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*New South Wales*  
**DRUG TRENDS**  
*1998*



**Findings from the  
Illicit Drug Reporting System (IDRS)**

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## LIST OF ABBREVIATIONS

<b>ABCI</b>	Australian Bureau of Criminal Intelligence
<b>ABS</b>	Australian Bureau of Statistics
<b>ADIS</b>	Alcohol and Drug Information Service
<b>AFDL</b>	Australian Forensic Drug Laboratory
<b>AFP</b>	Australian Federal Police
<b>ATSI</b>	Aboriginal or Torres Strait Islander
<b>CDHAC</b>	Commonwealth Department of Health and Aged Care
<b>DEA</b>	NSW Drug Enforcement Agency
<b>DHEA</b>	dehydroepian-drosterone
<b>ESB</b>	English Speaking Background
<b>GHB</b>	Gamma Hydroxy Butyrate (also called GBH)
<b>IC</b>	Inner city of Sydney
<b>IDRS</b>	Illicit Drug Reporting System
<b>IDU</b>	Injecting drug users
<b>KIS</b>	Key informant study
<b>NDARC</b>	National Drug and Alcohol Research Centre
<b>NESB</b>	Non-English Speaking Background
<b>NSEP</b>	Needle and Syringe Exchange Program
<b>NSW</b>	New South Wales
<b>OTHER</b>	Refers to other (secondary) indicators
<b>WS</b>	Western Sydney

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### 1.0 INTRODUCTION

In 1998, the Commonwealth Department of Health and Aged Care (formerly the Commonwealth Department of Health and Family Services) commissioned the National Drug and Alcohol Research Centre to conduct a national trial of the Illicit Drug Reporting System (IDRS), following a successful pilot study of the methods in Sydney in 1996, and a multi-state trial in 1997 (Hando et al., 1997; Hando et al., 1998a, 1998b). The national trial consisted of conducting the complete IDRS in New South Wales, Victoria, and South Australia, as had occurred during the 1997 multi-state trial. This complete IDRS consisted of a survey of injecting drug users and key informants, and analyses of other illicit drug indicators. In addition, other states and territories were to conduct a "core" IDRS which consisted of interviews with key informants and collection of secondary indicator data. In 1998, the full IDRS B including the IDU survey B continued to be run in New South Wales, South Australia and Victoria, while the feasibility of the core IDRS was established in the remaining states and territories.

The purpose of the IDRS is to provide a co-ordinated approach to the monitoring of data associated with the use of opiates, cocaine, amphetamines and cannabis, and act as a strategic early warning system for emerging illicit drug problems. The IDRS needs to be a timely and sensitive indicator of emerging drug trends rather than describe phenomenon in detail. It also needs to suggest areas for more detailed data collection and be linked to such a data collection mechanism; collect comparable data nationally; be representative; be simple to operate and cost effective.

The *1998 NSW Drug Trends Report* summarises the information gathered by the NSW component of the national IDRS using three methods: key informant interviews with professionals working in the drug field, a survey of IDU, and an examination of existing indicators. The three methods are intended to complement and supplement each other, with each having its various strengths and weaknesses. Results are summarised by drug type in a series of tables designed to provide the reader with an abbreviated picture of the illicit drug scenes and recent trends.

The reader is referred to a national report presenting state comparisons (McKetin et al, 1999) and separate South Australian and Victorian Drug Trends Reports (Hayes et al., 1999; Rumbold & Fry, 1999). The results of the 1997 multi-state trial of the IDRS are also available in state reports (Cormack et al., 1998; Hando et al., 1998a; Rumbold & Fry, 1998) and in a national report (Hando et al., 1998b).

#### 1.1 STUDY AIM

The specific aim of the NSW IDRS was to identify emerging illicit drug trends in NSW that require further investigation.

## 2.0 METHOD

Information from three main sources was compiled to determine trends in illicit drug use: a survey of injecting drug users, a key informant study of professionals working in the drug field, and an examination of existing secondary indicators. While key informants and injectors were asked specific questions about trends during the previous 6 months, information about trends over a longer time period (i.e., 12 months) was also collected from these participants, and can also be determined from comparisons with previous IDRS data and other studies (eg. Hando et al., 1997; Hando et al., 1998).

### 2.1 INJECTING DRUG USER (IDU) SURVEY

One hundred and seventy-six regular IDU were interviewed between July and September 1998. It had been found in previous years that IDU were a good sentinel group to report on trends in the four main illicit drug categories. Half of the sample were recruited from the inner city suburbs of Sydney, such as Newtown, Surry Hills, Redfern and Darlinghurst and the remaining half from the southwest suburbs of Sydney, such as Canterbury and Cabramatta. Postal codes of IDU showed that 92 resided in the inner city (IC) and 76 resided in the south-west and western region of Sydney (WS). Eight respondents resided in the north of Sydney, and were included in the IC sample because they were recruited from the IC and were demographically more similar to the IC sample than the WS sample. The breakdown of postcodes by district is provided in Appendix 1.

The IDU were recruited using multiple methods including advertisements in local newspapers, rock magazines and needle exchanges. Upon contacting the researchers the potential subject was screened over the phone or in person on a series of questions regarding their drug use in the preceding six months. Entry criteria was having injected at least monthly in the six months prior to the interview and residing in Sydney for the past year. The IDU were interviewed at places convenient to them, such as coffee shops, hotels, shopping malls, parks and at NSEPs.

A structured interview schedule based on previous NDARC research (eg. Darke et al., 1992, 1994) was administered to subjects. Sections on demographics, drug use, price, purity and availability of drugs, crime, risk-taking behaviour, health and general trends were included. Interviews took about 30 minutes to administer and subjects were reimbursed \$20 for out-of-pocket expenses and time. Descriptive analyses were conducted using SYSTAT (Wilkinson, 1990) and SPSS for Windows, Release 6.1.4 (SPSS Inc., 1996). Results are presented by region (IC and WS) only where trends differed between regions.

### 2.2 KEY INFORMANT STUDY

Forty-two key informants who worked in the illicit drug field were interviewed between July and August 1998. Entry criteria was at least weekly contact with illicit drug users in the past 6 months and/or contact with 10 or more illicit drug users in the last 6 months. All but one key informant satisfied this criteria; the former providing information on steroids based on researched conducted in this area. The median number of days that key informants had contact with illicit

drug users in the past six months was 120 (range 12-180), and the majority (74%) reported contact with more than 50 illicit drug users. Key informants included health workers (n = 12), needle exchange/outreach workers (n = 9), drug treatment workers (n = 9), police (n = 4), and researchers (n = 6). Forty-two percent (n = 18) were male. Key informants rated their knowledge as good to excellent (84%) and all reported that they felt moderately certain or very certain of the information they provided. Many worked with special populations, including youth (n = 10), aboriginals (n = 3), persons from non-English speaking backgrounds (n = 4), injecting drug users (n = 11), prisoners (n = 3), women (n = 8), and five worked with other specific populations (sex workers, importers of illicit drugs, HIV/AIDS patients).

Eighteen key informants were recruited from the previous IDRS key informant study in Sydney (Hando et al., 1998) which interviewed 37 key informants, representing a follow-up rate of 49%. The remainder were recruited from recommendations made by existing key informants, former key informants, and colleagues.

Key informants were asked to specify the main illicit drug used by the drug users they had most contact with in the past six months. Most key informants reported on the use of heroin (n = 25), the remainder reporting on amphetamines (n = 2), cocaine (n = 4), cannabis (n = 6), ecstasy (n = 2) and steroid use (n = 4). One key informant reported on two drug types: ecstasy and steroids.

The interview schedule was a structured instrument which included sections on drug use patterns, drug availability, criminal behaviour and health issues. Most interviews were conducted by telephone and took between 20 and 60 minutes to administer, however, several interviews were conducted face-to-face because this was more convenient. Notes were taken during the interview and transcribed in full afterwards. Open-ended responses were analysed using a word processor. Closed-ended questions were analysed using SPSS for Windows, Release 6.1.4 (SPSS Inc., 1996).

### 2.3 OTHER INDICATORS

To complement and validate data collected from the IDU and key informant studies, a range of secondary data sources were examined, including survey, health and law enforcement data. The pilot study for the IDRS (Hando et al., 1997) recommended that such data should:

- C be available at least annually;
- C include 50 or more cases;
- C provide brief details of illicit drug use;
- C be collected in the main study site (Sydney or NSW for the present study);
- C include details on the four main illicit drugs under investigation.

Data sources which fulfil these criteria and have been included in this report are:

- C telephone advisory data, provided by the Alcohol and Drug Information Service (ADIS);
- C purity of drug seizures made by the Australian Federal Police (AFP) provided by the

- Australian Forensic Drug Laboratory (AFDL) courtesy of the Australian Bureau of Criminal Intelligence;
- C police offence data, provided by Crime Agencies, NSW Police Service;
  - C toxicology data from methadone clinics provided by the Royal North Shore Toxicology Unit;
  - C data from Needle and Syringe Exchange Programs (NSEPs) in Sydney;
  - C statewide rates of opioid-related fatalities provided by the Australian Bureau of Statistics (ABS);
  - C toxicology of suspected overdose fatalities in the Sydney metropolitan area provided by the Division of Analytical Laboratories, NSW Health Department;
  - C toxicology data on intoxicated drivers provided by the Division of Analytical Laboratories, NSW Health Department;
  - C data from specialist surveys of illicit drug users.

Some indicators in NSW were unavailable at the time of writing this report, or did not meet the above criteria. These included ambulance and emergency room data, treatment admission data, HIV and HCV incidence and prevalence data (National Centre in HIV Epidemiology and Clinical Research), and data on drug use prevalence from the National Household Survey, (National Drug Strategy, CDHAC).

Only data from July 1997 onwards has been included in this report. The reader is referred to previous IDRS reports (O'Brien, Darke and Hando, 1996; Hando et al., 1997; Hando et al., 1998) for indicators of illicit drug use prior to July 1997 in NSW.

**3.0 SUMMARY OF DRUG TRENDS**

The 1998 IDRS detected a number of drug trends during the past 6-12 months from analyses of the IDU survey, the key informant survey, and other indicators. Table 3.1 contains a summary of information on the price, availability, purity, and use of each of the four main drug types monitored by the IDRS. A brief description of the major drug trends is also provided below.

**Table 3.1 Price, availability, purity and use of heroin, amphetamine, cocaine, and cannabis.**

	Heroin	Amphetamine	Cocaine	Cannabis
Price				
Cap	\$25-50	\$50	\$50	\$20-25
Gram	\$280	\$100	\$200	(gram)
Change	Decreased	Stable	Decreased	\$400 (ounce) Stable to decreasing
Availability	Easy Stable	Easy Stable	Easy Increased	Easy Stable
Purity <sup>a</sup>	71% Small increase	21% Stable	64% Small increase	High <sup>b</sup> Stable <sup>b</sup>
Use	Increased	Stable	Increased	Not clear

<sup>a</sup> Based on the purity of AFP seizures

<sup>b</sup> Based on IDU and key informant estimates

**HEROIN**

The major trends in heroin use were a decrease in price and an increase in the use of heroin, accompanied by continuing high purity and ready availability of heroin (see Table 3.1). The large increase in the proportion of heroin users injecting cocaine was also noteworthy, and is discussed further under cocaine trends. Increased frequency of heroin use was found in the IDU survey, and was associated with more health-related problems. There was a continuing trend for more opioid-related fatalities, smoking of heroin and heroin use among cannabis users.

**AMPHETAMINE**

The price, purity and availability of amphetamine had not changed since the 1996 IDRS. Information obtained from key informants and IDU suggested that amphetamine use patterns were stable, and the number of new amphetamine users was declining.

**COCAINE**

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## SUMMARY OF DRUG TRENDS

In 1998 there was a large increase in cocaine use, which was not restricted to the IC (where increased cocaine use was found in 1997). Cocaine had become more available, particularly "caps" of cocaine, which were substantially cheaper than in 1997 (\$50 vs. \$80). Cocaine use consisted nearly entirely of heroin users injecting powder cocaine. There were numerous health consequences reportedly associated with cocaine use, most of which related to the frequency with which cocaine was injected (10-15 times/day).

### CANNABIS

The potency of cannabis remained high, and cannabis was still considered easy to obtain. Most IDU and key informants indicated that the price of cannabis was the same as in previous years (\$400 per ounce); however, there was a trend toward more IDU purchasing cannabis for less than in previous years which was reflected in the median price of cannabis per ounce (\$350). There were mixed reports about trends in cannabis use. The IDU survey suggested that use had decreased, whereas key informant reports and other indicators suggested that more young people were using cannabis. The existence of psychological problems among cannabis users was also noted by a number of key informants. A continuing trend from 1997 was an increase in heroin use among cannabis users seeking treatment.

### OTHER DRUGS

The main trend noted with regard to other drug use was that the use of pharmaceutical drugs among IDU remained relatively high. Several other trends regarding steroid and ecstasy use were noted by key informants (see Table 3.2).

**Table 3.2 Trends in other drug use**

- |   |  |
|---|--|
| C | high but stable proportion of IDU injecting methadone  |
| C | high but stable proportion of IDU using benzodiazepines  |
| C | ecstasy had decreased in price (\$50 tablet) and had become more available                           |
| C | ecstasy purity stable  |
| C | more GHB use and cocaine use among ecstasy users   |
| C | more steroid users   |
| C | increase in the use of non-steroidal performance enhancing drugs (e.g., insulin) among steroid users |



DRUG-RELATED ISSUES

Trends in drug-related issues (Table 3.3) included more health-related problems, particularly increasing rates of opioid-related fatalities, and injection-related problems which were associated with the injection of methadone and cocaine. There was a steady increase in the dispensing of injecting equipment from NSEPs, suggesting an increase in the use of injecting equipment in Sydney. The IDU and key informants reported that there had been more police activity recently and a proportion of IDU (35%) believed that police activity had made it harder to obtain drugs. Key informants reported more violent crime (particularly bag snatches) being committed by heroin users, but the IDU survey did not find an increase in self-reported violent crime relative to 1997.

**Table 3.3 Trends in drug-related issues**

C	increase in opioid-related overdoses
C	more injection-related problems, particularly associated with methadone injection and cocaine injection
C	an increase in dispensing (and return) of injection equipment from NSEPs
C	increased police activity
C	possible increase in violent crime

RESEARCH IMPLICATIONS

The findings from the 1998 IDRS suggest the following areas for further investigation:

1. a continuation of research into factors influencing the current popularity of heroin use and its availability, and interventions to reduce the harms associated with heroin injection, such as overdose;
2. an examination of factors influencing transitions to injecting heroin (e.g., smoking heroin among cannabis users);
3. research into the harms associated with cocaine injection, particularly HIV-HCV risk taking behaviours, and methods of reducing these harms;
4. research into measures that would reduce methadone injection and associated injection-related problems.

Note that some of these issues may have received some research attention to date.

## 4.0 CURRENT DRUG SCENE AND RECENT TRENDS

### 4.1 OVERVIEW OF THE IDU SAMPLE

#### 4.1.1 DEMOGRAPHICS OF THE IDU SAMPLE

The demographic characteristics of the IDU sample are summarised in Table 4.1.

**Table 4.1 Demographic characteristics of IDU sample (N=176)**

<b>Demographic</b>	<b>% of IDU</b>
Sex (male)	70
Ethnicity:	
ESB	72
NESB	28
ATSI	18
Employment	
Not employed	83
Full time	3
Part time/casual	7
Student	6
Home duties	2
Tertiary education	
None	69
Trade/technical	27
University/college	5
Currently in treatment	26
Prison history	53
	<b>Years</b>
Age (median)	28
School education (mean)	9.9

The median age of subjects was 28 years (range 16-52), with 70% being male (Table 4.1). There was no difference in the median age of the IC and WS samples (29 vs. 27 years). Females were younger than males (median age: 25 vs. 29 years,  $t_{174} = 2.5$ ,  $p < .05$ ). Only a minority (24%) of subjects were currently in drug treatment, which was mostly methadone treatment.

The mean number of years spent in formal school education was 9.9 (SD 1.9, range 0-12 yrs), with WS subjects reporting fewer years of education (9.2 vs. 10.4 years,  $t_{174} = 4.3$ ,  $p < .001$ ). The majority of the sample had no tertiary education (69%), with IDU from WS more likely to report no post-school education (82% vs. 59%,  $\chi^2 = 10.3$ ,  $p < .001$ ). The overwhelming majority of the sample was currently unemployed (83%), although this was more common among IDU in WS (94% vs. 74%,  $\chi^2 = 14.8$ ,  $p < .001$ ).

Over half of subjects had been imprisoned (53%), with males (60% vs. 36%,  $\chi^2 = 8.8$ ,  $p < .01$ ) and IDU from WS (72% vs. 38%,  $\chi^2 = 20.5$ ,  $p < .001$ ) more likely to have been so.

#### 4.1.2 DRUG USE HISTORY OF THE IDU SAMPLE

The median age of first injection was 19 years (range 8-41 years), with females first injecting at an earlier median age (17 vs. 20 yrs,  $U = 2343$ ,  $p < .01$ ). There was no difference in the age of first injection of WS and IC subjects (18 vs. 19.5 years).

Heroin was the drug first injected by 66% of subjects, with 28% having first injected amphetamine, 5% other opiates and 1% ecstasy. A larger proportion of WS subjects had first injected heroin (78% vs. 58%,  $\chi^2 = 7.5$ ,  $p < .01$ ), with a trend for more IC subjects to have first injected amphetamine (33% vs. 21%,  $\chi^2 = 3.1$ ,  $p < .08$ ).

There was also evidence from the IDU survey that less heroin users had made a transition to injecting heroin from amphetamine injecting than in 1997. Specifically, 69% of heroin users reported that heroin was the first drug they injected in 1998, compared to 55% in 1997, while the proportion of heroin users reporting that amphetamine was the first drug they had injected was lower in 1998 than in 1997 (36% vs. 25%). This suggests that more heroin users have begun injecting heroin without making a transition from amphetamine injection.

Heroin was overwhelmingly the current drug of choice of the sample (82%), with small proportions preferring cocaine (7%), amphetamines (5%), methadone (3%), benzodiazepines (1%), alcohol (1%) and cannabis (1%).

As in previous years, the sample engaged in a wide variety of polydrug use. Of the 14 drug types asked about, the median number ever used was nine (range 2-14), with five (range 2-11) classes having been used in the last six months. A median of three (range 1-9) classes had been injected, two (range 1-6) classes in the preceding six months.

The drug use histories of IDU, and routes of administration used for each drug are presented in Table 4.2. As in previous years, the use of all four main illicit drugs the IDRS focuses upon (heroin, amphetamines, cocaine and cannabis) was widespread.

**Table 4.2 Drug use history of IDU sample (N=176)**

Drug Class	Ever used	Ever Injected	Injected last 6 months	Ever smoked	Smoked last 6 months	Ever Snorted	Snorted last 6 months	Ever Swallow	Swallow last 6 months	Used last 6 months	Days used last 6 months*
	%	%	%	%	%	%	%	%	%	%	
1. Heroin	100	99	93	55	22	27	5	17	7	93	180
2. Methadone	69	38	23					67	40	42	90
3. Other opiates	56	23	6	7	1	2	1	48	28	32	6
4. Amphetamines	71	64	30	11	2	44	14	38	9	35	9
5. Cocaine	81	69	55	9	3	38	17	5	4	59	25
6. Hallucinogens	60	13	0	4	3	2	1	57	17	17	3
7. Ecstasy	43	14	6	4	2	7	5	42	15	17	5
8. Benzodiazepines	72	19	10	6	2	3	1	72	59	60	17
9. Steroids	3	1	1					2	1	1	91
9. Alcohol	80	7	0					79	50	49	24
10. Cannabis	92									69	60
12. Anti-depressants	28									15	30
13. Inhalants	29									7	3
14. Tobacco	95									93	180

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\* Median number of days used in the last six months by those IDU using the drug class in that period.

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## 4.2 HEROIN

Trends in heroin use were established from information obtained from 25 key informants and any of the IDU surveyed who felt confident to comment on heroin trends, or who had used heroin in the last six months.

Nearly all of the IDU sample could comment on aspects of heroin price, purity and availability (163/176). Twenty-five key informants reported on the use of heroin, including general health workers (n = 7), needle exchange workers (n = 6), drug treatment workers (n = 5), two researchers, two police officers, a methadone worker, a user group representative, and an outreach worker. Key informants were familiar with heroin users from the inner city, inner west and eastern suburbs of Sydney (n = 15), western and south western Sydney (n = 6), and throughout Sydney/NSW (n = 4). Eighteen key informants described heroin users who were primarily from an English-speaking background, four described heroin users mainly from a non-English speaking background, and three described mainly Aboriginal heroin users.

### 4.2.1 PRICE

The median price of heroin reported by IDU in 1998 was substantially cheaper than in 1997 (\$280 vs. \$400/gram), and was cheaper in WS (modal price: \$240), compared to the IC (modal price: \$300). Key informants reports on the price of heroin (n = 7) were varied, but suggested that a gram of heroin cost between \$150 and \$500, consistent with IDU reports. A substantial proportion of IDU also reported purchasing heroin in half-grams (\$150) and quarter-grams (\$70).

Caps were the most common means of heroin purchase reported among IDU, and were also cheaper in WS (modal price: \$25) than in the IC (modal prices: \$30, \$40 or \$50). Key informant reports on the price of heroin caps (n = 21) were consistent with IDU reports, suggesting that most caps cost \$30 to \$50 (n = 17). It is noteworthy that five key informants indicated that caps could be purchased for under \$30 (\$20-25). Key informant reports suggested that heroin caps had become available in a variety of sizes to accommodate smaller purchases.

Consistent with the price of heroin reported by IDU and key informants, the ABCI also reported that covert purchases of heroin made during the 1997-98 financial year usually cost between \$20 and \$80 a cap, \$150 a half-gram, and \$300 to \$450 for a street gram.

A key informant from law enforcement reported that heroin costs approximately \$6000-6500 per pound, or \$3000 per ounce, if purchased in multiples of 700 gram blocks.

The majority of IDU believed that the price of heroin was stable (58%) or decreasing (25%), with only 6% believing it had become more expensive in the last six months. Similarly, most key informants thought that the price of heroin was either stable (n = 8) or had decreased (n = 7) during the past six months.

## 4.2.2 AVAILABILITY

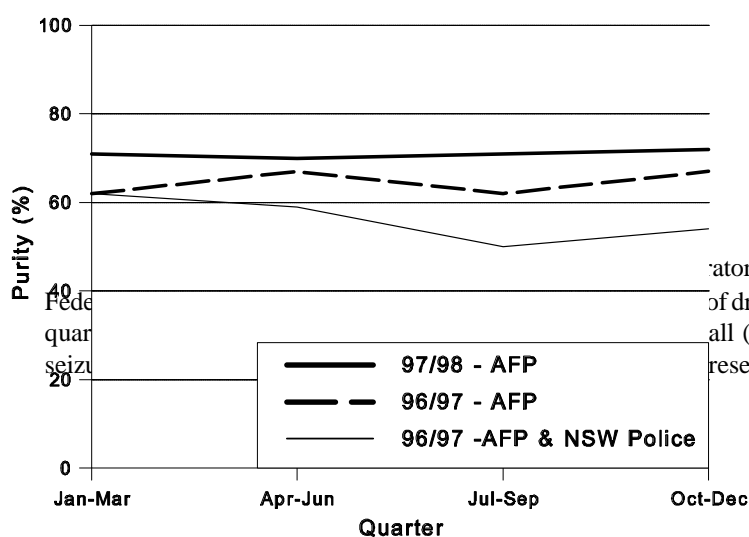
Heroin was considered easy or very easy (94%) to obtain by almost all IDU, while the availability of heroin was considered stable (71%). Consistent with IDU reports, all key informants considered heroin easy to very easy to obtain, and the majority of key informants (n = 15) also reported that the availability of heroin had remained stable.

Six key informants commented on the changes in the types of people dealing heroin, including an increase in the number of Aboriginals dealing heroin, an increase in the number of South Pacific Islanders dealing both cocaine and heroin especially in Kings Cross, and an increase in the number of young dealers.

## 4.2.3 PURITY

Analysis of heroin seizures<sup>1</sup> made by the Australian Federal Police between July 1997 and June 1998 (n = 55) found a mean purity level of 71% (range 43-84%), with very little fluctuation occurring between quarters (1%) (see Figure 4.1). Comparison with the purity of heroin seizures made by the AFP in 1996-97 (64%) suggests a small increase in purity in 1997-1998. It should be noted that the purity of AFP seizures may be higher than the purity of street level heroin. Comparison of the purity of AFP seizures from 1996/97 with the purity of all seizures made by police in NSW in 1996/97 (see Figure 4.1) shows that AFP seizures were on average 9% more pure than all police seizures made within NSW (64% vs. 55%).

The majority of IDU reported heroin purity as medium, whereas key informant reports suggested it was medium to high. These reports, albeit gross, are consistent with the purity levels of police seizures. Both IDU (47%) and key informants (n = 14) reported that purity levels had remained stable in the last six months, which is not inconsistent with the small increase in the purity of AFP police seizures from 64% in 1997 to 71% in 1998.



**Figure 4.1** Purity of heroin seizures received by the AFDL in each quarter of the 1996-97

laboratories analyse most drugs seized by the Australian Federal Police (AFP) of drugs received at the laboratory within the relevant quarter. This includes all (street) seizures of two grams or less and larger seizures presented.

and 1997-98 financial years.

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#### 4.2.4 USE

##### *Prevalence of heroin use among different populations*

Surveys of school students and TAFE students provides an estimate of heroin use among youth. The 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health), which sampled 12 to 17 year olds from 143 NSW schools, found that 5% of males and 3% of females reported having ever used heroin or other opiates (i.e., methadone, morphine or pethidine) other than for medical reasons. Recent opiate use (within the past week) was reported by 1% of males and 0.3% of females. The 1996 survey of drug use among NSW TAFE students aged 16 to 25 years found that 5% of students (6% of males and 4% of females) had tried heroin (AGB McNair, 1998): an small increase relative to the 4% of TAFE students surveyed in 1992 who had tried narcotics (Keys Young, 1993). It should be noted that these figure pertain to opiate use among school students in 1996, not current use of opiates among school students.

The prevalence of heroin use among injecting drug users can be estimated from NSEP data collected on client visits in 1998 from the IC (N = 28 818) and WS (N = 1316). The type of drug used by NSEP clients was collected between January and June 1998 at the IC NSEP, and during July 1998 at the WS NSEP. Just over half (55%) of the client visits sampled from each NSEP used heroin. Please note that the these figures refer to information on client visits, not the number of different clients attending the service.

##### *Current patterns in heroin use*

The demographic characteristics of heroin users were estimated from key informant responses and the characteristics of IDU who had used heroin within the last six months. Heroin users were very similar in demographics to the overall IDU sample, most being in their late twenties, unemployed (85% of IDU), most had ten years of schooling, and more than half were male (72 % of IDU). Twenty-eight percent of heroin users surveyed were from a NESB, and 19% were ATSI. About half (54% of IDU) had a prison history.

Both rock and powder heroin use were widespread in both the WS and IC IDU samples. Key informants also reported the use of both rock and powder heroin throughout Sydney, although a number of key informants reported that what users thought was rock may have been compressed powder. Codeine preparations were the most common forms of other opioids being used among the IDU sample, with Panadeine Forte<sup>7</sup> being the most common.

Injection was the most common route of administration among IDU surveyed, with 93% having injected heroin in the last six months. In accordance with this observation, key informant reports suggested that nearly all the heroin users they had contact with injected heroin.

Key informants reported that most heroin users used heroin on a daily basis, with minorities using less frequently. This observation was supported by the IDU survey, which found that heroin was used on a median of 180 days in the last six months (i.e., daily). According to key informant reports, the frequency of use per day among injecting heroin users was one to six injections a day, where typically one cap of heroin was used per injection.

Both the IDU survey and key informant reports suggested that polydrug use was very common among heroin users. Patterns of polydrug use among heroin users were almost identical to those

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among the overall IDU sample (see Table 4.2). Key informant reports and the IDU survey showed that tobacco, benzodiazepines, cannabis, alcohol, cocaine and methadone were the most commonly used other drugs.

### *Trends in heroin use*

Participants in the IDU survey (n = 34) noted several general trends in heroin use. The major themes were that there were more heroin users, more young heroin users, and that smoking heroin was becoming more common. In line with these trends noted by IDU, key informants perceived an increase in the number of heroin users, an increase in the number of young heroin users (n = 8), an increase in both the quantity and the frequency of heroin use (n = 5), and an increase in smoking heroin (n = 2). Heroin use among IDU was more also found to be more frequent than in previous years (180 days vs. 120 days in 1997 and 128 days in 1996), particularly among the IC IDU (1996: 77 days, 1997: 90 days, 1998: 180 days). All of these trends are indicative of an increase in heroin use.

The prevalence of smoking heroin is worthy of particular attention. Nearly a quarter of the IDU surveyed (22%) had smoked heroin in the six months preceding the interview, and key informants reported that a similar proportion (10-15%) of heroin users smoke heroin B mainly the younger Indo-Chinese heroin users. It is notable that this practice was equally common among WS and IC users (21% vs. 23%). In both the 1996 (24% vs. 13%) and 1997 (26% vs. 12%) IDRS studies, smoking heroin was more common among IDU in WS. Thus while the proportions of IDU in WS who had recently smoked heroin remained stable, the proportion of IC users had risen to match the WS levels, suggesting a diffusion of heroin smoking from WS to the remainder of Sydney. Six key informants reported that they had observed a transition from smoking to injecting, predominantly by the younger Indo-Chinese users. The proportion of IDU who had recently smoked heroin was particularly high if one considers that injecting is the preferred route of administration among this sample. Such a high rate of smoking among IDU suggests that there may have also been a substantial increase in smoking heroin among non-IDU drug users.

A further salient trend was the increase in cocaine use among heroin users. Many participants in the IDU survey reported that cocaine injection was becoming more common among heroin users, including the injection of a cocktail of cocaine and heroin, known as a "speedball" or "CC". Consistent with this observation, many heroin key informants (n = 14) also perceived a substantial increase in the number of primary heroin users using cocaine in both the IC and WS over the last six months. Key informants also reported that heroin users either used cocaine and heroin consecutively or mixed the heroin with cocaine to form a "speedball". A substantial increase in cocaine use among heroin users was also found by the IDU survey (see *Trends in cocaine use*, p. 25).

#### 4.2.5 SUMMARY OF HEROIN TRENDS

Table 4.3 contains a summary of trends in the price, purity, availability and use of heroin in the last six to twelve months. Heroin appears to be highly available, cheaper than in 1997 and of high purity. The use of heroin has increased since 1997, and there has been a dramatic increase in the injection of cocaine among heroin users.

**Table 4.3 Estimated trends in the price, availability, purity and use of heroin**

<b>Price</b>	
Gram	\$280 (WS \$240, IC \$300); Decreased
Cap	\$30 (WS \$25; IC \$30, \$40, \$50); Decreased
<b>Availability</b>	Easy; Stable
<b>Purity</b>	71% (AFP seizures); Small increase
<b>Use</b>	Increase in the number of heroin users Increase in quantity and frequency of use Diffusion of heroin smoking to IC Increased cocaine use among heroin users

### 4.3 AMPHETAMINE

A large proportion of the IDU sample were able to comment aspects of amphetamine price, purity and availability (66/176), although this proportion was lower than in 1997 (38% vs. 52%).

Only two key informants nominated amphetamine users to be the illicit drug users with which they had most contact. Information on amphetamine use trends provided by these two key informants was supplemented with comments on amphetamine use from other key informants (n = 12). Amphetamine key informants reported that amphetamine users they had contact with resided in all areas of Sydney, although they came in contact with users through working in the inner city and eastern suburbs of Sydney.

#### 4.3.1 PRICE

Most IDU surveyed reported that amphetamine cost \$80-100 per gram (median price: \$100), and \$50 a cap. Consistent with IDU reports, key informants reported that amphetamine cost \$80-100 per gram. Six IDU reported on the price of an ounce of amphetamine, with a median price of \$1000. The price of amphetamine appears unchanged since the 1996 IDRS, and nearly all of those who commented on amphetamine believed the price had remained stable. Consistent with the price of amphetamine reported by IDU and key informants, the ABCI also reported that covert purchases of amphetamine made during the 1997-98 financial year cost between \$80 and \$100 a gram.

#### 4.3.2 AVAILABILITY

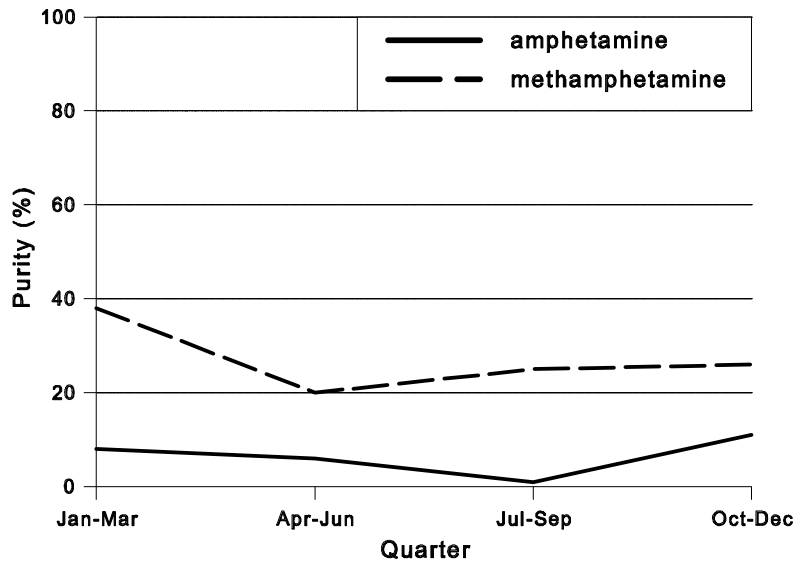
Both IDU and key informant reports suggested that amphetamine was easy or very easy to obtain (91% of IDU), and availability was stable (83% of IDU). One of the key informants noted that a lot of amphetamine came from Queensland and the manufacture/importation was run by "bikies".

#### 4.3.3 PURITY

Both IDU and key informant reports suggested that amphetamine purity was medium to low (80% of IDU), and that purity had remained stable or decreased over the preceding six months (74% of IDU).

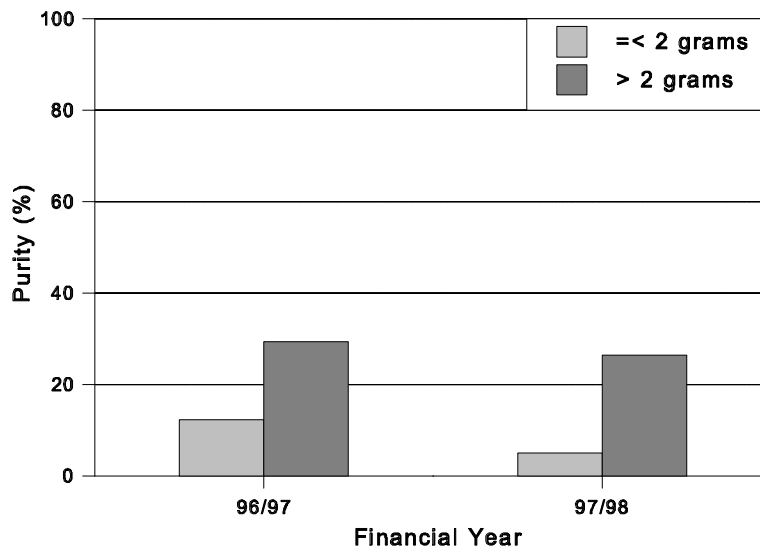
According to the purity of AFP seizures of amphetamine made in 1997-98 (n = 46), amphetamine purity was low (21%), and stable relative to 1996-97 (20%). As can be seen in Figure 4.2, there was little fluctuation in purity between quarters, and the purity of methamphetamine seizures was greater than the purity of amphetamine seizures. The quarterly purity data for AFP seizures made in 1996-97 is not presented because there were too few seizures analysed. The annual mean purity of AFP seizures can be seen in Figure 4.3. There was a substantial difference in the purity of small (> 2 grams) and large (> 2 grams) amphetamine seizures (see Figure 4.3). The purity of

small seizures made by the AFP was 5%; comparable with the purity of all NSW police seizures of amphetamine made in 1996-97 (7%). This suggests that there has been little change in the purity



of street level amphetamine from 1996-97 to 1997-98.

**Figure 4.2** Mean purity of Australian Federal Police seizures of amphetamine and



methamphetamine received by the AFDL in each quarter of the 1997-98 financial year.

**Figure 4.3** Mean purity of Australian Federal Police seizures of amphetamine (amphetamine and methamphetamine) received by the AFDL in the 1996-97 and 1997-98 financial years.

#### 4.3.4 USE

##### *Prevalence of amphetamine use among different populations*

The prevalence of amphetamine use among youth can be estimated from the 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health) and the 1996 Survey of NSW TAFE students. The 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health) found that 8% of males and 6% of females aged between 12 and 17 years reported having ever used amphetamine other than for medical reasons. Recent use of amphetamine was low, being reported by 2% of males and 1% of females. The 1996 Survey of NSW TAFE students aged 16 to 25 years found that 22% of students had ever tried amphetamine. This suggests an increase in amphetamine use relative to 1992 when 12% of students had tried any stimulant drug. Although these figures suggest an increase in stimulant use among youth, they are calculated from data collected in 1996, and may not reflect stimulant use among youth in 1998.

The prevalence of amphetamine use among injecting drug users can be estimated from NSEP data collected on client visits in 1998 from the IC (N = 28 818) and WS (N = 1316). Only 4% of 1998 client visits sampled from an IC NSEP used amphetamine, and 8% of client visits sampled from a WS NSEP in 1998 used amphetamine. Note that these figures refer to information on client visits, not the number of different clients attending the service.

Toxicology data from populations of illicit drug users also provides an indication of the extent of amphetamine use, and may provide an early indication of trends in amphetamine use. Amphetamine was found in only 3% of overdose fatalities in the January-June period of 1998, with no regional differences in prevalence rates (IC 3%, WS 2%). The 1998 figures were not substantially different from the corresponding period in 1997 (2%, IC 1%, WS 4%). Amphetamine was found in only 1% of urine samples taken from methadone patients in 1998, which is consistent with the data from 1997, where 2% of urine samples from methadone patients were found to have amphetamine present in their urine samples.

Taken together, these findings suggest that the prevalence of amphetamine use among populations of illicit drug users is low and stable.

##### *Current patterns of amphetamine use*

Information from key informant reports and from the IDU survey were used to establish the demographic characteristics of amphetamine users. Amphetamine users were similar in age to other IDU, mostly from an ESB (83% of IDU) and over half (60% of IDU) were male. Relative to other IDU, those IDU who had used amphetamine in the last six months were less likely to be unemployed (67% vs. 91%,  $\chi^2 = 16.3$ ,  $p < .00005$ ), more likely to have tertiary education (46% vs. 23%;  $\chi^2 = 9.3$ ,  $p < .002$ ) and more years of schooling (10.3 vs. 9.7 years,  $t_{174} = -2.3$ ,  $p < .03$ ), and were less likely to have a prison history (26% vs. 67%;  $\chi^2 = 26.5$ ,  $p < .000005$ ). Few were in treatment for amphetamine use.

Among those IDU who had used amphetamine in the last six months, most had injected it (87%), although a substantial proportion had also snorted (41%) or swallowed (26%) the drug. Few had smoked amphetamine (5%). Key informants also reported that most amphetamine users injected the drug, and reported that about one-quarter use amphetamine daily, but most use two to three days per week.

Amphetamine use among IDU was almost exclusively of powder (95%), with liquid amphetamine ("ox blood") and prescriptions amphetamines being rare (8%). One key informant noted that amphetamine users all use "street speed" (powder methamphetamine/amphetamine). Only one person this key informant had contact with (out of 100 users) had mentioned "shaboo" (smokeable methamphetamine crystals, also called "ice"), and only three referred to using diverted dexamphetamine, ritalin or duramine tablets.

Key informant reports suggested that other drugs commonly used by amphetamine users included hallucinogens, ecstasy, benzodiazepines (e.g., prescribed Normison, Valium and Rohypnol), and experimental heroin use. IDU who had used amphetamine in the past six months were more likely to use hallucinogens, ecstasy, inhalants, and benzodiazepines, than other IDU. They were also more likely to use antidepressants, opiates other than heroin, to drink alcohol and smoke cannabis than other IDU.

### *Trends in amphetamine use*

There was a fall in the proportion of IDU surveyed reporting amphetamines use in the past six months, from 55% in 1997 to 35% in 1998; only 5% nominated amphetamine as their drug of choice in 1998 (cf. 15% in 1997). The proportion of IDU for whom amphetamine was the first drug injected fell from 39% in 1997 to 28% in 1998. There was also a slight decrease in the frequency of amphetamine use, with the median days used in the last six months being nine in 1998 compared with 12 in 1997. The recent use of amphetamines was more common among IC subjects (45% vs. 21%,  $\chi^2 = 0.9$ ,  $p < .001$ ), and this use was more frequent than among WS subjects (medians 12 vs. 5 days,  $U = 468.5$ ,  $p < .07$ ). Consistent with the reduction of amphetamine use among the IDU sample, one informant reported that there had been a decrease in the number of amphetamine users attending an IC NSEP, from approximately 30% in 1997 to approximately 15% in 1998. This key informant suggested that this decrease may be due to a drop in the number of "new" amphetamine users. Several heroin key informants reports ( $n = 4$ ) also suggested that amphetamine was less popular or that amphetamine use had decreased.

Despite an apparent reduction in amphetamine use among IDU, there were several key informant reports ( $n = 6$ ) that suggested an increase in amphetamine use among specific groups. Similarly, several IDU ( $n = 7$ ) reported that amphetamine use had increased and become more available in the IC.

One key informant also noted more variability in the quality of amphetamine. Amphetamine was more coarsely ground and looked like sand, had a more beige appearance (normally white), and was more likely to be cut with other drugs (e.g., GHB). This key informant had noticed occasional reports of "ice" (methamphetamine crystals, also called "shaboo"), but this had



occurred only two to three times in the previous six months. One of the amphetamine key informants, and several cocaine key informants, thought that the cocaine available in Sydney may be adulterated with amphetamine or other stimulants. One key informant also referred to a drug called "crank" which was thought to be a mixture of amphetamine and cocaine. The subjective effects included a rapid onset euphoria which was likened to the cocaine effect, followed by longer lasting stimulant effect.

#### 4.3.5 SUMMARY OF AMPHETAMINE TRENDS

Trends in amphetamine price, availability, purity and use are summarised in Table 4.4. Few new amphetamine trends emerged from the 1998 IDRS, with the price, purity and availability of amphetamine being very stable. Although there were mixed reports about trends in amphetamine use, most evidence suggested it was relatively low and stable to decreasing.

**Table 4.4 Estimated trends in the price, availability, purity and use of amphetamine**

<b>Price</b>	
Gram	\$100; Stable
Cap	\$50; Stable
<b>Availability</b>	Easy; Stable
<b>Purity</b>	21% (AFP seizures); Stable
<b>Use</b>	Decreased use among IDU Increase in cutting amphetamine with other drugs



## 4.4 COCAINE

Trends in cocaine use were established from information obtained from four key informants (whose reports were supplemented with comments by other key informants about cocaine use) and any of the IDU surveyed who felt confident to comment on cocaine trends.

The proportion of IDU surveyed who could comment on aspects of cocaine price, purity and availability has continued to increase since 1996, and increased markedly since 1997 (1996: 15%, 1997: 29%, 1998: 59%, n = 104).

Key informants included one needle exchange worker, one outreach worker, one was a general health worker, and one key informant worked in law enforcement. Information on cocaine use trends was supplemented by comments on cocaine use made by other key informants (n = 20), most of whom had regular contact with heroin users (n = 15). Key informants reported that the cocaine users with which they had contact lived mostly in the inner city (Kings Cross, Redfern and Waterloo), south-western Sydney (Marrickville, Cabramatta) and throughout western Sydney.

### 4.4.1 PRICE

According to the IDU surveyed, cocaine cost \$200 per gram (modal price), cheaper than in 1997 for WS (\$240) but not the IC (\$200). A half-gram was reported to cost \$100, an amount that had not been reported in previous IDRS studies.

Caps of cocaine were the most common amount purchased by IDU, and most IDU reported they cost \$50, a drop from \$80 in 1997. It should be noted that none of the IDU surveyed in 1996 reported on the price of cocaine caps, and only 29 did so in 1997, compared with 86 in the 1998 IDRS. Most IDU who commented on the price of cocaine (76%) believed it was stable during the past six months, despite the decrease in price since the 1997 IDRS.

The price of cocaine reported by key informants was slightly cheaper than that reported by IDU, being \$100 to \$200 per gram, and \$20 to \$40 per cap. This discrepancy may have been due to the small number of key informants reporting on the price of cocaine (n = 4). One key informant reported that the price of cocaine at importation was \$65 000/kg for 20 kg batches, or \$90 000 to \$120 000 for a single kilogram, and that the price of cocaine at importation was decreasing. Key informant responses suggested that the price of cocaine was stable to decreasing over the last six months.

Consistent with the price of cocaine reported by IDU and key informants, the ABCI reported that covert purchases of cocaine made during the 1997-98 financial year cost \$20 to \$80 a cap, and \$200 a gram.

In summary, most of the information obtained on the price of cocaine suggests a decrease in price since 1997, particularly in the price of cocaine caps, which more users were purchasing. The increase in the purchase of cheaper cocaine caps is consistent with expansion of the cocaine

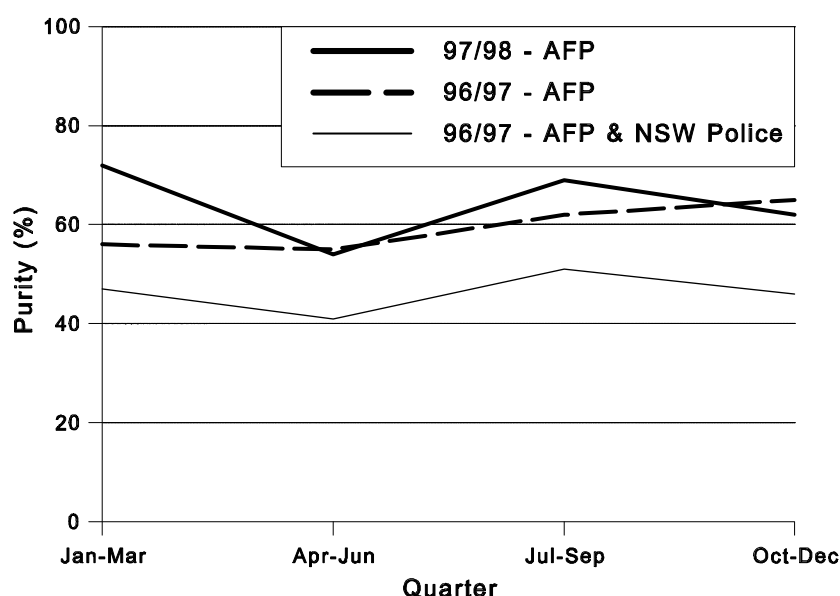
market.

#### 4.4.2 AVAILABILITY

Cocaine was considered to be easy or very easy to obtain by both the IDU surveyed (87%) and the key informants. The IDU reported that availability had remained stable (63%) or increased (29%) over the last six months, while all key informants reported that cocaine had become more available. One key informant reported that the availability of cocaine at importation had also increased, was very easy to obtain, with cocaine importers having devised a unique and effective way of importing the drug.

Six key informants reported an increase in the number of people dealing cocaine in Sydney, and five commented on the involvement of Pacific Islanders in dealing in the IC. A key informant involved in law enforcement reported an increase in the importation of cocaine over the last 12 months. Cocaine importers tended to be white Australians or South Americans, male, business owners, and aged between 30 and 55 years.

#### 4.4.3 PURITY



**Figure 4.4** Purity of cocaine seizures received by the AFDL in each quarter of the 1996-97 and 1997-98 financial years.

The mean purity level of all AFP cocaine seizures in 1997-98 was 64% (range 15-85%), slightly higher than the purity of AFP seizures of cocaine made in 1996-97 (59%) (see Figure 4.4). Of the 43 seizures made by the AFP in 1997-98, only three were small (< 2 grams) and there was no significant difference between the purity of these small seizures and larger seizures. It should be

noted that AFP seizures of cocaine may be of higher purity than street level cocaine. Comparison of AFP seizures from 1996/97 with all police seizures made in NSW in 1996/97 (see Figure 4.4) shows that AFP seizures were, on average, 13% more pure,

Consistent with the purity of cocaine seizures, IDU perceived the purity of cocaine to be medium (51%) to high (28%), with no change in purity over the past six months. There was no consensus among key informant reports regarding the purity of cocaine; however, one key informant did note that large seizures of imported cocaine were high in purity (.90%), and the purity of these seizures had increased in the last 6 months.

#### 4.4.4 USE

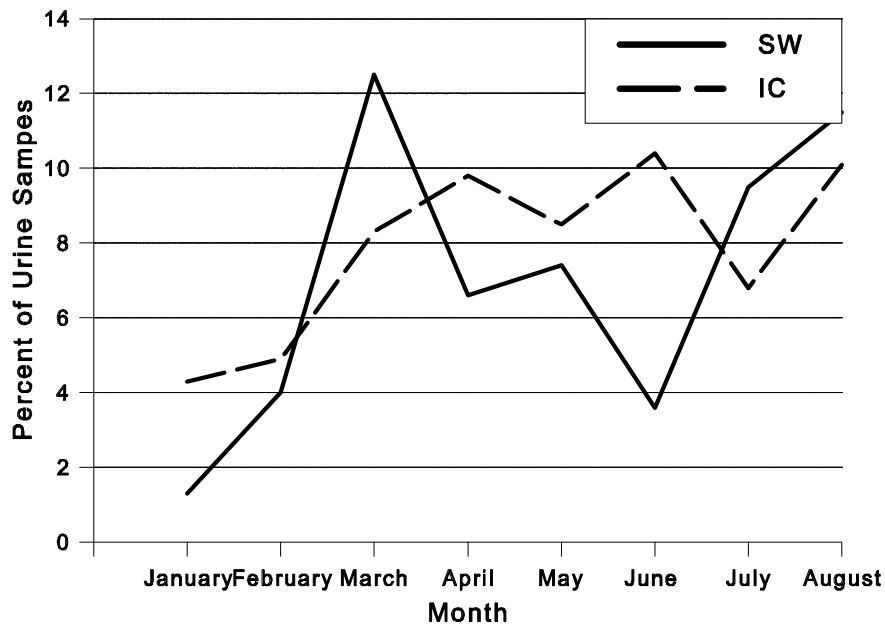
##### *Prevalence of cocaine use among different populations*

The Survey of NSW TAFE students aged between 16 and 25 years found that 9% of students had tried cocaine. There was no other data available to the IDRS on the prevalence of cocaine use among the general population at the time of writing this report.

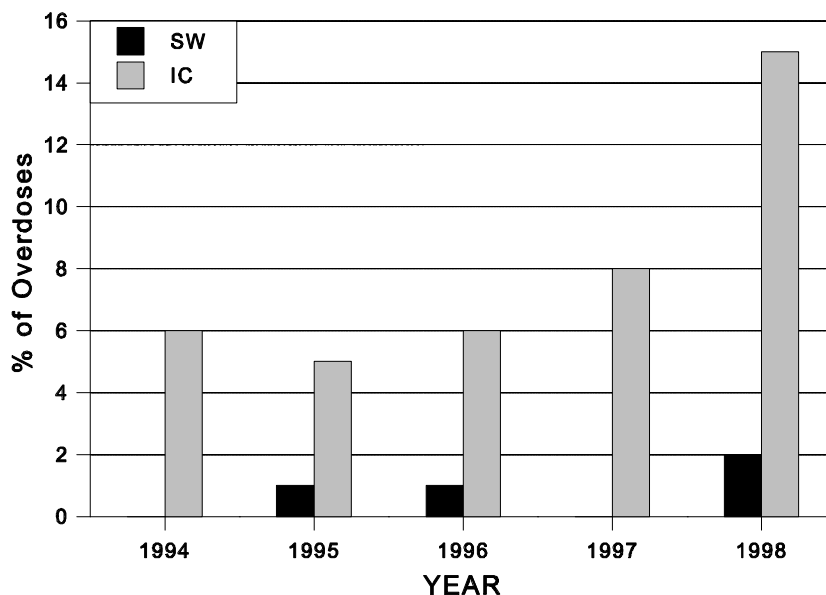
The prevalence of cocaine use among injecting drug users can be estimated from NSEP data collected on client visits in 1998 from the IC (N = 28 818) and WS (N = 1316). Note that these figures refer to information on client visits, not the number of different clients attending the service. Cocaine was the second most common drug used (after heroin) at the IC NSEP (27%), and third most common at the WS NSEP (14%, after methadone 16% and heroin 55%). A further 3% at the IC NSEP had used a cocktail of cocaine and heroin (i.e., speedball). Only one (.003%) person at the IC NSEP reported using crack cocaine. Given the reported high frequency of cocaine injection these figures may over represent the proportion of IDU who use cocaine.

Toxicology data on the urine samples taken from methadone patients and on suspected overdose fatalities provides an indication of trends in the prevalence of cocaine use among illicit drug users. Toxicology of urine samples taken from methadone clients found an increase in the number of cocaine positive urine samples in 1998 (see Figure 4.5). Cocaine was found in 8% of the urine samples between January and August 1998 (IC 8%, WS 7%), double the prevalence found in 1997 (4%, IC 5%, WS 2%). The prevalence of cocaine in suspected overdose fatalities in Sydney also increased from 5% in the January-June period of 1997 to 11% in the same period in 1998. As shown in Figure 4.6, the prevalence was greater in the IC than in the WS (15% vs. 2%), which continues the trend of earlier years toward greater prevalence of cocaine in the IC compared to the WS (1997, 8% vs. 0%; 1996, 6% vs. 1%; 1995, 5% vs. 1%; 1994, 6% vs. 0%).

In summary, the prevalence of cocaine use appears to have increased in 1998 relative to 1997, and is now the second most common illicit drug (excepting cannabis use) used among IDU after opiates. Comparison with drug use patterns in previous years suggests that cocaine has replaced amphetamine as the stimulant of choice among heroin users.



**Figure 4.5** The percentage of urine samples obtained from methadone patients that tested positive for cocaine each month from January to August 1998, for methadone



clinics in the IC and in the WS of Sydney.

**Figure 4.6** The percentage of suspected overdose fatalities in the IC and WS that tested positive for cocaine per year (1994-1998). 1998 figures represent cases analysed from January to August only.

*Current patterns of cocaine use*

Information from key informant reports and from the IDU survey were used to establish the demographic characteristics of cocaine users. IDU who had used cocaine in the last six months were similar in age and gender to the overall IDU sample. Several differences were noted between cocaine users (IDU who had used cocaine in the last six months) and other IDU. Cocaine users were less likely to be employed (10% vs. 28%,  $\chi^2 = 9.9$ ,  $p < .002$ ), were more likely to have a prison history (62% vs. 40%,  $\chi^2 = 7.7$ ,  $p < .006$ ) and had slightly lower levels of education (mean years 9.6 vs. 10.3,  $t_{174} = 2.9$ ,  $p < .005$ ). There was also a high representation of ATSI (23%) and NESB (35%) among cocaine users.

Nearly all IDU reported using powder cocaine, with only 3% reporting use of crack cocaine. Key informants also reported that the cocaine used was predominantly powder (cocaine hydrochloride), with no reports of crack cocaine. As noted earlier, survey of attendees at an IC NSEP also found that only one client out of 28 818 client visits reported crack cocaine use. Nearly all IDU (91%) who had used cocaine in the last six months had injected it. Key informant reports suggested that most cocaine users injected cocaine daily, and regular users injected cocaine between 3 to 30 times a day (10-15 times/day on average).

Key informants reported that most cocaine users (95-100 %) also used heroin, an observation consistent with the IDU survey: 96% of IDU who had used cocaine in the last 6 months, had also used heroin in the last 6 months, and 80% nominated heroin as their drug of choice.

The IDU survey showed that patterns of polydrug use among cocaine users were extremely similar to those among the total sample of IDU. Specifically, the most commonly used other drugs were heroin (96%), tobacco (92%), cannabis (68%), benzodiazepines (58%), alcohol (49%). Use of other stimulant drugs was relatively low: amphetamine (33%), ecstasy (14%), hallucinogens (15%) and inhalants (8%). In accordance with the polydrug use found among the cocaine using IDU, key informants perceived that benzodiazepine, cannabis and alcohol use were common among cocaine users, whereas the use of hallucinogens and ecstasy were not.

*Trends in cocaine use*

The figures from the IDU survey relating to cocaine use are of major importance. Fifty nine percent of subjects had used cocaine in the preceding six months, on a median of 25 days. This represents a substantial increase on the previous years of the IDRS, both in terms of proportions recently having used the drug and the frequency of use (Table 4.5). There was no difference in the proportions of WS and IC subjects who had used cocaine in the preceding six months (62% vs. 57%), but WS subjects had used the drug more frequently than the IC group (48 vs. 12 days).

Key informant reports also strongly suggested that the number of cocaine users had increased in the last six months, particularly injecting cocaine use.

**Table 4.5 Cocaine use 1996-1998 among IDRS subjects**

<b>Year</b>	<b>Proportion used*</b>	<b>Days used*</b>	<b>Daily use*</b>
1996	41%	3	2%
1997	34%	4	2%
1998	59%	25	17%

\* Among those who had used cocaine in the preceding six months

Heroin key informants (n = 14) also reported an increase in the number of primary heroin users using cocaine in both the inner city and western/south western Sydney over the last six months. Reports from both cocaine and heroin key informants indicated that cocaine was either mixed and injected with heroin ("speedball" or "cc") or the cocaine injection was followed by an injection of heroin.

A number of key informants also described a variety of drug cocktails that contained cocaine. One key informant described a cocktail named "crank" which was a mixture of cocaine and speed, another described "CK1" which was a mixture of cocaine and ketamine, and a third key informant described "manjos" which were a cocktail of marijuana and stimulants (cocaine or amphetamine). Key informant reports also suggested that cocaine may be adulterated with amphetamine or related stimulants.

## 4.4.5 SUMMARY OF COCAINE TRENDS

Cocaine trends are summarised in Table 4.6. In 1998 cocaine became more available, particularly as "caps" of cocaine, which were much cheaper than in 1997. Purity of cocaine also increased slightly. There was a dramatic increase in cocaine injecting among heroin users, who reportedly can inject cocaine 10 to 15 times a day.

**Table 4.6 Estimated trends in the price, availability, purity and use of cocaine**

<b>Price</b>	
<b>Gram</b>	\$200; Stable in IC, decreased in WS
<b>Cap</b>	\$50; Decreased
<b>Availability</b>	Easy; Increased
<b>Purity</b>	64% (AFP seizures); Small increase
<b>Use</b>	Increased use of cocaine Increased injecting of cocaine among heroin users More drug cocktails containing cocaine

## 4.5 CANNABIS

Trends in cannabis use were established from information obtained from six key informants and any of the IDU surveyed who felt confident to comment on the price, availability, potency or trends in cannabis use. Cannabis key informants included five drug treatment workers and one general health worker. Key informants had contact with cannabis users throughout Sydney. As in previous years, a large proportion of the IDU sample could comment on aspects of cannabis price, potency and availability (129/176).

### 4.5.1 PRICE

Most IDU reported that the price of cannabis per ounce was \$400 (range \$150-550), as in 1996-97; however, the median price was \$350, reflecting a larger proportion of IDU paying less than \$400 than in 1997 (53% vs. 33%). IDU estimated that a quarter ounce cost \$100. Key informant estimates of the cost of an ounce (\$400-600) and quarter ounce (\$110-125) were slightly higher than those reported by IDU

By far, most IDU commented on the price of a gram of cannabis, which was reported to cost \$20 in western Sydney, and \$25 in the remainder of the city. Key informants also reported that the price per gram of cannabis was \$20 to \$25.

The ABCI reported that covert purchases of cannabis made during the 1997-98 financial year cost between \$200 and \$700 per ounce and between \$20 and \$50 for a gram.

Most IDU who commented on cannabis (77%) and most key informants (n = 4) believed the price of cannabis had remained stable in the preceding six months.

### 4.5.2 AVAILABILITY

Cannabis was reported to be either easy or very easy to obtain by the majority of IDU (96%), and availability was considered to be stable (85%). Most key informant reports (n = 4) also suggested cannabis was very easy to obtain, and that availability had remained stable. One key informant reported that a new variety of cannabis was being grown and transported from South Australia to New South Wales which was equivalent in potency to other hydroponic cannabis varieties, but grew more horizontally.

### 4.5.3 POTENCY

Most IDU regarded the potency of cannabis as high (72%), as did most key informants (n = 4). IDU considered the potency of cannabis was stable over the preceding six months (75%), while a substantial minority (17%) believed the potency had increased. There was no consensus about changes in cannabis potency among the three key informants who felt confident to comment on it.



#### 4.5.4 USE

##### *Prevalence of cannabis use among different populations*

The 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health) found that 39% of males and 31% of females aged between 12 and 17 years reported having ever used cannabis. Males were more likely to report cannabis use within the past week than females (13% vs. 8%).

The 1996 Survey of NSW TAFE Students found a significant increase in cannabis use among students. About two-thirds of students had tried cannabis, compared with about half in 1992, while weekly use of the drug increased from 17% to 24% during the four year period.

##### *Current patterns of cannabis use*

Key informant reports suggested that most cannabis users were in their twenties to early thirties (range 12-60 years), and over two-thirds were male. Most were from an English-speaking background. The typical level of education attained by this group was either Year 10 or Year 12 of high school, with a proportion having tertiary education. Three key informants reported that between 10 to 30 percent of cannabis users were currently in treatment, which consisted mostly of counselling. Few cannabis users (<15%) were thought to have a prison history.

The cannabis users referred to by key informants usually smoked cannabis daily, on average about 10 to 15 cones a day or a quarter of an ounce a week, and used bong. All smoked the head of the cannabis plant (key informants reported a disinterest in smoking leaf), and most mixed it together with tobacco before smoking. The majority of cannabis using IDU smoked cannabis leaf or head (98%), and the minority used hash (20%) or hash oil (10%), a pattern which was similar to that found in 1997.

Tobacco and alcohol were the most common other drug used; 10 to 30% used other illicit drugs (e.g., amphetamine, ecstasy and heroin) and most smoked, snorted or swallowed these drugs. One key informant noted that cannabis was also smoked regularly by users of other illicit drugs, who made up a sub-group of regular cannabis users.

##### *Trends in cannabis use*

Cannabis had been widely (69%) and frequently (median 60 days) used by IDU in the preceding six months. Cannabis use was more common among IC subjects than WS subjects (80% vs. 54%,  $\chi^2 = 3.7$ ,  $p < .001$ ), who also reported more frequent use (72 vs. 50 days), although the difference was not statistically significant ( $p < .60$ ). The proportion of IDU who used cannabis in 1998 was less than in 1997 (85%), as was the frequency of cannabis use in the last six months (median 100 days).

Most key informants agreed that patterns of cannabis use had remained relatively static over the last six months, as had the type of people who used cannabis. One key informant compared cannabis use to smoking tobacco, in that people find a level of use with which they are happy, and then maintain that level. Changes that were noted by key informants included an increase in the number of cannabis users (particularly youth), an increase in the use of hydroponic cannabis, and younger cannabis users (12-13 year olds) among treatment admissions.

A number of key informants also reported an increase in the number of heroin users among treatment admissions for cannabis use and two key informants commented on an increase in the smoking of heroin by primary cannabis users. Approximately half of them were introduced to heroin by smoking it on cones ("snow cones") and then made the transition to smoking heroin alone ("chasing the dragon"), and then made a transition from smoking to injecting heroin. Increased heroin use among cannabis users was also noted in 1997.

#### 4.5.5 SUMMARY OF CANNABIS TRENDS

A summary of cannabis trends can be seen in Table 4.7. In 1998 high potency cannabis remained easy to obtain. The price of cannabis per ounce had decreased slightly relative to 1997, although the majority of users still paid \$400 per ounce as in 1997. There was a continuing trend for heroin use among cannabis users seeking treatment. Use of cannabis decreased among IDU, although there was evidence of increased use among youth.

**Table 4.7 Estimated trends in the price, availability and use of cannabis**

<b>Price</b>	
Gram	\$400; Stable to decreasing
Cap	\$20-25; Stable
<b>Availability</b>	Easy to very easy; Stable
<b>Use</b>	Decreased use among IDU Increased use among youth and non-IDU Continuing trend toward the use of hydroponic cannabis Increase in heroin use among cannabis users

## 4.6 OTHER DRUGS

### 4.6.1 METHADONE

Information on patterns of methadone use were based on key informant reports (n = 14, 9 needle exchange/general health/outreach workers, 2 drug treatment workers, 1 police officer, 1 methadone worker, 1 user group representative) and methadone use patterns among the IDU sample.

Forty-two percent of the IDU surveyed had used methadone in the last six months, however, nearly half of these (46%) were currently engaged in methadone maintenance treatment. As would be expected, most used daily (median days of methadone use in the last six months = 180 days). Of those IDU not on methadone maintenance treatment, 34% had used methadone in the last six months, and they had used approximately once per month (median days = 6.5). This finding is consistent with key informant reports that most IDU used illicit methadone once a week to less than once a month, mainly in an effort to prevent withdrawal when heroin was not available.

About half of the IDU who reported methadone use in the last six months had injected it, irrespective of whether they were receiving methadone treatment (55% of IDU on methadone treatment vs. 50% of other IDU), a finding consistent with 1997. Methadone use did not differ between the IC and WS IDU samples. Methadone use among IDU that were not currently on methadone maintenance treatment had decreased slightly relative to the 1997 IDRS, when 42% of IDU had used in the last six months, on a weekly basis (median days = 22).

Toxicology of fatal overdoses in 1998 (January-June) found that 5% tested positive for methadone, a similar proportion to that found in 1997 (7%).

In terms of polydrug use, IDU who had used methadone in the last six months were more likely to have also used other opiates (46% vs. 35%) and antidepressants (24% vs. 15%) in the last six months than other IDU. This pattern was more pronounced among IDU on methadone maintenance treatment, with 56% using other opiates and 29% using antidepressants.

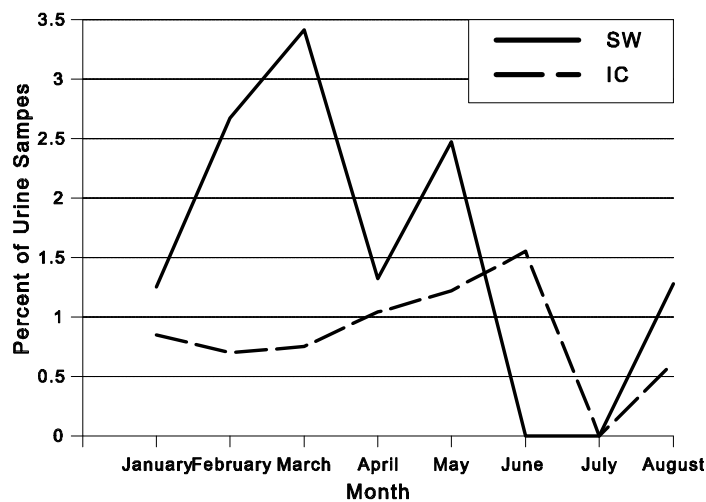
### 4.6.2 BENZODIAZEPINES

The 1996 survey of TAFE students (1998) which sampled 5216 students aged between 16 and 25 years, found that 16% had used sleeping tablets, such as Valium and Serepax, other than for medical reasons, with regular (weekly) use being minimal (1.5%). There were no changes in lifetime use or regular use levels of sedatives from 1992 to 1996.

Benzodiazepines had been used by 60% of IDU in the preceding six months, with 10% having injected them in that period. This was a slight reduction in the proportion of IDU who used

benzodiazepines in 1997 (74%). There was a noticeable difference between the patterns of benzodiazepine use of WS and IC subjects. As in 1997, among WS IDU flunitrazepam (Rohypnol<sup>7</sup>) was the most commonly used benzodiazepine, while diazepam (e.g. Valium<sup>7</sup>) was the most common among IC IDU. This is of note as flunitrazepam was rescheduled to an S8 drug in July this year. Despite this, it has managed to date to retain popularity in WS Sydney.

The widespread use of benzodiazepines was also demonstrated by toxicology on the urine of methadone patients, and the toxicology of fatal overdoses. Benzodiazepines were the second most common drug (to morphine) found in overdose fatalities (28%). This represented a small increase from the January-June period in 1997 (22%). Prevalence was slightly higher in the WS (IC 23%, WS 37%), a finding consistent with 1997 (IC 19%, WS 27%). Benzodiazepines were also the second most common drug found in the urine samples of methadone patients, after morphine, and valium type benzodiazepines were by far the most common (23%, IC 22%, WS 24%). Flunitrazepam was not commonly detected in urine samples (IC 1%, WS 2%), a finding that reflects the difficulty detecting this substance in urine rather than a particularly low prevalence of use. It is interesting to note that the proportion of urine samples that tested positive for flunitrazepam decreased in June to August 1998 (see Figure 4.7), around the time when the flunitrazepam, Rohypnol<sup>8</sup>, was rescheduled to an S8 drug under Commonwealth (but not State) legislation. Comparable urinalysis data for benzodiazepines in 1997 was not obtained.

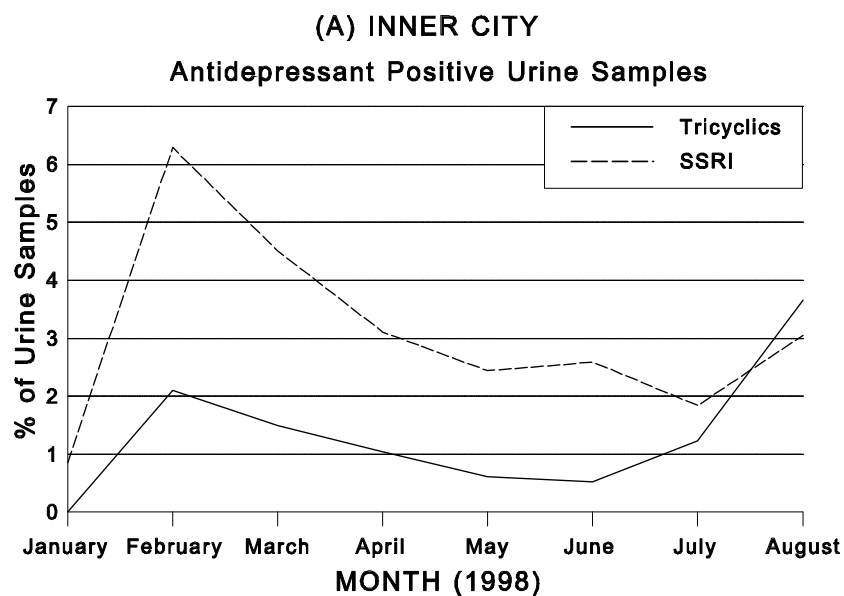


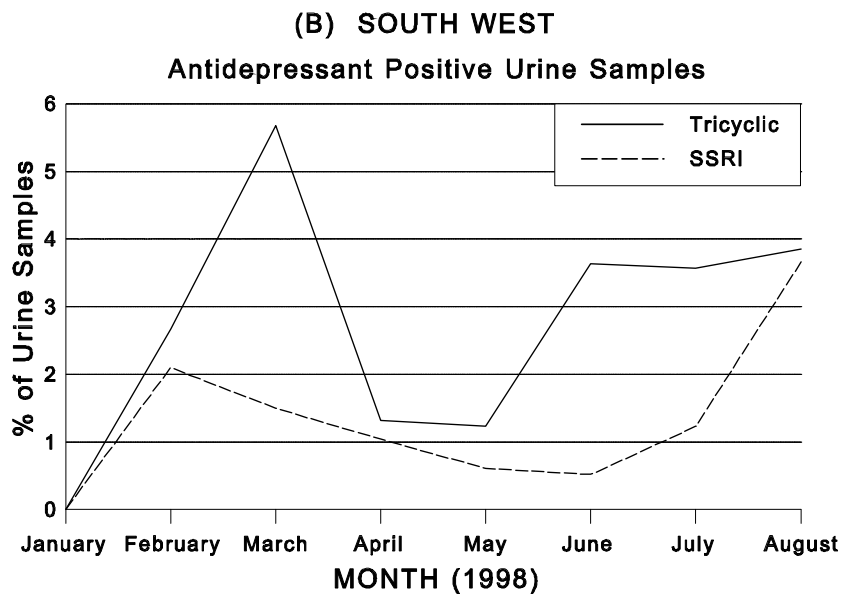
**Figure 4.7** The percentage of urine samples obtained from methadone patients that tested positive for flunitrazepam each month from January to August 1998, for methadone clinics in the IC and in the WS of Sydney.

### 4.6.3 ANTIDEPRESSANTS

As in 1997, a notable proportion of IDU (15%) had used antidepressants in the preceding six months. Among those who had used antidepressants in the preceding six months, two thirds mainly used serotonin specific re-uptake inhibitors (SSRIs), the most common being Zoloft<sup>®</sup> (sertraline). A third, however, mainly used the older tricyclic antidepressants, which are known to be more toxic and dangerous in conjunction with opioids than SSRIs. Darke and Ross (1999) found that use of tricyclic antidepressants among IDU was associated with a significant increase in risk of overdose.

The prevalence of anti-depressants in the urine samples of methadone patients was 5%, with no regional differences (IC 4%, WS 5%) and a similar prevalence of SSRIs and tricyclic anti-depressants (SSRIs 3%, tricyclics 2%). There was some variation in the prevalence of SSRIs and tricyclic antidepressants between January and August (see Figure 4.8, A and B). These low rates of antidepressant detection are consistent with the relatively low proportion of the IDU sample who used antidepressants, and the relatively low frequency of use. Comparable urinalysis data on antidepressants for 1997 was not obtained.





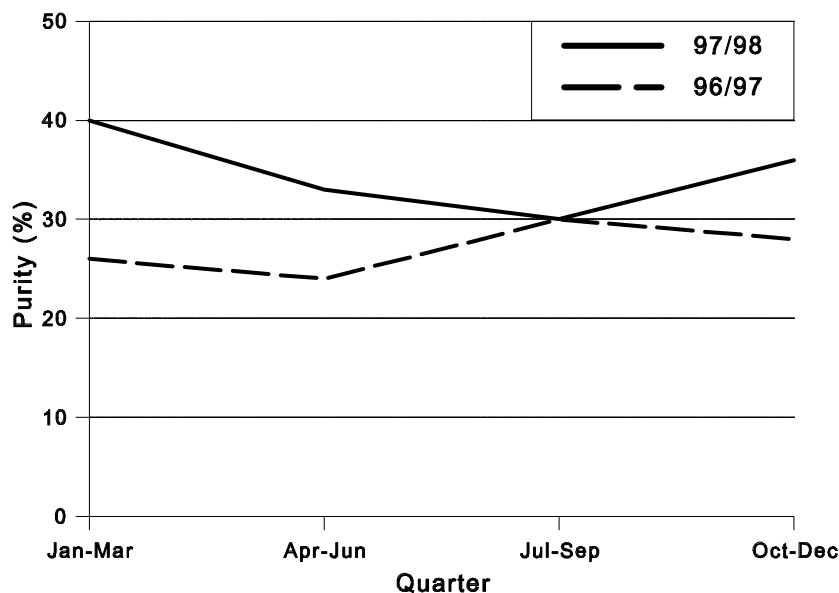
**Figure 4.8** The percentage of urine samples obtained from methadone patients in the IC (A) and WS (B) of Sydney that tested positive for SSRIs and tricyclic antidepressants.

#### 4.6.4 ECSTASY (MDMA)

Two key informants reported on the use of ecstasy. One was a researcher, the other a drug education officer for the police department. Key informants reported that most ecstasy users resided in the IC and most were of an ESB, were well educated, employed and few were in treatment or had a prison history. Most consumed ecstasy orally, with few injecting or snorting the drug. Frequency of use ranged from occasional use to regular use, with regular use being three to four days a week. Up to several tablets could be taken per occasion. In terms of polydrug use, many ecstasy users also used other designer drugs, such as ketamine, GHB and MDA. The majority also smoked cannabis, many were social drinkers, and about half smoked tobacco.

The reported price of ecstasy tablets was (\$50), with the price having decreased since 1997 (\$60@). ABCI figures for covert police purchases also indicate that ecstasy usually costs \$50 (range: \$20-70). Ecstasy was reported to be very easy to obtain with availability having increased over the last six months. Key informant reports suggested more people were dealing in ecstasy, and that a wider variety of ecstasy-type drugs had become available.

Key informants regarded the purity of ecstasy to be low, and reported that purity had decreased over the last six months. Purity analysis of Australian Federal Police seizures made within NSW did not support the key informants' perceptions of ecstasy purity (see Figure 4.9). A total of 53 police seizures of MDMA and related derivatives (MDEA, MBDB, BDMPEA, MDA, MDE, and PMA) were analysed during the 1997/98 financial year. The mean purity was 32% (range <1-85%), with little fluctuation between quarters (10%), as can be seen in Figure 4.9. These figures



are consistent with the 1996/97 levels of 29% (range <1-80%).

**Figure 4.9.** Purity of Australian Federal Police seizures of MDMA and related compounds (MDEA, MBDB, BDMPEA, MDA, MDE, PMA) received by the AFDL in each quarter of the 1996/97 and 1997/98 financial years.

In terms of trends, one key informant reported the following changes among ecstasy users: more injection of ecstasy, an increase in polydrug use, particularly GHB use (12 months ago), cannabis and ketamine use (six months ago), and an increase in cocktails of cocaine and ketamine (called "CK1"). It was also noted that ecstasy users were taking more ecstasy on any given occasion in order to get more "out of it".

The IDU survey found a continuing trend from 1997 for more ecstasy use in the IC compared with the WS (26% vs. 5%). This trend was also true of other hallucinogenic substances (IC 23% vs. WS 9%).

Estimates of the prevalence of ecstasy use among youth can be obtained from surveys of school students and tertiary students. The 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health), which sampled 12 to 17 year olds, found that 4% of males and 3% of females reported having ever used ecstasy. Recent use of ecstasy was very low (1%). The 1996 survey of TAFE students aged between 16 and 25 years found that more than one in ten students (13%) had ever tried ecstasy, but only 2% were at least weekly users of ecstasy (AGB McNair, 1998).

#### 4.6.5 ANABOLIC AND ANDROGENIC STEROIDS

Four key informants (2 researchers, 1 needle exchange worker, 1 endocrinologist) reported on the use of steroids. Most steroid users were thought to be male (95-99%), with an over-



representation of gay or bisexual men. Steroid users were thought to be aged in their early twenties (range: 12 years - mid forties), reside throughout Sydney but mainly in the inner city, and be mostly from an English-speaking background (75-80%), with minorities being ATSI or from NESBs. Key informants reported that steroid users were well educated (usually year 12 or higher) and employed in a variety of occupations (security, modelling, teachers, professional sports people, and in the fitness industry). None of the steroid users were in treatment for their steroid use and very few had a prison history.

Key informant reports suggested that steroid users took a variety of human and veterinary steroids in "cycles", which usually lasted for 6 to 12 weeks, and occurred two to three times a year. The amount and frequency of use within cycles varied, although most users used daily or every second day. The majority of steroid users used intramuscular injections of both water-based and oil-based steroid solutions. Common injection sites included buttocks, calves, and thighs. A small percentage combined oral steroid use with injection of steroids (.5%), and an even smaller proportion used only oral steroids (.1%). Commonly used steroids included: Proviron (human AAS, oral); Dynabol (veterinary, oil based injectable); Deca-Durabolin (human, injectable); Drive (veterinary, oil based injectable); Deca 50 (veterinary, oil based injectable); Stanzol (veterinary, water based injectable); Andriol (human, oral); Norabolin (nandrolone; veterinary, oil based injection). Other non-steroid performance enhancing drugs used included insulin, human growth factor, L-carnatene, dehydroepian-drosterone (DHEA), and creatine-monohydrate.

Recent trends reported by key informants included an increase in the number of steroid users, an increase in the number of young steroid users, and an increase in the number of female steroid users. There was also a trend toward increasing non-steroidal performance enhancing drugs (i.e., insulin, human growth hormone and clenbuterol) because they were more difficult to detect. One key informant reported that it was more difficult to obtain DHEA since it became illegal in 1997, although it could still be obtained via the internet. Another trend reported was the increasing reliance of users on the internet, not only as a means of providing them with information about steroids and their use, but also as a means of purchasing steroids and non-steroid performance enhancing drugs. These trends occurred within the last 12 months.

Steroids were reported to be easily available, and there were no changes noted in the availability, strength, or price of steroids in the last six months. Steroids were still mainly sold through gym networks, however, key informants reported that more dealers were beginning to supplement their income by selling cocaine and other drugs.

The prevalence of anabolic-androgenic steroid use among youth can be estimated from surveys of school and college students. The 1996 Survey of Substance Use Among NSW Secondary School Students (NSW Health) found that 3% of males and 0.8% of females aged 12 to 17 years reported having ever used steroids without a doctor's prescription in an attempt to make them better at sport, to increase muscle size or to improve their general appearance. Recent use of steroids was low, being reported by only 1% of males and less than 0.2% of females. The 1996 survey of NSW TAFE students aged between 16 and 25 years found that 4% of students had used anabolic - androgenic steroids, and that use was more common among males (5% vs. 2%) (AGB McNair, 1998).



Steroid use among other illicit drug users was very low. Data on the type of drug used by NSEP clients on each client visit was collected by one NSEP in the IC between January and June 1998 (N = 28 818), and one NSEP in the WS during July (N = 1316). Steroids were used by only 3% of clients at the WS NSEP, and less than 1% of clients at the IC NSEP. Consistent with this finding, key informants reported that illicit drug use among steroid users was similar to that among the general population.

#### 4.6.6 SUMMARY OF OTHER DRUG TRENDS

A summary of other drug trends can be found in Table 4.8. The major trend was a continuing high level of benzodiazepine and illicit methadone use among IDU. A substantial proportion of IDU also continued to use the more toxic tricyclic antidepressants. Other trends included an increase in steroid use and use of non-steroidal performance enhancing substances, more GHB and ketamine use among ecstasy users, and increased availability of a wider variety of ecstasy-type drugs.

**Table 4.8 Summary of trends in other illicit drugs**

<b>Illicit methadone</b>	Continuing trend for injection of methadone Slight reduction in illicit methadone use
<b>Benzodiazepines</b>	Use among IDU remains widespread Rohypnol most popular in the WS Valium most popular in the IC
<b>Antidepressants</b>	Prevalence of use among IDU stable SSRIs most popular
<b>Ecstasy</b>	Purity stable Price decreased slightly (\$50 vs. \$60) More available More polydrug use and drug cocktails (esp. GHB, ketamine, and cocaine)
<b>Anabolic steroids</b>	Increase in the number and type of users Increase in use of non-steroidal performance enhancing drugs (e.g., insulin) Increasing reliance on the internet for supply and information

## 5.0 DRUG-RELATED ISSUES

## 5.1 IDU SURVEY

Health problems among the IDU sample are summarised in Table 5.1.

### *General health*

The overall mean number of health symptoms reported by IDU was 17.5 (SD 8.5, range 0-43), similar to the number of health symptoms reported in 1997 (mean 18.7, SD 8.2, range 0-43). Two-thirds of subjects reported having experienced injection-related problems in the preceding month, with 51% reporting prominent scarring or bruising, and 34% having difficulty injecting due to vascular damage.

Drug use patterns particularly associated with injection-related problems were cocaine injection and methadone injection. IDU who had injected cocaine in the preceding six months were more likely to report scarring (59% vs. 40%,  $\chi^2 = 6.6$ ,  $p < .01$ ), difficulty injecting (42% vs. 26%,  $\chi^2 = 4.6$ ,  $p < .04$ ), and abscesses or infections from injecting (14% vs. 5%,  $\chi^2 = 3.6$ ,  $p < .06$ ) relative to other IDU. IDU who had injected methadone in the last six months were more likely to report thrombosis (20% vs. 6%,  $\chi^2 = 7.5$ ,  $p < .01$ ).

### *Needle sharing behaviour*

A substantial minority of IDU reported borrowing (23%) or lending (23%) used injection equipment in the preceding month. Of those who had borrowed used needles in the last month, most reported (92%) that only one other person had used the needle before them. The proportion of IDU who borrowed or lent needles was not greatly different from that found in the 1997 IDU sample, where 21% had lent used needles and 15% had borrowed them.

IDU who had used opiates other than heroin or methadone in the preceding six months were more than twice as likely to have lent needles in the last month than other IDU (39% vs. 16%,  $\chi^2 = 11.0$ ,  $p < .001$ ). IDU who had used benzodiazepines (29% vs. 16%,  $\chi^2 = 4.1$ ,  $p < .05$ ), hallucinogens (20% vs. 40%,  $\chi^2 = 5.6$ ,  $p < .02$ ), or injected amphetamine (32% vs. 19%,  $\chi^2 = 3.3$ ,  $p < .08$ ) in the past six months were also more likely to have lent used needles.

*Overdose*

Experience of heroin overdose among IDU remained common (Table 5.1). Over half had ever overdosed (57%), 30% in the preceding 12 months. These figures are similar to those reported from the 1996 and 1997 IDRS studies.

Not surprising, more frequent heroin use within the preceding six months was associated with more recent experience of overdose ( $r_s = -.36, p < .0005$ ). Conversely, methadone use was associated with not having overdosed recently ( $r_s = .35, p < .0005$ ). No other patterns of drug use were significantly associated with overdose.

**Table 5.1 Drug-related issues among IDU (N=176)**

<b>Drug-related issue</b>	<b>%</b>
Heroin overdose	
Ever	57
Last year	30
Administered Narcan ever	42
Narcan last year	22
Witnessed an overdose ever	79
Needle sharing (last month)	
Borrowed used needles	23
Lent used needles	23
Injection-related health problems (last month)	66
Bruising or scarring	51
Difficulty injecting	35
Dirty hit	17
Abscesses or infections	10
Thrombosis	9

*Crime*

As in previous years, recent criminal activity was common in the IDU sample, with 51% reporting having committed some crime in the preceding month (see Table 5.2). As expected, the two most common types of crime were property crime and dealing. Both property crime (28% vs. 20%) and fraud (14% vs. 4%) were more common among the IC IDU, whereas drug dealing was more common among IDU in the WS (39% vs. 28%). There was little change in the proportion of IDU committing crime relative to 1997 (cf. 56%).

Patterns of drug use found to be associated with increased criminal activity were frequent heroin use ( $r_s = .25, p < .01$ ) and frequent cocaine use ( $r_s = .20, p < .01$ ). Frequency of heroin use was associated particularly with increased dealing ( $r_s = .16, p < .03$ ), whereas more frequent cocaine use was associated with dealing ( $r_s = .18, p < .02$ ) and violent crime ( $r_s = .15, p < .06$ ). It is important to note that only six of the IDU surveyed had committed a violent crime in the last month, all of whom used heroin daily as well as having used cocaine in the last six months. Benzodiazepine use in the last six months was also associated with an increase in criminal activity relative to other IDU (62% vs. 27%,  $\chi^2 = 7.5, p < .01$ ).

**Table 5.2. Criminal activity reported by IDU in the last month**

<b>Crime</b>	<b>% of IDU</b>
Property crime	24
Dealing	33
Fraud	10
Violent crime	3
Any crime	51

*Police activity*

IDU perceptions of recent police activity are summarised in Table 5.3. The majority of IDU (55%) reported more police activity over the preceding six months. About one-third (35%) believed police activity had made it more difficult to obtain drugs, an effect that was more apparent in WS Sydney (46% WS, 27% IC). A substantial proportion of the IDU (47%) also believed that number of drug arrests had increased.

**Table 5.3 IDU perceptions of recent police activity**

<b>Police activity</b>	<b>% of IDU</b>
More activity	55
Stable	42
Less activity	3
<b>More difficult to obtain drugs</b>	
Yes	35
No	65
<b>Arrests</b>	
More arrests	47
Stable	51

Less arrests	2
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## 5.2 KEY INFORMANT STUDY

### *Heroin*

The main health problems noted by key informants were injection-related. Six key informants specifically commented on an increase in the number of heroin users who were presenting to their service with serious vascular problems, such as infections, abscesses, swelling around injection sites, collapsed veins, and septicemia. A number of the key informants associated this increase in vascular problems with the injecting of methadone and other non-injectables such as benzodiazepines, and with the recent increase in the injecting of cocaine, where users may use the same injection site up to ten times a day. The vascular problems among cocaine users were reported to be worse than those among heroin users.

There was some concern about the rapid deterioration in the health of heroin users, and more heroin users had been enquiring about treatment, particularly naltrexone treatment and detoxification.

### *Cocaine*

In addition to the vascular problems among cocaine users mentioned above, key informants also noted unsafe injecting practises among cocaine users and a deterioration in mental health and lifestyle among cocaine users. In terms of psychiatric morbidity, some cocaine users exhibited paranoid ideation and auditory hallucinations, while many had shown early symptoms of psychosis. Cocaine users were also prone to skin-picking, which was associated with skin infections and abscesses. Deterioration in lifestyle was also associated with unsafe sex work practises.

### *Amphetamine*

Two key informants noted that a proportion of amphetamine users had a chaotic lifestyle. One key informant also pointed out that amphetamine users found it difficult to engage in treatment services, even when they appeared motivated.

### *Cannabis*

A substantial number of key informants commented on the increase in psychological problems among cannabis users presenting to treatment. Problems included depression, psychosis, memory and concentration problems, anxiety problems, suicidal thoughts, and mood and anger problems. Many cannabis users also were thought to have respiratory problems such as bronchial pneumonia and asthma. Key informants also reported an increase in young admissions to treatment for cannabis use, and an increase in heroin-related problems among cannabis users.

### *Ecstasy and designer drugs*

Key informants reported that a greater number of ecstasy users were reported to be seeking help at nightclubs after taking GHB (gamma-hydroxy-butyrate) and developing nausea and vomiting. There was also an increase in GHB related overdoses in October-November 1997. Finally, one key informant commented on an increase in mental health problems (i.e., depression) over the last six months among long term ecstasy users.

### *Steroids*

Most steroid users were generally regarded as possessing a good knowledge of needle-risks and safe injecting practises, although abscesses were still common among users who did not clean their injection site with an alcohol swab. Individual comments from key informants suggested that psychological problems, such as poor self-esteem and "roid-rage", were evident among steroid users.

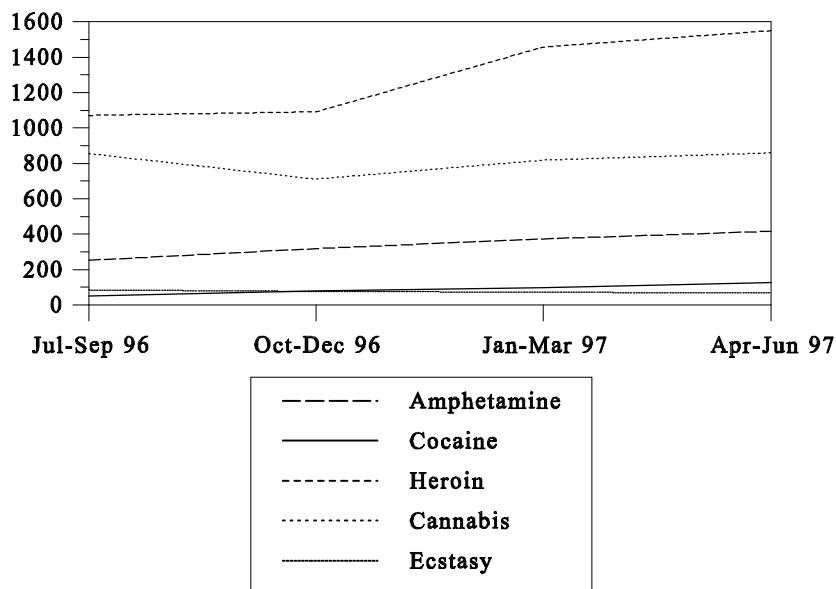
### *Crime and Police activity*

Nine heroin key informants commented that there had been an increase in violent crime, particularly bag snatching, mugging and armed robbery. Key informants also noted an increase in violent behaviour and violent crimes among cannabis users. Twelve key informants noted an increase in police activity over the past six months, particularly in Campbelltown, Kings Cross and Cabramatta. This increase usually took the form of a greater visibility of police presence, particularly more beat police, and was a continuation of the increase in police activity that began over 12 months ago. Several key informants commented on the presence of police around NSEPs and harassment from plain clothes police, some of whom would not provide police identification.

5.3 OTHER INDICATORS

*Drug enquires*

The NSW Alcohol and Drug Information Service (ADIS) received 43,101 phone inquiries during the 1997/98 financial year. The number of heroin mentions were highest (n = 5172), followed by cannabis (n = 3247), amphetamines (n = 1363), cocaine (n = 356), then ecstasy (n = 304). These figures were consistent with 1996/97 figures except for heroin which recorded a 40% increase in inquiries (from 3670), to become the most frequently mentioned drug. The number of ADIS calls by drug type, per quarter, is shown in Figure 5.1



**Figure 5.1** The number of ADIS drug mentions per quarter for each drug type.

*Intoxicated drivers*

During 1997, drivers who displayed symptoms of intoxication not caused by alcohol were tested for other drug use. A preliminary analysis of this data by the NSW Division of Analytical Laboratories found that most of these drivers were intoxicated with cannabis (58%), followed by opiates (40%), benzodiazepines (30%), amphetamine (18%) and methadone (17%). Only 4% were found to be intoxicated with cocaine. It should be noted that these percentages reflect multiple drugs found in the blood of drivers, and therefore do not add to 100%. These figures were similar to those from 1996 (DAL, 1997), although there was an increase in the proportion of drivers intoxicated with stimulants (1997: cocaine 1%, amphetamine 9%).

### *NSEP data*

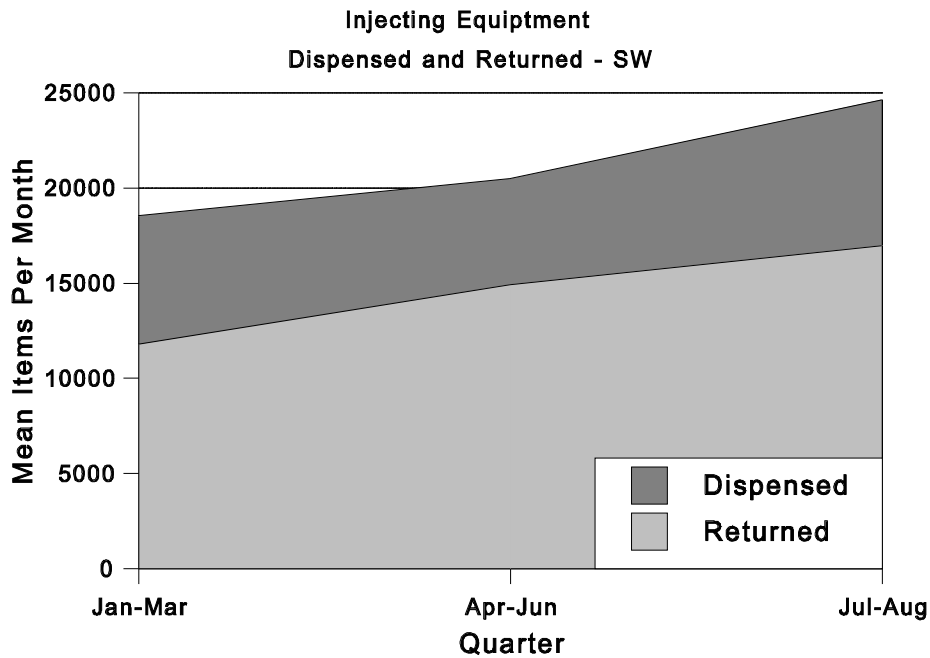
Some needle and syringe exchange programs (NSEPs) keep records of the number of clients presenting to their agency and the type of services provided. This data provides an indication of changes in the use of injecting equipment, the return of used injecting equipment, and the types of people using this equipment.

Data from one NSEP in the WS region of Sydney showed that the number of needles and syringes being dispensed had steadily increased throughout 1998 (see Figure 5.2). During the first quarter 18 526 were dispensed per month, 20 472 per month in the second quarter, and 24 608 per month in the July-August period. The number of returns in the first quarter of 1998 was 11 773 (64%) per month, 14 906 (73%) per month in the second quarter and 16 957 (69%) per month in the July-August period. The average number of client visits was 1083 (Jan-Aug, 1998) which was constant across quarters. Approximately three-quarters (76%) of these NSEP clients were male, and most were aged between 20 and 35 years (65%). Based on client data collected in August 1998 (N = 1211) the majority of the NSEP clients were Caucasian/Australian (60%), 28% were of a NESB and less than 1% were ATSI.

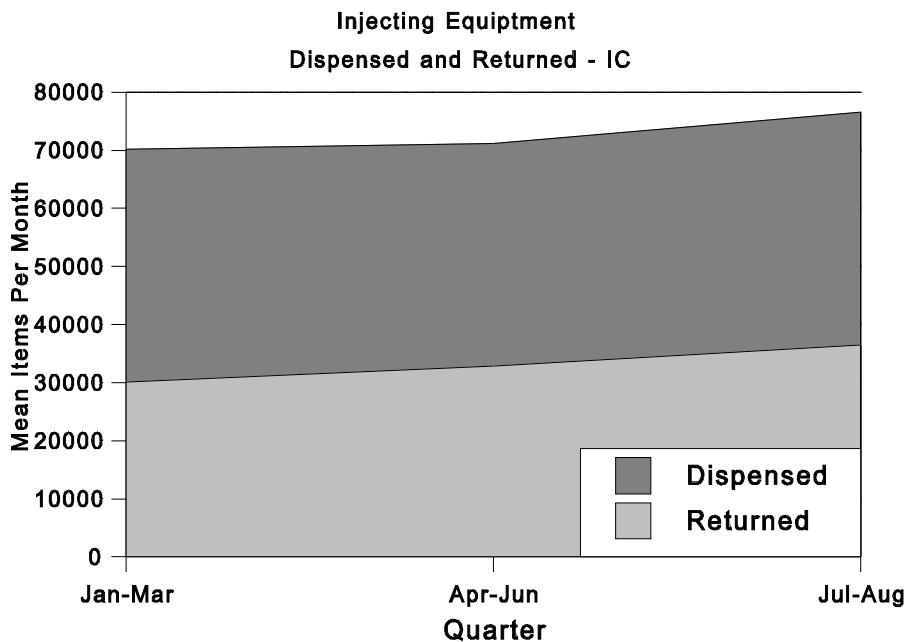
Several NSEPs in the IC (KRC and associated outreach services) collected data on the number of client visits, number of fits dispensed and returned (see Figure 5.3), and the age and gender of clients. The number of client visits showed a small but steady increase throughout 1998. In the first quarter of 1998 there were 7 205 client visits per month, in the second quarter 7 769 client visits per month, and 8038 per month in the July-August period. The number of fits dispensed per month showed a similar increase (1st quarter 70 175, 2nd quarter 71 191, and 76571 for July-August). The number of fits returned per month also increased, with 30 086 (43%) in the first quarter, 32 888 (46%) in the second quarter, and 36 522 (48%) in the July-August period. Based on client data collected in January 1998, 65% of clients were male (N = 7 835), and half (51%) were aged between 25 and 35 years (N = 5521).

The Newtown Needle Exchange, in the inner city of Sydney, provided a total of 14,910 service occasions in the Redfern/Waterloo area in August-September, 1998 (i.e., an average of 7455 per month). During the August-September period 203 271 fits were dispensed, and 75% of these were returned. The return rate at the Newtown Needle Exchange for the six month period from April to September, 1998, was 74%. Of the total number of occasions of service (August-September), 65% were Aboriginal or Torres Strait Islander clients. The total number of occasions of service for the whole program in Redfern from August-September, 1998, was 19,646. Of the total number of occasions, 62% were Aboriginal or Torres Strait Islander clients.





**Figure 5.2** Average number of injecting equipment items dispensed and returned per month by quarter from an NSEP in the Western region of Sydney (WS). The third quarter only includes data for July and August.



**Figure 5.3** Average number of injecting equipment items dispensed and returned per month from a Sydney inner-city (IC) NSEP. The third quarter only includes data for July and August.

*Overdose*

The rate of opioid-related fatalities in NSW in 1997 increased to 86.3 per million population (aged 15-54 years, N = 312) from 72.7 per million population in 1996 (aged 15-54 years, N = 260). The majority of overdose fatalities were male (82%) and the mean age of fatal overdose was 31.3 years, almost identical to 1996 figures where 83% were female and the mean age of fatal overdose was 31.5 years.

The above mentioned figures do not provide an indication of 1998 trends in overdose, which can be provided by local forensic toxicology data. The number of suspected overdose fatalities seen by forensic toxicology in Sydney between January and June 1998 was 179 (IC 120, WS 59). This was a large increase on the 129 (IC 78, WS 51) suspected overdose fatalities that occurred in same period in 1997, an increase that occurred mostly in the IC.

### *Arrest data*

During 1997/1998, the NSW Police Service arrested 12 420 persons charged with 9 028 offences. As well 8 185 Court Advice Notices and 1 566 summonses were issued in relation to drug offences.

NSW Police drug seizures involving indictable offences during 1997/98 included 170 675 g cocaine, 1 941 075 g cannabis leaf, 83 002 cannabis plants, 35 843 g ecstasy, 3 879 g hallucinogens, 222 515 g heroin, 3 386 g ecstasy, 3 879 g hallucinogens, 222 515 g heroin, 3 386 methadone, 87 472 g amphetamine, 539 g steroids, 7 015 g opium, 1 273 g sedatives, 30 019 g other drugs and 108 g stimulants.

The NSW Bureau of Crime Statistics and Research reported that in 1998 there were 3,724 criminal incidents in NSW relating to narcotics, 393 relating to cocaine, 14,483 relating to cannabis (including cultivation of cannabis), and 2,241 relating to other drugs (Chilvers, 1998)

## 5.4 SUMMARY OF DRUG-RELATED ISSUES

The main drug-related issues that arose in 1998 are summarised in Table 5.4. Injection-related health problems were particularly apparent among methadone injectors and cocaine injectors, and included thrombosis, scarring, difficulty injecting and abscesses or infections from injecting. An increase in opioid related fatalities occurred in both NSW in 1997 (. 20% increase) and in Sydney in 1998 (. 40% increase), showing continuation of a long-term trend toward increasing opioid-related overdoses. More drug treatment services and enquiries related to heroin than to any other illicit drug. There was a steady increase in the amount of injecting equipment given out by NSEPs, and a corresponding increase in the return of used injecting equipment. Cannabis was still the most likely drug to be detected in intoxicated drivers (excluding alcohol), while a significant proportion were intoxicated with opiates or benzodiazepines. There was a trend toward more drivers being intoxicated with stimulants in 1998 compared with 1997. There was also a reported increase in police activity that had made it more difficult to obtain drugs, and several key informants reported that violent crimes, particularly bag snatching, had increased in 1998.

**Table 5.4 Summary of drug-related issues**

**Drug-related health issues**

Increase in vascular problems associated with methadone and cocaine injection

Increase in opiate-related overdoses

Increase in heroin-related enquires (ADIS)

Increase in dispensing (and return) of injecting equipment

Increase in drivers intoxicated with stimulants (although intoxication with cannabis, heroin and sedatives is still more common)

Continuing psychological disturbances among cannabis users

Adverse effects of GHB and other designer drugs

**Crime - Police activity**

Overall levels of crime high and stable

More reports of violent crime, particularly bag snatching

Reported increase in arrests among IDU

More police activity, particularly an increase in police visibility

Police activity has made it more difficult to obtain drugs in the WS than the IC

## 6.0 COMPARISON OF DATA FROM DIFFERENT SOURCES

Tables 6.1 to 6.6 contain information on current and emerging drug trends, and the information sources from which these were obtained (IDU, KIS, OTHER). Data are presented separately for each of the four main drug classes, for other drugs, and for drug-related issues.

There was good agreement between sources, particularly between IDU and key informant information, for the four main drug classes. The lower number of trends supported by other indicator data reflects limited availability of such indicator data. Similarly, indicator data often provided data which could not be provided by key informants and IDU, such as the number of fatal overdoses and the number of drug-related enquires. In most cases where indicator data, IDU data, and key informant information were available, they showed good agreement.

Drug trends relating to other drugs relied more heavily on key informant information, with little comparable information available from IDU and other indicator sources.

**Table 6.1 Trends in heroin endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>HEROIN TRENDS</b>	<b>ID U</b>	<b>KI S</b>	<b>OTHE R</b>
Availability stable and very easy	T	T	
Purity medium to high and stable to increasing	T	T	T
Price of heroin decreased since 1997 (\$240/gm, \$30/cap)	T	T	T
Increased heroin use	T	T	
Increased cocaine injecting among heroin injectors including "speed balls" or "CCs"	T	T	T
More young heroin users	T	T	
Diffusion of heroin smoking to IC Sydney	T	T	
Continuing popularity among young females	T		
Increase in ADIS enquires regarding heroin			T
More injection-related problems among heroin users		T	
Increase in violent crime among heroin users		T	

**Table 6.2 Trends in amphetamine endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>AMPHETAMINE TRENDS</b>	<b>IDU</b>	<b>KI S</b>	<b>OTHER</b>
Stable price (\$80-100/gm)	T	T	T
Availability of amphetamine easy and stable	T	T	
Purity low and stable	T	T	T
Less use of amphetamine among IDU	T	T	T
Reduction in transitions to heroin injection	T	T	

**Table 6.3 Trends in cocaine endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>COCAINE TRENDS</b>	<b>IDU</b>	<b>KI S</b>	<b>OTHER</b>
Decrease in price of cocaine caps (\$50/cap)	T	T	T
Increased cocaine availability	T	T	
Increase in availability of cocaine caps	T	T	
Purity of cocaine medium and stable to increasing	T	T	T
Cocaine use increased	T	T	T
Use of "speedballs" (heroin and cocaine)	T	T	T
More visible cocaine dealers		T	
More injection-related problems		T	
Psychiatric disturbances among cocaine users		T	

**Table 6.4 Trends in cannabis endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>CANNABIS TRENDS</b>	<b>IDU</b>	<b>KI S</b>	<b>OTHER</b>
Price stable (\$400/ounce, \$20-25/gm)	T	T	T
Availability (easy) (IDU; KIS)	T	T	
Potency high and stable	T	T	
Less frequent cannabis use among IDU	T		
More young users		T	T
More heroin use among cannabis users seeking treatment		T	
Continuing trend for psychological problems among cannabis users		T	
Decrease in ADIS enquires regarding cannabis			T

**Table 6.5 Trends in other drugs endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>OTHER DRUG TRENDS</b>	<b>IDU</b>	<b>KI S</b>	<b>OTHER</b>
High but stable proportion of IDU injecting methadone	T		
More young steroid users		T	
Increase in non-steroidal performance enhancing drugs (e.g., insulin) among steroid users		T	
Ecstasy has decreased in price (\$50 tablet) and has become more available		T	T
Ecstasy purity stable			T
More GBH use and cocaine use among ecstasy users		T	

**Table 6.6 Trends in drug-related issues endorsed (T) by injecting drug users (IDU), key informants (KIS) or other indicators (OTHER).**

<b>DRUG-RELATED ISSUES</b>	<b>IDU</b>	<b>KI S</b>	<b>OTHER</b>
Increased police activity	T	T	
Increase in opioid-related overdoses			T
More injection-related problems, particularly associated with methadone injection and cocaine injection		T	
Increase in violent crime such as bag snatching associated with frequent heroin and cocaine use	T	T	
An increase in dispensing of injection equipment from NSEPs			T

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## 7.0 DISCUSSION

### *Summary of main findings*

The IDRS revealed many trends in illicit drug use in 1998. The most salient and noteworthy were an increase in heroin use and an increase in cocaine injection among heroin users. Both of these trends in use were accompanied by medium to high purity of these drugs, which were easily available, and cheaper than in 1997. These trends were also associated with health consequences.

In 1998 there were more treatment admissions and enquires relating to heroin than for any other drug, and there was also a continuing trend for more opioid-related fatalities. Heroin users who were also injecting cocaine suffered from more injection-related problems, as well as poor mental and physical health.

The IDRS also found a continuation of some drug trends from previous years. These trends related mainly to cannabis and included continued availability of high potency cannabis, smoking of heroin among cannabis users, and psychological problems among cannabis users. There was also a continuing trend for use of pharmaceuticals among IDU, particularly methadone, benzodiazepines and antidepressants. Previous research, and analysis of the current IDU survey, suggests that the use of these pharmaceutical substances is associated with injection-related problems and increased risk of overdose (Darke & Ross, 1999).

Few new trends were noted for other drug classes. There were reports of overdoses from GHB and other designer drugs which have serious health implications for users of those drugs. Amphetamine use appeared to be relatively low and stable, while the price, availability and purity remained stable.

### *Study limitations*

It should be kept in mind that while attempts were made to substantiate key informant reports, these reports are still a subjective profile of drug use and availability based on the perceptions of key informants only. Key informant reports were compared to the IDU survey findings and other indicator data which provide a more objective profile. The combination of the three methods seemed to provide an efficient and complementary way to monitor trends in illicit drug use over time. The IDRS could be further enhanced by the development of supplementary secondary data sets (eg. ambulance data) and specialist studies of illicit drug users.

One obstacle to the progress of the IDRS is the lack of timely and consistent indicator data. Currently there is no data available on the potency of cannabis, making it not possible to confirm anecdotal evidence of increasing cannabis potency. Data on the purity of NSW police seizures of heroin, amphetamine, cocaine and ecstasy were also not available in 1998, making it difficult to track trends in purity from year to year. Even more problematic was the lack of current data on the prevalence of drug use. The prevalence surveys that were available at the time of writing this report referred to data collected in 1996 and 1997, and therefore could not be used to validate



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drug trends found in the 1998 IDRS. To compensate for these problems, indicator data was collected from more local and readily available sources (i.e., local NSEPs and toxicology laboratories). Indicator data from these sources proved valuable in validating the findings of the IDU survey and the key informant survey.

### *Implications for research*

The findings of the 1998 IDRS suggest the following main areas for further investigation. Note that some of these issues have already received some research attention to date.

1. a continuation of research into factors influencing the current popularity of heroin use and its availability, and interventions to reduce the harms associated with heroin injection, such as overdose;
2. an examination of factors influencing transitions to injecting heroin (e.g., smoking heroin among cannabis users);
3. research into the harms associated with cocaine injection, particularly HIV-HCV risk taking behaviours, and methods of reducing these harms;
4. research into measures that would reduce methadone injection and associated injection-related problems.

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## Appendix 1

Local Government Areas constituting broad geographic regions are as follows:

**Inner City (IC).** Botany, City of Sydney, Leichardt, Randwick, South Sydney, Waverley

**Western Sydney (WS).** Ashfield, Auburn, Bankstown, Blacktown, Burwood, Campbelltown, Canterbury, Concord, Drummoyne, Fairfield, Holroyd, Liverpool, Marrickville, Parramatta, Penrith, Strathfield.