

Trends in Drug Use and Related Harms in Australia, 2001 to 2011

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Executive Summary

Global trends as at 2010

- In 2010 there was a rapid expansion in the seizure of emerging psychoactive substances in Europe, with 40 new substances notified to the European early warning system during this time. This grouping of substances includes cathinones (e.g. mephedrone) and synthetic cannabis (e.g. kronic or spice) (United Nations Office on Drugs and Crime, 2011).
- Opium cultivation remained stable in Afghanistan in 2010, while there was a slight increase in Myanmar. However, global opium production declined during this time.
- Coca cultivation has continued to decline by 18% between 2007 and 2010 (United Nations Office on Drugs and Crime, 2011)
- Prevalence of illicit drug use has generally remained stable over the past decade.
- However, the emergence of new substances presents unique issues for both law enforcement and treatment services.
- There have been increases in non-medical use of prescription drugs reported in a number of countries (United Nations Office on Drugs and Crime, 2011).

Australian trends

- Tobacco continues to cause more ill health and premature death than any other drug.
- Proportions of Australian reporting risky patterns of alcohol consumption for short term harm at least once in the past 12 months declined significantly between 2007 and 2010, while those reporting more frequent consumption at this level remained stable.
- Daily drinking declined significantly between 2007 and 2010 (from 8.1% to 7.2%) which was primarily due to a decline among males.
- Illicit drug use declined in Australia between 1998 and 2007, while 2010 has shown a significant increase in use. This increase is primarily driven by an increase in cannabis use (from 9.1% in 2007 to 10.3% in 2010) and non-medical pharmaceutical use (0.2% to 0.4%).
- Looking at other illicit drugs, population surveys conducted in 2007 and 2010 show an increase in cocaine use in Australia, although still at an overall low prevalence (2.1% of general population in 2010). Patterns of use among those surveyed however remain sporadic.
- Ecstasy use declined significantly in 2010 for the first time since 1995.
- Increases have been recorded in the prescription of pharmaceutical opioids, and prescriptions are most prevalent among older Australians. Harms related to these drugs remain relatively low at this stage in Australia.
- Small minorities of regular ecstasy users in Australia report the use of emerging psychoactive substances such as mephedrone, with a decline seen from 16% in 2010 to 13% in 2011.

Tobacco

Prevalence

- Between 1991 and 2007 daily tobacco smoking rates declined by more than 30% to the lowest levels seen over the 16-year period.
- In 2007 less than one in six (16.6%) people aged 14 and over reported daily smoking declining from 21.8% in 1998.
- In 2007 it was estimated that Australian smokers numbered around 2.9 million. There were 4.3m ex-smokers and 9.5m never smokers.
- Female teenagers (8.7%) were more likely than male teenagers (6.0%) to be daily smokers. For all other ages males had higher smoking rates than females.

- Both males and females aged between 20 and 29 years were more likely to be smokers than any other age group.
- The geography of smoking is shifting from the developed to the developing world. In 1995, more smokers lived in low and middle-income countries (933 million) than in high-income countries (209 million). The most rapid increases have been seen in Asian countries, for example, in China.
- The majority of people who inject drugs also report smoking tobacco.

Harms

- Tobacco causes more ill health and premature death than any other drug used in Australia. If cigarette smokers commence smoking as teenagers and do not quit, then eventually about half of them will die from tobacco-related disease.
- Tobacco smoking was responsible for 7.8% of the total burden of disease and injury in Australia in 2003.
- The economic costs associated with licit and illicit drug use in 2004–5 amounted to \$56.1 billion, of which tobacco accounted for 56%, alcohol 27%, and illicit drugs 15%.
- In 2004-05, an Australian Government report estimated that active and passive smoking caused almost 15,000 Australian lives to be lost and cost the hospital system \$669.6 million.

Alcohol

Prevalence

- The majority of Australians in the general population consume alcohol, with the 2010 figure of past year alcohol use (80.5%) representing a significant decline from 82.9% in 2007.
- It appears that part of this decline might be due to lower proportions of 14 to 19 year olds reporting past year alcohol use.
- Proportions of Australian reporting risky patterns of alcohol consumption for short term harm at least once in the past 12 months declined significantly between 2007 and 2010, while those reporting more frequent consumption at this level remained stable.
- Daily drinking declined significantly between 2007 and 2010 (from 8.1% to 7.2%) which was primarily due to a decline among males.

Treatment seeking

- Alcohol-related hospital separations have increased over time and outnumber hospital separations for the other major illicit drug classes.
- The number of treatment episodes for alcohol has steadily increased over the past six years and represent a greater proportion of all treatment episodes (from 37% of all treatment episodes in 2001 to 46% of all treatment episodes in 2008/09).

Deaths

- Overall, alcohol-attributable deaths in Australia have declined between 1996 and 2005
- Across all jurisdictions death rates were approximately 3 deaths per 10,000 population in 2005 (with the exception of the NT, where they were 8 per 10,000 population).
- In 2005, the most common cause of alcohol-attributable death was alcoholic liver cirrhosis

Cannabis

Prevalence

General population

- The prevalence of last year cannabis use in Australia declined between 1998 and 2007 (from 17.9% to 9.1), with 2010 recording a significant increase to 10.3%.
- The increase was driven by higher prevalence among Australians aged 50 to 59 years.
- Prior data from the survey of secondary school students showed the decline in cannabis use from 32.4% in 1996 to 13.6% in 2008.
- Daily cannabis use among those who continue to use has remained relatively stable over time (13% of cannabis users in 2010).
- The highest proportion reporting daily cannabis use were Australians aged 40 years and over.

Sentinel Groups

- Among injecting drug users past 6 month cannabis use declined from 83% in 2003 to 79% in 2011.
- Daily cannabis use among current users has remained stable (50% in 2011).
- Among regular ecstasy users cannabis use has remained stable at 85% (in 2003 and 2011).
- Daily cannabis use decreased from approximately 30% in 2003 to 18% in 2011.

Treatment seeking

- There have been increases (particularly among older age groups) in numbers presenting to hospital for problems associated with cannabis use between 2001 and 2008.
- There was an increase in outpatient treatment episodes for problems associated with cannabis from 23,826 in 2001/02 to 31,100 in 2008/09. Cannabis treatment episodes accounted for 22.5% of all drug treatment episodes.

Law enforcement

- Two thirds of all drug-related arrests in 2009/10 were for cannabis which represents a drop from 75% of all drug arrests in 2001/02. Numbers of cannabis arrests have remained relatively stable over time.

Market indicators

- The price of both hydroponic and bush cannabis has declined slightly in 2011, and both forms have remained readily available.

Ecstasy

Prevalence

General population

- Use of ecstasy in the general population has declined for the first time since 1995. The decline from 3.5% in 2007 to 3% in 2010 was statistically significant, and was driven by a significant decline in use among males over 14 (from 4.4% in 2007 to 3.6% in 2010), and young Australians aged 14 to 19 (particularly among females where use declined from 6% in 2007 to 2.5% in 2010).
- In 2010 the majority of Australians who used ecstasy reported using once every few months or less.

Sentinel Groups

- Among injecting drug users, prevalence of 6 month ecstasy use declined from 29% in 2002 to 14% in 2011.
- Among regular ecstasy users there has been a decline in proportions reporting weekly ecstasy use between 2003 and 2011.

Treatment seeking

- There has been an increase in outpatient treatment episodes for problems associated with ecstasy use from 253 in 2001/02 to 1,397 in 2008/09, however these episodes only account for 1% of all drug and alcohol related treatment episodes.

Deaths

- Ecstasy-related deaths in Australia are low in comparison to methamphetamine and heroin-related deaths. During the period 2000 to 2005, 82 deaths that were ecstasy related were identified. Ecstasy was considered a direct antecedent or cause in 67 of these deaths, with only 19 considered to be due to ecstasy toxicity alone.

Law enforcement

- The number and weight of ecstasy seizures detected at the Australian border has continued to decline between 2006/07 and 2009/10.

Market indicators

- The price of ecstasy tablets has declined over time (between 2003 and 2008), according to regular ecstasy users, as has the purity. While ecstasy remains relatively easy to obtain, there has been an increase between 2008 and 2011 in proportions of regular ecstasy users reporting that it is difficult to obtain (from 6% to 20%).

Heroin

Prevalence

General population

- Past year heroin use remains low among the broader Australian population at less than 1% in 2010.

Sentinel Groups

- Among injecting drug users there has been a decline in the prevalence of past 6 month heroin use over time (from 79% 2000 to 64% in 2011), however daily heroin among heroin users in this group has remained stable.
- Very small proportions of regular ecstasy users (4% in 2011) report heroin use.

Treatment seeking

- Opioid-related hospital presentations remain higher than other illicit drug presentations.
- Hospital presentations declined substantially in 2001/02 and have subsequently remained stable to 2007/08. The 30 to 39 year age group accounted for the largest proportion (35%) of presentations in 2007/08.
- Numbers of people in opioid substitution treatment have increased between 2001 and 2011, particularly among older Australians (30 years and over), with a decline in clients aged 20 to 29.

Deaths

- Heroin-related deaths continue to outnumber deaths for other illicit drugs.
- Although deaths have declined substantially since 1999 (from 1116 to 374 in 2005) heroin remains a significant cause of death.

Law Enforcement

- The weight of heroin seizures detected at the Australian border increased between 2005/06 and 2009/10, however the weight of these seizures remains relatively low compared to the late 1990s/early 2000s.
- The number of heroin-related arrests increased by 20% in 2008/09, however, they remain relatively low.

Market indicators

- The price of small amounts of heroin ('caps') has remained unchanged between 2000 and 2010 at \$50, while there has been a decline in the price of a gram from \$450 in 2001 to \$350 in 2011.
- While heroin remains readily available according to IDRS participants, a larger proportion of this group (42% in 2011) report that it is 'low' in purity.

Pharmaceutical opioids

Prevalence

General population

- Past year non-medical use of pharmaceutical opioids (such as oxycodone and morphine) among the general population increased significantly between 2007 and 2010 (from 0.2% to 0.4%). However, prevalence still remains relatively low in Australia.
- There has been an increase in oxycodone prescribing, particularly among older Australians. This increase may in part be due to legitimate prescribing given the ageing population in Australia however, it is not possible to differentiate non-medical use from legitimate prescribing in these data.

Sentinel groups

- Among IDRS participants, injecting use of morphine increased between 2001 and 2007 (from 40% to 50%), however this figure has since declined to 41% in 2011.
- With the exception of the Northern Territory, (where daily use is seen among this sub-population), morphine use remains sporadic at once a week or less.
- There has also been an increase in oxycodone use among IDRS participants, but again, use is sporadic across jurisdictions.

Treatment seeking

- Outpatient treatment episodes for problems associated with morphine account for approximately one-quarter of the treatment episodes for pharmaceutical opioids. They remain much lower in number than those for heroin.

Deaths

- Deaths due to heroin outnumber those for oxycodone in Australia.
- Multiple drugs (in particular alcohol and benzodiazepines) were recorded in the majority (82%) of oxycodone-related deaths.
- Mortality related to oxycodone is currently relatively low in Australia, and is not comparable to numbers of oxycodone deaths seen in the United States, where they outnumber heroin and cocaine deaths.

Methamphetamine

Prevalence

General population

- Prevalence of past year methamphetamine use remains stable in Australia at 2.1% in 2010.
- Weekly methamphetamine use has remained stable between 2001 and 2010 (9.3% reported weekly or more use in 2010, with the majority of Australians across all age groups reporting use every few months or less frequently).
- Powder methamphetamine continues to be the form most used in the general population.

Sentinel groups

- Among IDRS respondents, prevalence of past 6 month methamphetamine use overall remained stable between 2001 and 2011, however a decline was recorded between 2009 and 2010.
- Among regular ecstasy users there was a decline in past 6 month methamphetamine use between 2003 (84%) and 2009 (54%) and a decline in frequency of use. This decline is across all forms of methamphetamine but most marked for crystal methamphetamine. Use has stabilised at a lower level in 2010 and 2011.
- Shorter term trends show that crystal methamphetamine use in particular increased significantly between 2010 and 2011 among both IDRS and EDRS respondents.

Treatment seeking

- There was a slight increase in outpatient treatment episodes for meth/amphetamine from 12,211 in 2001/02 (10.8% of all treatment episodes) to

16,588 in 2007/08 (11.2%). This figure declined to 12,739 (9.2% of all treatment episodes) in 2008/09, and is consistent with the decline in methamphetamine use seen across sentinel groups and in the general population.

- Hospital presentations for meth/amphetamine problems are second highest after opioids. These have stabilised over the past five years after steady increases during the 1990s. The 20 to 39 year old Australians account for the largest proportion of these presentations.

Deaths

- Methamphetamine-related deaths remain lower than those for opioids, and have been decreasing since 2000. Much of this decline is driven by the decline in heroin-related deaths, as the majority of methamphetamine deaths are due to multiple drug (often heroin) toxicity.

Law enforcement

- Numbers of amphetamine-type stimulant seizures detected at the border have fluctuated between 2006/07 and 2009/10 after steady increases between 2001/02 to 2006/07. The weight of seizures has also fluctuated across this time period.
- Arrests for amphetamine-type stimulants have steadily increased since 1999/00, with the 2008/09 figure of 16,407 being the highest on record.
- The number of clandestine laboratories detected in 2009/10 (694) represents the highest on record.

Market indicators

- There were mixed trends for the median price of a gram of powder base and crystal methamphetamine, with IDRS respondents reporting increases for base and crystal methamphetamine and a decrease for powder methamphetamine. Among EDRS respondents the only change was a decrease in the median price for a gram of crystal methamphetamine.
- Trends in median prices for points of each form were also mixed. Prices for powder and base methamphetamine declined according to EDRS respondents, and remained stable according to IDRS respondents. Both groups reported an increase in the median price for a point of crystal methamphetamine.
- Purity of all three forms appears to have increased between 2008 and 2011, with crystal methamphetamine generally being reported as 'high' in purity among both EDRS and IDRS respondents. Both powder and base methamphetamine were reported as being 'medium' to 'high' in purity.
- With the exception of base methamphetamine, the majority of IDRS and EDRS respondents report methamphetamine as 'easy' or 'very easy' to obtain. Both powder and crystal methamphetamine forms have become increasingly more available according to EDRS respondents between 2009 and 2011. In contrast, approximately one third (38%), and one quarter (25%) of EDRS and IDRS respondents respectively reported base methamphetamine as being 'difficult' to obtain in 2011.

Cocaine

Prevalence

General population

- There was a slight increase in cocaine use among the general population in 2007 (from 1% in 2004 to 1.6% in 2007) and again in 2010 to 2.1%. However cocaine use in the broader population remains relatively low. The rise in 2010 was mainly accounted for by 20 to 29 year olds.
- Frequency of cocaine use in the general population remains sporadic, with the majority of Australians reporting monthly or less frequent use in 2010.

Sentinel groups

- Among IDRS respondents there has been a decline in prevalence of 6 month cocaine use between 2001 and 2008, and prevalence has remained at this lower

level between 2009 and 2011. Frequency of cocaine use (weekly or more) has remained relatively stable between 2001 and 2011.

- Conversely, among regular ecstasy users there has been an increase in prevalence of past 6 month cocaine use (from 23% in 2003 to 46% in 2011), however use among this group is relatively infrequent at 2 occasions over the past 6 months in 2011. Frequency of cocaine use has remained stable among this group.

Treatment seeking

- An increase in cocaine-related harms in 2001 (treatment and hospital presentations) mirrored high levels of use among injecting drug users in NSW. These indicators have since declined with hospital and treatment presentations for problems relating to cocaine remaining relatively low.

Law enforcement

- Cocaine seizures declined in number (291) and weight (386kg) in 2009/10, however, there was one particularly large detection of 240kg seized through the cargo stream, coming in from Mexico.
- Cocaine-related arrests increased from 689 in 2007/08 to 848 in 2008/09. Over 50% of these arrests occurred in NSW.

Deaths

- Cocaine-related deaths remain relatively low in Australia. In 2005 there were 10 deaths where cocaine was determined to be the underlying cause and a total of 15 deaths where cocaine was mentioned as either the underlying or contributory cause.

Market indicators

- There has been an increase in the price of a gram of cocaine between 2001 and 2010, while purity is reported as being low to medium.
- There have been increasing proportions of both EDRS and IDRS respondents reporting that cocaine is 'low' in purity between 2008 and 2011.
- Availability of cocaine is reported by EDRS respondents as difficult (44% in 2011), and these proportions have increased since 2008 (from 37%). Just under half (43%) of the IDRS respondents reported cocaine as 'easy' to obtain in 2011 however this proportion has declined from 54% in 2008. Approximately one-quarter (27%) of IDRS respondents reported cocaine as 'difficult' to obtain in 2011, increasing from just 18% in 2008.

1. Introduction

The purpose of this resource document is to collate various data sources that document trends in alcohol and other drug use and harms in Australia. We hope that it will be a useful resource document.

We have provided data on the following drug classes:

Alcohol
Cannabis
Ecstasy
Methamphetamine
Heroin
Cocaine
Pharmaceutical opioids

The main data sources used for this report are:

1. National Drug Strategy Household Survey (NDSHS)
2. Australian Secondary Students Survey of Alcohol and other Drugs (ASSAD)
3. Illicit Drug Reporting System (IDRS)
4. Ecstasy and related Drugs Reporting System (EDRS)
5. Illicit Drug Data Report (IDDR)
6. National Minimum Data Set – Alcohol and other drug treatment services in Australia (NMDS - AODTS)
7. National Hospital Morbidity Database (NHMD)
8. The Australian Bureau of Statistics Causes of Death database
9. Seizure data from the Australian Customs and Border Protection Service

There is an important distinction between the general population surveys (data source 1 and 2, for example) and those surveys of sentinel groups (such as 3 and 4). Interpretation of the general population data is different from the sentinel group data. Sentinel groups are chosen precisely because they engage in illicit drug use, and are likely to have knowledge about market characteristics. Sentinel groups cannot tell us about general population prevalence, but are vital in describing harms and changing patterns of consumption within the drug using population itself.

Within each drug we provide data (where available) on:

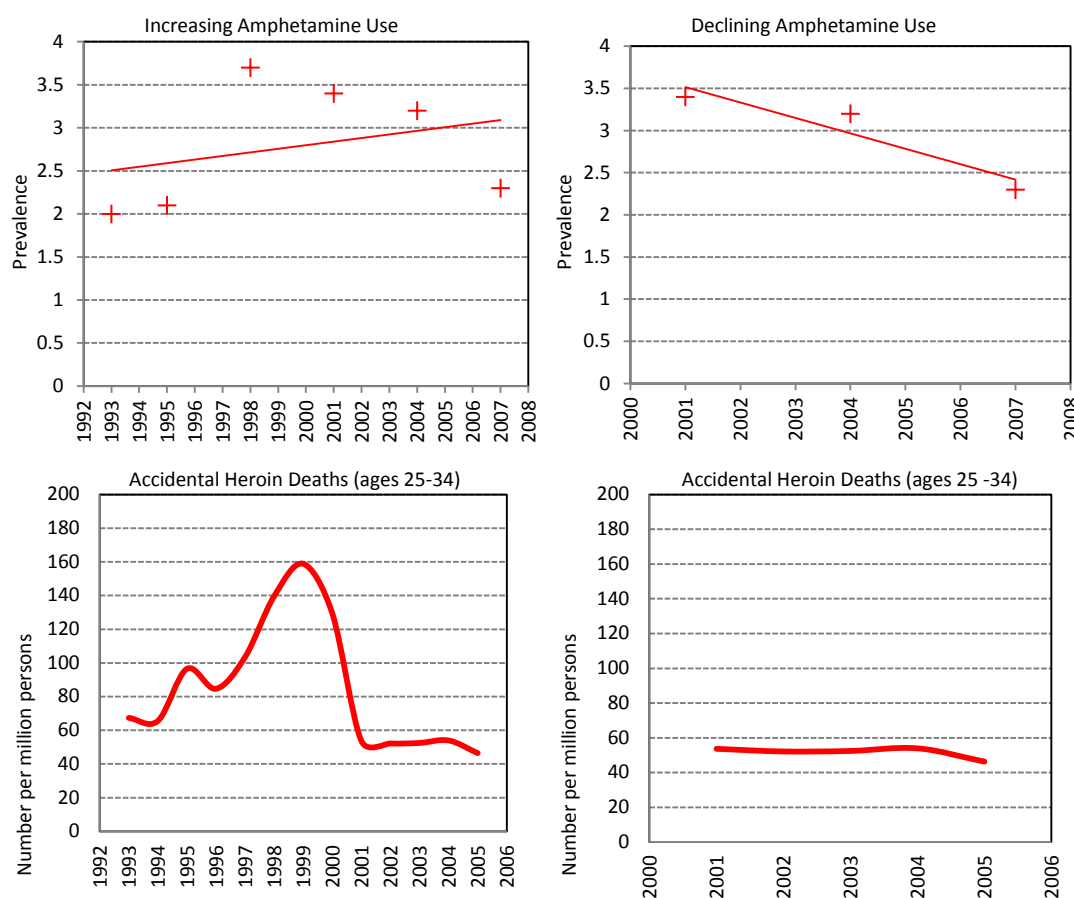
Prevalence of past year use over time among the general population;
Prevalence of past six month use over time among sentinel groups of drug users in Australia that are monitored by the Illicit Drug Reporting System (IDRS) and the Ecstasy and related Drugs Reporting System (EDRS);
Trends in frequency of use among the general population and among sentinel groups;
Numbers seeking treatment;
Indicators of drug-related harm using mortality and hospital admissions;
Law enforcement activity (arrests and seizures) for illicit drugs;
Market indicators including user reports of availability, price and purity.

We sought consistent high quality indicators that had reliable data over a number of years. In addition, we used national data wherever possible. Some indicators such as ambulance call-outs are available but not in a nationally consistent manner. Therefore we did not include these.

Understanding trends

The ways in which trends are interpreted depends on the time horizon that is chosen. The interpretation of a trend will depend on the artificial commencement and endpoint of the trend being examined. This is demonstrated in the below two examples (Figure 1). Amphetamine use in the last year rose in Australia between 1993 and 1998 and then declined. Examination of the 2001 to 2007 trend line only demonstrates the decline. Accidental heroin deaths peaked in Australia in 1999 and 2000, but have remained stable in most recent years. Examination of the trend line from 2001 demonstrates stable accidental heroin deaths.

Figure 1: Examples of the trend lines with the inclusion of different years



Thus, we have foreshortened the horizon in these trends analyses, by limiting ourselves to those trends from 2001 onwards. The end point of analysis depends on the availability of data. If we chose to use an earlier data than 2001 in the analyses, the interpretations may have been different. Despite a focus on 2001 onwards, in some places we do provide reference to trends prior to 2001.

In addition to the time horizon issue, it is also important to note the difference between a linear and a non-linear trend. Linear trends are relationships that can be represented by a straight line (i.e. the prevalence of drug use is consistently increasing or consistently decreasing over time). Non-linear trends account for variable patterns in the trends (i.e. the prevalence both increasing and decreasing at different time points). We chose to restrict our statistical analyses to linear trends only.

Finally, when we update this resource document with new data, the trend lines may change.

Language

We use standard language to describe the trends. For example, downward movement is described using terms such as decline, decrease, drop, and fall; upward movement is described using terms such as climb, rise and increase; and stability is described using terms such as remain stable and level off. Where possible we have used the terms “significant” or “statistically significant” to indicate when the interpretation of trends is based on statistical hypothesis testing. Where we have not used these terms, it means either that the change is not significant, or it hasn’t been tested for significance.

2010 data from the National Drug Strategy Household Survey

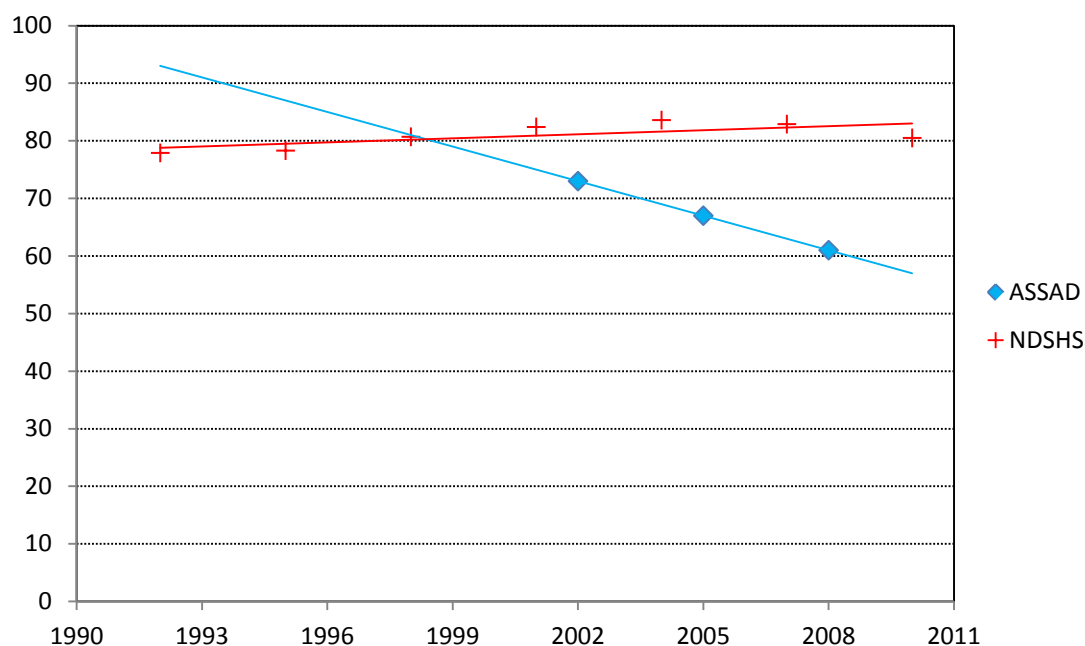
At the time of publishing this report, the Australian Institute of Health and Welfare report on the findings from the 2010 NDSHS were published. The raw data however, was not available at this time. Therefore, in some instances, confidence intervals are not available, and certain age categories (in particular 40 to 49 years) are not presented for the 2010 data in graphs. Graphs will be updated as these data become available.

2. Alcohol

2.1 Patterns of alcohol use

The figure below (Figure 2) provides past year prevalence of alcohol use in the Australian population and among Australian secondary students surveyed about their alcohol and other drug use. In 2010, 80.5% of the population aged 14 years and over reported consuming alcohol in the past year, representing a significant decline from 82.9% in 2007 (Australian Institute of Health and Welfare, 2011a). The latest ASSAD survey shows that in 2008, 61% of students reported past year use of alcohol, a slightly lower proportion than 73% reporting past year alcohol use in 2002 (White and Smith. G., 2009).

Figure 2: Alcohol use across multiple surveys¹



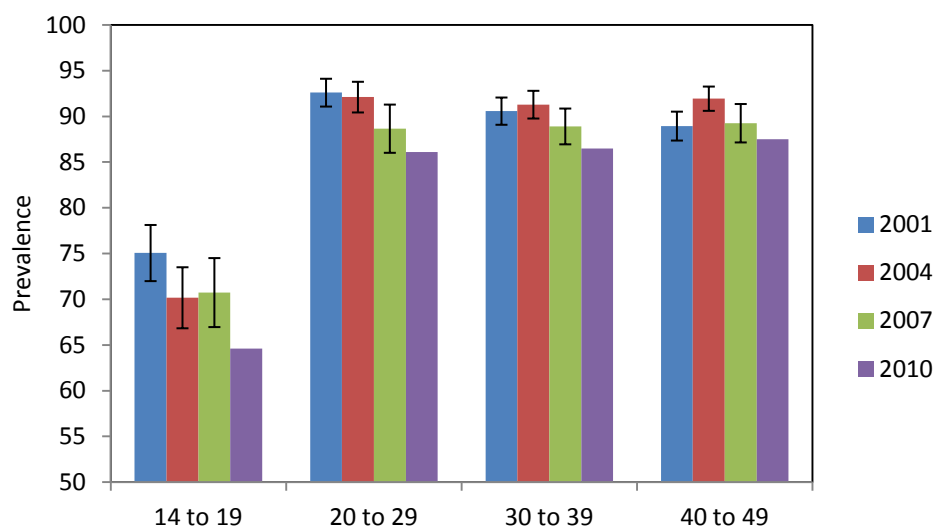
Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students' use of over-the-counter and illicit substances, DoHA.

We now examine general patterns of alcohol consumption among different age groups and by gender.

¹ For Figures 2, 12, 34, 45, 63, and 93, we have fitted a linear regression trend line through the available data, but have not tested for statistical significance.

Looking at past year prevalence of alcohol use by 10 year age group among males surveyed for the NDSHS, there are no significant differences over time in the prevalence across any of the age groups (Figure 3).

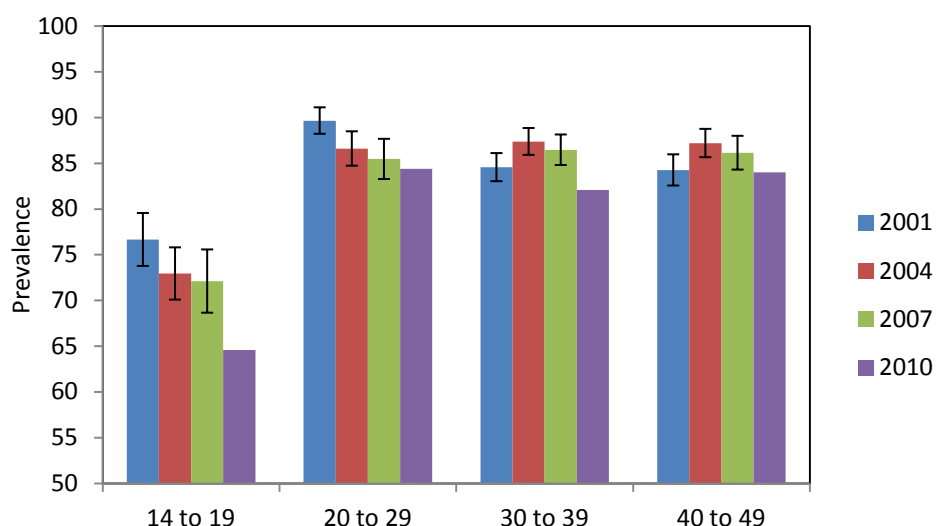
Figure 3: Past year alcohol use among males by age group



Source: National Drug Strategy Household Surveys, AIHW

This same age-trend is also evident among females surveyed for the NDSHS (Figure 4).

Figure 4: Past year alcohol use among females by age group



Source: National Drug Strategy Household Surveys, AIHW

Comparing past year alcohol use between males and females, by 10 year age group in 2010 (Table 1), there are slightly higher proportions of males across all age groups reporting past year use (with the exception of the 14 to 19 year olds).

Table 1: Past year alcohol use by age and gender, 2010

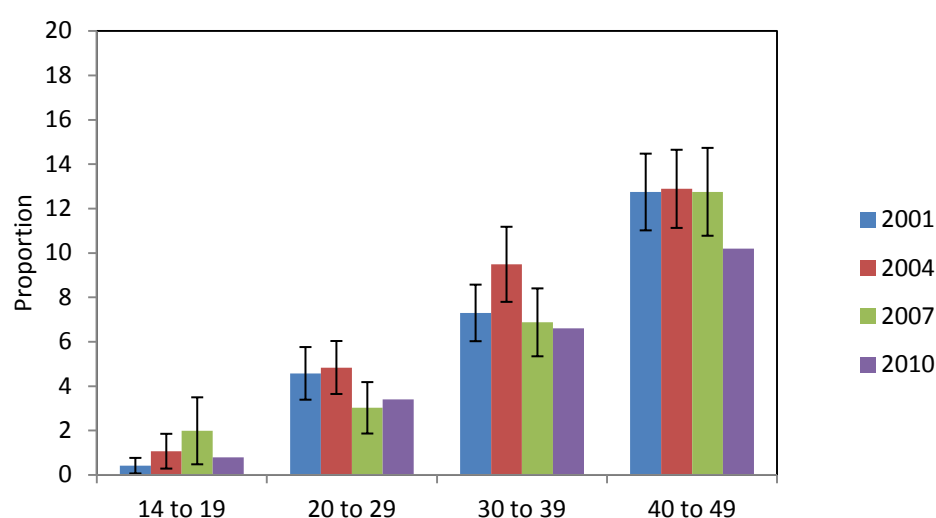
Age group	Males	Females
14 to 19	65	65
20 to 29	86	84
30 to 49	87	82
40 to 49	88	84

Looking at these trends over time, a slightly larger proportion of females in the youngest age group report past year use compared to males, however, the difference is not significant. This difference disappeared in the 2010 findings (Table 1 above). For all other age groups, past year alcohol use in males is higher than it is in females. Again, however, these differences are not significant (data not shown).

More important than last year consumption (as shown in the above data) are patterns of daily use of alcohol between age groups and gender. Daily use of alcohol is indicative of a harmful pattern of consumption.

Figure 5 shows the proportion of males reporting daily alcohol use (among those who consumed alcohol in the past year) by age group over time. Despite higher proportions of males aged 14 to 19 reporting daily alcohol consumption in 2007 compared to 2001, this is not a significant change. Likewise, although lower proportions of 20 to 29 year old males reported daily alcohol use in 2007 compared to 2001, this is also not significant. The 2010 figures show that there has been a significant decline overall in the proportion of males reporting daily drinking (Australian Institute of Health and Welfare, 2011a).

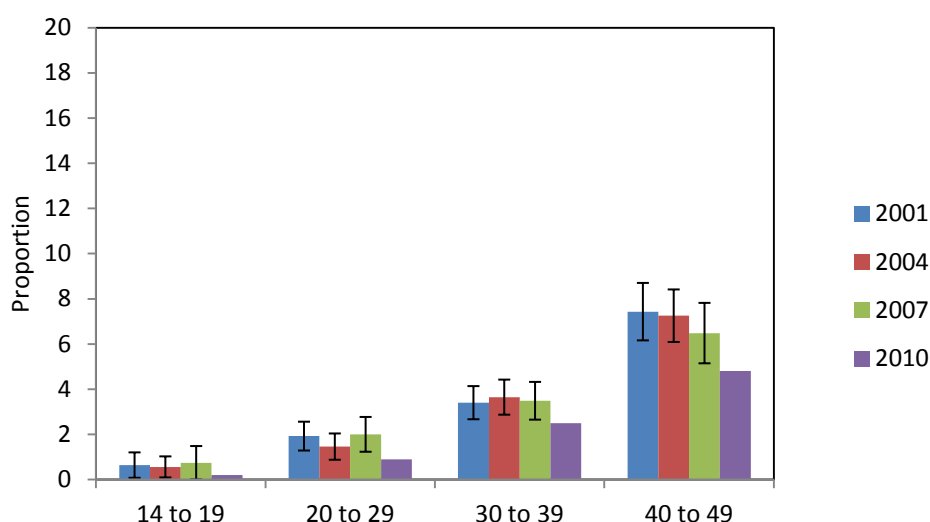
Figure 5: Proportion of male recent drinkers reporting daily alcohol use in the past 12 months by age group



Source: National Drug Strategy Household Surveys, AIHW

The proportion of females reporting daily alcohol use remained stable between 2001 and 2007 (Figure 6) The 2010 figures show lower proportions of females across all age groups reported daily drinking however, according to AIHW analysis, these changes were not significant (Australian Institute of Health and Welfare, 2011a).

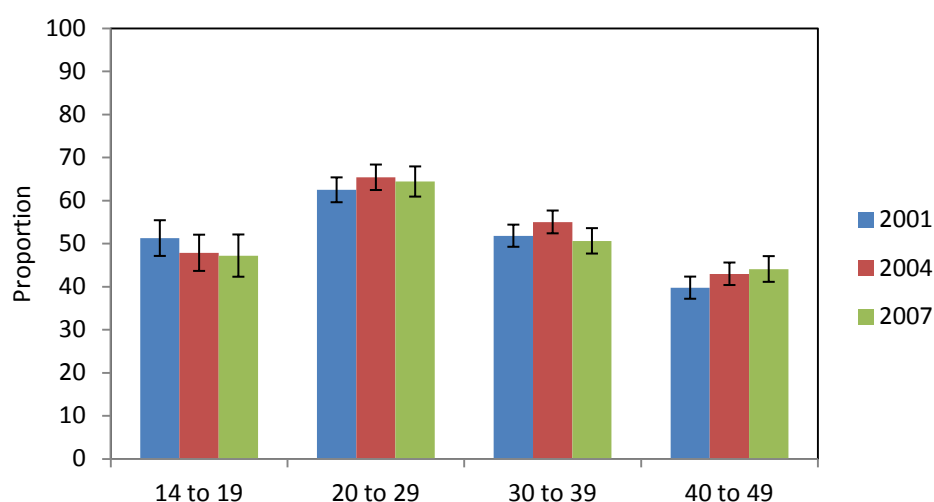
Figure 6: Proportion of female recent drinkers reporting daily alcohol use in the past 12 months by age group



Source: National Drug Strategy Household Surveys, AIHW

Looking at 'risky' drinking for short term harm (defined as 7 or more drinks consumed per occasion for males and 5 or more drinks per occasion for females), there has been no change (since 2001) in the proportions of 14 to 19 year old males reporting 'risky drinking' for short term harm. Likewise, there have been no changes over time among any of the other age groups in proportions reporting 'risky drinking'. The proportion of 20 to 29 year olds reporting 'risky drinking' remains highest over time, and is significantly higher compared to any of the other age groups across all three years (Figure 7).

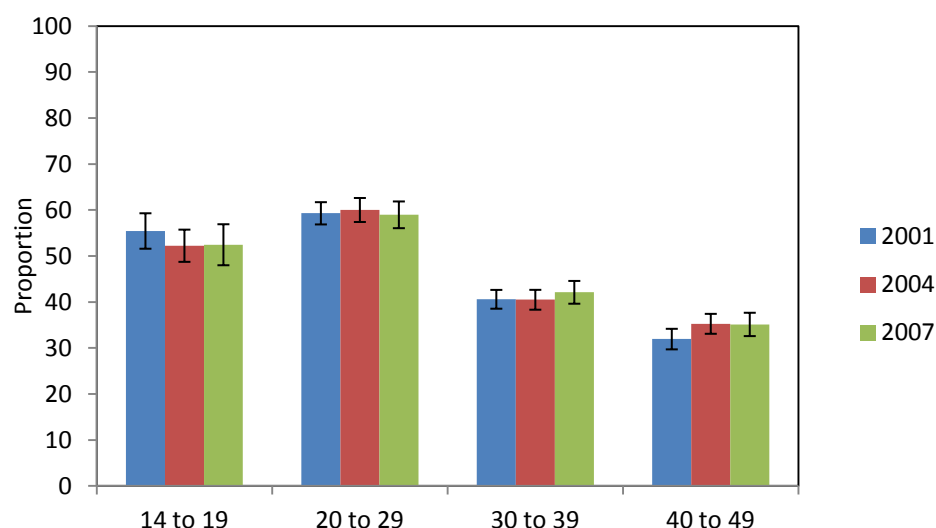
Figure 7: Proportion of recent male drinkers reporting more than 6 drinks per occasion (risky drinking) by age group



Source: National Drug Strategy Household Surveys, AIHW

There have been no changes over time in proportions of females reporting 'risky drinking' among any of the age groups. As with the males, the highest proportion of females reporting 'risky drinking' were aged 20 to 29 years, and were significantly higher than the proportion of 30 to 39 and 40 to 49 year olds. There was no difference in proportions of 14 to 19 year olds and 20 to 29 olds reporting 'risky drinking' (Figure 8).

Figure 8: Proportion of recent female drinkers reporting more than 4 drinks per occasion (risky drinking) by age group



Source: National Drug Strategy Household Surveys, AIHW

The 2010 NDSHS data shows that overall, the proportion of Australian males aged 14 years and over reporting 'risky drinking' has not changed since 2007, while there has been a significant decline among females reporting 'risky drinking'. As in previous years, proportions reporting this pattern of drinking were highest among 20 to 29 year olds (data not shown) (Australian Institute of Health and Welfare, 2011a).

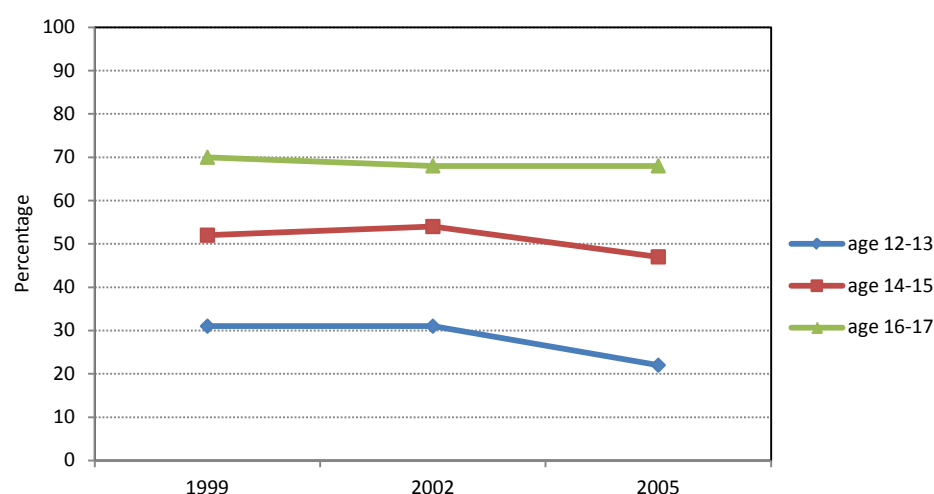
Young people

In 2001 55% of 14 to 19 year old female drinkers reported drinking at harmful levels on at least one occasion in the last year, compared to 52% in 2007 (Figure 8 above). There has been no change over time in the proportion of 20 to 29 year old female drinkers drinking harmfully (59% on at least one occasion in the last year; stable between 2001 and 2007). Similar patterns are seen among young males in the general population aged between 14 and 29 years (Figure 7 above). The decline reported in 2010 appears to be driven primarily by 14 to 19 year old Australians (data not shown) (Australian Institute of Health and Welfare, 2011a).

Students

The Australian Secondary School Students Survey (ASSAD) has been administered in 1999, 2002, 2005 and 2008 (White, 2001, White and Hayman, 2004, White and Hayman, 2006, White and Smith. G., 2009). In both the 1999 and the 2002 surveys, 51% of students aged between 12 and 17 years consumed alcohol in the last month. In 2005 the proportion dropped to 45%, and to 37% in 2008 (data not shown). The decline between 2002 and 2005 is largest in the youngest age group (12 to 13 year olds), followed by declines in the 14 to 15 year olds (Figure 9).

Figure 9: Past month alcohol use among secondary school students by age group



Australian secondary school students' use of over-the-counter and illicit substances, DoHA.

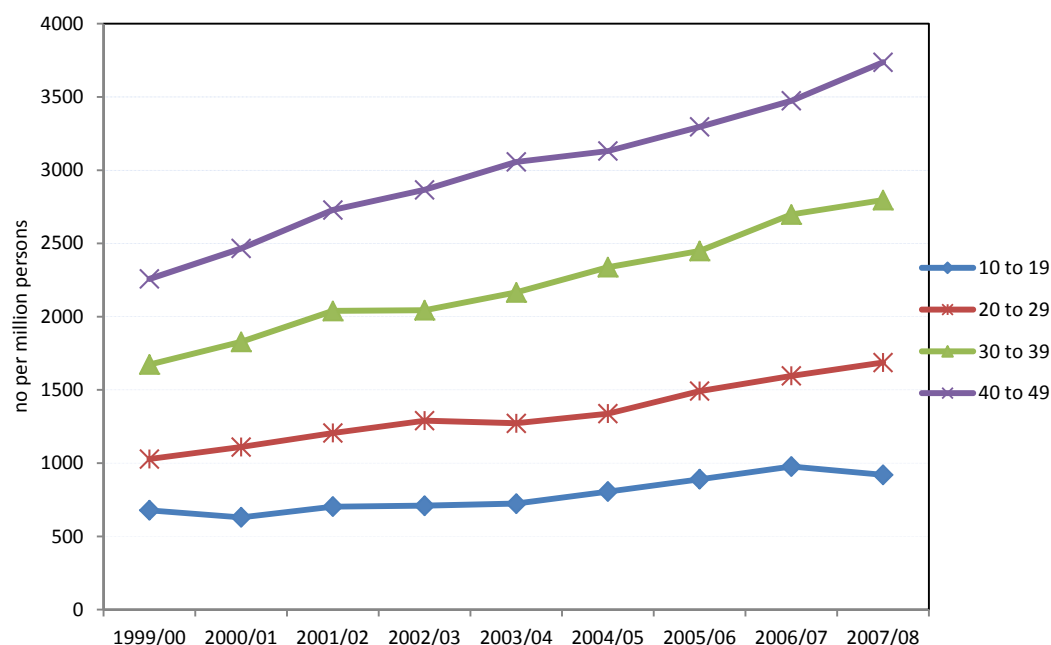
2.2 Patterns of alcohol-related harms

Hospital separations

The National Drug Research Institute's National Alcohol Indicators Project (NAIP) publishes bulletins on alcohol-related hospitalisations. Bulletin No. 12 reported that rates of alcohol-attributable hospitalisations increased in all jurisdictions during the period 1993/94 to 2004/05, particularly Victoria (VIC), Tasmania (TAS), the Australian Capital Territory (ACT) and the Northern Territory (NT) (National Drug Research Institute, 2009). Dependence, falls, assaults and alcohol abuse were the most common causes of hospitalisations in 2004/05. These hospitalisations are higher for males compared to females.

Hospital presentations for conditions related to alcohol dependence, abuse and poisoning are higher than those for similar conditions related to the major illicit drug classes of heroin, cannabis, methamphetamines and cocaine (Roxburgh and Degenhardt, 2008). They are also highest among those aged 40 to 49 years (Figure 10). It should be noted however, that the numbers presented in Figure 10 are likely to be an underestimate of alcohol-attributable hospital presentations, as they do not include admissions for falls, assaults, or motor vehicle accidents where alcohol has played a role.

Figure 10: Hospital presentations for alcohol dependence, abuse and poisoning, 2000 to 2008



Source: National Hospital Morbidity Database, AIHW

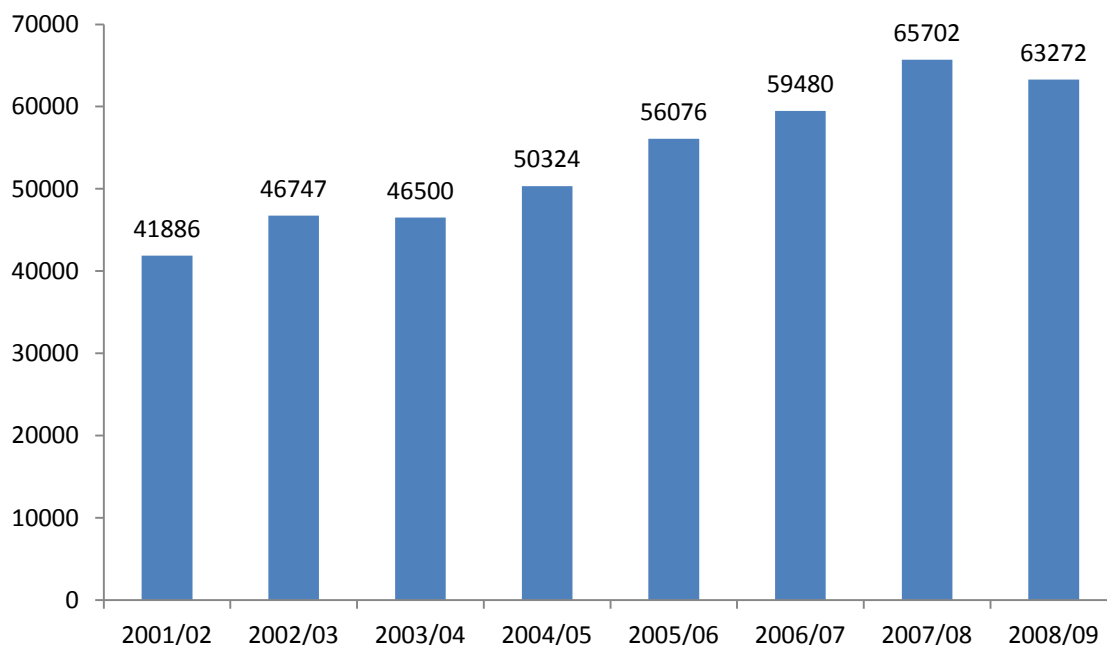
Deaths

Data from the latest NAIP bulletin on alcohol-attributable deaths show that there has been a declining trend among males across all jurisdictions except for in TAS and the ACT. There has also been a downward trend among females, although this trend was not as consistent in the NT, ACT or TAS (National Drug Research Institute, 2009). In 2005 the most common cause of death in Australia was alcoholic liver cirrhosis.

2.3 Patterns of alcohol treatment seeking

There have been higher numbers of treatment episodes recorded for alcohol over time, and a higher proportion of all treatment episodes have been attributable to alcohol (37% in 2001/02 compared to 46% in 2008/09).

Figure 11: Number of closed treatment episodes where alcohol was the principal drug of concern



Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

2.4 Alcohol: summary

Prevalence

- The majority of Australians in the general population consume alcohol, with the 2010 figure of past year alcohol use (80.5%) representing a significant decline from 82.9% in 2007.
- It appears that part of this decline might be due to lower proportions of 14 to 19 year olds reporting past year alcohol use.
- Proportions of Australian reporting risky patterns of alcohol consumption for short term harm at least once in the past 12 months declined significantly between 2007 and 2010, while those reporting more frequent consumption at this level remained stable.
- Daily drinking declined significantly between 2007 and 2010 (from 8.1% to 7.2%) which was primarily due to a decline among males.

Treatment seeking

- Alcohol-related hospital separations have increased over time and outnumber hospital separations for the other major illicit drug classes.
- The number of treatment episodes for alcohol has steadily increased over the past six years and represent a greater proportion of all treatment episodes (from 37% of all treatment episodes in 2001 to 46% of all treatment episodes in 2008/09).

Deaths

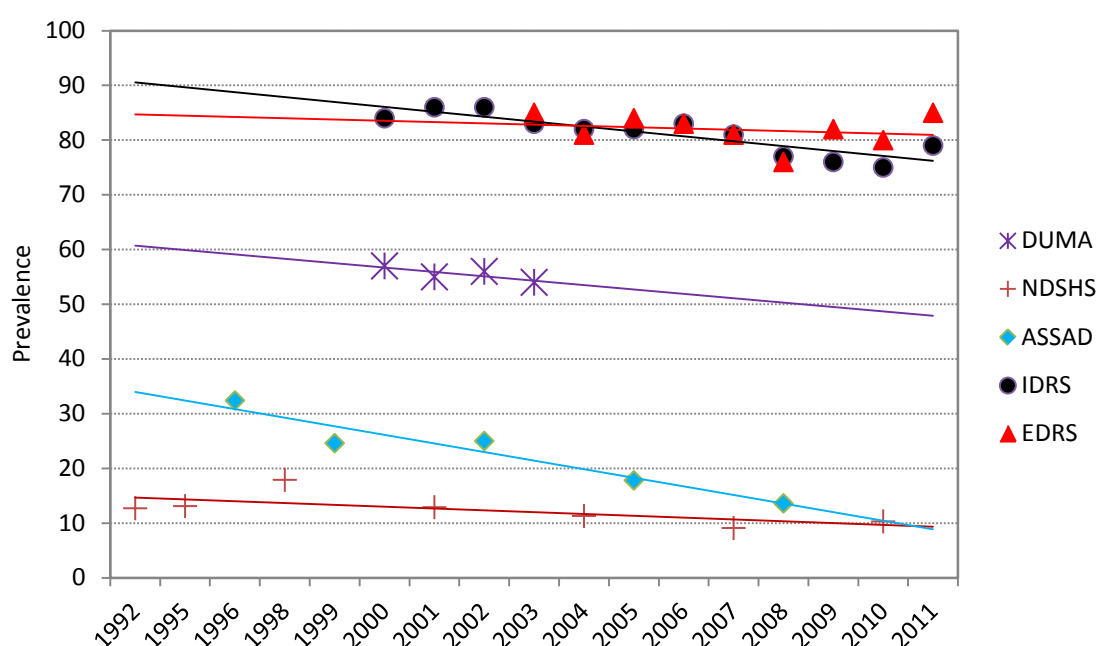
- Overall, alcohol-attributable deaths in Australia have declined between 1996 and 2005
- Across all jurisdictions death rates were approximately 3 deaths per 10,000 population in 2005 (with the exception of the NT, where they were 8 per 10,000 population).
- In 2005, the most common cause of alcohol-attributable death was alcoholic liver cirrhosis.

3. Cannabis

3.1 Patterns of cannabis use

Cannabis is the most commonly “tried” and “ever used” illicit drug in Australia, as in all other Western nations, with around 35% of Australians having consumed cannabis at some point in their lives (Australian Institute of Health and Welfare, 2011a). Past year prevalence of cannabis use decreased significantly in the general population from 11.3% in 2004 to 9.1% in 2007 (the lowest prevalence since 1993) (Figure 12), with 2010 data showing a significant increase to 10.3%. A downward trend is seen among school students, where past year use has gone from 32.4% in 1996 to 13.6% in 2008 (White and Smith. G., 2009). Among sub-populations this decline was observed among adult detainees (DUMA), with lower numbers over time testing positive to cannabis.

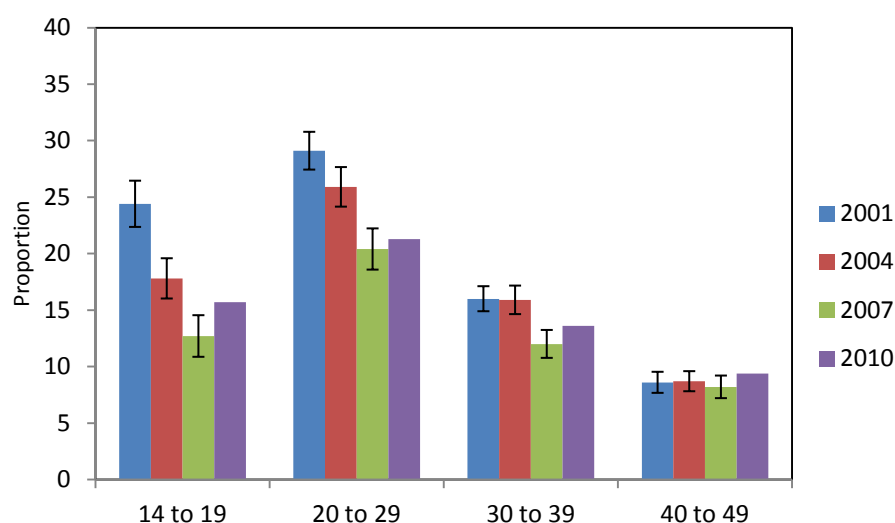
Figure 12: Cannabis use across multiple surveys



Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students’ use of over-the-counter and illicit substances, DoHA. Drug use monitoring in Australia: annual reports on drug use among police detainees, AIC. Findings from the Ecstasy and related Drugs Reporting System, NDARC. Findings from the Illicit Drug Reporting System, NDARC.

Age-related trends from the NDSHS show that past 12 month cannabis use is most prevalent among the 20 to 29 year age group, and least prevalent among the 40 to 49 year age group. There were significant decreases over time among the 14 to 19 year olds between 2001 and 2007, and a significant decrease among the 20 to 29 and the 30 to 39 year olds between 2004 and 2007. Past year cannabis use has remained stable among 40 to 49 year olds (Figure 13). Although 2010 figures show an increase in past year cannabis use across these age groups, none of these increases were significant (Australian Institute of Health and Welfare, 2011a).

Figure 13: Proportion of the general population reporting past year cannabis use



Source: National Drug Strategy Household Surveys, AIHW.

Table 2 shows the proportion of males compared to females reporting past year cannabis use between 2001 and 2010. The decline in past year cannabis use between 2001 and 2007 appears to be driven by both males and females, with 2010 figures showing a slight increase across both genders

Table 2: Past year cannabis use by gender

Cannabis	2001	2004	2007	2010
Males	15.8	14.4	11.6	12.9
Females	10	8.3	6.6	7.7

Source: National Drug Strategy Household Surveys, AIHW

Looking at analysis of 10 year age group by gender, data from the NDSHS show that past year cannabis use is highest among the 20 to 29 year age group for both males and females, and lowest among the 40 to 49 year age group (Table 3). Across all age groups, cannabis use declined among both females and males (with the exception of males aged 40 to 49 years) between 2001 and 2007. Interestingly, the greatest decline for both women and men during this period occurred among the 14 to 19 year olds. As with the overall prevalence of cannabis use, analysis of the 2010 data by 10 year age group and gender shows a slight (but not significant) increase across all age groups for both men and women.

Table 3: Past year cannabis use by gender and age group

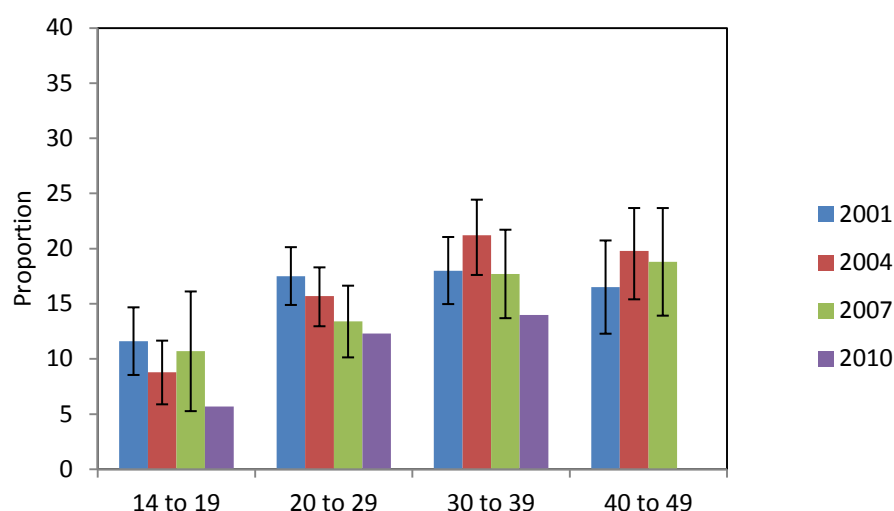
Males	14-19	20-29	30-39	40-49
2001	26.6	35.1	20.8	10.7
2004	18.4	32.4	21.4	11.9
2007	13.1	25.7	15.9	11.6
2010	15.9	25	18.2	12.7

Females	14-19	20-29	30-39	40-49
2001	22.6	23.2	11.7	6.6
2004	17.4	19.5	10.6	5.7
2007	12.7	15.9	8.4	5.1
2010	15.5	17.5	9	6.2

Source: National Drug Strategy Household Surveys, AIHW

Despite the prevalence of cannabis use in the general population decreasing significantly between 2004 and 2007, daily use (indicative of a harmful pattern of consumption) among past year users has remained stable between 2001 and 2007. In 2001 the proportion of past year cannabis users using daily was 16%, in 2004 it was 16.4% and in 2007 14.9% (Roxburgh et al., 2010). Data from 2010 shows that daily cannabis use across age groups remains unchanged (Australian Institute of Health and Welfare, 2011a). Note that data for the 40 to 49 year age group, and for confidence intervals around 2010 percentages was unavailable at the time of publication.

Figure 14: Proportion of past year cannabis users reporting daily cannabis use



Source: National Drug Strategy Household Surveys, AIHW

Examination of trends in data among people who inject drugs that are surveyed for the Illicit Drug Reporting System (IDRS) reveals that recent cannabis use (past 6 months) has decreased at a constant (and significant) rate of 1.0% per year (Figure 15). As can be seen among regular ecstasy users (REU) surveyed for the Ecstasy and related Drugs Reporting System (EDRS) (the right hand graph), cannabis use in the past 6 months is also decreasing at a constant rate of 1.3% per year. The trends in IDRS and EDRS match the NDSHS trends.

Figure 15: Linear trend in cannabis use (last 6 months) amongst IDRS respondents (LHS) and EDRS respondents (RHS)

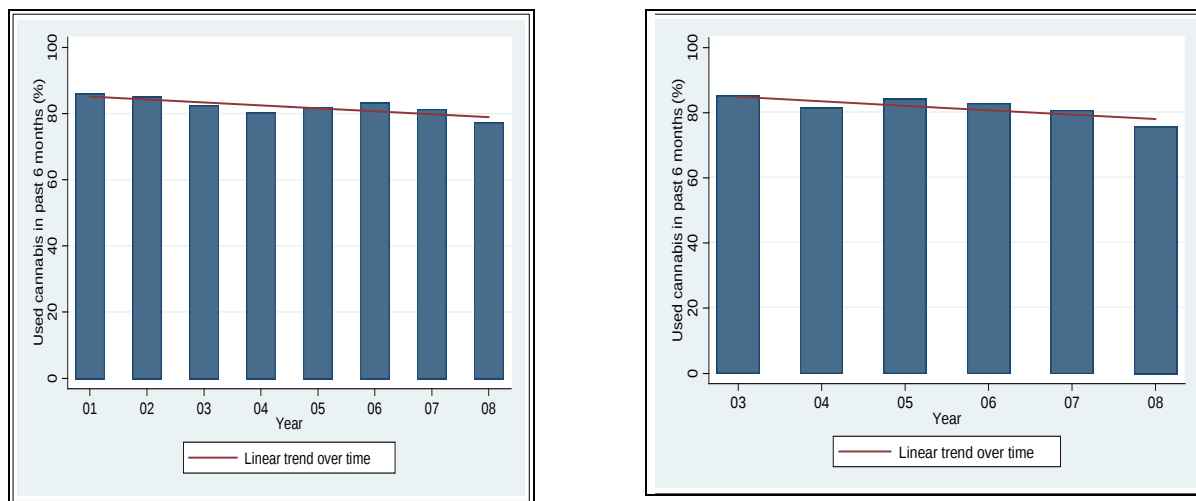
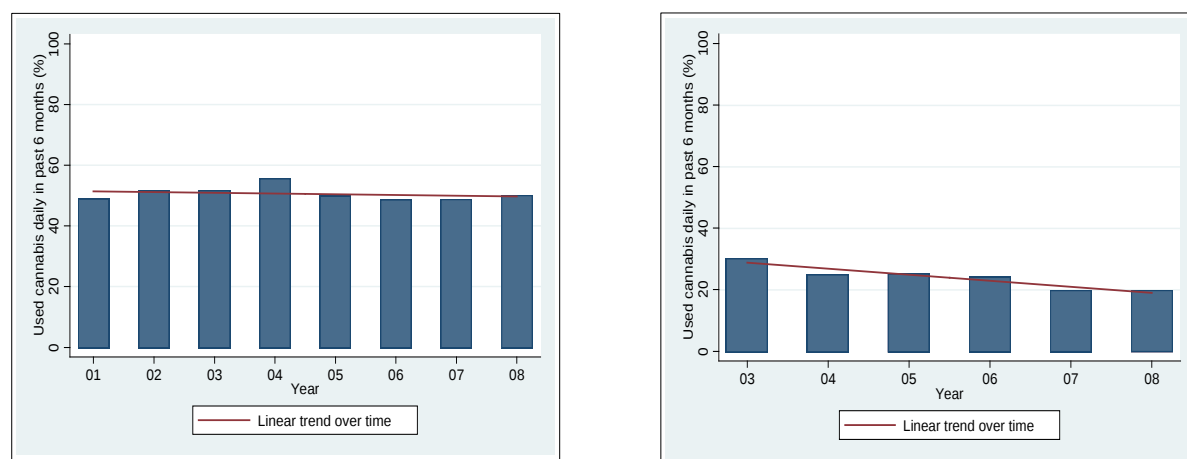


Figure 16 provides the trend line for daily cannabis use amongst those IDRS and EDRS respondents who reported cannabis use. This reveals non-significant changes over time among IDRS respondents and a significant decreasing trend among EDRS respondents (decreasing at a constant rate of 2.0% per year).

Figure 16: Linear trend in daily cannabis use amongst IDRS respondents (LHS) and EDRS respondents (RHS) reporting recent cannabis use



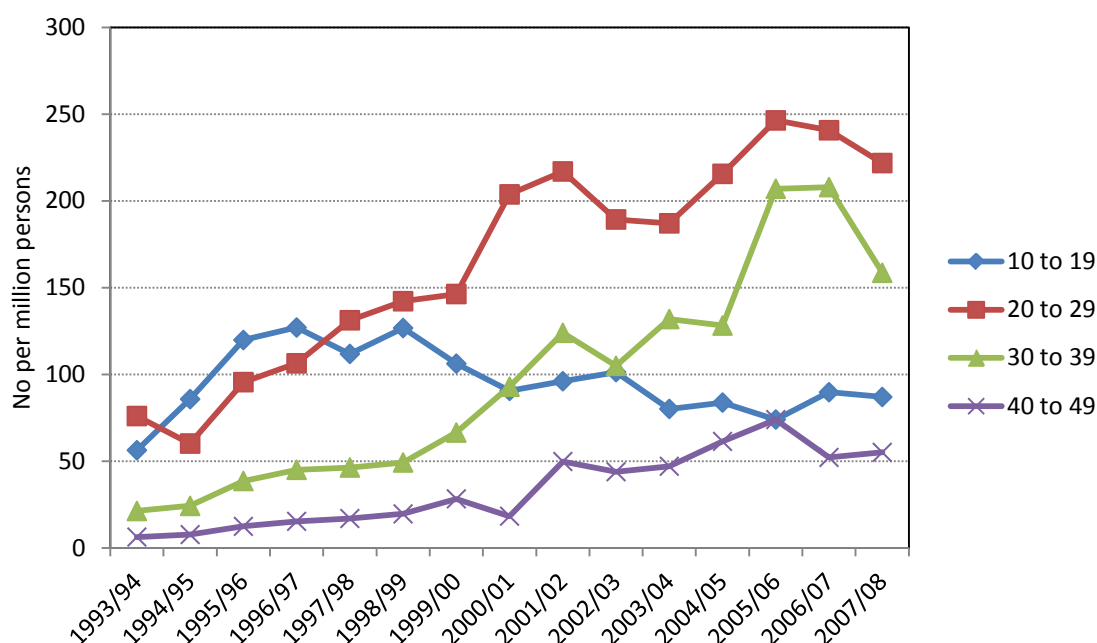
3.2 Patterns of harms associated with cannabis use

Hospital separations

In 2007/08, hospital separations with a principal diagnosis related to cannabis were higher across all age groups than in 2001/02, with the exception of those aged 10 to 19 years (Figure 17). Looking at longer term trends in Australia the rate of separations has gone from 40 per million people in 1993/94 to 134 per million persons in 2007/08 (Roxburgh, 2010). Cannabis-related separations are highest among the 20 to 29 year age group, which fits with patterns of use among the general population.

Admissions for cannabis dependence have accounted for an increasing proportion of all cannabis-related hospital admissions, from 55% in 1999/00 to 75% in 2007/08 (Roxburgh, 2010).

Figure 17: Rate of cannabis-related hospital separations by age group, 2001 to 2008



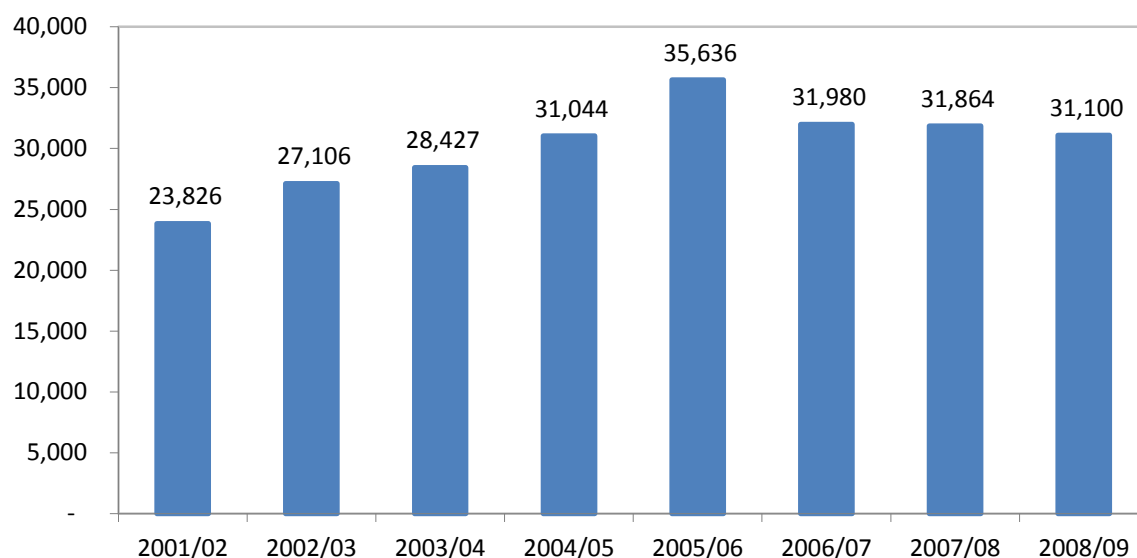
Source: National Hospital Morbidity Database, Roxburgh and Burns (2010)

N.B. Cannabis-related separations include those for dependence, cannabis toxicity and cannabis use disorders

3.3 Patterns of cannabis treatment seeking

The greatest proportion of treatment sought for illicit drugs among alcohol and drug treatment agencies (reporting to the Alcohol and other Drug Treatment Services National Minimum Data Set, AODTS-NMDS) is for cannabis. In 2008/09, a slightly higher percentage (22.5%) of all treatment episodes (including alcohol) were for cannabis compared to 21% in 2001/02 (Figure 18).

Figure 18: Number of closed treatment episodes where cannabis was the principal drug of concern



Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

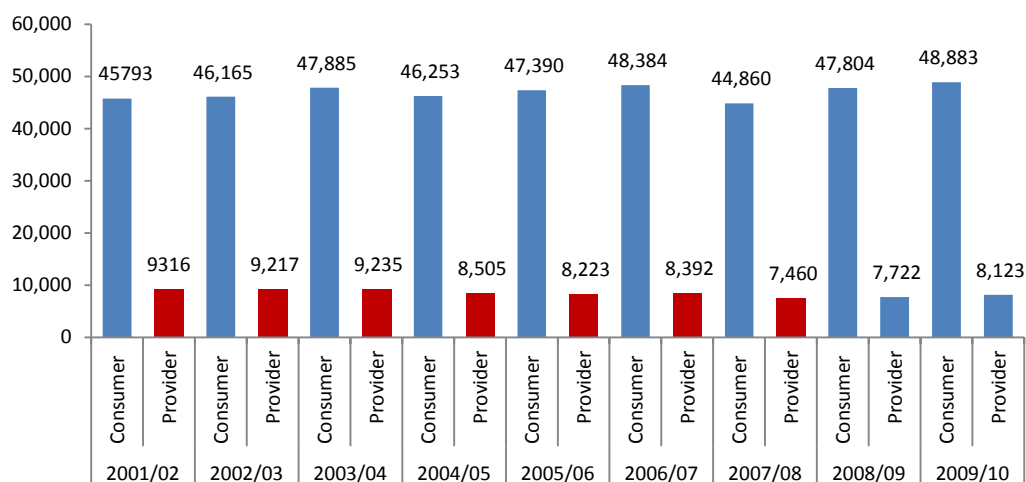
3.4 Cannabis law enforcement indicators

Consumer and Provider arrests

Despite the fact that the majority of all drug related arrests in 2009/10 were for cannabis offences (67%), this proportion is lower than that recorded in 2001/02, when cannabis arrest accounted for 75% of all drug arrests (Australian Crime Commission, 2009) (Figure 19).

Considering consumer arrests only, the percentage of these that are for cannabis is lower in 2009/10 (71%) than in 2001/02 (78%). This trend is seen in provider arrests also, where in 2001/02, 64% of all provider arrests were for cannabis while in 2009/10 this figure was 52% (Figure 19).

Figure 19: Cannabis consumer and provider arrests, 2001 to 2010

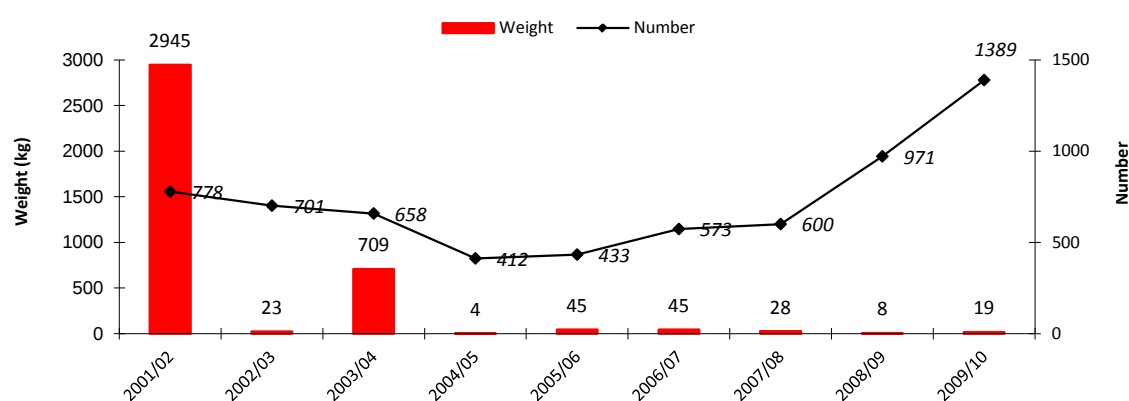


Source: Australian Illicit Drug Report, ACC, Illicit Drug Data Reports, ACC

Seizures

We distinguish between border seizures (interdiction) and domestic seizures for each drug. The weight of cannabis detections at the border was at its highest in 2001/02 (Figure 20), and more recent years have seen a sharp decline in the weight of seizures coming into the country. The number of seizures however have steadily increased to the highest recorded in 2009/10 (1389) during the period.

Figure 20: Weight and number of cannabis detections made at the border by the Australian Customs and Border Protection Service, 2001 to 2010

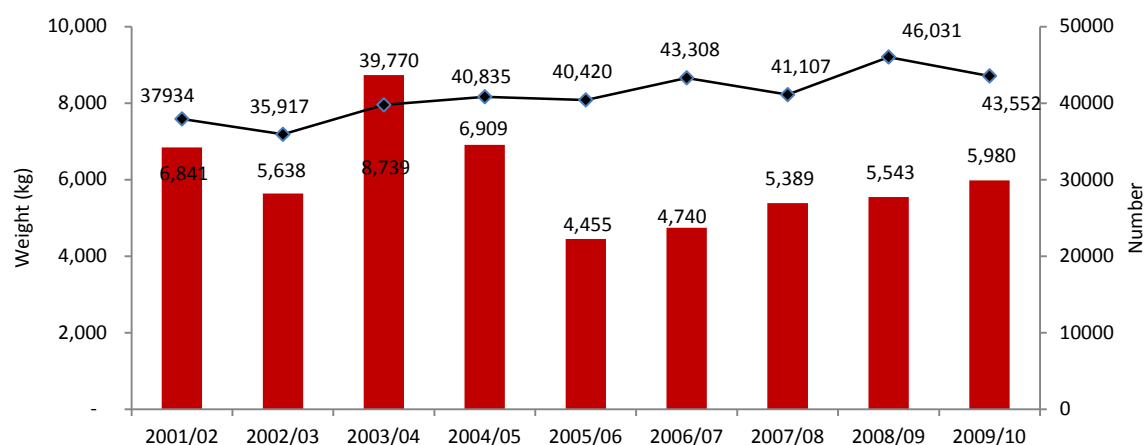


Source: Australian Customs and Border Protection Service

The Australian Crime Commission (ACC) reports that ‘the majority of cannabis consumed in Australia is domestically produced and remains readily available’ (Australian Crime Commission, 2009). Larger weights of domestic seizures (Figure 21) compared to border seizures (Figure 20) confirm that much of the cannabis consumed in Australia is likely to be produced domestically.

There appears to be little change in the number and weight of domestic cannabis seizures over time (Figure 21).

Figure 21: Weight and number of domestic cannabis seizures made by State/Territory police, 2001 to 2010



Source: Australian Illicit Drug Report, ACC, Illicit Drug Data Reports, ACC

■ Weight (kg) ◆ Number

3.5 Cannabis market indicators

Cannabis Price Potency and Availability reported by Regular Ecstasy users (REU) surveyed for the Ecstasy and related Drugs Reporting System (EDRS)

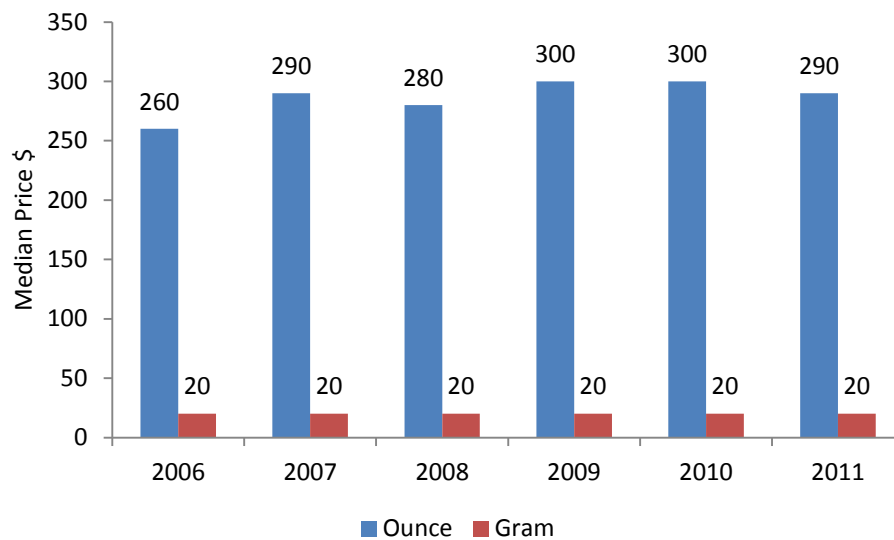
The following data represents median price potency and availability across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price, potency and availability of cannabis from the EDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#EDRS_Jurisdictional

Cannabis price – Hydroponic

Hydroponic cannabis prices per gram have remained stable over the past five years at \$20, while the price of an ounce has increased from \$260 in 2006 to \$290 in 2011 (Figure 22) (Sindicich and Burns, in press) .

Figure 22: Median price of hydroponic cannabis, 2006-2011 (EDRS)

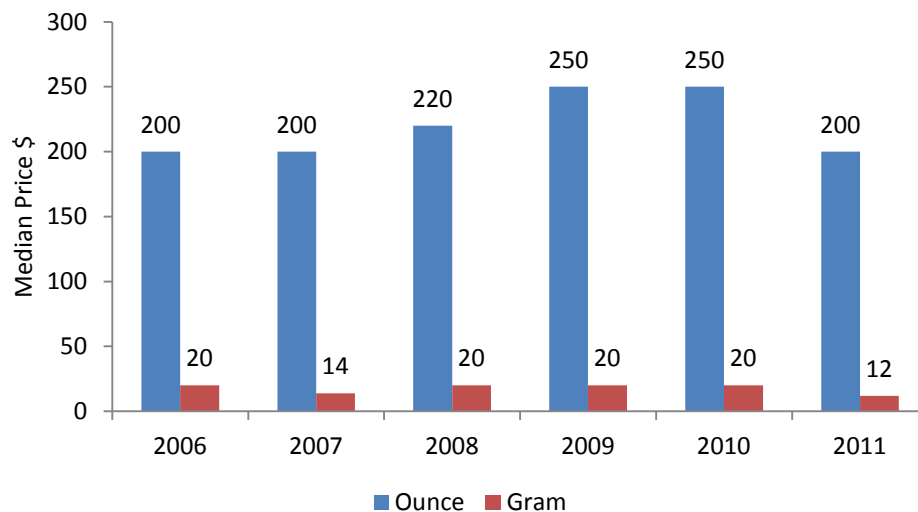


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis price - Bush

The price of both a gram and an ounce of bush cannabis declined between 2009 and 2011 (from \$20 to \$12 per gram and \$250 to \$200 per ounce) (Figure 23).

Figure 23: Median price of bush cannabis, 2006-2011 (EDRS)

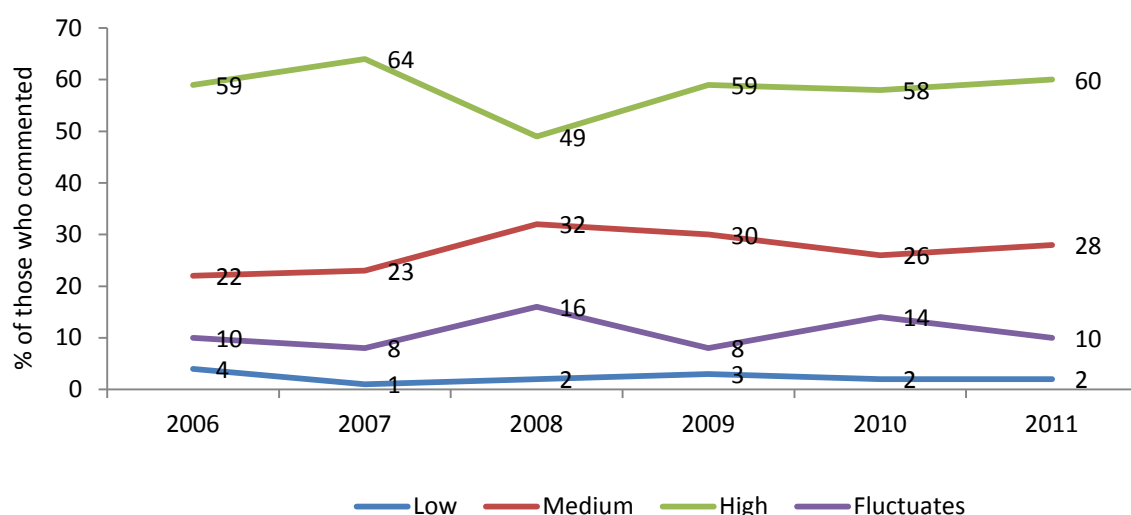


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis potency- Hydroponic

Reports of hydroponic cannabis potency have remained stable across time with the majority of REU reporting that potency is 'high' (Figure 24) (Sindicich and Burns, in press).

Figure 24: Current potency of hydroponic cannabis nationally, 2006-2011 (EDRS)

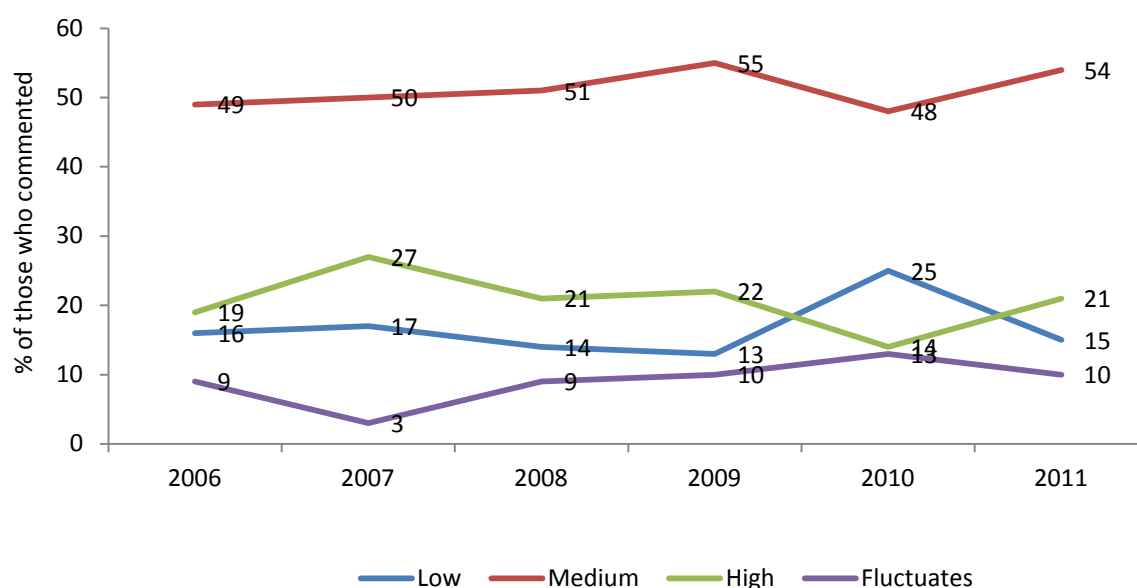


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis potency-bush

The potency of bush cannabis has been reported by REU consistently to be 'medium'. Reports of potency have remained stable since 2006 (Figure 25).

Figure 25: Current potency of bush cannabis nationally, 2006-2011 (EDRS)

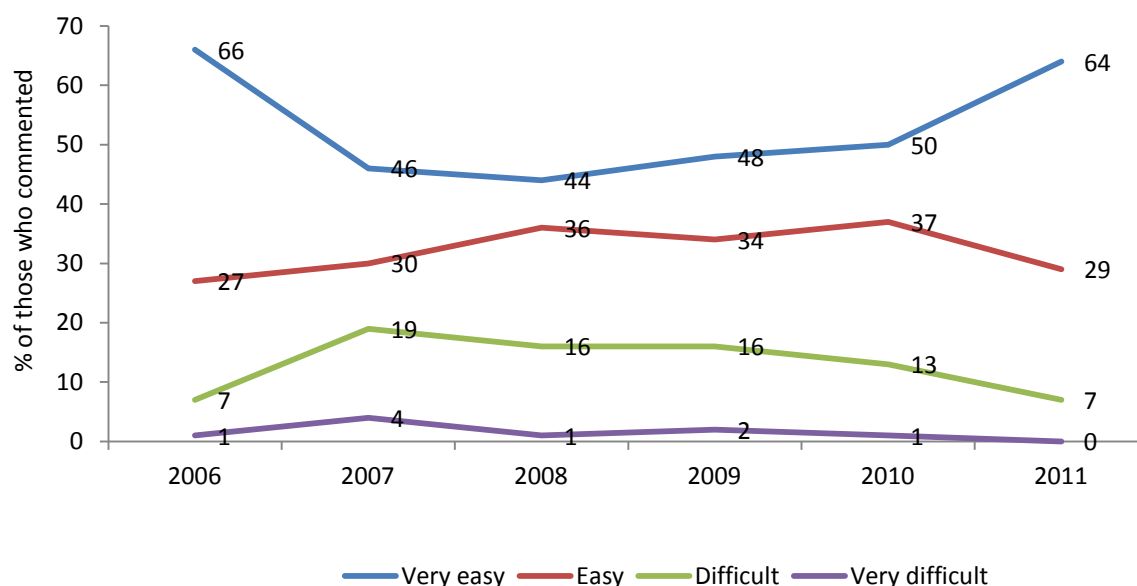


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis availability-hydroponic

Approximately two thirds of the REU surveyed in 2011 reported hydroponic cannabis as being 'very easy' to obtain, representing an increase from 50% in 2010 (Figure 26).

Figure 26: Current availability of hydroponic cannabis nationally, 2006-2011 (EDRS)

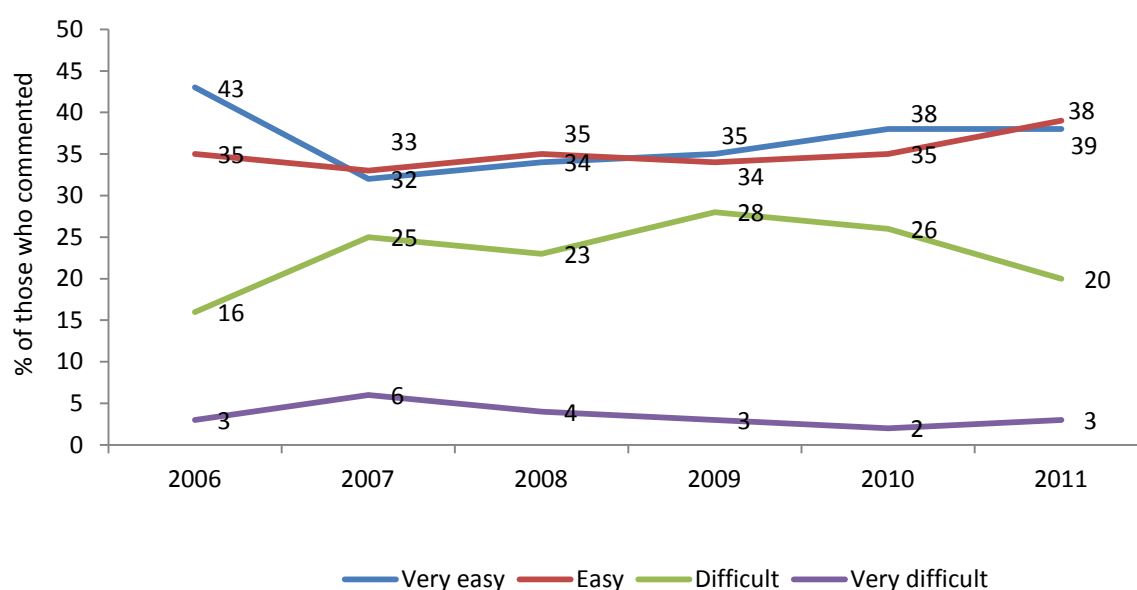


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis availability-bush

The majority of REU have consistently reported that bush cannabis is 'easy' or 'very easy' to obtain (Figure 27).

Figure 27: Current availability of bush cannabis nationally, 2006-2011 (EDRS)



Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cannabis Price Potency and Availability reported by people who inject drugs (PWID) as surveyed by the Illicit Drug Reporting System (IDRS)

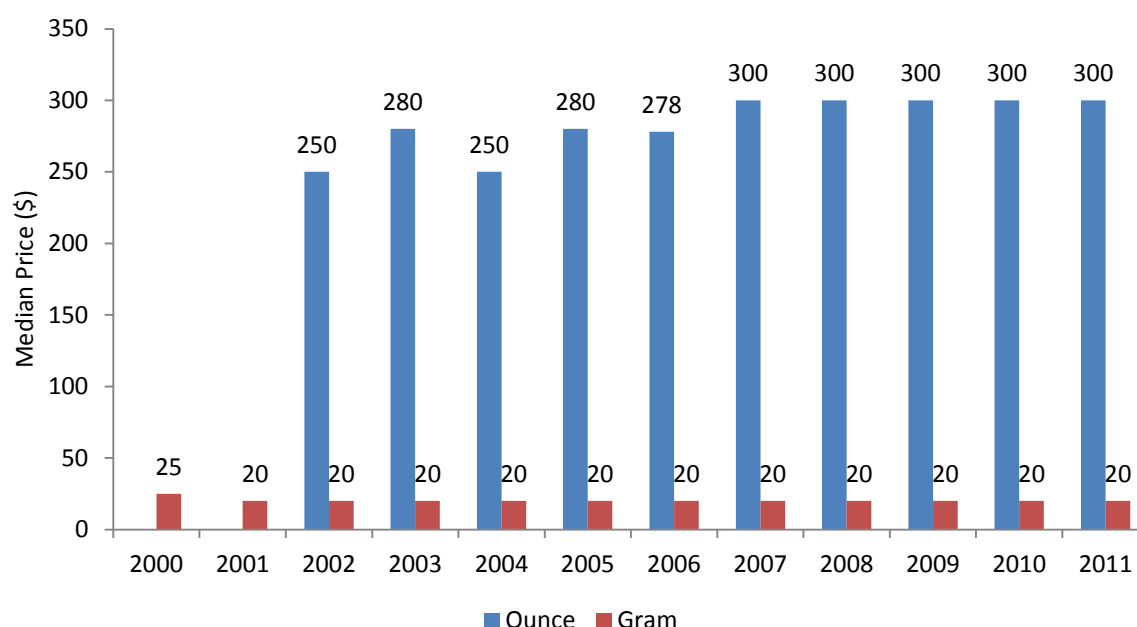
The following data represents median price potency and availability of cannabis across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price potency and availability of cannabis from the IDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#IDRS_Jurisdictional

Cannabis price - Hydroponic

The price of a gram of hydroponic cannabis at \$20, and the price of an ounce of hydroponic cannabis at \$300 has remained stable between 2007 and 2011 (Figure 28) (Stafford and Burns, in press).

Figure 28: Median price of hydroponic cannabis price per ounce and gram, nationally, 2000-2011 (IDRS)



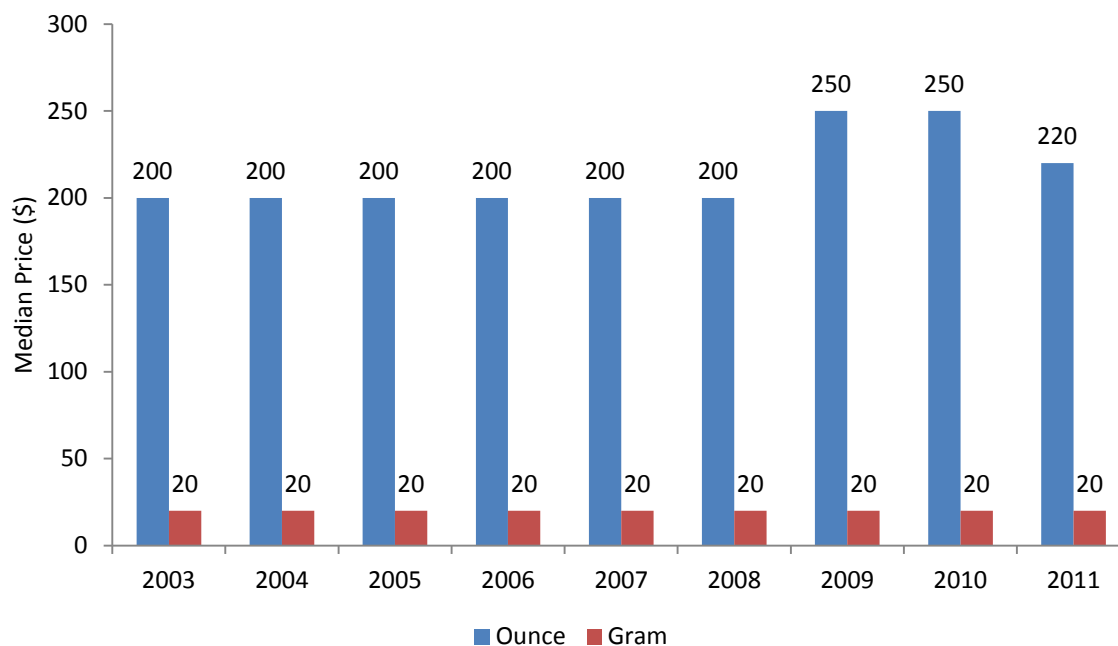
Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Note: from 2003 onwards hydroponic and bush cannabis data were collected separately. No data is available for the price of an ounce in 2000 and 2001.

Cannabis price - Bush

The price of a gram of bush cannabis is also \$20, and this has remained stable over time. The price of an ounce declined slightly from \$250 in 2010 to \$220 in 2011 (Figure 29).

Figure 29: Median price of bush cannabis price per ounce and gram, nationally, 2000-2011 (IDRS)



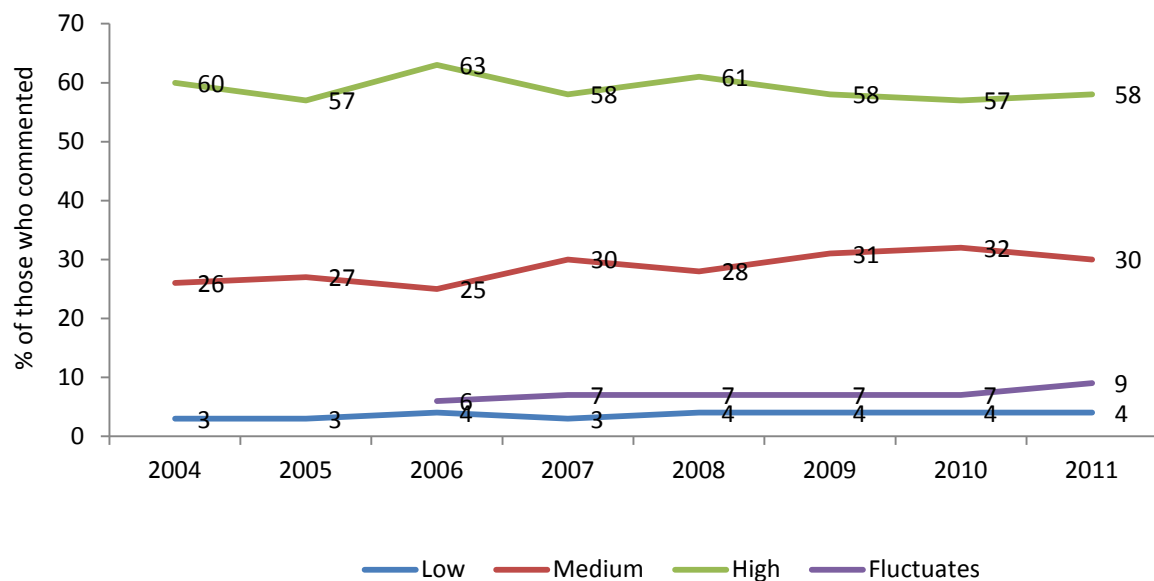
Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Note: Collection of data on bush cannabis commenced from 2003 onwards

Cannabis potency - Hydroponic

The majority of IDRS respondents reported hydroponic cannabis potency as being 'high', and this has remained stable over time (Figure 30) (Stafford and Burns, in press).

Figure 30: Current potency of hydroponic cannabis nationally, 2004-2011 (IDRS)

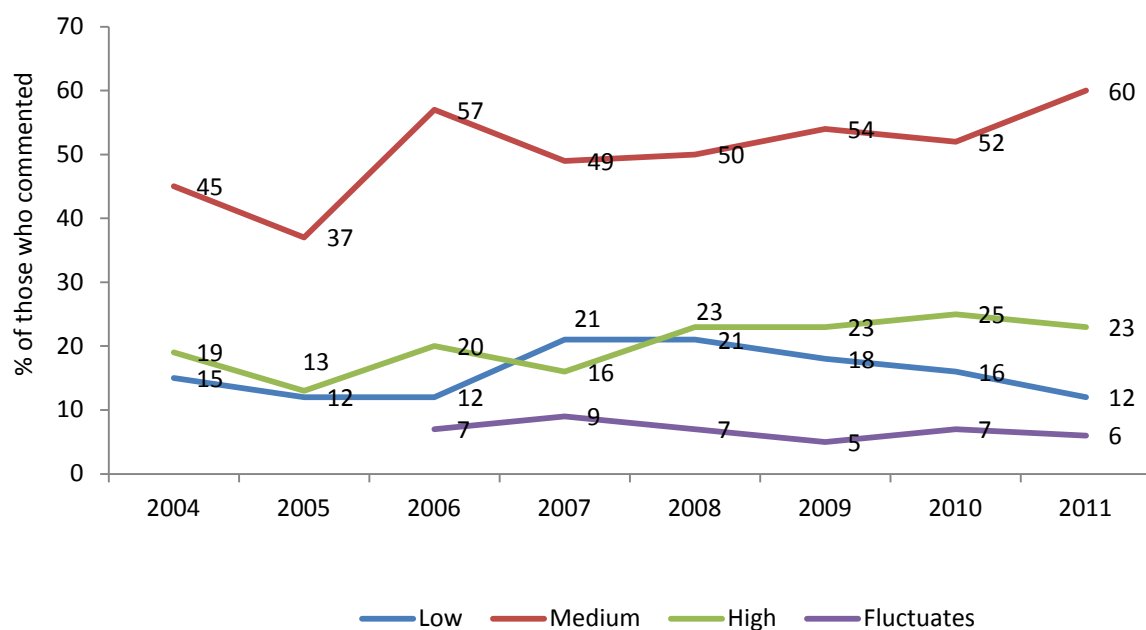


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Cannabis potency - Bush

The current potency of bush cannabis has been relatively consistently reported as 'medium' over time (Figure 31).

Figure 31: Current potency of bush cannabis nationally, 2004-2011 (IDRS)

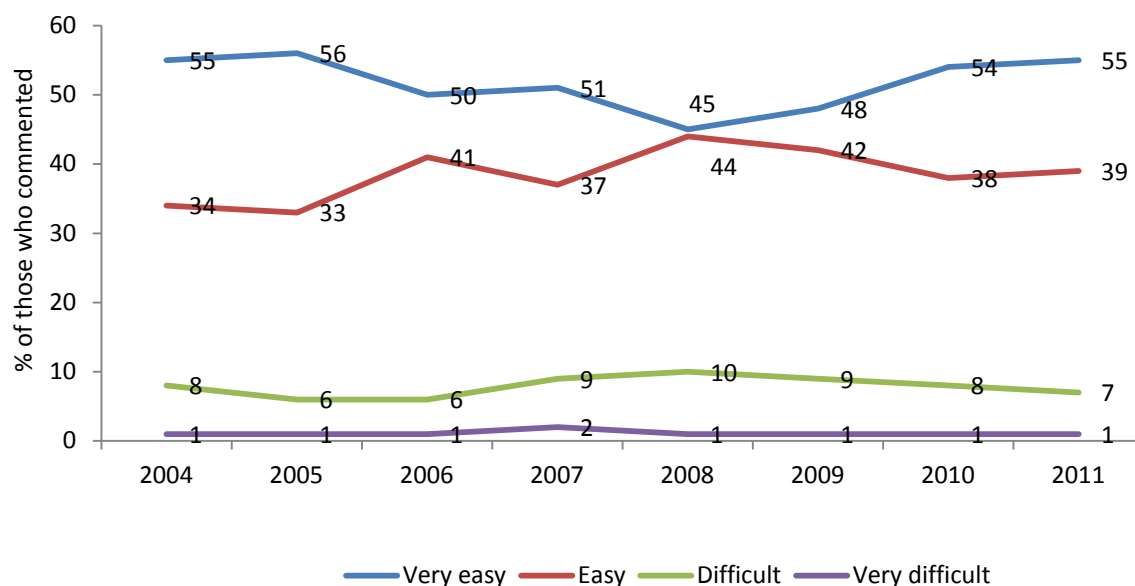


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Cannabis availability - Hydroponic

The current availability of hydroponic cannabis has mainly been reported as 'very easy' or 'easy', and hasn't changed over time (Figure 32).

Figure 32: Current availability of bush cannabis nationally, 2004-2011 (IDRS)

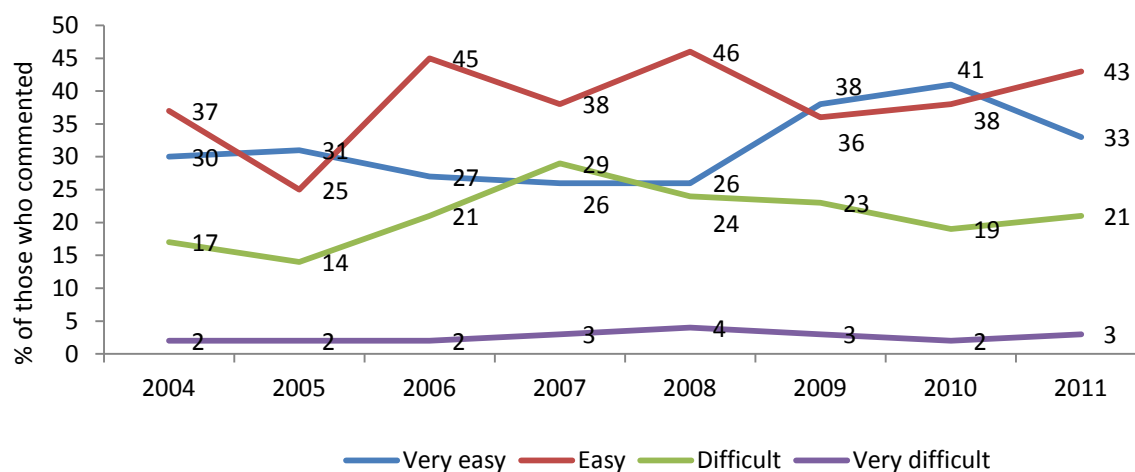


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Cannabis availability - Bush

The current availability of bush cannabis has mainly been reported as 'very easy' or 'easy' and hasn't changed over time (Figure 33).

Figure 33: Current availability of hydroponic cannabis nationally, 2004-2011 (IDRS)



Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

3.6 Cannabis: summary

Prevalence

General population

- The prevalence of last year cannabis use in Australia declined between 1998 and 2007 (from 17.9% to 9.1), with 2010 recording a significant increase to 10.3%.
- The increase was driven by higher prevalence among Australians aged 50 to 59 years.
- Prior data from the survey of secondary school students showed the decline in cannabis use from 32.4% in 1996 to 13.6% in 2008.
- Daily cannabis use among those who continue to use has remained relatively stable over time (13% of cannabis users in 2010).
- The highest proportion reporting daily cannabis use were Australians aged 40 years and over.

Sentinel Groups

- Among injecting drug users past 6 month cannabis use declined from 83% in 2003 to 79% in 2011.
- Daily cannabis use among current users has remained stable (50% in 2011).
- Among regular ecstasy users cannabis use has remained stable at 85% (in 2003 and 2011).
- Daily cannabis use decreased from approximately 30% in 2003 to 18% in 2011.

Treatment seeking

- There have been increases (particularly among older age groups) in numbers presenting to hospital for problems associated with cannabis use between 2001 and 2008.
- There was an increase in outpatient treatment episodes for problems associated with cannabis from 23,826 in 2001/02 to 31,100 in 2008/09. Cannabis treatment episodes accounted for 22.5% of all drug treatment episodes.

Law enforcement

- Two thirds of all drug-related arrests in 2009/10 were for cannabis which represents a drop from 75% of all drug arrests in 2001/02. Numbers of cannabis arrests have remained relatively stable over time.

Market indicators

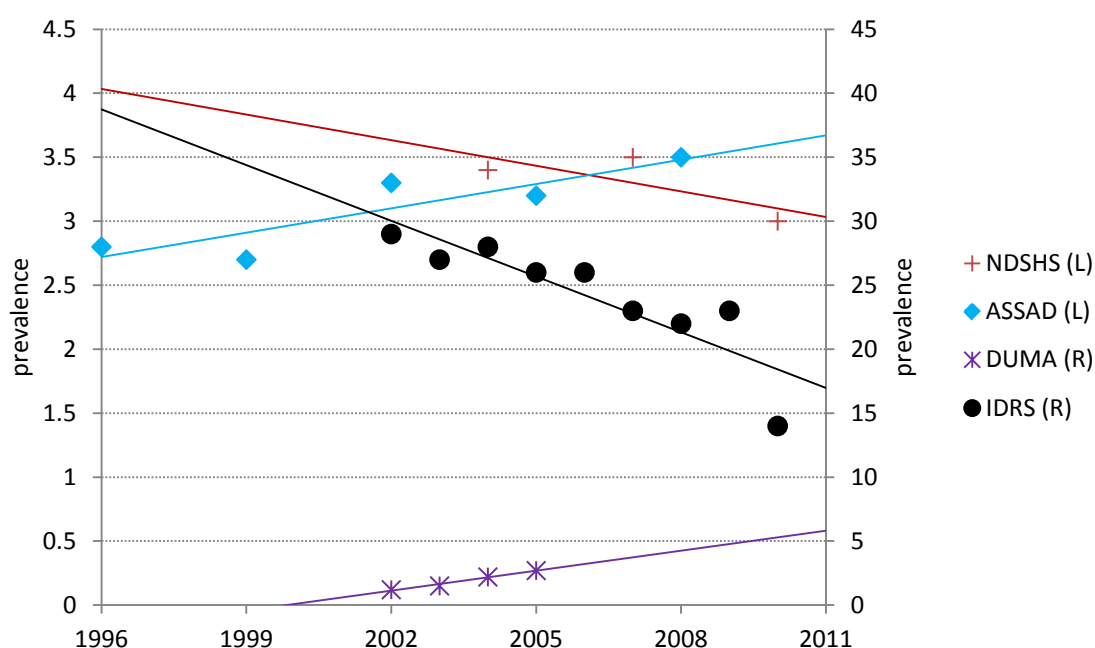
- The price of both hydroponic and bush cannabis has declined slightly in 2011, and both forms have remained readily available.

4. Ecstasy

4.1 Patterns of ecstasy use

Ecstasy is the second most commonly used illicit drug in the general population following cannabis (3% of Australians reported past year ecstasy use in 2010). Since 2004, this percentage has declined from 3.4% to 3% (Australian Institute of Health and Welfare, 2011a). It should be noted that data prior to this is difficult to assess as in 2001 and earlier surveys, ecstasy was classified within a 'designer drug' category which was inclusive of Ketamine and GHB. From 2004 onwards ecstasy was asked about separately. In 2008, 3.5% of secondary school students in Australia reported using ecstasy in the past year, and this proportion has remained stable since 2002 (White and Smith. G., 2009).

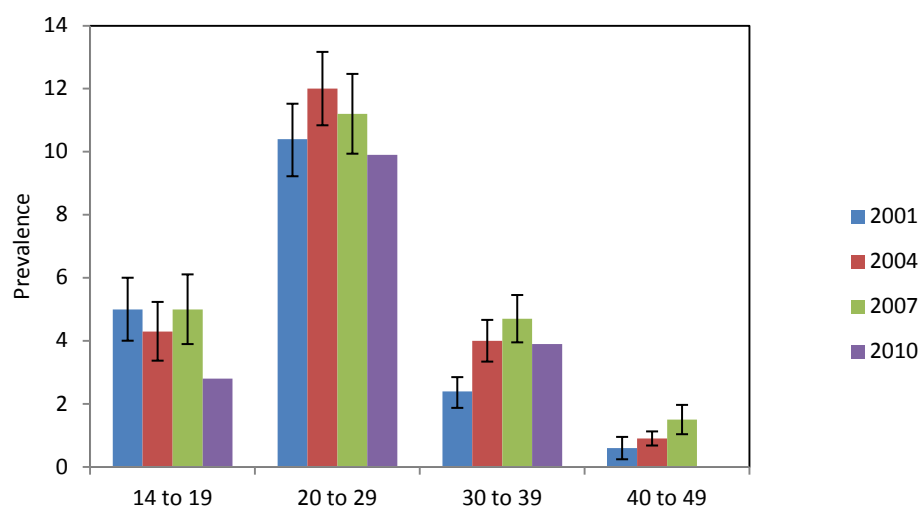
Figure 34: Ecstasy use across multiple surveys



Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students' use of over-the-counter and illicit substances, DoHA. Drug use monitoring in Australia: annual reports on drug use among police detainees, AIC. Findings from the Illicit Drug Reporting System, NDARC.
Note: Figure above does not include EDRS as by definition, all EDRS respondents used ecstasy in the last 12 months.

Looking at age analyses, data from the NDSHS show that past year ecstasy use is highest among the 20 to 29 year age group, and lowest among the 40 to 49 year age group (Figure 35). It remains significantly higher among the 20 to 29 year olds compared to all other age groups. Looking at trends over time across age groups, there has been a significant decrease among the 14 to 19 year age group, particularly females (Australian Institute of Health and Welfare, 2011a) between 2007 and 2010. While there was a significant increase in the proportion of 30 to 39 year olds reporting recent ecstasy use between 2001 and 2007 (from 2.4% to 4.7%), this proportion was stable at 3.9% in 2010. Likewise, a significant increase is seen among 40 to 49 year olds (from .6% in 2001 to 1.5% in 2007) (Figure 35). It should be noted that data for the 40 to 49 year age group for 2010 was not available at the time of publication.

Figure 35: Proportion of the general population reporting past year ecstasy use



Source: National Drug Strategy Household Surveys, AIHW

Across the whole population, more males than females report past year ecstasy use (Table 4).

Table 4: Past year ecstasy use by gender

Ecstasy	2001	2004	2007	2010
Males	3.6	4.4	4.4	3.6
Females	2.3	2.4	2.7	2.3

Source: National Drug Strategy Household Surveys, AIHW

Looking at gender by age group, larger proportions of males than females across age groups reported past year ecstasy use in 2010 (Table 5). The proportion of females aged 14 to 19 reporting past year ecstasy use declined significantly in 2010 from 6% in 2007 to 2.5%.

Table 5: Past year ecstasy use by gender and age group

Males	14-19	20-29	30-39	40-49
2001	5.7	12.5	3.1	0.3
2004	3.9	15.1	5.8	0.6
2007	4	13.8	6.3	0.9
2010	3.1	11.4	4.9	NA

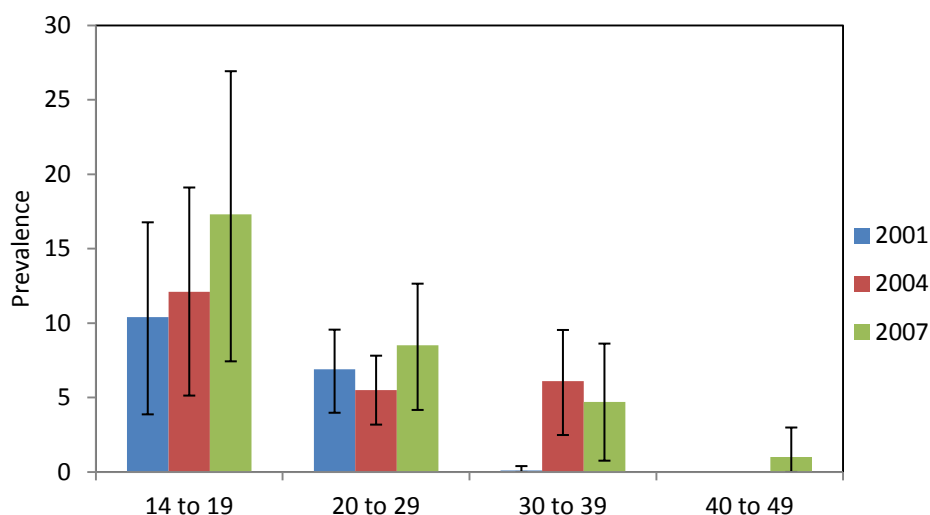
Females	14-19	20-29	30-39	40-49
2001	4.3	8.3	1.7	0.3
2004	4.7	8.8	2.3	0.1
2007	6	8.7	3.2	0.2
2010	2.5	8.2	3.0	NA

NA means data not available at the time of publication

Source: National Drug Strategy Household Surveys, AIHW

Looking at weekly or more frequent ecstasy use among those reporting recent use, there has been no change in these patterns among any of the age groups, with the exception of the 30 to 39 year olds. There has been a significant increase in the proportion of 30 to 39 year olds reporting weekly or more frequent ecstasy use from 0.1% in 2001 to 4.7% in 2007 (Figure 36). Data on weekly use of ecstasy by 10 year age group was not available at the time of publishing. Overall, the majority (84.5%) of Australians report infrequent ecstasy use, once every few months or less (Australian Institute of Health and Welfare, 2011a).

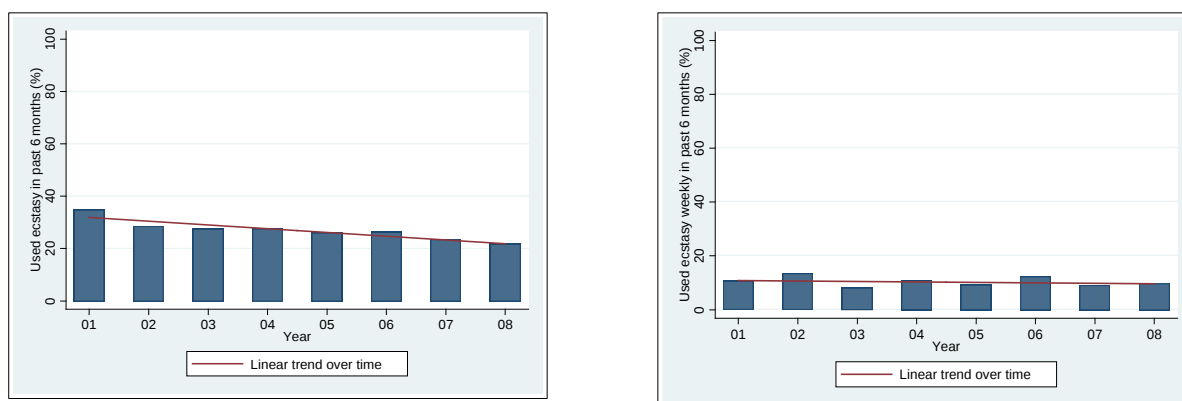
Figure 36: Proportion of past year ecstasy users reporting weekly or more ecstasy use



Source: National Drug Strategy Household Surveys, AIHW

The pattern of ecstasy use among sentinel groups of illicit drug users (as measured by the IDRS and EDRS) follows a different pattern. Among IDRS respondents, the prevalence of past six month ecstasy use is decreasing at a constant rate of 1.4% per year, while the frequency of (weekly) use among current ecstasy users has remained stable since 2001 (Figure 37).

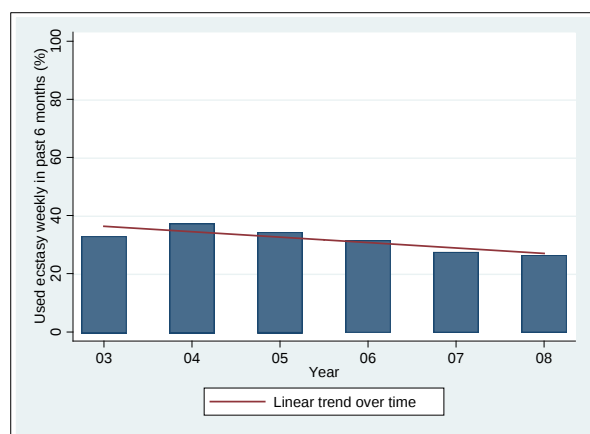
Figure 37: Linear trend in ecstasy use (last 6 months) (LHS) and weekly use among current users (RHS), IDRS respondents



Source: Illicit Drug Reporting System and Ecstasy and related Drugs Reporting System

Among regular ecstasy users surveyed for the Ecstasy and related Drug Reporting System (EDRS), the proportion reporting using ecstasy weekly or more frequently in the past six months was 27% in 2007 compared to 33% in 2003 (Degenhardt et al., 2009), representing a decrease at a constant rate of 1.9% per year (Figure 38).

Figure 38: Linear trend in weekly ecstasy use amongst EDRS respondents



Source: Ecstasy and related Drugs Reporting System

4.2 Patterns of harms associated with ecstasy use

Hospital separations

Data on ecstasy-related hospital admissions are not available in Australia, as they are classified (in accordance with the International Statistical Classification of Diseases 10th revision Australian Modification – ICD-10AM) under amphetamines (National Centre for Classification in Health, 1998).

Deaths

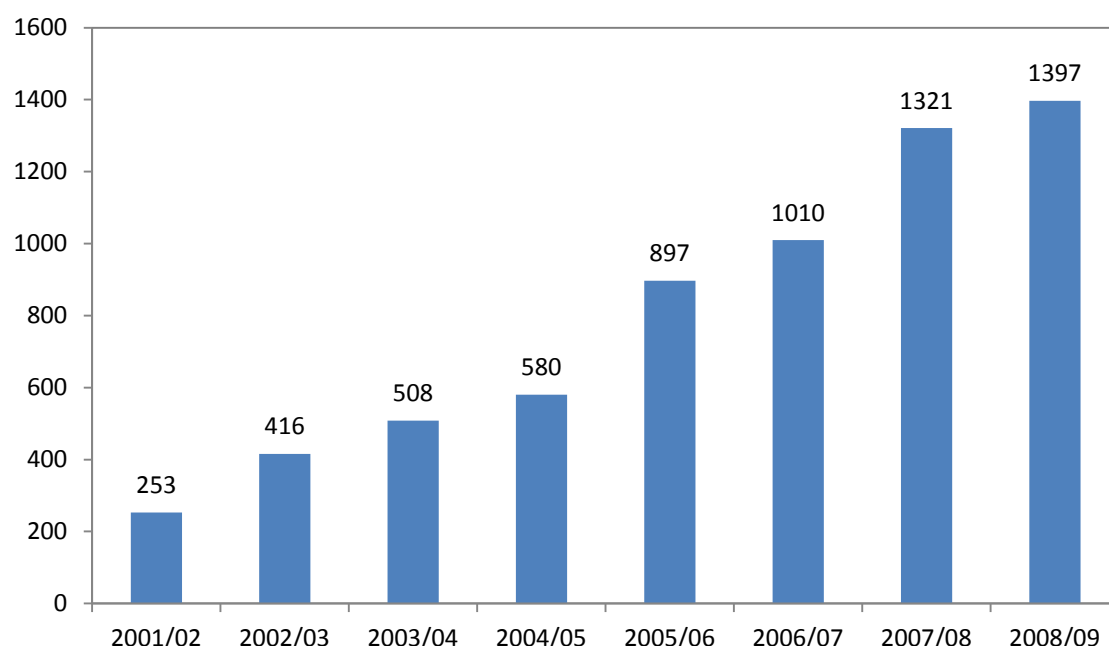
A recent review of the National Coronial Information System (NCIS) (Kaye et al., 2009) identified 82 ecstasy-related deaths during the period July 2000 to June 2005. MDMA was considered a direct cause or antecedent cause in 67 of these deaths. However, only 19 of these deaths were due to MDMA toxicity alone, with the larger proportion being due to multiple drug toxicity (most commonly opioids and methamphetamine). Ecstasy-related deaths in Australia are lower in number in comparison to methamphetamine and opioid-related deaths (Degenhardt and Roxburgh, 2007b, Degenhardt and Roxburgh, 2007a). Nevertheless, the variable nature of the contents of MDMA tablets clearly increases the risks of adverse consequences, as does polydrug use.

4.3 Patterns of ecstasy treatment seeking

In 2008/09 ecstasy was nominated as the principal drug of concern in 1,397 closed treatment episodes compared to 253 in 2001/02 (NMDS) and only accounted for 1% of all closed treatment episodes (compared to 0.2% in 2001/02) (Figure 39).

Regular ecstasy users in the EDRS report that they are unlikely to present for treatment for problems associated with their drug use (Degenhardt et al., 2009).

Figure 39: Number of closed treatment episodes where ecstasy was the primary drug of concern



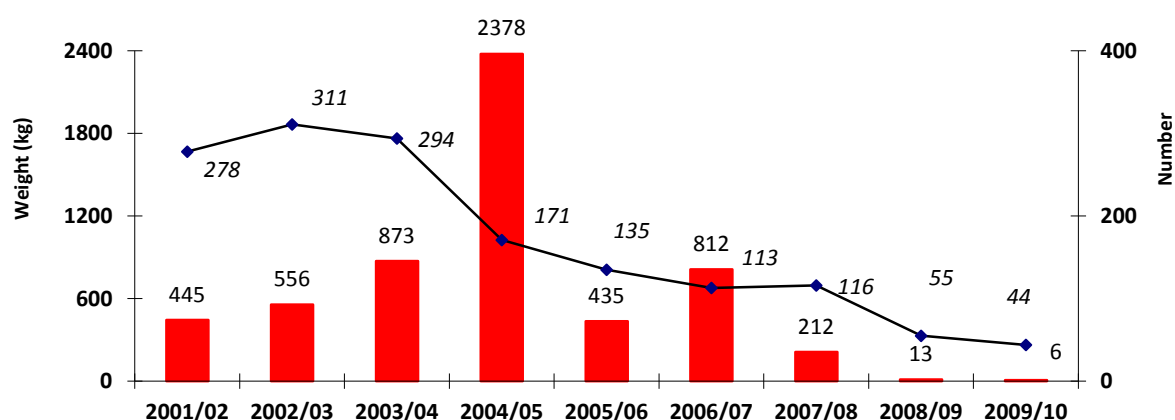
Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

4.4 Ecstasy law enforcement indicators

To date, information on consumer and provider arrests within Australia specifically related to ecstasy are unavailable and are included in data on amphetamine type stimulants (ATS).

The Australian Customs and Border Protection Service does differentiate between seizures for MDMA and ATS, and data show that over the past decade, the weight of ecstasy seizures detected at the Australian border has declined from 2378kg in 2004/05 to just 6kg in 2009/10 (Figure 40). Numbers of seizures have also declined over time.

Figure 40: Weight and number of MDMA detections made at the border by the Australian Customs and Border Protection Service, 2001-2010

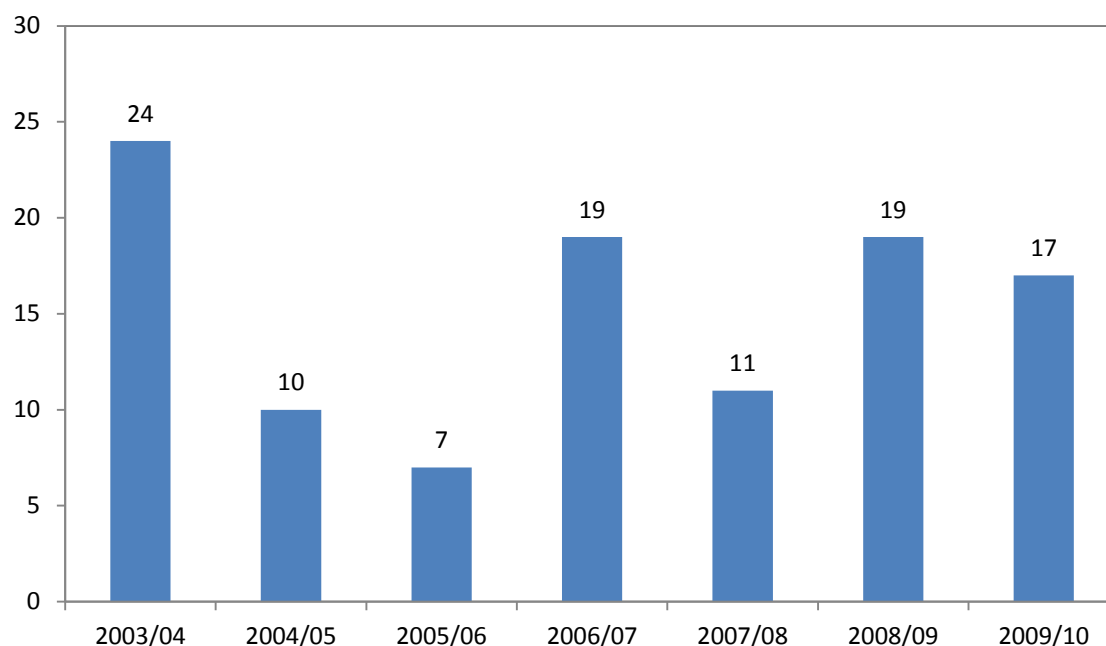


Source: Australian Customs and Border Protection Service

■ Weight — Number

The number of clandestine laboratory detections in Australia in which MDMA was being produced has fluctuated over time, and in 2009/10, these laboratories only accounted for approximately 2% of all laboratory detections (Figure 41) (Australian Crime Commission, 2011).

Figure 41: Number of clandestine laboratory detections in which MDMA was being produced 2003 to 2010



Source: Australian Illicit Drug Data Reports, ACC

Note: Earlier data on MDMA laboratory detections is unavailable.

4.5 Ecstasy market indicators

Ecstasy Price Potency and Availability reported by REU surveyed for the EDRS

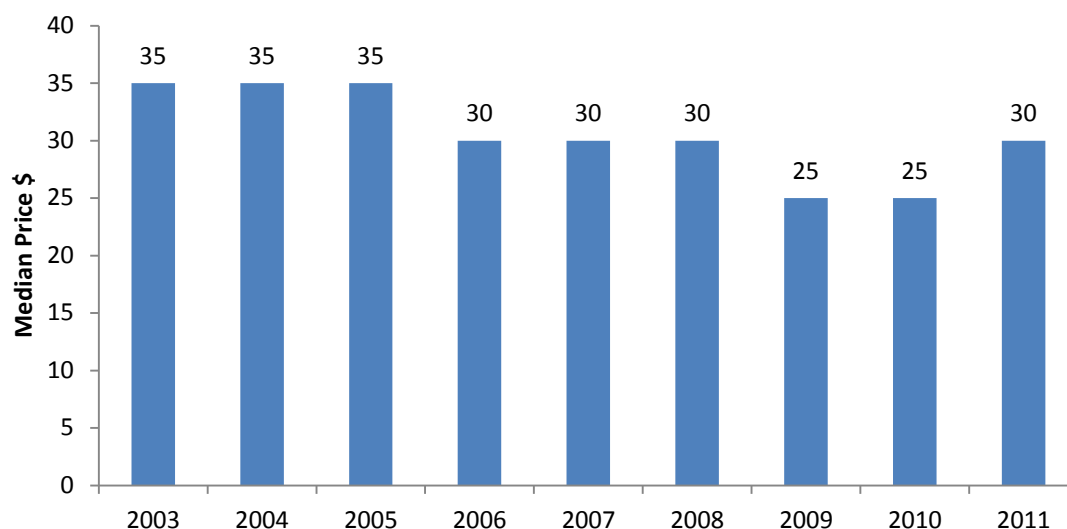
The following data represents median price potency and availability across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price purity and availability of ecstasy from the EDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#EDRS_Jurisdictional

Ecstasy Price

The median price of an ecstasy pill has declined over time from \$35 in 2003 to \$30 in 2011 (Sindicich and Burns, in press).

Figure 42: Median price of an ecstasy pill, 2003-2011 (EDRS)

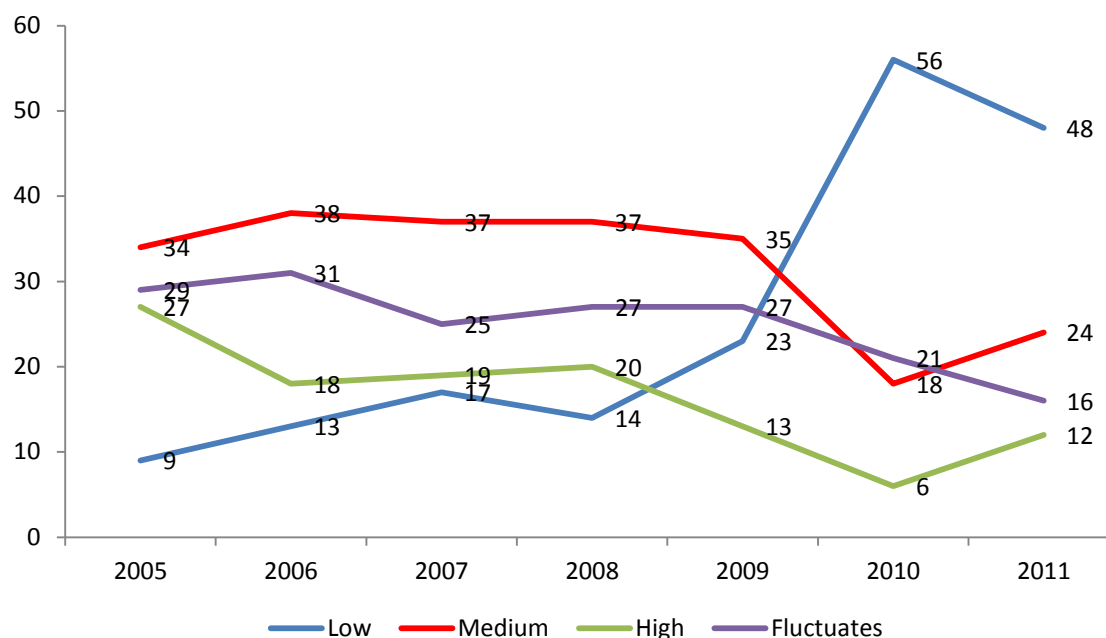


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Ecstasy purity

Proportions of respondents reporting that ecstasy is 'high' in purity have declined over time from 27% in 2005 to 12% in 2011 (Figure 43). There was a dramatic increase in the proportion reporting purity as 'low', from 9% in 2005 to 56% in 2010, however this declined again to 48% in 2011.

Figure 43: Current purity of ecstasy nationally, 2005-2011 (EDRS)

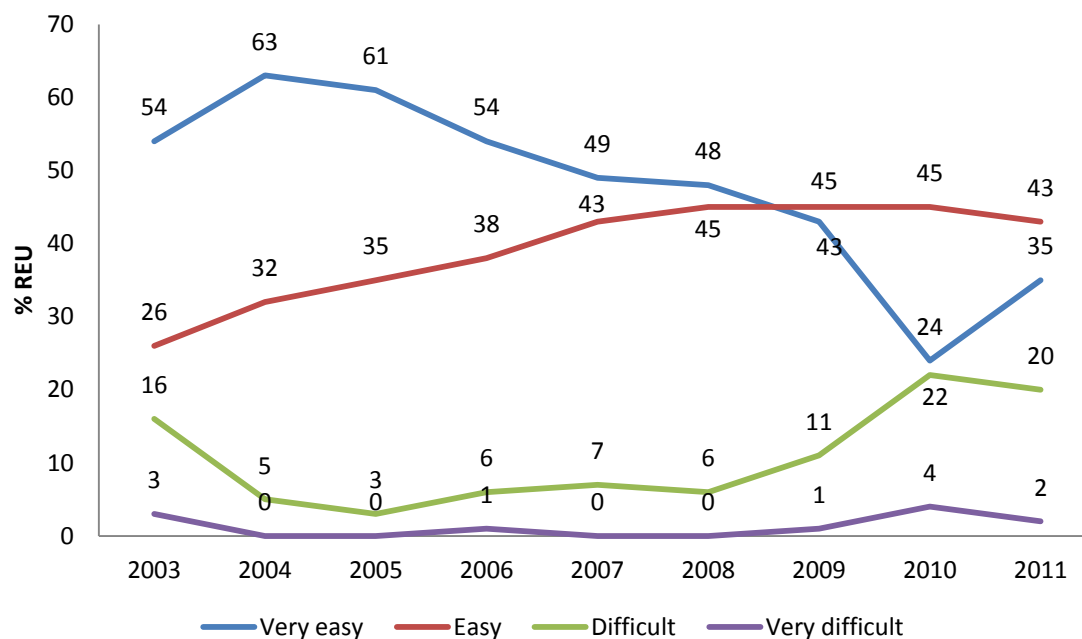


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Ecstasy availability

Since 2008, there has been increasing proportions of EDRS respondents reporting that ecstasy is difficult to obtain (from 6% in 2008 to 20% in 2011) (Figure 44). There has been a corresponding decline in proportions reporting that ecstasy is very easy to obtain between 2008 and 2011.

Figure 44: Current availability of ecstasy nationally, 2003-2011 (EDRS)



Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

4.6 Ecstasy: summary

Prevalence

General population

- Use of ecstasy in the general population has declined for the first time since 1995. The decline from 3.5% in 2007 to 3% in 2010 was statistically significant, and was driven by a significant decline in use among males over 14 (from 4.4% in 2007 to 3.6% in 2010), and young Australians aged 14 to 19 (particularly among females where use declined from 6% in 2007 to 2.5% in 2010).
- In 2010 the majority of Australians who used ecstasy reported using once every few months or less.

Sentinel Groups

- Among injecting drug users, prevalence of 6 month ecstasy use declined from 29% in 2002 to 14% in 2011.
- Among regular ecstasy users there has been a decline in proportions reporting weekly ecstasy use between 2003 and 2011.

Treatment seeking

- There has been an increase in outpatient treatment episodes for problems associated with ecstasy use from 253 in 2001/02 to 1,397 in 2008/09, however these episodes only account for 1% of all drug and alcohol related treatment episodes.

Deaths

- Ecstasy-related deaths in Australia are low in comparison to methamphetamine and heroin-related deaths. During the period 2000 to 2005, 82 deaths that were ecstasy related were identified. Ecstasy was considered a direct antecedent or cause in 67 of these deaths, with only 19 considered to be due to ecstasy toxicity alone.

Law enforcement

- The number and weight of ecstasy seizures detected at the Australian border has continued to decline between 2006/07 and 2009/10.

Market indicators

- The price of ecstasy tablets has declined over time (between 2003 and 2008), according to regular ecstasy users, as has the purity. While ecstasy remains relatively easy to obtain, there has been an increase between 2008 and 2011 in proportions of regular ecstasy users reporting that it is difficult to obtain (from 6% to 20%).

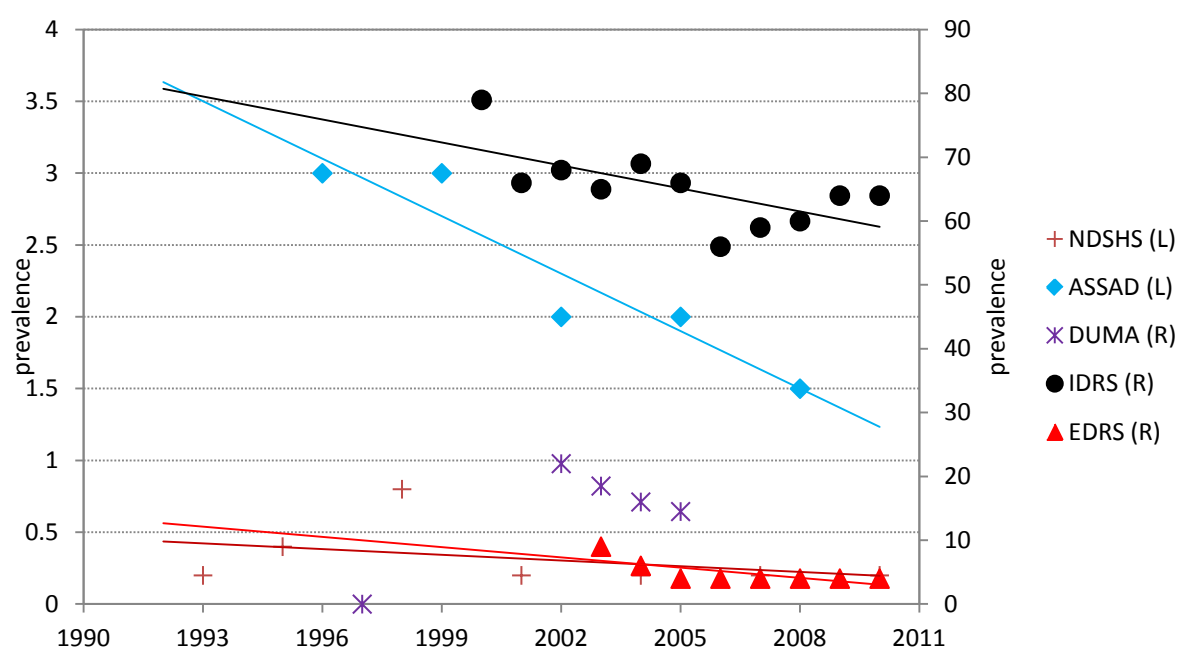
5. Heroin

5.1 Patterns of heroin use

In December 2000 - January 2001 heroin markets in Australia experienced an unexpected and dramatic reduction in the availability of heroin. This translated into reduced consumption and significant reductions in overdose. This reduction has been maintained since this time.

Determining the level of heroin use in the general population is difficult because heroin users are often not captured in the general population surveys. Less than 1% (0.2%) of Australians reported past year heroin use in 2010 (Figure 45). Use among people who inject drugs surveyed for the IDRS and the population of ecstasy users surveyed for the EDRS (on the right axis - Figure 45), has been declining since 2003. Detainees (DUMA) are also less likely to self report that they had recently used heroin in 2005 than in 2003, and urinalysis results support this decline.

Figure 45: Heroin use across multiple surveys



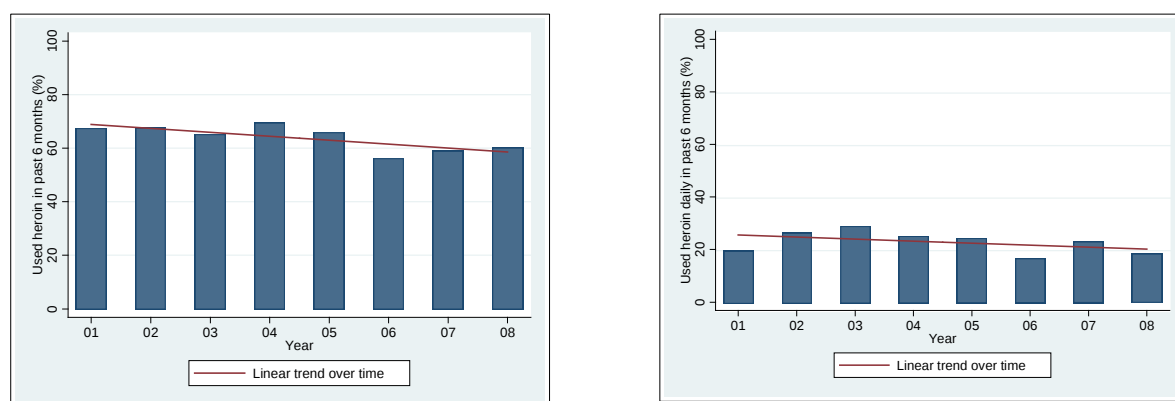
Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students' use of over-the-counter and illicit substances, DoHA. Drug use monitoring in Australia: annual reports on drug use among police detainees, AIC. Findings from the Ecstasy and Related Drugs Reporting System, NDARC. Findings from the Illicit Drug Reporting System, NDARC.

Examining the age trends in heroin use from the NDSHS (as we have for other drugs) is difficult due to the very low prevalence of heroin use in the general population. We have not presented this data as no meaningful conclusions can be drawn from the analysis. Likewise we don't present trends in heroin use by gender among the general population as numbers are too small.

Published research on the changing heroin user population has revealed that there have been fewer young, new initiates to injecting drug use since the reduction in heroin availability. The Australian Needle and Syringe Program findings have documented a rise in longer term injecting careers among participants and a decline in both young people and new initiates attending services (Iversen and Maher, 2008).

Amongst people who inject drugs who are surveyed for the IDRS, past 6 month heroin use has recorded a declining trend. Heroin use is decreasing at a constant rate of 1.5% per year. The rate of daily use amongst those users is remaining stable over time (Figure 46).

Figure 46: Linear trend in heroin use (last 6 months) (LHS) and daily heroin use (RHS) amongst heroin users in the IDRS



Source: Illicit Drug Reporting System

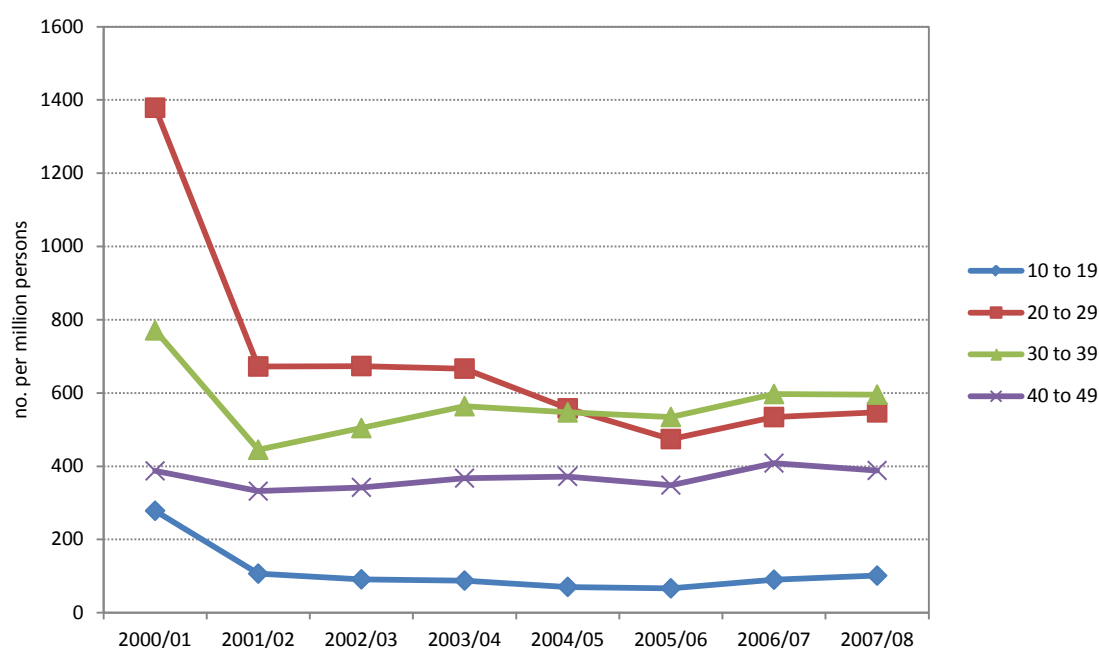
5.2 Patterns of harms associated with heroin use

Hospital separations

Consistent with the reduction in heroin availability seen in 2001, lower numbers of opioid-related hospital presentations have been recorded since this time (in 2007/08 there were 440 opioid-related hospital separations per million persons). Separations for opioid dependence accounted for approximately half of all opioid-related separations in 2007/08 (Roxburgh, 2010).

Examining age trends in hospitalisations for opioids, separations are highest among the older age groups. Opioid-related separations among the 40 to 49 year age group have remained stable between 2000/01 and 2007/08, while there were marked declines in these separations around the time of the heroin shortage among the younger age groups (i.e. the 10 to 19 and the 20 to 29 year olds). These data are consistent with other literature showing that younger users, particularly in New South Wales, were most impacted by the heroin shortage (Degenhardt et al., 2005b). These data suggest that although heroin-related harms are lower in Australia since 2000, it appears that the older more entrenched users continue to experience problems associated with their heroin use.

Figure 47: Rate of opioid-related hospital separations by age group, 2001 to 2008



Source: National Hospital Morbidity Database, AIHW.

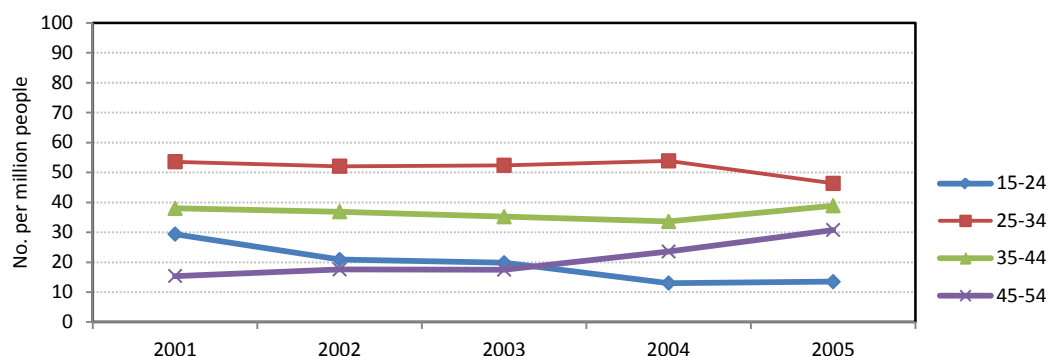
Deaths

Accidental opioid related deaths² have remained lower than in the late 1990's when heroin use was at its highest, however these deaths still outnumber those for psychostimulants (Degenhardt and Roxburgh, 2007b). Data for 2001 to 2005 are presented in Figure 43. In 2005 there were a total of 374 deaths that were due to opioids³, lower than the peak in 1999 of 1,116 deaths. Since 2003 the rate of accidental deaths due to opioids per million persons has remained stable at approximately 32 per million, and remains highest among the 25 to 34 year age group (Figure 48).

² Unfortunately data on mortality beyond 2005 is not available in the same format as that between 2001 and 2005 and hence not able to be used to reliably assess trends over time.

³ All data on accidental opioid deaths used in the Degenhardt report refer to deaths in which opioids were considered to be the underlying cause of death. This means that the deaths recorded here only include those in which it was considered that opioids such as heroin, morphine, pethidine, methadone and codeine were primarily responsible for the person's death. There are more deaths each year in which opioids are considered to have contributed to a person's death (e.g. general medical conditions, suicides, other accidental deaths), however these deaths are not presented.

Figure 48: Number of accidental deaths due to opioids per million persons among those aged 15-54 years by age group



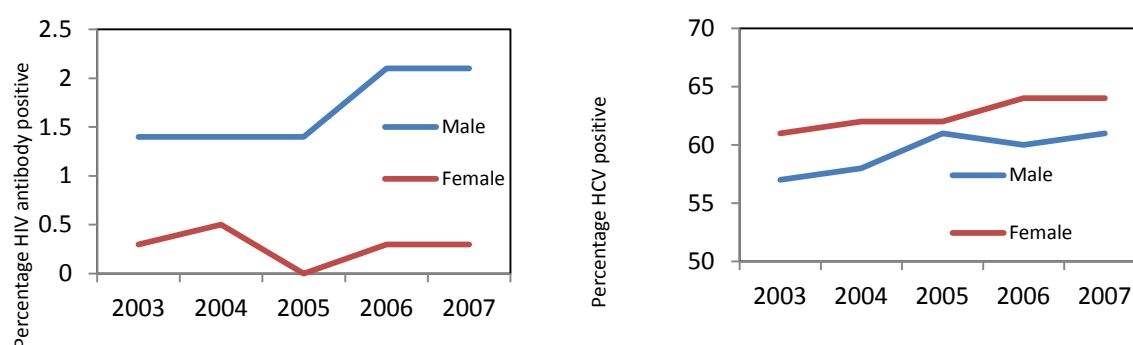
Source: Degenhardt and Roxburgh, 2007

5.3 Harms associated with injecting drugs

Although drugs other than heroin are injected by people who inject drugs (methamphetamine for example), we report on injecting harms more generally here (for example blood borne virus rates of transmission).

The number of new HIV diagnoses per year in Australia has increased from 690 in 2001 to 983 in 2007 (National Centre in HIV Epidemiology and Clinical Research, 2008). Of these, injecting drug use was the exposure category for 5.7% in 2001, falling to 4% in 2007 (excluding males who also reported a history of homosexual contact). Between these years the percent of new HIV diagnosis attributed to this exposure category has fluctuated. The prevalence of HIV antibody in a survey of needle and syringe programs has remained stable at 1.0 to 1.5 % since 2003.

Figure 49: HIV (LHS) and HCV (RHS) seroprevalence among PWID recruited for the Australian NSP Survey, 2003 to 2007



Source: Australian NSP Survey National Data Report 2003-2007

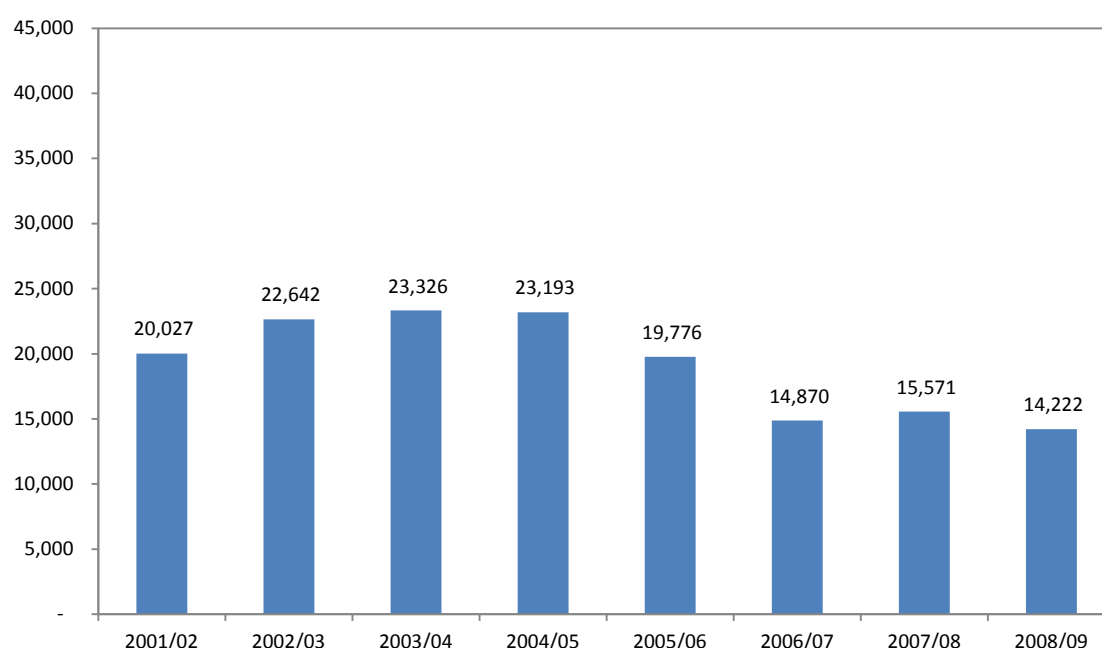
Source: Australian NSP Survey National Data Report 2003-2007

The number of newly acquired HCV infections in Australia has decreased from 550 in 2003 to 267 in 2007. Of these, injecting drug use was the exposure category for 364 (66%) and 207 (78%) respectively (National Centre in HIV Epidemiology and Clinical Research, 2008). Even though the total number of newly acquired HCV infections has decreased the percentage attributed to injecting drug use has shown a fluctuating increase. The prevalence of hepatitis C in the Australian needle and syringe program survey has remained stable at 60% since 2003.

5.4 Patterns of heroin treatment seeking

The National Minimum Data Set for Alcohol and other Drug Services does not capture the number of clients in pharmacotherapy, which is the main treatment sought for heroin dependence. Therefore, the NMDS heroin treatment data mainly covers non-pharmacotherapy treatments. There were lower numbers of treatment episodes for heroin recorded in 2006/07 compared to earlier years (Figure 50). As a percentage of all treatment episodes, heroin episodes have changed from 17.7% in 2001/02 to 10% in 2008/09.

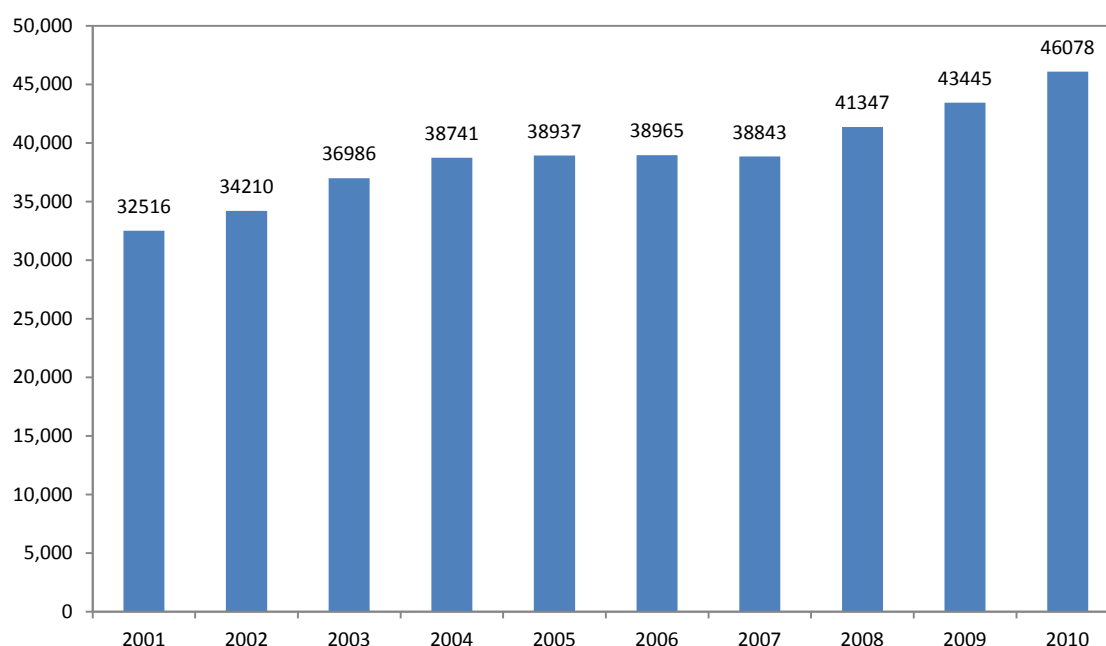
Figure 50: Number of closed treatment episodes where heroin was the principal drug of concern (excluding community based pharmacotherapy maintenance)



Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

Conversely, there were higher numbers of clients receiving pharmacotherapy in 2010 compared to 2001 (Figure 51). Since 2006 the proportion of opioid dependent Australians aged over 30 entering pharmacotherapy has increased (from 72% to 82% in 2010). In contrast, there has been a decline in younger opioid dependent people (aged 20 to 29) entering pharmacotherapy between 2006 and 2010. (Australian Institute of Health and Welfare, 2011b).

Figure 51: Total number of clients in pharmacotherapy as at 30 June each year



Source: Australian Institute of Health and Welfare; National Opioid Pharmacotherapy Statistics Annual Data (NOPSAD) collection

Note: Data from 2001 includes buprenorphine, and from 2006, buprenorphine-naloxone.

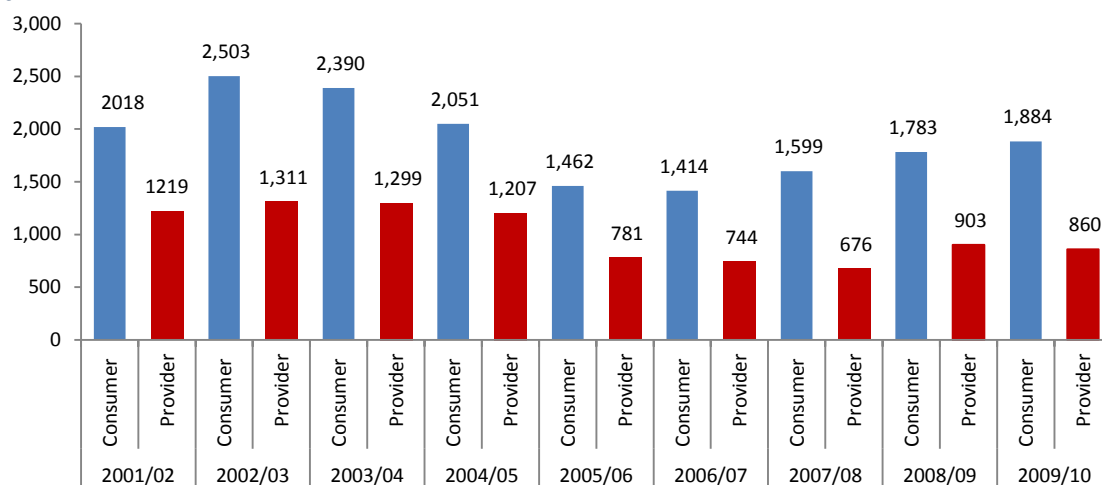
In summary, there is evidence to suggest the number of regular heroin users has stabilised in Australia following the dramatic reduction in heroin availability in 2001, with fewer presentations to treatment for heroin dependence and fewer treatment naive persons entering treatment (Degenhardt et al., 2005a).

5.5 Heroin law enforcement indicators

Consumer and Provider arrests

Both consumer and provider heroin drug offences are lower in numbers compared to 2001 with approximately 500 fewer consumer and provider arrests between 2001 and 2010. Consumer arrests have dropped from 2,018 in 2001 to 1,884 in 2010. Over the same time period provider arrests have decreased from 1,219 to 860 (Australian Crime Commission, 2011). In 2001 heroin arrests accounted for 3% of all consumer arrests, remaining stable to 2010 (3%), while the percentage of all provider arrests that are for heroin are lower (8% in 2001 and 5% in 2010) (Figure 52).

Figure 52: Heroin and other opioid consumer and provider arrests, 2001 to 2010

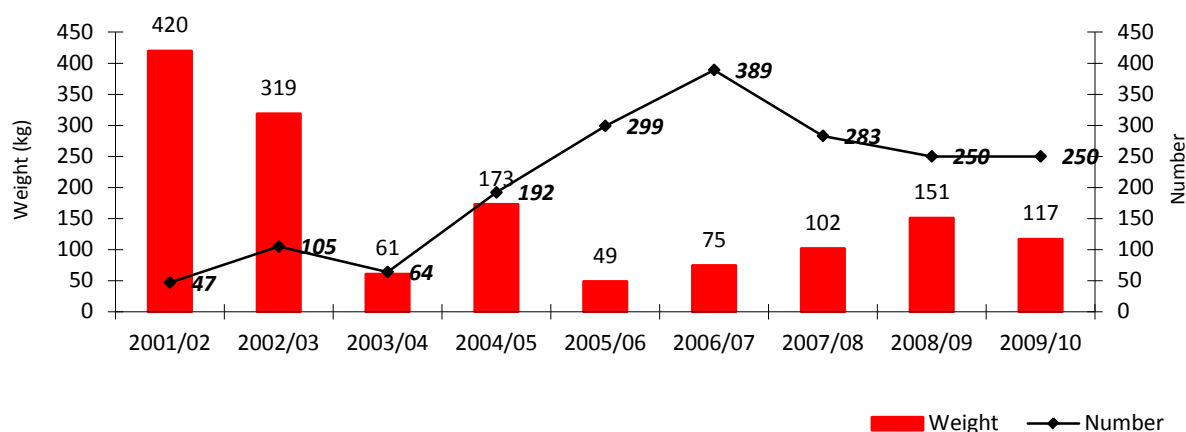


Source: Australian Illicit Drug Report, ACC, Illicit Drug Data Reports, ACC

Seizures

In the financial year 2009/10 there were 250 heroin detections at the Australian border, representing a decrease from a record high of 389 detections in 2006/07. Numbers of detections have been steadily increasing since 2003/04, while weights remain much lower. The total weight of detections in 2009/10 was 117.52 kilograms (a slight decrease from 151 kilograms in 2008/09), with weights of heroin seizures being equally distributed across importation modes (air passengers and crew, and cargo and international mail) (Australian Customs and Border Protection Service, 2010) (Figure 53).

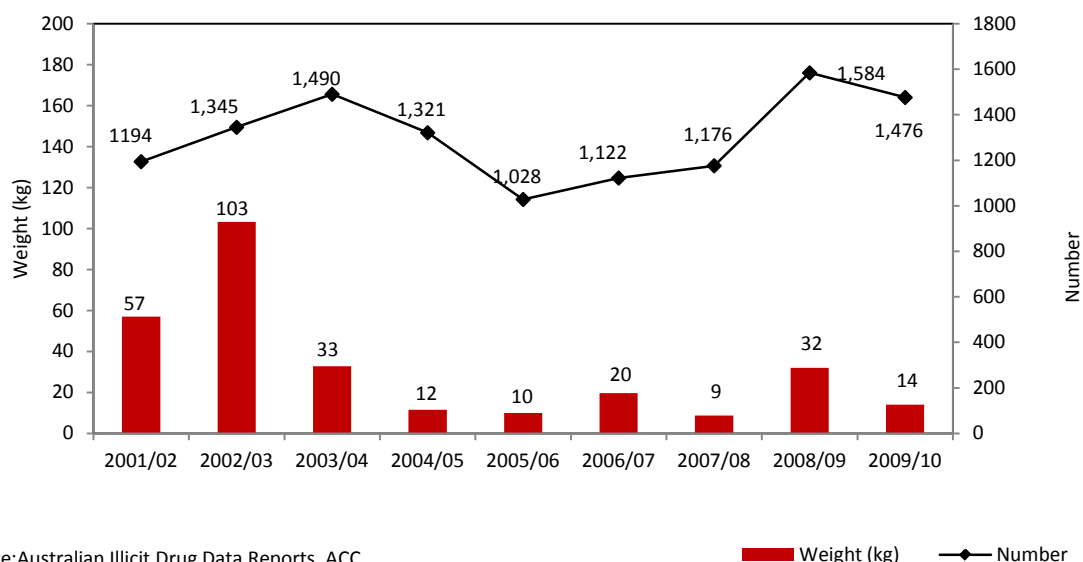
Figure 53: Weight and number of heroin detections made at the border by the Australian Customs and Border Protection Service, 2001 to 2010



Source: Australian Customs and Border Protection Service

The number of domestic heroin seizures made by State and Territory Police (Figure 54) has increased from 1,028 in 2005/06 to 1,476 in 2009/10 – these reflect mainly use/possess and drug dealing seizures, while the weight of seizures has been lower compared to 103 kg seized in 2002/03.

Figure 54: Weight and number of total seizures of Heroin made by State/Territory police, 2001 to 2010



Source: Australian Illicit Drug Data Reports, ACC

5.6 Heroin market indicators

Heroin Price Purity and Availability reported by PWID as surveyed by the IDRS

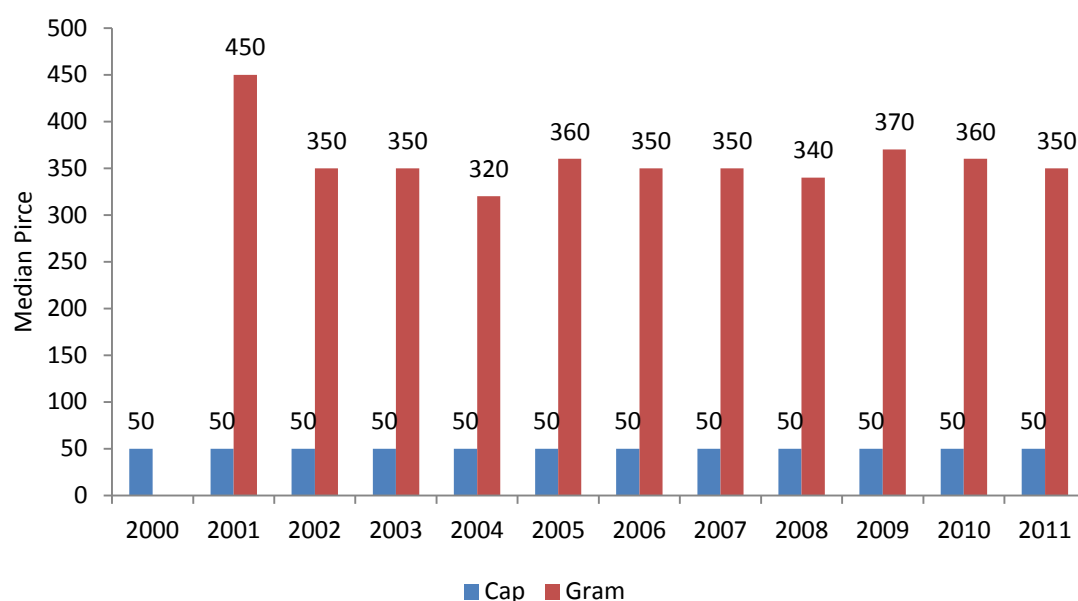
The following data represents median price purity and availability of heroin across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price purity and availability of heroin from the IDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#IDRS_Jurisdictional

Heroin Price

The price of a cap of heroin remains unchanged at \$50 over the 11-year period, while prices for a gram are lower at \$350 in 2011 compared to \$450 in 2001 (Figure 55) (Stafford and Burns, in press).

Figure 55: Median price of heroin per point and gram, nationally, 2000-2011 (IDRS)



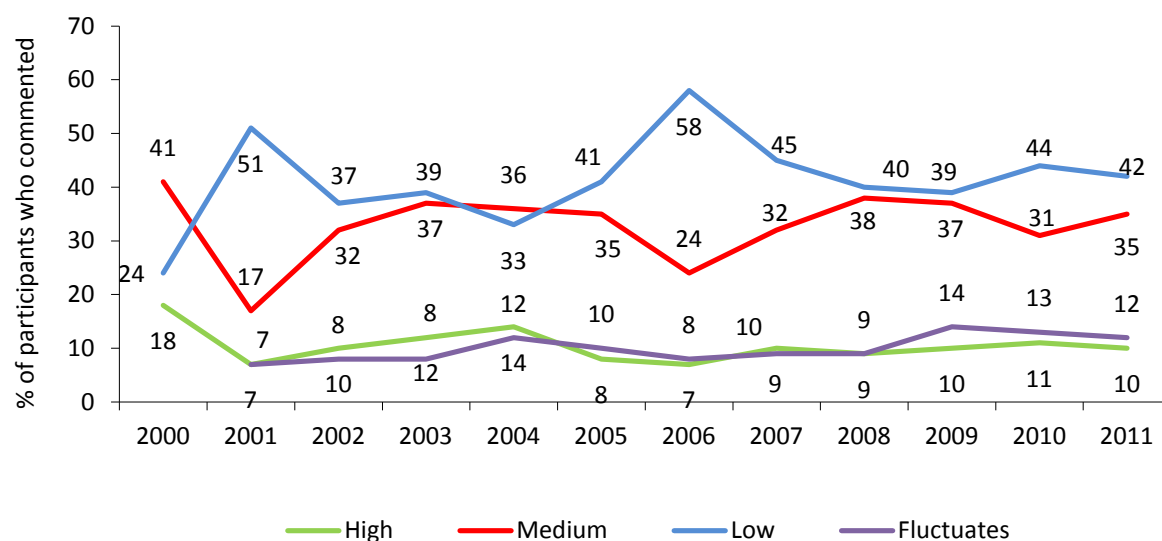
Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Note: in 2000, a cap is actually a 'rock'. No data are available for the price of a gram in 2000.

Heroin Purity

Reports of heroin purity among participants surveyed for the IDRS have remained relatively stable across time since 2001. The majority of participants in Australia have reported that purity is low to medium. A notable increase in participants reporting heroin as low in purity occurred in 2001 (from 24% in 2000 to 51% in 2001) around the time of the heroin shortage (Figure 56). There was another noticeable increase in proportions reporting low purity in 2006 (to 58%), with a concomitant decrease in proportions reporting heroin as medium in purity (to 24%). Just under half (42%) of the IDRS participants reported that heroin purity was 'low' in 2011.

Figure 56: Current purity of heroin nationally, 2000-2011 (IDRS)

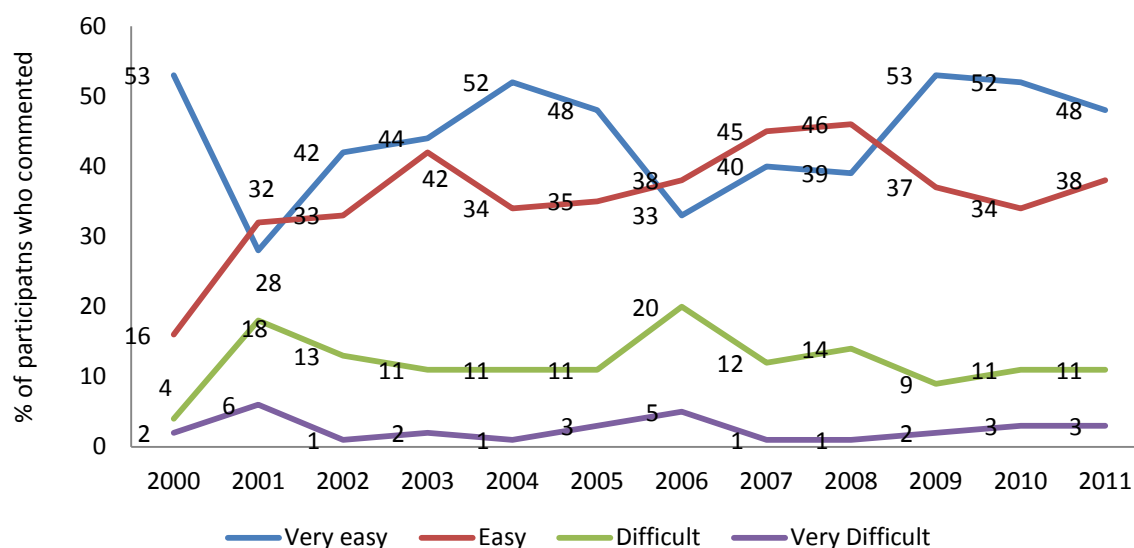


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Heroin Availability

There was a marked reduction in proportions reporting that heroin is 'very easy' to obtain, from 53% of participants in 2000 to 28% in 2001. This figure has since returned to 48% in 2011. Proportions reporting heroin as 'easy' to obtain have fluctuated between just under half of the sample to approximately one-third (38%) in 2011 (Figure 57).

Figure 57: Current availability of heroin, nationally, 2000-2011 (IDRS)



Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

5.7 Heroin: summary

Prevalence

General population

- Past year heroin use remains low among the broader Australian population at less than 1% in 2010.

Sentinel Groups

- Among injecting drug users there has been a decline in the prevalence of past 6 month heroin use over time (from 79% 2000 to 64% in 2011), however daily heroin among heroin users in this group has remained stable.
- Very small proportions of regular ecstasy users (4% in 2011) report heroin use.

Treatment seeking

- Opioid-related hospital presentations remain higher than other illicit drug presentations.
- Hospital presentations declined substantially in 2001/02 and have subsequently remained stable to 2007/08. The 30 to 39 year age group accounted for the largest proportion (35%) of presentations in 2007/08.
- Numbers of people in opioid substitution treatment have increased between 2001 and 2011, particularly among older Australians (30 years and over), with a decline in clients aged 20 to 29.

Deaths

- Heroin-related deaths continue to outnumber deaths for other illicit drugs.
- Although deaths have declined substantially since 1999 (from 1116 to 374 in 2005) heroin remains a significant cause of death.

Law Enforcement

- The weight of heroin seizures detected at the Australian border increased between 2005/06 and 2009/10, however the weight of these seizures remains relatively low compared to the late 1990s/early 2000s.
- The number of heroin-related arrests increased by 20% in 2008/09, however, they remain relatively low.

Market indicators

- The price of small amounts of heroin ('caps') has remained unchanged between 2000 and 2010 at \$50, while there has been a decline in the price of a gram from \$450 in 2001 to \$350 in 2011.
- While heroin remains readily available according to IDRS participants, a larger proportion of this group (42% in 2011) report that it is 'low' in purity.

6. Pharmaceutical opioids

The use of pharmaceutical opioids has an important and significant place in medicine. Opioids are used to manage (acute and chronic, as well as cancer-related) pain, post-operative care, and for analgesia and anaesthetic. Pharmaceutical opioids include morphine, pethidine, codeine, oxycodone, methadone, propoxyphene, dextropropoxyphene, hydromorphone, hydrocodone, fentanyl and buprenorphine.

This section focuses on the 'extramedical' use of pharmaceutical opioid medications, given the increasing concern in Australia about these drug classes. Extramedical use is defined as 'any use of a medication outside a doctor's prescription, not excluding the possibility that the user may have medically driven reasons for using the drug' (Larance et al., 2011).

There are a number of ways in which someone can obtain pharmaceutical opioids: through a legitimate prescription from a doctor, purchase on the illicit market, purchase on the internet, theft, from family and friends, or through visiting several doctors, which in Australia is defined as 'doctor shopping' where more than 5 doctors are consulted within a 12 month period.

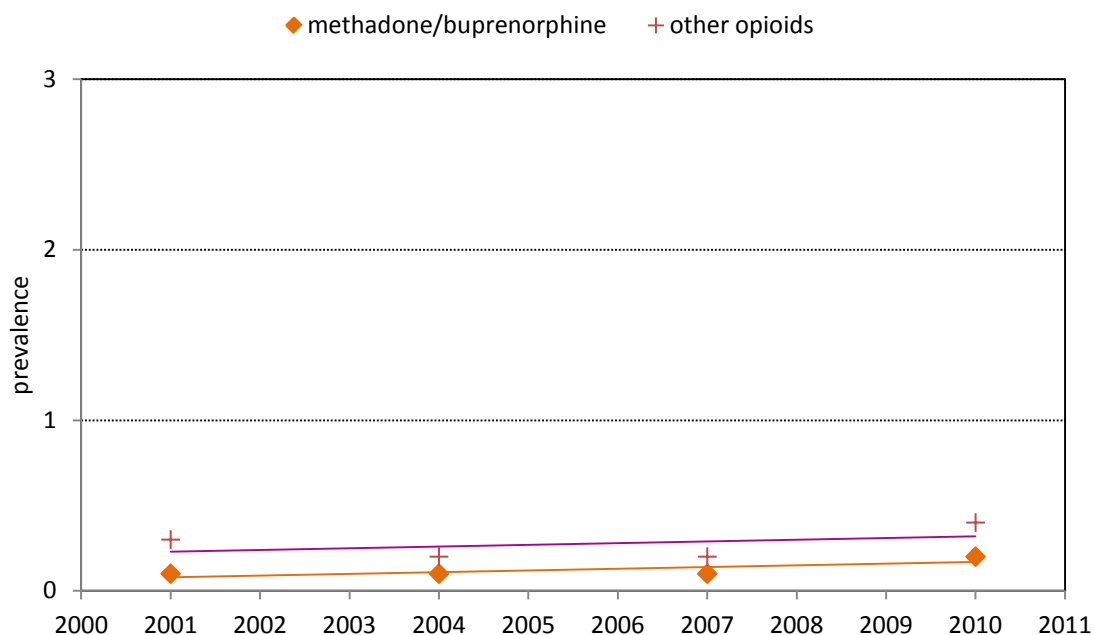
A key challenge with interpreting and understanding trends in use of these drugs is the distinction between medical use, extramedical use, non-adherence (e.g. using prescribed medication in a non-prescribed way such as intravenously) and diversion (the unsanctioned supply of pharmaceuticals from legal sources to illicit markets (Larance et al., 2011). Monitoring systems in Australia endeavour to distinguish between these different behaviours, however, in some instances this is not well documented.

According to recent research (Roxburgh, 2011), prescribing of morphine in Australia has declined, while oxycodone prescribing has increased markedly. Numbers of oxycodone prescriptions are highest among older Australians. This may in part reflect appropriate prescribing for pain management among an ageing population, however it is not possible to differentiate non-medical use from appropriate prescribing in these data.

6.1 Patterns of extramedical use of pharmaceutical opioids

Past year extramedical (the NDSHS uses the term 'non-medical') use of pharmaceutical opioids (methadone, buprenorphine and other opioids) remains low among the general population at less than 1% in 2010 (Australian Institute of Health and Welfare, 2011a).

Figure 58: Past year non-medical use of pharmaceutical opioids (methadone, buprenorphine, morphine, other opiates/opioids)

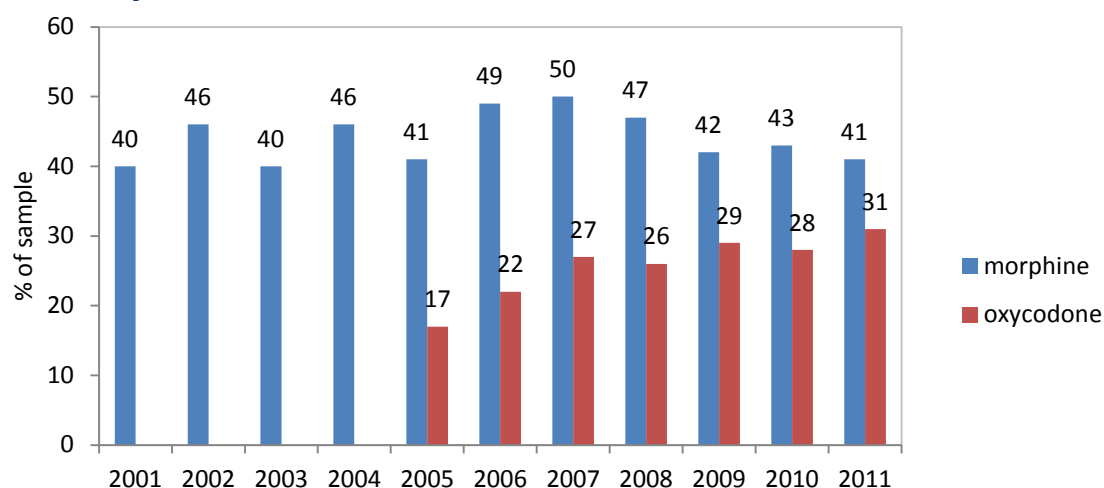


Source: National Drug Strategy Household Surveys, AIHW

NB: The other opioids category includes morphine, oxycodone and pethidine

The majority of use of morphine (85%) and oxycodone (88%) among IDRS participants is reported as being extramedical use (Stafford and Burns, 2010). Investigating injecting use of these drugs among IDRS participants, approximately 50% reported injecting morphine in the past six months between 2006 and 2008, with a slight decline occurring to 41% in 2011. Approximately one-third (31%) of participants reported injecting oxycodone in 2011, representing an increase from 17% in 2005 (Stafford and Burns, in press) (Figure 59).

Figure 59: Recent (last 6 months) morphine and oxycodone injection among PWID surveyed for the IDRS



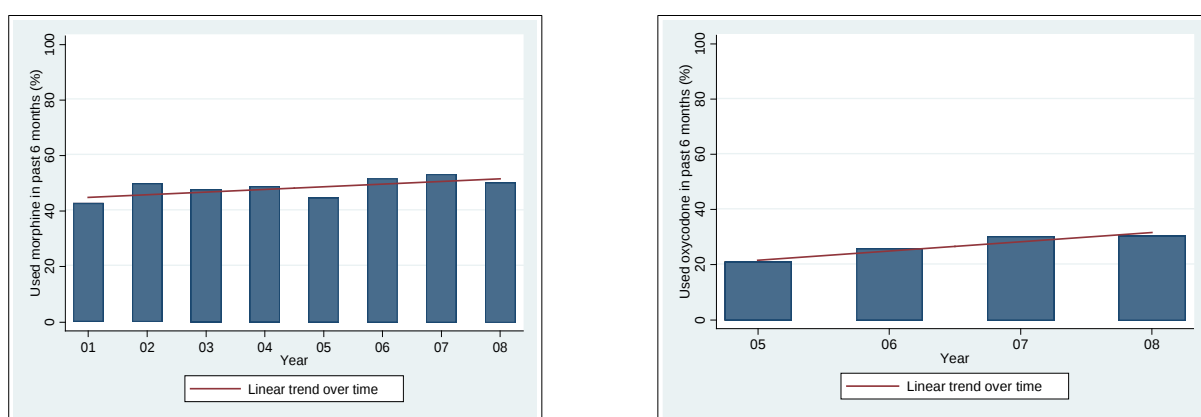
Source: Stafford and Burns (in press)

Note: Oxycodone data only collected from 2005 onwards

It should be noted however that the use of morphine among IDRS participants remains infrequent across most jurisdictions in Australia (with the exception of the Northern Territory where daily morphine use is seen among this group due to heroin not being readily available). The frequency of oxycodone use is sporadic across all jurisdictions (Stafford and Burns, in press).

Examining whether there have been statistically significant changes over time within the IDRS sample, the linear trend line for morphine (2001 to 2008) reveals a significant increase at a constant rate of 1% per year (Figure 60, LHS). For oxycodone, the trend line is from 2005 to 2008 and also demonstrates a significant increase, at a rate of 3.4% per year (Figure 60, RHS).

Figure 60: Linear trend in morphine use (last 6 months) (LHS) and oxycodone use (RHS) among IDRS respondents

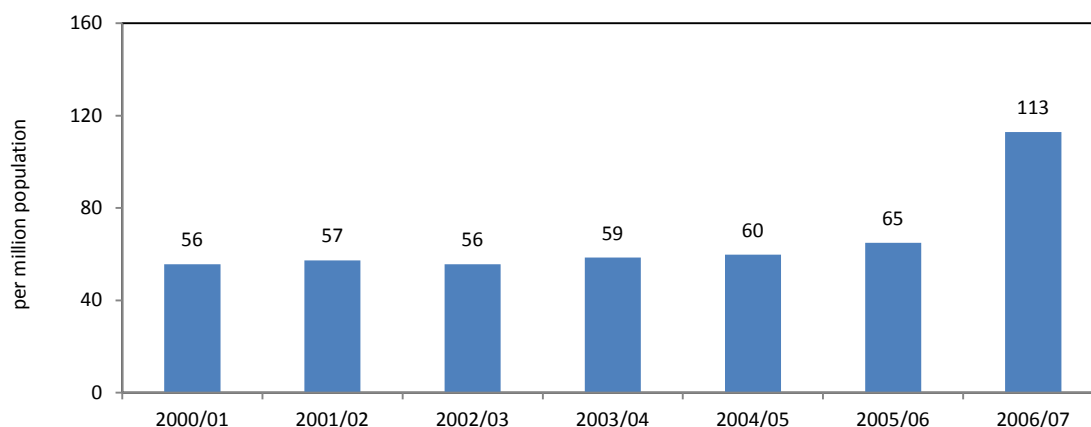


6.2 Patterns of harms associated with pharmaceutical opioid use

Hospital separations

It is not possible to separate out hospital separations for morphine, oxycodone, and codeine, and any changes in these data may be attributable to the more readily accessible over-the-counter preparations containing codeine. Figure 61 shows a higher number of separations per million persons for other opioid poisoning in 2006/07 (up to 113 per million persons from 65 in 2005/06).

Figure 61: Rate of other opioid* hospital separations for poisoning, per million persons, 2001 to 2007



Source: National Hospital Morbidity Database, AIHW

*Figure includes morphine, oxycodone, and codeine and excludes heroin

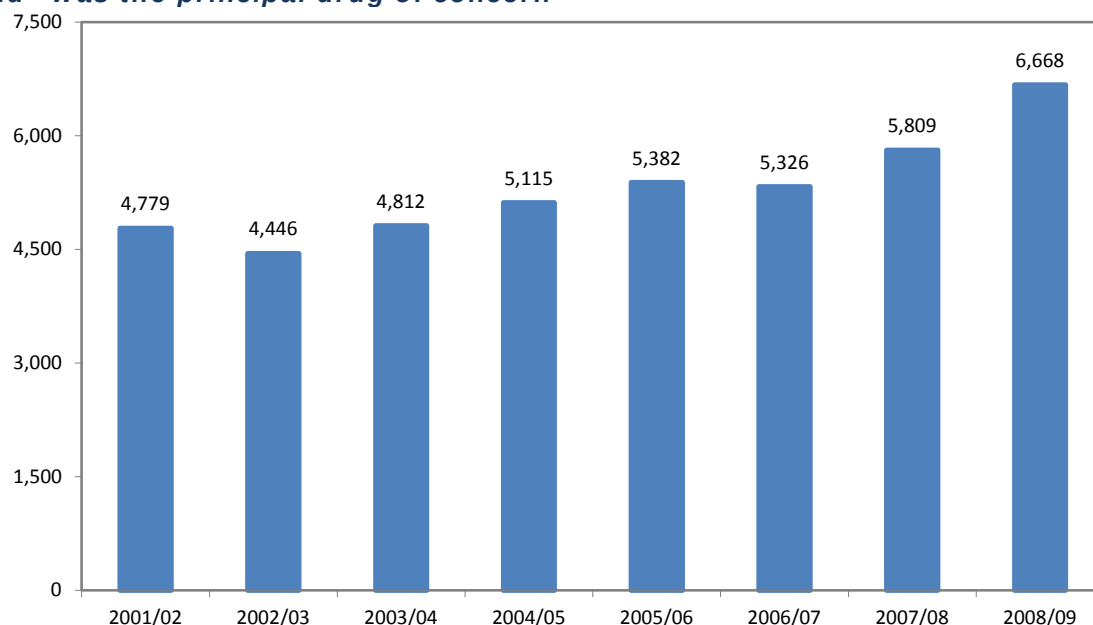
Deaths

Recent analysis of oxycodone deaths in Australia (Roxburgh, 2011) shows that a total of 465 oxycodone-related deaths were recorded during the period 2001 and 2009. A small proportion (10%) of these deaths was due to oxycodone toxicity alone, where oxycodone was found at greater than therapeutic or fatal levels in toxicology testing. The vast majority (82%) of the deaths however, were attributable to multiple drug toxicity, with benzodiazepines and alcohol being the most common drugs detected. The combination of alcohol, benzodiazepines and opioids is a particularly dangerous one, and all three substances were found to have contributed to these deaths, whether they were detected at fatal levels or not. Within the context of increased prescribing of oxycodone, and high levels of continued benzodiazepine prescribing in Australia, it isn't surprising that toxicology reports are increasingly reporting oxycodone as a contributory factor. Oxycodone-related mortality overall is still relatively low in this country, particularly compared to heroin-related deaths which still make up the majority of fatal opioid overdoses in Australia (Roxburgh, 2011). Oxycodone-related deaths in Australia are also relatively low compared to numbers seen in the United States, where these deaths outnumber those for heroin and cocaine (Paulozzi and Xi, 2009).

6.3 Patterns of pharmaceutical opioid treatment seeking

Treatment seeking for pharmaceutical opioids, collected within the Alcohol and other Drug Treatment Services National Minimum Data Set, has increased from 4,779 in 2001/02 to 6,668 in 2008/09 (Figure 62). As a percentage of all treatment episodes pharmaceutical opioids accounted for 4.8% in 2008/09, stable since 2001/02 where they represented 4%. Morphine accounted for approximately one-quarter of all treatment episodes for opioids other than heroin in 2008/09.

Figure 62: Number of closed treatment episodes where methadone or “other opioid” was the principal drug of concern



Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

6.4 Pharmaceutical opioids: summary

Prevalence

General population

- Past year non-medical use of pharmaceutical opioids (such as oxycodone and morphine) among the general population increased significantly between 2007 and 2010 (from 0.2% to 0.4%). However, prevalence still remains relatively low in Australia.
- There has been an increase in oxycodone prescribing, particularly among older Australians. This increase may in part be due to legitimate prescribing given the ageing population in Australia however, it is not possible to differentiate non-medical use from legitimate prescribing in these data.

Sentinel groups

- Among IDRS participants, injecting use of morphine increased between 2001 and 2007 (from 40% to 50%), however this figure has since declined to 41% in 2011.
- With the exception of the Northern Territory, (where daily use is seen among this sub-population), morphine use remains sporadic at once a week or less.
- There has also been an increase in oxycodone use among IDRS participants, but again, use is sporadic across jurisdictions.

Treatment seeking

- Outpatient treatment episodes for problems associated with morphine account for approximately one-quarter of the treatment episodes for pharmaceutical opioids. They remain much lower in number than those for heroin.

Deaths

- Deaths due to heroin outnumber those for oxycodone in Australia.
- Multiple drugs (in particular alcohol and benzodiazepines) were recorded in the majority (82%) of oxycodone-related deaths.
- Mortality related to oxycodone is currently relatively low in Australia, and is not comparable to numbers of oxycodone deaths seen in the United States, where they outnumber heroin and cocaine deaths.

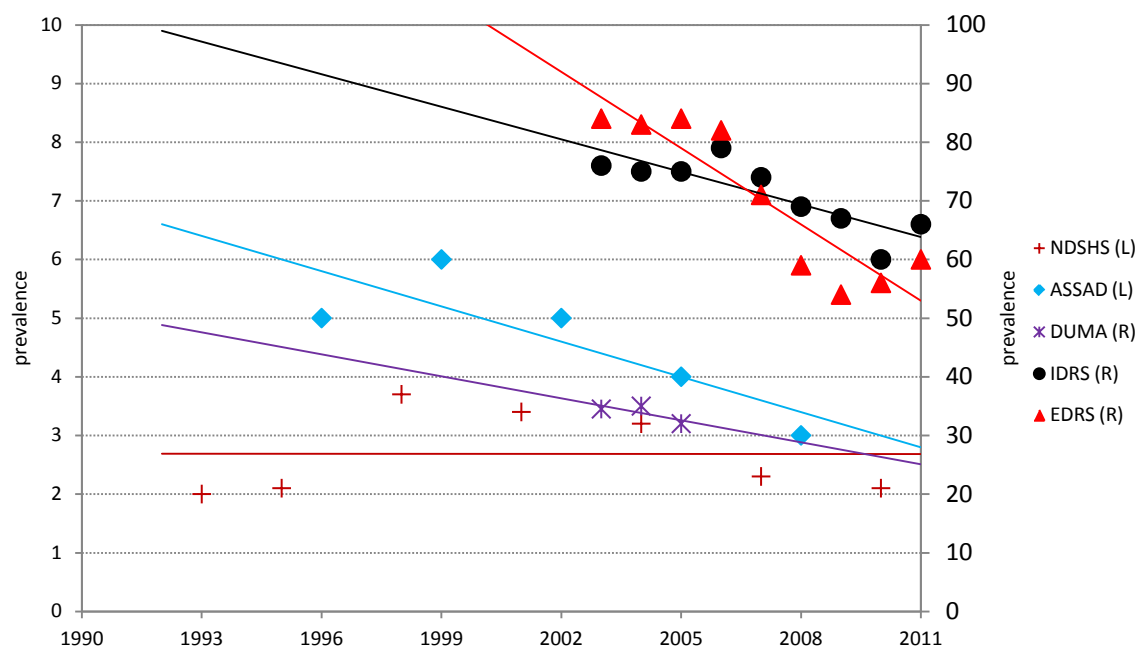
7. Methamphetamine

In this section we report on amphetamine and meth(yl)amphetamine⁴. Throughout the 80's in Australia, the most readily available form of illicit amphetamine was amphetamine sulphate (Topp and Churchill, 2002). However, this changed over time through the 90's due to legislative controls that were introduced for precursor chemicals being used to manufacture amphetamine. This resulted in changes to the production of amphetamine, resulting in the increasing production of methamphetamine (Topp and Churchill, 2002). According to law enforcement data, methamphetamine now dominates the Australian market (Australian Crime Commission, 2009). Methamphetamine is usually sold as powder ('speed'), base, or crystal methamphetamine ('ice'). Regular crystal methamphetamine use in particular has been associated with problems such as greater liability for developing dependence, and increased risk of psychosis (McKetin et al., 2005). Some Australian surveillance systems monitor these three forms of methamphetamine separately.

7.1 Patterns of methamphetamine use

In the general population, past 12 month use of methamphetamine has remained low and stable since the early 1990s. The percentage of NDSHS respondents who reported recent use between 1993 and 2010 has ranged between 2.0% - 3.7%, at its peak in 1998, with a significant decrease recorded from 3.2% in 2004 to 2.3% in 2007 (Australian Institute of Health and Welfare, 2008). In 2010, 2.1% of Australians reported past year methamphetamine use (Australian Institute of Health and Welfare, 2011a). Methamphetamine use among school students has also remained stable and low (3% reported past year use in 2008) (White and Smith. G., 2009). Declines are observable in detainees testing positive to illicit amphetamines (DUMA) and among regular drug users surveyed for the Ecstasy and related Drugs Reporting System (EDRS) (Figure 63).

Figure 63: Methamphetamine use across multiple surveys

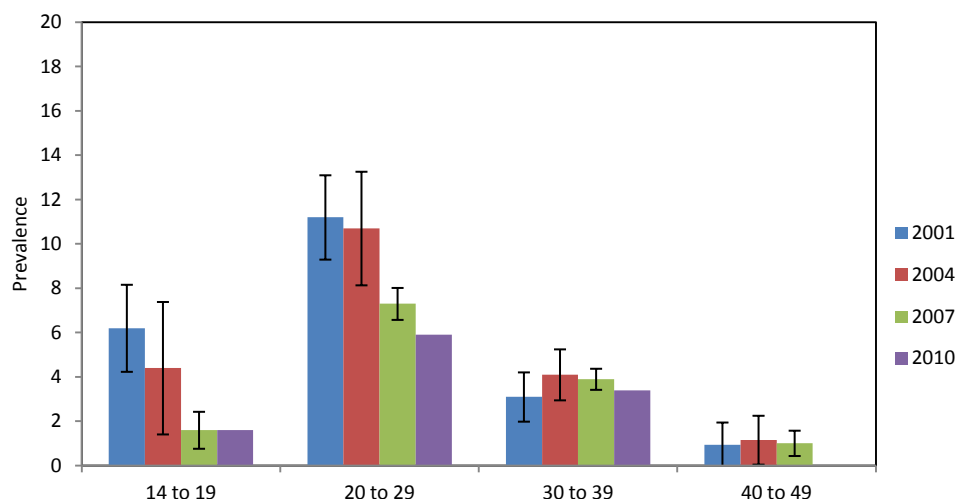


Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students' use of over-the-counter and illicit substances, DoHA. Drug use monitoring in Australia: annual reports on drug use among police detainees, AIC. Findings from the Ecstasy and related Drugs Reporting System, NDARC. Findings from the Illicit Drug Reporting System, NDARC.

⁴ We use the generic term methamphetamine in this report for simplicity.

Figure 64 provides trends within age groups from the NDSHS. There has been a significant decline in past year methamphetamine use among the younger age groups (14 to 19 and 20 to 29 year olds) between 2001 and 2007. These figures remained stable in 2010. Past year methamphetamine use among the 30 to 39 year olds and 40 to 49 year olds has also remained stable. Note that data for the 40 to 49 year age group was not available at the time of publication.

Figure 64: Proportion reporting past year methamphetamine use by age group



Source: National Drug Strategy Household Surveys, AIHW

Table 6 shows the proportion of males compared to females reporting past year methamphetamine use between 2001 and 2010. Although a larger proportion of males than females report past year methamphetamine use, there has been a decline over time among both.

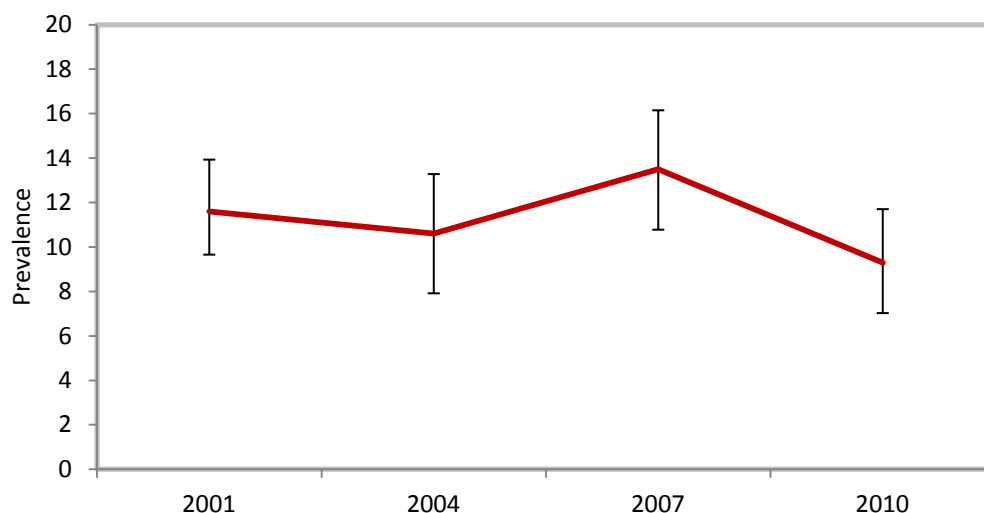
Table 6: Past year methamphetamine use by gender

Methamphetamine	2001	2004	2007	2010
Males	4.2	4	3	2.5
Females	2.7	2.5	1.6	1.7

Looking at frequency of use (Figure 65) the proportion of past year methamphetamine users reporting weekly or more frequent use among the general population has not changed significantly between 2001 and 2010. Three-quarters of Australians aged 14 years and older report using methamphetamine every few months or less frequently (Australian Institute of Health and Welfare, 2011a).

In the 2010 NDSHS survey, the most commonly used form of methamphetamine among the general population was 'speed' or powder methamphetamine (Australian Institute of Health and Welfare, 2011a).

Figure 65: Proportion of past year methamphetamine users reporting weekly or more use

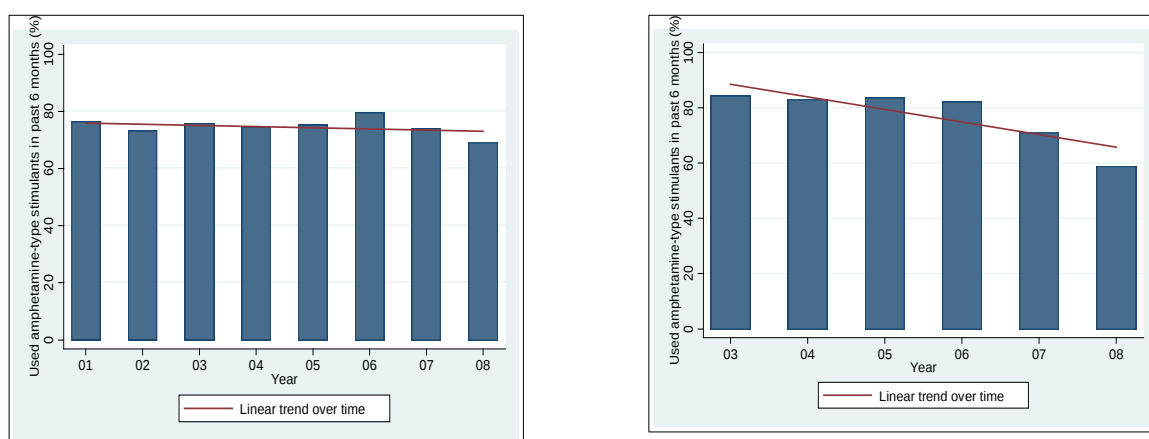


Source: National Drug Strategy Household Surveys, AIHW

Among participants surveyed for the IDRS, past 6 month use of any form of methamphetamine has remained stable between 2001 and 2008 (Figure 66 - LHS).

In contrast, there is a declining pattern of methamphetamine use amongst the EDRS participants (decreasing at a constant rate of 4.1% per year, Figure 66 - RHS). The largest decline among this group is in the use of crystal methamphetamine in particular (Sindicich and Burns, 2010).

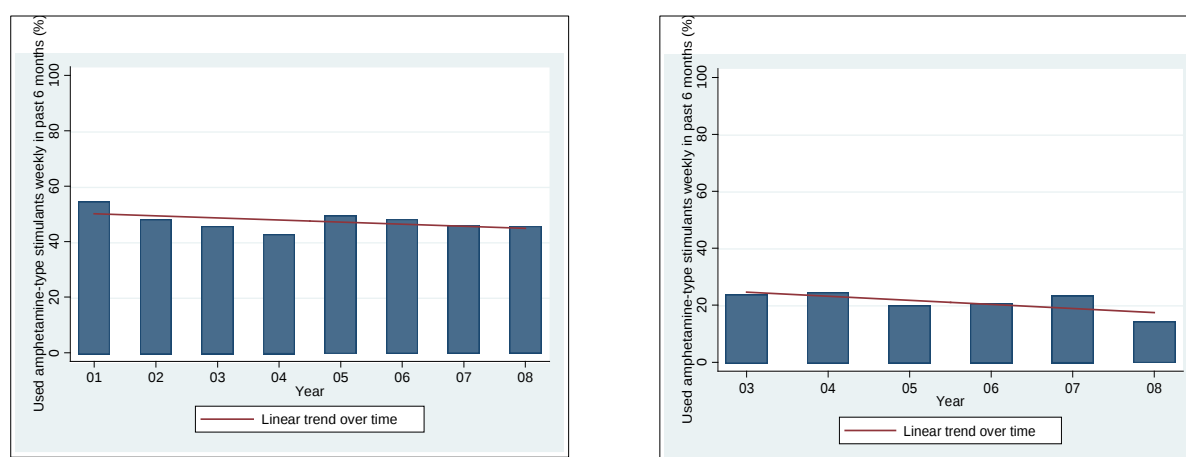
Figure 66: Linear trend in methamphetamine use (last 6 months) amongst IDRS (LHS) and EDRS (RHS) respondents



Source: Illicit Drug Reporting System
Ecstasy and related Drugs Reporting System

Figure 67 provides the trend lines for weekly or more frequent use amongst those IDRS (on the left) and EDRS (on the right) respondents reporting past 6 month methamphetamine use. There has been no change in the frequency of methamphetamine use among the IDRS participants over time, but a significant declining trend is evident among the EDRS participants (decreasing at a constant rate of 1.4% per year).

Figure 67: Linear trend in weekly methamphetamine use amongst IDRS (LHS) and EDRS (RHS) respondents reporting recent methamphetamine use



Source: Illicit Drug Reporting System
Ecstasy and related Drugs Reporting System

In summary, it appears that among IDRS participants, last six month use of methamphetamine and weekly use amongst those users has remained stable over time. In contrast, among EDRS participants, the pattern is one of significantly declining use over time (last six months and weekly use amongst users).

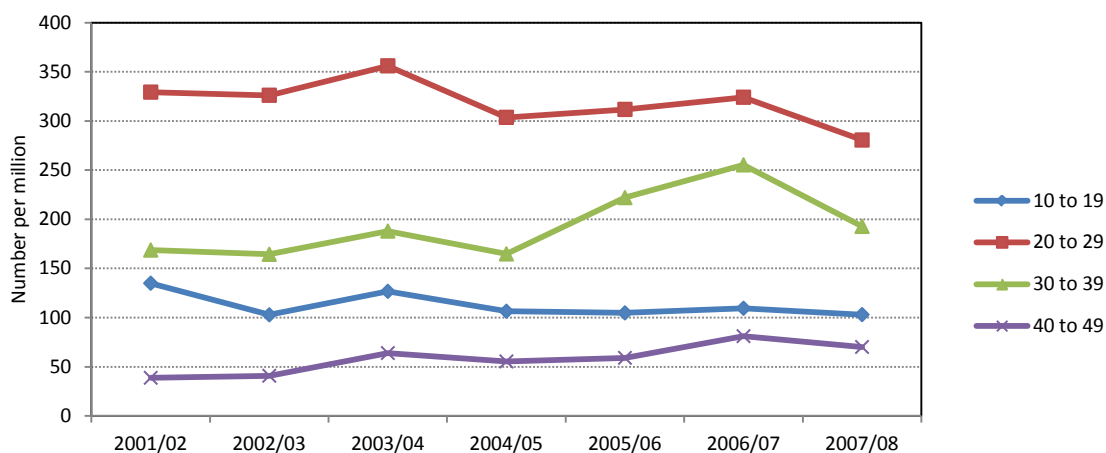
7.2 Patterns of harms associated with methamphetamine use

Hospital separations

To date, the coding system for the National Hospital Morbidity Database (NMHD) is unable to distinguish between hospital separations related to amphetamine, methamphetamine and ecstasy (Roxburgh and Degenhardt, 2006). It is likely however, that most of these separations will be related to methamphetamine, with only a small minority related to ecstasy. Amphetamine related hospital separations are second highest to opioids among the four major illicit drug classes (amphetamine, cocaine, opioids and cannabis). Higher numbers of amphetamine-related hospital presentations have been recorded over time from 62.7 per million persons in 1993/94 to 161 per million persons in 2007/08. Separations for amphetamine dependence have accounted for an increasing proportion (39% in 2007/08) of all amphetamine-related separations (Roxburgh, 2010).

Looking at age trends in amphetamine-related separations, they are highest among the 20 to 29 year age group, followed by the 30 to 39 year age group, among whom separations are higher in the past few years (Figure 68). Separations for amphetamine-related problems have stabilised among the 10 to 19 year age group.

Figure 68: Rate of amphetamine-related hospital separations by age group, 2001 to 2008



Source: National Hospital Morbidity Database, AIHW

Deaths

In 2005⁵ there was a total of 68 drug induced deaths in which methamphetamine was mentioned (there were 75 in 2004). At a population level this represents a decrease from 6.6 per million persons in 2004 to 5.9 per million persons in 2005 (Degenhardt and Roxburgh, 2007a). There were 26 deaths in 2005 where methamphetamine was thought to be the underlying cause of death.

Table 7: Number of methamphetamine-related deaths among those aged 15-54

	2001	2002	2003	2004	2005
Methamphetamine mentions	51	55	50	75	68
Methamphetamine underlying cause	13	1	17	17	26

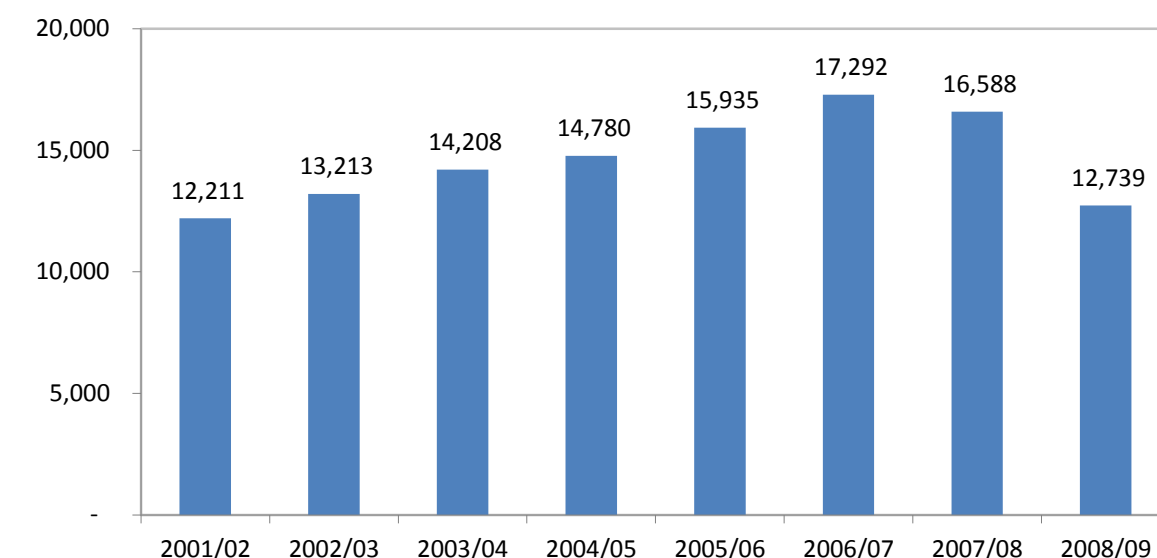
Source: Degenhardt and Roxburgh, 2007

7.3 Patterns of methamphetamine treatment seeking

Higher numbers of treatment episodes for amphetamines were recorded between 2001/02 and 2006/07 (from 12,211 to 17,292), however the last couple of years have seen a decline to 12,739 in 2008/09. The percentage of all treatment episodes attributable to amphetamines has fluctuated between 9.2% (the lowest recorded – 2008/09 and 12.3% (the highest recorded – 2006/07) (Figure 69).

⁵ Unfortunately data on mortality beyond 2005 is not available in the same format as that between 2001 and 2005 and hence not able to be used to reliably assess trends over time. This means that the time period for the mortality data presented here does not match the time period for the general population surveys (2001 to 2007) nor IDRS and EDRS (2001 to 2008).

Figure 69: Number of closed treatment episodes where amphetamine was the principal drug of concern



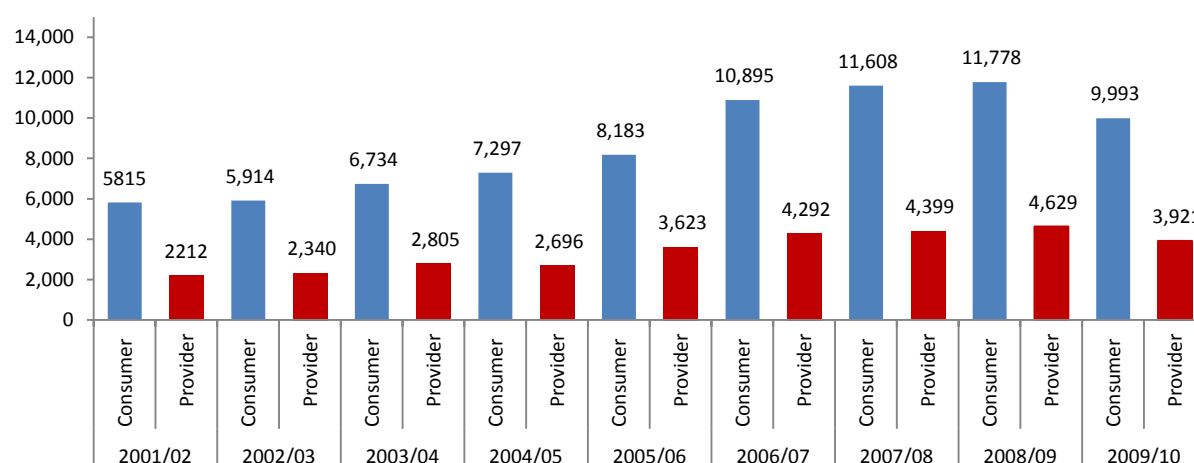
Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

7.4 Methamphetamine law enforcement indicators

Consumer and Provider arrests

To date, state and territory and Australian Federal Police data do not distinguish between amphetamine and ecstasy related arrests, rather they are grouped together. Both consumer and provider ATS drug offences (including amphetamine, methamphetamine, MDMA, MDA) are higher in number in 2009/10 compared to 2001/02 (Figure 70). Between 2001/02 and 2008/09 consumer arrests more than doubled from 5,815 to 11,778, with a decline to 9,993 in 2009/10. Provider arrests rose from 2,212 in 2001/02 to 3,921 in 2009/10. In 2001/02, 10% of all consumer drug related arrests were for ATS (including ecstasy); this figure was 14% in 2009/10. ATS provider arrests have changed from 15% of all arrests in 2001/02 to 25% in 2009/10.

Figure 70: Amphetamine Type Stimulant consumer and provider arrests, 2001 to 2010

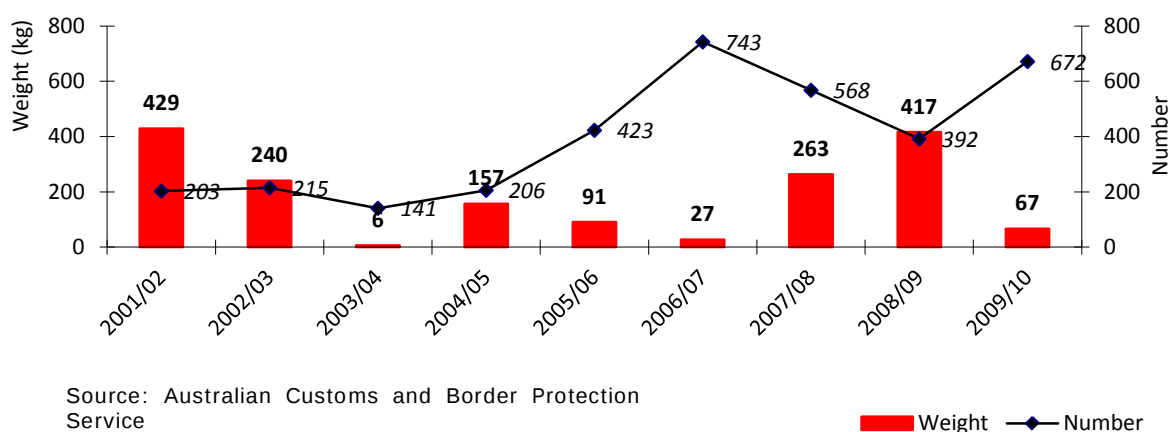


Source: Australian Illicit Drug Data Reports, ACC

Seizures

In 2009/10 the number of detections of amphetamine type stimulants was higher at 672 (compared to 392 in 2008/09). Conversely the weight decreased dramatically from 417 kilograms in 2008/09 to just 67 in 2009/10 (Figure 71). The variation in weights of seizures of amphetamine type stimulants detected at the border over the years reflects changes in patterns of detections between international mail and cargo (Australian Customs and Border Protection Service, 2010).

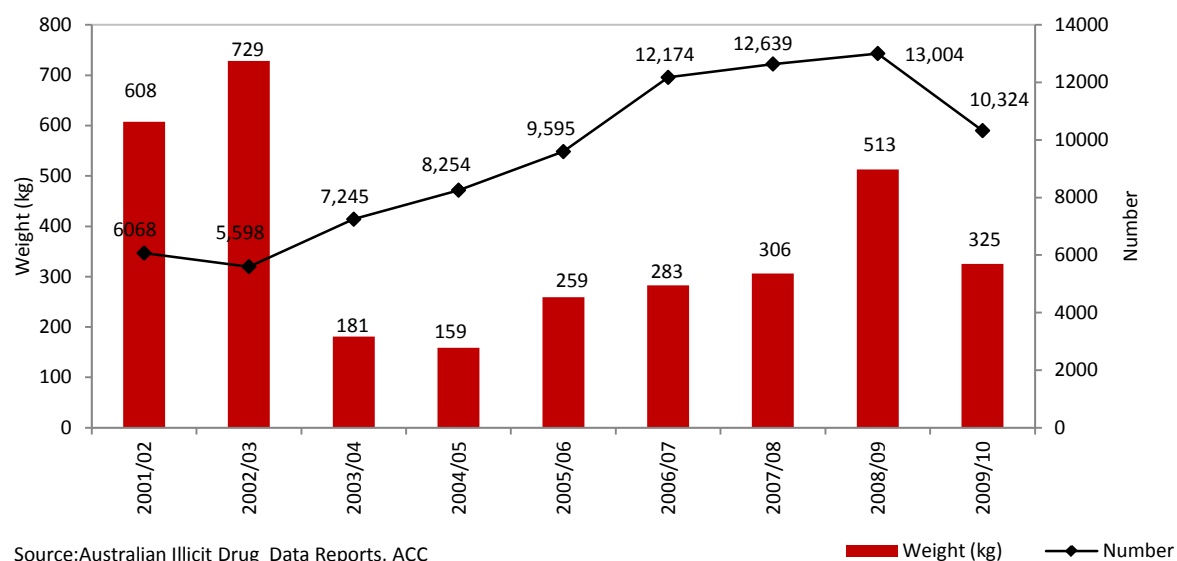
Figure 71: Weight and number of amphetamine* detections made at the border by the Australian Customs and Border Protection Service, 2001 to 2010



* Seizures include amphetamine, methamphetamine and crystal methamphetamine (ice) detections, and exclude MDMA

Figure 72 provides the number and weight of domestic seizures of amphetamine-type stimulants (which include MDMA). The figure below demonstrates a rising trend in both number and weight of seizures over time. Although MDMA seizures are not differentiated in these figures, it is likely that this trend reflect changes in the domestic methamphetamine market rather than the MDMA market, given that MDMA seizures at the border declined markedly around this time, and the fact that there is very little MDMA produced domestically within Australia (Australian Crime Commission, 2009).

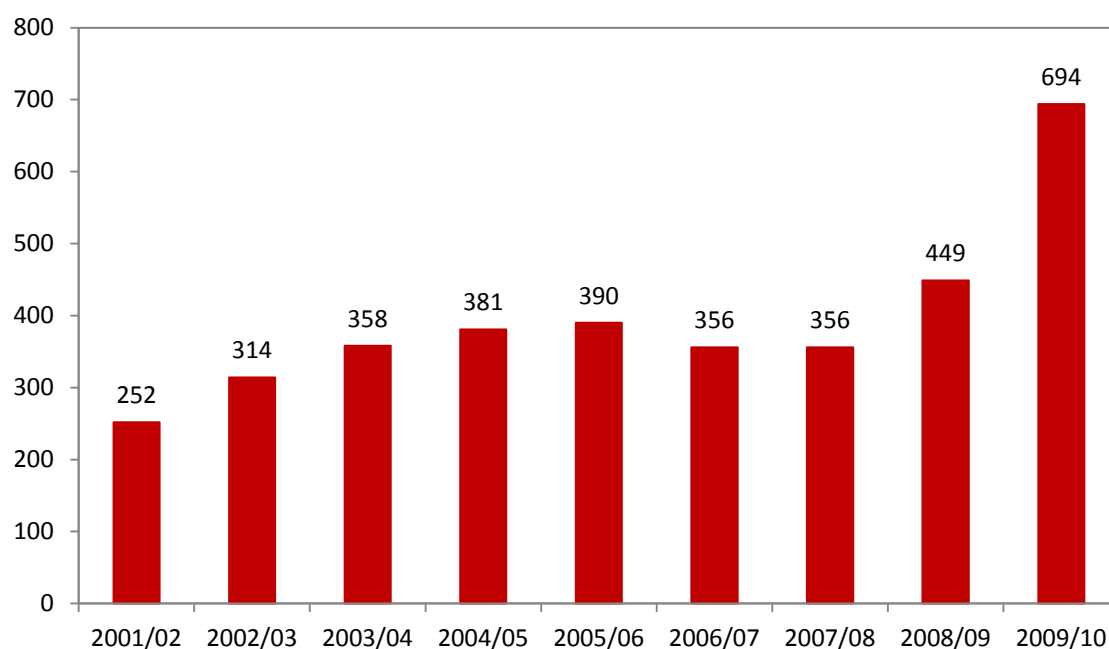
Figure 72: Weight and number of domestic seizures of Amphetamine –type stimulants (including MDMA) made by State/Territory police, 2001 to 2010



Clandestine laboratories and precursor seizures

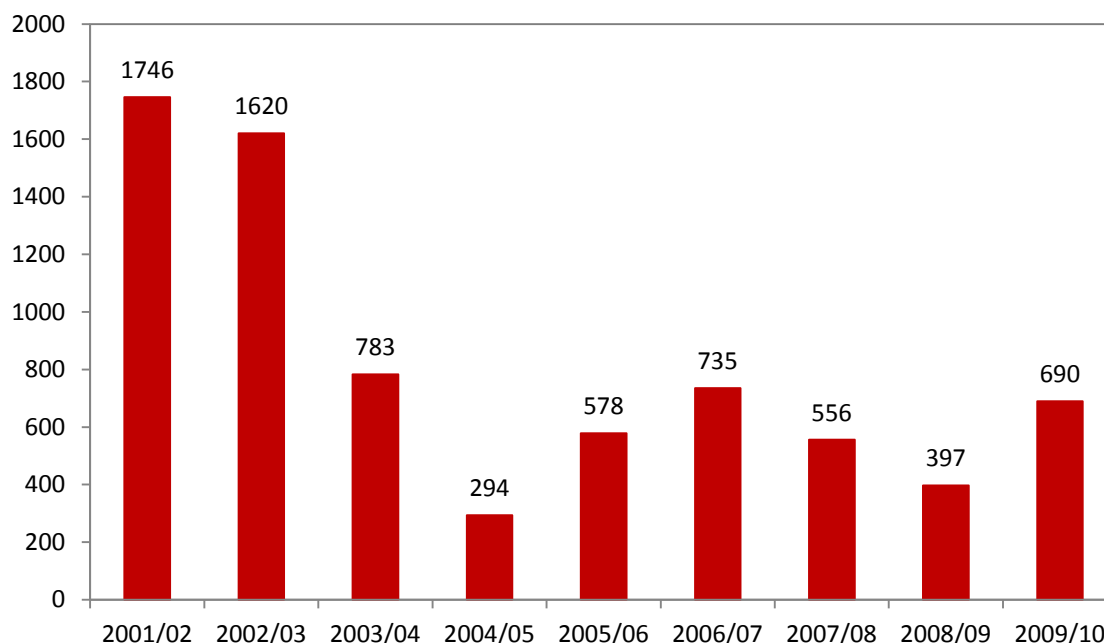
The number of clandestine laboratories detected nationally has increased markedly from 252 in 2001/02 to a peak of 694 in 2009/10 (Figure 73). Laboratories that were producing MDMA accounted for a very small proportion of the total number in 2009/10 (17, 2%) (Australian Crime Commission, 2011).

Figure 73: Total number of clandestine laboratory detections including MDMA



Data on the number of precursor seizures at the Australian border reveal that the total number of precursor seizures declined between 2001/02 and 2004/05 (Figure 74), with numbers increasing to 690 in 2009/10.

Figure 74: Number of precursor seizures detected at the border by Australian Customs and Border Protection Service



Source: Australian Illicit Drug Data Reports, ACC

7.5 Methamphetamine market indicators

Methamphetamine Price Purity and Availability reported by Regular Ecstasy users (EDRS)

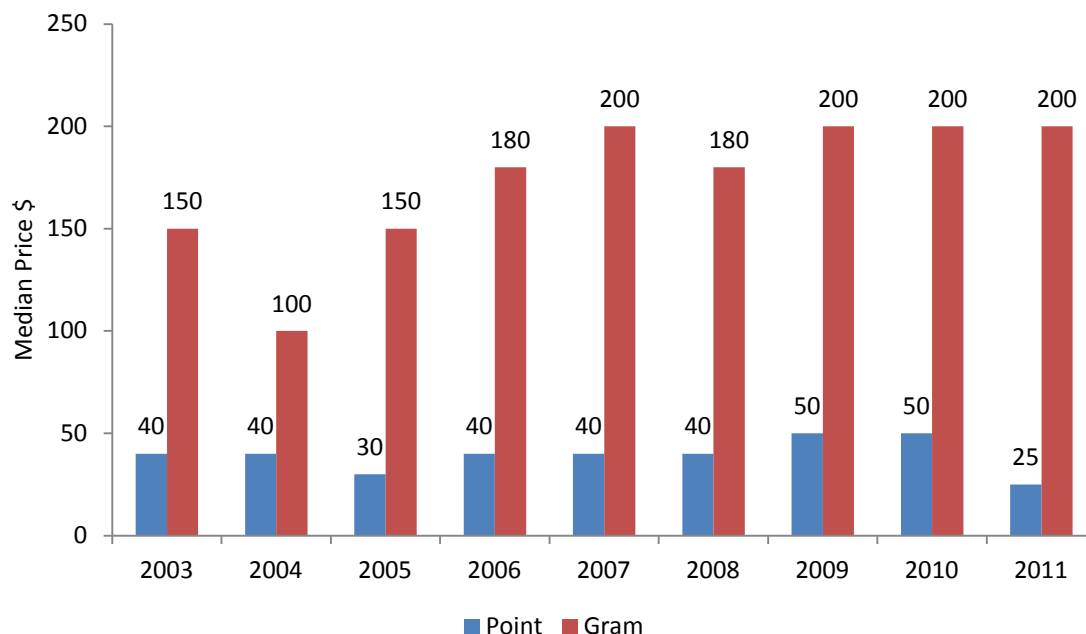
The following data represents median price purity and availability across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price purity and availability of methamphetamine from the EDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#EDRS_Jurisdictional

Methamphetamine Price – Powder

The price of a point of powder methamphetamine has remained relatively stable over time, with the exception of 2011, when it declined to \$25. It should be noted that this is most likely due to jurisdictional variation, which is masked by national data. The price for a gram has changed from a low of \$100 in 2004 to \$200 in 2011 (Figure 75).

Figure 75: Median price of powder methamphetamine (speed), nationally 2003-2011 (EDRS)

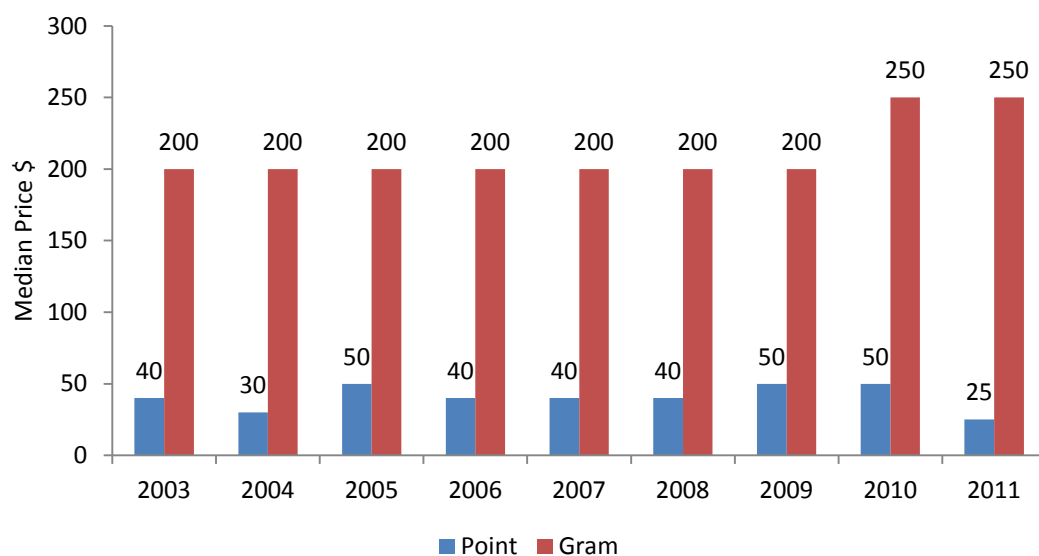


Source: Ecstasy and related Drugs Reporting System (EDRS) Sindicich and Burns (in press).

Methamphetamine Price – Base

As with the price of powder methamphetamine, the price of a point of base methamphetamine declined to \$25 in 2011, however, again this most likely reflects jurisdictional differences. The price of a gram increased from \$200 between 2003 and 2009 to \$250 in 2011 (Figure 76).

Figure 76: Median price of base methamphetamine, 2003-2011 (EDRS)

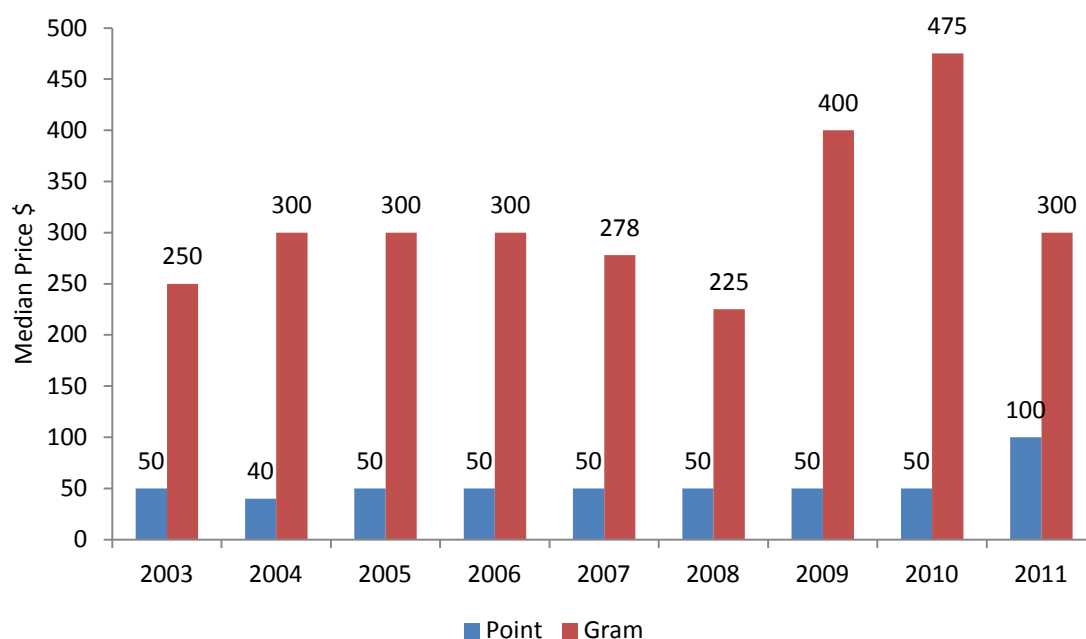


Source: Ecstasy and related Drugs Reporting System (EDRS) Sindicich and Burns (in press).

Methamphetamine Price – Crystal

The price of a point of crystal methamphetamine increased from \$50 between 2004 and 2010 to \$100 in 2011. The price of a gram has changed markedly from a low of \$225 in 2008 to \$475 in 2010, declining again to \$300 in 2011. It should be noted that the median price may be due to the effects of jurisdictional differences, particularly in jurisdictions where crystal methamphetamine may not be as readily available (Figure 77).

Figure 77: Median price of crystal methamphetamine, 2003-2011 (EDRS)

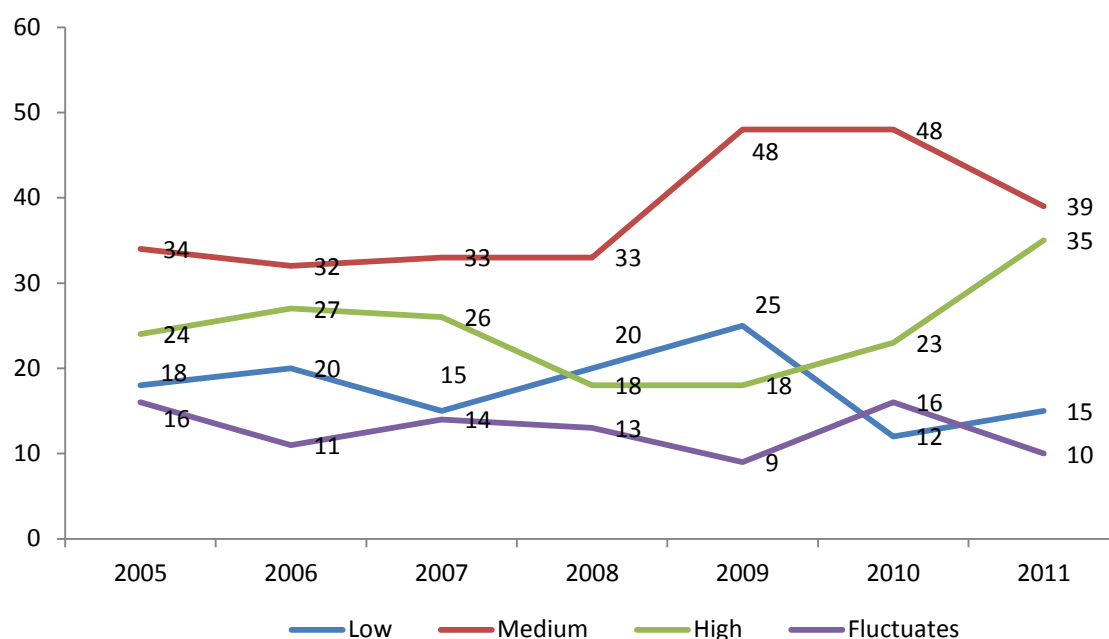


Source: Ecstasy and related Drugs Reporting System (EDRS) Sindicich and Burns (in press).

Methamphetamine purity - Powder

The majority of EDRS participants reported powder methamphetamine as being of 'medium' or 'high' purity (74%) in 2011, and proportions reporting 'high' purity almost doubled between 2009 (18%) and 2011 (35%) (Figure 78).

Figure 78: Current purity of powder methamphetamine nationally, 2005-2011 (EDRS)

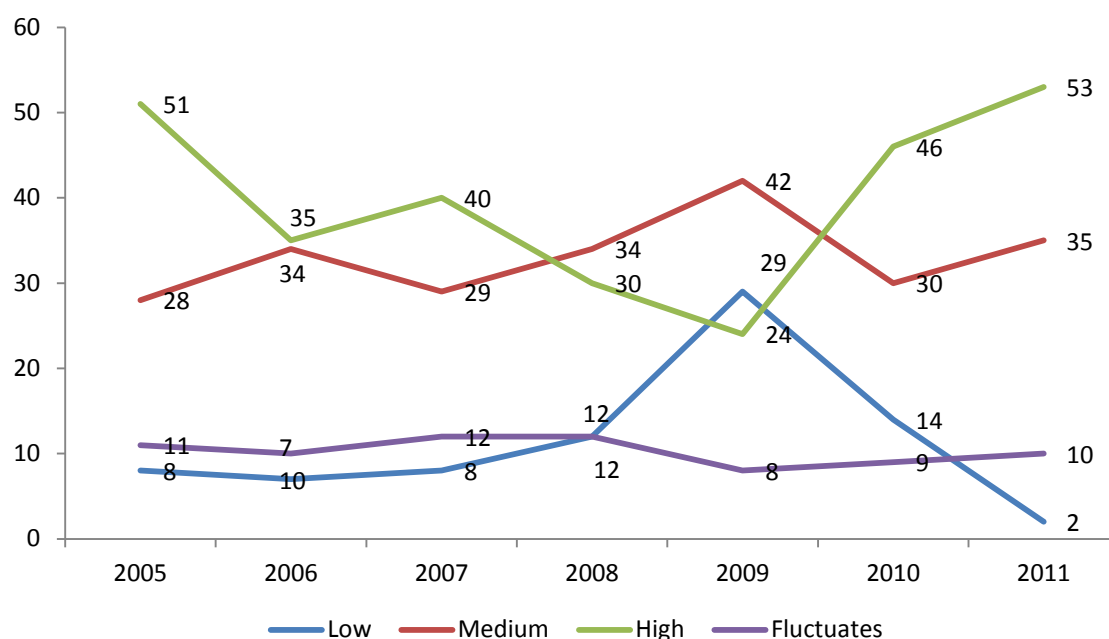


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine purity - Base

There has been a marked increase in proportions of EDRS respondents reporting the purity of base methamphetamine as 'high', from 24% in 2009 to 53% in 2011. Conversely, proportions reporting 'low' purity have declined dramatically over the same time period from 29% to 2% (Figure 79).

Figure 79: Current purity of base methamphetamine nationally, 2005-2011, (EDRS)

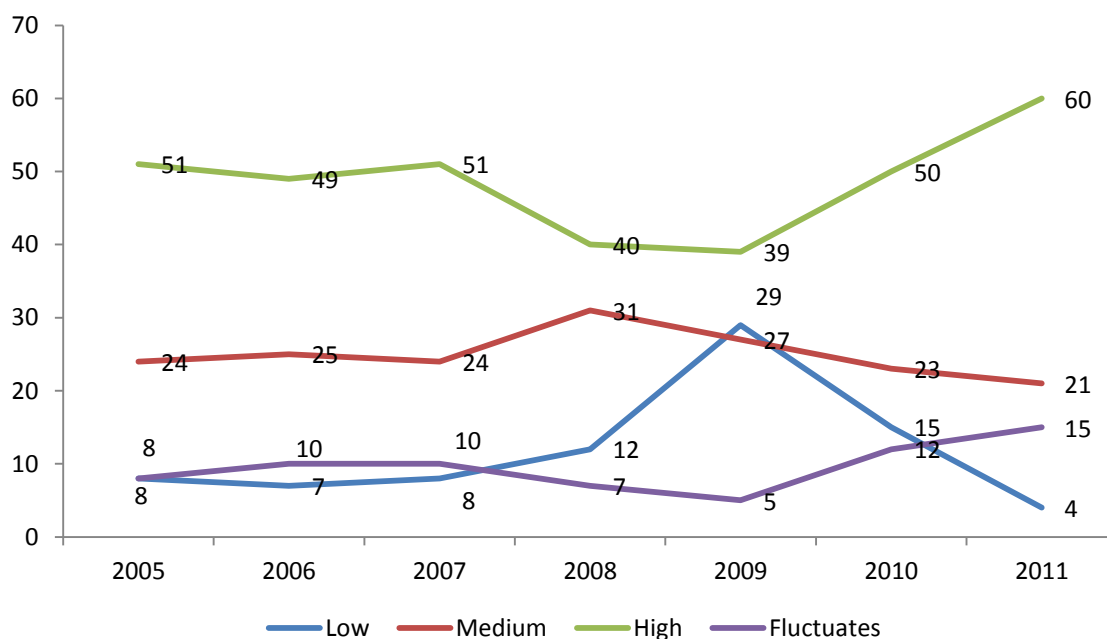


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine purity - Crystal

Proportions reporting 'high' purity of crystal methamphetamine have also increased between 2009 and 2011 from 39% to 60%, while fewer respondents are reporting 'low' purity' (4% in 2011) (Figure 80).

Figure 80: Current purity of crystal methamphetamine nationally, 2005-2011, (EDRS)

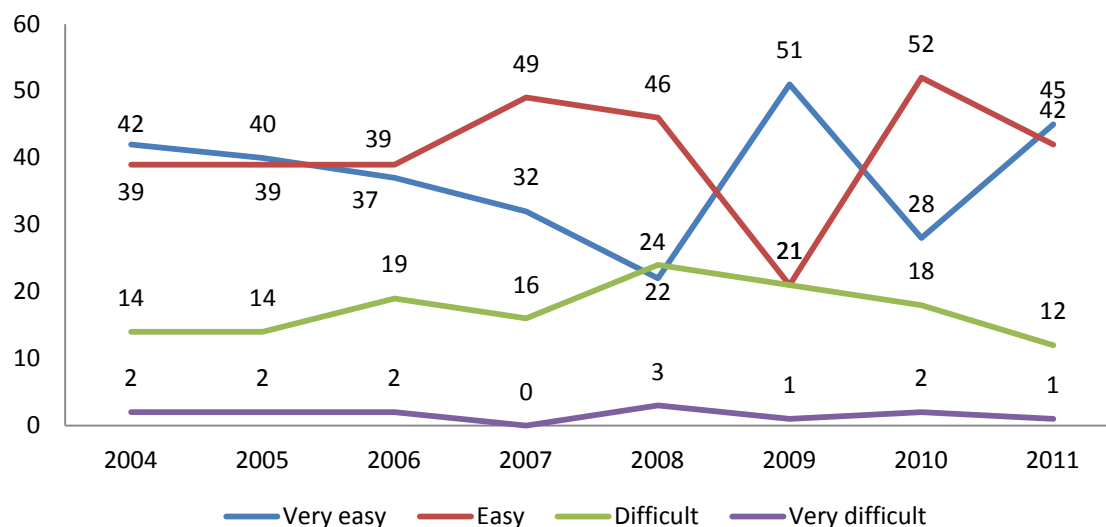


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine availability - Powder

The availability of powder methamphetamine has fluctuated since 2007. Overall an increasing majority of EDRS participants report that powder methamphetamine is 'easy' or 'very easy' to obtain (87% in 2011) and proportions reporting it is 'difficult' have declined from 24% in 2008 to 12% in 2011 (Figure 81).

Figure 81: Current availability of powder methamphetamine nationally, 2004-2011, (EDRS)

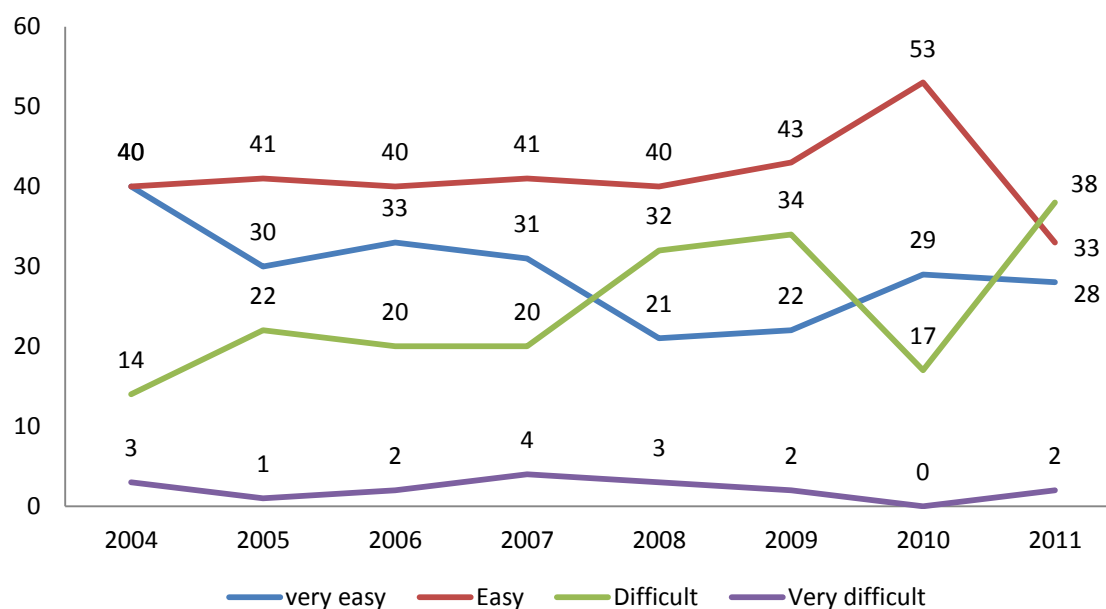


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine availability - Base

The proportion of EDRS respondents reporting base as 'easy' to 'very easy' to obtain has declined markedly from 82% in 2010 to 61% in 2011, while those reporting it as 'difficult' have almost doubled from 17% in 2010 to 38% in 2011 (Figure 82).

Figure 82: Current availability of base methamphetamine nationally, 2004-2011, (EDRS)

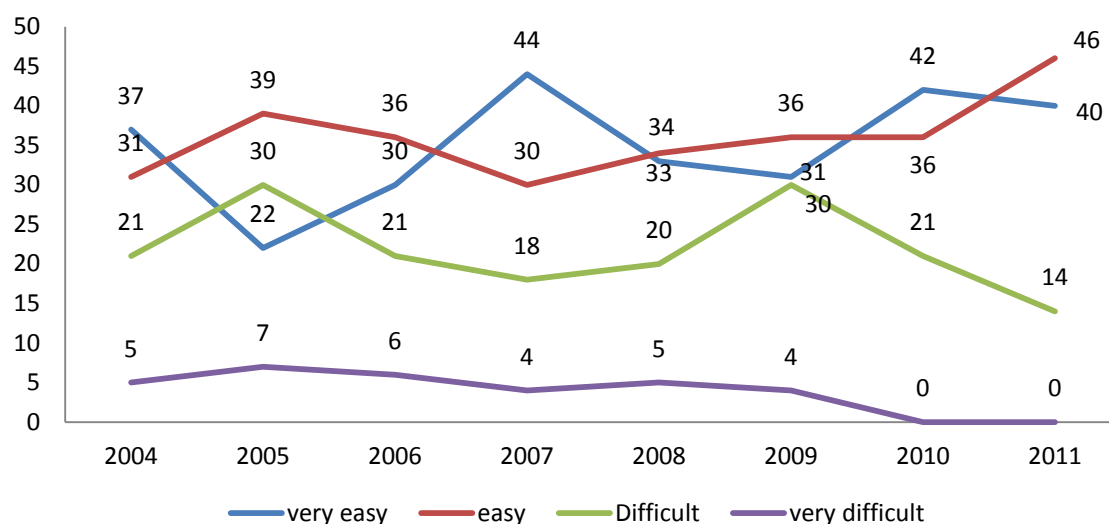


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine availability - Crystal

An increasing proportion of EDRS respondents reported crystal methamphetamine as being 'easy' or 'very easy' to obtain (from 67% in 2009 to 86% in 2011) (Figure 83).

Figure 83: Current availability of crystal methamphetamine nationally, 2004-2009, (EDRS)



Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press).

Methamphetamine Price Purity and Availability reported among people who inject drugs (PWID) as surveyed by the Illicit Drug Reporting System (IDRS)

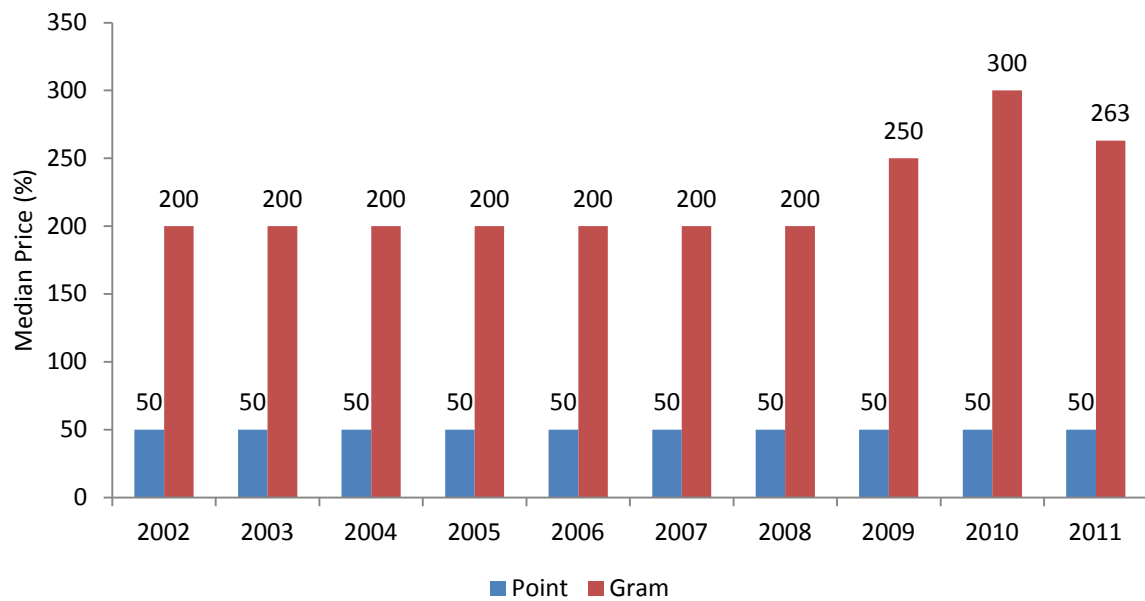
The following data represents median price purity and availability of methamphetamine across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price purity and availability of methamphetamine from the IDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#IDRS_Jurisdictional

Methamphetamine Price - Powder

The median price for a point of methamphetamine powder remains unchanged at \$50, while the price for a gram has fluctuated between \$200 and \$300 (Figure 84).

Figure 84: Median price of powder methamphetamine (speed), nationally 2003-2011, (IDRS)

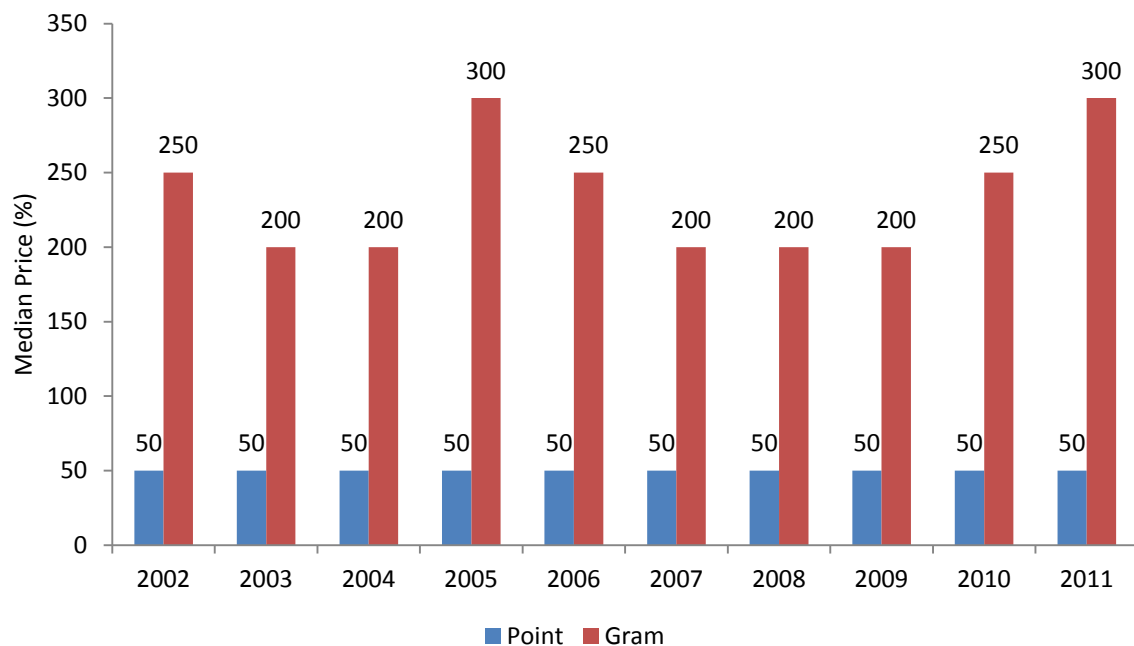


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine Price – Base

As with powder methamphetamine, the price for a point of base has remained at \$50. The price for a gram of base has fluctuated between \$200 and \$300 (recorded in 2005 and again in 2011) (Figure 85).

Figure 85: Median price of base methamphetamine, nationally 2003-2011, (IDRS)

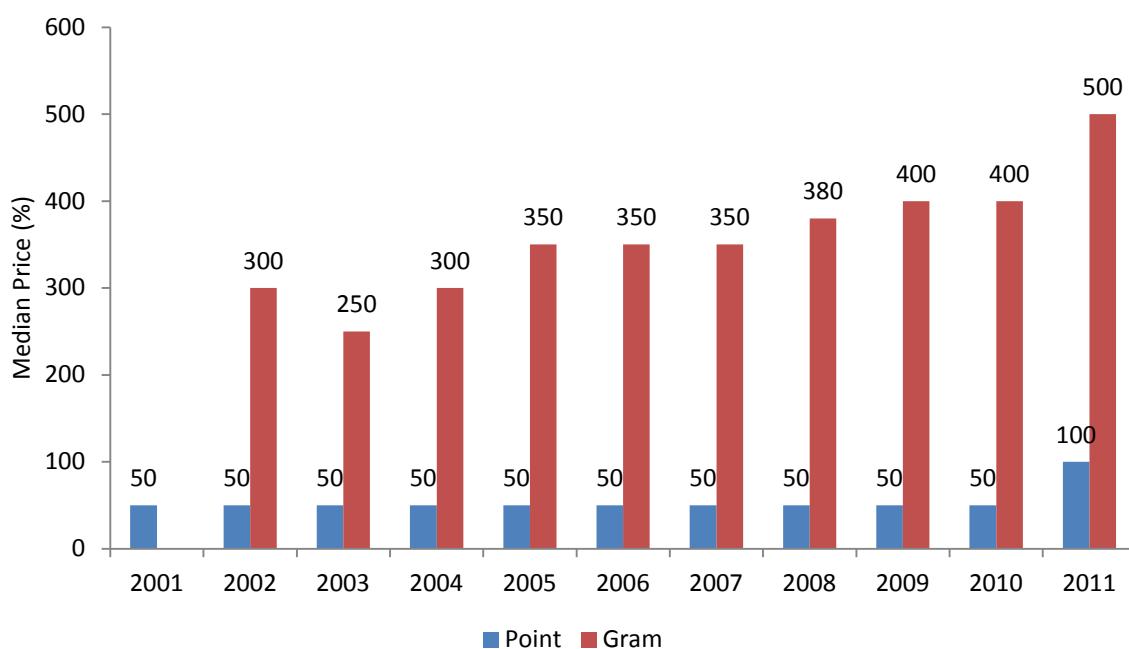


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine Price – Crystal

The price for a point of crystal methamphetamine remains increased to %100 in 2011, while the price for a gram has steadily increased from \$250 in 2003 to \$500 in 2011 (Figure 86). Again, these changes most likely reflect jurisdictional variations, with prices likely to be high in areas where crystal methamphetamine is not as readily available.

Figure 86: Median price of crystal methamphetamine, nationally 2003-2010, (IDRS)

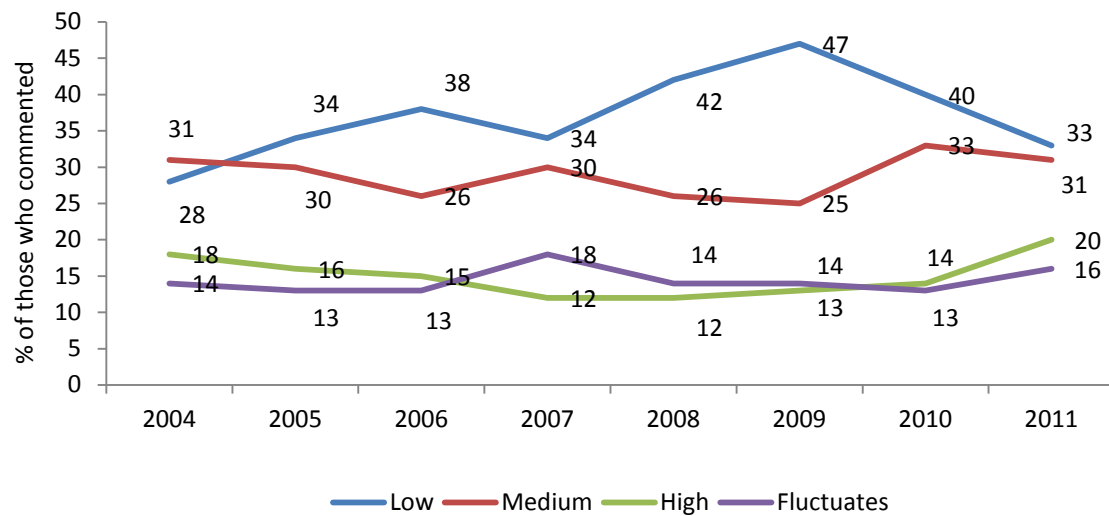


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine purity - Powder

One-third (33%) of the IDRS participants in 2011 reported powder methamphetamine as being of 'low' purity, and this proportion has declined from 47% in 2009 (Figure 87). Proportions reporting 'high' purity have increased from 12% in 2008 to 20% in 2011.

Figure 87: Current purity of powder methamphetamine, nationally, 2004-2011, (IDRS)

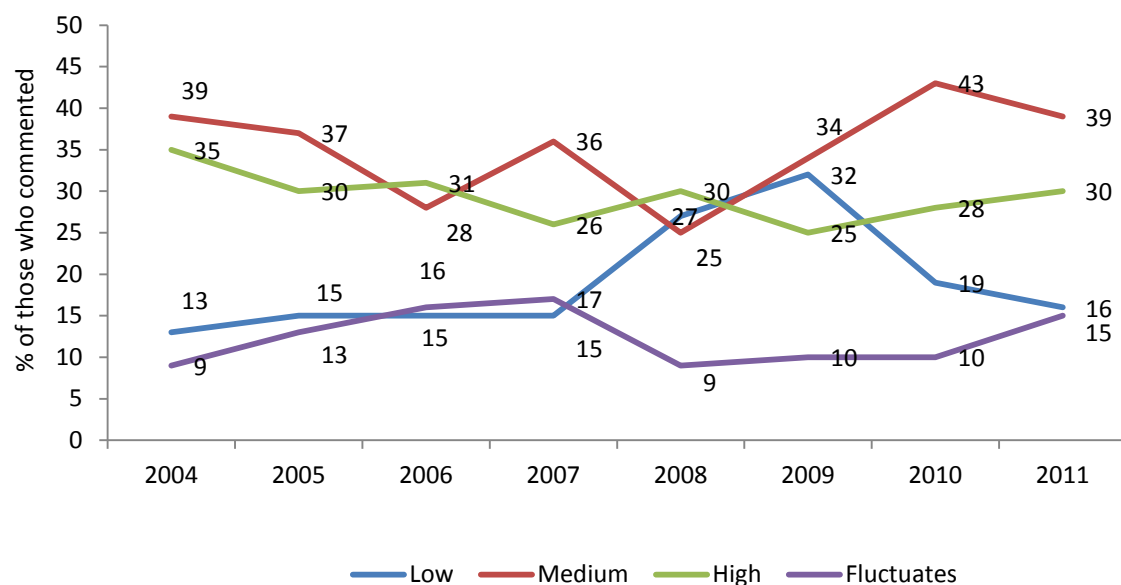


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine purity - Base

The purity of base over time has alternated between 'medium' and 'high'. (Figure 88).

Figure 88: Current purity of base methamphetamine nationally, 2004-2011, (IDRS)

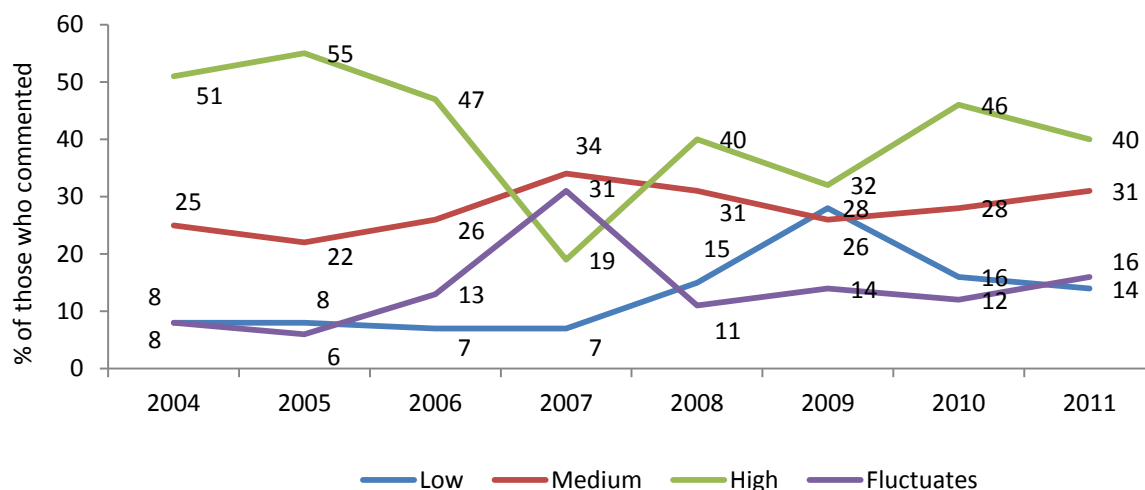


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine purity - Crystal

Overall the current purity of crystal methamphetamine has been reported as 'high', however this figure has fluctuated over time from 51% in 2004 to 40% in 2011. (26% in 2009) (Figure 89).

Figure 89: Current purity of crystal methamphetamine nationally, 2004-2011, (IDRS)

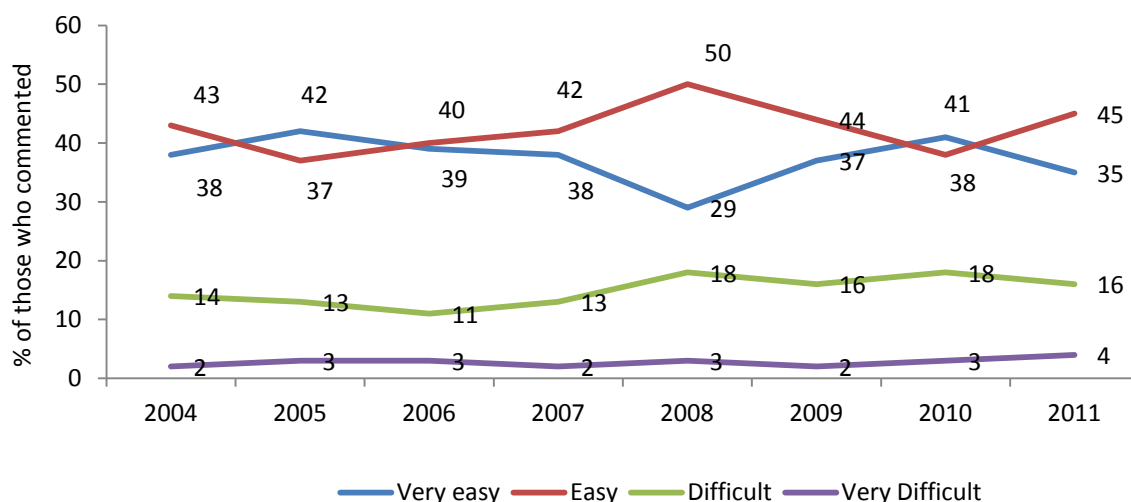


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine availability - Powder

The majority of IDRS respondents report the availability of powder methamphetamine availability as either 'very easy' or 'easy' (80% in 2011) (Figure 90).

Figure 90: Current availability of powder methamphetamine nationally, 2004-2011, (IDRS)

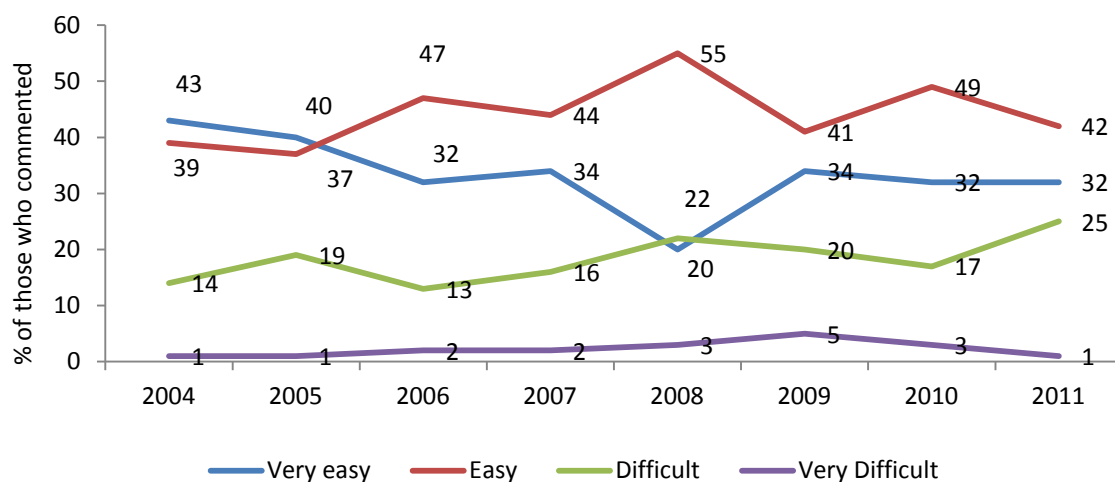


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine availability - Base

The currently availability of base methamphetamine over time has mainly been reported as either 'very easy' or 'easy' to obtain (Figure 91).

Figure 91: Current availability of base methamphetamine nationally, 2004-2011, (IDRS)

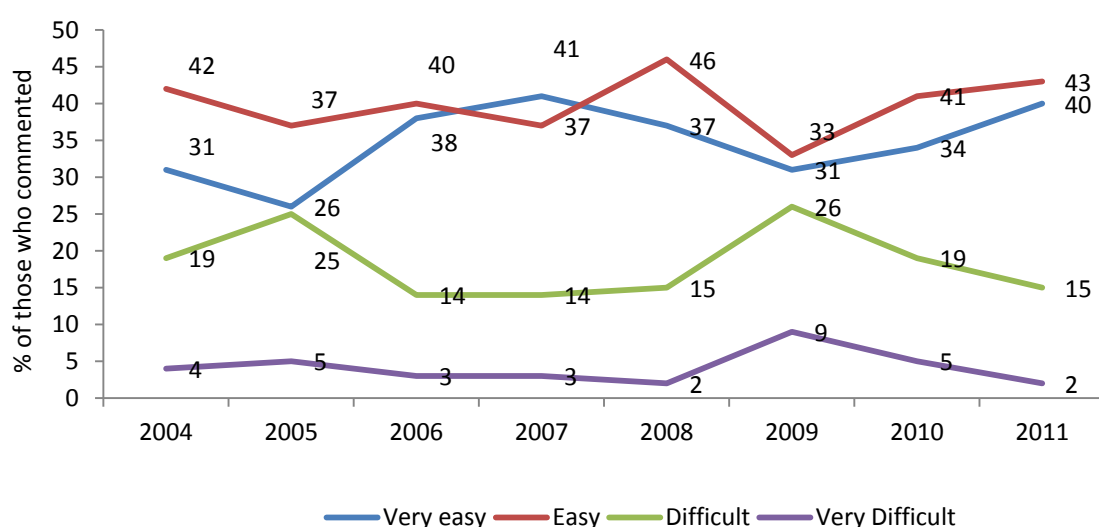


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

Methamphetamine availability - Crystal

Proportions of IDRS respondents reporting the availability of crystal methamphetamine as either 'very easy' or 'easy' to obtain has increased since 2009 from 61% to 83% in 2011 (Figure 92). There is a corresponding decline in proportions reporting it as difficult to obtain (from 26% in 2009 to 15% in 2011).

Figure 92: Current availability of crystal methamphetamine nationally, 2004-2009, (IDRS)



Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press).

7.6 Methamphetamine: summary

Prevalence

General population

- Prevalence of past year methamphetamine use remains stable in Australia at 2.1% in 2010.
- Weekly methamphetamine use has remained stable between 2001 and 2010 (9.3% reported weekly or more use in 2010, with the majority of Australians across all age groups reporting use every few months or less frequently).
- Powder methamphetamine continues to be the form most used in the general population.

Sentinel groups

- Among IDRS respondents, prevalence of past 6 month methamphetamine use overall remained stable between 2001 and 2011, however a decline was recorded between 2009 and 2010.
- Among regular ecstasy users there was a decline in past 6 month methamphetamine use between 2003 (84%) and 2009 (54%) and a decline in frequency of use. This decline is across all forms of methamphetamine but most marked for crystal methamphetamine. Use has stabilised at a lower level in 2010 and 2011.
- Shorter term trends show that crystal methamphetamine use in particular increased significantly between 2010 and 2011 among both IDRS and EDRS respondents.

Treatment seeking

- There was a slight increase in outpatient treatment episodes for meth/amphetamine from 12,211 in 2001/02 (10.8% of all treatment episodes) to 16,588 in 2007/08 (11.2%). This figure declined to 12,739 (9.2% of all treatment episodes) in 2008/09, and is consistent with the decline in methamphetamine use seen across sentinel groups and in the general population.
- Hospital presentations for meth/amphetamine problems are second highest after opioids. These have stabilised over the past five years after steady increases during the 1990s. The 20 to 39 year old Australians account for the largest proportion of these presentations.

Deaths

- Methamphetamine-related deaths remain lower than those for opioids, and have been decreasing since 2000. Much of this decline is driven by the decline in heroin-related deaths, as the majority of methamphetamine deaths are due to multiple drug (often heroin) toxicity.

Law enforcement

- Numbers of amphetamine-type stimulant seizures detected at the border have fluctuated between 2006/07 and 2009/10 after steady increases between 2001/02 to 2006/07. The weight of seizures has also fluctuated across this time period.
- Arrests for amphetamine-type stimulants have steadily increased since 1999/00, with the 2008/09 figure of 16,407 being the highest on record.
- The number of clandestine laboratories detected in 2009/10 (694) represents the highest on record.

Market indicators

- There were mixed trends for the median price of a gram of powder base and crystal methamphetamine, with IDRS respondents reporting increases for base and crystal methamphetamine and a decrease for powder methamphetamine. Among EDRS respondents the only change was a decrease in the median price for a gram of crystal methamphetamine.
- Trends in median prices for points of each form were also mixed. Prices for powder and base methamphetamine declined according to EDRS respondents, and remained stable according to IDRS respondents. Both groups reported an increase in the median price for a point of crystal methamphetamine.

- Purity of all three forms appears to have increased between 2008 and 2011, with crystal methamphetamine generally being reported as 'high' in purity among both EDRS and IDRS respondents. Both powder and base methamphetamine were reported as being 'medium' to 'high' in purity.
- With the exception of base methamphetamine, the majority of IDRS and EDRS respondents report methamphetamine as 'easy' or 'very easy' to obtain. Both powder and crystal methamphetamine forms have become increasingly more available according to EDRS respondents between 2009 and 2011. In contrast, approximately one third (38%), and one quarter (25%) of EDRS and IDRS respondents respectively reported base methamphetamine as being 'difficult' to obtain in 2011.

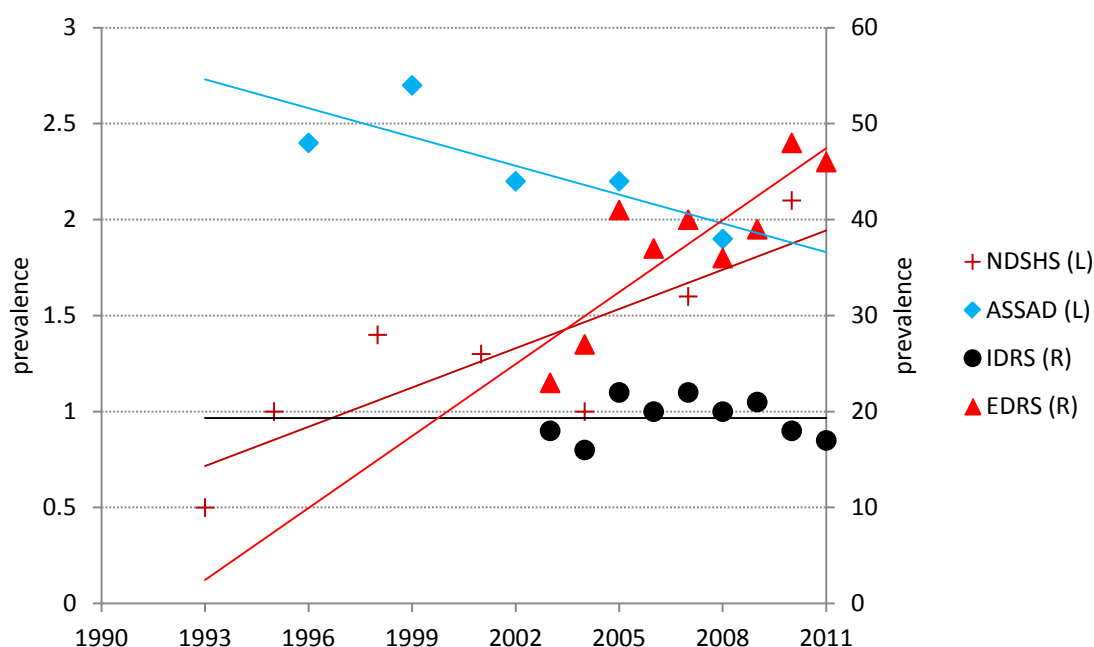
8. Cocaine

There are unique jurisdictional patterns of cocaine use in Australia, with previous research into cocaine markets showing that the majority of cocaine use occurs within Victoria and New South Wales (Shearer et al., 2005). Analysis of routine data collections such as hospital admissions also show that the majority of cocaine-related harms are documented in New South Wales (Roxburgh and Burns, 2009).

8.1 Patterns of cocaine use

It is difficult to obtain an accurate estimate of the prevalence of cocaine use in the general population due to the low levels consumed. In the NDSHS data since the early 1990's show that past 12 month use of cocaine has remained low (in 2010 to 2.1% of Australians reported past 12 month cocaine use). Among school students recent use has remained below 3% since 1996. In regular ecstasy users recruited for the EDRS, past 6 month use has increased from 24% in 2003 to 46% in 2011, while the pattern among people who inject drugs (PWID) (discussed later) is variable.

Figure 93: Cocaine use across multiple surveys

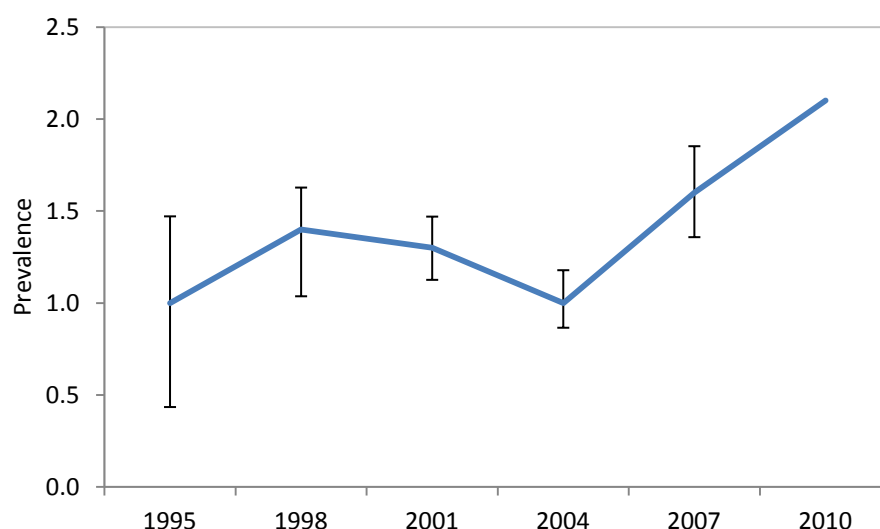


Source: National Drug Strategy Household Surveys, AIHW. Australian secondary school students' use of over-the-counter and illicit substances, DoHA. Drug use monitoring in Australia: annual reports on drug use among police detainees, AIC. Findings from the Ecstasy and Related Drugs Reporting System, NDARC. Findings from the Illicit Drug Reporting System, NDARC.

Note: We do not report DUMA data due to extremely low "positive" sample sizes for cocaine.

Examining cocaine use in the general population survey (NDSHS) the rise in recent cocaine use from 2004 (1%) to 2007 (1.6%) is statistically significant (Figure 94). Analysis reported by the Australian Institute of Health and Welfare (Australian Institute of Health and Welfare, 2011a) shows that the increase to 2.1% in 2010 is also significant (Figure 94). It should be noted however that prevalence remains low. Note that data were unavailable to include confidence intervals around the 2010 data at the time of publication.

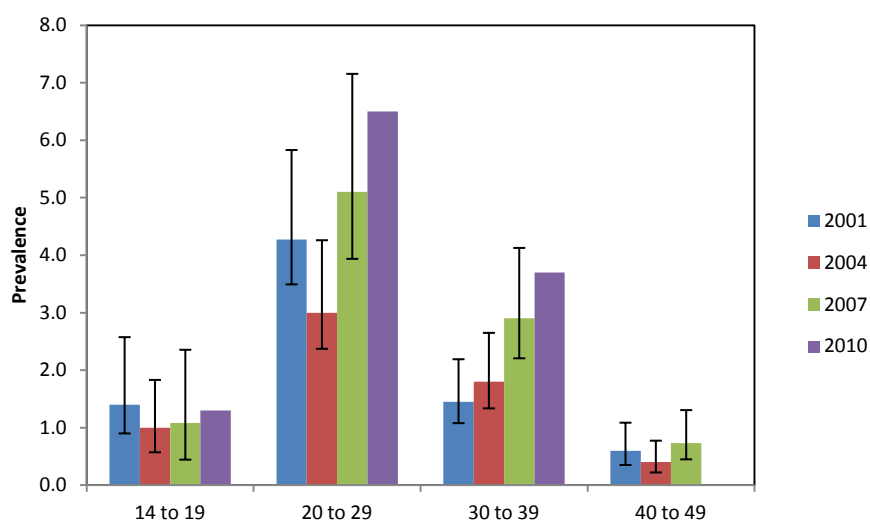
Figure 94: Proportion of general population reporting past year cocaine use



Source: National Drug Strategy Household Surveys, AIHW

Looking at trends by age group, past year cocaine use is most prevalent among the 20 to 29 year age group. The increase recorded overall in 2010 is most likely being driven by this age group (Figure 95). Note that data for the 40 to 49 year age group and data for confidence intervals for the 2010 data were unavailable at the time of publication.

Figure 95: Proportion of the general population reporting past year cocaine use by age group



Source: National Drug Strategy Household Surveys, AIHW

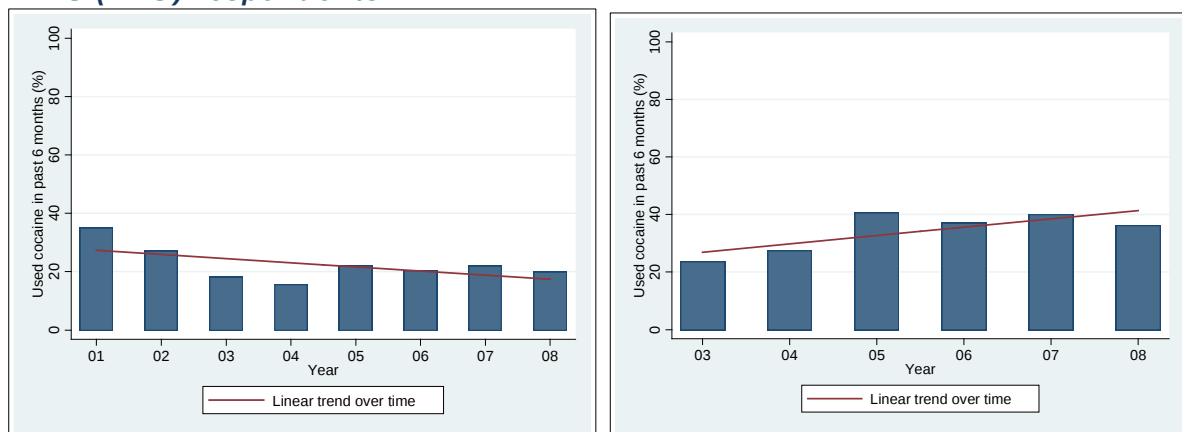
Table 8 shows cocaine use by gender, with a larger proportion of males reporting past year use than females.

Table 8: Past year cocaine use by gender

Cocaine	2001	2004	2007	2010
Males	1.6	1.3	2.2	2.7
Females	1	0.8	1	1.5

Turning to sentinel samples (IDRS and EDRS participants), we examine a linear trend for cocaine use in the past 6 months⁶ (Figure 96). The IDRS linear trend indicates cocaine use decreasing at a constant rate of 1.3% per year (LHS). It is also worth noting that in 2008, 20% of IDRS respondents used cocaine in the preceding 6 months. The pattern of use among EDRS participants (on the RHS) is different from that of the IDRS participants: cocaine use is increasing amongst the EDRS population, at a constant rate of 3% per annum.

Figure 96: Linear trend in cocaine use (last 6 months) amongst IDRS (LHS) and EDRS (RHS) respondents

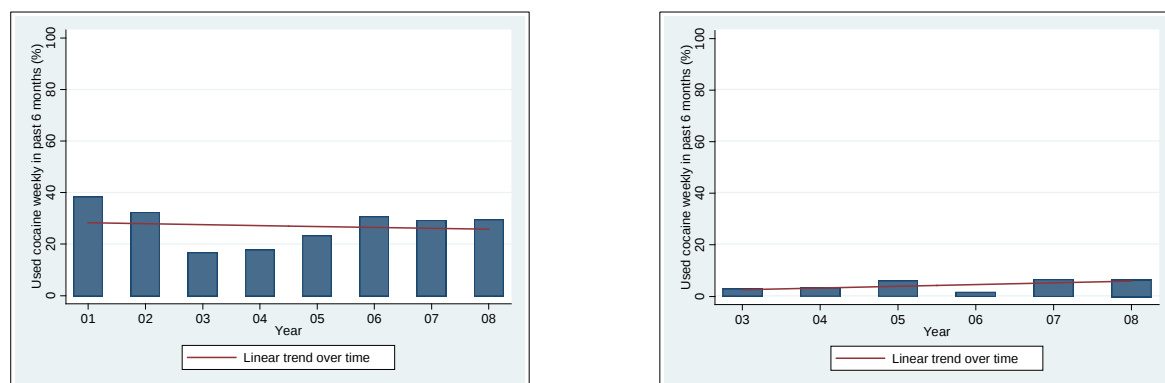


Source: Illicit Drug Reporting System
Ecstasy and related Drugs Reporting System

Examining weekly cocaine use among PWID in the past 6 months, the IDRS linear trend is non-significant (remaining stable over time). The pattern of weekly use amongst cocaine users from the EDRS has remained stable over time (Figure 97).

⁶ It looks like a non-linear trend would be more appropriate for these data but due to time constraints we have not been able to do the analyses.

Figure 97: Linear trend in weekly cocaine use amongst IDRS (LHS) and EDRS (RHS) respondents reporting recent cocaine use



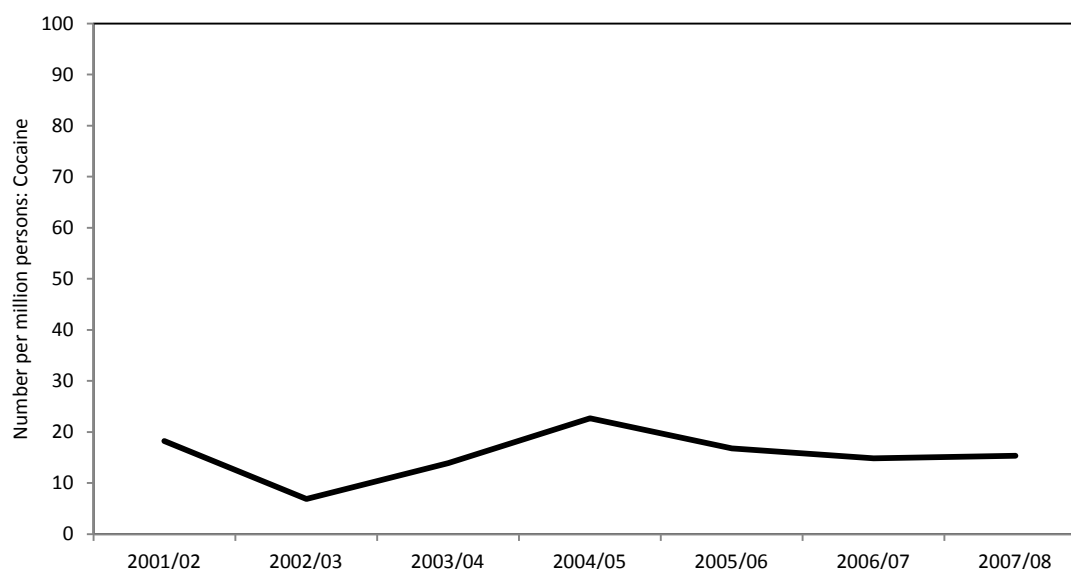
Source: Illicit Drug Reporting System
Ecstasy and related Drugs Reporting System

8.2 Patterns of harms associated with cocaine use

Hospital separations

Principal cocaine related separations are higher in number over the last 10 years, with peaks in 2001/02 and 2004/05. In 2007/08, separations for cocaine-related problems in NSW accounted for the majority (81%) of all cocaine separations in Australia, and almost two-thirds (62%) of NSW cocaine-related separations were for dependence (Roxburgh, 2010).⁷ Cocaine related separations are low when compared to opioids, amphetamines and cannabis and due to the relatively small number conclusions should be drawn with caution. Due to low numbers; no age trend data is available.

Figure 98: Rate of cocaine-related hospital separations among persons aged 15-54, 2001 to 2008



Source: National Hospital Morbidity Database, AIHW; Roxburgh and Burns 2010

⁷ Due to small numbers age trends in cocaine-related separations have not been presented.

Deaths

Cocaine-related deaths remain relatively low in Australia⁸. In 2005 there were only 10 deaths where cocaine was determined to be the underlying cause and a total of 15 deaths where cocaine was mentioned as either the underlying or contributory cause.

Table 9: Number of cocaine-related deaths among those aged 15-54

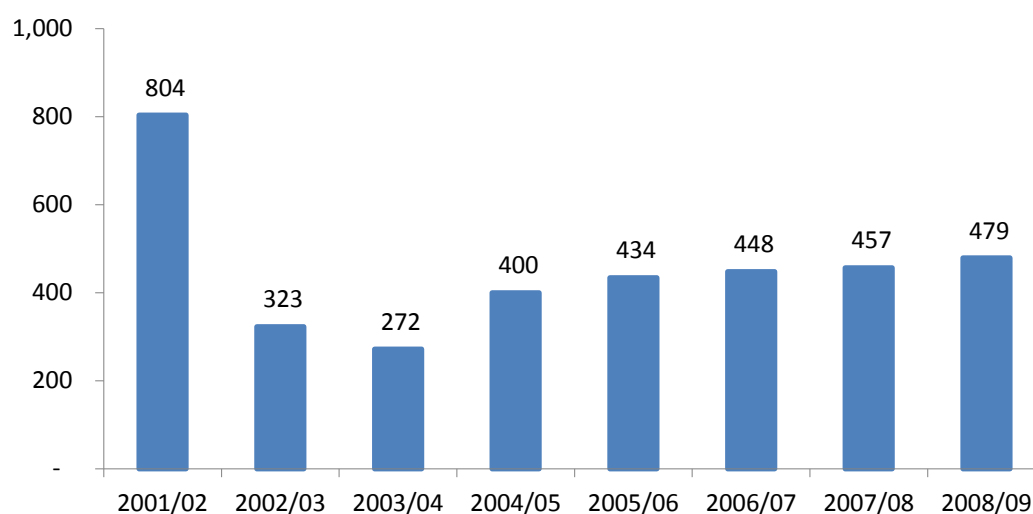
	2001	2002	2003	2004	2005
Cocaine - total mentions	28	15	15	20	15
Cocaine - underlying cause	2	1	5	5	10

Source: Roxburgh and Degenhardt 2007

8.3 Patterns of cocaine treatment seeking

In 2008/09 cocaine was nominated as the principal drug of concern in 479 closed treatment episodes out of a total of 138,027 episodes for illicit drug use (0.3%) (Figure 99). This proportion is lower than 2002/03, when cocaine treatment episodes made up 1.1% of all treatment episodes.

Figure 99: Number of closed treatment episodes where cocaine was the principal drug of concern



Source: Alcohol and Other Drug Treatment Services National Minimum Data Set, AIHW

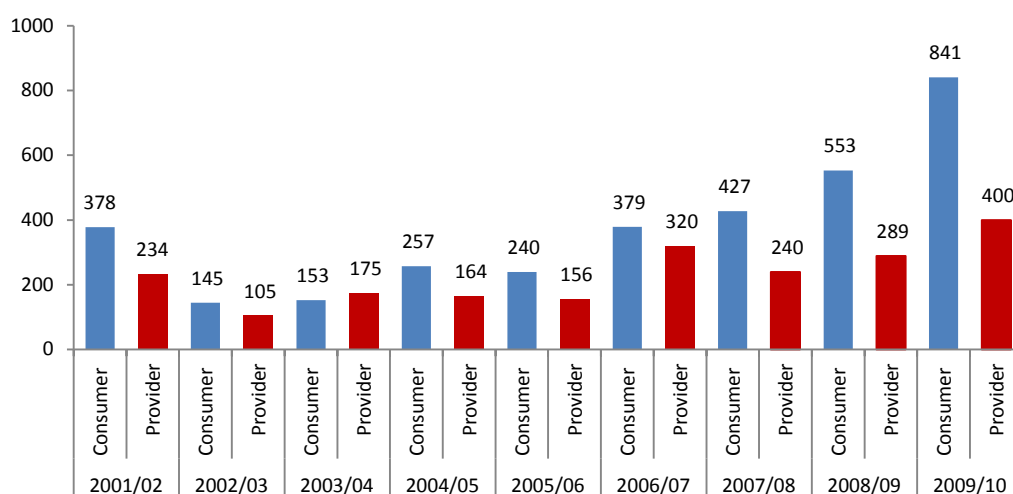
⁸ Unfortunately data on mortality beyond 2005 is not available in the same format as that between 2001 and 2005 and hence not able to be used to reliably assess trends over time.

8.4 Cocaine law enforcement indicators

Consumer and Provider arrests

Consumer and provider cocaine arrests remain negligible relative to other illicit drugs, however fluctuating increases can be observed since 2001/02 (Figure 100). Numbers of cocaine consumer arrests have increased markedly from 240 in 2005/06 to 841 in 2009/10. Provider arrests have shown a similar pattern, and were highest in 2009/10 at 400. Relative to other drugs, consumer cocaine arrests account for 1% of all drug arrests, while provider arrests account for 2.5% (Australian Crime Commission, 2011).

Figure 100: Cocaine consumer and provider arrests, 2001 to 2010

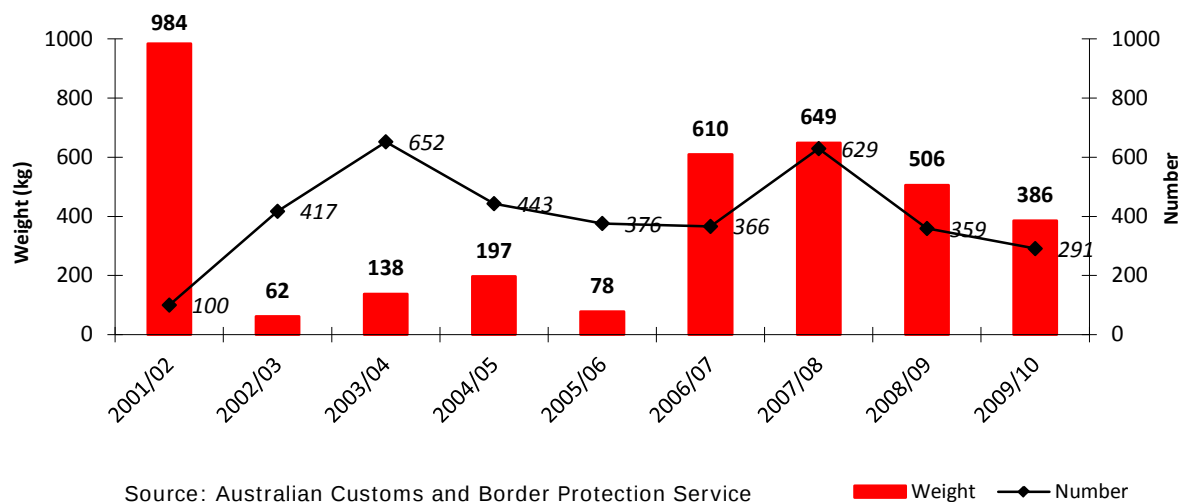


Source: Australian Illicit Drug Data Reports, ACC

Seizures

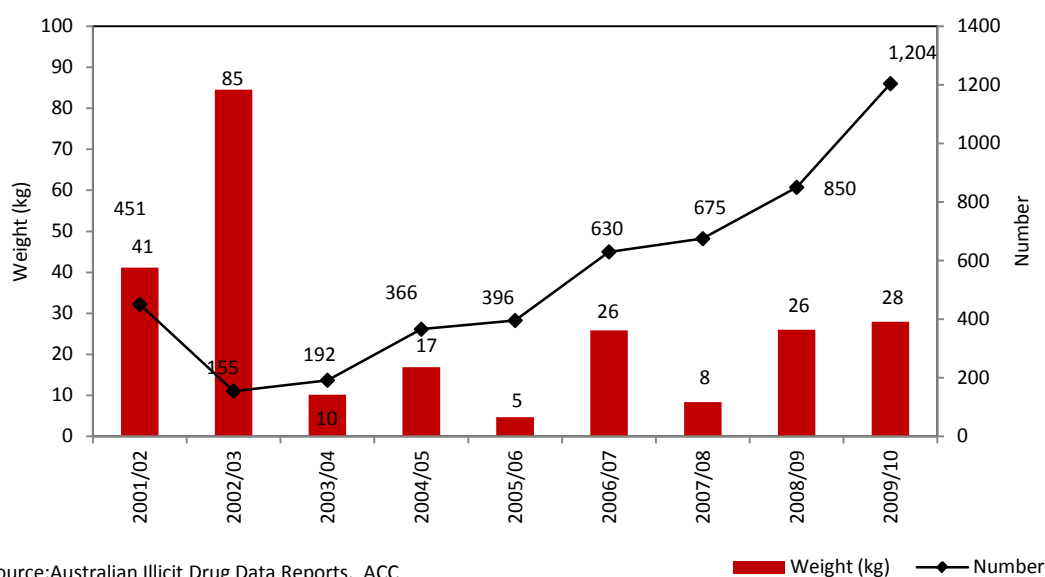
During 2009/10, the Australian Customs and Border Protection Service made 291 detections of cocaine at the Australian border, a decrease from 359 in 2008/09 (Figure 101). The detections weighed a total of 386 kilograms a decrease from 506 kilograms in 2008/09. There was a significant increase in the weight of cocaine seized through the air passengers and crew stream, however there was one significant detection of 240kg seized through the cargo stream coming in from Mexico (Australian Customs and Border Protection Service, 2010).

Figure 101: Number and weight of cocaine detections made at the border by the Australian Customs and Border Protection Service, 1995/96 to 2009/10



The number of cocaine seizures recorded by domestic and territory police in 2009/10 (1,204) represents the highest on record (Figure 102). The total weight across all seizures however remained stable from 2008/09.

Figure 102: Weight and number of total seizures of cocaine made by State/Territory police, 2002 to 2010



8.5 Cocaine market indicators

Cocaine Price Purity and Availability reported by Regular Ecstasy users (EDRS)

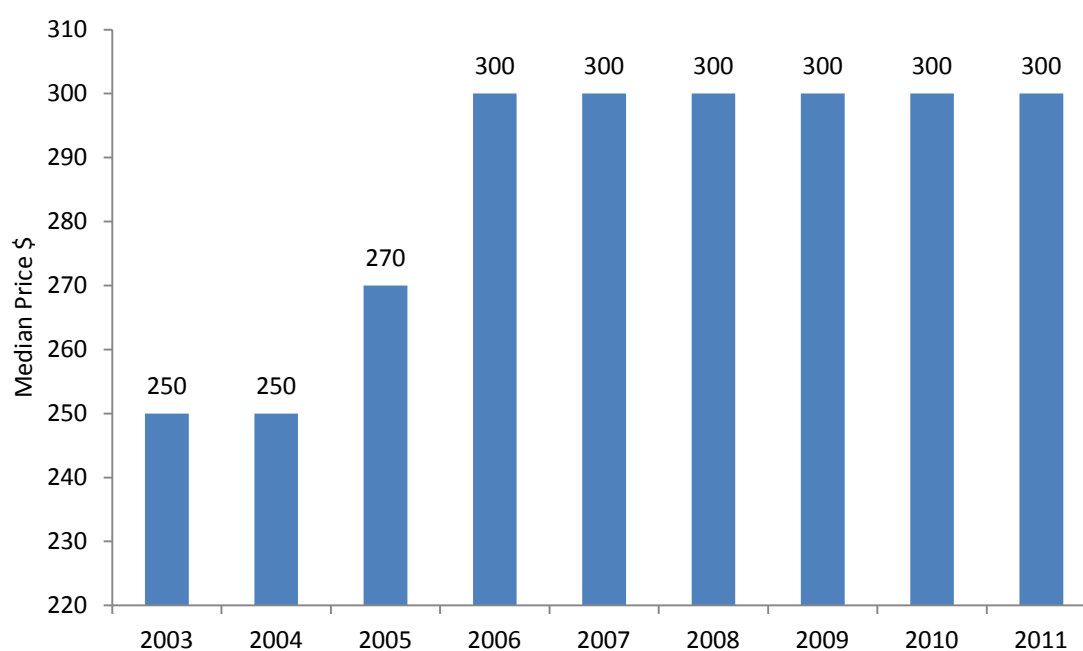
The following data represents median price purity and availability across Australia, which is likely to obscure any jurisdictional differences. There are likely to be large jurisdictional differences in cocaine indicators given that a large part of this market tends to be concentrated in Victoria and New South Wales. For further information regarding jurisdictional trends on price purity and availability of cocaine from the EDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#EDRS_Jurisdictional

Cocaine price

The price of a gram of cocaine has increased over time from \$250 in 2003 to \$300 in 2011 (Figure 103).

Figure 103: Median price of cocaine (per gram), nationally 2003-2011, (EDRS)

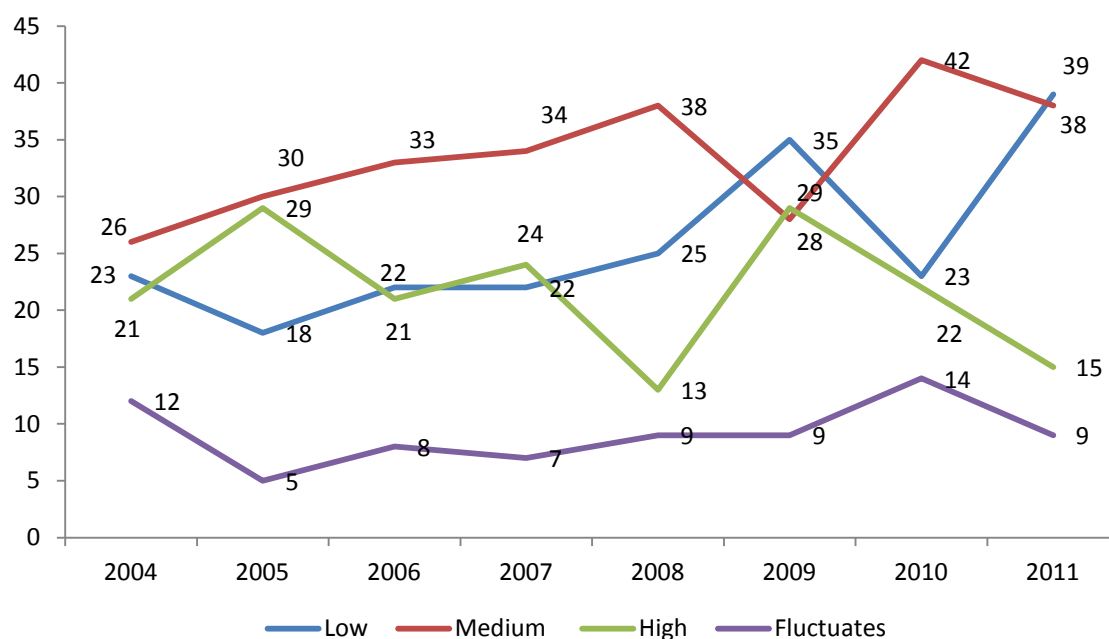


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cocaine purity

The majority of reports from EDRS participants between 2004-2011 were that cocaine purity is 'low' to 'medium'. Numbers reporting cocaine as being high in purity have fluctuated, while there has been a steady increase in the numbers reporting that cocaine purity is 'low' (from 23% in 2004 to 38% in 2011) (Figure 104).

Figure 104: Current purity of cocaine nationally, 2004-2011, (EDRS)

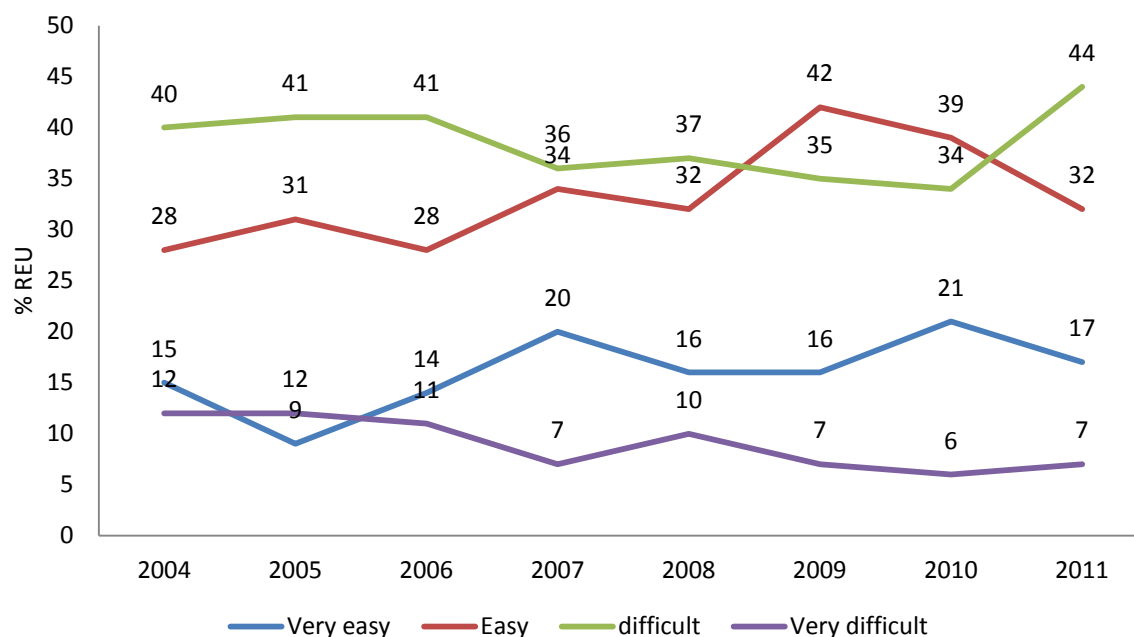


Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cocaine Availability

Just under half (44%) of the EDRS participants in 2011 reported that cocaine is 'difficult' to obtain, representing a marked increase from 34% in 2010 (Figure 105). Proportions reporting cocaine as 'easy' to obtain have declined over the past few years, while those reporting it as 'very easy' to obtain remains low at 17% in 2011.

Figure 105: Current availability of cocaine nationally, 2004-2011, (EDRS)



Source: Ecstasy and related Drugs Reporting System (EDRS), Sindicich and Burns (in press)

Cocaine Price Purity and Availability reported among people who inject drugs (PWID) as surveyed by the Illicit Drug Reporting System (IDRS)

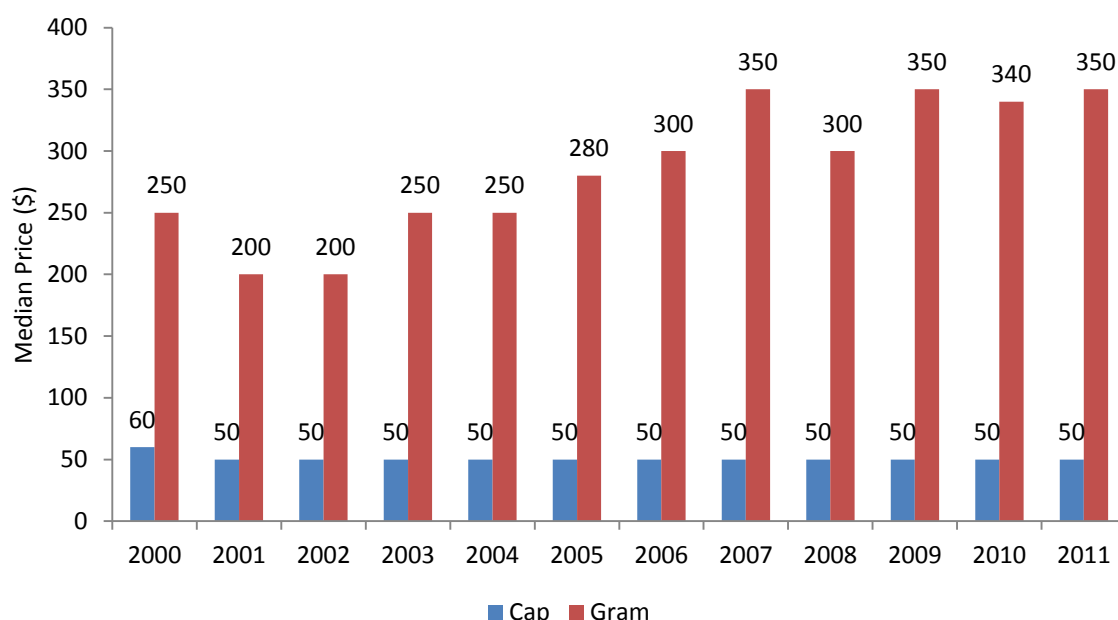
The following data represents median price purity and availability of cocaine across Australia, which is likely to obscure any jurisdictional differences. For further information regarding jurisdictional trends on price purity and availability of cocaine from the IDRS findings please refer to the following weblink:

http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National+Reports#IDRS_Jurisdictional

Cocaine price

IDRS participants report that a price of a cap of cocaine has remained relatively stable at \$50 over time, while the price of a gram has fluctuated (this figure was \$350 in 2011) (Figure 106).

Figure 106: Median price of cocaine, nationally, 2000-2011, (IDRS)

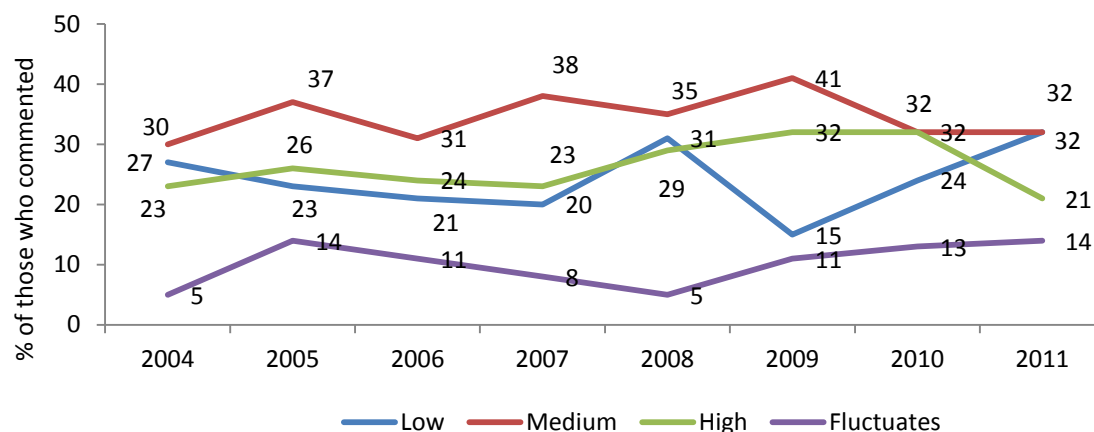


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Cocaine purity

Approximately two-thirds (64%) of IDRS participants reported cocaine as being either 'low' (32%) or 'medium' (32%) in purity, with a smaller proportion (21%) reporting purity as 'high' (Figure 107).

Figure 107: Current purity of cocaine nationally, 2004-2011, (IDRS)

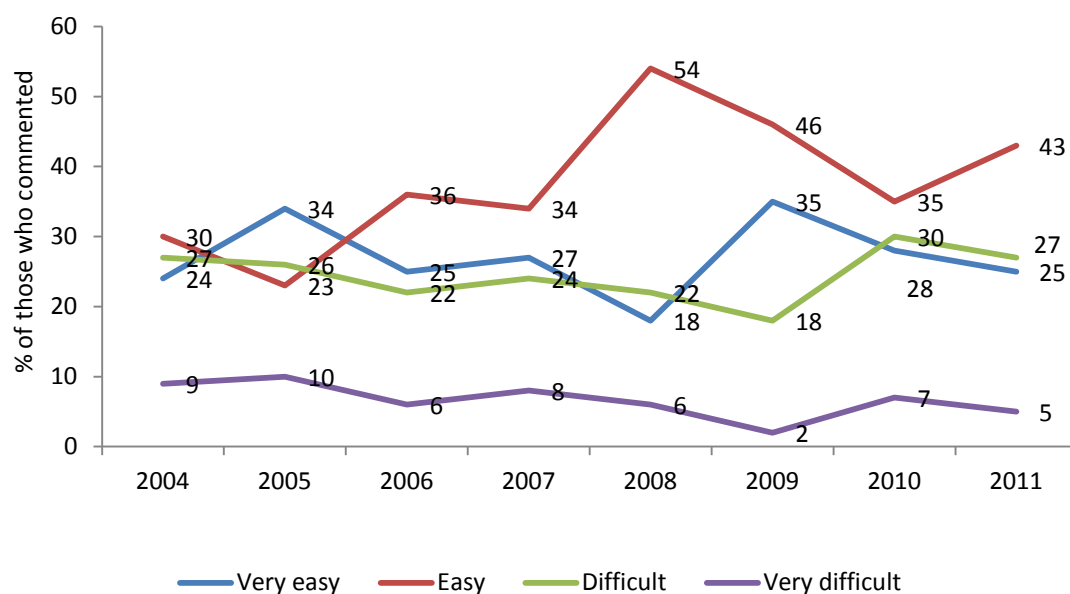


Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

Cocaine availability

Cocaine availability, according to IDRS participants, has fluctuated over time. Proportions reporting that cocaine is 'easy' to obtain have declined from 54% in 2008 to 43% in 2011, while there has been a corresponding increase in proportions reporting it as 'difficult' to obtain (from 18% in 2008 to 27% in 2011) (Figure 108). Only one-quarter reported cocaine as 'very easy' to obtain in 2011.

Figure 108: Current availability of cocaine nationally, 2004-2011, (IDRS)



Source: Illicit Drug Reporting System (IDRS), Stafford and Burns (in press)

8.6 Cocaine: summary

Trends in cocaine are largely driven by use and harms occurring in NSW.

Prevalence

General population

- There was a slight increase in cocaine use among the general population in 2007 (from 1% in 2004 to 1.6% in 2007) and again in 2010 to 2.1%. However cocaine use in the broader population remains relatively low. The rise in 2010 was mainly accounted for by 20 to 29 year olds.
- Frequency of cocaine use in the general population remains sporadic, with the majority of Australians reporting monthly or less frequent use in 2010.

Sentinel groups

- Among IDRS respondents there has been a decline in prevalence of 6 month cocaine use between 2001 and 2008, and prevalence has remained at this lower level between 2009 and 2011. Frequency of cocaine use (weekly or more) has remained relatively stable between 2001 and 2011.
- Conversely, among regular ecstasy users there has been an increase in prevalence of past 6 month cocaine use (from 23% in 2003 to 46% in 2011), however use among this group is relatively infrequent at 2 occasions over the past 6 months in 2011. Frequency of cocaine use has remained stable among this group.

Treatment seeking

- An increase in cocaine-related harms in 2001 (treatment and hospital presentations) mirrored high levels of use among injecting drug users in NSW. These indicators have since declined with hospital and treatment presentations for problems relating to cocaine remaining relatively low.

Law enforcement

- Cocaine seizures declined in number (291) and weight (386kg) in 2009/10, however, there was one particularly large detection of 240kg seized through the cargo stream, coming in from Mexico.
- Cocaine-related arrests increased from 689 in 2007/08 to 848 in 2008/09. Over 50% of these arrests occurred in NSW.

Deaths

- Cocaine-related deaths remain relatively low in Australia. In 2005 there were 10 deaths where cocaine was determined to be the underlying cause and a total of 15 deaths where cocaine was mentioned as either the underlying or contributory cause.

Market indicators

- There has been an increase in the price of a gram of cocaine between 2001 and 2010, while purity is reported as being low to medium.
- There have been increasing proportions of both EDRS and IDRS respondents reporting that cocaine is 'low' in purity between 2008 and 2011.
- Availability of cocaine is reported by EDRS respondents as difficult (44% in 2011), and these proportions have increased since 2008 (from 37%). Just under half (43%) of the IDRS respondents reported cocaine as 'easy' to obtain in 2011 however this proportion has declined from 54% in 2008. Approximately one-quarter (27%) of IDRS respondents reported cocaine as 'difficult' to obtain in 2011, increasing from just 18% in 2008.

9. Snapshot of other drugs in 2009 among EDRS participants: Ketamine, GHB, LSD

9.1 Ketamine

- Almost one-third (29%) of the national EDRS sample reported lifetime use of ketamine, and a tenth (10%) reported using ketamine recently. The mean age of first use was 20 years.
- Ketamine use is predominantly reported in VIC, NSW and SA. All other states had less than 10 participants reporting recent use.
- Proportion of reported recent use of ketamine has declined in all jurisdictions from 2003-2009. This may be related to a demographic issue (i.e. ketamine use is becoming refined to a group of users not targeted by the EDRS) or a sampling issue (i.e. perhaps the EDRS is no longer able to target this sub-group of REU that use ketamine) or a change in availability, purity or price may be the issue, though trend data collected has not demonstrate this to be the case.
- The current purity of ketamine was reported to be high and this was reported to have remained stable by the majority that commented.
- Ketamine availability was mixed with 57% reporting that it was difficult and 53% reporting that it was easy to obtain. According to participants who commented, availability had remained stable in the preceding six months.

9.2 GHB

- Fourteen percent of the national EDRS sample reported lifetime use of GHB, with the mean age of first use being 22 years.
- There was a significant decrease in recent use in 2009 compared to 2008. Four percent of the national sample reported recent use, with most recent use reported on the east coast of Australia (VIC and NSW). There were no reports of recent use in the NT.
- Recent use occurred on a median of two days in the six months preceding interview; 85% reported using less than once per month.
- Recent GHB users reported using a median of 5.75 ml in a typical episode of use and a median of 9 ml in the heaviest recent episode of use. GHB was consumed orally; only one participant reported recent injection.
- Only 10 participants were able to comment on the price of a millilitre of GHB. Over half the participants commented that the price had not changed (i.e. it was stable).
- Purity reports were mixed between high and medium, and purity change comments were also mixed between remaining stable and having considered to have increased.
- Of those who commented on GHB availability, reports were mixed between being considered easy and difficult to obtain. Availability change was also mixed with minimal numbers commenting.

9.3 LSD

- The median price per tab of LSD ranged from \$15 in SA to \$25 in the ACT, the NT and WA. Sixty-four percent of those commenting reported that the price had remained stable in the six months prior to interview.
- Of those who commented, 60% reported that the current purity of LSD was high. Forty-six percent of those who commented reported that purity had remained stable, in the six months preceding interview.
- Overall LSD was reported to have remained easy to obtain and this has remained stable (53%) in the last six months.
- LSD was mostly reported to have been obtained from friends and used in private locations such as the participants' own homes or friend's homes.

References

- AUSTRALIAN CRIME COMMISSION (2009) Illicit Drug Data Report 2007-08. Canberra, Commonwealth of Australia.
- AUSTRALIAN CRIME COMMISSION (2011) Illicit Drug Data Report 2009-10. Canberra, Commonwealth of Australia.
- AUSTRALIAN CUSTOMS AND BORDER PROTECTION SERVICE (2010) Annual Report 2009-10. Canberra, Australian Customs and Border Protection Service.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (2008) 2007 National Drug Strategy Household Survey: detailed findings. Canberra, Australian Institute of Health and Welfare.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (2011a) 2010 National Drug Strategy Household Survey Report. Canberra, Australian Institute of Health and Welfare.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (2011b) National Opioid Pharmacotherapy Statistics Annual Data collection: 2010 report. Canberra, Australian Institute of Health and Welfare.
- DEGENHARDT, L., CONROY, E., DAY, C., GILMOUR, S. & HALL, W. (2005a) The impact of the Australian heroin shortage on demand for and compliance with treatment for drug dependence. *Drug and Alcohol Dependence*, 79, 129-135
- DEGENHARDT, L., DAY, C., CONROY, E., GILMOUR, S. & HALL, W. (2005b) Age differentials in the impacts of reduced heroin supply: Effects of a "heroin shortage" in NSW, Australia. *Drug and Alcohol Dependence*, 79, 397-404
- DEGENHARDT, L. & ROXBURGH, A. (2007a) 2005 Cocaine and methamphetamine related drug-induced deaths in Australia. . Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- DEGENHARDT, L. & ROXBURGH, A. (2007b) Accidental drug-induced deaths due to opioids in Australia, 2005. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- DEGENHARDT, L., ROXBURGH, A., DUNN, M., CAMPBELL, G., BRUNO, R., KINNER, S., GEORGE, J., QUINN, B., WHITE, N. & TOPP, L. (2009) The epidemiology of ecstasy use and harms in Australia. *Neuropsychobiology*, 60, 176-187
- IVERSEN, J. & MAHER, L. (2008) Drug injection trends among participants in the Australian Needle and Syringe Program Survey, 2003 to 2007. IDRS Drug Trends Bulletin Sydney, National Centre in HIV Epidemiology and Clinical Research, UNSW.
- KAYE, S., DARKE, S. & DUFLOU J. (2009) Methylenedioxymethamphetamine (MDMA)-related fatalities in Australia: Demographics, circumstances, toxicology and major organ pathology. *Drug and Alcohol Dependence*, 104, 254-261
- LARANCE, B., DEGENHARDT, L., LINTZERIS, N., WINSTOCK, A. & MATTICK, R. P. (2011) Definitions related to the use of pharmaceutical opioids: Extramedical use, diversion, non-adherence and aberrant medication-related behaviours. *Drug and Alcohol Review*, 30, 236-245
- MCKETIN, R., MCLAREN, J. & KELLY, E. (2005) The Sydney methamphetamine market: patterns of supply, use, personal harms and social consequences. NDLERF Monograph No. 13. Sydney, National Drug and Alcohol Research Centre, University of NSW.
- NATIONAL CENTRE FOR CLASSIFICATION IN HEALTH (1998) *The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification*, Sydney, National Centre for Classification in Health.
- NATIONAL CENTRE IN HIV EPIDEMIOLOGY AND CLINICAL RESEARCH (2008) Australian NSP Survey National Data Report 2002 - 2007. National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.
- NATIONAL DRUG RESEARCH INSTITUTE (2009) Bulletin 12: Trends in estimated alcohol-attributable deaths and hospitalisations in Australia, 1996-2005. Perth, Curtin University.

- PAULOZZI, L. J. & XI, Y. (2009) Recent changes in drug poisoning mortality in the United States by urban-rural status and by drug type. *Pharmacoepidemiology and drug safety*, 17, 997-1005
- ROXBURGH, A., AND BURNS, L. (2010) Drug-related hospital stays in Australia 1993-2008. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- ROXBURGH, A., BRUNO, R., LARANCE, B. AND BURNS, L., (2011) Prescription of opioid analgesics and related harms in Australia. *Medical Journal of Australia*, 195, 280-284
- ROXBURGH, A. & BURNS, L. (2009) Drug related hospital stays in Australia, 1993-2007. Sydney, National Drug and Alcohol Research Centre, UNSW.
- ROXBURGH, A. & DEGENHARDT, L. (2006) Hospital stays related to illicit drugs in Australia, 1993-2004. NDARC Technical Report No. 261. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- ROXBURGH, A. & DEGENHARDT, L. (2008) Characteristics of drug-related hospital separations in Australia. *Drug & Alcohol Dependence*, 92, 149-155
- ROXBURGH, A., HALL, W. D., DEGENHARDT, L., MCLAREN, J., BLACK, E., COPELAND, J. & MATTICK, R. P. (2010) The Epidemiology of cannabis use and cannabis-related harm in Australia 1993-2007. *Addiction*, 105, 1071-1079
10.1111/j.1360-0443.2010.02903.x.
- SHEARER, J., JOHNSTON, J., KAYE, S., DILLON, P. & COLLINS, L. (2005) Characteristics and dynamics of cocaine supply and demand in Sydney and Melbourne. NDLERF Monograph No. 14. Sydney, National Drug and Alcohol Research Centre, University of NSW.
- SINDICICH, N. & BURNS, L. (2010) Australian Trends in Ecstasy and Related Drugs Markets 2009: Findings from the Ecstasy and Related Drugs Reporting System Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- SINDICICH, N. & BURNS, L. (in press) Australian trends in ecstasy and related drug markets 2011: Findings from the Ecstasy and related Drugs Reporting System (EDRS) Sydney, National Drug and Alcohol Research Centre, UNSW.
- STAFFORD, J. & BURNS, L. (2010) Australian Drug Trends 2009: Findings from the Illicit Drug Reporting System (IDRS). Australian Drug Trends Series No. 37 Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- STAFFORD, J. & BURNS, L. (in press) Australian Drug Trends 2011: Findings from the Illicit Drug Reporting System (IDRS). Sydney, National Drug and Alcohol Research Centre, UNSW.
- TOPP, L. & CHURCHILL, A. (2002) Australia's dynamic methamphetamine market. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- UNITED NATIONS OFFICE ON DRUGS AND CRIME (2011) World Drug Report 2011. Vienna, UNODC.
- WHITE, V. (2001) Australian secondary students' use of over-the-counter and illicit substances in 1999. Canberra, Commonwealth Department of Health and Aged Care.
- WHITE, V. & HAYMAN, J. (2004) Australian secondary students' use of over-the-counter and illicit substances in 2002. Canberra, Drug Strategy Branch, Australian Government Department of Health and Ageing.
- WHITE, V. & HAYMAN, J. (2006) Australian secondary school students' use of over-the-counter and illicit substances in 2005. Canberra, Drug Strategy Branch, Australian Government Department of Health and Ageing.
- WHITE, V. & SMITH, G. (2009) Australian secondary students' use of tobacco, alcohol and over-the-counter and illicit substances in 2008. Canberra, Australian Government Department of Health and Ageing.