A. Roxburgh, C. Breen & L. Degenhardt

NSW DRUG TRENDS 2003

Findings from the Illicit Drug Reporting System (IDRS)

NDARC Technical Report No. 174

NEW SOUTH WALES DRUG TRENDS 2003



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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
ATSI	Aboriginal and Torres Strait Islander
BBV	Blood borne virus
FDS	Family Drug Support
HBV	Hepatitis B virus
HCV	Hepatitis C virus
IDRS	Illicit Drug Reporting System
IDU	Injecting Drug Users
KIS	Key Informants
NCHECR	National Centre for HIV Epidemiology and Clinical Research
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NSP	Needle and Syringe Program
NSW	New South Wales

EXECUTIVE SUMMARY

Demographic characteristics of injecting drug users (IDU)

One hundred and fifty four IDU participated in the 2003 IDRS. Sixty eight percent were male, 86% were unemployed and the average age of respondents was 33 years. Forty seven percent had not completed any further education after school and 6% had completed a university degree. Sixty eight percent had a previous prison history. The average age of first injection was 19.9 years.

Patterns of drug use among IDU

Proportions of IDU reporting cocaine as their drug of choice decreased markedly from 19% in 2002 to 4% in 2003, and a similar pattern was seen in proportions reporting cocaine as the drug they had injected most in the preceding month (17% in 2002 to 2% in 2003). The proportion of IDU reporting heroin as their preferred drug increased from 72% in 2002 to 84% in 2003, representing the highest figure since the commencement of the IDRS. This pattern was also reflected in proportions reporting heroin as the drug injected most in the preceding month (73% in 2002 to 83% in 2003).

The proportion of IDU reporting daily heroin use in the preceding six months decreased from 53% in 2002 to 47% in 2003, which is consistent with increasing numbers reporting current engagement in drug treatment (37% in 2002 to 47% in 2003). There were fewer IDU reporting daily use than prior to the heroin shortage in 2001. Indicator data analysed showed relatively stable rates of; recorded police incidents for heroin possession/use (NSW Bureau of Crime Statistics and Research); ambulance callouts to heroin overdoses and overdose presentations to emergency departments (NSW Department of Health) in the preceding twelve months. Numbers across these data collections remained substantially lower than figures recorded prior to 2001, suggesting that the market has not returned to pre-shortage levels.

Heroin

The median price for a gram of heroin (\$300) and a cap of heroin (\$50) remained stable in 2003. Prices remained higher than those reported in 2000.

Heroin availability appears to have returned to some extent, with the overwhelming majority (91%) of IDU reporting that heroin was 'easy' to 'very easy' to obtain (compared to 88% in 2002). Seventy percent thought that availability had remained stable (54% in 2002). Seven percent reported that heroin was 'difficult' to obtain (compared to 11% in 2002) and 20% (the same as 2002) thought it had become more difficult.

Eighty one percent of IDU thought that heroin was of 'low' to 'medium' purity. NSW police seizure data indicated that the median purity of heroin remains low (approximately 30%) and has not returned to levels reported prior to 2001.

Key informant comments on the price and availability of heroin were consistent with IDU reports.

Methamphetamine

Fifty three percent of IDU had used some form of methamphetamine (speed, base or ice) in the preceding six months, a proportion comparable to 2002 (48%). Thirty one percent reported using speed (representing a slight decrease from 39% in 2002), while there was an increase in proportions using the more potent forms of methamphetamine. Thirty two percent reported using base (23% did so in 2002) and 38% reported using ice (representing a marked increase from 25% in 2002).

A 'point', i.e. 0.1 of a gram, was a popular purchase amount for all three forms of methamphetamine, and the median price remained stable at \$50 for speed, base and ice.

Speed remained readily available with 75% of IDU commenting reporting that it was 'easy' or 'very easy' to obtain, and that availability had remained stable (53%) or had become easier (18%). Base was also 'easy' or 'very easy' to obtain (75%), with availability remaining stable (60%). Availability of ice increased substantially in 2003, with 80% reporting that it was 'easy' to 'very easy' to obtain (compared to 59% in 2002). Only 14% of IDU commenting thought that ice was 'difficult' or 'very difficult' to obtain compared to over half of those commenting (59%) in 2002. Consistent with reports of increased availability, 41% of IDU commenting thought that ice had become easier to obtain.

Key informants predominantly reported on ice, and comments were consistent with those of IDU.

Cocaine

The prevalence and frequency of cocaine use dropped substantially in 2003. Fifty three percent of IDU reported cocaine use in the preceding six months (compared to 79% in 2002) and median number of days use declined from 24 days in 2002 to five days in 2003. Prevalence rates were the lowest reported since 1997, as were the median number of days used.

Thirty percent of IDU reported that cocaine was 'difficult' to 'very difficult' to obtain compared to 23% in 2002, while 64% thought it 'easy' to 'very easy' (74% thought so in 2002). Approximately half of those commenting (54%) thought availability had remained stable while nearly a third (28%) thought it had become more difficult.

Despite changes in availability and use patterns, cocaine prices remained remarkably stable. The median price for a gram of cocaine has been reported as \$200 since 1996, while the price for a cap has remained stable at \$50 since 1998.

Key informant comments were consistent with those of IDU.

Cannabis

The cannabis market has remained relatively unchanged since the commencement of the IDRS, and the majority of IDU (79%) continued to report cannabis use. Frequency of use increased substantially from 81 days in 2002 to 180 days (daily use) in 2003.

The price of cannabis remained stable at \$20 per gram and the overwhelming majority (91%) of IDU reported that it was readily available.

Key informant reports on cannabis were consistent with those of IDU.

Use of illicit pharmaceuticals

More detailed data regarding the purchase, frequency of use and injection of illicit pharmaceuticals was collected in 2003 to provide further clarification regarding the diversion of these medicines. Licit use was defined as being from a prescription in the participant's name.

Illicit Methadone

The proportions reporting use of illicit methadone syrup in the preceding six months remained relatively stable at 18% (compared to 20% in 2002). Approximately half of this group had been engaged in methadone treatment during this period, indicating that methadone was being diverted to IDU engaged in treatment, as well as to those who were not.

Eleven percent of IDU reported injecting illicit methadone syrup in the preceding six months, and just under half (47%) of this group were engaged in methadone treatment during this period.

Eight percent of IDU reported illicit methadone syrup as the form they had used most in the preceding six months, none of whom were engaged in treatment.

Illicit methadone was considered to be readily available with 69% reporting that it was 'easy' to 'very easy' to obtain. A third reported it was 'difficult'. Sixteen percent of IDU reported buying illicit methadone in the past six months, primarily from street dealers and friends.

Smaller proportions of IDU reported using illicit physeptone tablets (5%) in the preceding six months, the majority (70%) of whom were engaged in methadone treatment.

Illicit Buprenorphine

Fewer IDU (5%) reported the use of illicit buprenorphine in the preceding six months, and as with illicit methadone, just under half of this group (43%) had been engaged in buprenorphine treatment during this period. Only three IDU reported injecting illicit buprenorphine in the preceding six months. Three percent of IDU reported illicit buprenorphine as the form they had used most in the preceding six months, none of whom were engaged in treatment.

Morphine

Prevalence of morphine use (23% compared to 22% in 2002) and injection (20% compared to 18% in 2002) in the preceding six months remained relatively stable. Frequency of morphine use also remained stable at a median of five days.

Morphine was predominantly from illicit sources. MS Contin was the most common brand of morphine used, with 100mg tablets reported at a median price of \$20. A small

proportion of IDU (9%) reported buying morphine, predominantly from friends and street dealers.

Morphine was not considered to be readily available, with 50% of those commenting reporting that it was 'difficult' to obtain.

Other opioids

There was a decrease in the prevalence of use (13% compared to 23% in 2002) and injection (2% compared to 6% in 2002) of other opioids such as Panadeine Forte and pethidine in the preceding six months, while frequency of use remained stable (median of five days). Panadeine Forte was the main form used and one third of those reporting other opioid use sourced them illicitly.

Benzodiazepines

Despite a restriction in the availability of benzodiazepine gel capsule preparations (Euhypnos, Nocturne, Normison & Temaze) being introduced on 1 May 2002, IDU continued to use and inject benzodiazepines. Sixty two percent of IDU reported benzodiazepine use (compared to 58% in 2002), and 19%, benzodiazepine injection (the same as in 2002) in the preceding six months. There was a slight increase in median days used (from 13 in 2002 to 18 in 2003), and in the proportion reporting daily benzodiazepine use (from 6% in 2002 to 10% in 2003). Among those reporting daily use, almost half (47%) reported injecting benzodiazepines in the preceding six months. Just under half (40%) of those using benzodiazepines reported sourcing them illicitly, and Valium and Normison were the more popular brands used.

Associated harms

The proportion of IDU sharing needles remained relatively stable, with 6% reporting that they had used a needle after someone else in the preceding month (7% in 2002). The proportion reporting that someone else used a needle after them decreased slightly from 17% in 2002 to 12% in 2003. The proportion reporting shared use of other injecting equipment such as filters and water remained high at 43% (compared to 38% in 2002).

Compared to 2002, there was very little change in location for injection, with just over half (56%) of the sample reporting private home as both their usual injection location and where they last injected. Approximately a third of the sample reported a public place as their usual location (34%) and the last location (33%). Eight percent reported that they usually injected at the medically supervised injecting centre in Kings Cross (12% did so in 2002).

Sixty percent of IDU reported injection related health problems in the past month (compared to 66% in 2002), with 30% reporting multiple problems (from 38% in 2002). Consistent with previous years, prominent scarring/bruising of injection sites (38%) and difficulty injecting (33%) were the most frequent problems reported. Half of the sample reported ever having overdosed. Two percent reported an overdose in the month preceding interview, while figures for overdose within the past twelve months were slightly higher at 12%.

There was little change in the proportion (80%) of IDU who reported spending money on drugs on the day prior to interview or the median amount of money spent (\$100).

Approximately half (46%) of the sample had spent \$100 or more on drugs that day while approximately a quarter (23%) had spent \$200 or more.

Approximately a quarter (26%) of the sample reported seeking help from a mental health professional for a problem other than drug use, representing a slight increase from 19% in 2002. Depression continued to be the most commonly reported mental health problem (16% compared to 13% in 2002).

Proportions reporting involvement in criminal activity in the month preceding interview (55%) remained relatively stable, and the most commonly reported offences were drug dealing (36%) and property crime (31%). Forty nine percent of IDU had been arrested in the previous twelve months representing a slight increase from 41% in 2002. There was little change in IDU perception of police activity, with two thirds reporting that police activity had increased in the preceding six months, and two thirds reporting that this activity had no impact on their ability to obtain drugs

Implications

The findings of the 2003 NSW IDRS indicate that further attention is required in the following areas:

- Research into drug trends and associated harms of methamphetamine use studying a group of primary methamphetamine users.
- Close monitoring of the patterns and prevalence of ice use.
- Development of effective treatment programs for methamphetamine users along with the development of strategies to engage and retain users in these programs.
- More detailed research into the nature of the cocaine market (that supplies IDU) in Sydney.
- Careful consideration by medical practitioners of the clinical need for benzodiazepine gel capsule preparations and the possibility of removing them from the market.
- Increasing focus on the development of educational material regarding the dangers of sharing injecting equipment other than needles, as well as broader dissemination of this material.

1. INTRODUCTION

The Illicit Drug Reporting System (IDRS) is Australia's federally funded national drug monitoring system. The purpose of the IDRS is to provide a standardised, comparable approach to the monitoring of data relating to the use of opiates, cocaine, methamphetamine and cannabis. The IDRS is intended to act as a strategic early warning system, identifying emerging drug problems of national concern. It is not intended to describe phenomenon in detail, but rather, is designed to indicate the need for more detailed data collection by providing sensitive and timely data on emerging trends in illicit drug markets.

One component of the IDRS involves interviews with regular IDU to obtain information on use patterns and drug markets. IDU are recruited as a sentinel group of users that are active in illicit drug markets. The information from the IDU survey is therefore not representative of illicit drug use in the general population, nor is it indicative of all illicit or injecting drug users, but identifies emerging trends that require further monitoring.

The IDRS has operated in NSW since 1996. The data described in this report represent a summary of drug trends detected by the NSW IDRS in 2003. Results are summarised by drug type to provide the reader with an abbreviated picture of illicit drug markets and recent trends. NSW drug trends from previous years can be found in the annual *NSW Drug Trends* reports (Roxburgh et al., 2003, Darke et al., 2002b, Darke et al., 2001, McKetin et al., 2000, McKetin et al., 1999, Hando et al., 1998a, Hando and Darke, 1998, O'Brien et al., 2002c, Darke et al., 2002d, Day et al., 2003, Degenhardt et al., in press, Fry and Bruno, 2002, Griffiths et al., 2000, Hando et al., 1998b, McKetin, 2000, Shand et al., 2003, Topp et al., 2004, Topp et al., 2003a, Topp et al., 2003b, Topp et al., 2002a).

Since 2000, trends in the use of ecstasy and other party drugs have formed a separate, specialised component of the IDRS, and are reported elsewhere.

Study Aims

The specific aims of the 2003 NSW IDRS were:

1. to monitor the price, purity, availability and patterns of use of heroin, methamphetamine, cocaine and cannabis; and

2. to identify emerging trends in NSW illicit drug markets that require further investigation.

2. METHOD

The IDRS analyses three main sources of information to document drug trends:

1. a quantitative survey of injecting drug users (IDU);

2. a semi-structured interview with key informants (KIS), who are professionals working in the illicit drug field, and have regular contact with and/or specialised knowledge of illicit drug users, dealers or manufacture; and

3. a collation of existing indicator data on drug-related issues.

Previous IDRS research has demonstrated that IDU are an appropriate sentinel group for detecting illicit drug trends, due to their high exposure to many types of illicit drugs. IDU also have first hand knowledge of the price, purity and availability of the main illicit drug classes. KIS interviews are used to provide contextual information about drug use patterns and health-related issues, such as treatment presentations. The collation of indicator data provides a precise and reliable measure of drug trends detected by the IDU and KIS surveys.

Data from these three sources are triangulated against each other to determine the convergent validity of trends detected. The data sources complement each other in the nature of the information they provide. Data from the 2003 IDRS were compared with IDRS findings from previous years to determine changes in drug trends over time.

2.1 Survey of injecting drug users (IDU)

In the 2003 NSW IDRS the IDU survey consisted of face-to-face interviews with 154 IDU, conducted in June 2003. Just over half (54%) of the sample was recruited from the inner city of Sydney (Kings Cross, Redfern) and the remainder from Sydney's south-western region (Canterbury, Cabramatta). IDU were recruited from these regions as they capture the two largest open-air illicit drug markets in NSW, namely Kings Cross and Cabramatta. It is in these markets that trends in illicit drug use are likely to first emerge.

IDU were recruited from treatment and support agencies as well as Needle and Syringe Programs (NSP). Potential participants were screened for eligibility; criteria for entry to the study were: (i) at least monthly injection of any drug in the six months preceding the interview; and (ii) residence in Sydney for the preceding twelve months, with no significant periods of incarceration during that time.

The interview schedule included sections on demographics; drug use history; the price, purity and availability of illicit drugs; criminal activity; injection risk-taking behaviour; health; and general drug trends. Participants were interviewed within the agencies that assisted with recruitment where possible, or at coffee shops and fast-food outlets. Interviews took about 30 minutes to conduct, and participants were reimbursed \$30 for their time and expenses. Descriptive analyses of the quantitative data derived from the IDU survey were conducted using SPSS for Windows, Release 11.0 (2001).

2.2 Survey of key informants (KIS)

Fifty KIS who had regular contact with, and/or specialist knowledge of, illicit drug users, dealers or drug manufacture, were interviewed in July and August 2003. To be eligible, participants must have had at least weekly contact with illicit drug users or suppliers, and/or contact with a minimum of ten different illicit drug users or suppliers, in the six months preceding the interview. A broad range of KIS were interviewed in 2003 including: drug treatment workers (n=12); needle and syringe program workers (n=9); drug and alcohol counsellors (n=9); law enforcement officers (n=6); nurses (n=4); doctors (n=3); health education officers (n=2); researchers (n=2); a psychologist, a project manager and a general health worker.

Twenty KIS reported on the use and supply of heroin, 15 on the use, manufacture and supply of methamphetamine, 12 on cannabis use and supply, and three on the use and supply of cocaine. Cocaine key informants were extremely difficult to find this year, with many of the professionals reporting that there was very little cocaine available and therefore, use was down. Fifteen potential cocaine key informants were asked to participate in the 2003 survey, ten of who reported not having contact with cocaine users in the preceding six months, two commented on heroin instead, and three completed the interview on cocaine.

The KIS interview schedule was a semi-structured instrument, based on previous IDRS research, which paralleled the structure of the IDU interview. The interview included sections on drug use patterns; drug price, purity and availability; criminal activity; and health and treatment issues. Interviews took between 30 and 60 minutes to conduct, and were conducted over the telephone. Notes were taken during the interview, and transcribed in full after completion of the interview. Content analysis was then used to extract recurring themes from the data.

2.3 Other indicators

To complement and validate data collected from the IDU and KIS surveys, a range of secondary data sources were examined. These included health, survey, and law enforcement data. The pilot study for the IDRS (Hando et al., 1997) recommended that such data should be available at least annually; include 50 or more cases; be brief; be collected in the main study site (i.e., Sydney for the present study); and cover the four main illicit drugs, i.e., heroin, methamphetamine, cocaine and cannabis.

Data sources that have been included in this report are:

- Alcohol and Drug Information Service Calls received regarding problematic drug use;
- Family Drug Support telephone support service for family members affected by problematic drug use and for users themselves;
- Australian Bureau of Statistics Overdose data;
- Australian Crime Commission purity data from Police seizures
- Health Insurance Commission notifications of Hepatitis C and Hepatitis B
- Medically Supervised Injecting Centre data on drug injected at the Centre
- Needle and Syringe Programs data on last drug injected
- NSW Bureau of Crime Statistics and Research incidents recorded for possession/use

• NSW Department of Health – drug-related visits to emergency departments, NSW ambulance callouts to overdoses, numbers registering for opioid pharmacotherapy treatment, number of heroin treatment episodes by treatment type, number of treatment episodes by drug type and gender, and toxicology data from suspected drug users in which drugs were detected.

3. RESULTS

3.1 Overview of the IDU sample

The demographic characteristics of the 154 IDU interviewed in 2003 are presented in Table 1. The mean age of the sample was 33 (SD 7.9, range 18 to 52), and 68% of the respondents were male. Forty seven percent of the sample was currently in drug treatment; 35% were in methadone maintenance, 9% in buprenorphine treatment and 3% in counselling. Proportions in current treatment represent an increase from 37% in 2002. Two IDU had used naltrexone in the preceding six months, and one of the two had obtained it on the street.

Mean number of school years completed was 9.6 (SD 1.5, range 4 to 12). Forty seven percent of the sample reported having no tertiary qualifications, 47% had completed a trade or technical qualification and 6% had completed a university qualification. The majority (86%) were unemployed, and 68% had a previous prison history.

Characteristic	2002 N=158	2003 N=154		
Age (yrs)	31.4	33		
Sex (% male)	65	68		
Employment (%):				
Not employed	73	86		
Full time	7	3		
Part time/casual	3	8		
Home Duties	1	2		
Student	-	1		
Sex Work	15	17*		
ATSI (%)	28	33		
School education (yrs)	9.6	9.6		
Tertiary education (%):				
None	47	47		
Trade/technical	43	47		
University/college	10	6		
Currently in drug treatment (%)	37	47		
Prison history (%)	58	68		

Source: IDRS IDU interviews

*Questions concerning sex work differed slightly from 2002 to 2003 and differences should be interpreted cautiously.

In terms of ethnicity, 33% of IDU identified as being of Aboriginal and/or Torres Strait Islander (ATSI) descent and 4% of the sample reported Vietnamese as the language they spoke most at home. Smaller numbers of IDU reported other languages such as Arabic and Greek.

KIS reports of demographic characteristics reflected those of the sample; the majority were male, the age range was broad although users were predominantly in their 30s, many users had a prison history, very few completed high school and the majority were unemployed, and those IDU who were in treatment were predominantly on methadone maintenance while smaller proportions were on buprenorphine. While many KIS reported that the majority of IDU they had contact with were from English speaking backgrounds, some reported seeing clients with Asian, Indigenous and European backgrounds.

3.2 Drug use history and current drug use

The mean age of first injection was 19.9 years (SD 5.8, range 8 - 40) (Table 2, page 7). Heroin was the first drug injected by 62% of the sample; 34% reported that they first injected amphetamines; 3% reported cocaine and 1% other opioids.

Heroin was the drug of choice for 84% of respondents; methamphetamine for 6%, cocaine for 4% and benzodiazepines were the drug of choice for 3% of respondents. There has been a continued decrease in the proportion of IDU reporting cocaine as their drug of choice since the peak of the heroin shortage (29% in 2001; 19% in 2002 and 4% in 2003), and a corresponding increase in respondents nominating heroin as their drug of choice (from 61% in 2001 to 72% in 2002 to 84% in 2003). The 2003 figure represents the highest proportion of IDU reporting heroin as their drug of choice since the commencement of the IDRS in NSW in 1996.

Eighty three percent of IDU reported injecting heroin most often in the month preceding interview (representing an increase from 73% in 2002), and there was a significant decrease in the proportion of IDU reporting cocaine as the drug injected most often (from 17% in 2002 to 2% in 2003) (χ^2 =50.2, df=4, p<0.01). There was a slight increase in the proportion of IDU reporting benzodiazepines as the drug injected most often in the preceding month (from 1% in 2002 to 5% in 2003) and this pattern was reflected in proportions reporting benzodiazepines as their drug of choice as well as most recent drug injected (Table 2). There was little change in proportions reporting methamphetamine as the drug they injected most often in the last month (6% in 2002 and 8% in 2003).

While there was little change in the proportion of IDU reporting heroin as the drug most recently injected (74% in 2002 and 77% in 2003), there was a marked decrease in proportions reporting cocaine (16% in 2002 to 4% in 2003). Interestingly, although there was little change in the proportion of respondents reporting methamphetamine as their drug of choice, and as the drug injected most often in the last month, there was a noticeable increase in the proportion reporting methamphetamine as the most recent drug injected (from 5% in 2002 to 13% in 2003).

The 2003 IDRS included questions on 17 drug classes. Consistent with previous years the IDU sample engaged in extensive polydrug use, with respondents reporting that they had used an average of 10 (SD 2.7, range 4-17) drug classes in their lives and 6.6 (SD 2,

range 2-13) in the six months preceding interview. Respondents had injected an average of 4.6 drug classes (SD 2.1, range 1-12) at some time in their lives, and an average of 2.6 (SD 1.4, range 1-8) drug classes in the preceding six months (Table 2).

Variable	2002 N=158	2003 N=154
Age first injection (years)	19.3	19.9
First drug injected (%)		
Heroin	64	62
Amphetamine	30	34
Cocaine	3	3
Other opioids	1	1
Hallucinogens	1	-
Ecstasy	1	-
Drug of choice (%)		
Heroin	72	84
Cocaine	19	4
Methamphetamine	6	6
Cocaine+heroin	1	_
Benzodiazepines	<1	3
Other	1	3
Drug injected most often in last month (%)		
Heroin	73	83
Cocaine	17	2
Methamphetamine	6	8
Cocaine+heroin	1	_
Benzodiazepines	1	5
Other	2	1
Most recent drug injected (%)		
Heroin	74	77
Cocaine	16	4
Methamphetamine	5	13
Cocaine+heroin	1	1
Benzodiazepines	1	3
Other	3	2
Frequency of injecting in last month (%)		
Less than daily	25	32
Once a day	10	11
2-3 times a day	33	34
≥ 3 times a day	32	22
	52	
Polydrug use		
Number of drug classes ever tried	9.8	10
Number of drug classes used in last 6 months	6.7	6.6
Number of drug classes ever injected	4.4	4.6
Number of drug classes injected in last 6 months	2.9	2.6

Table 2: Injection history, drug preferences and polydrug use of IDU

Source: IDRS IDU interviews

Figure 1 shows the most recent drug injected as reported by respondents attending an inner city needle exchange, and the pattern is consistent with IDRS IDU reports. Numbers reporting cocaine as the most recent drug injected steadily decreased in the past twelve months, more than halving from 539 in July 2002 to 213 in June 2003. Numbers reporting heroin as the most recent drug injected remained relatively stable in the past twelve months at over 2,000 per month, although remained lower than figures reported prior to 2001. Numbers reporting methamphetamine remained low and relatively stable for the entire period (1997 to 2003).





Source: Inner city needle exchange

The polydrug use histories of IDU, and routes of administration are presented in Table 3 (page 9). Recent use of the four main drugs monitored by the IDRS remained common: heroin (97%), cannabis (79%), cocaine (53%), and methamphetamine (53%).

Differences between 2002 and 2003 regarding heroin use include a slight decrease in the median number of days heroin use from 180 to 170, as well as the percentage reporting daily heroin use (53% in 2002 to 47% in 2003).

Changes in patterns of cocaine use were more pronounced with a decrease in the proportion of IDU reporting recent cocaine use (79% in 2003 to 53% in 2003), a decrease in the proportion reporting daily use (10% in 2002 to 3% in 2003), and a marked decrease in the median number of days of cocaine use (24 days in 2002 to 5 days in 2003). All these figures represent the lowest reported since 1997.

The median number of days of cannabis use increased markedly (81 days in 2002 to 180 days in 2003) as did the proportion of IDU reporting both recent injection of ice (19% in 2002 to 35% in 2003) and recent ice use overall (25% in 2002 to 38% in 2003).

Noticeable differences in use patterns of other drug types include; an increase in median number of days of methadone use (127 days in 2002 to 140 days in 2003), an increase in median days of buprenorphine use (23 days in 2002 to 60 days in 2003) and a decrease in the proportion of IDU reporting recent use of other opioids (23% in 2002 to 13% in 2003). These changes are most likely indicative of the increase in the proportion of IDU reporting recent.

Table 3: Polydrug use history and routes of administration of the IDU sample

Drug Class	Ever used	Ever Injected	Injected last 6 mths	Days injected last 6 mths	Ever smoked	Smoked last 6 mths	Ever Snorted	Snorted last 6 mths	Ever Swallow	Swallow last 6 mths	Used last 6 mths	Days used last 6 mths
Heroin	70	70	70		⁷ 0	<u> </u>	[%] 0	% 0	% 0	[%] 0	<i>V</i> 0	
Mathadana (nuanihad)	99	99	97	170	60	10	31	3	17	6	97	170
Methadone (prescribed)	69	31	6	2					68	44	44	162
Methadone (not prescribed)	45	34	11	5					31	10	18	6
Physeptone (prescribed)	12	4	<1	2	-	-	-	-	10	1	1	35
Physeptone (not prescribed)	18	10	<1	3	<1	-	<1	-	11	4	5	3
Buprenorphine (prescribed)	30	3	1	11	-	-	-	-	30	23	23	60
Buprenorphine (not prescribed)	8	5	2	2	-	-	-	-	4	3	5	5
Other opiates	29	14	2	1	2	-	-	-	21	12	13	5
Morphine	46	40	20	2.5	2	1	1	-	21	8	23	3
Homebake	19	19	2	30	1	-	1	-	1	-	2	30
Amphetamines (speed powder)	77	75	30	3	5	<1	49	4	31	3	31	3
Methamphetamine (base/point/wax)	49	46	30	2.5	4	2	5	<1	9	4	32	2
Methamphetamine (ice/shabu/crystal)	53	47	35	5	18	10	2	-	3	2	38	5
Amphetamine liquid	30	24	4	1.5					6	-	4	1.5
Pharmaceutical stimulants	14	3	<1	20	<1	-	1	-	14	1	1	10.5
Cocaine	88	85	48	6	18	3	43	10	13	2	53	5
Hallucinogens	54	10	<1	1	<1	-	1	-	54	2	2	2
Ecstasy	53	16	5	1	<1	-	2	-	50	14	16	2
Benzodiazepines	84	35	19	20	3	<1	1	_	81	58	62	18
Alcohol	98	3	-	-							68	20
Cannabis	97										79	180
Anti-depressants	31	<1	-	-					31	17	17	135
Inhalants	13										3	1
Tobacco	99										97	180

4. HEROIN

Ninety seven percent of IDU commented on the price, purity and availability of heroin, and the following percentages refer to this proportion of IDU. Seventeen KIS commented on the availability and use of heroin, with fewer commenting on price and purity.

4.1 Price

Prices paid for heroin by IDU on the last occasion of purchase are presented in Table 4. The median price reported for a gram of heroin remains unchanged from 2002 at \$300 per gram. This price remains substantially higher than prices reported in 2000 (\$220), prior to the heroin shortage in 2001 (Figure 2, page 11). There was no difference between the median reported price for a gram of heroin in the inner city or south-western Sydney. Prices for all other amounts bought remained stable since 2002.

Caps of heroin remained the most popular purchase amount while numbers purchasing grams of heroin decreased from 38 in 2002 to 21 in 2003. Numbers purchasing half and quarter grams of heroin remained relatively stable since 2002, and ten IDU reported buying heroin in points.

The 2003 IDRS asked respondents who had bought caps to estimate what amount of heroin constituted a cap. Of the 102 IDU who had purchased caps in the preceding six months, only 23 were able to respond. Nearly half (11) of this group reported that there was approximately one point in a cap of heroin, three IDU reported two points, and two reported half a gram. The remainder of reports ranged from less than one point to .9 of a gram.

Consistent with purchase prices, 71% of IDU commenting on heroin reported that the price had remained stable in the preceding six months, representing an increase from 52% who thought so in 2002. Twenty two percent thought the price had increased (31% in 2002), 4% thought it fluctuated, and only 3% thought the price had decreased (8% reported a decrease in 2002).

Amount	Median price* \$	Number of purchasers*
Gram	300 (300)	21 (38)
Сар	50 (50)	102 (119)
Half gram	150 (150)	57 (60)
Quarter gram	70 (70)	57 (54)

Table 4: Price of most recent heroin purchases by IDU, 2002-2003

Source: IDRS IDU interviews

* 2002 data is presented in brackets



Figure 2: Median price of a gram and cap of heroin estimated from IDU purchases, 1996 - 2003

Source: IDRS IDU interviews

KIS comments on the price of heroin ranged from \$200 to \$400 a gram, and there was general agreement that caps cost \$50. Consistent with IDU reports, most KIS thought the price had remained stable.

4.2 Availability

Ninety one percent of IDU commenting on heroin reported that it was 'easy' (37%) to 'very easy' (54%) to obtain, compared with 88% in 2002 (33% 'easy' and 56% 'very easy'). Seven percent thought it 'difficult' (compared to 11% in 2002) and 2%, 'very difficult' to obtain. None of the IDU in 2002 thought heroin was 'very difficult' to obtain. (Figure 3).



Figure 3: IDU reports of ease of availability of heroin in the past six months, 1996 - 2003

The majority of IDU (70%) that commented thought that heroin availability had remained stable (54% in 2002) in the preceding six months, while 20% thought it had become 'more difficult' (the same as for 2002). Only 8% reported that heroin had become 'easier' to obtain (compared with 23% in 2002) and 1% thought availability 'fluctuated.' (Figure 4, page 12).

Consistent with IDU comments, KIS reported that heroin was 'easy' to 'very easy' to obtain, and there were more reports of stable availability. KIS opinions on availability were divided, with some reporting that heroin was easier to obtain and others reporting that it was more difficult.



Figure 4: IDU reports of change in availability of heroin in the past six months, 1996-2003

Source: IDRS IDU interviews

Methods of purchase were similar to the 2002 IDRS. IDU who reported purchasing heroin bought it predominantly by contacting dealers on mobile phones (45%), from street dealers (31%), home delivery (12%) and the dealer's home (9%). The median time that IDU reported it usually took them to score heroin was 15 minutes, and the time taken last time they scored was 10 minutes.

Consistent with IDU purchase patterns, several KIS, including law enforcement officers, commented on a continuing trend away from the more visible methods of selling heroin (i.e. street dealers) to increasing contact via mobile phone.

4.3 Purity

Figure 5 (page 13) shows that the median purity of NSW Police heroin seizures analysed remained relatively stable over the past eighteen months, although it remained much lower (at approximately 30%) than levels reported in early 2001. With the exception of the last half of 2000 (when purity dropped to below 60%), the purity of Australian Federal Police (AFP) heroin seizures that were analysed remained relatively stable between 1999 and 2003 at approximately 70%. This is consistent with AFP seizures being larger seizures that are detected at the border, at a higher level of distribution than state police seizures, prior to the heroin being 'cut' for street level distribution. Purity of AFP seizures for the past twelve months however, should be interpreted with caution as it is based on small numbers of seizures (refer Figure 6, page 13).



Source: Division of Analytical Laboratories & Australian Crime Commission

Figure 6 shows the number of heroin seizures upon which the above purity figures are based. In the past twelve months, NSW Police have analysed approximately 40 seizures per quarter. The number of seizures analysed by the AFP per quarter remained low, with the exception of the first quarter of 2003, when 41 seizures were analysed.



Figure 6: Number of heroin seizures analysed in NSW, by quarter, 1999 – 2003

Source: Division of Analytical Laboratories & Australian Crime Commission * NSW Police data for numbers of seizures for 2001/02 was not available.

The majority (81%) of IDU commenting thought that heroin purity was 'low' (37%) to 'medium' (44%), 7% reported purity was 'high,' and 9% thought it fluctuated (comparable figures in 2002 were 46% 'low', 38% 'medium', and 10% 'high'). Thirty four percent of IDU commenting reported that purity remained stable (21% thought so in 2002), 28% thought it had decreased (34% in 2002), 22%

thought it fluctuated (12% thought in 2002), and only 15% thought heroin purity had increased in the preceding six months (29% thought so in 2002). IDU comments were consistent with NSW Police seizure data, and it is more likely that these seizures rather than AFP seizures, are reaching this group of street level users.

Consistent with IDU reports, many KIS thought heroin was of low to medium purity. Only one KIS reported heroin purity as high, while four thought purity fluctuated.

Approximately half of the KIS commenting thought purity had remained stable in the preceding six months while equal numbers (three) thought it had increased or fluctuated. Two KIS thought purity had decreased. These comments were generally consistent with IDU comments about heroin purity.

4.4 Use

4.4.1 Heroin use among IDU

Ninety seven percent of the sample had used heroin in the preceding six months. In 2003 larger proportions reported heroin as; their drug of choice (84% compared to 72% in 2002), the drug injected most often in the month preceding interview (82% compared to 73% in 2002); and the last drug injected (77% compared to 74% in 2002).

The overwhelming majority of KIS reported that both prevalence and frequency of heroin use had remained stable in the preceding six months. The majority of KIS believed that IDU were using heroin between one and three times per day. There were no reports of a change in the quantity of heroin being used.

4.5 Current patterns of heroin use

The median number of days of heroin use in the six months preceding interview decreased slightly from 180 days (i.e. daily use) in 2002 to 170 days in 2003. The proportion of IDU reporting daily heroin use during this period also decreased slightly from 53% in 2002 to 47% in 2003. Consistent with this, a slightly lower proportion (67%) of IDU reported heroin use on the day prior to interview compared with 2002 (70% - Figure 7).

Figure 7: Proportion of IDU reporting daily heroin use in preceding six months, and heroin use on the day preceding interview, 1996-2003



Source: IDRS IDU interviews

Fifty one percent of IDU who reported heroin as their drug of choice had used cocaine in the preceding six months (compared with 72% in 2002), 2% had used cocaine on a daily basis (4% reported daily cocaine use in 2002) and the median number of days cocaine was used by primary heroin users was one (this figure was seven in 2002).

Ninety percent of IDU reported using heroin powder and 93% reported using heroin rock in the six months preceding interview. Over half of the sample (56%) stated that heroin rock was the form they had used most often during this period.

Contrary to IDU reports regarding the form of heroin being used, more KIS reported the use of powder than rock. However, it should be noted that nearly half of the KIS sampled were uncertain of the heroin form used. In addition there may be discrepancies in what users and KIS classify as rock and powder.

KIS reports were in agreement with IDU regarding route of administration of heroin. The vast majority reported that the main route of administration for heroin was injection while several made reference to approximately 10-20% of users smoking heroin (this is consistent with 10% of IDU reporting that they smoked heroin in the preceding six months, Table 3 page 9).

4.6 Heroin related harms

4.6.1 Law enforcement

Figure 8 shows the number of police incidents recorded for heroin possession/use in the inner Sydney area, the Fairfield/Liverpool area and the remainder of NSW from January 1997. It is evident that the numbers of incidents declined throughout 2001 and have subsequently remained lower than levels prior to the heroin shortage. Throughout much of this period, incidents recorded in the Fairfield/Liverpool area are higher than in the inner Sydney area, and are often equivalent to figures from the rest of the state.





Source: NSW Bureau of Crime Statistics and Research

4.6.2 Health

Figure 9 shows the number of calls to the Alcohol and Drug Information Service (ADIS) and to the Family Drug Support (FDS) line regarding heroin. The number of enquiries to FDS regarding heroin were much lower than numbers received at ADIS, possibly due to the difference in the nature of the services. FDS is a family support line and callers are often younger than callers utilising the ADIS service. The number of calls to ADIS regarding heroin remained relatively stable in the last twelve months although they remained lower than numbers received throughout 2001. During 2001, calls almost halved from 517 in January 2001 to 255 in March 2001. Calls to FDS regarding heroin remained relatively stable in the last two years with the exception of a sharp increase in the month of April 2003. As with ADIS, calls to FDS started to decrease in March 2001, and have remained lower since this time.





Source: Alcohol and Drug Information Service and Family Drug Support N.B. Family Drug Support data was only available from April 2000

Overdose

Figure 10 (page 17) shows Australian Bureau of Statistics (ABS) data on accidental opioid deaths among those aged 15-54 in Australia and NSW for the period 1988-2002. Deaths in NSW remained relatively stable between 2001 and 2002, and accounted for just under half (43%) of the national total in 2002. Males accounted for the majority (82%) of the 2002 deaths in NSW. The number of deaths remained lower than those recorded during the period 1996 to 2001, in which they peaked at 481 in 1999.

Figure 10: Number of accidental deaths due to opioids among those aged 15-54 years in NSW and Australia, 1988 - 2002



Source: Australian Bureau of Statistics mortality database

NSW ambulance callouts to overdoses also remained relatively stable at approximately 100 to 200 calls per month, in the past twelve months (Figure 11). The number of calls decreased dramatically in late 2000, and have not since returned to levels recorded during the period 1998 to 2000, during which they peaked at 545 in January 1999.



Figure 11: Number of ambulance callouts to overdoses 1996-2003

Source: Ambulance Service of NSW case sheet database

A similar pattern was evident in the number of deaths of suspected drug users (as determined by police or pathologists) in which morphine was detected, with figures remaining relatively stable in the past twelve months (Figure 12, page 18). Morphine related deaths made up approximately 50% of the total number of deaths in which drugs were detected during this period. As with other indicators, morphine related deaths more than halved from the December 2000 quarter (88 deaths) to the March 2001 quarter (37 deaths). Although they started to increase again in the first quarter of 2002, they remained much lower than numbers recorded in earlier years.

Figure 12: Number of suspected drug related deaths in which morphine was detected post mortem and total number of drug related deaths, 1995-2003



Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories

There were slight fluctuations in the number of heroin-related visits to NSW emergency departments in the past twelve months but for the most part, numbers remained stable (Figure 13). A downward trend in numbers was evident from the beginning of 2001, and figures have since remained lower than those reported previously.





Source: Emergency Department Information System, NSW Department of Health

IDU data (in particular, those reporting overdose in the past twelve months) reflect indicator trends. Figure 14 shows the proportion of heroin users who reported ever overdosing, the proportion reporting overdose in the past year, and in the past month. The proportion reporting overdose in their lifetime has remained relatively stable at approximately 50%, while the proportion reporting overdose in the proportion reporting a recent overdose (within the last month) has also decreased from 6% in 1999 to 2% in 2000, and has remained stable at 2% for the last four years.





Treatment

Figure 15 (page 20) shows the number of closed treatment episodes where the principal drug of concern was opioids, by treatment type. Numbers attending for assessment only between July 2002 and June 2003 have remained relatively stable, although somewhat lower than numbers recorded throughout 2000. Numbers recorded for residential rehabilitation have also remained relatively stable in the previous twelve months, ranging between 61 and 105 per month. Numbers entering withdrawal management were slightly higher in the last twelve months than during 2001 however, they remained lower (between 150 and 264 per month) than numbers recorded throughout 2000 (between 338 to 450 per month). Numbers attending counselling in the past twelve months have fluctuated between 131 and 218 per month.

N.B. Data for overdose in the last month was not collected in 1996



Figure 15: Number of heroin treatment episodes by treatment type, NSW 2000-2003

Source: National Minimum Data Set (NMDS) for Alcohol and Other Drug Treatment Services, NSW Department of Health.

N.B.The NMDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period.

Figure 16 shows that although there were fluctuations in the number of re-registrations for opioid pharmacotherapy during the period 1997 to 2003, numbers have been increasing over the last two years. Numbers for new registrations have remained relatively stable for the past two years.



Figure 16: Number of registrations for opioid pharmacotherapy, NSW 1997-2003

Source: Pharmaceutical Services Branch, NSW Department of Health

Methadone treatment

Unlike previous years, the 2003 IDRS distinguished between the use of prescribed (where the prescription was in the participant's name) and non-prescribed (i.e. the prescription was in someone else's name) methadone and physeptone. This section will discuss the use of prescribed methadone and physeptone only. The use of illicit (or non-prescribed) methadone and physeptone will be discussed under 'Opioids'.

Forty four percent of IDU had used methadone that had been prescribed for them in the preceding six months (43% reported any use of methadone during this period in 2002), a quarter of whom also reported illicit methadone use. Six percent of IDU reported injecting prescribed methadone. One

percent of IDU reported using prescribed physeptone tablets, and only one IDU reported injecting prescribed physeptone. Thirty five percent of IDU stated they were currently participating in a methadone maintenance program (28% were in current methadone treatment in 2002), and 43% reported receiving methadone treatment in the preceding six months (compared to 34% in 2002). Methadone syrup was the predominant form used.

Among those who used prescribed methadone, the median number of days of use in the preceding six months was 162 days compared with 127 days in 2002. Median number of days of prescribed physeptone use was 35 days. Forty three percent of methadone users reported daily use compared with 40% in 2002. Twenty three percent of the IDU sample reported methadone use on the day prior to interview compared with 18% in 2002.

Overall, IDU reports indicated an increase in both the prevalence and the frequency of methadone use, consistent with increased numbers reporting engagement in a methadone treatment program.

Buprenorphine treatment

The 2003 IDRS also distinguished between the use of prescribed and non-prescribed buprenorphine. Use of illicit (or non-prescribed) buprenorphine will be discussed under 'Opioids.' Thirty percent of IDU reported ever having used buprenorphine (compared with 17% in 2002), and 23% reporting using it in the preceding six months (this figure was 13% in 2002). Nine percent stated they were currently participating in buprenorphine treatment and 21% (compared with 10% in 2002) reported receiving buprenorphine treatment in the preceding six months. Among those who used buprenorphine, the median number of days of use was 60 (compared to 23 in 2002). Only three IDU reported daily use (compared with one in 2002). IDU data indicated that there has been a slight increase in the prevalence of participation in buprenorphine treatment, while frequency of buprenorphine use has increased more substantially.

KIS comments were consistent with IDU data, with reports of an increase in client enquiries regarding buprenorphine treatment.

4.7 Trends in heroin use

As in previous years of the IDRS, when IDU commented on general trends in heroin use, the main trend reported was that younger people were using heroin. In contrast to previous years however, more IDU reported that prevalence of heroin use had declined, and that more people were entering treatment. Despite this decline, IDU reported that the frequency of heroin use among those still using heroin had increased.

KIS also reported that younger people were using heroin. In contrast to IDU data however, which showed a slight decrease in frequency of heroin use, the majority of KIS reported that frequency had remained stable. Nevertheless, there were a few KIS reports of slightly decreasing trends.
4.8 Summary of heroin trends

- The price of a gram of heroin remained stable in 2003, however, it remained substantially higher than prices reported prior to the heroin 'shortage' in 2001.
- Heroin availability remained relatively stable, but has not yet returned to levels prior to 2001.
- The purity of AFP heroin seizures remained relatively stable over the past twelve months at approximately 70%. The purity of NSW Police seizures also remained stable, although at a lower level (approximately 30%).
- The majority of IDU thought heroin was of low to medium purity. A third thought purity had remained stable and a third thought it had decreased.
- Frequency of heroin use has decreased slightly since 2002, and KIS reports indicated there has been no change in the quantity of heroin being used.
- Indicator data were relatively stable for the past twelve months, although numbers across data collections remained substantially lower than figures recorded prior to 2001.

5. METHAMPHETAMINE

In response to the increasing diversification of the methamphetamine markets in Australia identified by the 2001 IDRS (Topp et al., 2002b), data is now collected for three different forms of methamphetamine; methamphetamine powder ('speed'); methamphetamine base ('base'), and crystal methamphetamine ('ice'). Speed is typically fine-grained powder, ranging in colour from white through to beige or pink due to differences in the chemicals used to produce it. Base is the paste methamphetamine that is 'moist', 'oily' or 'waxy' and is often brownish in colour. It can be difficult to dissolve for injection due to its oily consistency. Ice comes in crystalline form, in either translucent or white (sometimes with a pink, green or blue hue) crystals that vary in size. In an attempt to further clarify the characteristics of the different forms, photographs were presented to participants for identification. The results of these data are discussed below in the section "flashcard analysis".

Thirty six percent of IDU commented on the price purity and availability of speed, 31% commented on base, and 38% commented on ice. The following percentages refer to these proportions of IDU commenting on methamphetamine.

Three KIS commented on speed and 12 commented on ice. A few KIS made mention of base but most stated they had heard very little about base use recently.

5.1 Price

Prices paid for speed, base and ice by IDU on the last occasion of purchase are presented in Table 5, page 24. The median price of a gram of speed was \$50, representing a substantial drop from \$100 in 2002. This price appears somewhat lower than would be expected given the median prices reported for a half-gram and a point of speed (Table 5), and it should be noted that only four IDU reported paying \$50 for a gram.

Consistent with 2002, the most common amount of speed purchased was a half-gram (median price \$50, the same as in 2002). Points were also a common purchase amount (median price \$50, the same as 2002), while fewer IDU purchased grams and eightballs (the median price for an eightball was \$200, the same as 2002) of speed.

IDU were asked to estimate approximately how much speed constituted an eightball, and of the seven IDU who had bought eightballs in the preceding six months, three were able to answer. All three participants reported that an eightball was equivalent to 3.5 grams (or an eighth of an ounce).

With the exception of a gram of speed, prices have remained stable in 2003, and 71% of IDU commenting reported such stability in the preceding six months (61% reported stable prices in 2002). Nine percent who commented thought that prices had decreased (the same as 2002) and only 4% reported an increase (compared to 19% in 2002).

The median price for a gram of base was \$200 and a point was \$50, the same as prices reported in 2002. A half-gram was reportedly \$150, which represents a substantial increase from \$75 in 2002. This price however, is based on only two IDU reports and therefore should be interpreted with caution.

Twenty three IDU reported buying base in points in the preceding six months, making it the most popular purchase amount (13 IDU reported buying points in 2002). Fewer IDU reported buying grams, eightballs and half grams of base (Table 5, page 24).

With the exception of reports on half grams of base (which were based on small numbers) the price has remained stable, and 65% of IDU commenting reported such stability in the preceding six months. Twenty three percent who commented reported that they didn't know whether the price had changed, and equal proportions (4%) reported that it had increased, decreased and fluctuated.

Amount	Median price* \$	Number of purchasers*
Speed Gram	50 (100)	8 (15)
Half gram	50 (50)	13 (18)
"Eightballs" (3.5 gms)	200 (200)	7 (12)
Point (0.1 gram)	50 (50)	11 (0)
Base Gram	200 (200)	5 (9)
Half gram	150 (75)	2 (6)
Point	50 (50)	23 (13)
Ice Gram	250 (300)	7 (4)
Half Gram	150 (150)	6 (6)
Point (0.1 gram)	50 (50)	32 (13)

Table 5: Price of most recent methamphetamine purchases by IDU, 2003

Source: IDRS IDU interviews

* 2002 data is presented in brackets

There were insufficient KIS reports regarding the price for speed and base however, KIS reports of the price for a point of ice ranged from \$40 to \$60. Consistent with IDU data, several KIS reported \$50 as the average price for a point of ice.

The most commonly purchased amount of ice was a point (32 participants bought points) and the median price reported was \$50, as in 2002. Fewer IDU reported buying grams and half grams of ice. The median price for a gram was \$250, representing a decrease from \$300, while a half-gram was \$150 (as in 2002). Fifty three percent of IDU commenting thought the price of ice had remained stable (67% thought so in 2002) in the preceding six months, 29% didn't know, 10% thought it had increased and 7% thought it had decreased.

5.2 Availability

Among the IDU who commented on the availability of speed, 75% thought it 'easy' (40%) to 'very easy' (35%) to obtain (37% reported 'easy' and 33% 'very easy' in 2002). Thirteen percent commenting thought it was 'difficult' and 6%, 'very difficult' (Figure 17). Fifty three precent of IDU commenting on speed thought availability had remained stable (61% thought so in 2002) in the preceding six months while 18% thought it had become 'easier' to obtain. Eleven percent thought it had become 'more difficult' and 7% thought that availability 'fluctuated'.





Seventy five percent of IDU commenting on base reported that is was 'easy' (42% - the same as 2002) to 'very easy' (33% - compared to 26% in 2002) to obtain. Nineteen percent thought it 'difficult' (23% thought so in 2002) and 2% thought it 'very difficult' to obtain (Figure 17). Sixty percent of IDU commenting thought that base availability had remained stable in the preceding six months, while equal proportions (15%) thought it had either become 'easier' or 'more difficult' to obtain.

The majority (80%) of IDU commenting on ice reported that it was 'easy' (35%) to 'very easy' (45%) to obtain. Nine percent thought it 'difficult' and only 5%, 'very difficult' to obtain (Figure 17). These figures are in stark contrast to reports from the 2002 IDRS, in which the majority reported that it was 'difficult' (37%) to 'very difficult' (22%) to obtain (Figure 18, page 26). Consistent with these reports, nearly half (41%) of those commenting stated that ice had become 'easier' to obtain in the preceding six

months, and 38% thought availability had remained 'stable'. Only 7% thought it had become 'more difficult' (compared to 22% in 2002).

KIS also reported that ice was 'easy' to 'very easy' to obtain, with many commenting that the availability of ice had recently increased.



Figure 18: IDU reports of ease of availability of ice in the past six months, 2002–2003

IDU predominantly bought speed by contacting dealers on mobile phones (27%), from street dealers (22%), friends (16%) and dealer's homes (10%). Purchasing patterns were similar to those reported in 2002, with the exception of an increase in proportions purchasing from street dealers. Only 11% of IDU reported buying speed from street dealers in the 2002 IDRS. The median time that IDU reported it usually took them to score speed was 20 minutes, and time taken the last time they scored was 15 minutes. There was little change in times taken to score speed from the 2002 IDRS.

IDU predominantly bought base from street dealers (25%), contacting mobile dealers (21%), dealer's home (17%) and receiving it as a gift from friends (15%). Purchasing patterns in 2002 were spread evenly across friends, dealer's home and street dealers. The median time that IDU reported it usually took them to score base was half an hour, and time taken the last time they scored was 15 minutes. Time taken to score usually in 2002 was 20 minutes, and the last time, 25 minutes.

IDU predominantly bought ice from street dealers (40%), contacting mobile dealers (21%) and receiving it as a gift from friends (12%). Street dealers, dealer's home and buying from friends were predominant purchase methods in 2002, with smaller proportions (15%) contacting mobile dealers. The median time that IDU reported it usually took them to score ice was 15 minutes, and time taken on the last occasion was 10 minutes. Both usual scoring time and time for last scoring occasion were 15 minutes in 2002.

5.3 Purity

Figure 19 (page 27) shows the median purity of methamphetamine seizures analysed in NSW for the period 1999 to 2003. The median purity of AFP seizures was relatively high (ranging between 50 and 80%) in the past twelve months however, these figures should be interpreted with caution as they are based on small numbers of seizures analysed (Figure 20, page 27). In contrast, NSW Police seizures that were analysed were lower in purity (at approximately 6%), with an increase (to 19%) recorded in the second quarter of 2003.



Figure 19: Purity of methamphetamine seizures analysed in NSW, by quarter, 1999 – 2003

Source: Division of Analytical Laboratories & Australian Crime Commission * NSW Police data for 2001/02 was not available.

Figure 20 shows the number of methamphetamine seizures upon which the above purity figures are based. Numbers of AFP seizures analysed have remained below 20 per quarter for the past eighteen months. The number of NSW Police seizures analysed has remained higher, above 100 seizures per quarter, for the past twelve months.



Figure 20: Number of methamphetamine seizures analysed in NSW, by quarter, 1999 – 2003

Source: Division of Analytical Laboratories & Australian Crime Commission * NSW Police data for 2001/02 was not available.

Over half (53%) of the IDU commenting on speed thought that purity was 'low' (26%) to 'medium' (27%). Twenty two percent thought purity was 'high,' while 16% thought it fluctuated. In 2002, the majority (76%) of IDU thought that speed was 'medium' (43%) to high' (33%) in purity. Thirty six percent reported that purity had remained stable in the preceding six months, while 16% thought it had fluctuated, 15% thought it had increased and 12% thought speed purity had decreased.

The majority (68%) of IDU commenting on base thought it was of 'medium' (35%) to 'high' (33%) purity, while 17% thought purity was 'low'. A larger proportion (50%) of IDU commenting on base in 2002 reported that purity was 'high'. Forty percent reported that purity had remained stable in the preceding six months, while 17% thought it had decreased and 13%, increased. Eight percent thought base purity had fluctuated.

The majority (78%) of IDU commenting on ice thought it was 'medium' (26%) to 'high' (52%) in purity, while only 3% thought it was 'low'. These figures were similar to those reported in 2002. Five percent thought purity fluctuated. Thirty one percent thought ice purity had remained stable in the preceding six months while 15% thought it had decreased and 12%, increased. Ten percent thought purity had fluctuated.

Figure 21 shows the proportion of IDU reporting the purity of each form of methamphetamine as 'high'. Greater proportions of IDU reported ice and base as being 'high' in purity than speed.



Figure 21: Proportion of IDU reporting speed, base and ice purity as 'high' 1996-2003

Source: IDRS IDU interviews

N.B. Data on base purity was not collected until 2002, while ice purity commenced in 2001.

Nearly all of the KIS reported ice purity as being high, however, few were able to comment on whether purity had changed in the preceding six months.

5.4 Use

5.4.1 Methamphetamine use among IDU

Fifty three percent of IDU had used some form of methamphetamine (speed, base, or ice) in the six months preceding interview, a slight increase compared to the proportion reported in the 2002 IDRS (48%). Separating out the forms, 31% reported using speed (39% reported speed use in 2002), 32% reported using base (23% in 2002) and 38% reported using ice (25% in 2002) during this period. Figure 22 (page 29) shows that the prevalence of speed use has continued to decrease over the last 3

years, while use of the more potent forms of methamphetamine has increased. It should be noted that data collection on the use of base was not commenced until 2001.

Smaller percentages (4%) reported using amphetamine liquid in the preceding six months and the median number of days used and days injected was 1.5. Only 1% of IDU reported using pharmaceutical stimulants.





5.4.2 Current patterns of methamphetamine use

The median number of days of speed use in the preceding six months was three, for base it was two and for ice, five days. There were no reports of daily speed or base use. Three IDU reported using speed on more than 60 days in the preceding six months while the majority (80%) reported speed use on 10 days or less. The same pattern was found among the base users. Three IDU reported using ice on a daily basis for the preceding six months, and seven IDU reported using ice on every third day or more (i.e. on 60 days or more). More than half the sample (58%) however, reported using ice on six days or less during this period.

Although there was general agreement among KIS that there had been an increase in the prevalence of ice use, there were mixed reports with regard to whether the frequency and quantity of use had changed. Some reported an increase, while others reported a decrease. This may reflect the sporadic use patterns reported by IDU.

Consistent with the increased use and availability of ice, there was also an increase in the proportion of IDU reporting ice as the form of methamphetamine they had used most often in the six months preceding interview (25% compared to 11% in 2002), with fewer reporting speed (15% compared to 25% in 2002), and base (8% compared to 12% in 2002).

KIS comments also reflected those of IDU with the majority reporting ice as the form most used among IDU.

5.5 Methamphetamine related harms

5.5.1 Law enforcement

Figure 23 shows that the number of police incidents recorded per month for amphetamine possession/use is higher in the inner Sydney area than it is in Fairfield/Liverpool. Incidents for the inner Sydney area fluctuated from 12 to 23 in the last twelve months, with the June figure remaining higher at 23. Several sharp increases were evident in the number of incidents recorded in the inner city; the highest occurred in the early half of 2001, and smaller increases occurred in January 2002 and June 2002. The number of incidents recorded for the Liverpool/Fairfield area has remained relatively stable in the past two years.





Source: NSW Bureau of Crime Statistics and Research

The number of clandestine laboratories detected in NSW has steadily increased over time from 20 in the 1998/99 financial year to 51 in 2002/03 (Figure 24). Consistent with previous years, the main method of production continued to be pseudoephedrine-based using the hypophosphorous method, and the production capacity was of a medium to large scale in over half of the laboratories detected. Seven of the 51 laboratories were producing MDMA, or ecstasy.





Source: NSW Police Service

Law enforcement KIS also reported an increasing number of clandestine methamphetamine laboratories being discovered in and around the Sydney metropolitan area. While this may reflect an increase in the number of laboratories in operation, it may also be attributable to enhanced intelligence and investigation methods. Law enforcement KIS comments supported the latter, with claims that greater collaboration with other industries (such as pharmaceutical companies, real estate, and hardware), as well as other states had contributed to the detection of an increasing number of laboratories.

5.5.2 Health

Figure 25 shows the number of calls to the ADIS and FDS lines regarding amphetamines. Similar to heroin, the number of enquiries to FDS regarding amphetamines was much lower than numbers received at ADIS during the period 2000 to 2003. Figures for both ADIS and FDS have fluctuated in the past twelve months however, a steady increase was evident in the number of calls received by ADIS regarding amphetamines during this period. Calls to both services regarding amphetamines increased in early 2001, simultaneous to the decrease in number of calls received regarding heroin.



Figure 25: Number of inquiries to ADIS and FDS regarding amphetamines, 1996 - 2003

Source: Alcohol and Drug Information Service and Family Drug Support N.B. Family Drug Support data was only available from April 2000

The majority of KIS reported there were health issues related to methamphetamine use, and in particular, some raised concerns about increasing psychosis among methamphetamine users, and accompanying agitation and aggression.

The total number of amphetamine overdose presentations to NSW emergency departments steadily increased in the past twelve months from 16 in July 2002 to 45 in January 2003 (Figure 26, page 32). Numbers have since dropped to 28 in April 2003. The number of amphetamine overdose presentations in the Kings Cross area have remained low and relatively stable in the past twelve months. Figures for the Redfern and Cabramatta area remained low and stable between 1997 and 2003.





Source: Emergency Department Information System, NSW Department of Health

The number of suspected drug related deaths in which methamphetamine was detected (Figure 27) appear to have increased in the past few years, relative to previous rates reported.

Figure 27: Number of suspected drug related deaths in which methamphetamine was detected post mortem, 1995-2003



Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories N.B. These numbers relate to deaths in which methamphetamine was detected, however there may have also been other drugs present. The number of closed treatment episodes for amphetamines has remained relatively stable over the past twelve months. Prior to this, there was a steady increase from 178 in December 2000 to 300 in May 2001, coinciding with the peak of the heroin shortage, and figures remained relatively stable at a higher rate between 2001 and 2002.





Source: NMDS-AODTS, NSW Department of Health. N.B.The NMDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period.

5.6 Flashcard Analysis

A flashcard, that was first used in the 2002 IDRS, containing photographs of the three different forms of methamphetamine (speed, base and ice) was shown to IDU who were asked to identify which picture most resembled the form/s they had used in the preceding six months. The photographs were grouped into three categories; Category A photographs were thought to represent speed, Category B represented base and Category C represented ice.

5.6.1 Speed

Of the participants who had used speed in the preceding six months, the majority (70%) identified pictures from the A class photographs (Table 6, page 34), with 52% of this group identifying A1 (refer to picture on page 34). Smaller percentages identified photographs from Category B (8%) and Category C (6%).

When asked about which form of methamphetamine they had primarily used in the preceding six months, participants were again asked to identify which picture most resembled that form.

Among participants who had primarily used speed (n=23), the majority (70%) also identified pictures from the A class photographs (48% of who identified A1). Equal percentages (8%) of this group identified photographs from Category B and Category C (Table 6, page 34).

5.6.2 Base

Approximately half (52%) of the participants who had used base in the preceding six months identified pictures from the B class photographs, 16% identified photographs from Category C and 8% identified photographs from Category A (Table 6, page 34). Photograph B3 (refer to picture on page 34) was the most commonly identified picture. Three IDU were unable to identify which photograph most resembled the base they had used during this period.

Among participants who had primarily used base (n=14), 35% identified pictures from the C class photographs, 14% identified Category B photographs and 1 IDU identified a photograph from Category A. Fourteen percent of this group were unable to identify a photograph from the flashcard that looked most like the base they had used.

	-	1		0 0	/	0
	Speed		Base		Ice	
Category	Any*	Primary form	Any*	Primary form	Any*	Primary form used*
identified	N = 48	used*	N = 49	used*	N = 59	N=39
		N=23		N=19		
% A	70	70	8	<1	-	-
% B	8	8	52	14	<1	<1
% C	6	8	16	35	93	93

Table 6: Reports from speed, base and ice users regarding the form of these drugs

Source: IDRS IDU interviews

*Note that percentages do not add to 100 due to missing data or respondents not being able to identify a photograph.

5.6.3 Ice

Of the participants who had used ice in the preceding six months, the overwhelming majority (93%) identified pictures from the C class photographs, 70% of who identified C2 (see picture below). None of this group identified photographs from Category A and only 1 IDU identified a photograph from Category B (Table 6). One IDU was unable to identify a photograph that most resembled the ice they had used.

The figures among participants who had primarily used ice (n=39) look almost identical to those in the group above (Table 6). The vast majority (93%) identified pictures from the C class photographs (64% of who identified C2). None of this group identified photographs from Category A and only 1 IDU identified a photograph from Category B.

Photographs most identified







B3



5.6.4 Summary

The 2003 flashcard analysis looks very similar to analysis reported in the 2002 IDRS (Roxburgh et al., 2003). Among participants who had used speed and those who had primarily used speed, the majority identified photographs from Category A, thought to represent speed. There was an even clearer trend among participants who had used ice and those who had primarily used ice, with the vast majority in both groups identifying photographs from Category C, thought to represent ice. As in 2002, there was some ambiguity among base users with respect to its visual identification, with photographs identified from both Category B (thought to represent base) and Category C. Interestingly, participants who had primarily used base identified photographs from Category C more often than Category B. These findings highlight the complexities of the methamphetamine market and the various forms available.

5.7 Trends in methamphetamine use

All participants were asked at the end of the survey if there were any recent changes in the types of drugs their friends had been using. Two thirds (66%) of IDU commenting on recent changes in the types of drugs being used reported that people were moving to ice, while 8% reported a move to base and speed. Reports of increased ice use were attributed in many instances to the increased availability of ice.

Consistent with IDU comments, many KIS (including law enforcement officers) also reported that ice use had increased, along with availability.

5.8 Summary of methamphetamine trends

- Prices have remained relatively stable over time for all three forms of methamphetamine.
- Availability of ice has increased compared to the 2002 IDRS. Speed remained readily available, while more IDU thought base was difficult to obtain.
- Prevalence of speed use continued to decrease, while use of both base, and ice in particular, has increased.
- Patterns of methamphetamine use continued to be sporadic across all three forms, with very small numbers reporting daily ice use in the preceding six months.
- Ice (as opposed to speed in 2002) was the most predominant form of methamphetamine used in the preceding six months.
- Indicator data showed a somewhat mixed picture with regard to amphetamine use although all data showed increases during 2001. The majority of indicators have remained higher in the last few months (e.g. inquiries to ADIS, overdose presentations, incidents recorded for amphetamine possession/use), with some remaining relatively stable (closed treatment episodes).

6. COCAINE

Fifty nine percent of IDU commented on the price, purity and availability of cocaine, and the following percentages refer to this proportion of IDU. As stated previously, cocaine KIS were difficult to find this year, as many had not had contact with cocaine users. Consequently, only three KIS reported on the use, purity and availability of cocaine, and two on price.

6.1 Price

Prices paid for cocaine by IDU on the last occasion of purchase are presented in Table 7. The median price for a gram of cocaine was \$200, and has remained stable since the commencement of the IDRS in NSW in 1996 (Figure 29, page 37). There was no difference between the median reported price for a gram of cocaine in the inner city versus south western Sydney. The median price for a cap of cocaine was \$50, the same price reported in 2002 (Table 7). Prices for all other amounts bought remained unchanged from 2002.

Caps continued to be the most popular purchase amount however numbers purchasing caps dropped from 84 in 2002 to 37 in 2003. Likewise, much smaller numbers reported buying grams (11, compared to 39 in 2002) half grams (11, compared to 33 in 2002), and quarter grams of cocaine (four, compared to 12 in 2002).

Amount	Median price* \$	Number of purchasers*
Gram	200 (200)	11 (39)
Cap	50 (50)	37 (84)
Half gram	100 (100)	11 (33)
Quarter gram	70 (70)	4 (12)

Table 7: Price of most recent cocaine purchases by IDU, 2003

Source: IDRS IDU interviews

*2002 data is presented in brackets



Figure 29: Median price of a gram and cap of cocaine estimated from IDU purchases, 1996 – 2003

Source: IDRS IDU interviews

As with heroin, respondents who had bought caps of cocaine were asked to estimate what amount constituted a cap. Of the 37 IDU who had purchased caps in the preceding six months, only eight responded to this question. Five IDU reported that there was approximately one point in a cap of cocaine, two reported a quarter of a gram, and one participant reported two points.

Consistent with purchase prices, 67% of IDU commenting on cocaine reported that the price had remained stable in the preceding six months (the same proportion thought so in 2002). Twenty two percent thought the price had increased (versus 16% in 2002), 2% thought it decreased (5% thought so in 2002), and 7% didn't know.

The two KIS reporting on price stated that a gram of cocaine ranged from \$200 to \$300. Both reported that the price had remained stable in the first half of 2003.

6.2 Availability

Sixty four percent of IDU commenting on cocaine reported that it was 'easy' (33%, the same as in 2002) to 'very easy' (31%, compared to 41% in 2002) to obtain (Figure 30, page 38). Twenty six percent thought cocaine was 'difficult' to obtain (20% thought so in 2002) representing the highest proportion since the commencement of the IDRS in NSW. Seven percent thought it was 'very difficult' to obtain (3% thought so in 2002). Approximately half (54%) of those commenting thought availability had remained stable (64% thought so in 2002) while 28% thought it had become more difficult (compared to 25% in 2002). Twelve percent thought cocaine had become easier to obtain in the preceding six months.

IDU predominantly bought cocaine through contacting dealers on a mobile phone (33%) and from street dealers (33%). Smaller percentages reported obtaining cocaine as a gift from friends (8%), buying from friends (6%) and from dealer's homes (4%). Purchasing patterns were similar to those reported in 2002 with the exception of obtaining cocaine from dealer's homes, which decreased from 11% in 2002 to 4% in 2003. The median time IDU reported it usually took them to score cocaine, and time taken the last time they scored was 15 minutes (these times were 12 minutes and 11 minutes respectively in 2002).

Consistent with IDU reports, two of the three KIS reported that cocaine was not that easy to obtain, and that it had been more difficult for the preceding six months. The third KIS stated that cocaine was easy to obtain. However the clarification was made that the cocaine market had shifted from targeting IDU during the heroin drought, to non-IDU who were gainfully employed, and it was the latter group to which the KIS was referring to with respect to availability.





Source: IDRS IDU interviews

6.3 Purity

The purity of cocaine seizures analysed by the NSW Police Service has remained relatively stable in the past twelve months at approximately 30% (Figure 31, page 39). Purity was lower during this period compared to purity of seizures (approximately 60%) analysed throughout 2000/01 (Data for the period 2001/02 for the NSW Police Service was not available). The purity of cocaine seizures analysed by the AFP has fluctuated over the past twelve months from 45% to 71%. Prior to this period purity remained relatively stable for the period 1999 to 2002 at approximately 60%, with the exception of the December 2000 quarter (Q4 00) during which it dropped to23.5%. Consistent with data on heroin purity, the purity of AFP cocaine seizures was higher than the purity of NSW Police cocaine seizures for reasons previously discussed. Some of the purity figures however, need to be interpreted with caution as they are based on small numbers of seizures (refer Figure 32, page 39).



Figure 31: Purity of cocaine seizures analysed in NSW, by quarter, 1999 - 2003

Source: Division of Analytical Laboratories & Australian Crime Commission * NSW Police data for 2001/02 was not available.

Figure 32 shows the number of seizures analysed in NSW between 1999 and 2003. The number of seizures analysed by the NSW Police in the past twelve months has remained under 20 per quarter and dropped as low as 6 in the first quarter of 2003 (Q1 03). The number of seizures analysed by the AFP increased from 13 in the September 2002 quarter (Q3 02) to 44 in the June 2003 quarter (Q2 03).



Figure 32: Number of cocaine seizures analysed in NSW, by quarter, 1999 – 2003

Source: Division of Analytical Laboratories & Australian Crime Commission * NSW Police data for 2001/02 was not available.

The majority (80%) of IDU commenting on cocaine reported purity as being 'low' (44%) to 'medium' (36%). Only 8% thought purity was 'high'. These figures were similar to the 2002 IDRS in which 52% reported 'low' purity, 32% 'medium' and 10% 'high'. Thirty seven percent thought cocaine purity had decreased in the preceding six months in 2003, while 36% thought it remained stable. Only 9% reported that cocaine purity had increased.

In contrast to IDU reports, two of the three KIS thought that cocaine was of high purity while one thought it was low. Reports of high purity were both from law enforcement officers, and may be indicative of the purity of high-grade seizures rather than that of street level cocaine.

6.4 Use

6.4.1 Cocaine use among IDU

The proportion of IDU reporting cocaine use in the preceding six months dropped substantially from 79% in 2002 to 53% in 2003, representing the lowest proportion reported since 1997 (Figure 33). There was also a decrease in the proportion of IDU reporting cocaine as the last drug injected (from 16% in 2002 to 4% in 2003), and as the drug most often injected in the month preceding interview (from 17% in 2002 to 2% in 2003).

6.4.2 Current patterns of cocaine use

Frequency of cocaine use among IDU also decreased substantially in 2003, with median days of cocaine use in the preceding six months dropping from 24 in 2002 to 5 in 2003 (Figure 34, page41). Only 3% of IDU (5% of cocaine users) reported daily cocaine use during this period, representing a decrease from 10% of IDU in 2002, as well as the lowest proportion recorded since 1997 (Figure 33). Seven percent of IDU reported cocaine use on the day prior to interview compared with 16% in 2002 (Figure 33).





Source: IDRS IDU interviews





Source: IDRS IDU interviews

While law enforcement KIS felt there was no change in prevalence or frequency of cocaine use, the health professional reporting on cocaine felt that both prevalence and frequency of use had decreased. The fact that twelve of the fifteen potential cocaine KIS declined to comment due to lack of contact with cocaine users was also indicative of a decrease in cocaine use among IDU.

All of the IDU that had used cocaine reported that cocaine powder was the form most used in the preceding six months. There were no reports of 'crack' cocaine being used. 2003 is the first year in which interviewers were asked to prompt for route of administration where participants reported crack use. If participants stated they had injected 'crack', it was not coded as 'crack', as this form of cocaine is only bioavailable when smoked (Platt, 1997).

6.5 Cocaine related harms

6.5.1 Law enforcement

Figure 35 (page 42) shows that the number of police incidents recorded for cocaine possession/use were higher in the inner Sydney area than in Fairfield/Liverpool, and, for the most part, higher than numbers recorded in the rest of NSW during the period 1997 to 2003. Numbers of cocaine incidents in the inner Sydney area have remained relatively stable in the past twelve months although at a much lower rate than figures reported throughout 2001. A similar pattern was evident in the incidents recorded in Liverpool/Fairfield, and the rest of NSW. Cocaine incidents for possession/use recorded in the inner Sydney area mirrored cocaine use patterns, with peaks occurring in both 1998 and 2001. Those recorded in Liverpool/Fairfield also peaked during 2001.



Figure 35: Incidents of cocaine possession/use by geographic area, 1997-2003

Source: NSW Bureau of Crime Statistics and Research

6.5.2 Health

Figure 36 shows the number of calls to the ADIS and FDS lines regarding cocaine. Similar to both amphetamines and heroin, the number of enquiries to FDS regarding cocaine was much lower than numbers received at ADIS. Figures for both ADIS and FDS have fluctuated in the past twelve months (FDS more so), with the number of calls to ADIS regarding cocaine representing the lowest recorded since November 1997. Calls to ADIS were also consistent with patterns of cocaine use (Figures 33, & 34, pages 40 & 41), and the number of police incidents recorded for cocaine possession/use (Figure 35), with peaks occurring in 1998 and 2001. Calls to FDS regarding cocaine also increased throughout 2001.





Source: Alcohol and Drug Information Service and Family Drug Support N.B. Family Drug Support data was only available from April 2000 There have been very few presentations to emergency departments for cocaine overdose in the Kings Cross area in the past twelve months (Figure 37), which was consistent with cocaine use patterns (Figures 33 & 34, pages 40 & 41) and IDU reports of cocaine availability (Figure 30, page 38). The trend in the number of cocaine overdose presentations was similar to other indicators (as discussed), with substantial increases occurring in the NSW totals in both 1998 and 2001, and declining in May 2002. Presentations in the Kings Cross area increased in 1998 and 2001, albeit it to a lesser extent, and also declined in May 2002.



Figure 37: Cocaine overdose presentations to NSW emergency departments, 1997-2003

Source: Emergency Department Information System, NSW Department of Health

The number of drug related deaths in which cocaine was detected post mortem have remained relatively low for the past twelve months (Figure 38), following substantial increases in December 1998, and again throughout 2001.





Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories

The number of closed treatment episodes for cocaine has remained stable and relatively low for the past twelve months (Figure 39). Consistent with all other indicator data, numbers showed a steady increase from 25 in April 2001 to 94 in August 2001, representing the highest during the period 2000 to 2003. Figures remained higher throughout 2001, with decreases commencing in January 2002. More males than females completed treatment episodes for cocaine during this period.



Figure 39: Number of cocaine treatment episodes by gender, NSW 2000-2003

Source: NMDS-AODTS, NSW Department of Health.

N.B.The NMDS is based on closed treatment episodes and so some episodes may be excluded if they did not finish in the given period.

6.6 Trends in cocaine use

When asked about general trends in drug use, there were very few reports of cocaine use. Fewer IDU (59%) commented on cocaine price, purity and availability of cocaine use in 2003 than in 2002 (75%), which is indicative of a downward trend in cocaine use.

6.7 Summary of cocaine trends

- The median price for a gram of cocaine has remained stable since the commencement of the IDRS in 1996, and the price for a cap has remained stable since 1998.
- Cocaine was not as readily available in 2003 and 26% reported that it was difficult to obtain. This figure represents the highest since 1996.
- Frequency of cocaine use was the lowest reported since 1997 and proportions that reported recent cocaine use, the lowest since 1996.
- Consistent with patterns of cocaine use and reported availability, indicator data showed a decline in trends relating to cocaine, with fewer calls to drug and alcohol services, fewer recorded incidents of possession/use, fewer closed treatment episodes, and fewer cocaine related deaths.

7. CANNABIS

Seventy eight percent of IDU commented on price purity and availability of cannabis, and the following percentages refer to this proportion of IDU.

This year represents the first in which price information was separated for hydroponically grown cannabis ('hydro') and outdoor grown cannabis ('bush').

7.1 Price

Prices paid for hydro and bush by IDU on the last occasion of purchase are presented in Table 8. The median price of a gram of hydro was \$20, the same as in 2002, and this quantity remained the most popular purchase amount. Median prices reported for a quarter ounce of hydro (\$100), a half-ounce (\$180) and an ounce (\$310) all represented a slight increase from cannabis prices reported last year. However, these comparisons should be interpreted with caution given that there was no distinction made between hydro and bush in the 2002 IDRS. The higher prices may be due to the fact that IDU were asked specifically about hydro rather than being representative of a price increase *per se*. Quarter ounces of hydro were the next most popular purchase amount (n=31), with smaller numbers buying ounces (n=10) and half ounces (n=7). Fourteen participants reported buying 'bags' of hydro. Fewer IDU reported buying 'sticks' (5) this year compared to 2002 (n=20). Only two IDU reported buying hash in the preceding six months, and there were no reports of hash oil being purchased.

Hydro appeared to be the more popular form of cannabis with fewer IDU reporting the purchase of bush. The most popular purchase amount for bush was a gram, and the median reported price (\$20) was no different to a gram of hydro. As would be expected, median reported prices for an ounce (\$225) and a quarter ounce (\$80) of bush were cheaper than equivalent amounts of hydro (Table 8). Smaller numbers of IDU reported buying bush in quarter ounce (n=7) and ounce (n=6) amounts.

Amount	Hydro Median price* (\$)	Hydro Number of purchasers	Bush Median price* (\$)	Bush Number of purchasers
Ounce	310 (300)	10	225 (300)	6
Half ounce	180 (160)	7	N/A	0
Quarter ounce	100 (90)	31	80 (90)	7
Gram	20 (20)	61	20 (20)	18

=	Table 8: Price of most recent cannabis	purchases by	JIDU, 2003
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Source: IDRS IDU interviews

*2002 median prices are in brackets however, these data did not differentiate between hydro and bush

Consistent with reported prices for cannabis, the majority (77%) of IDU who commented thought prices had remained stable (82% thought so in 2002). Eight percent thought the price had decreased, 6% thought it had increased and 5% thought prices fluctuated.

Many KIS were unable to comment on the price of cannabis however, among the few that did, the price for a gram was reported as being between \$20 and \$30, and \$300 for an ounce. Despite being unsure of specific cannabis prices, half of the KIS stated that the price remained stable in the preceding six months.

7.2 Availability

Consistent with previous years, the overwhelming majority (91%) of IDU commenting on cannabis thought it was 'easy' (23%) to 'very easy' (68%) to obtain, with 83% reporting that availability had remained stable in the preceding six months. Patterns of purchase of cannabis were also remarkably similar to those in 2002, with IDU predominantly buying it from street dealers (36%), friends (17%) and dealer's homes (14%). Fewer IDU (13%) reported buying cannabis from mobile dealers than in 2002 (21%) suggesting that purchases may have been somewhat more opportunistic this year. The median time that IDU reported it usually took them to score, and time taken last time they scored was ten minutes.

The overwhelming majority of KIS reported that cannabis was 'very easy' to obtain and that availability had remained stable in the preceding six months.

7.3 Potency

The majority (87%) of IDU commenting on cannabis reported it as being of 'medium' (30%) to 'high' (57%) potency. Only 3% thought potency was 'low'. These figures differed from those reported in 2002, in which 78% thought cannabis potency was 'high' and 17% thought it 'medium'. Seventy percent in 2003 thought the potency level had remained stable in the preceding six months, 11% thought it had increased and 8% thought it had decreased.

Although some KIS were unsure of the potency of cannabis, among those who commented, all but one reported cannabis potency as 'high' and stable in the preceding six months.

7.4 Use

7.4.1 Cannabis use among IDU

As in previous years, there was little change in the prevalence of cannabis use among IDU. Seventy nine percent had used cannabis in the preceding six months (compared to 80% in 2002). Prevalence of cannabis use among sentinel groups of IDU in NSW has remained relatively stable since the commencement of the IDRS in 1996.

7.4.2 Current patterns of cannabis use

Frequency of cannabis use changed substantially in 2003. The median number of days of cannabis use in 2003 was 180 (i.e. daily) compared with 81 in 2002 (Figure 40, page 47). This figure represents the highest reported since 1996. Forty percent of IDU (50% of cannabis users) reported daily use in the preceding six months compared to 33% in 2002.

Half of the cannabis KIS reported an increase in both frequency and quantity of cannabis use. All but one of the KIS reported use on a daily basis and the quantity ranged from three cones up to 30 cones per day.



Figure 40: Median number of days of cannabis use in the past six months, 1996 - 2003

Source: IDRS IDU interviews

Consistent with larger proportions of IDU reporting they had bought hydro, 95% of respondents who had used cannabis reported using hydro in the preceding six months, and 67% of cannabis users reported using bush (similar to figures in 2002). Five percent of cannabis users reported using hash, and 3%, hash oil, representing a decrease from 18% using hash and 6% using hash oil in 2002. Eighty five percent of those who had used cannabis reported hydro as the predominant form used and 9% reported bush. Again these figures are similar to those reported in 2002 (88% predominantly used hydro, and 11%, bush).

All KIS reported hydroponic cannabis as the form predominantly used and half also stated that bush cannabis was used in conjunction with hydro.

7.5 Cannabis related harms

7.5.1 Law enforcement

Figure 41 shows the number of recorded police incidents for cannabis possession/use in the inner Sydney area and Fairfield/Liverpool. The number of incidents in the inner Sydney area has remained relatively stable in the past twelve months, however, figures were lower than those recorded during 2001. The number of incidents recorded in the Fairfield-Liverpool area is much lower than inner city figures, and has remained stable over time.





Source: NSW Bureau of Crime Statistics and Research

7.5.2 Health

There has been a slight downward trend in the number of calls to ADIS regarding cannabis in the past twelve months (Figure 42). The number of calls to FDS has remained relatively stable for the duration of the period with the exception of April 2003. However, this may be due to an irregularity in the data recorded rather than reflecting a real increase.



Figure 42: Number of inquiries to ADIS and FDS regarding cannabis, 1996 - 2003

Source: Alcohol and Drug Information Service and Family Drug Support N.B. Family Drug Support data was only available from April 2000.

7.6 Trends in cannabis use

Prevalence of cannabis use remained unchanged among IDU, however, there was a substantial increase in the frequency of use from 81 median days in the preceding six months in 2002 to 180 days in 2003.

7.7 Summary of cannabis trends

- Prices for larger and smaller amounts of cannabis have remained relatively stable since 2000, and lower than prices reported between 1996 and 1999. Bush cannabis was slightly cheaper than hydroponic cannabis.
- Cannabis remained readily available.
- The potency of cannabis appeared to have decreased slightly with IDU reporting that it is medium to high (compared to high in 2002).
- Hydroponic cannabis continued to dominate the market although a substantial proportion of IDU used bush cannabis.
- Prevalence of cannabis use remained stable.
- Frequency of cannabis use increased substantially in 2003.
- Indicator data suggested that the prevalence of cannabis use within the broader community has remained relatively stable.

8. OPIOIDS

8.1 Use of illicit methadone

Detailed data regarding the purchase, frequency of use and injection of illicit methadone syrup was collected in 2003 to provide further clarification regarding the use of methadone prescribed for treatment and the diversion of prescribed methadone.

Eighteen percent of IDU reported using illicit methadone syrup in the six months preceding interview on a median of six days. Just over half of this group (54%) had been engaged in methadone treatment during this period.

Eleven percent of IDU reported injecting illicit methadone syrup in the preceding six months on a median of five days. Just under half (47%) of those injecting illicit methadone syrup were engaged in methadone treatment during this period.

Only 8% of IDU reported illicit methadone syrup as the form most often used in the preceding six months, none of who were in methadone treatment during this period.

Among those commenting on illicit methadone (n=58), 69% reported that it was 'easy' (47%) to 'very easy' (22%) to obtain, while 26% thought it 'difficult'. Sixteen percent of IDU reported buying illicit methadone in the past six months, primarily from street dealers and friends. Of those who purchased illicit methadone, 92% reported that the source was a take away dose.

Five percent of IDU reported using illicit physeptone tablets in the preceding six months on a median number of three days. Seventy percent of those using illicit physeptone were engaged in methadone treatment during this period.

Among IDU who reported injecting any form of methadone or physeptone in the previous six months, 42% reported doing so in the month prior to interview. Half of those who had injected during this period reported injection related problems due to methadone, the most common being difficulty finding veins to inject into (36%) followed by skin ulcers (18%).

8.2 Use of illicit buprenorphine

Five percent of IDU reported the use of illicit buprenorphine in the preceding six months on a median of five days. Of this group, just under half (43%) had been engaged in buprenorphine treatment during this period.

Three IDU reported injecting illicit buprenorphine on a median of two days. Only one of these IDU was engaged in buprenorphine treatment during this period.

Three percent of IDU reported illicit buprenorphine as the form most often used in the past six months, none of who were in buprenorphine treatment during this period. Only one IDU reported they had injected buprenorphine in the past month, and did not report any resulting injection related problems.

8.3 Morphine

Twenty three percent of IDU reported using morphine in the preceding six months on a median of three days (compared to 22% on a median of five days in 2002). Two thirds (66%) of the morphine users reported illicit morphine use during this period.

Twenty percent of IDU reported injecting morphine (18% reported doing so in 2002) on a median of 2.5 days and again, two thirds (66%) of this group reported illicit morphine use during this period.

Forty three percent of IDU who reported injecting morphine in the preceding six months had also done so in the previous month, with 42% of this group reporting injection related problems due to morphine. The most common problem reported among those injecting in the previous month was swelling of the hand (33%).

Figure 43 shows that the prevalence of morphine use and injection has remained relatively stable since 2002 but has increased slightly from figures reported in 2001. Frequency of morphine use has remained stable.







Morphine was predominantly from illicit sources with 82% of morphine users reporting illicit morphine as the form most used. MS Contin was the most common brand of morphine used, and 9% of IDU reported buying 100mg MS Contin tablets at a median price of \$20.

Among those commenting on illicit morphine (n=32), 41% reported that it was 'easy' (22%) to 'very easy' (19%) to obtain while 50% of this group thought it 'difficult'. Sixteen percent of IDU reported buying illicit morphine in the preceding six months, predominantly from friends and street dealers.

8.4 Other opioids

Thirteen percent of IDU reported using other opioids such as Panadeine Forte and pethidine in the preceding six months (compared with 23% in 2002) on a median of five days (the same as in 2002). Among this group, a third (35%) reported using illicit opioids during this period. Two percent reported injecting these drugs on a median of 2.5 days, representing a decrease from 6% in 2002. Panadeine Forte continued to be the main type of opioid used.

9. OTHER DRUGS

9.1 Benzodiazepines

Despite a restriction in the availability of benzodiazepine gel capsule preparations (Euhypnos, Nocturne, Normison & Temaze) introduced on 1 May 2002, IDU continued to use and inject benzodiazepines. Sixty two percent of IDU reported benzodiazepine use in the preceding six months on a median of 18 days (58% reported benzodiazepine use on a median of 13 days in 2002). As in 2002, 19% of IDU reported injecting benzodiazepines. The median number of days benzodiazepines were injected was 20. Ten percent of IDU reported daily benzodiazepine use, representing a slight increase from 6% in 2002. Among those reporting daily benzodiazepine use, almost half (47%) reported intravenous use in the preceding six months. Among IDU who had injected benzodiazepines, almost two thirds (62%) reported using gel capsule preparations (including Normison, Euhypnos and Temaze) most often in the preceding six months.

Forty percent of IDU reported obtaining their benzodiazepines from illicit sources (39% reported doing so in 2002), and 24% reported illicit benzodiazepines as the main form used. Similar to 2002, Valium was the most popular type of benzodiazepine used (23% reported using Valium), followed by Normison (15%) and Serepax (7%). There was a slight increase in the proportion of IDU reporting benzodiazepine use on the day prior to interview from 13% in 2002 to 17% in 2003.

Almost a quarter (22%) of IDU commenting on drug trends reported that IDU were moving to benzodiazepine use, and many specified an increase in the use of gel capsules. Reports of the shift to benzodiazepines were attributed in some instances to price, with benzodiazepines being cheaper than heroin, and consistently getting a better 'hit' due to poor quality heroin.

Overall, prevalence of benzodiazepine use has remained relatively stable, while frequency has increased slightly. There has also been an increasing trend in injection of benzodiazepines over the past few years (Figure 44).

Figure 44: Proportion of IDU reporting benzodiazepine use, daily use and injection in the preceding six months 1996-2003



Source: IDRS IDU interviews

Seventy percent of IDU who reported injecting benzodiazepines in the preceding six months had also done so in the previous month, with 86% of this group reporting injection related problems due to the injection of benzodiazepines. The most common problem reported among those injecting in the

previous month was difficulty finding veins to inject into (57%), followed by scarring and bruising (43%), benzodiazepine dependence (43%), swelling of the arm (38%), abscesses and infections (29%) and swelling of the leg (29%). Seventy-two precent of IDU that reported problems identified more than one injection related problem due to recent benzodiazepine injection.

Data from the Medically Supervised Injecting Centre (MSIC) in Kings Cross also show an increasing trend in the number of clients over time that inject benzodiazepines at the Centre (Figure 45). The number has risen from 1 client in June 2001 to 116 clients in May 2003. While numbers injecting benzodiazepines represent a small proportion of the total attendances at the MSIC, they still represent a gradual increase over time from 2% of clients in June 2001 to 10.4% in May 2003. This data is consistent with IDRS IDU reports over time.



Figure 45: Number of clients attending MSIC who inject benzodiazepines, 2001-2003

Source: Medically Supervised Injecting Centre, Kings Cross

The number of deaths of suspected drug users in which benzodiazepines were detected (Figure 46) has remained relatively stable in the past two years, and has usually been in combination with opioids.





Source: Forensic Toxicology Laboratory database, Division of Analytical Laboratories

9.2 Antidepressants

Seventeen percent of IDU reported using antidepressants in the preceding six months on a median number of 135 days (16% had done so on a median of 180 days in 2002). Twenty percent of the female IDU had used antidepressants on a median of 67.5 days and 15% of males had done so on a median of 180 days. There were no reports of illicit antidepressant use. The most commonly used antidepressants were Zoloft, Effexor and Zyprexa.

Twenty six percent of IDU reported attending a health professional (primarily general practitioners) in the past six months, representing an increase from 15% in 2002. Thirty three percent of females versus 23% of males reported attending a health professional. The primary mental health issue reported was depression (16%).

10 ASSOCIATED HARMS

10.1 Blood borne viruses

People with a history of injecting drug use are at significantly greater risk of acquiring hepatitis B (HBV), hepatitis C (HCV) and HIV than the general population (National Centre in HIV Epidemiology and Clinical Research, 2002). This is because blood borne viruses (BBV) can be transmitted via the sharing of needles, syringes and equipment.

The overall trends in the total number of notifications for HBV and HCV in NSW are shown in Figure 47. Incident or newly acquired infections and unspecified infections (i.e. the timing of the disease acquisition is unknown) are presented. HCV continued to be more commonly notified than HBV, however, there has been a downward trend in notifications of both HBV and HCV since 2001.





Source: Communicable Diseases Network - Australia - National Notifiable Diseases Surveillance System¹

Trends on the number of incident notifications for HBV and HCV in NSW are shown in Figure 48 (page 55). HBV incident reporting has decreased slightly in the past twelve months from 87 in 2002 to 59 in 2003, returning to levels reported in 1997. The number of HCV incident notifications decreased more markedly from 132 in 2002 to 95 in 2003.

¹ Notes on interpretation

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



Figure 48: Total notifications for HBV and HCV incident infections, 1997 - 2003

Source: Communicable Diseases Network - Australia - National Notifiable Diseases Surveillance System

10.2 Sharing of injecting equipment among IDU

In the month preceding interview 7% (n=10) of IDU had injected with syringes that had already been used ('borrowed needles'), compared to 6% in 2002 (Figure 49). All of these participants reported that only one other person had used the syringe first. People who had used the syringe first were reported by most (n=6) to be regular sex partners, followed by close friends (n=3) and casual sex partners (n=1). Twelve percent reported passing used needles on to other IDU ('lent needles') in 2003 (17% who reported doing so in 2002).

As in previous years, sharing of other injecting equipment in the month preceding interview was more common, with 43% reporting doing so (compared to 38% in 2002). Forty percent of IDU reported sharing spoons, 32% reported sharing water, 31% reported sharing filters and 13% reported sharing tourniquets.

Overall, Figure 49 shows a downward trend in borrowing, lending and sharing other injecting equipment however, proportions reporting sharing of other equipment remained rather high.





Note: Other injecting equipment include spoons, water, filters and tourniquets

Source: IDRS IDU interviews

Figure 50 shows the breakdown of the types of equipment IDU reported sharing, and while there was an initial decrease in proportions sharing water and filters, these figures subsequently increased. Proportions reporting that they share tourniquets and spoons have remained relatively stable.



Figure 50: Proportion of IDU reporting sharing other injecting equipment by type, 2000 - 2003

10.2.1 Summary

Rates of reporting of newly acquired (incident) HBV and HCV to health authorities have decreased since 2002. IDRS survey data suggest that the proportion of IDU reporting borrowing and lending needles has remained stable. There has been an increase in the proportion of IDU sharing other injecting equipment, in particular water and filters, which continues to be of concern with regard to the transmission of blood borne viruses such as HBV and HCV.

10.3 Location of injections

Equal proportions (56%) of IDU reported that the usual location for injection (Figure 51), and for their most recent injection (Figure 52, page 57) in the month preceding interview, was in a private home. Thirty four percent of IDU reported usually injecting in a public place (e.g. street, toilet or car), and 33% reported that they last injected in a public place. Eight percent of IDU reported the medically supervised injecting centre (MSIC) located in Kings Cross as their usual location for injection while 7% reported last injecting there. The injection location data were comparable to 2002 figures (refer to Figures 51 and 52).





Source: IDRS IDU interviews

Source: IDRS IDU interviews



Figure 52: Proportion of IDU reporting the last location for injection, 2001-2003

Over the last three years there has been a slightly downward trend in the proportion of IDU reporting that they usually injected, and injected last in a public place (Figures 51 and 52).

10.4 Injection related health problems

Sixty percent of IDU reported at least one injection related problem in the month preceding interview compared to 66% in 2002. Thirty percent reported two or more problems during this period (38% reported two or more in 2002). As in previous years, the most commonly reported problems were prominent scarring/bruising of injection sites (38%) and difficulty injecting (33%). Both these figures represented a slight decrease from 48% (prominent scarring/bruising) and 41% (difficulty injecting) in 2002. Smaller proportions reported experiencing a dirty hit (14%), abscesses or infections from injecting (12%) and overdose (2%). Of those reporting a dirty hit (n=19), the majority (n=13) attributed it to heroin while three IDU attributed it methamphetamine, two to benzodiazepines, and one to methadone. Of those who had overdosed on heroin in the past month (n=3), two reported using benzodiazepines in conjunction with heroin at the time of overdose, and one reported alcohol. An ambulance attended two of the three IDU who reported they had overdosed in the last month.

Figure 53 (page 58) shows that in the last few years there has been a downward trend in proportions reporting prominent scarring or bruising and difficulty injecting in the past month, while proportions reporting a dirty hit, overdose, and abscesses or infections have remained relatively stable. Reports of thrombosis and difficulty injecting increased in 2001 but have since declined.


Figure 53: Proportion of IDU reporting injection related problems by problem type, 1997-2003

10.5 Expenditure on illicit drugs

Despite 97% of IDU reporting drug use on the day prior to interview, only 80% reported spending money on drugs the previous day (82% reported doing so in 2002). The median amount spent was \$100 (range \$5 to \$1500), the same as in 2002. Forty six percent of the sample had spent \$100 or more on that day and 23% had spent \$200 or more. As in previous years there was a significant correlation between the amount spent on drugs on the day prior to interview and frequency of injecting (Spearman's r=.51, p<.001).

10.6 Mental health problems

Twenty six percent of IDU reported seeing a health professional for a mental health problem other than drug use in the preceding six months, representing an increase from 19% in 2002. As in previous years the most commonly reported mental health problem was depression (16%, compared to 13% in 2002), followed by anxiety (5%, the same figure reported in 2002), drug induced psychosis (4%, one participant reported this problem in 2002) and schizophrenia (3%, compared to 4% in 2002). Health professionals consulted included general practitioners (17%), psychiatrists (17%), counsellors (7%), psychologists (4%), and community health and mental health nurses (4% for each).

10.7 Criminal and police activity

Fifty five percent of IDU reported engaging in any form of crime in the month preceding interview, a figure comparable to the 2002 proportion (58%). The most commonly reported crimes were drug dealing (36%) and property crime (31%). Eight percent of IDU reported involvement in violent crime (compared to 9% in 2002) and 7% reported fraud (this figure was 11% in 2002).

Forty nine percent of IDU had been arrested in the previous twelve months and the most common grounds for arrest were property crime (20%), violent crime (10%), possession of a prohibited drug (8%) and drug dealing (6%). These figures were comparable to those reported in 2002 with the exception of property crime. Eleven percent of IDU in 2002 reported being arrested for property crime in the preceding twelve months. There was no significant difference between the proportions of males and females reporting involvement in criminal activity in the previous month (53% versus 59%)

or the proportion of males and females that had been arrested in the previous twelve months (51% versus 47%).

Figure 54 shows that over time there has been a relatively stable proportion of IDU engaging in these four types of offences.

KIS also generally reported that numbers engaging in these offences had remained stable. However, among those KIS commenting on methamphetamine users, a few reported an increase in violent crime due to the direct effects of ice, such as aggression and agitation.

Figure 54: Proportion of IDU reporting engagement in criminal activity by offence type 1996-2003



Sixty seven percent of IDU reported a perceived increase in police activity in the preceding six months compared to 63% in 2002 (Table 9, page 60), while 23% thought it had remained stable (29% thought so in 2002). Only 3% thought there had been less police activity in the preceding six months, a decrease from 8% in 2002. Over half of the sample (57%) reported an increased police presence on the streets while a smaller proportion (10%) reported an increase in stop and search procedures.

Equal numbers of KIS reported that police activity had either remained stable or increased in the preceding six months.

Consistent with previous years, two thirds (66%) of the sample reported that police activity had no impact on their ability to score drugs (this figure was 61% in 2002) (Table 9, page 60).

	2002 N=158 %	2003 N=154 %
<i>Criminal activity in last month</i> : Dealing Property crime Fraud Violent crime Any crime	32 31 11 9 58	36 31 7 8 55
Arrested in last 12 months	41	49
Police activity in last 6 months More activity Stable Less activity Don't know	63 29 0 8	67 23 3 7
More difficult to obtain drugs recently Yes No	35 61	33 66

Table 9: Criminal and police activity as reported by IDU, 2002 - 2003

Source: IDRS IDU interviews

10.7.1 Summary

Proportions of IDU reporting recent involvement in criminal activity has remained stable across time, and property crime and drug dealing remained the most commonly reported offences. Likewise there has been little change in perceived levels of police activity.

11 DISCUSSION

Larger proportions of this year's IDU sample had a prison history, were unemployed and currently engaged in treatment compared to 2002. These differences may be indicative that IDU who have remained in the illicit drug market following the heroin shortage in 2001 are the more dedicated, longer-term users. Nevertheless, it is difficult to qualify whether some users left the market as a result of the shortage, as the IDRS only interviews those IDU who remain actively engaged in illicit drug markets. Much of the indicator data, particularly for heroin, showed progressive declines over time, which may suggest that fewer people are using heroin in the broader community in Sydney.

11.1 Heroin

Despite some return of heroin availability in Sydney's illicit drug markets in 2002 and 2003, it has not returned to levels reported prior to the heroin shortage in 2001. Frequency of heroin use among IDU (median days used and the proportion of IDU reporting daily use) has also not returned to pre-shortage levels. There may be several explanations for this. Research undertaken in Australia by one of the authors (Louisa Degenhardt) and others suggests there has been a sustained change in the nature of the heroin market in Australia. A less consistent supply of heroin available post 2000 could well lead to less frequent use. In addition it may be that IDU find it difficult to sustain their heroin use at higher levels due to increased price, and have reduced their use accordingly. While heroin prices have remained stable since 2002, they remain higher than prices reported prior to 2001. Finally, less frequent use of heroin may be consistent with higher proportions of IDU in methadone treatment, a phenomenon that has been well documented in the literature (Hall et al., 1998).

Both law enforcement and health indicator data showed decreases in heroin related harm since the heroin shortage, with fewer incidents recorded for possession and use of heroin, fewer ambulance callouts to overdoses, fewer heroin overdose presentations, and fewer deaths in which morphine was detected. Conversely, there have been increasing numbers of re-registrations for opioid pharmacotherapy in NSW. All of these findings suggest there has been a decrease in heroin use among the general community.

Overall, trends in heroin price, purity and availability indicated that the heroin shortage in 2001 has had a sustained impact on illicit drug markets in Sydney. Indicator data also suggested a broader impact on heroin use among the general community. Nonetheless, IDU who have remained active in Sydney's illicit drug markets have maintained access to, and continue to use heroin, albeit less frequently.

11.2 Methamphetamine

Data collected this year documented a substantial increase in both the availability and use of ice among Sydney IDU. There was a dramatic change in ice availability from 'difficult' to 'very difficult' in 2002 to 'easy' to 'very easy' in 2003, and this was reflected in the prevalence of recent use. Ice was also the most common form of methamphetamine used in the previous six months. Patterns of use remained sporadic, however, a small proportion (6%) of IDU reported using ice on every third day or more. Such frequent use is clearly of concern in relation to aggression, agitation and related mental health issues, and these implications were supported by KIS comments of increased presentations to local hospitals for drug-induced psychosis following ice use. Prevalence of recent base use also increased this year although patterns of use were sporadic. Prevalence of recent speed use continued to decline, reflecting a general trend towards use of the more potent forms of methamphetamine.

Law enforcement and health indicator data showed an increasing trend with higher numbers of incidents recorded for amphetamine possession and use, more calls to information services regarding problematic amphetamine use, and increased numbers of amphetamine overdose presentations. Interestingly, the number of closed treatment episodes for amphetamine use has remained relatively

stable over time, indicative that methamphetamine users continue to be a difficult group to engage in treatment. This is a concern given that the 2001 National Drug Strategy Household Survey findings show that methamphetamine is the second most commonly used illicit drug after cannabis among the broader community in Australia, and is used on a regular basis (from weekly to daily) by 11% of those reporting methamphetamine use in the past twelve months(Australian Institute of Health and Welfare, 2002). KIS comments supported indicator data. Law enforcement officers reported an increase in the number of clandestine methamphetamine labs being detected in and around the Sydney metropolitan area and indicator data support these comments. Health KIS continued to voice concerns regarding methamphetamine-related harms, particularly drug induced psychosis, agitation and aggression.

Overall, data indicated an increase in both the availability and recent use of ice however, whether these patterns are sustained remains to be seen. The methamphetamine market in Sydney appears to be somewhat opportunistic, targeting opioid injectors in the context of a sustained reduction in heroin supply. In the event that heroin availability returns to Sydney drug markets at levels reported prior to the shortage, this may lead to a reduction in methamphetamine use among this group. The data suggests the need for the development of effective treatment programs for methamphetamine users as well as the implementation of strategies to engage and retain these users in treatment.

11.3 Cocaine

The use of cocaine increased in 2001 following the reduction in heroin supply however, this shift to cocaine has not been sustained. The 2003 IDRS data showed marked decreases in the prevalence and frequency of cocaine use, with the proportion of IDU reporting any use (57%) and the proportion reporting daily use (3%) in the preceding six months representing the lowest since 1997. There was also a notable decrease in cocaine availability in 2003, with more than a third of the sample reporting that it was 'difficult' to 'very difficult' to obtain, and this proportion represents the highest since 1997. Despite marked changes in the availability and use of cocaine, the price has remained remarkably stable since 1997, at \$200 per gram.

Decreases were documented across all indicator data sources, with fewer incidents recorded for possession and use, fewer cocaine overdose presentations, fewer deaths in which cocaine was detected, and fewer closed treatment episodes for cocaine use.

Overall, data suggested a marked reduction in cocaine use, and given that prices for cocaine have remained stable, the decrease is more likely to be partially attributable to cocaine availability, which also declined markedly in 2003. If the availability of cocaine were to increase in Sydney, there may be a concomitant increase in cocaine use among IDU.

11.4 Cannabis

Consistent with previous years of the IDRS, there was very little change documented in cannabis trends among IDU with the exception of the frequency of cannabis use, which increased markedly from 81 median days in the preceding six months in 2002 to 180 days in 2003. Given that this increase is occurring in the context of; consistently high prices for heroin, lower heroin purity, and reduced frequency of heroin use, it may be that IDU are substituting or supplementing their heroin use with cannabis.

While hydroponic cannabis continued to be the predominant form of cannabis used, two thirds of those using cannabis also reported using bush. Smaller proportions reported using hash (5%) and hash oil (3%).

Despite the increase in frequency of use among IDU, indicator data showed that cannabis use in the broader community has not changed, with the number of calls to help lines remaining relatively stable. There has been a decrease in the number of incidents recorded for possession and use, which most likely reflects an increased use of the cautioning process for first time offenders in NSW.

Overall, the only change detected in cannabis use among IDU is the increased frequency of use. The other aspects of cannabis use remained consistently stable.

11.5 Opioids

Approximately one fifth of the sample reported using illicit methadone in the preceding six months, and approximately half of this group reported being engaged in methadone maintenance treatment during this period. A smaller proportion (11%) reported injecting methadone from illicit sources and again, approximately half had been engaged in methadone treatment. None of the IDU who reported predominantly using illicit methadone (8%) in the preceding six months had been engaged in methadone treatment during this period. Smaller proportions reported use (5%) of illicit physeptone tablets (the majority were engaged in treatment).

Small proportions reported use (5%) of illicit buprenorphine in the preceding six months, approximately half of who were in buprenorphine treatment during this period. None of the IDU who reported predominantly using illicit buprenorphine (2%) had been engaged in buprenorphine treatment.

These data indicated that diversion of methadone (and to a lesser extent buprenorphine) to IDU both in and out of treatment continues to occur. As would be expected, those who reported primarily using methadone or buprenorphine from illicit sources were not engaged in treatment. Injection of methadone and buprenorphine did not appear to be a significant issue among IDU in Sydney and this might be attributed to several factors. Firstly, methadone injection may not be as prevalent given that IDU in Sydney have continued to access heroin despite the reduction in supply. Alternatively, it may reflect the restrictions introduced in NSW in 1998 on take away doses of methadone as well as the removal of larger syringes (which facilitate the injection of methadone) from NSW NSPs during the same period (Darke et al., 2002d).

11.6 Benzodiazepines

The prevalence of benzodiazepine use (62% of IDU) has remained relatively stable, while frequency of use among the IDU sampled for the IDRS increased slightly. Ten percent of IDU reported daily benzodiazepine use (compared to 6% in 2002), and approximately half of this group reported injecting benzodiazepines. Just under half of the sample reported obtaining benzodiazepines illicitly, while approximately a quarter reported predominantly using illicit benzodiazepines in the preceding six months. Valium was the most popular brand of benzodiazepines reported gel capsules as the predominant form used. The majority of IDU who had injected benzodiazepines in the past month reported injection related problems, most notably difficulty finding veins to inject into, prominent scarring and bruising, and benzodiazepine dependence. There were anecdotes from a significant minority of IDU about a perceived shift from injecting heroin to injecting benzodiazepines, in particular, gel capsules.

Indicator data was consistent with IDU data, showing an increasing trend in benzodiazepine injection. The number of MSIC clients reporting benzodiazepine injection has increased over time however, they still only represent a small percentage (10.4%) of the total attendances at MSIC.

Overall, the data indicated that despite the restrictions introduced in May 2002 both to limit the supply of benzodiazepine gel capsules and the prescription of benzodiazepines in general, IDU in Sydney continued to access (both licitly and illicitly) and inject (predominantly gel capsule) benzodiazepines. A large proportion of IDU also reported health harms associated with injecting benzodiazepines. Given the ongoing harms reported among this group, these findings indicate that health professionals may need to give further consideration to the prescription of gel capsule benzodiazepine preparations, with a view to removing them from the market.

11.7 Associated harms

The proportion of IDU reporting borrowing used needles remained relatively stable while those lending used needles decreased slightly. Just under half of the sample reported sharing other injecting equipment including spoons, water and filters, representing a slight increase from 2002.

Indicator data showed a downward trend in the number of newly acquired Hepatitis C infections nevertheless, given that IDU are at particular risk of contracting blood borne viruses, the sharing of injecting equipment continues to be an issue of concern.

Overall, data indicated an unacceptably high level of equipment sharing among IDU, suggesting that an increased focus on the harms associated with sharing is required. Educational strategies need to address the issue that sharing of any injection related equipment is potentially dangerous.

Proportions reporting injection related problems have decreased slightly overall, while proportions reporting specific problems have either remained stable or decreased. Benzodiazepine injectors were more likely to report injection related problems than those who don't inject benzodiazepines.

There was little change in the locations reported for injecting, with approximately a third reporting doing so in a public place.

There was a slight increase in proportions reporting mental health problems, and depression remained the most commonly reported problem.

There was little change in proportions reporting engagement in criminal activity or offence types. This group remained relatively engaged in criminal activity with just under half of the sample being arrested in the previous twelve months. There was no change in perceptions of police activity in 2003.

12 IMPLICATIONS

The findings of the 2003 NSW IDRS indicated several areas of illicit drug use that require further attention including:

- Further research into drug trends and associated harms of methamphetamine use studying a group of primary methamphetamine users.
- Close monitoring of the patterns and prevalence of ice use.
- Development of effective treatment programs for methamphetamine users, and development of strategies to engage and retain users in these programs.
- More detailed research into the nature of the cocaine market (that supplies IDU) in Sydney.
- Careful consideration by medical practitioners of the clinical need for benzodiazepine gel capsule preparations and the possibility of removing them from the market.
- Increasing focus on the development of educational material regarding the dangers of sharing injecting equipment other than needles as well as broader dissemination of this material.

REFERENCES

Australian Institute of Health and Welfare (2002) 2001 National Drug Strategy Household Survey: detailed findings. Canberra: Australian Institute of Health and Welfare

Breen, C., Degenhardt, L., Roxburgh, A., Bruno, R., Fry, C., Duquemin, A., Fischer, J., Gray, B. and Jenkinson, R. (2002) *The impact of a change in the availability of publicly subsidised temazepam gel capsules in Australia.* NDARC Technical Report Number 158. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Darke, S., Kaye, S. and Topp, L. (2002a) Cocaine use in New South Wales, Australia, 1996-2000: 5 year monitoring of trends in price, purity, availability and use from the Illicit Drug Reporting System (IDRS), *Drug and Alcohol Dependence*, **67**, 73-79.

Darke, S., Kaye, S. and Topp, L. (2002b) New South Wales Drug Trends 2001: Findings from the Illicit Drug Reporting System. NDARC Technical Report Number 125. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Darke, S., Topp, L. and Kaye, S. (2001) New South Wales Drug Trends 2000. Findings of the Illicit Drug Reporting System (IDRS). NDARC Technical Report Number 117. Sydney: National Drug and Alcohol Research Centre.

Darke, S., Topp, L., Kaye, S. and Hall, W. (2002c) Heroin use in New South Wales, Australia, 1996-2000: 5 year monitoring of trends in price, purity, availability and use from the Illicit Drug Reporting System (IDRS). *Addiction*, **97**, 179-186.

Darke, S., Topp, L. and Ross, J. (2002d) The injection of methadone and benzodiazepines among Sydney IDU 1996-2000: 5 year monitoring of trends from the Illicit Drug Reporting System (IDRS). *Drug and Alcohol Review*, **21**, 27-32.

Day, C., Topp, L., Rouen, D., Darke, S., Hall, W. and Dolan, K. (2003) Decreased heroin availability in Sydney Australia in early 2001, *Addiction*, **98**, 93-95.

Degenhardt, L., Topp, L. and Day, C. (in press) Issues surrounding the detection of a reduction in drug supply: The case of the heroin shortage in Australia, 2001, *WHO Bulletin on Narcotics*.

Fry, C. and Bruno, R. (2002) Recent trends in benzodiazepine use by injecting drug users in Victoria and Tasmania., *Drug and Alcohol Review*, **21**, 363-367.

Griffiths, P., Vingoe, L., Hunt, N., Mounteney, J. and Hartnoll, R. (2000) Drug information systems, early warning, and new drug trends: Can drug monitoring systems become more sensitive to emerging trends in drug consumption?, *Substance Use & Misuse*, **35**, 811-844.

Hall, W., Ward, J. and Mattick, R. P. (1998) The effectiveness of methadone maintenance treatment 1: Heroin use and crime. In Ward, J., Mattick, R. P. and Hall, W. (Eds) *Methadone Maintenance Treatment and Other Opioid Replacement Therapies*, Amsterdam: Harwood Academic Publishers.

Hando, J. and Darke, S. (1998) New South Wales Drug Trends. Findings from the Illicit Drug Reporting System (IDRS). NDARC Monograph Number 56. Sydney: National Drug and Alcohol Research Centre.

Hando, J., Darke, S., Degenhardt, L., Cormack, S. and Rumbold, G. (1998a) Drug Trends 1997. A Comparison of Drug Use and Trends in Three Australian States: Results from a National Trial of the Illicit Drug

Reporting System (IDRS). NDARC Monograph Number 36. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Hando, J., Darke, S., O'Brien, S., Maher, L. and Hall, W. (1998b) The development of an early warning system to detect trends in illicit drug use in Australia: the Illicit Drug Reporting System, *Addiction Research*, **6**, 97-113.

Hando, J., O'Brien, S., Darke, S., Maher, L. and Hall, W. (1997) *The Illicit Drug Reporting System Trial : Final Report.* Monograph Number 31. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

McKetin, R. (2000) The Illicit Drugs Reporting System, NSW Public Health Bulletin, 11, 49-52.

McKetin, R., Darke, S. and Godycka-Cwirko, C. (1999) New South Wales Drug Trends 1998. Findings of the Illicit Drug Reporting System (IDRS). NDARC Technical Report Number 72. Sydney: National Drug and Alcohol Research Centre.

McKetin, R., Darke, S. and Kaye, S. (2000) New South Wales Drug Trends 1999. Findings of the Illicit Drug Reporting System (IDRS). NDARC Technical Report Number 86. Sydney: National Drug and Alcohol Research Centre

National Centre in HIV Epidemiology and Clinical Research (2002) *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2002.* Sydney, NSW.: National Centre in HIV Epidemiology and Clinical Research, UNSW.

O'Brien, S., Darke, S. and Hando, J. (1996) *Drug Trends. Findings from the Illicit Drug Reporting System* (*IDRS*). NDARC Technical Report Number 38. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Platt, J. (1997) Cocaine Addiction: Theory, Research and Treatment, Harvard University Press, Cambridge, Massachusetts.

Roxburgh, A., Degenhardt, L., Breen, C. and Barker, B. (2003) New South Wales Drug Trends 2002: Findings from the Illicit Drug Reporting System. NDARC Technical Report Number 144. Sydney: National Drug and Alcohol Research Centre, University of New South Wales

Shand, F., Topp, L., Darke, S., Makkai, T. and Griffiths, P. (2003) The monitoring of drug trends in Australia, *Drug and Alcohol Review*, **22**, 63-74.

Topp, L., Breen, C., Kaye, S. and Darke, S. (2004) Adapting the Illicit Drug Reporting System (IDRS) methodology to examine the feasibility of monitoring trends in party drug markets, *Drug and Alcohol Dependence*, **73 (2)**, 189-197.

Topp, L., Day, C. and Degenhardt, L. (2003a) Changes in patterns of drug injection concurrent with a sustained reduction in the availability of heroin in Australia., *Drug and Alcohol Dependence*, **70**, 275-286.

Topp, L., Degenhardt, L., Day, C. and Collins, L. (2003b) Contemplating drug monitoring systems in the light of Australia's 'heroin shortage'. Invited Editorial, *Drug and Alcohol Review*, **22**, 3-6.

Topp, L., Degenhardt, L., Kaye, S. and Darke, S. (2002a) The emergence of potent forms of methamphetamine in Sydney, Australia; A case study of the IDRS as a strategic early warning system, *Drug and Alcohol Review*, **21**, 341-348.

Topp, L., Kaye, S., Bruno, R., Hargreaves, K., Longo, M., Williams, P., O'Reilly, B., Fry, C., Rose, G. and Darke, S. (2002b) *Australian Drug Trends 2001: Findings of the Illicit Drug Reporting System (IDRS)*. NDARC Monograph Number 48. Sydney: National Drug and Alcohol Research Centre, UNSW.