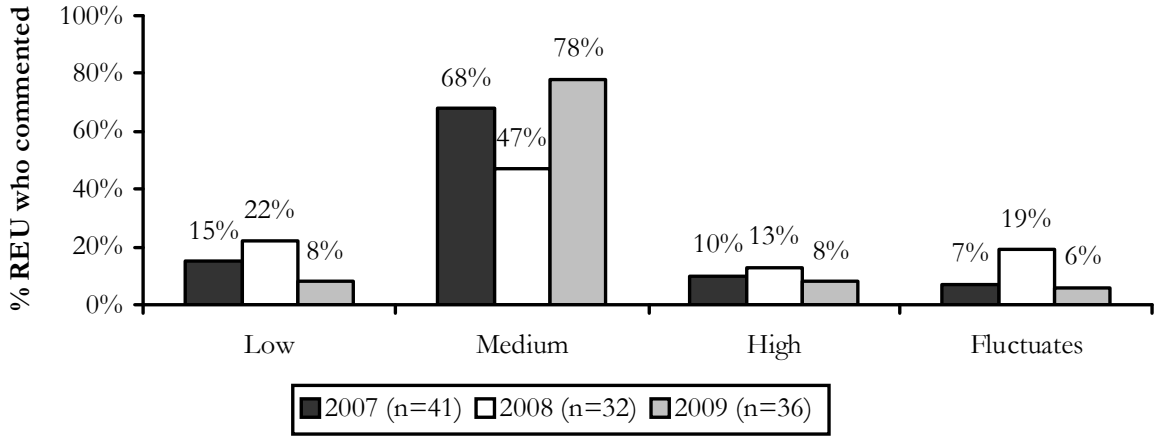
Participants were asked to comment on the current potency of hydroponic (Figure 21) and bush cannabis (Figure 22) and changes in potency during the six months preceding the interview (Figure 23). Hydroponically-grown cannabis was reported to be currently 'high' (57%) or medium (33%) in potency, while bush was reported to be medium (78%) in potency. The majority of those who commented indicated that the potency of both bush and hydro had remained stable during the preceding six months.

Figure 21: Current potency of hydro cannabis, 2007-2009



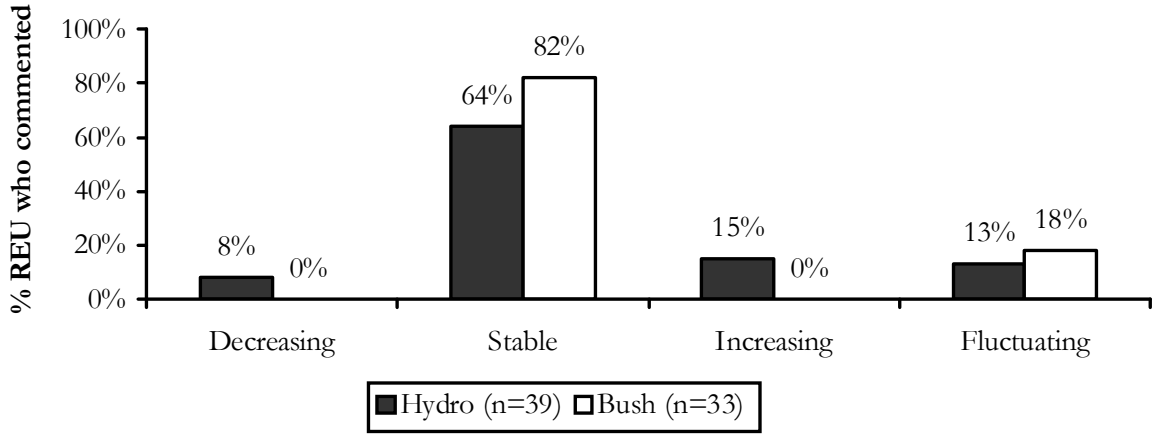
Source: EDRS interviews

Figure 22: Current potency of bush cannabis, 2007-2009



Source: EDRS interviews

Figure 23: Recent change in potency of cannabis, 2009



Source: EDRS interviews

8.4 Availability

REU were asked to comment on the current availability of 'hydro' and 'bush' cannabis and changes in this availability during the six months preceding the interview (Table 25). A majority of those that commented on the current availability of 'hydro' indicated that it was currently 'very easy' (49%) or 'easy' (32%) to obtain, and that this availability had been 'stable' (76%) during the preceding six months. Similarly, 'bush' was reported to be 'very easy' (46%) or 'easy' (33%) to obtain with availability 'stable' (54%) or 'fluctuating' (18%) during the preceding six months.

REU were asked who they had last obtained cannabis from, and the location that they had last scored the drug in the preceding six months (Table 25). 'Hydro' was most commonly last obtained through purchases from friends (51%) or dealers (33%), at private residences, most typically a friend's home or a dealer's home. Similarly, 'bush' was last obtained from friends (61%) or dealers (22%), and was most typically last obtained at private residences.

Table 25: REU reports of availability of cannabis in the preceding six months, 2006-2009

	Hydro				Bush			
	2006	2007	2008	**2009**	2006	2007	2008	**2009**
Ease of obtaining cannabis	n=54	n=48	n=42	**n=47**	n=63	n=40	n=33	**n=39**
Very easy (%)	50	56	52	**49**	46	68	39	**46**
Easy (%)	41	35	31	**32**	43	25	52	**33**
Difficult (%)	9	6	17	**19**	11	8	9	**21**
Very difficult (%)	-	2	-	**-**	-	-	-	**-**
Change availability	n=53	n=45	n=40	**n=45**	n=59	n=40	n=32	**n=39**
Stable (%)	74	76	60	**76**	69	78	56	**54**
Easier (%)	15	13	15	**11**	27	18	22	**15**
More difficult (%)	6	11	10	**7**	2	3	9	**13**
Fluctuates (%)	6	-	15	**7**	2	3	13	**18**
Person last scored*				**n=45**				**n=36**
Used but not scored (%)				**9**				**8**
Friends (%)				**51**				**61**
Dealers (%)				**33**				**22**
Workmates (%)				**4**				**-**
Acquaintances (%)				**2**				**8**
Unknown persons (%)				**-**				**-**
Last Location scored*				**n=45**				**n=36**
Used but not scored (%)				**9**				**8**
Home delivery (%)				**16**				**11**
Friend's home (%)				**40**				**44**
Dealer's home (%)				**24**				**22**
Acquaintance's home (%)				**7**				**8**
Agreed public location (%)				**2**				**3**
Street market (%)				**-**				**3**
Work (%)				**-**				**-**
Other (%)				**-**				**-**

Source: EDRS interviews

*Question was not asked prior to 2009

8.5 Summary of cannabis trends

- Almost three-quarters (76%) had used cannabis during the six months preceding the interview. Recent use was more common among males relative to females and 'younger' relative to 'older' participants.
- Cannabis had typically been smoked, with around one-quarter recently ingesting the drug.
- The median frequency of cannabis use was 15 days (range 1-180) or approximately fortnightly. The median quantities used on the last day of use during this time were 4 cones (range 0.5-30) or 1 joint (range 0.5-6). Daily cannabis smoking was relatively uncommon (6%).
- Consistent with the decline in cannabis use seen among the general population nationally, there has been less recent use, and a lower median frequency of use among the EDRS cohorts between 2007 and 2009 relative to previous years.
- The median last purchase price for one ounce of 'hydro' was $280 (range $100-350) compared to $225 ($150-250) for 'bush'. The median weight for one $25 bag of hydro was 1.4 grams (range 1-2 grams), compared to 1.5 grams (1-3 grams) for bush. The median weight for one $50 bag of hydro was 3 grams (range 2-3.5 grams), compared to 4 grams (2-5 grams) for bush.
- The potency of 'hydro' was reported to be high and stable, and the potency of 'bush' was reported to be medium and stable in the preceding six months.
- Both 'bush' and 'hydro' were reported to be 'easy' or 'very easy' to obtain, and this level of availability was perceived as remaining stable during the six months preceding the interview.

9.0 OTHER DRUGS

9.1 Alcohol

The entire sample of REU interviewed in 2009 had used alcohol at some stage in their lives (see Table 26). The median age that respondents had first used alcohol was 14 years (range 6-20 years) and there was no difference in the mean age of first use for males and females.

A large majority of the sample (99%) had used alcohol during the six months preceding the interview. The median frequency of alcohol use was 55 days (range 4-180 days), or just over two days a week on average, during the six months preceding the interview. This was not significantly different from the median of 72 days (approximately three times a week) reported in 2008. There was no significant difference in the median frequency of use for males and females or 'older' and 'younger' participants. Almost one-half of those that had recently used alcohol (48%) had done so three times a week or more during the preceding six months.

Based on data from the 2007 National Drug Strategy Household Survey (AIHW, 2008a,b), it was estimated that among those aged between 20 and 29 nationally, 47.8% had used alcohol on a weekly basis and 2.3% had used alcohol on a daily basis in the past 12 months. A large majority (90%) of the 2009 EDRS sample had used alcohol at least weekly (but not daily) during the six months preceding the interview, which is substantially higher relative to those aged 20-29 nationally (47.8%). Similarly, the proportion reporting recent daily use of alcohol (7%) is higher than the estimate among those aged 20-29 nationally (2.3%).

Participants also completed the Alcohol Use Disorders Identification Test (AUDIT; Saunders, et al., 1993) which is a brief screening scale to identify individuals with alcohol problems, including those in early stages (see Section 11.4).

Table 26: Patterns of alcohol use of REU, 2003-2009

Alcohol	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	100	100	100	100	100	100	**100**
Median age first used (range)	15 (10-18)	14 (7-18)	14 (8-18)	15 (4-19)	14 (8-18)	14 (7-17)	**14 (6-20)**
Used in last 6 mths (%)	98	98	98	95	99	100	**99**
Of those used last 6 mths Median days used (range)	48 (1-180)	48 (6-180)	49 (2-180)	48 (2-180)	48 (1-180)	72 (12-180)	**55 (4-180)**

Source: EDRS interviews

9.2 Tobacco

A large proportion (92%) of the REU sample in 2009 had smoked tobacco at some stage in their lives (Table 27). The median age that tobacco was first used was 15 years (range 9-25 years) and there was no significant difference between the age of first use for males and females.

A large majority (77%) of the sample had smoked tobacco during the six months preceding the interview, and there was no significant difference in the proportion of males (81%) and females (69%) or 'older' (77%) and 'younger' (77%) participants that smoked. The median number of cigarettes smoked per day was 4 (range 1-30).

Over two-fifths (42%) of those who had recently smoked (32% of the entire sample) reported smoking tobacco on a daily basis during the six months preceding the interview. Two-fifths

(40%) of those that had recently smoked tobacco had done so once a week or less during the six months preceding the interview. Males (50%) were more likely to report recent daily tobacco use relative to females (24%), χ^2=4.7, p<.05. The median frequency of use was also higher for males (170 days) relative to females (30 days), Mann-Whitney U=414.5, p<.05.

In the 2007 National Drug Strategy Household Survey, it was estimated (from the sample of 1,143 participants) that approximately 22.7% of Tasmanians (aged 14 years and over) smoked tobacco on a daily basis in the year prior to interview, compared with 16.6% of Australians nationally (Australian Institute of Health and Welfare, 2008a,b). Among those aged 20-29, 30.4% of Tasmanians had smoked tobacco on a daily basis, compared to 21.4% nationally. Almost one-third (32%) of the 2007 REU sample had smoked on a daily basis, which is similar to the estimate of prevalence for Tasmania for this age group, but notably greater than the estimate of prevalence among the general population nationally.

Table 27: Patterns of tobacco use of REU, 2003-2009

Tobacco	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	96	89	89	94	90	96	**92**
Median age first used (range)	15 (3-23)	14 (7-22)	15 (8-20)	15 (7-23)	15 (7-21)	15 (6-22)	**15 (9-25)**
Used last 6 mths (%)	81	77	83	81	74	86	**77**
Used daily last 6 mths (%)	44	40	51	51	36	32	**32**
Of those used last 6 mths	n=81	n=77	n=83	n=81	n=74	n=86	**n=76**
Used on a daily basis (%)	54	57	61	63	49	37	**42**
Used once a week or less (%)	22	25	18	19	14	33	**40**

Source: EDRS interviews

9.3 Ketamine

In the 2007 National Drug Strategy Household Survey, it was estimated (from the sample of 1,143 participants) that approximately 0.3% of Tasmanians had used ketamine in the year prior to interview, compared with 0.2% Australians nationally (Australian Institute of Health and Welfare, 2008a,b).

Just over one-fifth of the 2009 REU sample (21%) had used ketamine at some stage of their life (Table 28), similar to the proportions between 2005 and 2008 (23%-24%). The median age of first use was 21 years (range 15-35 years).

Less than one-tenth (5%) of the REU sample (all younger males) had used ketamine in the six months preceding the interview in 2009, which is consistent with the low level of use among the cohort since 2004 (see Table 28). The median frequency of ketamine use was 2 days (range 1-2 days) in the six months preceding the interview.

The median quantity of ketamine used in both a typical session and the biggest session during the last six months was 1.5 points (range 1-2, n=2). Other participants (n=2) reported use of 2.5-5 lines of ketamine during this time.

Table 28: Patterns of ketamine use among REU, 2003-2009

Ketamine	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	38	18	24	23	23	26	**21**
Median age first used (range)	21 (15-36)	21 (18-24)	22 (16-28)	22 (19-30)	20 (18-30)	21 (18-26)	**21 (15-35)**
Used last 6 mths (%)	24	5	11	6	14	6	**5**
Of those used last 6 mths							
Median days used (range)	2.5 (1-24)	2 (1-5) *	3 (1-5)	2 (1-3)*	1 (1-30)	1 (1-5)	**2 (1-2)**
Route of administration							
Snorted (%)	63	60	45	50	50	50	**60**
Swallowed (%)	67	80	91	50	57	50	**40**
Injected (%)	17	-	-	-	-	17	**-**
Median points (0.1g) used typical session (range)	-	-	-	-	1.5 (1.5)*	2 (2-2)*	**1.5 (1-2)***
Median points (0.1g) used biggest session (range)	-	-	-	-	1.75 (1.5-2)*	2 (2-2)*	**1.5 (1-2)***

Source: EDRS interviews
* n<10

9.4 GHB/GBL/1,4B

GHB (gamma-hydroxybutyrate) may also be known as 'GBH', 'grievous bodily harm', 'fantasy', 'liquid ecstasy', 'liquid E' and 'blue nitro' in Australia. GHB has received unfavourable mentions in the media due to its suspected use in the facilitation of sexual assaults and GHB-related deaths and overdose. A study investigating GHB overdose (Degenhardt, Darke & Dillon, 2003) found that over half of GHB users interviewed had overdosed at some stage, and that frequency of use and use of alcohol and other drugs in combination with GHB were significant risk factors in GHB overdose. A retrospective study of GHB-related deaths in Australasia from 2000 to 2003 (Caldicott, Chow, Burns, Felgate & Byard, 2004) reported ten confirmed GHB-related deaths during this period, two of which were also associated with use of alcohol.

Several substances such as GBL (gamma-butyrolactone) and 1,4B (1,4 butanediol) are metabolised to GHB following ingestion and may be used as substitutes for GHB (Australian Crime Commission, 2003). There were no reports of use of 1,4B or GBL among the Tasmania sample between 2004 and 2006. In 2007, GBL and 1,4B were incorporated into the category of GHB due to their similarities and low individual levels of use.

In the 2007 National Drug Strategy Household Survey, none of the 1,143 Tasmanians sampled had used GHB in the year prior to interview, compared with 0.1% Australians nationally (Australian Institute of Health and Welfare, 2008a,b).

One in ten (11%) of the 2009 REU sample had used GHB/GBL/1,4B at some stage of their lives (Table 29). The median age of first use of GHB was 22 years (range 17-35 years).

Three younger males (<23 years) reported use of GHB/GBL/1,4B in the six months preceding the interview (Table 29), which is consistent with the low levels of recent use among previous EDRS cohorts (1%-6%). The median frequency of use was 1 day (range 1-2 days) during this time.

Table 29: Patterns of GHB/GBL/1,4B use among REU, 2003-2009

GHB	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007# n=100	2008# n=100	**2009# n=100**
Ever used (%)	10	7	7	9	4	7	**11**
Median age first used (range)	22 (16-27)	20 (17-32)	21 (18-30)	23 (21-31)	24 (20-31)	22 (18-30)	**22 (17-35)**
Used last 6 mths (%)	6	3	2	3	1	1	**3**
Of those used last 6 mths							
Median days used (range)	1 (1-1)	1 (1-3)	2 (2-2)	2 (1-3)	6 (n=1)	1 (n=1)	**1 (1-2)**
Route of administration Swallowed (%)	100	100	100	100	100	100	**100**
Median quantities used (ml)		n=1	n=1		n=1		**n=3**
Typical session	-	300	25	-	9	-	**10(1-50)**
Biggest session	-	300	50	-	36	-	**10(1-50)**

Source: EDRS interviews
Includes GBL and 1,4B

9.5 MDA

One-tenth (10%) of the 2009 REU sample had ever used MDA (Table 30) which is similar to the proportion of the cohorts between 2005 and 2008 (8%-15%) but fewer relative to the 2004 (20%) and 2003 (32%) cohorts. The median age of first use was 21 years (range 14-35 years).

Only eight participants (8%) had used MDA during the six months preceding the interview (Table 30), consistent with the low levels of recent use among the samples between 2005 and 2008 (3-5%). MDA was typically swallowed on a median of two days (range 1-24 days) in the preceding six months, with a median of 2 capsules consumed in both a typical session (range 0.75-4) and during the biggest session (range 0.75-7) of use.

Table 30: Patterns of MDA use among REU, 2003-2009

MDA	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	32	20	8	14	8	15	**10**
Median age first used (range)	20 (16-32)	20 (16-21)	23 (17-28)	22 (15-30)	20 (18-27)	21 (18-26)	**21 (14-35)**
Used last 6 mths (%)	21	15	3	3	5	3	**8**
Of those used last 6 mths							
Median days used last 6 mths (range)	2 (1-20)	2 (1-4)	2 (1-2)	1 (1-1)	4 (1-12)	1 (1-3)	**2 (1-24)**
Route of admin. last 6 mths							
Smoked (%)	-	-	-	-	-	-	**13**
Snorted (%)	43	20	-	33	-	-	**25**
Swallowed (%)	95	100	100	67	100	100	**88**
Injected (%)	-	-	-	-	-	-	**13**
Median capsules used							
Typical session (range)	0.5 (0.5-1)	1 (1-5)	1 (1-1)	1 (1-1)	2 (1-3)	2 (1-4)	**2 (0.75-4)**
Biggest session (range)	1.25 (0.5-2)	1.5 (1-8)	1.5 (1-2)	1 (1-1)	2 (1-5)	2 (1-8)	**2 (0.75-7)**

Source: EDRS interviews

9.6 Benzodiazepines

Almost two-fifths (36%) of the 2009 REU sample had used benzodiazepines at some stage of their life (Table 31). A significantly greater proportion of males (43%) relative to females (22%) had ever used benzodiazepines, χ^2=4.63, p<.05. The median age of first use was 20 years (range 14-28 years).

One-quarter (24%) of the 2009 REU sample had used benzodiazepines during the six months preceding the interview, which trended towards being fewer relative to 2008 (37%), χ^2=3.39, p=.07. A significantly greater proportion of males (31%) relative to females (11%) had used benzodiazepines during this time, χ^2=5.12, p<.05.

The median frequency of recent benzodiazepine use was 4 days (range 1-60 days) during the six months preceding the interview. Three-quarters (74%) of those who had recently used benzodiazepines had done so on six or less occasions in the six months preceding the interview, or less than once a month.

Less than one-tenth (6%) of the sample reported recent licit (prescribed) use and one-fifth (19%) reported recent illicit (non-prescribed) use of benzodiazepines. One participant reported recent injection of illicit benzodiazepines.

Licit benzodiazepines had been used on a median frequency of 18 days (range 10-180) during the six months preceding the interview. Illicit benzodiazepines had been used on a median four days (range 1-60) during this time.

Of the Tasmanians surveyed in the 2007 National Drug Strategy Household Survey, 1% of the sample had used benzodiazepines for non-medical purposes in the past year, compared to 1.4% of the population nationally (Australian Institute of Health and Welfare, 2008a,b). The proportion of the 2009 REU sample reporting recent use (during the last six months) of illicit benzodiazepines (19%) is considerably higher than these estimates of prevalence in the general population.

Table 31: Patterns of benzodiazepine use of REU, 2003-2009

Benzodiazepines	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	52	34	40	48	41	51	**36**
Ever injected (%)	7	2	3	4	2	1	**4**
Median age first used (range)	20 (10-40)	20 (8-24)	19 (10-28)	21 (14-35)	20 (13-34)	21 (13-29)	**20 (14-28)**
Used last 6 months (%)	35	23	25	33	25	37	**24**
Injected last months (%)	2	1	-	-	1	-	**1**
Licit use last 6 mths (%)	n/a	n/a	n/a	n/a	9	10	**6**
Illicit use last 6 mths (%)	n/a	n/a	n/a	n/a	20	31	**19**
Of those used last 6 mths Median days used (range)	6 (1-180)	6 (1-96)	3 (1-50)	5 (1-180)	4 (1-30)	4 (1-180)	**4 (1-60)**

Source: EDRS interviews

9.7 Anti-depressants

Less than one-fifth (16%) of the 2009 REU sample had used anti-depressants at some stage of their life (Table 32). The median age of first use was 21 years (range 14-42 years). One-tenth of the sample (10%) had recently used anti-depressants (in the six months preceding the interview)

and there was no significant difference in the proportion of males (11%) and females (8%) or 'older' (9%) and 'younger' (12%) participants. One in ten (9%) reported recent licit use and a single participant (1%) reported recent illicit use of anti-depressants.

All of those who had recently used licit anti-depressants had used them orally on a median frequency of 120 days (range 30-180) during the six months preceding the interview. Illicit anti-depressants had been used orally on two days by a single participant during this time.

Table 32: Patterns of anti-depressant use of REU, 2003-2009

Anti-depressants	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	32	14	21	20	24	22	**16**
Median age first used (range)	18 (13-44)	20 (17-23)	18 (16-27)	20 (14-35)	20 (14-35)	18 (10-27)	**21 (14-42)**
Used last 6 mths (%)	14	4	12	9	11	6	**10**
Licit use last 6 mths (%)	n/a	n/a	n/a	n/a	6	5	**9**
Illicit use last 6 mths (%)	n/a	n/a	n/a	n/a	5	1	**1**
Of those used last 6 mths Median days used (range)	90 (14-180)	6 (1-180)	180 (1-180)	34 (3-180)	180 (1-180)	135 (30-180)	**105 (2-180)**

Source: EDRS interviews

9.8 Amyl nitrite

Over two-thirds (67%) of the 2009 REU sample had ever used amyl nitrite, which is significantly greater than the proportion in 2008 (38%), χ^2=15.72, p<.001 (Table 33). The median age of first use was 21 years (range 14-26 years).

Compared to 2008, a significantly greater proportion of the 2009 sample reported recent use of amyl nitrite (51% vs. 15%), χ^2=3.46, p<.05. There was no significant difference in the proportion of males (55%) relative to females (44%) who had recently used amyl nitrite. A significantly greater proportion of 'younger' (64%) relative to 'older' (40%) participants had recently used amyl nitrite, χ^2=5.43, p<.05.

The median frequency of use was 5 days (range 1-72) during the six months preceding the interview or approximately once a month.

Table 33: Patterns of amyl nitrite use of REU, 2003-2009

Amyl nitrite	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	78	52	49	41	43	38	**67**
Median age first used (range)	20 (16-43)	20 (14-31)	19 (14-25)	20 (14-55)	20 (15-37)	20 (12-24)	**21 (14-26)**
Used last 6 mths (%)	43	23	16	10	20	15	**51**
Of those used last 6 mths Median days used (range)	3 (1-72)	5 (1-120)	3.5 (1-20)	3 (1-10)	1.5 (1-10)	2 (1-96)	**5 (1-72)**

Source: EDRS interviews

9.9 Nitrous oxide

Over one-half of the 2009 REU sample (54%) had ever used nitrous oxide (Table 34). The median age of first use was 19 years (range 12-32 years).

Almost one-third (32%) of the sample had used nitrous oxide during the six months preceding the interview, which is similar relative to 2008 (29%). A significantly greater proportion of the male sample (39%) had recently used nitrous oxide in comparison to the proportion of the female sample (19%), $\chi^2=4.08$, $p<.05$.

The median frequency of use during the last six months was 5 days (range 1-40), or less than once a month. The median number of bulbs used in a typical session was 10 (range 1-25 bulbs) and the median number used in a heavy session of use was 17 (range 1-80 bulbs).

Table 34: Patterns of nitrous oxide use of REU, 2003-2009

Nitrous oxide	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	47	57	69	69	64	62	**54**
Median age first used	19	19	18	19	19	19	**19**
(range)	(12-30)	(12-28)	(15-29)	(11-30)	(15-32)	(15-28)	**(12-32)**
Used last 6 mths (%)	25	34	41	39	46	29	**32**
Of those used last 6 mths							
Median days used	4	3	5	5	5	4	**5**
(range)	(1-50)	(1-24)	(1-24)	(1-30)	(1-50)	(1-60)	**(1-40)**
Bulbs typical session	6	4	7	5	9	10	**10**
(range)	(1-12)	(1-50)	(1-40)	(1-40)	(1-60)	(1-50)	**(1-25)**
Bulbs biggest session	10	6	9	10	15	20	**17**
(range)	(1-24)	(1-20)	(1-60)	(1-140)	(1-180)	(1-100)	**(1-80)**

Source: EDRS interviews

9.10 Pharmaceutical stimulants

Since 2007 a distinction was made between illicit (non-prescribed) and licit (prescribed) use of pharmaceutical stimulants. Although it is not known whether the use of pharmaceutical stimulants was licit or illicit among the REU cohorts between 2003 and 2006, it is likely that the majority of this use was illicit; given the low median frequency of this use (pharmaceutical stimulants are typically prescribed for daily administration long-term). Data presented in Table 35 from 2007 onwards refers only to illicit use. In 2009, only two participants reported past use of licit pharmaceutical stimulants and this use was not in the preceding six months.

Almost one-third of the 2009 REU sample (30%) had ever used illicit pharmaceutical stimulants (Table 35). The median age of first use was 19 years (range 11-28 years). One-tenth of the sample (10%) had used pharmaceutical stimulants in the six months preceding the interview, similar to the proportion among the cohorts between 2004 and 2008 (12%-19%). There was no significant difference in the proportion of the males (11%) and females (8%) or the proportion of 'older' (10%) and 'younger' (11%) participants that had recently used pharmaceutical stimulants.

The majority of those who had recently used pharmaceutical stimulants had taken the drug orally (90%), and smaller proportions had recently snorted (20%) or injected (10%) these drugs in the preceding six months. The median frequency of use was 2 days (range 1-15) in the six months preceding the interview. The median number of tablets used in a typical session was 4 (range 1-15 tablets) and the median number used in a heavy session of use was 5 (range 1-20 tablets: n=10).

Table 35: Patterns of pharmaceutical stimulant use of REU, 2004-2009

Pharmaceutical stimulants	2004 n=100	2005 n=100	2006 n=100	2007* n=100	2008* n=100	**2009* n=100**
Ever used (%)	39	44	50	40	41	**30**
Median age of first use (range)	19 (7-31)	19 (15-28)	19 (11-31)	18 (14-31)	19 (13-47)	**19 (11-28)**
Used last 6 mths (%)	14	16	12	19	16	**10**
Of those used last 6 mths						
Median days used (range)	3 (1-180)	3.5 (1-30)	2 (1-60)	2 (1-90)	2 (1-10)	**2 (1-15)**
Median tablets typical session (range)	4 (1-15)	4 (2-10)	5 (1-8)	3 (2-20)	3 (1-10)	**4 (1-15)**
Median tablets biggest session (range)	4 (1-15)	6 (2-25)	6 (1-32)	5 (2-20)	6 (2-25)	**5 (1-20)**

Source: EDRS interviews
* Data includes only illicit use; data from previous years may include both illicit and licit use

9.11 Psychedelic mushrooms

Over one-half (56%) of the 2009 REU sample had ever used psychedelic mushrooms (Table 36). The median age of first use for mushrooms was 19 years (range 12-31 years). One-fifth (21%) of the 2009 sample had used mushrooms in the preceding six months (Table 36), which is not significantly different to 2008 (31%, $p>.05$).

A significantly greater proportion of males (28%) in comparison to females (8%) had recently used psychedelic mushrooms, $\chi^2=5.44$, $p<.05$. Based on a median split for age, a significantly greater proportion of 'younger' (34%) relative to 'older' (10%) participants had recently used mushrooms, $\chi^2=8.81$, $p<.01$.

All of those that had recently used mushrooms (100%) had ingested them during the preceding six months. The median frequency of mushroom use was 2 days (range 1-30 days) in the preceding six months, or approximately once every three months.

Table 36: Patterns of psychedelic mushroom use of REU, 2003-2009

Psychedelic mushrooms	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	58	60	63	74	66	61	**56**
Median age of first use (range)	20 (14-37)	20 (14-25)	20 (14-28)	20 (11-29)	19 (15-26)	20 (14-43)	**19 (12-31)**
Used in last 6 mths (%)	38	41	40	55	39	31	**21**
Used LSD & mushrooms (%)	13	17	16	21	13	19	**14**
Used LSD or mushrooms (%)	49	56	55	63	46	53	**41**
Of those used in last 6 mths	n=38	n=41	n=40	n=55	n=39	n=31	**n=20**
Median days used (range)	3 (1-180)	3 (1-48)	3 (1-12)	3 (1-19)	3 (1-20)	2 (1-12)	**2 (1-30)**

Source: EDRS interviews

9.12 Heroin

Less than one-tenth (6%) of the 2009 REU sample had ever used heroin (Table 37). The median age of first heroin use was 20 years (range 15-29 years). Consistent with the low levels of recent use among the REU cohorts in previous years, three participants (2 males and 1 female) had used heroin during the six months preceding the interview (having snorted or smoked the drug) and there was no recent injection of heroin. The low reported use and availability of heroin among REU in Hobart is consistent with data reported in the Tasmanian IDRS in relation to injecting drug use (see Bruno, 2005, 2006; de Graaff & Bruno, 2007, 2008, 2009, 2010).

Table 37: Patterns of heroin use of REU, 2003-2009

Heroin	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	20	4	8	10	5	6	**6**
Median age of first use (range)	19 (14-30)	20 (16-26)	22 (16-26)	18 (15-32)	19 (16-21)	20 (16-27)	**20 (15-29)**
Used last 6 mths (%)	6	-	-	2	-	1	**3**
Injected last 6 mths (%)	6	-	-	2	-	-	**-**
Of those used last 6 mths							
Median days last 6 mths (range)	16 (3-48)	-	-	7 (3-10)	-	1 (n=1)	**1 (1-48)**

Source: EDRS interviews

9.13 Methadone

Less than one in ten (8%) of the 2009 REU sample had ever used methadone, which is consistent with the low levels of lifetime use reported in previous years (Table 38). The median age of first methadone use was 21 years (range 14-25). Four male participants (4%) had used methadone during the six months preceding the interview (one of whom was receiving a licit methadone maintenance dose on a daily basis). There was no recent injection of methadone. The median frequency of use was 24 days in the last six months (range 2-180), or approximately once a week.

Table 38: Patterns of methadone use of REU, 2003-2009

Methadone	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	14	2	5	9	6	3	**8**
Median age of first use (range)	22 (16-36)	18 (17-19)	20 (16-22)	21 (16-34)	22 (14-30)	20 (19-22)	**21 (14-25)**
Used last 6 mths (%)	13	2	1	5	1	2	**4**
Injected last 6 months (%)	11	2	1	3	-	1	**-**
Of those used last 6 mths Median days used (range)	10 (1-24)	90 (2-180)	180 n=1	20 (1-180)	1 n=1	90 (1-180)	**24 (2-180)**

Source: EDRS interviews

9.14 Buprenorphine

Consistent with the low levels of buprenorphine use among the REU cohorts in previous years, two participants had ever used buprenorphine among the 2009 sample (Table 39), and a single male participant had taken licit buprenorphine orally on 90 occasions during the last six months.

Table 39: Patterns of buprenorphine use of REU, 2003-2009

Buprenorphine	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	5	-	2	3	1	2	**2**
Median age of first use (range)	25 (22-37)	-	21 (20-22)	32 (22-35)	22	28 (22-33)	**24 (20-28)**
Used last 6 mths (%)	3	-	1	1	1	1	**1**
Injected in last 6 mths (%)	2	-	-	-	1	-	**-**
Of those used last 6 mths Median days used (range)	30 (2-180)	-	6	180	1	15	**90**

Source: EDRS interviews

9.15 Other opioids

'Other opioids' comprise a broad drug class including over-the-counter pharmaceuticals such as codeine, restricted pharmaceuticals such as morphine, and alkaloid poppy plant derivatives such as opium or 'poppy wash'. One-fifth (19%) of the 2009 REU sample had ever used 'other opioids' for not-as-prescribed (or non-licit) purposes (Table 40), which is similar to the proportions in previous years (19-35%). The median age of first use was 19 years (range 13-27).

Less than one-tenth (6%) of the sample (5 males and 1 female) had recently used 'other opioids' for non-licit purposes, which is significantly fewer relative to 2008 (17%), $\chi^2=4.91$, $p<.05$. The median frequency of 'other opioid' use was 3 days (range 1-24) during the six months preceding the interview. For those who had recently used 'other opioids', the most common route of administration was swallowing (50%), followed by smoking (33%), snorting (17%) and injecting (17%).

Table 40: Patterns of other opioid use of REU, 2003-2009

Other opioids	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever used (%)	35	19	25	33	23	29	**19**
Median age of first use (range)	20 (14-44)	19 (16-27)	18 (16-27)	20 (14-29)	19 (13-25)	20 (15-27)	**19 (13-27)**
Used last 6 mths (%)	13	8	13	14	8	17	**6**
Injected in last 6 mths (%)	8	-	-	4	1	3	**1**
Of those used last 6 mths Median days used (range)	n=13 6 (1-120)	n=8 11 (3-48)	n=13 8 (1-48)	n=14 3 (1-121)	n=8 8 (1-72)	n=17 4 (1-96)	**n=6 3 (1-24)**

Source: EDRS interviews

9.16 Other drugs

Research chemicals or 'experimental chemicals' such as 2CI (2,5-dimethoxy-4-iodophenethylamine), 2CB (4-bromo-2,5-dimethoxyphenethylamine) and 2CE (2,5-dimethoxy-4-ethylphenethylamine) are relatively new substances and little is known about the effects and risks of using these drugs (see Matthews & Bruno, 2007). In many countries, research chemicals are not controlled substances and can often be purchased through chemical supply companies for 'research' purposes (The vaults of Erowid, 2005).

Table 41 shows the proportion of the EDRS cohorts reporting recent use of research chemicals during the six months preceding the interview. In 2009, 14% of the Tasmanian EDRS sample reported recent use of capsules known locally as 'Israelis'. The median frequency of use was 2 days (range 1-90) during the six months preceding the interview or approximately once every three months. Anecdotal evidence suggested that this substance was purchased online in powder form and sold locally in capsule form. Israelis were marketed as 'herbal ecstasy' or an 'ecstasy-like substance'. Subsequent analysis by Tasmania Police revealed that the capsules contained 4-methylmethcathinone (2-methylamino-1-p-tolylpropan-1-one).

Several KE (n=5) also mentioned a recent increase in the use of capsules known as 'Israelis' which were sold as herbal stimulants with effects similar to MDMA. It was noted that the price of these capsules ranged from $10 to $50 with an average price (~$20) lower than ecstasy pills. A recent arrest in relation to Israelis was mentioned by several KE and it was suggested that the use of these capsules may subsequently decrease.

Table 41: Use of research chemicals in last six months among REU, 2003-2009

Other opioids	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
2CB (%)	1	1	1	-	2	2	**1**
2CI (%)	-	5	1	23	12	2	**9**
2CE (%)	-	-	-	-	1	1	**3**
Israelis (%)	-	-	-	-	-	-	**14**

Source: EDRS interviews

Single participants also reported lifetime use of ephedrine (1%), Salvia divinorum (1%), Datura (1%), MDPV (Methylenedioxypyrovalerone) (1%), and Methylone (1%).

9.17 Summary of other drug use

- The entire 2009 REU sample had recently consumed alcohol, on an average of two to three days per week in the last six months. A large majority (90%) had used alcohol at least weekly (but not daily) during this time, which is substantially higher than the estimate of prevalence in the general population (47.8%, among those aged 20-29 nationally – a comparable age group to the current REU cohort).
- Tobacco had recently been used by three-quarters (77%) of the sample, with over one-third (32%) of these smoking tobacco on a daily basis in the last six months. The proportion of daily smokers was much greater than the national (21.4%) but similar to Tasmanian (30.4%) smoking prevalence among those aged 20-29 in the general population.
- Consistent with the low levels of use reported in previous years, less than one-tenth of the sample reported recent use of MDA (8%), ketamine (5%), or GHB/GBL/1,4B (3%).
- One-quarter (24%) of the 2009 REU sample had used benzodiazepines during the six months preceding the interview, which trended towards being fewer relative to 2008 (37%), but did not reach statistical significance. Almost one-fifth (19%) reported recent illicit use of benzodiazepines, much higher than recent estimates of prevalence in the general population (1-1.4%). However, the use of illicit benzodiazepines was relatively low in frequency, at four days in the last six months.
- Almost one-tenth (9%) of the REU sample were prescribed anti-depressants, and illicit use of such drugs was almost non-existent (1%).
- A significantly greater proportion of the sample reported recent use of amyl nitrite in 2009 (51%) relative to 2008 (15%), with recent use more common among younger relative to older participants. Frequency of use was relatively low at less than once a month in the last six months.
- Almost one-third (32%) of the 2009 sample reported low frequency use (less than once a month) of nitrous oxide, with recent use more common among males relative to females.
- One-tenth (10%) of REU reported recent illicit use of pharmaceutical stimulants (such as dexamphetamine or methylphenidate) in 2009. The median frequency of pharmaceutical stimulant use was low, at 2 days in the last six months.
- Only small proportions of the 2009 sample had recently used heroin (3%), methadone (4%), buprenorphine (1%) or opioids (pharmaceuticals and alkaloid poppy derivatives) (6%). A significantly smaller proportion of the sample reported recent use of other opioids in 2009 (6%) relative to 2008 (17%),
- One-fifth (21%) of the 2009 sample had recently used psychedelic mushrooms. Recent use was more common among males than females. Mushrooms had been used on a median of 2 days in the last six months. Two-fifths of the sample (41%) had recently used some form of psychedelic drug (either LSD and/or mushrooms) in the last six months.
- Small proportions of the sample reported recent use of research chemicals such as 2CI, 2CB and 2CE. In 2009, 14% of the sample reported use of capsules known locally as 'Israelis'. These capsules are thought to have contained 4-Methylmethcathinone.

10.0 DRUG INFORMATION-SEEKING BEHAVIOUR

REU were asked how often they found out about the content or purity of batches of ecstasy pills (Table 42). One-fifth (23%) of the sample indicated that they 'never' found out about the content/purity of ecstasy tablets before they took them, one-third (35%) sometimes found out and the remainder did so half the time or more often. Participants most typically found out information about ecstasy through friends (91%) and websites (42%). Of those that had accessed websites, the most commonly accessed website was www.pillreports.com (97%).

Five participants (7%) reported using testing kits to find out the content/purity of ecstasy tablets in the preceding six months. Findings from previous years (see Matthews & Bruno, 2008) indicate that pill testing has the potential to influence the decision to take a pill, particularly in the case of potentially harmful substances such as DXM and PMA.

A large proportion of the sample (86%) indicated that they had 'sometimes' or more often bought a drug in the last six months and it had turned out to have a different content or purity than expected. Ninety participants indicated that they believed the ecstasy that they had recently taken had contained a substance other than MDMA. The most common perceived substance was methamphetamine (60%) followed by ketamine (18%), caffeine (17%), MDA (12%), and 2CI/2CB (8%).

Table 42: Content and testing of ecstasy tablets, 2005-2009

	2005 n=100	2006 n=100	2007 n=91	2008 n=98	**2009 n=99**
Find out the content/purity of ecstasy (%)					
Never	27	25	33	33	**23**
Sometimes	28	34	30	28	**35**
Half the time	9	7	11	6	**12**
Most times	27	19	15	17	**15**
Always	9	15	10	16	**14**
Find out content/purity of ecstasy via (%)	n=73	n=75	n=66	n=66	**n=76**
Friends	88	93	88	85	**91**
Dealers	45	61	49	29	**15**
Other people	38	31	36	14	**11**
Personal experience	41	23	8	14	**5**
Testing kits	7	13	3	17	**7**
Websites	45	36	44	46	**42**
Ecstasy different content/purity than expected (%)					
Never	27	23	26	13	**14**
Sometimes	67	66	67	69	**58**
Half the time	5	8	3	8	**12**
Most times	1	2	2	8	**13**
Always	-	1	1	1	**2**
Suspected substance other than MDMA (%)				n=81	**n=90**
Meth/amphetamine				74	**60**
MDA				12	**12**
Ketamine				17	**18**
Caffeine				32	**17**
Opioids				4	**2**
2CI/2CB				9	**8**
PMA				3	**6**
LSD				4	**6**
BZP				-	**4**
Cocaine				1	**1**

Source: EDRS interviews

10.1 Summary of drug information-seeking behaviour

- Whereas one-third (29%) of the regular ecstasy users interviewed in 2009 actively and regularly sought information about the content/purity of 'batches' of ecstasy pills, the remainder did so half the time or less (47%) or 'never' (23%).
- Participants typically obtained this information from friends, and websites (particularly www.pillreports.com).
- The majority of the sample (86%) reported that they had bought a drug and it turned out to have different effects than they expected in the last six months.
- A majority of those who commented (91%) indicated that ecstasy they had taken recently appeared subjectively to contain substances other than MDMA, most commonly perceived to be methamphetamine (60%), ketamine (18%), caffeine (17%), MDA (12%), or 2CI/2CB (8%).

11.0 RISK BEHAVIOUR

11.1 Injecting drug use

Just over one-tenth (14%, 95%CI 8.5-22.1%) of the 2009 REU participants had used substances intravenously at some stage of their lives (Table 43), which is similar to the proportion among previous REU cohorts (10-26%). The median age of first injection was 20 years (range 17-28). There was no significant difference in the proportion of males (13%) and females (17%) who had ever injected. Based on a median split for age, a significantly greater proportion of 'older' (23%) relative to 'younger' (4%) participants had ever injected, $\chi^2=7.20$, $p<.01$.

One-tenth (12%, 95%CI 6.9-19.87%) of the 2009 sample had used substances intravenously during the six months preceding the interview, similar to the proportions in the 2004-2008 REU samples (6-9%), but notably lower than the proportion among the 2003 sample (22%). There was no significant difference in the proportion of males (9%) and females (17%) who had recently injected. Based on a median split for age, a significantly greater proportion of 'older' (21%) relative to 'younger' (2%) participants had recently injected.

Table 43: Injecting drug use among REU, 2003-2009

	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever injected (%)	26	15	19	18	10	15	**14**
Age first injected (range)	n/a	n/a	18 (16-29)	18 15-33)	18 (14-29)	20 (16-31)	**20 (17-28)**
Injected last 6 months	22	9	8	9	6	7	**12**

Source: EDRS interviews

11.1.1 Lifetime injecting drug use and context to initiation

Table 44 shows the drugs ever injected and drug first injected for those reporting intravenous use of drugs at some stage of their life (n=14).

Almost three-quarters of those who had ever injected had first injected methamphetamine (71% any form, 50% powder, 21% crystal), while the remainder had first injected pharmaceutical stimulants (14%), and other drugs (14%, comprising 7% steroids and 7% adrenaline).

Lifetime injection of methamphetamine (93% any form, 93% powder, 71% base, 50% crystal) was most common, followed by ecstasy (36% pills, 7% powder), methadone (36%), benzodiazepines (29%), pharmaceutical stimulants (21%), cocaine (21%), and heroin (21%).

Table 44: Injecting drug use history among REU injectors, 2009

	Ever injected (%) n=14	First drug injected (%) n=14
Methamphetamine (any form)	93	71
Methamphetamine powder	93	50
Methamphetamine base	71	-
Crystal methamphetamine	50	21
Pharmaceutical stimulants	21	14
Ecstasy pills	36	-
Ecstasy powder	7	-
Heroin	21	-
Methadone	36	-
Buprenorphine	-	-
Cocaine	21	-
LSD	14	-
Ketamine	7	-
MDA	7	-
Other opioids*	14	-
Benzodiazepines	29	-
Alcohol	7	-
Other	-	14

Source: EDRS interviews
* Includes codeine, morphine, and pethidine

11.1.2 Recent injecting drug use and injecting risk behaviours

Over one-tenth of the sample (12%) had injected a drug in the six months prior to the interview. Table 45 shows that the most commonly injected drug in the last six months was methamphetamine (100% any form, 67% powder, 58% base, 25% crystal), followed by ecstasy (17%), and methadone (17%). The last drug injected was typically methamphetamine (91% any form, 33% powder, 50% base, 8% crystal) or ecstasy (8%). The frequency of injection for each drug was variable and ranged from single occasions to twice a week within the preceding six months.

Table 45: Recent injecting drug use patterns (recent injectors) among REU, 2009

	% injected last 6 months n=12	Median days injected last 6 months* (range)	Last drug injected n=12
Methamphetamine powder (%)	67	3 (1-10)	33
Methamphetamine base (%)	58	2 (1-12)	50
Crystal methamphetamine (%)	25	10 (2-48)	8
Ecstasy (%)	17	4 (1-8)	8
Methadone (%)	17	27 (6-48)	-
Buprenorphine (%)	-	-	-
Pharmaceutical stimulants (%)	8	2 (n=1)	-
Ketamine (%)	-	-	-
Heroin (%)	-	-	-
Other opioids (%)	8	2 (n=1)	-
Benzodiazepines (%)	8	1 (n=1)	-
Alcohol (%)	8	1 (n=1)	-
MDA (%)	8	5 (n=1)	-
Cocaine (%)	8	2 (n=1)	-
LSD (%)	8	1 (n=1)	-

Source: EDRS interviews
* Of those who had injected in the preceding six months

Those who had recently injected had done so on a median of 5 occasions (range 1-120 times) in the six months preceding the interview, or less than once a month on average (Table 46). Recent injectors had typically injected with close friends (58%), a regular sex partner (25%) or by themselves (25%). The majority of recent injectors had last done so at private residences including their own home (50%) or a friend's home (42%).

Table 46: Context and patterns of recent injection among REU, 2004-2009

	2004 n=9	2005 n=8	2006 n=9	2007 n=6	2008 n=7	**2009 n=12**
Median times injected last 6 mths (range)	20 (1-72)	58 (1-350)	120 (1-400)	81 (4-150)	15 (1-90)	**5 (1-120)**
People usually inject with*						
Close friends (%)	56	63	44	67	57	**58**
Regular sex partner (%)	11	38	33	17	-	**25**
Casual sex partner (%)	11	-	11	17	-	**-**
Acquaintances (%)	11	13	22	33	14	**-**
No-one (%)	11	13	-	17	43	**25**
Relative (%)	-	-	11	17	-	**-**
Location last injected in last 6 mths*						
Home (%)						**50**
Friend's home (%)						**42**
Car (%)						**8**
Dealer's home (%)						**-**
Street (%)						**-**
Public toilet (%)						**-**
Venue toilet (%)						**-**
Work (%)						**-**

Source: EDRS interviews

* Question not asked prior to 2009

One-third (33%) had recently injected under the influence of and/or coming down from ecstasy and related drugs during the six months preceding the interview on a median of 13 occasions (range 1-120) during this time (Table 47).

A single participant had shared a needle in the last six months (Table 47). Single participants had shared other injecting equipment such as water (8%) and spoons/mixing containers (8%), which also increases the risk of exposure to blood-borne viral infections.

Needles were typically obtained from a chemist (50%), needle and syringe program outlets (33%), a friend (17%) or a dealer (8%) during the six months preceding the interview.

Table 47: Recent injecting risk behaviour and obtaining needles, 2004-2009

	2004 n=9	2005 n=8	2006 n=9	2007 n=6	2008 n=7	**2009 n=12**
Injected under influence &/or coming down from ERDs (%)	67	76	89	67	43	**33**
Median times injected under influence last 6 mths (range)*	n=6 5 (2-13)	n=6 5 (2-120)	n=8 8 (2-120)	n=4 18 (4-50)	n=3 15 (3-20)	**n=4** **13** **(1-120)**
Used needle after someone last 6 mths (%)	11 (n=1)	13 (n=1)	-	17 (n=1)	14 (n=1)	**8** **(n=1)**
Shared other injecting equipment last 6 mths						
None (%)	44	38	56	50	43	**83**
Spoons/mixing containers (%)	44	13	22	17	14	**8**
Tourniquets (%)	33	38	33	-	43	**-**
Filters (%)	22	-	-	-	29	**-**
Water (%)	11	38	11	17	29	**8**
Needle source last 6 mths						
Needle and Syringe Program (%)	100	88	89	50	43	**33**
Chemist (%)	11	25	56	67	71	**50**
Friend (%)	11	25	44	50	-	**17**
Dealer (%)	-	25	22	-	29	**8**
Partner (%)	-	-	11	-	-	**-**

Source: EDRS interviews

* Of those that had injected under the influence

11.2 Sexual risk behaviour

Penetrative sex was defined as the penetration of the penis/hand in the vagina/anus. Participants were given the option of self-completing this section of the report due to the personal nature of the questions.

One-half (54%) of the regular ecstasy-using sample reported having penetrative sex with a casual partner during the six months preceding the interview (Table 48). The number of casual sexual partners was typically one to five partners during this time.

Almost one-half (49%) of the sample had engaged in penetrative sex with a casual partner while under the influence of ecstasy and related drugs during the last six months (Table 48), with over one-half of these (51%) doing so on six or more occasions. These respondents most commonly reported having sex under the influence of alcohol (90%), followed by ecstasy (67%), cannabis (20%), or methamphetamine (6% powder, 4% base, 4% crystal).

Of those who had sex with a casual partner in the preceding six months around one-third reported that they never used protective barriers either when not under the influence (33%) or when under the influence of drugs/alcohol (37%). One-fifth reported that they always used protective barriers (22% and 20% respectively) and the remainder reported inconsistent use of protective barriers.

Table 48: Prevalence of sexual activity, protective barrier use in the preceding six months, 2004-2009

	2004 n=100	2005 n=100	2006 n=100	2007 n=98	2008 n=99	**2009 n=99**
Penetrative sex with casual partner last 6 mths (%)	61	69	45	54	60	**54**
Number of casual partners in last six mths	n=92	n=97	n=94	n=92	n=59	**n=54**
One partner (%)	44	38	54	51	18	**33**
Two partners (%)	16	26	18	18	23	**20**
Three - five partners (%)	34	30	20	21	41	**35**
Six - ten partners (%)	5	6	5	8	14	**9**
More than ten partners (%)	1	-	2	2	3	**2**
Use of protective barriers with casual partner not under influence of drugs/alcohol	n=56	n=67	n=45	n=50	n=56	**n=54**
Always use protective barrier (%)	36	45	47	38	36	**22**
Never use protective barrier (%)	7	19	11	18	20	**33**
Inconsistent or no barrier use (%)	64	55	53	62	64	**39**
Sex with casual partner while under influence drugs/alcohol last 6 mths (%)	47	49	34	40	47	**49**
Use of protective barriers with casual partner under influence of drugs/alcohol	n=43	n=48	n=32	n=37	n=52	**n=49**
Always use protective barrier (%)	35	44	34	24	31	**20**
Never use protective barrier (%)	12	19	9	22	15	**37**
Inconsistent or no barrier use (%)	65	56	66	76	69	**43**
Of those who had sex with casual partner on drugs/alcohol in last 6 mths	n/a	n/a	n/a	n/a	n=52	**n=49**
Number of times						
Once (%)					10	**18**
Twice (%)					19	**14**
Three-five times (%)					40	**16**
Six-ten times (%)					12	**29**
More than ten times (%)					19	**22**
Drugs used last time						
Ecstasy (%)					65	**67**
Cannabis (%)					19	**20**
Alcohol (%)					98	**90**
Methamphetamine powder (%)					10	**6**
Methamphetamine base (%)					-	**4**
Crystal methamphetamine (%)					-	**4**
Cocaine (%)					2	**6**
LSD (%)					-	**2**
GHB (%)					-	**-**
Amyl nitrite (%)					6	**4**
Nitrous oxide (%)					-	**4**
Methadone (%)					-	**4**
Other opioids (%)					-	**-**
Benzodiazepines (%)					2	**4**
Psychedelic mushrooms (%)					-	**4**
Pharmaceutical stimulants (%)					-	**2**

Source: EDRS interviews

11.3 Driving risk behaviour

Eighty-seven out of the 100 REU interviewed in 2009 had driven a car during the six months preceding the interview (Table 49). Over one-half of these (59%) had driven while they perceived themselves to be over the legal alcohol limit during this time. The median frequency of driving over the limit was 4 times (range 1-30) in the last six months. One-half (56%, 95%CI 54-74%) of the sample had been random breath tested (once or more) during the previous six months, and 15% of these were found to be over the legal blood alcohol limit during this time. The proportion reporting recent random breath testing was significantly greater relative to 2008 (40%, 95%CI 30-50%, χ^2=9.71, p<.01).

Just over one-half (51%, 95%CI 48-68) of those that had recently driven a car had driven soon after taking a drug in the last six months, which is lower relative to 2008 (63%, 95%CI 63-81%), but not statistically significant (p=.06). Of those that had driven under the influence (DUI) of drugs, the median number of times in the last six months was 3 times (range 1-180). Three participants had been tested for drug driving by police during the last six months and all reported that the result of this test had been negative. Of those that had driven under the influence, the drugs most commonly used were ecstasy (71%), cannabis (48%), and methamphetamine (18% any form, 7% powder, 7% base, 9% crystal), and LSD (11%). Of those that had recently driven under the influence of ecstasy (n=20), the median number of times in the last six months was 3 times (range 1-60).

For a recent study investigating risk factors associated with DUI of alcohol and other drugs among a large national sample of regular ecstasy users in Australia, see Matthews et al. (2008).
Those that had recently driven under the influence of ecstasy, cannabis or methamphetamine were asked further questions in regard to their perceived level of impairment on the last occasion that they had driven under the influence (Table 50).

Those who had last driven under the influence of ecstasy had done so on an average of 3 hours after taking the drug (range 0.1-8). A majority perceived that it had had 'no impact' on their driving (38%) or that their driving had been 'slightly impaired' (38%).

Those who had last driven under the influence of cannabis had done so on an average of 1 hour after taking the drug (range 0.1-12). A majority perceived that that their driving had been 'slightly impaired' (53%) or that it had had 'no impact' on their driving (37%).

Table 49: Driving under the influence of drugs among REU, 2004-2009

Variable	2004* n=100	2005 n=80	2006 n=81	2007 n=76	2008 n=86	**2009 n=87**
Driven over legal alcohol limit last 6 mths (%)#	n/a	58	48	37	49	**59**
Median times driven over legal limit last 6 mths (range)	n/a	n=46 4 (1-24)	n=39 3 (1-60)	n=28 2 (1-56)	n=42 3 (1-24)	**n=51** **4** **(1-30)**
Random breath tested last 6 mths (%) Of breath tested, over legal limit (≥1) (%)	n/a	n/a	n/a	38 7	40 -	**56** **15**
Driven soon after taking drug (%)#	n/a	55	78	51	63	**51**
Median times DUI of drugs last 6 mths (range)	n/a	n/a	n=63 5 (1-180)	n=39 2 (1-180)	n=54 6 (1-150)	**n=44** **3** **(1-180)**
Tested for drug driving last 6 mths (%) Of those tested, tested positive (%)	n/a	n/a	n/a	n/a -	2 -	**2** **-**
Of those DUI of drugs, drugs used (%)^	n=59	n=44	n=63	n=39	n=54	**n=44**
Cannabis	85	68	52	46	52	**48**
Ecstasy	76	91	89	85	83	**71**
Methamphetamine powder	75	34	27	33	13	**7**
Methamphetamine base	10	9	24	8	4	**7**
Crystal methamphetamine	-	2	10	-	2	**9**
Benzodiazepines	10	2	5	3	6	**5**
Psychedelic mushrooms	8	-	8	8	6	**5**
LSD	7	5	2	10	13	**11**
Amyl nitrite	8	2	-	3	4	**-**
Nitrous oxide	5	16	5	5	4	**7**
Cocaine	2	5	6	5	2	**2**
Ketamine	2	2	-	3	-	**-**
MDA	2	-	-	-	-	**-**
Other opioids	2	-	-	3	2	**2**
Pharmaceutical stimulants	-	-	2	-	2	**-**
GHB	-	2	2	-	-	**-**
Methadone	-	-	2	-	2	**-**
2CI/2CB/2CE	-	-	2	-	-	**2**
Of those who had DUI of ecstasy		n=40	n=47	n=27	n=38	**n=20**
Median number of times in last 6 mths (range)	n/a	3.5 (1-24)	3 (1-48)	2 (1-100)	3 (1-25)	**3** **(1-60)**

Source: EDRS interviews

* Data not restricted to those that had recently driven in 2004

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

^Drugs used on any occasion of DUI of drugs, not necessarily simultaneously

Table 50: Perceived driving impairment associated with last occasion of driving under the influence of drugs among REU, 2007-2009

	2007	2008	**2009**
Last drug-driven after taking ecstasy	n=23	n=30	**n=21**
How long (hours) driven after taking ecstasy (range)	2 (0.2-25)	2 (0.1-12)	**3 (0.1-8)**
Perceived level of impairment			
Quite impaired	4	13	**14**
Slightly impaired	52	60	**38**
No impact	35	20	**38**
Slightly improved	9	7	**5**
Quite improved	-	-	**5**
Last drug-driven after taking cannabis	n=9	n=25	**n=19**
How long (hours) driven after taking cannabis (range)	2 (0.1-8)	1 (0.1-12)	**1 (0.1-12)**
Perceived level of impairment			
Quite impaired	11	-	**5**
Slightly impaired	67	56	**53**
No impact	11	32	**37**
Slightly improved	11	12	**5**
Quite improved	-	-	**-**
Last drug-driven after taking methamphetamine	n=11	*n=3*	***n=5***
How long (hours) driven after taking cannabis (range)	2 (0.25-9)	*1 (0.1-5)^*	***2 (0.5-4)^***
Perceived level of impairment			
Quite impaired	-	-	***20***
Slightly impaired	55	*67*	***20***
No impact	18	-	***60***
Slightly improved	27	*33*	**-**
Quite improved	-	-	**-**

Source: EDRS interviews
^ n<5

11.4 Alcohol Use Disorders Identification Test (AUDIT)

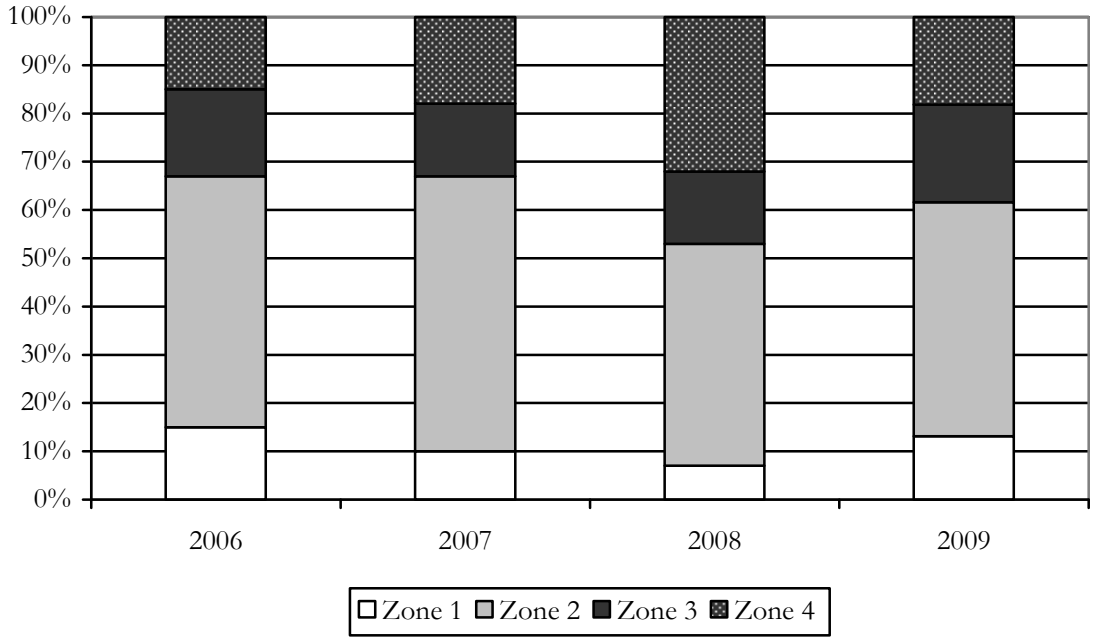
REU completed the Alcohol Use Disorders Identification Test (AUDIT; Saunders, et al., 1993). The AUDIT was designed by the World Health Organization as a brief screening scale to identify individuals with alcohol problems, including those in early stages. It is a 10-item scale, designed to assess three conceptual domains: alcohol intake, dependence, and adverse consequences (Reinert & Allen, 2002). Total scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence (Babor, et al., 2001). Higher scores indicate greater likelihood of hazardous and harmful drinking; such scores may also reflect greater severity of alcohol problems and dependence, as well as a greater need for more intensive treatment (Babor et al., 2001).

The overall mean score on the AUDIT was 14 (median=15; range 3-31, SD=6). Of those REU that completed the AUDIT (n=99), a large majority (87%) scored 8 or more, a level at which alcohol intake may be considered hazardous. The total AUDIT score places respondents into one of four 'zones', or risk levels. Just thirteen percent (13%) of the REU that completed the AUDIT scored in zone 1 (a level reflecting low-risk drinking or abstinence). Almost one-half (48%) scored in zone 2 (alcohol use in excess of low-risk guidelines[6]), a further 20% scored in zone 3 (harmful or hazardous drinking) and almost one-fifth (18%) scored in zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence).

[6] It should be noted that this threshold for low-risk is based on standards current at the time of publication (2008), and represents a threshold substantially higher than that likely to be specified by the National Health and Medical Research Council in their revised guidelines in 2008.

Figure 24 shows the proportion of REU categorised within each of the AUDIT risk categories between 2006 and 2009. A significantly smaller proportion of the 2009 sample had AUDIT scores within zone 4 relative to the 2008 sample (18% vs. 32%, χ^2=4.51, p<.05)

Figure 24: Proportion of REU categorised with each AUDIT risk zones, 2006-2009



Source: EDRS interviews

11.5 Binge drug use

Table 51 shows that one-quarter (27%) of the 2008 REU sample had recently 'binged' on ERDs (used for more than 48 hours continuously without sleep) which is not significantly different to the proportion in 2008 (38%, p>.05). Those that had recently binged had done so on a median of 2 occasions (range 1-48) during the six months preceding the interview. The median length of the longest period of continuous use during this time was 2 days (range 2-5 days). Of those that had recently 'binged', the substances used most commonly during any one binge session of use were ecstasy (96%), alcohol (85%), methamphetamine (41% any form, 26% powder, 11% base, 19% crystal), cannabis (41%), and cocaine (19%).

Table 51: Binge drug use among REU, 2003-2009

Variable	2003 n=100	2004 n=100	2005 n=80	2006 n=98	2007 n=100	2008 n=96	**2009 n=100**
Binged on any drug in last six months (%)#	45	35	39	46	38	38	**27**
Median times binged in last 6 mths (range)	n/a	n/a	n/a	3 (1-24)	3 (1-24)	2 (1-15)	**2 (1-48)**
Median length (days) biggest binge last 6 mths (range)	2.5 (2-8)	2.5 (2-5)	2.5 (2-5)	2.5 (2-6)	2.5 (2-6)	2.3 (2-5)	**2 (2-5)**
Of those who had binged, drugs used in any one binge session (%)							
Ecstasy	91	97	95	93	100	92	**96**
Methamphetamine powder	53	71	64	49	58	47	**26**
Methamphetamine base	21	-	23	36	21	11	**11**
Crystal methamphetamine	36	11	13	36	5	14	**19**
Pharmaceutical stimulants	-	3*	5	2	8	3	**4**
Cocaine	2	3*	13	27	11	19	**19**
LSD	9	20	26	16	13	31	**11**
Ketamine	11	-	10	-	5	3	**-**
MDA	7	6	-	-	-	-	**4**
GHB	-	-	3*	4	3	-	**4**
Amyl nitrite	25	9	10	2	8	3	**4**
Nitrous oxide	11	20	18	20	32	17	**11**
Cannabis	62	54	79	53	45	50	**41**
Alcohol	62	80	77	60	76	81	**85**
Benzodiazepines	2	3	-	-	-	-	**-**
Psychedelic mushrooms	4	11	3*	27	16	17	**11**
2CI	-	-	-	11	3	-	**-**
Other opioids	-	-	-	-	-	3	**-**

Source: EDRS interviews

Used for 48 hours continuously without sleep

11.6 Summary of risk behaviour

- **Injecting drug use.** Consistent with the low levels of intravenous drug use among previous REU cohorts, only a small proportion (12%) of the 2009 REU sample had recently used substances intravenously. Recent injection was more common among older relative to younger participants. Methamphetamine was typically the first drug ever injected and the most common drug ever and recently injected. While several participants reported sharing of needles and other injecting equipment, this was not common. Injecting equipment had been obtained from chemists, NSP outlets or friends in the preceding six months.
- **Sexual risk behaviour.** One-half (54%) of REU reported penetrative sex with a casual partner during the six months preceding the interview and almost one-half (49%) reported sex with a casual partner while under the influence of drugs, most commonly alcohol or ecstasy. Regardless of whether under the influence of ERDs, only around one-fifth reported 'always' using protective barriers with a casual partner and around one-third 'never' used protective barriers.
- **Drug driving.** Of those who had driven a car, over one-half (59%) reported driving at a time when they perceived themselves to be over the legal alcohol limit during the last six months, and one-half (51%) reported driving within an hour of taking illicit drugs in the last 6 months. Most commonly, participants reported driving under the influence of ecstasy, cannabis and/or methamphetamine. The proportion reporting that they had been random breath tested in 2009 (56%) was significantly greater relative to 2008 (40%)
- **Alcohol Use Disorders Identification Test (AUDIT).** Just over ten percent (13%) of the REU that completed the AUDIT scored in zone 1 (low-risk drinking or abstinence). Almost one-half (48%) scored in zone 2 (alcohol use in excess of low-risk guidelines), a further 20% scored in zone 3 (harmful or hazardous drinking), and almost one-fifth (18%) scored in zone 4 (those in this zone may be referred to evaluation and possible treatment for alcohol dependence).
- **Binge drug use.** One-quarter (27%) had recently 'binged' on ecstasy or related drugs (a continuous period of use for more than 48 hours without sleep), similar to proportions in previous samples. Substances most commonly used in a binge session of use were ecstasy, alcohol, methamphetamine, cannabis, and cocaine.

12.0 HEALTH-RELATED ISSUES

12.1 Overdose

One-quarter (24%) of REU had overdosed on any drug at some stage of their life (Table 52). Of those who had ever overdosed on any drug, the median number of times was 2 (range 1-10). Less than one-tenth of the 2009 REU sample (7%) had overdosed on a drug in the preceding six months. There were no significant sex or age differences between those who had or had not overdosed during the six months preceding the interview.

Table 52: Overdose on stimulants and depressants among REU, 2004-2009

	2004 n=100	2005 n=99	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Ever overdosed on any drug (%)	n/a	30	24	27	23	**24**
Median times ever overdosed (range)*	n/a	2 (1-50)	1 (1-5)	2 (1-20)	3 (1-30)	**2 (1-10)**
Overdosed in last 6 mths (%)	18	16	8	11	12	**7**

Source: EDRS interviews
* Of those reporting overdose episode

Participants were asked to distinguish between stimulant and depressant drug overdose episodes (Table 53). An overdose episode was defined by the common symptoms experienced. For a stimulant overdose, these symptoms included nausea/vomiting, chest pain, tremors, increased body temperature, increased heart rate, and seizure. For a depressant overdose, these symptoms included reduced level of consciousness, respiratory depression, turning blue, and collapsing.

Almost one-tenth (8%) had ever overdosed on a stimulant drug, and 1% of the sample had overdosed on a stimulant drug in the last six months preceding the interview. For the single participant who had overdosed on a stimulant in the last six months, the main drug was crystal methamphetamine and they received treatment from a GP.

Almost one-fifth (18%) of the sample had ever overdosed on a depressant drug and 6% of the sample had overdosed on a depressant drug in the six months preceding the interview. The main drugs involved in the last depressant overdose in the last six months were alcohol (67%), GHB (17%) and cannabis (17%). These overdose events often involved multiple drugs, most commonly ecstasy (33%) and alcohol (17%) and cocaine (17%) in combination with the depressant. The locations of last depressant overdose included the respondent's own home (33%), a live music event (33%), a nightclub (17%) and a private party (17%). On the last occasion of depressant overdose, the majority (83%) received no treatment.

Table 53: Overdose on stimulants and depressants among REU, 2007-2009

	Stimulant Overdose			Depressant overdose		
	2007 n=100	2008 n=100	**2009 n=100**	2007 n=100	2008 n=100	**2009 n=100**
Ever overdosed (%)	7	16	**8**	23	13	**18**
Overdosed in last 6 mths (%)	2	6	**1**	9	7	**6**
Median number times ever overdosed (range)	2 (1-12)	1 (1-10)	**1 (1-5)**	2 (1-20)	2 (1-30)	**2 (1-10)**
Main drug last overdose*	n=2	n=6	**n=1**	n=9	n=7	**n=6**
Ecstasy (%)	-	67	**-**	-	-	**-**
Methamphetamine powder (%)	50	-	**-**	-	-	**-**
Methamphetamine base (%)	-	17	**-**	-	-	**-**
Crystal methamphetamine (%)	-	17	**100**	-	-	**-**
Mushrooms (%)	50	-	**-**	-	-	**-**
Alcohol (%)	-	-	**-**	89	71	**67**
Benzodiazepines (%)	-	-	**-**	11	29	**-**
Heroin (%)	-	-	**-**	-	-	**-**
Methadone (%)	-	-	**-**	-	-	**-**
Cannabis (%)	-	-	**-**	-	-	**17**
GHB (%)	-	-	**-**	-	-	**17**
Other drugs last overdose*	n=2	n=6	**n=1**	n=9	n=7	**n=6**
Ecstasy (%)	-	17	**-**	22	43	**33**
Methamphetamine powder (%)	-	17	**-**	-	14	**-**
Methamphetamine base (%)	-	-	**-**	-	-	**-**
Crystal methamphetamine (%)	-	17	**-**	-	-	**-**
Alcohol (%)	-	67	**-**	-	14	**17**
Cannabis (%)	-	50	**-**	22	29	**-**
Mushrooms (%)	-	-	**-**	-	-	**-**
Anti-depressants (%)	-	-	**-**	11	14	**-**
Benzodiazepines (%)	-	17	**-**	-	14	**-**
Pharmaceutical stimulants (%)	-	17	**-**	-	-	**-**
Amyl nitrite (%)	-	17	**-**	-	-	**-**
LSD (%)	-	-	**-**	-	14	**-**
Other opioids (%)	-	-	**-**	-	14	**-**
Cocaine (%)	-	-	**-**	-	-	**17**
Location of last overdose*	n=2	n=6	**n=1**	n=9	n=6	**n=6**
Home (%)	100	17	**100**	33	17	**33**
Friend's home (%)	-	33	**-**	22	50	**-**
Pub (%)	-	17	**-**	-	-	**-**
Live music event (%)	-	-	**-**	11	17	**33**
Nightclub (%)	-	17	**-**	11	-	**17**
Public place (%)	-	17	**-**	22	-	**-**
Rave/doof/dance party	-	-	**-**	-	-	**-**
Outdoors (%)	-	-	**-**	-	17	**-**
Private party (%)	-	-	**-**	-	-	**17**
Other (%)	-	-	**-**	-	-	**-**
Treatment received last overdose*	n=7	n=6	**n=1**	n=9	n=7	**n=6**
None (%)	50	-	**-**	-	-	**83**
Monitored/watched by friends (%)	50	100	**-**	78	71	**-**
Onsite help (%)	-	-	**-**	-	29	**-**
Taken to hospital/ambulance (%)	-	-	**-**	11	-	**17**
Taken to doctor (%)	-	-	**100**	11	-	**-**
Other (%)	-	-	**-**	-	-	**-**
Median number of hours partying before overdose (range)*	0.25 (0-0.5)	8 (3-16)	**120**	5 (0-12)	8 (2-30)	**n/a**

Source: EDRS interviews

* Of those reporting overdose episode in last 6 months

12.2 Self-reported symptoms of ecstasy dependence

REU were asked about how they had felt about their ecstasy use during the 12 months preceding the interview using a version of the Severity of Dependence Scale (SDS; Gossop et al., 1995) adapted for ecstasy use. The scale consisted of 5 multiple choice questions that were rated on a scale of 0 to 3, resulting in a range of possible scores from 0-15 where high scores suggest greater psychological dependence. Participants were asked if they thought that their ecstasy use was out of control, if the prospect of missing a dose had made them feel anxious or worried, if they had worried about their ecstasy use, if they had wished they could have stopped, and if they would find it difficult to stop, or go without ecstasy.

Findings in relation to ecstasy dependence should be interpreted with caution due to the fact that there has been limited research of this syndrome (see Topp, Hall & Hando, 1997; Degenhardt, Bruno & Topp, 2010). The properties of the SDS are discussed in Bruno et al.,, 2009, and Bruno, Gomez, & Matthews, 2009. Another issue that should be considered is the fact that many ecstasy pills also include methamphetamine as well as, or instead of, MDMA, and there is well documented evidence that methamphetamine is associated with symptoms of dependence.

The median ecstasy SDS score was 1 (range 0-9). Almost one-half of participants (49%) obtained a score of zero on the ecstasy SDS, and one-fifth (18%) obtained a score of one on the scale: thus, two-thirds of respondents reported no or few symptoms of dependence in relation to ecstasy use. A score of three or more on the SDS provides a good balance between sensitivity and specificity for identifying problematic ecstasy use (Bruno, Gomez & Matthews, 2009). Almost one-fifth (18%) of the 2009 REU sample had a score of 3 or above on the ecstasy SDS.

12.3 Self-reported symptoms of methamphetamine dependence

REU participants that had used methamphetamine during the six months preceding the interview (n=48) were asked about how they felt about their use of this drug in the last 12 months, using the Severity of Dependence Scale (SDS). The scale consisted of 5 multiple choice questions that were rated on a scale of 0-3, resulting in a range of possible scores from 0-15, where higher scores suggest greater psychological dependence. Participants were asked if they thought that their methamphetamine use was out of control, if the prospect of missing a dose had made them feel anxious or worried, if they had worried about their methamphetamine use, if they had wished they could have stopped, and if they would find it difficult to stop or go without methamphetamine.

The median SDS score for those who had used methamphetamine in the preceding six months was 0 (range 0-11, n=48). A majority of those who completed the methamphetamine SDS received a score of zero (79%), indicating no symptoms of dependence. A score of four on the SDS in relation to methamphetamine use has been validated as a reasonable cut-off for predicting DSM-III-R diagnosis of severe amphetamine dependence (Topp & Mattick, 1997). One-tenth of those REU who completed the methamphetamine SDS (8%, n=4) had a score of 4, and it is reasonable to assume that some proportion of these people had experienced significant psychological symptoms of dependence.

12.4 Help-seeking behaviour

One-sixth (13%) of the 2008 REU sample had accessed a health or medical service in relation to their drug use in the six months preceding interview (Table 54). Some participants had accessed more than one service during this time. Among those who had recently accessed health services, the most commonly accessed service was a GP (69%), followed by counsellor (23%) drug and alcohol worker (23%), first aid (15%), emergency (15%), hospitalisation (15%), psychologist (15%), or psychiatrist (15%).

Participants that had accessed health services in relation to their drug use in the last six months were asked to specify the main drug and the main issue involved. Services had typically been accessed in relation to ecstasy (62%), cannabis (39%), other opioids (39%), and GHB (23%). The main issues involved in these treatment episodes were a mental health problem (69%), dependence/addiction (54%), acute physical symptoms (39%), and information/advice (23%).

Table 54: Access to health services in relation to drug use among REU, 2004-2009

	2004 n=100	2005 n=99	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Accessed health service in last 6 mths (%)	10	17	22	15	14	**13**
Services accessed*	n=10	n=17	n=22	n=15	n=14	**n=13**
GP (%)	30	59	45	40	50	**69**
First aid (%)	10	12	23	7	21	**15**
Ambulance (%)	-	-	27	-	7	**8**
Emergency (%)	-	12	18	-	21	**15**
Hospitalisation (%)	20	6	14	-	-	**15**
Counsellor (%)	20	18	14	27	21	**23**
Drug and alcohol worker (%)	10	-	14	7	7	**23**
Psychologist (%)	10	6	14	13	7	**15**
Psychiatrist (%)	-	6	9	-	7	**15**
Telephone counselling (%)	-	-	-	-	-	**-**
Internet counselling (%)	-	-	-	7	-	**8**
Dentist (%)	-	6	-	-	-	**-**
Main drug involved in treatment episode*	n=10	n=17	n=22	n=15	n=14	**n=13**
Alcohol (%)	10	-	45	7	36	**8**
Ecstasy (%)	40	53	41	53	29	**62**
Methamphetamine (%)	10	6	41	20	14	**15**
Cannabis (%)	10	24	32	13	21	**39**
Methadone (%)	20	-	14	-	-	**8**
Polydrug (%)	10	47	5	7	43	**8**
GHB (%)	-	-	-	-	-	**23**
Other Opioids (%)	-	-	-	-	-	**39**
Benzodiazepines (%)	-	-	-	-	-	**8**
Main issue involved in treatment episode*					n=14	**n=13**
Dependence/addiction (%)					21	**54**
Information/advice (%)					7	**23**
Pre-existing condition (%)					29	**-**
Mental health problem (%)					29	**69**
First aid/acute physical symptoms (%)					50	**39**

Source: EDRS interviews

* Of those who had accessed health service in last 6 months, participants may have attended more than one treatment type for more than one problem

12.5 Mental and physical health problems, psychological distress, and personal wellbeing

12.5.1 Mental health problems

Almost one-third (30%) of the 2009 REU sample reported that they had experienced mental health problems during the six months prior to the interview (Table 55). Of those who had experienced mental health problems, the most common problems experienced were depression (67%), anxiety (73%) and paranoia (20%).

Just over one-half (53%) of those who reported experiencing mental health problems had attended a health professional in relation to these problems during the last six months. One-third (30%) of those who had experienced mental health problems had been prescribed anti-depressants and one-fifth (20%) had been prescribed benzodiazepines during this time.

Table 55: Self-reported mental health problems, 2007-2009

	2007 n=100	2008 n=100	**2009 n=100**
Experienced mental health problems in last 6 mths (%)	35	27	**30**
Of those who had experienced mental health problems	n=35	n=27	**n=30**
Depression (%)	66	70	**67**
Anxiety (%)	54	70	**73**
Paranoia (%)	14	15	**20**
Panic (%)	9	-	**7**
Psychosis (%)	6	11	**-**
Obsessive compulsive disorder (%)	6	15	**3**
Bipolar disorder (%)	3	11	**-**
Eating disorder (%)	3	-	**-**
Self-harm (%)	3	-	**-**
Schizophrenia (%)	-	4	**-**
Mania (%)	-	4	**-**
Personality disorder (%)	-	4	**-**
Phobia (%)	-	-	**3**
Seen mental health professional last 6 mths (%)	34	48	**53**
Prescribed anti-depressants in last 6 mths (%)	17	19	**30**
Prescribed benzodiazepines in last 6 mths (%)	9	22	**20**
Prescribed anti-psychotics in last 6 mths (%)	3	7	**-**

Source: EDRS interviews

12.5.2 Psychological distress

The Kessler Psychological Distress Scale (K10) is a ten-item questionnaire designed to measure the level of distress and severity associated with psychological symptoms in population surveys, and it has been shown to be a marker for possible clinical diagnosis of anxiety or affective disorders (Andrews & Slade, 2001). Participants were asked to rate the extent to which they had experienced particular psychological symptoms (e.g., How often did you feel depressed?) in the preceding month on a five-point Likert scale.

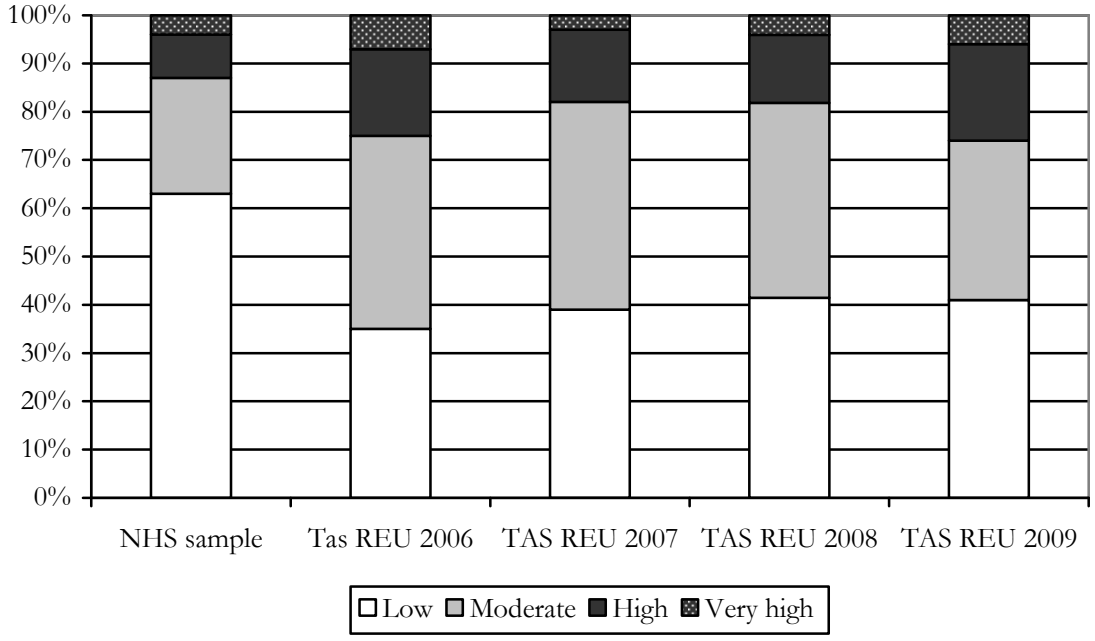
Among a normative Australian population sample, the mean K10 score was 14.2 and the median was 12 (range 0-50) (Andrews & Slade, 2001). Among the REU interviewed in 2009, the mean K10 score was slightly higher at 18 (SD=5.9) and the median score was 16.5 (range 10-34) out of a possible score of 50.

K10 scores can also be grouped into four categories of psychological distress: low (10-15); moderate (16-21); high (22-29); and very high (30-50). K10 scores of 30 or more (the 'very high' category) have a specificity of 0.99 (correct rejection rate) and sensitivity of 0.24 (hit rate) for the identification of a current anxiety or affective disorder meeting DSM-IV criteria (Andrews and Slade, 2001). In the 2007 Australian National Survey of Mental Health and Well-Being, 80% of those with a K10 score of 30 or greater met criteria for a DSM-IV mental disorder in the preceding 12 months, with 67% meeting criteria for an anxiety disorder and 54% for an affective disorder (ABS, 2008).

In the current sample, only six REU participants (6%) had a score of 30 and above and therefore 'very high' levels of psychological distress. Just over one-fifth scored in the 'high' category (20%), one-third scored in the 'moderate' category (33%), and two-fifths (41%) in the 'low' category.

Figure 25 shows a comparison between the EDRS sample with data from the 2004/05 National Health Survey which was based on a large (n=19,501) normative sample from the general Australian adult population (18-85+) (ABS, 2006). The proportion of the 2009 EDRS sample with scores categorised as 'very high' is similar to the NHS sample (6%, 95%CI 2.7-12.5% vs. 4%, 95%CI 3.7-4.3%, $p>.05$). However, the proportion of the EDRS sample with scores classified as 'high' or 'moderate' was significantly greater than the NHS sample (20%, 95%CI 13.3-28.9% vs. 9%, 95%CI 8.6-9.4, $p<.001$, and 33%, 95%CI 24.6-42.7% vs. 24%, 95%CI 23.4-24.6%, $p<.05$) and the proportion of the EDRS sample with scores classified as 'low' was significantly smaller relative to the NHS sample (41%, 95%CI 31.9-50.8% vs. 63%, 95%CI 62.3-63.7%, $p<0.001$). Individuals with 'high' levels of psychological distress have increased rates of experience of mental health problem and may benefit from interventions with a health professional (Andrews & Slade, 2001).

Figure 25: Responses to the K10 questionnaire in the National Health Survey 2004/05 and EDRS, 2006-2009



Source: EDRS interviews, 2006-2009 and National Health Survey, 2004/05

12.5.3 Personal Wellbeing Index

The Personal Wellbeing Index (PWI) was administered to REU to examine their satisfaction with various aspects of their lives. The PWI is comprised of seven questions relating to satisfaction with life domains, including standard of living, health, personal achievement, personal relationships, personal safety, feeling a part of the community, future security and life as a whole. Participants rate each question on scale of satisfaction from 0 (very unsatisfied) to 10 (very satisfied). The scores are combined across the seven domains to yield an overall Index score, which is adjusted to have a range of 0-100 (Cummins et al, 2008).

It has been reported that at normal levels of wellbeing (average score of 75 with a range between 60 to 90) people often feel good about themselves, are motivated to conduct their lives and have a strong sense of optimism. In comparison individuals with scores below 50 points are at a higher risk of depression (Cummins et al, 2008). Table 56 shows mean PWI scores of the REU sample in comparison to a sample from the general population (Cummins et al, 2008). The mean scores of REU are similar to those seen in the general population and within the normal range (between 60 and 90 percentage points) of wellbeing scores for each domain.

Table 56: Mean scores (SD) on the Personal Wellbeing Index (PWI) among REU and the general population

	General population Oct 2008	**REU 2009**
	n=2,000	**n=97**
Standard of living	77.25 (16.96)	**74.64 (16.14)**
Health	73.71 (19.63)	**68.04 (19.02)**
Achieving in life	72.40 (19.11)	**70.10 (16.68)**
Personal relationships	79.60 (21.17)	**75.67 (18.37)**
How safe you feel	80.25 (17.26)	**82.37 (18.64)**
Community connect	70.99 (20.25)	**72.37 (22.54)**
Future security	69.78 (19.58)	**72.17 (20.12)**
Life as a whole	77.02 (24.59)	**75.12 (15.41)**
Total score	74.88 (17.22)	**73.62 (13.43)**

Source: Australian Unity Wellbeing Index Survey 20 (Cummins et al., 2008); EDRS interviews

12.5.4 Chronic Physical Health

REU were asked whether they had ever been diagnosed with a range of chronic physical conditions, how old they were when first diagnosed, and if they had received treatment in the previous 12 months (Table 57). Asthma (39%) was the most common condition reported, followed by hay fever (35%), skin problems (22%), vision problems (22%), back/neck problems (20%) and migraine (14%).

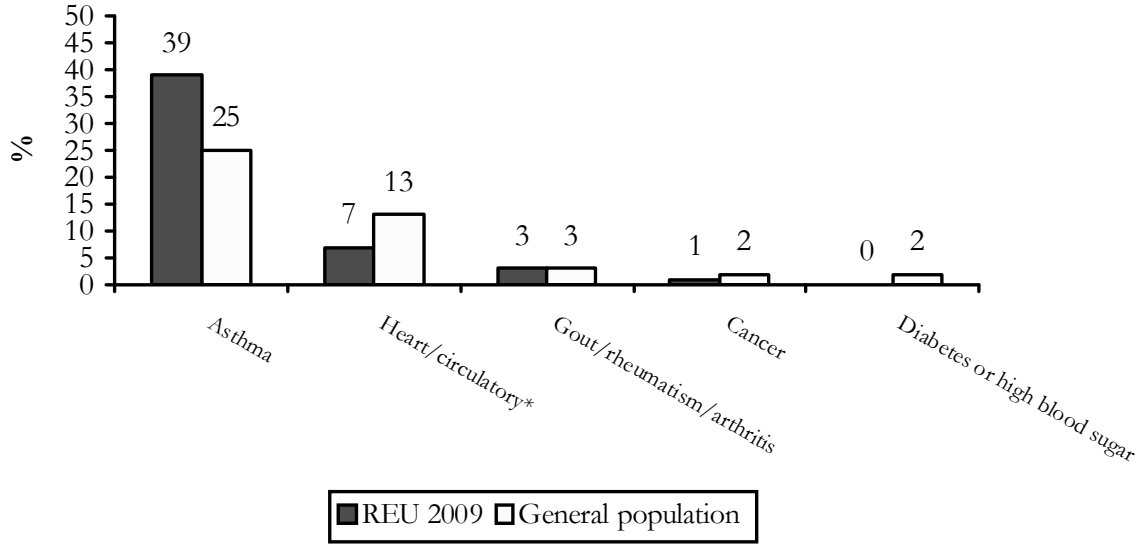
Table 57: Proportion of REU reporting chronic physical conditions, median age of diagnosis and recent treatment

	Lifetime diagnosis (%) n=99	Median age of diagnosis (range)	Treatment in last 12 mths (%)
Asthma	39	8 (1-24)	49
Cancer	1	26	-
A stroke (or effects of a stroke)	1	30	-
Any (other) heart or circulatory condition	6	17 (9-20)	17
Gout, rheumatism or arthritis	3	17 (10-19)	33
Diabetes or high blood sugar levels	-	-	-
Epilepsy	2	11 (1-21)	100
Skin problems	22	15 (1-35)	67
Vision problems	22	15 (4-22)	82
Hearing problems	3	15 (1-20)	67
High blood pressure	2	23 (20-26)	100
Liver disease	1	27	100
Joint/muscular/skeletal	10	16 (12-18)	60
Human Papilloma virus	1	23	100
Septicaemia	1	23	100
Hay fever	35	14 (1-24)	71
Sinus or sinus allergy	10	11 (3-27)	60
Bronchitis	11	15 (8-23)	-
Anaemia	2	13 (11-14)	50
Hernias	1	1	-
Kidney problems	5	18 (15-21)	20
Psoriasis	2	14 (1-26)	100
Stomach ulcer or other gastrointestinal ulcer	3	20 (19-27)	100
Thyroid trouble /goiter	2	23 (21-24)	-
Tuberculosis	2	15 (8-22)	-
Back or neck pain or back neck problems	20	18 (15-28)	60
Migraine	14	14 (7-27)	62
Other	2	-	-

Source: EDRS interviews

Figure 26 shows the proportion of the EDRS sample reporting lifetime diagnosis of some chronic conditions compared to the Australian general population aged 14-34 (Australian Bureau of Statistics, 2009). A significantly higher proportion of the EDRS national sample reported having been diagnosed with asthma compared to the general population (39%, 95CI 30-49% vs. 25%, 95%CI 23-26%, $p<.01$). No other differences were statistically significant.

Figure 26: Prevalence of chronic conditions among REU and Australian general population aged 15-34



Source: EDRS interviews; ABS, 2009
* Does not include stroke

12.6 Other self-reported problems associated with 'ERD' use

REU were asked if their drug use had caused recurrent problems during the six months preceding the interview (Table 58). These questions were chosen to be consistent with diagnostic criteria for substance abuse disorders, and based on the Comprehensive International Diagnostic Interview (CIDI). Two-fifths (42%) reported any recurrent drug-related problem, suggestive of possible substance abuse. One-quarter of the sample (26%) indicated that their drug use had recurrently interfered with their responsibilities at home, at work, or at school. One-fifth (19%) had recurrently found themselves in a situation where they were under the influence of a drug and could have put themselves or others at risk. Just over one-tenth of the sample (15%) reported that their drug use caused them to have repeated problems with family, friends, or people at work or school. A very small proportion of the EDRS sample (5%) reported that they had experienced recurrent drug-related legal problems.

Table 58: Self-reported recurrent drug-related problems, 2007-2009

	2007 n=100	2008 n=100	**2009 n=100**
Any recurrent drug problem (%)	57	53	**42**
Responsibility problems (interference with responsibilities) (%)	39	39	**26**
Risk problems (risk to self or others) (%)	26	28	**19**
Relationship/social problems (%)	25	14	**15**
Legal/police problems (%)	3	2	**5**

Source: EDRS interviews

Table 59 shows the main drug attributed to the problems experienced by REU during the six months preceding the interview. Whereas many participants attributed drug-related problems to ecstasy use, this is likely to reflect the purposive sampling of participants that regularly use ecstasy in the present study, rather than indicating that ecstasy has a greater impact in comparison to other drugs. Other drugs in which participants typically attributed problems to

included cannabis, and alcohol. A significantly greater proportion of males relative to females reported recent risk problems (25% vs. 8%), χ^2=4.30, p<.05, and all of those reporting recent legal problems were male. There were no other age or sex differences.

Table 59: Main drug attributed to problems experienced in the last six months, 2009

	Responsibility problems	Risk problems	Social problems	Legal problems
	n=26	n=19	n=15	*n=5*
Ecstasy	27	16	27	*20*
Cannabis	31	32	60	*20*
Methamphetamine powder	4	-	-	-
Methamphetamine base	-	-	-	-
Crystal methamphetamine	4	11	-	-
Alcohol	31	32	7	*20*
Benzodiazepines	-	-	-	*20*
LSD	-	11	-	-
Other opioids	-	-	7	*20*
Pharmaceutical stimulants	4	-	-	-

Source: EDRS interviews

12.7 Drug treatment indicator data

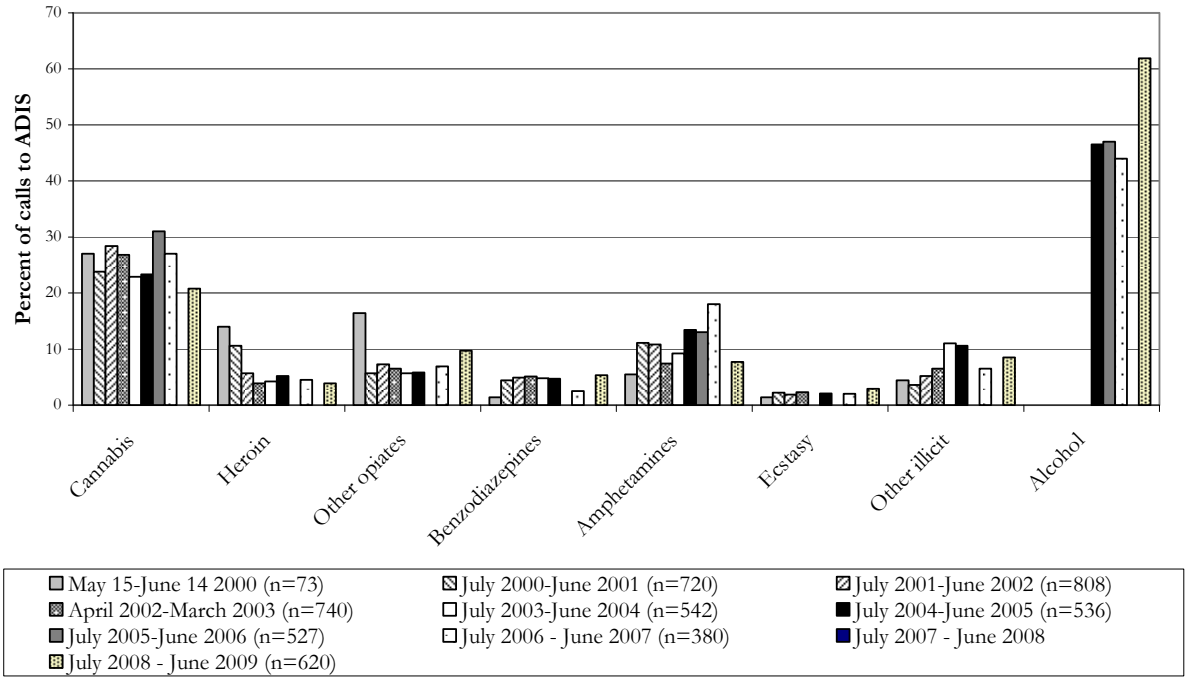
12.7.1 Alcohol and Drug Information Service data

The Tasmanian Alcohol and Drug Information Service (ADIS) is a telephone information and referral service that is administered by Turning Point Alcohol and Drug Centre in Victoria (Turning Point, 2001-2009). Detailed information in regard to drugs used was not included in the 2003/04, 2005/06 and 2007/08 ADIS reports, thus calls pertaining to ecstasy (along with cocaine and hallucinogens) are not available for these reporting periods. Calls in relation to cocaine are not available after the 2000/01 reporting period.

A small but consistent number of calls have been recorded in relation to ecstasy during the 2000/01 (16 calls), 2001/02 (15 calls), 2002/03 (17 calls), 2004/05 (11 calls), 2006/07 (8 calls) and 2008/09 (16 calls) reporting periods.[7] Figure 27 and 28 show that calls in relation to ecstasy account for a very small percentage (between 1.9% and 2.6%) of the total calls made to the service. For the 2008/09 reporting period, over three-fifths (61.9%) of all calls related to alcohol, followed by cannabis (21%), and amphetamines (7.7%), a pattern in keeping with the overall trends in previous years (Figure 27).

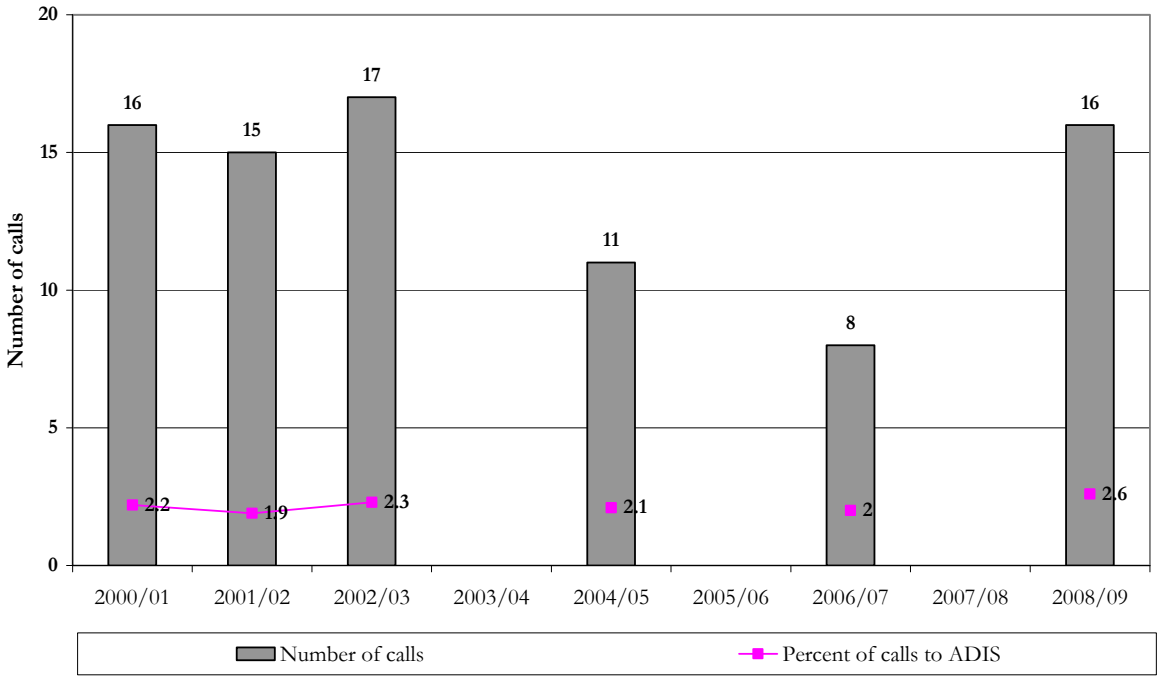
[7] Data from calls made to the Turning Point-administered ADIS have been reported over differing time periods due to the requirements of the Department of Health and Human Services; however, for comparative purposes (and since this annual data are the only information available to the authors), these slightly differing reporting periods were each treated as financial year periods.

Figure 27: Percentage of inquiries to ADIS for each drug type, May 2000-June 2009



Source: ADIS Tasmania reports, Turning Point Alcohol and Drug Centre
Note: Detailed drug information was not provided in the 2003/04 2005/06 and 2007/08 reports. Calls in relation to alcohol are not reported prior to 2004/05

Figure 28: Percentage of inquiries to ADIS with regard to ecstasy, May 2000-June 2009



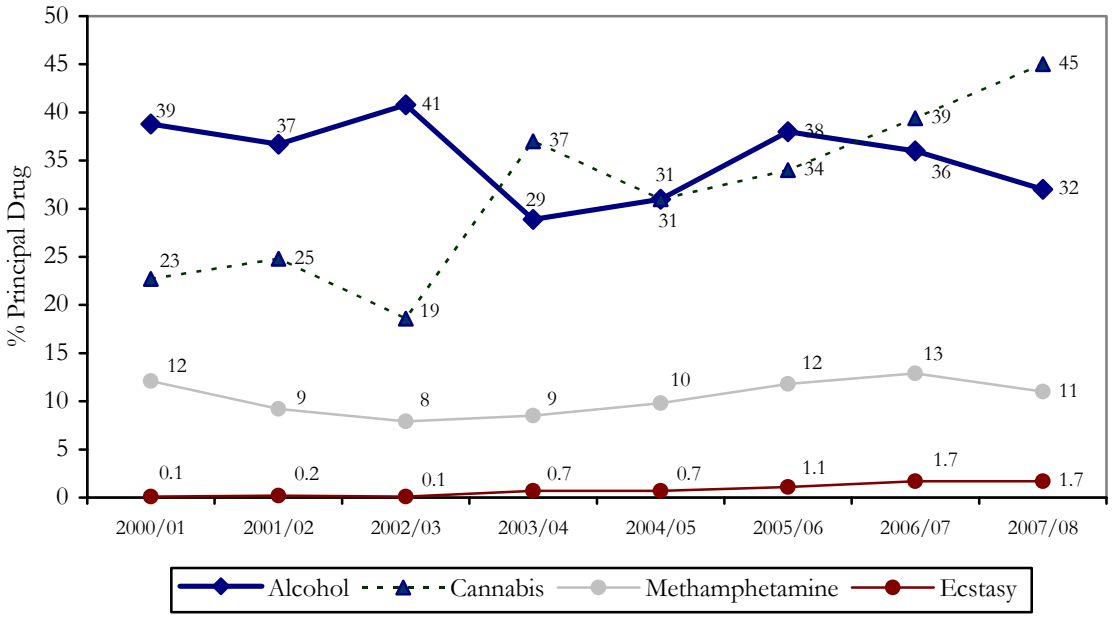
Source: ADIS Tasmania reports, Turning Point Alcohol and Drug Centre
Note: Calls referring to ecstasy were not specified in the 2003/04, 2005/06 and 2007/08 reports.

12.7.2 National Minimum Data Set (NMDS) treatment episode data

Figure 29 shows the proportion of treatment episodes in which the principal drug of concern was alcohol, cannabis, methamphetamine or ecstasy, based on findings from the National Minimum Data Set (NMDS) for alcohol and other drug treatment services in Tasmania (AIHW, 2008c). Data for the 2008/09 financial year were not available at the time of publication.

Of all drug treatment episodes reported to the NMDS in Tasmania during 2007/08, over two-fifths (45%) involved cannabis as the principal drug of concern, one-third (32%) involved alcohol and one-tenth (11%) involved cocaine. While treatment episodes in which ecstasy was the principal drug of concern only accounted for 1.7% (95CI 1.2-2.3%) of all episodes, this is a significantly greater proportion relative to 2003/04 (0.7%, 95%CI: 0.4-1.1). It should be noted, however, that this relates to 2-25 treatment episodes per annum.

Figure 29: Tasmanian Alcohol and Other Drug Treatment Services Minimum Data Set: Principal drug of concern, 2000/01-2006/07



Source: Australian Institute of Health and Welfare

12.8 Hospital admission indicator data

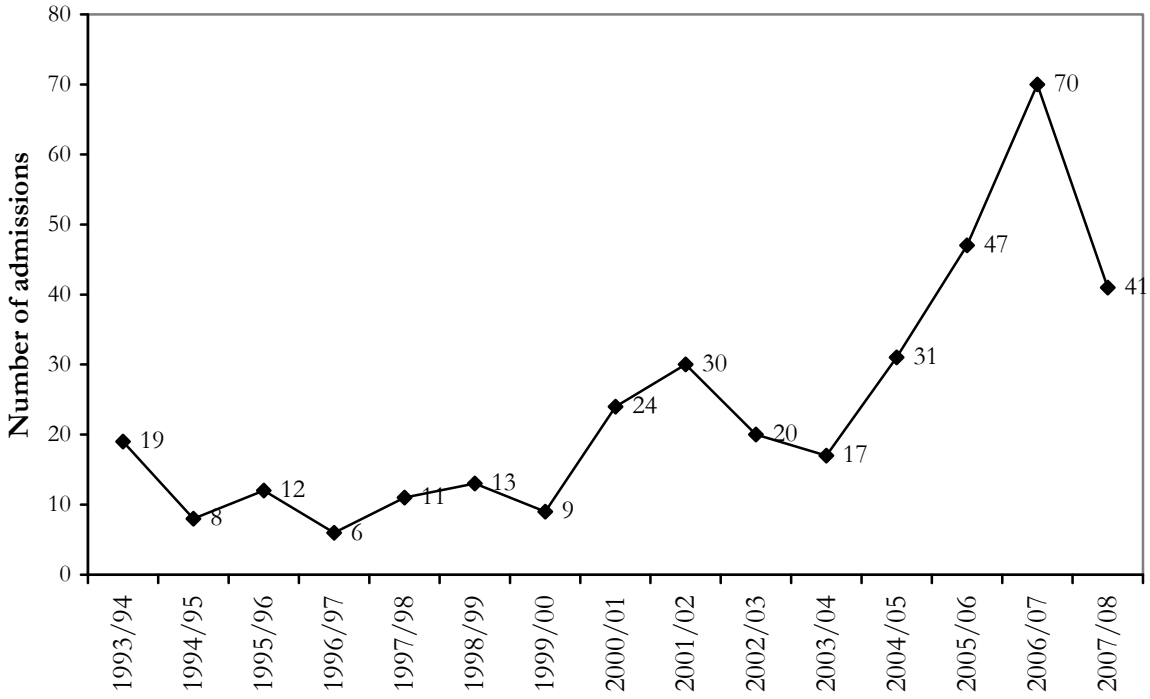
Hospital morbidity data in relation to use of drugs have been provided by the Australian Institute of Health and Welfare for the 1993/04 to 2007/08 financial year periods. These data relate to Tasmanian public hospital admissions, for individuals aged between 15 and 54 years, where use of each substance was recorded as the 'principal diagnosis' – namely, where the effect of the substance was established, after study, to be chiefly responsible for occasioning the patient's episode of care in hospital (with the exception of admissions for psychosis and withdrawal). These figures were based on diagnoses coded according to the International Classification of Diseases (ICD) 10, second edition. It is important to note that data from the state's single public specialist detoxification centre are only included in this dataset from June 2002. Data is provided for hospital admissions in relation to cannabis, methamphetamine and cocaine. Hospital admission data for opioids can be found in the 2009 IDRS report (de Graaff & Bruno, 2010). There are no objective hospital admission data in relation to substances such as ecstasy, ketamine, GHB, LSD, and MDA in Tasmania.

12.8.1 Cannabis

Tasmanian public hospital admissions where cannabis use was noted as the principal diagnosis are presented in Figure 30 below. The number of cases per annum has increased in recent years: between 1993/04 and 1999/00 there were around 11 cases per annum (6-19) but this has doubled to an average of 24 cases per annum between 2000/01 and 2004/05 (range 24-31). In the 2005/06 and 2006/07 reporting periods there were further notable increases to 47 and 70 cases per annum respectively. However, there was a reduction in 2007/08 relative to 2006/07, with 41 cases reported.

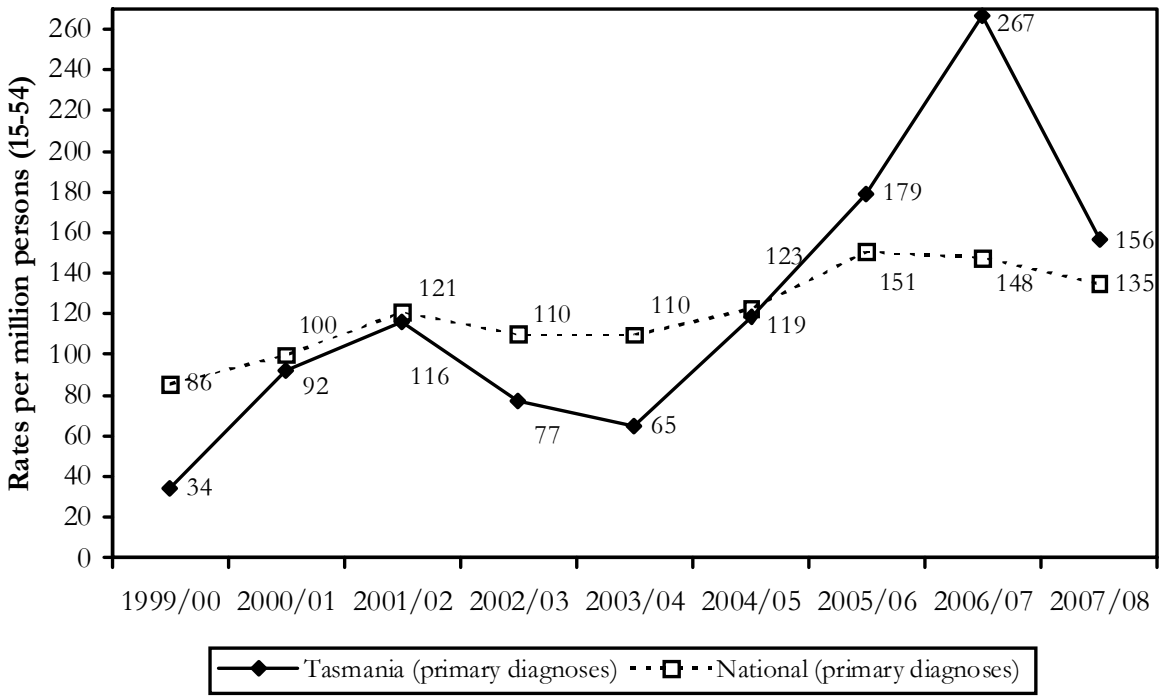
When the population-adjusted rates of Tasmanian admissions are compared with those nationally (Figure 31), it is clear that Tasmanian admission rates in 2007/08 are slightly higher those seen nationally (156 vs. 135 admissions per million population). However, this marks a return to admission rates that are more comparable to the national rates, as Tasmanian admission rates were substantially higher than the national rates in 2006/07.

Figure 30: Public hospital admissions (aged 15-54) in Tasmania where cannabis use was noted as the primary factor contributing to admission, 1993/94-2007/08



Source: Australian Institute of Health and Welfare (Roxburgh & Burns, in press)

Figure 31: Public hospital admissions (aged 15-54) where cannabis was noted as the primary contribution to admission, rates per million population for Tasmania and Australia, 1999/00-2007/08

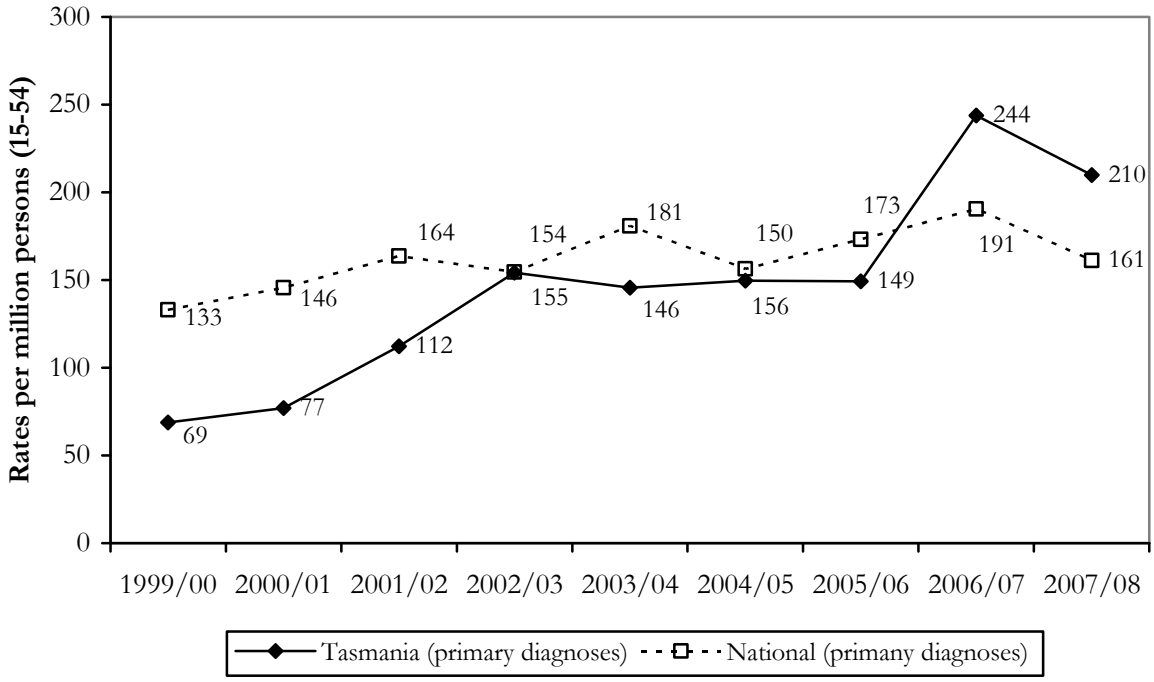


Source: Australian Institute of Health and Welfare (Roxburgh & Burns, in press)

12.8.2 Methamphetamine

Tasmanian public hospital admissions where methamphetamine use was noted as the principal diagnosis (rates per million population) are presented in Figure 32 below. Both local and national admission rates were increasing steadily between 1999/00 and 2001/02, and began to plateau in 2002/03 (national) and 2003/04 (Tasmania). As such, between the 2002/03 and 2005/06 periods, the Tasmanian admission rates remained relatively stable and were very similar or somewhat lower than those seen nationally. However, in 2006/07 there was a substantial increase in the Tasmanian admission rate, to a level considerably higher than the national figure (244 vs. 191 admissions per million population). There was a reduction in the Tasmanian admission rates in 2007/08 but they still remain above the national admission rate for this period (210 vs. 161 admissions per million population).

Figure 32: Public hospital admissions (aged 15-54) where methamphetamine was noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia 1999/00-2007/08

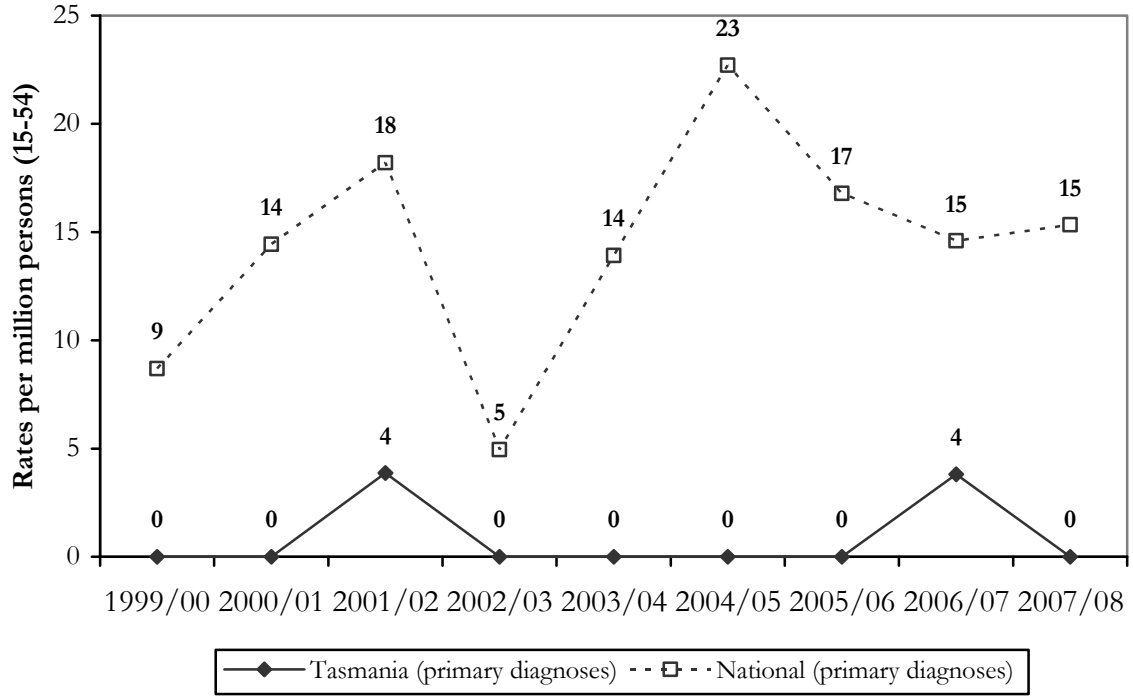


Source: Australian Institute of Health and Welfare (Roxburgh & Burns, in press)

12.8.3 Cocaine

Consistent with the apparent low levels of availability and use of cocaine locally, cocaine-related hospital admissions are virtually non-existent. When the local rates of cocaine-related public hospital admissions amongst those aged between 15 and 54 years are compared to the national Australian rate (Figure 33), these are substantially lower, with the total local cases where cocaine was noted as the primary factor contributing to the admission remaining substantially less than that of the national rate between 1999/00 and 2007/08.

Figure 33: Public hospital admissions (aged 15-54) where cocaine was noted as the primary factor contributing to admission, rates per million population for Tasmania and Australia, 1999/00-2007/08



Source: Australian Institute of Health and Welfare (Roxburgh & Burns, in press)

12.9 Summary of health-related issues

- **Overdose.** Less than one-tenth of the 2009 REU sample (7%) reported an overdose episode in the last six months, with 1% reporting a recent overdose episode on a stimulant drug (e.g., methamphetamine, ecstasy) and 6% reporting a recent overdose on a depressant drug (e.g., alcohol, GHB). While these symptoms of overdose were not medically trivial, most participants had not received any formal medical treatment in relation to an overdose episode.
- **Ecstasy dependence.** Almost one-fifth (18%) of REU reported experiencing significant symptoms of dependence in relation to ecstasy.
- **Methamphetamine dependence.** Almost one-tenth (8%) of those who had recently used methamphetamine had experienced significant symptoms of dependence in relation to methamphetamine.
- **Access to health services.** Despite regular substance use, just one-sixth (13%) of the 2009 REU sample had accessed health services in relation to drug use in the preceding six months, and when they did so, this was most commonly a GP (69%). Participants were most likely to access services in relation to the use of ecstasy (62%), cannabis (39%), other opioids (39%) or GHB (23%).
- **Mental health problems.** Almost one-third (30%) of the 2009 REU sample reported experience of mental health problems during the six months prior to the interview, most commonly depression (67%) and/or anxiety (73%). Just over one-half (53%) of those who had experienced mental health problems had attended a health professional in relation to these problems during this time.
- **Psychological distress.** Mean scores on the Kessler psychological distress scale (K10) were slightly higher among the current sample of REU relative to the general Australian population. The proportion of the sample with scores categorised as 'very high' was similar to the general Australian population; however, the proportion of REU with scores classified as 'high' or 'moderate' was significantly greater than the general population. Those classified in the 'high' range have increased rates of experience of mental health problems and may benefit from interventions with health professionals.
- **Personal Wellbeing Index (PWI).** The mean PWI scores of REU were similar to those seen in the general population and within the normal range (between 60 and 90 percentage points) of wellbeing scores for each domain.
- **Chronic physical conditions.** Asthma (39%) was the most common chronic physical condition reported followed by hay fever (35%), skin problems (22%), vision problems (22%), back/neck problems (20%) and migraine (14%). A significantly higher proportion of the EDRS sample reported having been diagnosed with asthma compared to the general population (39% vs. 25%).
- **Other problems.** Two-fifths (42%) reported any recurrent drug-related problem, suggestive of possible substance abuse. One-quarter of the 2009 sample (26%) reported that drug use had recurrently interfered with their responsibilities at home, work, or school during the six months preceding the interview. One-fifth had recurrently put themselves or others at risk (19%) and smaller proportions had experienced recurrent social/relationship (15%) problems or legal/police problems (5%) in relation to drug use. Problems were most commonly attributed to ecstasy, alcohol, or cannabis. Males were more likely to experience risk problems relative to females.

12.9 Summary of health-related issues (continued)

- **Tasmanian drug treatment data.** While a consistent number of calls (approximately 15 per annum) have been made to the Tasmanian Alcohol and Drug Information Service over the last few years in relation to ecstasy, these account for a small percentage (~2%) of the calls made to this service.
  Data from the National Minimum Data Set (NMDS) for alcohol and other drug treatment services in Tasmania shows that while ecstasy was the principal drug of concern in only 1.7% of all treatment episodes in the 2007/08 period, this is a significantly greater proportion relative to 2004/05 (0.7%), suggesting a gradual increase. It should be noted, however, that this data relates to 25 treatment episodes on 2007/08.
- **Tasmania hospital admission data**. In 2005/06 cannabis admissions were higher than the national rate (179 and 151 admissions per million persons respectively), with a further substantial increase seen in 2006/07 (267 vs. 142 admissions per million population). There was a reduction in Tasmanian admission rates in 2007/08 such that they are more comparable with those seen nationally but still slightly higher (156 vs. 135 admissions per million population).
  Tasmanian hospital admission rates for methamphetamine increased steadily between 1999/00 and 2002/03 followed by a plateau between 2003/04 and 2005/06. In 2006/07, there was a substantial increase in the local rate of methamphetamine-related admissions, to a level that is considerably higher than the national rate (244 vs. 185 admissions per million persons respectively). There was a reduction in the Tasmanian admission rates in 2007/08 but they still remain above the national admission rate for this period (210 vs. 161 admissions per million population).
  There has been very few hospital admissions recorded in Tasmania in relation to cocaine.

13.0 CRIMINAL ACTIVITY, POLICING AND MARKET CHANGES

13.1 Reports of criminal activity among REU

Almost one-quarter (24%) of the 2009 REU sample self-reported engaging in some type of crime within the last month, (see Table 60). Consistent with previous years, the most common crime was drug dealing, with almost one-fifth (18%) reporting dealing drugs for cash profit in the last month. The majority of REU that reported drug dealing for cash profit had done so less than weekly in the last month (n=13) and others had done so at least once a week (n=2), more than once a week (n=2) or daily (n=2).

Smaller proportions of the sample reported committing property crime (11%), violent crime (1%), or fraud (1%) during the last month. One-half (n=6) of those that had recently committed property crime and all of those who had committed violent crime or fraud had done so less than weekly in the preceding month.

One-tenth of the sample (10%) had been arrested during the 12 months preceding the interview. These participants had been arrested for a variety of offences (see Table 60), with only small proportions having been arrested for drug-related offences, such as use/possession (n=3) or dealing/trafficking (n=1).

Table 60: Criminal activity reported by REU, 2003-2009

Criminal activity in the last month (%)	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Any crime	30	19	15	26	28	28	**24**
Drug dealing	25	16	8	21	24	24	**18**
Property crime	4	6	4	5	11	6	**11**
Fraud	1	-	3	3	1	2	**1**
Violent crime	-	-	2	1	5	2	**1**
Arrested in the last 12 mths (%)	6	3	9	8	10	6	**10**
Arrested for property crime	1	3	1	1	1	-	**3**
Arrested for use/possession	-	-	1	1	1	1	**3**
Arrested for violent crime	-	-	1	1	2	-	**1**
Arrested for dealing/trafficking	-	-	2	-	-	-	**1**
Arrested for driving offence	1	-	-	-	-	-	**2**
Arrested for DUI alcohol	2	-	2	2	3	2	**3**
Arrested for DUI drugs	-	-	1	-	-	-	**1**
Arrested for other reason	1	-	2	2	5	4	**4**

Source: EDRS interviews
Note: No distinction made between dealing for cash profit and ecstasy profit prior to 2004

13.2 Perceptions of police activity towards REU

REU were asked if there had been any changes in police activity towards ecstasy users during the six months preceding the interview (Table 61). Just over one-tenth (15%) perceived a recent increase in police activity. A majority of the sample (85%) indicated that police activity had not made it more difficult for them to score drugs during the six months preceding the interview.

Those that commented on increased police activity noted a recent increase in the use of sniffer dogs (n=4), an increased likelihood of being approached/searched in the street (n=3), increased undercover police presence at nightclubs/venues (n=2) and generally increased police presence.

Table 61: Perceptions of police activity by REU, 2003-2009

Perception	2003 n=100	2004 n=100	2005 n=100	2006 n=100	2007 n=100	2008 n=100	**2009 n=100**
Any recent changes in police activity?							
Decreased (%)	1	4	1	1	4	1	**-**
Stable (%)	24	35	43	24	29	33	**42**
Increased (%)	55	31	27	30	23	26	**15**
Don't know (%)	20	30	29	45	43	40	**43**
Police activity made it more difficult to score drugs recently?							
Yes (%)	28	17	15	15	29	32	**15**
No (%)	73	83	85	85	71	68	**85**
Don't know (%)	-	-	-	-	-	-	**-**

Source: EDRS interviews

13.3 REU experiences with drug detection 'sniffer' dogs

REU were asked about their responses to police sniffer dogs at events (Table 62). Two-fifths (41%) of REU had seen sniffer dogs at events in the six months preceding the interview. Thirty participants indicated that they had had drugs with them on an occasion when sniffer dogs were present at an event and two participants had been searched by police due to a positive identification from a sniffer dog and were arrested for possession.

Table 62: Perception and experience of sniffer dogs by REU, 2007-2009

	2007 n=100	2008 n=100	**2009 n=100**
Seen sniffer dogs in last 6 months (%)	9	17	**41**
Seen sniffer dogs when you have had drugs on you (%)	4	10	**30**
Searched by police due to positive sniffer dog notification (%)	-	-	**2**

Source: EDRS interviews

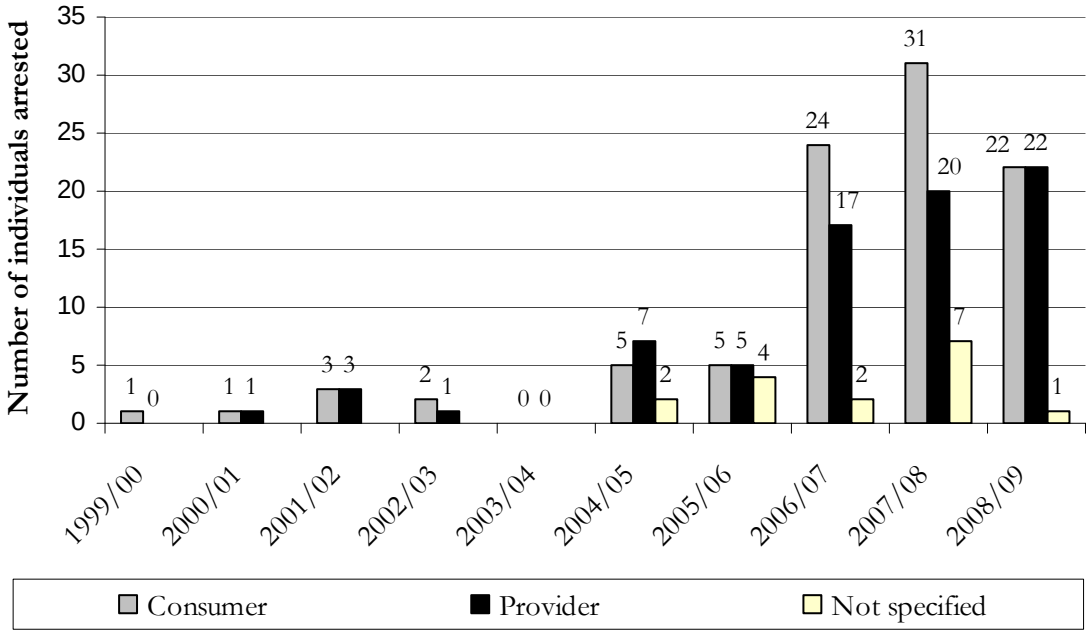
13.4 Drug-related arrests and seizures made by Tasmania Police

13.4.1 Ecstasy

Figure 34 shows the number of police incidents recorded by Tasmania Police for ecstasy possession and use (consumers) and for dealing or trafficking of ecstasy (providers) from 1999/00 to 2008/09. There were few ecstasy-related police incidents between the 1999/00 and 2003/04 financial years. An increase in the number of ecstasy-related arrests can be seen during the 2004/05 and 2005/06 financial years relative to previous years, and there were substantially more consumer and provider arrests between 2006/07 and 2008/09 relative to all previous years.

Figure 35 shows that there were no ecstasy tablets seized by Tasmania Police prior to the 1999/00 financial year. Since this time the number of tablets and the number of seizures have increased, with a considerable increase observed in the number and total weight of seizures in the 2003/04 reporting period in comparison to the previous three years. In 2004/05 and 2005/06, the number and size of seizures remained relatively stable. In the 2006/07 reporting period there was another large increase in both the size and number of seizures relative to previous years with almost three thousand (2,811) tablets seized from 55 seizures. The number of seizures has remained relatively stable since this time but there was a substantial increase in the total number of tablets seized during the 2008/09 period (4,478 tablets).

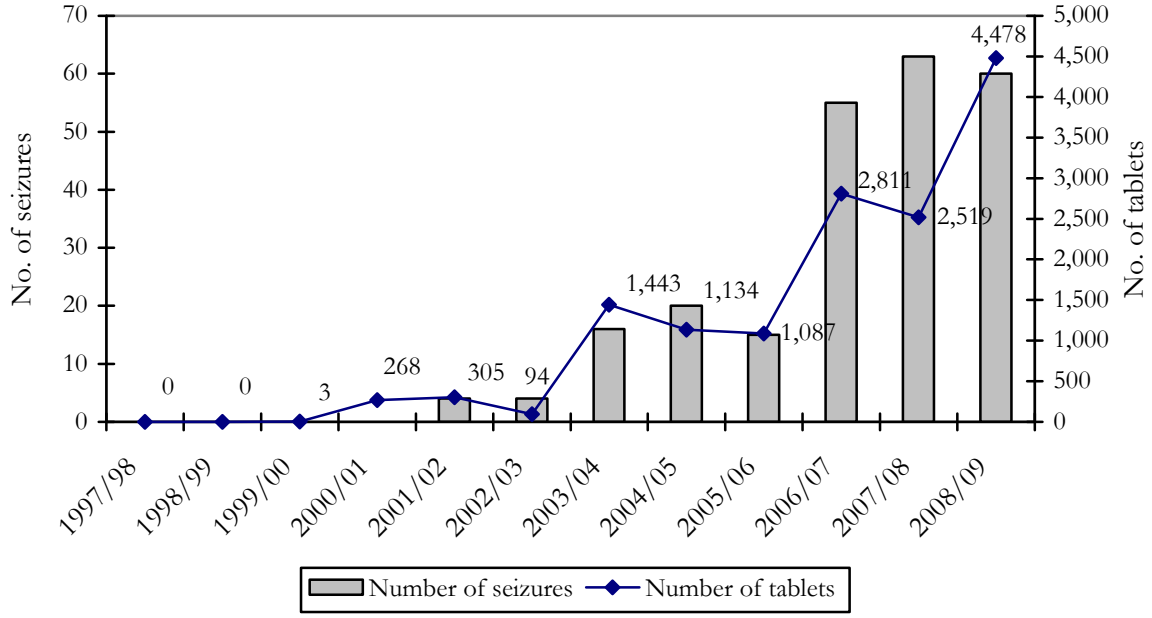
Figure 34: Number of police incidents recorded for ecstasy possession/use (consumers) and deal/traffic (providers), 1999/00-2008/09



Source: State Intelligence Services, Tasmania Police

Note: Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

Figure 35: Total number of tablets suspected to contain ecstasy seized by Tasmania Police, 1997/98-2008/09



Source: State Intelligence Services, Tasmania Police

Note: Number of seizures was not available for the 1999/00 and 2000/01 periods; data includes only those seizures that were recorded in tablet/capsule form; Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules

13.4.2 Methamphetamine

Arrest data for methamphetamine-related offences indicate a marked increase in the number of arrests between 1998/99 and 2001/02 (Table 63). The main increase over this period related to those charged with 'consumer'-type offences (such as use and possession), although there was a concomitant, albeit less marked, increase in the number of supply-type arrests. During 2002/03 and 2004/05, there were reductions in both consumer and provider arrest rates. Since 2004/05, there had been steady increases in the number of both arrest types, however, in the 2008/09 reporting period there were considerably fewer consumer and provider arrests relative to the previous two reporting periods.

Table 63: Consumer and provider arrests for methamphetamine and related substances, 1996/97-2008/09

	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	**2008/09†**
	n	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**	**n**
Consumer													
Female	3	5	0	4	9	18	8	10	9	10	24	26	**7**
Male	15	9	4	14	51	53	34	21	34	33	84	81	**18**
Unknown	0	1	2	2	0	0	0	0	0	0	0	0	**0**
Total	18	15	6	20	60	71	42	31	43	43	108	107	**25**
Provider													
Female	0	0	0	0	1	6	2	1	3	9	14	13	**5**
Male	2	0	1	7	9	12	17	7	23	25	55	57	**41**
Unknown	0	0	0	1	0	0	0	0	0	0	0	0	**0**
Total	2	0	1	8	10	18	19	8	26	34	69	70	**46**
Total Arrests	20	15	7	28	70	89	66	39	69	83	179	177	**72***

Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

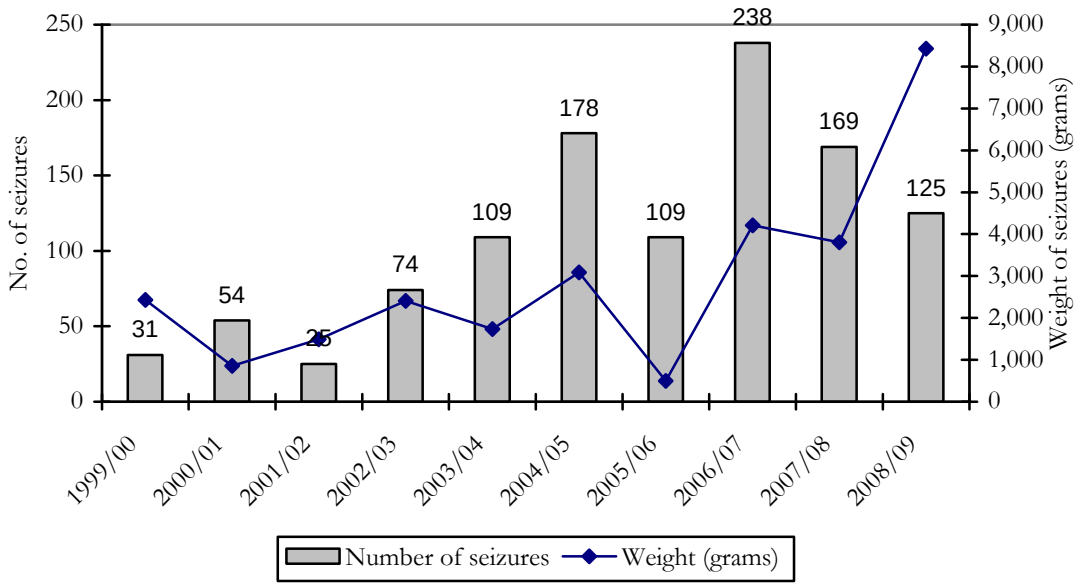
Note: 2008/09 data was provided by Tasmania Police State Intelligence Service and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules. Cases here relate to both arrest and summons charges.

'Consumer' refers to persons charged with use-type offences (e.g., possession, administration), while 'provider' refers to persons charged with supply-type offences (e.g., supply, cultivation or manufacture). Where a person has been charged with multiple offences within a category, that person is only counted once.

*Data included 1 methamphetamine-related offence without data indicating if they were providers/consumers

Tasmania Police seizures (Figure 36) of drugs suspected to be methamphetamine have varied somewhat in recent years. There have been notable increases in both weight and number of seizures between 2002/03 and 2006/07 (seizures for 2005/06 were only reported to ACC for part of the financial year). In subsequent years, there have been slight decreases in the number of methamphetamine seizures; however, the total weight of these seizures has increased, to more than 8 kilograms in the 2008/09 reporting period. In addition to the seizures shown in Figure 36 for 2008/09, there were 12 seizures totalling 959 tablets.

Figure 36: Seizures of methamphetamine by Tasmania Police, 1999/00-2008/09



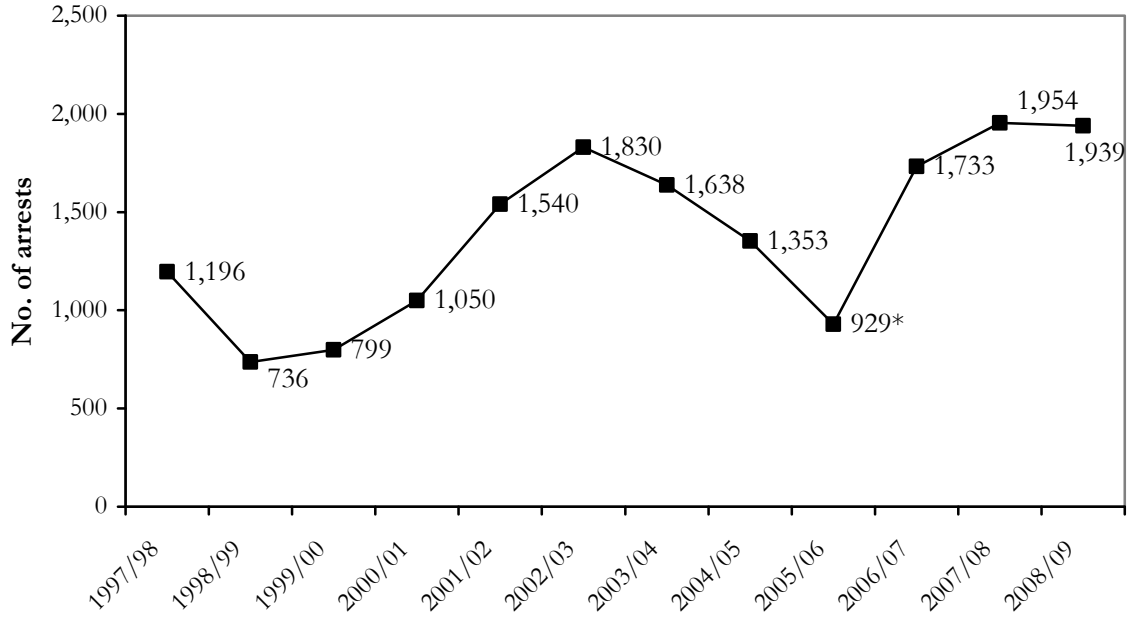
Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

Note: Seizures for 2005/06 were only reported to the ACC for part of the financial year. 2008/09 was provided by Tasmania Police State Intelligence Service, includes only seizures weighed in grams, and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

13.4.3 Cannabis

Figure 37 shows the number of cannabis-related arrests made by Tasmania Police between 1997/98 and 2008/09. Cautions and arrests relating to cannabis increased steadily from 736 in 1998/99 to 1,830 in 2002/03. This trend reversed in 2003/04, declining to 929 cases in 2005/06. However, it should be noted that arrests for 2005/06 were only reported to the ACC for part of the financial year. A substantial increase in cannabis-related arrests was observed in 2006/07 with 1,733 cases reported. This upward trend continued in 2007/08, and was stable in 2008/09 with 1,939 cases reported. It is likely that much of the gradual increase in cannabis-related arrests over the years reflects the increase in utilisation of 'official' cautions and diversions by Tasmania Police (which are included in these statistics) over 'unofficial' warnings, which would not be recorded in these statistics in preceding years.

Figure 37: Number of arrests (including cautions and diversions) for cannabis-related offences in Tasmania, 1997/98-2008/09



Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

Note: 2008/09 data were provided by State Intelligence Services and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules. *Arrests for 2005/06 were only reported to the ACC for part of the financial year

The Tasmanian Illicit Drug Diversion Initiative, which primarily but not exclusively relates to cannabis consumer offences has been well supported by police, with well in excess of 1,000 diversions made per annum between 2002/03 and 2006/07 (Table 64). A notable decrease was apparent between 2007/08 (1,681 diversions) and 2008/09 (891 diversions). The number of second- and third-level diversions (to health interventions), which have fluctuated in recent years, decreased from 634 interventions in 2007/08, to 343 in 2008/09 – a rate similar to those reported prior to 2007/08.

Table 64: Drug diversions or cautions issued by Tasmania Police, 2000/01-2008/09

	2000 /01	2001 /02	2002 /03	2003 /04	2004 /05	2005 /06*	2006 /07	2007 /08	**2008 /09**
Number of cautions/diversions state-wide	612	978	1,337	1,398	1,330	1,158	1,361	1,681	**891**
Number diverted to health intervention state-wide	151	n/a	263	179	365	236	369	634	**343**

Source: Department of Police and Emergency Management Corporate Reporting Services, Annual Corporate Performance Reports – Total District Drug Diversions; Alcohol and Drug Service

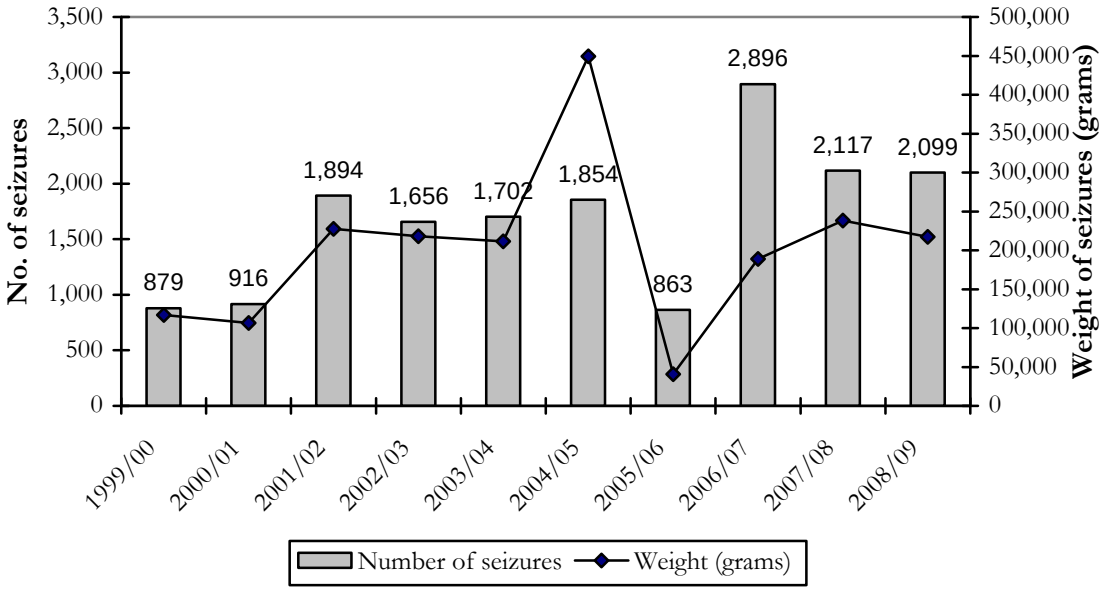
Note: These figures may differ from data submitted to the Australian Crime Commission if the decision to charge persons was altered to a caution after the figures were forwarded to State Intelligence Services

*Arrests and cautions for 2005/06 were only reported for part of the financial year

'n/a' Refers to cases where the relevant data were not provided to the authors

Examining cannabis seizures made by Tasmania Police, between 2001/02 and 2003/04, the volume of cannabis seized remained relatively stable (between 211,000 and 228,000 grams per financial year); however, in 2004/05 the volume of seizures substantially increased to 450,000 grams (Figure 38). While seizure data for Tasmania Police was only reported to the ACC for part of the financial year, in 2005/06, the volume of cannabis seizures reported by Tasmania Police was notably lower, less than 10% of that reported in the previous financial year (down to 41,000 grams). In 2006/07, the volume of seizures increased, returning to a similar level as reported between 2001/02 and 2003/04, and in 2007/08 there was another slight increase in the volume of seizures though the total number of seizures was lower relative to 2006/07. Both the volume and number of seizures was relatively stable in 2008/09. In addition to the seizures shown in Figure 38 for 2008/099, Tasmania Police reported 481 seizures of plants (476 seizures totalling 6261 plants and 5 seizures totalling 801 grams), two seizures of hash block totalling 445 grams, and 279 seizures of seeds.

Figure 38: Seizures of cannabis by Tasmania Police, 1999/00-2008/09



Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

Note: Seizures for 2005/06 were only reported to the ACC for part of the financial year

Data in 2008/09 were provided by Tasmania Police State Intelligence Service, include only non-plant seizures that were weighed in grams, and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

13.4.4 Cocaine

Tasmania Police have reported few seizures or arrests in relation to cocaine between the 1997/98 and 2008/09 financial years (Table 65). In the 2008/09 reporting period Tasmania police reported one consumer arrest in relation to cocaine and two seizures totalling 7 grams (Tasmania Police State Intelligence Services).

Table 65: Consumer and provider arrests for cocaine, 1997/98-2008/09

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	**2008/09**
Arrests (n)												
Consumer	0	0	0	2	1	0	0	0	0	0	0	**1**
Provider	0	0	0	0	0	0	0	0	0	1	0	**0**
Total	0	0	0	2	1	0	0	0	0	1	0	**1**
Seizures (n)	0	0	0	1	0	0	0	0	1	2	0	**2**
Weight (g)	0	0	0	1	0	0	0	0	1	7	0	**7**

Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

Note: 2008/09 data was provided by Tasmania Police State Intelligence Service and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

13.4.5 Hallucinogens

ACC data for hallucinogens includes tryptamines such as LSD and psilocybin (mushrooms). There have been a small number of arrests and seizures in Tasmania in relation to hallucinogens between 1997/98 and 2007/08 (Table 66). In the 2008/09 period Tasmania police reported two consumer arrests, two seizures of mushrooms totalling 28 grams and 4 seizures of LSD totalling 19 tabs (Tasmania Police State Intelligence Services).

Table 66: Consumer and provider arrests for hallucinogens, 1997/98-2008/09

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	**2008/09**
Arrests (n)												
Consumer	2	0	1	1	0	0	1	0	1	1	1	**2**
Provider	0	0	0	0	1	1	0	1	2	1	2	**0**
Total	2	0	1	1	1	1	0	1	3	2	3	**2**
Seizures (n)	5	0	0	0	0	0	1	3	0	2	1	**6**
Weight (g)	329	0	0	0	0	0	10	560	0	10	18	**28**
Units	6	0	0	0	0	0	0	0	0	0	0	**19**

Source: Australian Crime Commission (previously the Australian Bureau of Criminal Intelligence) and State Intelligence Services, Tasmania Police

Note: 2008/09 data was provided by Tasmania Police State Intelligence Service and are preliminary and subject to revision. Totals may differ from those reported in the Department of Police and Emergency Management annual report due to differences in counting rules.

13.4.6 Ketamine

There are few objective data on seizures and arrests in relation to ketamine in Tasmania as it is not listed as a separate drug in the illicit drug data reports (ACC). However, drug-specific data provided by Tasmania Police suggests no ketamine seizures or arrests were made during the 2003/04, 2004/05 reporting periods. There was one seizure of 1.5 grams of ketamine reported in 2005/06, with no seizures or arrests recorded in the 2006/07, 2007/08 or 2008/09 reporting periods.

13.4.7 GHB

There are no objective data on seizures and arrests in relation to GHB in Tasmania, as it is not listed as a separate drug in the illicit drug data reports (ACC).

13.4.8 MDA

The ACC reports seizures and arrests for drugs classed as phenethylamines which includes MDMA (ecstasy) as well as 3,4-methylendioxyethylamphetamine (MDEA), 3,4-methylendioxyamphetamine (MDA) and paramethoxyamphetamine (PMA). Thus, there are no data from Tasmania Police that relate specifically to MDA, though it is possible that some MDA-related seizures and arrests are inadvertently reported in Section 13.4.1 in relation to ecstasy.

13.4.9 Drug-related charges in Tasmanian courts

As shown in Table 67, the number of individuals before the Supreme Court for selling or trafficking in drugs has increased from 22 individuals in 1996/97 to 75 in 2007/08. As part of the context of these increases, the *Misuse of Drugs Act 2001* implemented changes to the existing law and may have expanded the number of prosecutions appropriate for presentation to the Supreme Court. The Act was further amended in 2004. It is thus likely that the recent apparent increase in charges (from 20 in 2003/04 to 75 in 2007/08) may largely relate to such legal changes rather than being necessarily reflective of substantial changes in the rate of such offences. Data was not provided in 2008/09.

The number of individuals before the Magistrates Court for drug-related matters has remained relatively stable between 2003/04 and 2007/08 (Table 67, Figure 39), however, in 2008/09, the number of individuals before the court for possession and use offences increased from a range of 414-517 individuals per financial year to 886.

Between 2004/05 and 2006/07, the number of individuals incarcerated at Hobart Prison in relation to drug offences remained stable (between 55 and 57 per financial year[8]), however, in 2008/09, this number increased slightly to 84 individuals (Table 67). The number of offences among those incarcerated has increased from 83 in 2003/04 to 165 in 2008/09 (Table 67). These changes largely relate to increases in the numbers imprisoned on charges of trafficking in a controlled substance (seven charges in 2003/04 and 52 in 2008/09) and possession of a controlled plant or its products (21 charges in 2003/04 and 38 in 2008/09 (see de Graaff & Bruno, 2010).

[8] In 2007/08, the total number of people incarcerated in the Hobart Prison was not provided to the authors.

Table 67: Number of individuals before Tasmanian courts or imprisoned on drug charges, 1996/97-2008/09

	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	**2008/09**
SUPREME COURT OF TASMANIA													
No. indictable charges relating to the *Misuse of drugs Act**	22	18	22	27	14	15	30	20^	33	47	66	75	**n/p**
HOBART MAGISTRATES COURT													
No. individuals before court (alleged no. of offences) for:													
dealing and trafficking in drugs	n/p	30 (40)	28 (33)	23 (28)	42 (47)	39 (48)	159 (180)	120 (138)	123 (130)	106 (118)	97 (106)	104 (114)	**128 (130)**
importing /exporting drugs	n/p	4 (5)	7 (8)	5 (8)	2 (2)	0 (0)	1 (1)	1 (1)	0 (0)	2 (3)	0 (0)	0 (0)	**0**
manufacturing/growing drugs	n/p	201 (260)	164 (189)	101(124)	144 (163)	142 (194)	186 (202)	102 (105)	80 (81)	93 (96)	107 (114)	96 (102)	**98 (102)**
possession and/or use of drugs	n/p	469 (928)	342 (654)	195(428)	263(544)	277 (542)	438 (896)	414 (829)	414 (800)	422(823)	480 (996)	517 (982)	**886 (1056)**
other drug offences	n/p	229 (284)	178 (251)	105(169)	113(155)	102 (104)	34 (38)	4 (6)	1 (1)	1 (1)	0 (0)	1 (1)	**1 (1)**
HOBART PRISON^													
Number of individuals incarcerated	21	42	26	29	n/p	16	35	36	55	57	56	n/p	**84**
Number of offences among those incarcerated	33	77	50	44	25	27	78	83	101	117	128	144	**165**

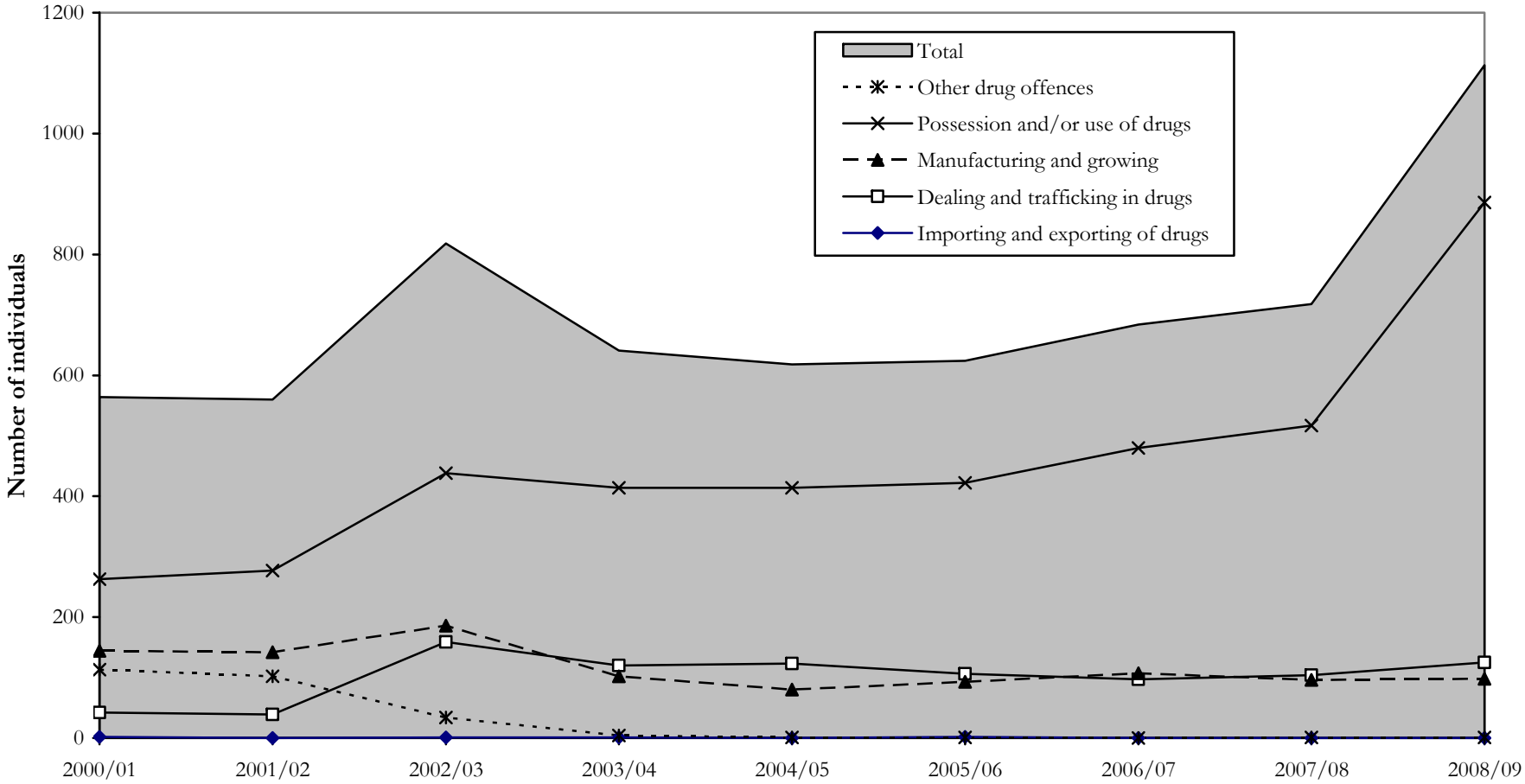
Sources: Department of Public Prosecutions (Supreme Court data); Magistrates Court (Magistrates Court data); Corrective Services (Prison data), Department of Justice and Industrial Relations

*This includes all indictable charges under the *Misuse of Drugs Act 2001*, which includes manufacturing a controlled drug for sale, cultivating a controlled plant for sale, possession of thing used in manufacture of a controlled substance for sale, possession of thing used for cultivation of a controlled plant for sale, manufacturing a controlled precursor intended for use in manufacture of controlled drugs for sale, selling a controlled precursor for use in manufacturing a controlled drug, trafficking in controlled substances and controlled drugs

^numbers of incarcerations refer to cases presented before both the Supreme and Magistrates courts

'n/p' refers to cases where data were not provided to the authors

Figure 39: Number of individuals before the Hobart Magistrates Court for drug-related offences, 2000/01-2008/09



Source: Hobart Magistrates Court

13.5 Summary of criminal and police activity

- **Criminal activity.** The self-reported level of criminal activity among the 2009 REU sample was relatively low. With the exception of dealing drugs (18%), around one-tenth of the REU interviewed had committed other criminal offences during the one month preceding the interview and one-tenth (10%) had been arrested during the preceding 12 months, generally for reasons unrelated to drug use.
- **Police activity.** Just over one-tenth of the REU sample (15%) perceived that there had been an increase in police activity towards ecstasy users in the last six months.
- **Arrests and seizures by Tasmania Police.** A substantial increase in the number of ecstasy tablets seized by Tasmania Police and the number of both consumer and provider arrests in relation to ecstasy was observed between the 2006/07 and 2008/09 reporting periods relative to any previous years. While the number of methamphetamine-related arrests substantially increased in the 2006/07 and 2007/08 periods relative to previous years, there was a substantial reduction in the 2008/09 reporting period. The number of methamphetamine-related seizures has also increased over the years, with a large increase in the total number of seizures in the 2006/07 period. While there were declines in the number of seizures in 2007/08 and 2008/09, there was a substantial increase in the weight of seizures in 2008/09. The number of cannabis-related arrests and cautions made by Tasmania police has increased since 2005/06, and remained relatively stable in 2008/09. An increase in the number of cannabis-related seizures was also observed in 2006/07, with seizures remaining relatively stable since this time.
- **Drug-related charges in Tasmanian courts.** The number of individuals before the Magistrates Court for possession and use offences increased from a range of 414-517 individuals per financial year to 886 in 2008/09. There was also a slight increase the number of individuals incarcerated at Hobart Prison in relation to drug offences in 2008/09 relative to previous years.

14.0 REFERENCES

Andrews, G. & Slade, T. (2001). Interpreting scores on the Kessler Psychological Distress Scale (K10). *Australian and New Zealand Journal of Public Health*, *25*, 494-497.

Ashton, M. (1999). The danger of warnings. *Drug and Alcohol Findings, 1,* 22-24.

Australian Drug Foundation (2005). ADF position on gamma-hydroxybutyrate (GHB). http://www.adf.org.au/article.asp?ContentID=ghb. (Accessed 28 Feb, 2005).

Australian Bureau of Criminal Intelligence (1997). *Australian Illicit Drug Report 1995-96*. Canberra: ABCI.

Australian Bureau of Criminal Intelligence (1998). *Australian Illicit Drug Report 1996-97*. Canberra: ABCI.

Australian Bureau of Criminal Intelligence (1999). *Australian Illicit Drug Report 1997-98*. Canberra: ABCI.

Australian Bureau of Criminal Intelligence (2000). *Australian Illicit Drug Report 1998-99*. Canberra: ABCI.

Australian Bureau of Criminal Intelligence (2001). *Australian Illicit Drug Report 1999-00*. Canberra: ABCI.

Australian Bureau of Criminal Intelligence (2002). *Australian Illicit Drug Report 2000-01*. Canberra: ABCI.

Australian Bureau of Statistics (1997). *1995 National Health Survey, SF-36 Population Norms Australia*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2001). *Information Paper: Use of the Kessler Psychological Distress Scale in ABS Health Surveys, Australia, 2001*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2006). *2004-05 National Health Survey: Summary of Results*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2008). 2007 *National Health of Mental Health and Wellbeing: Summary of Results*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics. (2009). *National Health Survey: Summary of Results 2007-2008*. Canberra: Australian Bureau of Statistics.

Australian Crime Commission (2003). *Australian Illicit Drug Report 2001-02*. Canberra: Australian Crime Commission.

Australian Crime Commission (2004). *Australian Illicit Drug Report 2002-03*. Canberra: Australian Crime Commission.

Australian Crime Commission (2005). *Australian Illicit Drug Report 2003-04*. Canberra: Australian Crime Commission.

Australian Crime Commission (2006). *Australian Illicit Drug Report 2004-05*. Canberra: Australian Crime Commission.

Australian Crime Commission (2007). *Australian Illicit Drug Report 2005-06*. Canberra: Australian Crime Commission.

Australian Crime Commission (2008). *Australian Illicit Drug Report 2006-07*. Canberra: Australian Crime Commission.

Australian Crime Commission (2009). *Australian Illicit Drug Report 2007-08*. Canberra: Australian Crime Commission.

Australian Institute of Health and Welfare (1999). *1998 National Drug Strategy Household Survey: First Results*. AIHW cat. no. PHE 15. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2000). *1998 National Drug Strategy Household Survey: State and Territory results*. AIHW cat. no. PHE 26. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2002a). *2001 National Drug Strategy Household Survey: First Results.* AIHW cat. no. PHE 35. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2002b). *2001 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW cat. no. PHE 37. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2005a). *2004 National Drug Strategy Household Survey: First Results.* AIHW cat. no. PHE 57. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2005b). *2004 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW cat. no. PHE 61. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2006). *Australia's Health 2006: The tenth biennial health report of the Australian Institute of Health and Welfare.* AIHW cat. no. AUS 73. Canberra: AIHW.

Australian Institute of Health and Welfare (2008a). *2007 National Drug Strategy Household Survey: First Results.* AIHW cat. no. PHE 98. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2008b). *2007 National Drug Strategy Household Survey: State and Territory Supplement.* AIHW cat. no. PHE 102. Canberra: AIHW (Drug Statistics Series).

Australian Institute of Health and Welfare (2008c). *Alcohol and other drug treatment services in Tasmania: Findings from the National Minimum Data Set (NMDS) 2006/07*. Canberra: Australian Institute of Health and Welfare.

Babor, T.F., Higgins-Biddle, J.C., Saunders, J.B., & Monteiro, M.G. (2001). *AUDIT – The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care.* Geneva: World Health Organization.

Black, E., Dunn, M., Degenhardt, L., Campbell, G., George, J., Kinner, S., Matthews, A., Quinn, B., Newman, J., & White, N. (2008). *Australian trends in ecstasy and related drug markets 2006: Findings from the Ecstasy and related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 10. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Breen, C., Topp, L., & Longo, M. (2002). *Adapting the IDRS methodology to monitor trends in party drug markets: Findings of a two-year feasibility trial.* National Drug and Alcohol Research Centre Technical Report No. 142. Sydney: University of New South Wales.

Breen C., Degenhardt L., White B., Bruno R., Chanteloup F., Fischer J., Johnston J., Kinner S., Moon C., Proudfoot P., & Weekley J. (2004*). Australian Party Drug Trends 2003: Findings of the Party Drugs Initiative.* National Drug and Alcohol Research Centre Monograph No. 52. Sydney: University of New South Wales.

Bruno, R. & McLean, S. (2004a). *Tasmanian Drug Trends 2003: Findings from the Illicit Drug Reporting System (IDRS).* National Drug and Alcohol Research Centre Technical Report No. 178. Sydney: University of New South Wales.

Bruno, R., & McLean, S. (2004b). *Tasmanian Party Drug Trends 2003: Findings from the Party Drugs Initiative (PDI).* National Drug and Alcohol Research Centre Technical Report No. 186. Sydney: University of New South Wales.

Bruno, R. (2005). *Tasmanian Drug Trends 2004: Findings from the Illicit Drug Reporting System (IDRS).* National Drug and Alcohol Research Centre Technical Report No. 215. Sydney: University of New South Wales.

Bruno, R. (2006). *Tasmanian Drug Trends 2005: Findings from the Illicit Drug Reporting System (IDRS).* National Drug and Alcohol Research Centre Technical Report No. 245. Sydney: University of New South Wales.

Bruno, R., Matthews, A., Topp, L., Degenhardt, L., Gomez, R., & Dunn, M. (2009). Can the Severity of Dependence Scale be usefully applied to 'ecstasy'? *Neuropsychobiology, Special Issue: Psychobiology of MDMA, 60,* 137-147.

Bruno, R., Gomez, R., & Matthews, A.J. (2009). Choosing a cut-off on the severity of dependence scale for ecstasy use. Poster presented at the Australasian Professional Society on Alcohol and other Drugs (APSAD) Conference, Darwin, Australia.

Bryant, F.B., & Smith, B.D. (2001). Refining the architecture of aggression: A measurement model for the Buss-Perry Aggression Questionnaire. *Journal of Research in Personality, 35,* 138-167.

Byard, R., Gilbert, J., James, R., & Lokan, R. J. (1998). Amphetamine derivative fatalities in South Australia – is "ecstasy" the culprit? *American Journal of Medical Pathology, 19*, 261-265.

Caldicott, D.G.E., Chow, F.Y., Burns, B.J., Felgate, P.D., & Byard, R.W. (2004). Fatalities associated with the use of γ-hydroxybutyrate and its analogues in Australasia. *Medical Journal of Australia,* 181*,* 310-313.

Chesher, G.B. (1993). Pharmacology of the sympathomimetic psychostimulants. In: D. Burrows, B. Flaherty & M. MacAvoy (Eds.), *Illicit Psychostimulant Use in Australia* (pp. 9-30). Canberra: Australian Government Publishing Service.

Commonwealth of Australia (2007). *Inquiry into the manufacture, importation and use of amphetamines and other synthetic drugs (AOSD) in Australia. Parliamentary joint committee on the Australian crime commission.* Canberra: The parliament of the commonwealth of Australia.

Cummins, R.A., Woerner, J., Gibson, A., Lai, L., Weinberg, M., & Collard, J. (2008). *Australian Unity Wellbeing Index Survey 20, Part A: The Wellbeing of Australians – Money, debt and loneliness.* Melbourne: Australian Centre on Quality of Life, Deakin University

de Graaff, B. & Bruno, R. (2007). *Tasmanian Drug Trends 2006: Findings from the Illicit Drug Reporting System (IDRS).* National Drug and Alcohol Research Centre Technical Report No. 273. Sydney: University of New South Wales.

de Graaff, B. & Bruno, R. (2008). *Tasmanian Drug Trends 2007: Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trends Series No. 5. Sydney: University of New South Wales.

de Graaff, B. & Bruno, R. (2009). *Tasmanian Drug Trends 2008: Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trends Series No. 23 Sydney: University of New South Wales.

de Graaff, B. & Bruno, R. (2010). *Tasmanian Drug Trends 2009: Findings from the Illicit Drug Reporting System (IDRS).* Australian Drug Trends Series. Sydney: University of New South Wales.

Degenhardt, L., Darke, S. & Dillon, P. (2003). The prevalence and correlates of gamma-hydroxybutyrate (GHB) overdose among Australian users. *Addiction, 98***,** 199-204.

Degenhardt, L., Bruno, R., & Topp, L. (2010). Is ecstasy a drug of dependence? *Drug and Alcohol Dependence, 107,* 1-10.

Dunn, M., Degenhardt, L., Campbell, G., George, J., Johnston, J., Kinner, S., Matthews, A., Newman, J., & White, N. (2007). *Australian trends in ecstasy and related drug markets 2006: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* National Drug and Alcohol Research Centre Monograph No. 61. Sydney: University of New South Wales.

Fetherston, J. and Lenton, S., 2006. *West Australian drug trends 2005: Findings from the Illicit Drug Reporting System (IDRS)*, NDARC Technical Report No. 252, NDARC, Sydney.

Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B. F., Hall, W., & Strang, J. (1995). The severity of dependence scale (SDS): Psychometric properties of the SDS in English and Australian samples of heroin, cocaine, and methamphetamine users. *Addiction, 90*, 607-614.

Hamida, S. B., Tracqui, A., de Vasconcelos, A. P., Szwarc, E., Lazarus, C., Kelche, C., Jones, B. C., & Cassel, J. C. (2008). Ethanol increases the distribution of MDMA to the rat brain: possible implications in the ethanol-induced potentiation of the psychostimulant effects

of MDMA. *The International Journal of Neuropsychopharmacology,* Published online by Cambridge University Press 02 Dec 2008 doi:10.1017/S1461145708009693.

Hando, J., Darke, S., Degenhardt, L., Cormack, S., & Rumbold, G. (1998). *Drug Trends 1997. A comparison of drug use and trends in three Australian states: Results from a national trial of the Illicit Drug Reporting System (IDRS*). Research monograph No. 36. Sydney: National Drug and Alcohol Research Centre.

Johnston, J., Barratt, M.J., Fry, C.L., Kinner, S., Stoové, M., Degenhardt, L., George, J., Jenkinson, R., Dunn, M., & Bruno, R. (2006). A survey of regular ecstasy users' knowledge and practices around determining pill content and purity: Implications for policy and practice. *International Journal of Drug Policy, 17,* 646-672.

Matthews, A., & Bruno, R. (2005). *Tasmanian Trends in Ecstasy and Related Drug Markets 2004: Findings from the Party Drugs Initiative (PDI).* National Drug and Alcohol Research Centre Technical Report No. 225. Sydney: University of New South Wales.

Matthews, A., & Bruno, R. (2006). *Tasmanian Trends in Ecstasy and Related Drug Markets 2005: Findings from the Party Drugs Initiative (PDI).* National Drug and Alcohol Research Centre Technical Report No. 251. Sydney: University of New South Wales.

Matthews, A., & Bruno, R. (2007). *Tasmanian Trends in Ecstasy and Related Drug Markets 2006: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* National Drug and Alcohol Research Centre Technical Report No. 281. Sydney: University of New South Wales.

Matthews, A., & Bruno, R. (2008). *Tasmanian Trends in Ecstasy and Related Drug Markets 2007: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 14. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A., & Bruno, R. (2009). *Tasmanian Trends in Ecstasy and Related Drug Markets 2008: Findings from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series No. 32. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Matthews, A. J., Bruno, R., Johnston, J., Black, E., Degenhardt, L., & Dunn, M. (2008). Factors associated with driving under the influence of alcohol and drugs among an Australian sample of regular ecstasy users. *Drug and Alcohol Dependence, 100*(1-2), 24-31.

Newcombe, R.G. (1998). Interval Estimation for the Difference Between Independent Proportions: Comparison of Eleven Methods. *Statistics in Medicine*; *17,* 873-890.

Reinert, D.F., & Allen, J.P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism: Clinical and Experimental Research, 26 (2),* 272-279.

Roxburgh, A., & Burns, L. (in press). Drug-related hospital stays in Australia, 1993-2008 Sydney: National Drug and Alcohol Research Centre.

Saunders, J.B., Aasland, O.G., Babor, T.F., de la Fuente, J.R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detections of persons with harmful alcohol consumption. *Addiction, 88,* 793-804.

Secretariat of the Parliamentary Joint Committee on the Australian Crime Commission (2007). Inquiry into the manufacture, importation and use of amphetamines and other synthetic drugs (AOSD) in Australia. Canberra: Commonwealth of Australia.

Sindicich, N., Burns, L., George, J., Kong, F., Matthews, A., Rainsford, C., Rowe, P., Scott, L. & White, N. (in publication) *Australian Trends in Ecstasy and related Drug Markets 2008: Finds from the Ecstasy and Related Drugs Reporting System (EDRS).* Australian Drug Trends Series. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Skiba, D., Monroe, J., Wodarski, J.S. (2004). Adolescent substance use: Reviewing the effectiveness of prevention strategies, Social Work, 49.

SPSS Inc. (2008). *SPSS Base 17.0 for Windows User's Guide.* SPSS Inc., Chicago IL.

Stafford, J., Degenhardt, L., Agliotis, M., Chanteloup, F., Fischer, J., Matthews, A., Newman, J., Proudfoot, P., Stoove, M., & Weekley, J. (2005). *Australian Trends in Ecstasy and Related Drug Markets 2004: Findings from the Party Drugs Initiative (PDI)*. National Drug and Alcohol Research Centre Monograph No. 57. Sydney: University of New South Wales.

Stafford, J., Degenhardt, L., Dunn, M., Fischer, J., George, J., Johnston, J., Matthews, A., Newman, J., Proudfoot, P., & Weekley, J. (2006). *Australian Trends in Ecstasy and Related Drug Markets 2005: Findings from the Party Drugs Initiative (PDI)*. National Drug and Alcohol Research Centre Monograph No. 58. Sydney: University of New South Wales.

Tandberg D. *Improved Confidence Intervals for the Difference between Two Proportions and Number Needed to Treat (NNT)*, Version 1.49, available at: http://www.cebm.net/index.aspx?o=1023

The Vaults of Erowid, (2005). http://www.erowid.org.html (Accessed 28 Feb, 2005).

Topp, L. & Churchill, A. (2002). Australia's Dynamic Methamphetamine Markets. *Drug Trends Bulletin, June, 2002*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Topp, L., Hall, W., & Hando, J. (1997). *Is there a dependence syndrome for ecstasy?* National Drug and Alcohol Research Centre Technical Report No. 51. Sydney: University of New South Wales.

Topp, L., & Mattick, R.P. (1997). Choosing a cut-off on the Severity of Dependence Scale (SDS) for amphetamine users. *Addiction*, 92, 839-845.

Turning Point (2009). *ADIS & DACAS Annual Report 2007/08*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2008). *ADIS & DACAS Annual Report 2006/07*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2007). *ADIS & DACAS Annual Report 2005/06*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2006). *ADIS & DACAS Annual Report 2004/05*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2005). *ADIS & DACAS Annual Report 2003/04*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2004). *ADIS & DACAS Annual Report 2002/03*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2003). *ADIS & DACAS Annual Report 2001/02*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2002). *ADIS & DACAS Annual Report 2000/01*. Melbourne: Turning Point Alcohol and Drug Centre.

Turning Point (2001). *ADIS & DACAS Annual Report 1999/00*. Melbourne: Turning Point Alcohol and Drug Centre.

Wardlaw, G. (1993). Supply reduction (law enforcement) strategies pertaining to illicit use of psychostimulants. In: D. Burrows, B. Flaherty & M. MacAvoy (Eds.), *Illicit Psychostimulant Use in Australia*. Canberra: Australian Government Publishing Service.

West, S.L., & O'Neal, K.K. (2004). Project D.A.R.E. outcome effectiveness revisited. *American Journal of Public Health*, *94*, 1027-1029.