

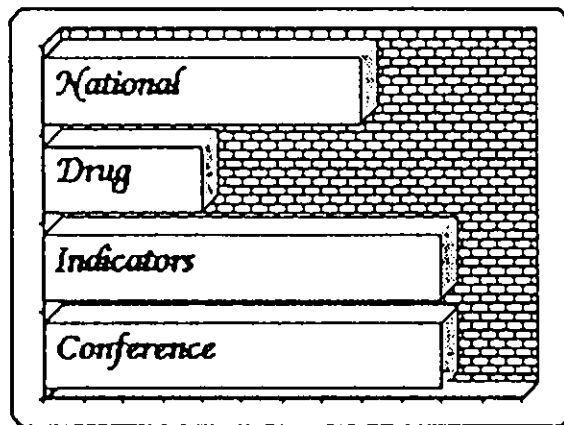
**EPIDEMIOLOGY OF ILLEGAL DRUG USE
IN AUSTRALIA 1988**

**Proceedings of the
First National Drug Indicators Conference
Canberra, 10-12 May 1988**

Edited by Grant Wardlaw

**Funded by the National Campaign Against Drug Abuse
and
Organised by the ACT Drug Indicators Project**

PO Box 28, Woden ACT 2606 Australia



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Published and printed by the ACT Drug Indicators Project
Australian Institute of Criminology
Canberra
1989

The National Library of Australia Cataloguing-in-Publication
information:

National Drug Indicators Conference (1st : 1988 : Canberra, ACT)
Epidemiology of illegal drug use in Australia 1988 :
proceedings of the First National Drug Indicators Conference,
Canberra, 10-12 May 1988.

ISBN 0 642 14663 2.

1. Drug abuse - Australia - Statistics - Congresses. 2. Drug
abuse surveys - Australia - Congresses. I. Wardlaw, Grant,
1950- . II. Australian Institute of Criminology. III. ACT
Drug Indicators Project. IV. Title

362.2'93'0994

PREFACE

As part of its funding by the National Campaign Against Drug Abuse, the ACT Drug Indicators Project undertook to organise an annual conference on drug use indicators and methodologies for developing and collecting them.

These Proceedings represent the product of the first of these conferences, which was intended to be a ground-clearing exercise which brought together government data collectors, NCADA-funded researchers and other analysts whose work aimed to increase the range and accuracy of our knowledge about illegal drug use in Australia. The papers presented detail the state of our knowledge at present and efforts which are underway to improve it. (Only those presentations which were supplied to the organisers in the form of written papers are reproduced here. However, this represents the great majority of the presentations.)

Although the conference was only a beginning, the presentations illustrate the strides which are being made in the collection of drug data in this country and provide much useful information which has not previously been available.

Future conferences will provide an opportunity to fill in the gaps in our knowledge, to discuss new methodologies for data collection, and to address the vital question of how to communicate the data to policy makers in a manner which will ensure its integration into the policy-making process.

Further information about the ACT Drug Indicators Project and the National Drug Indicators Conferences can be obtained from Dr Grant Wardlaw, Australian Institute of Criminology, PO Box 28, Woden ACT 2606 (Phone (062) 833812).

Dr Grant Wardlaw
Chief Investigator
ACT Drug Indicators Project

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**WELCOME TO
FIRST NATIONAL DRUG INDICATOR'S CONFERENCE**

**PROFESSOR DUNCAN CHAPPELL
DIRECTOR, AUSTRALIAN INSTITUTE OF CRIMINOLOGY**

Welcome to the Australian Institute of Criminology (AIC), and to the First National Drug Indicators Conference.

The AIC is very pleased to host this important meeting. It is a meeting which flows from the Institute's ongoing research, funded by the National Campaign Against Drug Abuse (NCADA), which seeks to develop methods of providing a more accurate appraisal of illegal drug use across Australia. The test base for this research is the ACT. But it is intended that the experience gained here in the nation's capital with the measurement of patterns and trends in illegal drug use will become a benchmark for policy makers in all parts of the country.

The need for comprehensive, reliable and national information about illegal drug use is pressing. Without such information policy makers seeking to grapple with one of the nation's most troubling and pervasive social and health problems are unable to measure the effect and impact of major initiatives like NCADA.

Experience gained by the Institute's Drug Indicators Project is already being utilised by policy makers here in the ACT. For example, the ACT Health Authority has used the Project's preliminary data to assist in the implementation process for the ACT Drugs of Dependence Ordinance. The Project, which is led by one of the Institute's senior researchers, Dr Grant Wardlaw, has also provided data to the Health Authority and the Australian Federal Police to allow them to fulfil reporting functions about drug abuse to the United Nations.

An integral part of the Project's research objectives has been that of providing a forum for the exchange of ideas and information about indicators of illegal drug use in Australia. This Conference is intended to fulfil that objective. It is a Conference which brings together drug data producers and consumers from all parts of the country to discuss the current state of knowledge about illegal drug use.

Some of you who are attending this Conference may not be familiar with the more general work of the AIC. Let me therefore tell you a little about the Institute's role. We are an independent statutory body. Our principal mission is to provide impartial information and advice about crime and criminal justice issues to governments, official agencies, private organisations and to the community at large. We have an extensive research program, as

well as a broad based information dissemination system through our library, seminars, and publications.

Our statutory responsibilities include that of collecting information and statistics of the type involved in the Drug Indicators Project. It is significant that the methodologies being developed by Dr Wardlaw and his team in regard to the area of drugs are now likely to be utilised in the measurement of domestic violence. The Institute is currently participating in an Interdepartmental Committee on Domestic Violence which is considering the development of a Domestic Violence Indicators Monitoring Project. The draft proposal for this new initiative draws heavily upon the experience gained in the Institute's Drug Indicators Project.

The Institute is also actively working to develop another very important indicator of the state of crime in the nation. At the moment Australia is one of the few developed nations which does not conduct regular crime victimisation surveys. Such surveys are widely utilised in countries like the United States, Canada and the United Kingdom to provide policy makers with information about issues like the reporting behaviour of crime victims, and the impact of crime upon individual citizens. They also permit policy makers to measure the effectiveness of different law enforcement practices in the community - something which is difficult to achieve with traditional official statistics like those produced by the police.

Crime victimisation surveys are quite expensive and resource intensive to produce. The Institute has therefore requested a modest amount of additional funding, commencing in the 1988/89 financial year, to allow it to begin conducting an annual crime victimisation survey. The data produced by a survey of this type will be a most valuable adjunct to the more specific information being generated about illegal behaviour in the Drug Indicators Project, and like research endeavours. The data should include information of direct interest to policy makers in the health field. For instance, many acts of criminal violence currently go unreported to authorities. Knowledge which would be produced by a crime victimisation survey of the dark figure of criminal violence in the Australian community is of obvious relevance to planning adequate health care and prevention programs.

It is now my pleasure to ask the Minister for Community Services and Health, Dr Neal Blewett, to give the opening address to this Conference.

OPENING ADDRESS

THE HON NEAL BLEWETT MINISTER FOR COMMUNITY SERVICES AND HEALTH

Professor Chappell, ladies and gentlemen, I am very pleased to open this conference which is designed to shed some light on what might be called one of the black holes of data on drug abuse in Australia, namely the size and dimensions of illegal drug use.

From a national perspective, the collection and dissemination of accurate statistical information relating to drug use and abuse is essential to the continued success of the national campaign against drug abuse.

We need this data both to effectively plan our further actions on hard drugs and to measure the results of our prevention, treatment and education strategies.

From a personal perspective, the availability of reliable data means that, at last, I will be able to respond with at least some degree of confidence to that ubiquitous media question: How many heroin users are there in Australia!

It is an enormous tribute to the achievement of the NCADA in the field of illicit drug abuse that we have done so much in shifting community behaviour and attitudes without as yet having the statistical evidence to reinforce our case.

Under ideal circumstances, of course, no government would agree to implement a program as complex as the NCADA without first having a detailed knowledge of the exact nature and extent of the problem being addressed.

But ideal circumstances never exist in politics and were not those which Australian governments faced in 1985, and we could not afford the luxury of being able to postpone our answers to drug abuse until the full dimension of the problem was better defined.

What was determined, however, was that as one of the basic planks of the NCADA campaign, a national drug abuse data information system would be established as a major priority, and that all jurisdictions would work in a cooperative way to achieve it.

We are now towards the end of the first triennium of the NCADA campaign, and it is timely to consider what progress has been made towards establishing in Australia something which very few nations have attempted - a truly national drug abuse data system, with five clear objectives:

- . to identify and describe the extent and nature of drug use and drug related problems;
- . to identify and describe the responses to such problems;

- . to determine factors associated with drug related problems and responses to them;
- . to provide information to facilitate the development and implementation of policies and programs focused on the prevention and reduction of drug related problems; and
- . to monitor and assess the impact of policies and programs aimed at improving responses to drug related problems in Australia.

To meet these objectives, precise indicators were required and the first step was to identify these components and establish a process for their collection on a comparable basis throughout the country.

Following an extensive consultation process, a package of twenty four relevant data sets were identified, covering such areas as:

- . the levels and patterns of use of illicit drugs;
- . indicators of the levels of harm associated with drug abuse in terms of poisonings and admissions to hospitals;
- . estimates of the total numbers of deaths caused by drug abuse;
- . details of the number of clients of various programs designed specifically to provide treatment for the health consequences of drug abuse, eg. methadone programs;
- . details of offences involving drugs together with seizures of various illegal drugs; and
- . estimates of the expenditure of public funds on drug abuse interventions.

All jurisdictions have agreed to this strategy and, with annual financial support of \$1 million from the Federal Government under the NCADA program, they are cooperating in implementing this data collection process.

So far, some twelve of the data sets are on line, with the remainder to be implemented by the end of 1989.

In addition to these basic collections, the national data system includes a research element to address areas in which there is currently no data available or in which existing methodologies are proving inadequate.

One of the most important research projects in this field is the ACT Drug Indicators Project being undertaken by the Australian Institute of Criminology.

This project aims to construct and monitor indicators of relative change in illicit drug use level and patterns over time, as well as assessing how best to integrate information from a variety of sources in order to provide a broader and more accurate picture of illicit drug use than is currently available.

Today's conference has been convened as part of that project and provides the forum for an overview of the illegal drug use situation in Australia, and the potential for establishing a methodology which will enable comparable statistics on illicit drug use to be developed by the commonwealth, states and territories.

I was interested to see the recent statistical update from the National Drug Abuse Data System which concluded that Australia has some 30,000 to 50,000 frequent regular dependent heroin users and at least 60,000 irregular recreational non-dependent heroin users.

The basis for this estimate is various methodologies drawn by the NSW Drug and Alcohol Authority, by the Australian Royal Commission of Inquiry into Drugs, and the extrapolation of research findings in the United Kingdom and the United States.

The results of these four differing methodologies have been cross indexed to support the revised estimates for dependent and non-dependent heroin users.

While it is pleasing to see this initiative, which narrowed some of the more extravagant estimates, we still have a long way to go on illicit drug prevalence and trends - to move from a 'best guess' to a more scientifically valid estimate.

It was to achieve this sort of transition that NCADA support was given to the ACT Drug Indicators Project, and I look forward with interest to the outcome of this conference's consideration of the report on the project and the potential it has for contributing to an acceptable comparative methodology on illicit drug use around our country.

I will be particularly interested in your views on some significant findings of the project, particularly the apparent much higher prevalence of intravenous use of cocaine and amphetamines, with respectively 40 per cent and 52 per cent of users apparently adopting this as the preferred method of administration.

There are obvious worrying implications of this finding for the spread of AIDS via needle sharing, and it is clear that debate on, and community education about, the issue should not be solely centred on heroin.

The conference will, of course, be discussing the dissemination of data which has been collected as part of the new system.

You will be aware of the production of a new annual booklet, *Statistics on Drug Use in Australia*, as part of the NCADA campaign. The booklet draws together all available data from commonwealth and jurisdictional sources, and contains short summaries of the main points demonstrated by the statistics.

Supplementing this annual publication is the statistical update series which commenced in August 1987, and is designed to draw to attention significant new findings from the data system.

Five issues have now been published, providing details on drug caused deaths in Australia, numbers of heroin users, drug caused morbidity data, and apparent consumptions of alcohol and tobacco in Australia.

As the extent of data holdings becomes progressively more developed, the intention is to provide more frequent and more detailed statistical updates, and to eventually move to the development of a statistical monograph series.

I think it is clear that we have made substantial progress in improving our knowledge base about the prevalence and incidence on drug abuse in Australia, and that there is a clearly understood plan for completing the process by the end of next year.

Our ability to achieve this goal is very much dependent upon the degree of cooperation and participation offered by all of the nine jurisdictions committed to the NCADA campaign, and, in turn, the assistance they receive from the agencies and authorities in whose hands the raw data are to be found.

There are, of course, the formal arrangements for the collection of this material through the National Drug Abuse Data Networking Committee.

But it is also important that understanding and cooperation are fostered through informal networking arrangements such as conferences like this.

I am sure that none of us underestimate the importance of sharing knowledge on current major research projects - both those supported through the NCADA program and from other funding sources - and on the development of various data bases in health and law enforcement areas.

These serve not only to put our own efforts into the broader context of developments in Australia, but also to provide an opportunity to cement relationships between relevant personnel in research, in the drug and alcohol authorities, in the law enforcement areas, and in the education and treatment agencies.

All of you here are aware of the value of having reliable indicators of the nature and extent of the illegal drug problem; indeed, I am sure that you are very conscious of the fact that you must play a leading role in bringing this about. The Government is philosophically and financially committed to providing you with the support to turn the plan into a reality.

But, in the final analysis, it is you who will determine the final success of this vital NCADA initiative.

I wish you well in your deliberations over the next few days, and I have great pleasure in declaring this conference open.

**ILLEGAL DRUG USE IN AUSTRALIA:
A NATIONAL OVERVIEW**

INDICATORS OF DRUG USE IN AUSTRALIA: AN OVERVIEW
OF THE NATIONAL DATA

DR. STEPHEN MUGFORD
RESEARCH FELLOW, ACT DRUG INDICATORS PROJECT
& SENIOR LECTURER, SOCIOLOGY (ARTS) A.N.U.

The extent of use of illicit drugs by Australians is a matter of considerable debate. The debate is given added salience because of the political context in which it occurs, with various groups making assertions which are, it often seems, coloured by their perception of the interests they serve. Thus, for instance, politicians at both the State and Federal level and of all political hues make claims about increases or decreases, at times influenced, it appears, by their electoral interests; self appointed moral guardians of the nation are known to wax eloquent in their fury at the level of drug use; police and customs officials argue for particular levels of apprehension and interdiction in terms that suggest that staffing levels are not irrelevant matters when drug statistics are bandied about; and those in treatment agencies, battling for funds and recognition are wont to paint their claims in colours that will ensure support, funds and so forth. The problem with all this is that those who construct figures are also those who have interests in seeing the figures come out certain ways at certain times. Furthermore, since in some areas the use that is known is only a portion of all use, increased efforts in the surveillance, prevention or treatment areas are all prone to produce a rise in the measured statistics of use, even if they have actually had some effect in reducing the real level of use.

In short, the problem of accurate data in this area is not unlike that of estimating one's position with limited instruments from the deck of a small ship in heavy weather. As the metaphor suggests, the problem is difficult but not impossible and salvation lies in making multiple sightings. This, in part, was what the First National Drug Indicators Conference was aiming for, and the group of papers from the six States that are included in these proceedings can be seen as such a set of sightings¹. In the present brief paper I aim to say something about the instruments and the sighting process and a little about our best estimate of the current position. Let me turn first to the sources of data.

Table 1 gives a picture of the data sources that are used, with a State by State breakdown of the material reported in the 6 papers. As can be seen, not all States reported on all the indicators, and no one State covered the entire range. Only the first two measures shown were reported on by all States, with the number

¹ In the case of the ACT, the aim was more limited, with Rosemary Jardine's paper concentrating upon government treatment agencies. In part, this reflects the fact that the main ACT picture is available in the series of ACT Drug Indicator Reports, the first full one of which was released parallel with the conference.

TABLE 1: DATA SOURCES USED IN THE STATE REPORTS

SOURCES	STATES					
	<u>VIC</u>	<u>QLD</u>	<u>TAS</u>	<u>SA</u>	<u>WA</u>	<u>NSW</u>
MORTALITY STATS	yes	yes	yes	yes	yes	yes
POLICE STATS	yes	yes	yes	yes	yes	yes
MORBIDITY STATS*	yes	yes	no	yes	yes	yes
METHADONE DATA	yes	yes	na**	yes	yes	yes
TELEPHONE SERVICES	yes	yes	yes	no	yes	no
SCHOOL SURVEYS	yes	no	no	yes	no	yes
PRICE & PURITY DATA	no	no	yes	yes	no	yes
AIDS DATA	no	no	no	yes	yes	yes
COURT STATS	no	no	no	yes	no	yes
POPULATION SURVEYS	no	no	no	no	no	yes***

* Includes admissions, bed days used and a variety of other sources

** Tasmania does not have such a program

*** The NSW paper (Muir) raises the issue but does not report detailed data.

of States not reporting such data rising as one moves down the Table. In part, these differences represent differences not only in availability, but also differences in the kinds of problems unique to each State. So, for example, Tasmania has a much smaller problem with heroin use than the mainland States. Hence that State has no methadone program from which it could report. In all, Table 1 lists 10 types of data, of which there are reports from one or more States on 9. It is to the picture that we can derive from these data - our metaphoric estimated position - that I now turn.

Mortality Data.

One particularly important point was raised in Ross' paper on Victoria when he reminded us forcefully that the vast bulk of drug related deaths are caused by licit drugs such as alcohol and tobacco. Only a small minority (around 5%) are a result of the use of illicit drugs or the misuse of pharmaceuticals. The point cannot, in my view, be emphasised too often if the problem of drug deaths is held to be a central issue in the drug policy debate¹.

A second important general issue that these reports raise is the standardisation of recording data. Despite standard classifications for a variety of causes of death, in practice the data actually available are not always comparable between States and do not always seem to reflect fully the real pattern of connections between drug use and death. Further work here is clearly necessary.

What, however, can we say of the pattern of those deaths that are related to illicit drugs? Although there are variations by drug types, some patterns can be discerned. In Queensland, such deaths have run at around 75-95 per annum in the period 1979-1986, with a high in the early 1980's. Opiate deaths had a slight peak in 1984 and have fallen since. In NSW the overall deaths from 1981-5 fluctuated between 226 and 314 with 1981 and 1985 the highest years. Opiate deaths, however, increased steadily in the period, more than doubling from 51 to 122. There is, however, some evidence in Muir's paper that these deaths may have peaked in 1985 and fallen since. In Victoria, the figures for drug overdose deaths in the period 1983-1986 fluctuated between 65 and 114, with a high in 1985. The pattern for opiates was similar, 25 to 76 with a peak in 1985. In S.A. the data are less detailed, but in the period 1984-7 State coroner's office figures for heroin overdose deaths show a total of 28 deaths, with a sharp peak in 1985. In W.A. deaths due to opiates, barbiturates and cocaine ranged from 6 to 32 with a sharp peak, overall and for opiates in 1985. Finally, Tasmania, in the period Jan. 87 - Mar. 88 only recorded one narcotic related death of the total of 13 cases submitted to the Government Analyst Laboratory.

Overall, then, it is hard to identify any clear pattern of mortality from illicit drug use in Australia as a whole. There are a number of fluctuations in all drug deaths and this pattern is true for opiated deaths. The main data for NSW are complicated by the fact that the detailed data for that State stop at 1985, but the recent, albeit sketchy, figures suggest that it is possible that the picture of a peak in opiate deaths shown in the other 4 mainland States could be repeated there. Certainly, the peak is clear in those other States, and raises interesting questions about its cause. Given that there was a rise before that time, and that 1985/6 saw the launching of a major government initiative in the area, it is certainly possible that the down-turn does reflect the impact of the 'Drug Offensive'.

Police Statistics

Police statistics are a particularly complex source of data. As the authorities are well aware, they do not apprehend more than a fraction of those offending against the law. There is thus a large potential pool of offenders who could be caught if more time and labour was available, either because of increases in funds or because of policy switches². Thus while the arrest statistics themselves present no major problem (a rise is a

rise) the relation of arrest to use is unclear. Several of the papers raise these thorny problems. In addition, legal changes in NSW and S.A. have been mentioned as causing changes in both enforcement practices and in reporting practices. For these reasons one should beware of over interpretation of figures, and place reliance only on those trends that are shared by several States and/or which fit in with other data.

In all States the arrest statistics show similar patterns at the very broad level. There are many arrests (thousands in most States), the general trend has been clearly upwards over the last decade and the vast bulk of offences recorded centre upon one drug (cannabis) and one type of offence (possession). Age related effects are clear, with the bulk of arrested people being in the age range 15-29. There appears to be a slowly rising trend in arrests for heroin use (with recent hiccups in a few States) and for amphetamine and cocaine use. Beyond the likelihood that it was not substantially decreasing in the period from about 1980-6, no clear interpretation of overall cannabis results is possible at this point, because here the implications of policy impacting upon arrests is maximised. Cannabis arrests generally increased, but whether this is an indication of increased cannabis use is impossible to say.

Morbidity Statistics and Methadone Programs

The morbidity statistics presented in the papers cover a wide variety of different types of data. They include such things as hospital admissions, admissions to non-government agencies, urinalysis findings, bed-days consumed by drug users etc. Comparable data for alcohol and illicit drugs is shown in the Victorian figures, again reminding us that of the drug related morbidity this is the principal drug that leads directly to hospital admission³.

I have combined these data with information on methadone programs, since it is clear that the presence of a methadone program alters the pattern of use of treatment facilities.

What general trends can we see here? First, where methadone treatment programs are available, there is a steady and substantial growth in the number of people joining them or waiting to join them. This would appear to indicate an increase in the use of opiates in Australia, consistent with other data. This data fits with the Hepatitis B picture reported by W.A. which shows a consistent rise 1984-7 in infections, particularly in the age group at risk of contracting the disease through needle sharing (15-34 years).

Second, there seems to be a fairly steady increase in the number of clients seeking help for opiate dependency problems in other types of treatment modality, offset only by reductions in some areas when methadone programs have become available or increased in size. Again, this probably points to an increase in the use of opiates.

Hospital data is not too clear, with different patterns showing up in the limited data available. The W.A. figures emphasise the significance of barbiturate use, especially among older groups than affected by opiates, while the Queensland figures show a drop in admission in recent years, quite opposite a trend to the other trends in that State.

This is clearly an area where we will need to do more to ensure the collection, compilation and reporting of standardised data if we are to use these as a monitoring field. It is interesting that the figures least likely to be affected by such things as availability of places for clients, namely the Hepatitis B figures, give a clearer picture of probable drug use increase than some others. Hopefully, in future there will be attempts to gather accurate morbidity data, and when a future drug indicators conference is held, we should give particular attention to trying to obtain detailed and comparable data of this type.

Telephone Services

Four States reported data from telephone advisory services. Accurate recording of the calls over a period of time could well provide interesting data for monitoring trends, once the services are regularised. At present, some fluctuation appears to result from novelty and change. The data show little increase in the type of drugs being enquired about. When all drug types are recorded, the general pattern of calls is for legal drugs to show up ahead of opiates, with polydrug problems also a major concern. Sex differences are evident here as in other data. Alcohol is the major drug of concern, with this being emphasised among males. Females are far more likely to call with tranquilliser problems than men. Psychostimulants, especially cocaine, and hallucinogens are the subject of few calls.

This is certainly an area of monitoring that could be sensitive in future, a point illustrated by the W.A. figures showing a recent increase in enquiries about 'Ecstasy (MDMA) a drug which has only recently been popular, and which was mentioned in another report (NSW) as showing up in very recent information.

School Surveys

Three States reported on large sample surveys of youth, principally, but not only, studies of school populations. There are some variations here, particularly in the use of solvents, which was much higher in the Victorian figures than elsewhere. As with all these types of data, the issue of standardised measures and sampling techniques again was central, with NSW in particular making mention of changes over time.

Nonetheless, clear patterns emerged. These were:

1. alcohol, tobacco and analgesics are much more commonly used than illicit drugs;
2. of the illicit drugs, cannabis is clearly the most commonly used, with little consistent evidence of other illicit use on a nation wide basis;
3. cannabis use rises with increased age, probably peaking around 15-16;
4. there seem to be differences by social status, with youth from lower status groups more likely to use illicit drugs than comparable high school groups.

Clearly, this is an important and well established area of data collection, and further standardisation and continued collection can only improve the utility of the monitoring.

AIDS Data

Since IV drug use is a significant vector for the transmission of the AIDS virus (HIV), it is important to have accurate data about its level and spread. Such data will, like Hepatitis B information, also act as a drug indicator. Three States reported related material. As yet, little can be added to our general knowledge about drug use from this source. Figures for antibody positive cases where IV drug use appears to be the main risk factor are rising, but given the complexities of testing and the delay in the production of antibodies, this rise may reflect past rather than current increases in such drug use.

Nonetheless, it is clear that this is an area where future detailed monitoring is imperative.

Price and Purity Data and Court Records

Three States reported price and purity data and two States reported data from court records. These data, although limited, complement the police data referred to above. Where possible, such data should be regularly collected, compiled and reported. Problems here include the fact that legal requirements concerning the nature of the charge, of proof in court and so forth influence what is routinely collected by police forces (e.g. purity analyses) and State variations in law may mean charges are not always strictly comparable. Nonetheless, such data, especially the price and purity data and the figures on the size and nature of seizures, can give an excellent picture of the trafficking situation if properly collected.

Little can be concluded from the present data set on these issues that adds to the picture derived from other sources, but there is a consistency between these and other data, and some firmer picture of prices emerge from the results, confirming more impressionistic conclusions drawn elsewhere.

SUMMARY

The State papers that were presented at this conference were a first attempt at the task of bringing together a comprehensive picture of drug use in Australia. The main objective was not to create such a picture, sharp focus and with perfect composition at once. Rather it was to see whether and how such an ambition might be achieved. The sharing of ideas, the airing of problems and the comparison of what we could find as a first approximation were the principal goals.

In these terms, it seems to me that the exercise was very successful. We have established that there are many relevant sources of data that can be used in monitoring illicit and licit drug use and have identified some problems. These centre particularly upon the following issues:

1. data needs to be collected, collated and compiled in a manner that is as standard across time and jurisdictions as can be achieved;
2. some data, especially official records of police and treatment agencies, are useful for general aggregate trends, but are sufficiently sensitive to resource and policy pressures that fine grain differences in figures may be meaningless unless confirmed by other jurisdictions and/or other means;
- 3 resources need to be made available by governments at all levels to ensure that the more difficult and expensive types of data gathering (such as surveys and price/purity data) are gathered. Otherwise we are working

in an unnecessary darkness and cannot properly answer the very questions that those governments would like answered.

With these limitations recognised, we can still see some useful themes in the data that were presented. The emphasis from several sources upon the relative insignificance of illicit drugs as causing problems of the magnitude caused by legal drugs, except as a major AIDS vector, has considerable importance. The trend for opiate use seems, from several sources, to have flattened out. Problems generated by it in terms of overdose deaths are falling slightly, although costs continue to rise overall when the increases in treatment, including methadone programs, are counted. Of the other drugs, the trend towards increased amphetamine use, particularly intravenously, which we identified in the ACT Drug Indicators Project (ACTDIP) data seems to find some support in the papers. There is also evidence of a small flurry of use of, and concern about, ecstasy.

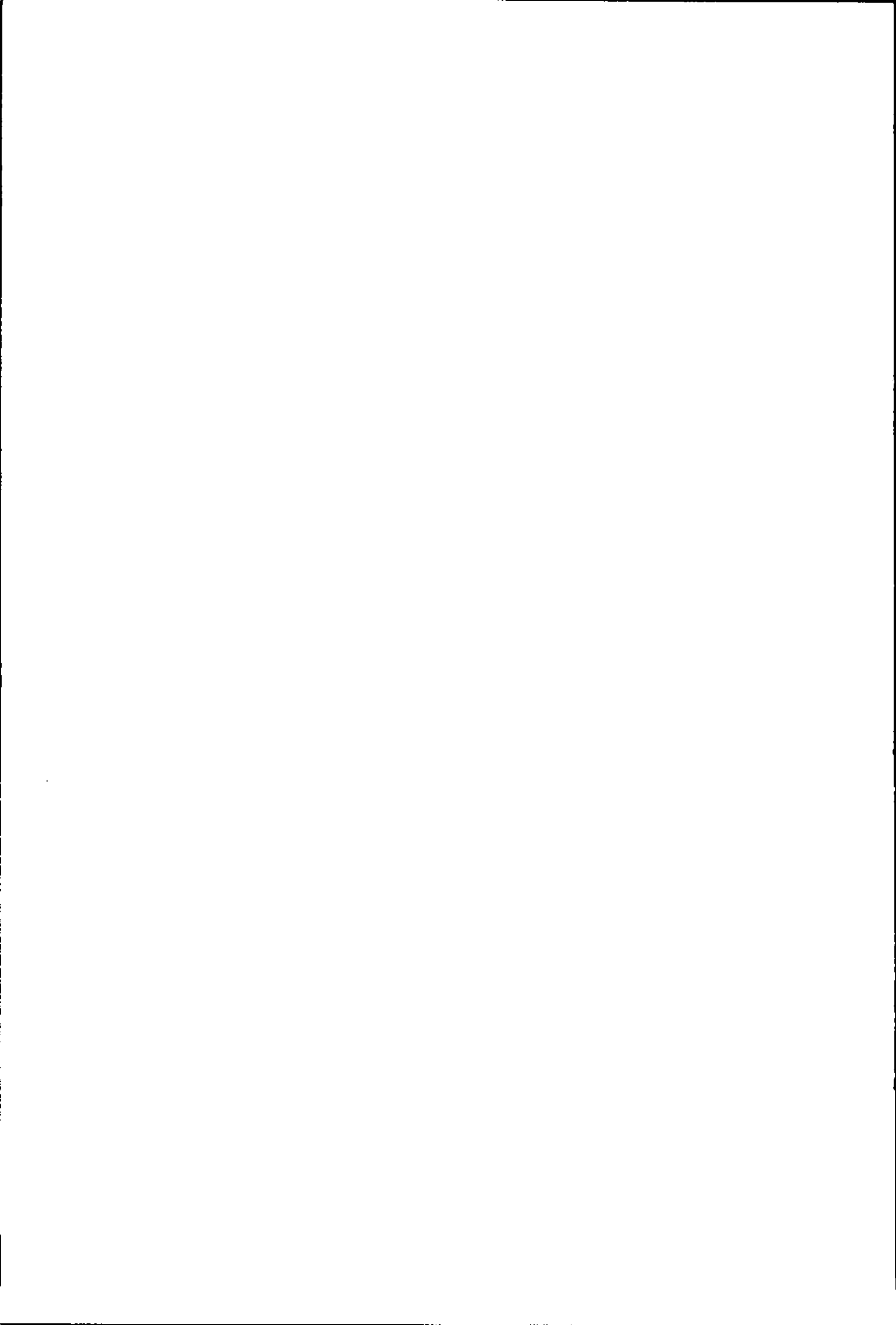
On the other hand, despite official concern at times, cocaine continues to appear as a very small problem nation wide, again something that ACTDIP data would suggest.

In future we plan to hold further conferences on this topic, and to work towards improving the quality of data gathering and reporting. No doubt the list of sources compiled in Table 1, and the details of method and data that were reported in each paper will help various agencies in compiling the next round of reports, and in working towards improved monitoring of drug use. We hope that this, combined with our detailed work in the ACTDIP will have such an effect in the near future.

¹ I am not suggesting that any drug death isn't a tragedy - simply that if the utilitarian position of 'the greatest good of the greatest number' is to be the basis of social policy, as so many discussions imply, then the idea that the illicit drugs are so terrible because of the (few) deaths they create, seem misplaced.

² This statement does not imply any criticism of police forces. The arrests made must be a result of policy choices about where to concentrate enforcement efforts, and any force, given the limits of its resource base, is forced to make such choices and produce the particular pattern of results that it does.

³ Of course, tobacco is even more prominent as a cause of illhealth, but the admissions here are shown for lung, heart or other disease, not for tobacco dependency.





National Campaign Against Drug Abuse

THE FIRST NATIONAL DRUG INDICATORS CONFERENCE
CANBERRA, 10-12 MAY 1988

THE ROLE AND PRELIMINARY FINDINGS OF RESEARCH
CONDUCTED FOR
THE DRUG OFFENSIVE HEROIN PREVENTION CAMPAIGN

Presented by: Tom Carroll
Associate Campaign Manager
The Drug Offensive

Acknowledgement:

I would like to make acknowledgement of the contribution to this paper by Aileen Plant and Petra Mackaskill of the Department of Public Health, University of Sydney.

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THE DRUG

OFFENSIVE
A Federal and State Initiative.

THE ROLE AND PRELIMINARY FINDINGS OF RESEARCH
CONDUCTED FOR THE DRUG OFFENSIVE HEROIN PREVENTION
CAMPAIGN

TOM CARROLL CANBERRA, MAY 10, 1988.

Mr Chairman, Colleagues,

The aim of this paper will be to briefly:

- I) Outline the various research functions undertaken by The Media Unit of The National Campaign Against Drug Abuse,
- II) Describe, in particular, the evaluation program for The Drug Offensive Heroin Prevention Campaign,
- III) Present preliminary findings from studies conducted within the Heroin Campaign Evaluation Program.

I RESEARCH UNDERTAKEN BY THE NCADA MEDIA UNIT

To date the Media Unit of NCASA has developed and implemented prevention campaigns focussing on heroin and, more recently, alcohol. Campaigns aimed at addressing the inappropriate use of pharmaceuticals, or medicines, and at cigarette smoking by young women are currently in development. Various research projects are carried out, other qualitative studies and quantitative for both the development and evaluation of these campaigns. Broadly speaking, these projects may be designed to:

-2-

- i) Initially explore or measure knowledge, attitudes, and beliefs of a potential campaign target group.
- ii) Assess the impact or appropriateness of particular concepts, messages or draft media executions with a target group.
- iii) Assess the market penetration of particular advertisements or resources, i.e. seeking a measure of the numbers of people within a target group who have seen particular advertisements or other campaign materials and exploring what these people understood the messages of these advertisements or products to be.
- iv) Measuring changes against a previous measure of knowledge, attitudes and beliefs within a target group.

Some projects of course may seek to serve more than one of these functions. Although designed to ensure the development of appropriate and effective campaigns there is clearly, I feel, a good deal of data generated in these

-3-

studies which can contribute to a broader understanding of the levels of, reasons for and contextual influences on, drug use in Australia.

II EVALUATION PROGRAM FOR THE DRUG OFFENSIVE HEROIN PREVENTION CAMPAIGN

I will now turn my attention to the Drug Offensive Heroin Prevention Campaign which, of course, was not a campaign aimed at the current user with a goal of cessation of use. It was, rather, a campaign aimed at those deemed to be 'at risk' of initiating heroin use. After examining the literature on the antecedents of drug use and various data from treatment populations, a decision was made to target the heroin prevention campaign at, and immediately prior to, the most common age group for initiation to heroin use i.e. The 15 to 20 year-age group, and at those within this age group who were currently using alcohol and marijuana.

Media components of the campaign were three television commercials and six supporting print advertisements. In this initial phase of the campaign, advertising was bought only in Sydney, Brisbane and Canberra and commenced on the launch date 10th May, 1987.

-4-

An evaluation program for this campaign was developed by an evaluation study group comprising: Dr John Pierce then of the University of Sydney, Mel Steur from the Queensland Alcohol and Drug Dependence Service, Peter Homel from the NSW Directorate of the Drug Offensive and myself. This evaluation encompasses a number of separate studies:

- i) A community prevalence survey;
- ii) A baseline survey of current illicit drug users; (both of the above studies being conducted prior to the launch of the Campaign advertising).
- iii) A community recall survey conducted at the end of July (approximately four weeks after the advertising concluded);
- iv) A repeat of the initial baseline survey with the cohort of illicit drug users, conducted in late November, which also included measures of recall of campaign advertising for this cohort.

Other measures to contribute to this evaluation program include an examination of calls to the various alcohol and drug counselling and information services, demand on printed resources and content of press clippings.

-5-

An evaluation report encompassing the findings of the surveys mentioned above is being prepared by Dr Aileen Plant and her colleagues in the Department of Public Health, University of Sydney in conjunction with the evaluation study group for the campaign and it is envisaged that this report will be completed at the end of this month. The tables and figures presented in this paper have been prepared by Dr Plant for that report.

III PRELIMINARY FINDINGS FROM THE COMMUNITY
PREVALENCE SURVEY AND THE ILLICIT DRUG USERS
SURVEY OF THE DRUG OFFENSIVE HEROIN
PREVENTION CAMPAIGN EVALUATION.

Today I would like to present to you some of the findings of the baseline illicit drug users survey and the community prevalence survey of this campaign evaluation.

FIRSTLY,

A, The Community Prevalence Survey

1) Method

This study was a nationwide survey of the Australian community conducted to ascertain the extent of self-reported illicit drug use and to gain a community measure

-6-

against which to compare the illicit drug users sample. The survey was carried out by Roy Morgan Research Company in May 1987 prior to the launch of the heroin campaign advertising. The sample was randomly selected after stratification.

People over the age of 14 years were asked the question "in the last 12 months, which, of any the activities listed below have you, yourself done? Which others? Any Others? The activities listed were:

Drunk too much Alcohol,

Smoked Cigarettes,

Smoked Marijuana, Grass, Hash, Pot,

Taken pills such as Amphetamines, Speed, Uppers,

Downers,

Taken hallucinations, such as Magic Mushrooms, LSD

etc,

Used Cocaine, Crack,

Used Heroin, Smack.

Demographic information was also obtained on all respondents.

-7-

Cards were used so that respondents simply pointed to indicate the drug or drugs used rather than give the answer aloud.

A total of 3594 interviews were conducted in NSW, Victoria, Queensland, South Australia, Tasmania and Western Australia.

2) Results

The prevalence of illicit drug use in the community survey is indicated in table 1.

The data is presented here for the total population in the survey, for those aged 14-29, and for the population excluding those aged 14-29. These age groups have been chosen so that the information presented here is comparable to that reported in the illicit drug users survey.

Prevalence of illicit drug taking in the 14-29 age group is more than double that of the over 30 population with the exception of heroin which may be due to the small numbers involved.

-8-

As can be seen in figure 1, the prevalence of all illicit drug-taking behaviour in males is virtually twice that of females until the 50 + age group.

Figures 2-5 illustrate self-reported "Too Much" Alcohol, any Cigarettes, Marijuana and Pills (i.e. Amphetamines, Speed, Uppers, Downers) for each drug by age and sex. Heroin, Cocaine and Hallucinogens are not illustrated here because of the low prevalence of these drug taking behaviours in this survey. (Hallucinogens 0.4%, Cocaine 0.3% and Heroin 0.1%).

The main limitation of this survey is the accuracy of this self-reported data, particularly in relation to admitting to the use of an illicit substance.

The increased prevalence of female illicit drug-taking in the older groups compared with males is likely to be due to the construction of the question. The question was worded in such a way that differences between licit and illicit use of Pills, "Uppers", "Downers", could not be detected. The data have been analysed so that all answers have been called illicit for convenience, although it is acknowledged that some are, in fact, licit. Another problem with these data is the self-definition of "Too Much" Alcohol.

-9-

Despite the limitations of this survey, however, it is obvious that large sectors of the population experiment with some sort of illicit substances at certain times of their lives. Of particular interest in this survey is the differential reporting of illicit drug taking by males and females.

B. Illicit Drug Users Survey

Turning now to the Illicit Drug User Survey.

1. Method

This survey was similarly conducted by the Roy Morgan Research Company. The aim of this survey was to interview members of the Heroin Campaign Target Group. Realising that this group would not necessarily be easy to locate, the stratification procedure targeted suburbs where a large population of people aged 15-30 years resided. The age range 15-30 years was chosen because, while it contained our specific 15-20 year old target group, it also contained the 20-30 age range which was of major interest with respect to illicit drug taking behaviour, and a broader age range provided a greater opportunity to gain a reasonable sample size within the allocated budget for the project.

The survey resulted in 844 interviews. The selection criteria for entry into the study required the respondent to be within the specified age range and to admit to having used one or more of the illicit drugs as I have mentioned

-10-

previously in the community prevalence study in the previous twelve months.

That is,

Smoked Marijuana.

Taken Pills such as Amphetamines, Speed, Uppers, Downers

Taken Hallucinogens, such as Magic Mushrooms, LDS etc

Used Cocaine, Crack

Used Heroin, Smack

If selected for entry to the sample, the person was then asked a series of questions to determine demographic information, the type and frequency of drug use, attitudes and beliefs about some aspects of drugs and drug use (particularly about Heroin and Heroin users), drug use within their social network, and from whom the respondent would or would not seek help regarding drugs.

2. Results

Table 2 compared the socio-demographic characteristics of the community prevalence survey sample with the illicit drug users survey sample.

Of note is that in the illicit drug users survey there are: proportionately more males than females (494:347); the age structure is younger with proportionately more people in the 20-24 year age group; more single people; more people attending or finished tertiary education, and for

-11-

those who worked, the average income in the illicit drug users survey was lower than in the community prevalence survey.

The prevalence of drug use by age and sex is shown in table 3.

Figures 6 and 7 demonstrate drug use by sex and age groups. There were no significant sex differences for either multiple drug use or the use of any specific drug.

Multiple drug use by age and sex in the illicit drug users survey is shown in figures 8 and 9. There are more multiple drug users in the 20-24 year old age group (39.2%) compared with the 15-19 (29.2%) or the 25-30 (33.2%) age groups. This difference was significant at the 5% level.

Figures 10-19 show the frequency of drug use by age, sex and the percentage of frequent users. A frequent user was defined as someone reporting use of the specific drug more than once per week. Depending on age and sex, Marijuana was used frequently by 24-53% of illicit drug users sample, pills by 5-17% and Cocaine and Heroin both 3-8%.

Figures 20-25 illustrate comparisons of drug use in the Community Prevalence Survey (CPS) sample and the Illicit Drug Users Survey (IDUS) sample by sex.

-12-

A range of attitudinal and belief questions were included in the illicit drug users survey. One such question referred to a range of items that the respondent did or did not associate with regular Heroin users. On this question only 58% of males and 55% of females associated high risk of AIDS infection with regular Heroin users. Responses to the item on the repeated illicit drug users survey will no doubt be of particular interest following the various education initiatives in drug offensive heroin prevention campaign and in other campaigns focussing on the risks of AIDS infection through intravenous drug use.

Two other questions of particular interest to the Heroin Campaign were aimed at gaining a self-reported measure of:

- i) What the respondent would do if offered certain drugs,
- ii) To whom the respondent would or would not go if he/she or someone close to him/her has a problem with drugs and wanted help.

In analysing responses to the "offer" question respondents have been categorised into a "risk category" depending on the answer given to the question:

-13-

"Which line best describes what you would do if offered (e.g.) Heroin by a friend.

Be horrified and say no

Definitely say no

Probably say no

Might say yes

Probably say yes

Definitely say yes and try it"

Those answering "Be horrified and say no" and "Definitely say no" were allocated to the "lower risk" category, while those giving one of the other responses were classified as "higher risk".

The number of people who were classified at "higher risk" of using various substances was 12% for heroin, 48% for cocaine and 56% for pills (Amphetamines, Speed, Uppers, Downers). Figures 26-31 illustrate the responses given to these questions.

Figures 32 and 33 illustrate to whom the respondents reported they would or would not go for help with a drug problem. Most respondents would prefer face-to-face information and counselling services or going to see their doctor, while the most frequently reported groups from whom respondents would not ask for help were relatives and priests.

-14-

These results clearly have implications for both the Drug Offensive campaign strategy and service delivery agencies.

In conclusion I would simply like to re-iterate that what I have presented here today are merely the preliminary findings of the Heroin Campaign Evaluation Program. A full report encompassing what I have illustrated today is scheduled to be completed by the end of this month. This report will also incorporate the results of the comparison of the repeated illicit drug users survey with this initial survey and the analysis of any movement on items within the cohort in line with exposure or non-exposure to the campaign advertising. ,

Other reports of both the various qualitative and quantitative research projects conducted in campaign development and evaluation will be released from time to time, either as specific reports or as publications within the National Campaign Against Drug Abuse Monograph Series.

TABLE 1
PERCENT DRUG USE IN THE COMMUNITY PREVALENCE SURVEY

Drug	% USER		
	Survey Population	14-29 Year Age Group	Population less those aged 14-29
Marijuana	6.2	12.6	3.1
Pills	1.6	2.4	1.2
Hallucinogens	0.4	0.8	0.2
Cocaine	0.3	0.5	0.2
Heroin	0.1	0.1	0.1

TABLE 2
 SOCIODEMOGRAPHIC CHARACTERISTICS OF THE ILLICIT DRUG
 USERS COMMUNITY PREVALENCE

	ILLICIT DRUG USERS SURVEY		COMMUNITY PREVALENCE SURVEY	
	Male N=494 (% of sex)	Female N=347 (% of sex)	Male N=1805 (% of sex)	Female N=1789 (% of sex)
Age Group				
15 - 19	20.0	24.8	31.1	28.6
20 - 24	45.8	48.4	32.6	30.8
25 - 30	34.2	26.8	36.3	40.6
Marital status				
Married	5.9	7.8	26.6	39.3
De facto	16.0	11.5	3.0	4.0
Engaged	2.8	2.9	2.4	2.5
Single	72.9	71.8	64.9	48.4
Education level				
Secondary	39.7	34.1	59.4	66.5
TAFE	20.7	21.1	17.0	11.3
University	35.0	38.4	22.8	21.6
Working in 1987				
Full-time	58.9	51.0	63.6	36.9
Part-time	15.6	21.6	8.0	15.5
Unemployed and not studying (% within age-group)				
15 - 19	22.2	15.1	12.6	16.5
20 - 24	15.0	10.2	12.6	30.7
25 - 30	7.7	12.9	7.8	44.4
Income				
< \$6000	33.8	37.8	5.4	7.6
6 - 15,000	20.2	25.1	17.4	19.7
>15 - 20,000	16.4	14.4	16.4	12.2
>20 - 25,000	15.8	10.4	44.0	55.7
> 25,000	13.8	12.4	16.7	4.8

TABLE 3
PREVALENCE OF DRUG USE BY AGE AND SEX
(n = 841)

	Age					
	15-19		20-24		25-30	
	M	F	M	F	M	F
n =	99	86	226	168	169	93
Alcohol	79.8	86.1	87.2	78.6	78.7	73.1
Cigarettes	74.8	86.1	73.0	79.8	75.7	73.1
Marijuana	89.0	96.5	97.8	94.1	97.6	91.4
Pills etc	24.2	29.1	36.7	34.5	25.4	24.7
Hallucinogens	13.1	7.0	17.7	13.1	11.8	6.5
Cocaine	7.1	5.8	11.5	14.9	11.2	14.0
Heroin	2.0	5.8	4.0	6.0	4.1	5.4
Multiple drug use excluding cigarettes or alcohol	30.3	26.7	40.7	36.9	33.1	33.3

FIGURE 1

Community Prevalence Survey Self-reported illicit drug use in last 12 months

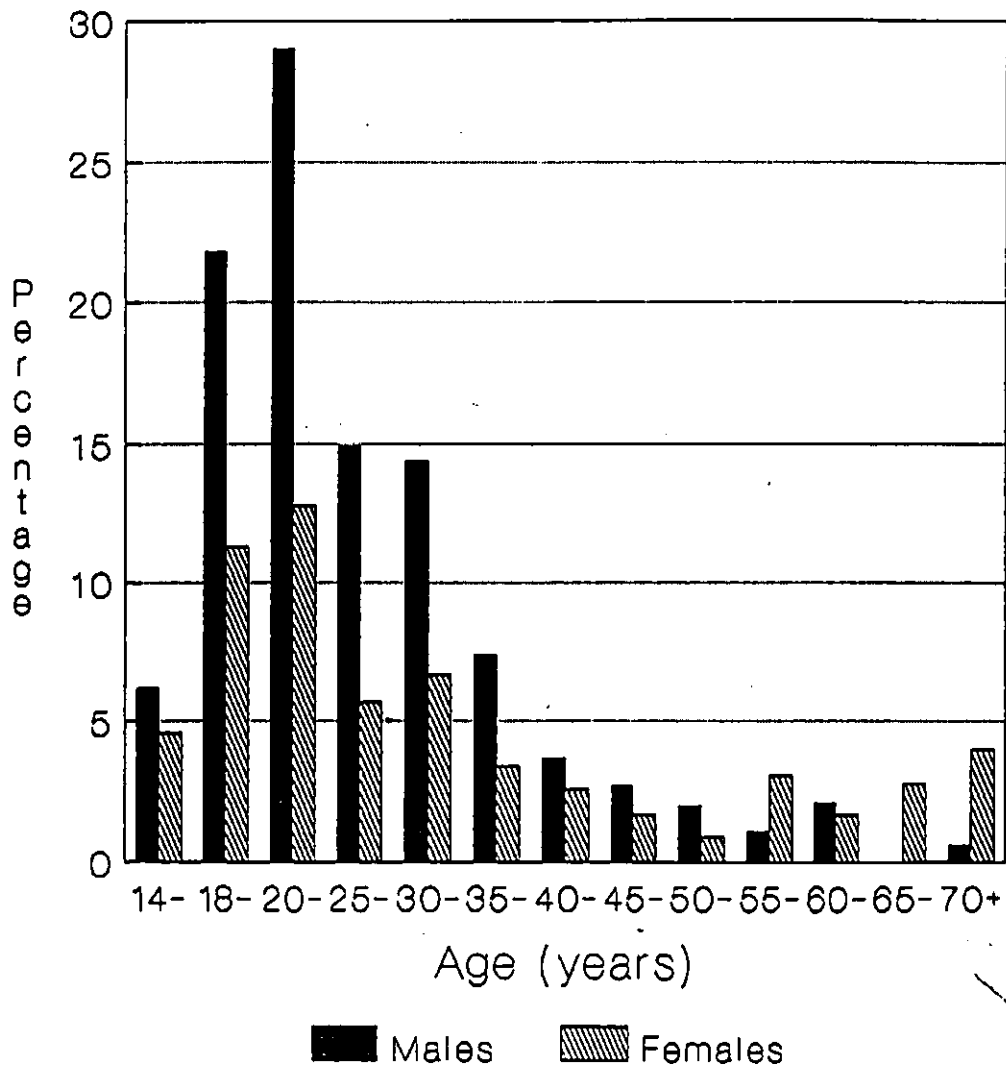


FIGURE 2

Community Prevalence Survey Self-reported excess alcohol use in last 12 months

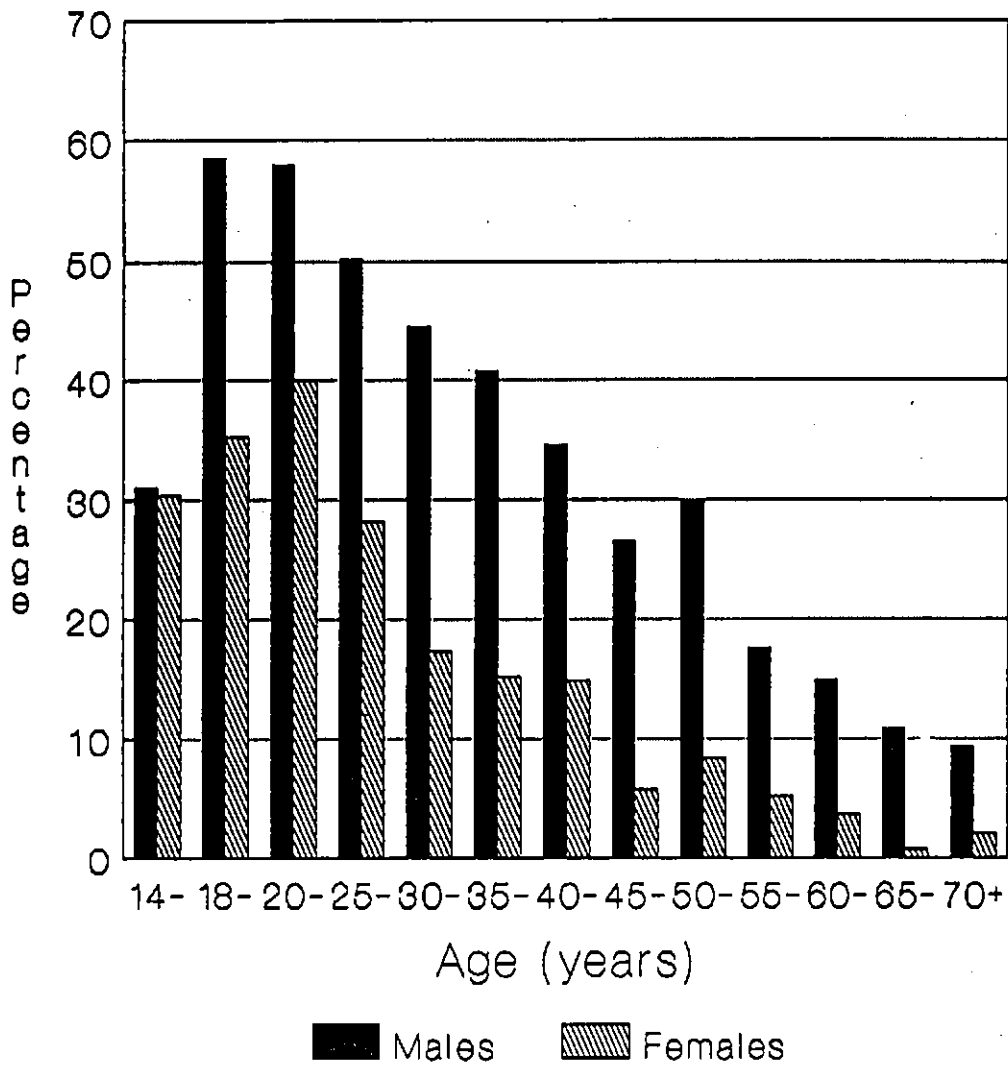


FIGURE 3

Community Prevalence Survey Self-reported cigarette use in last 12 months

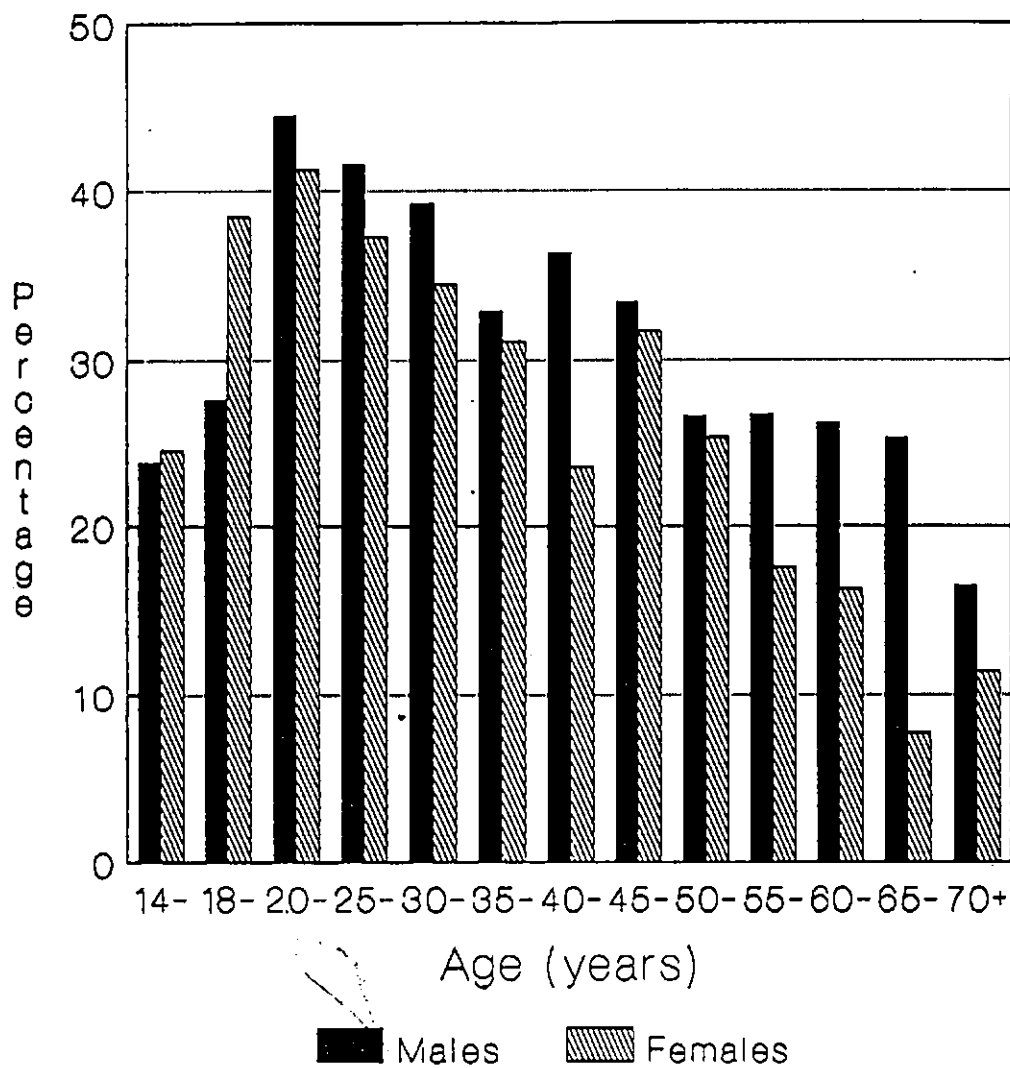


FIGURE 4

Community Prevalence Survey Self-reported illicit marijuana use

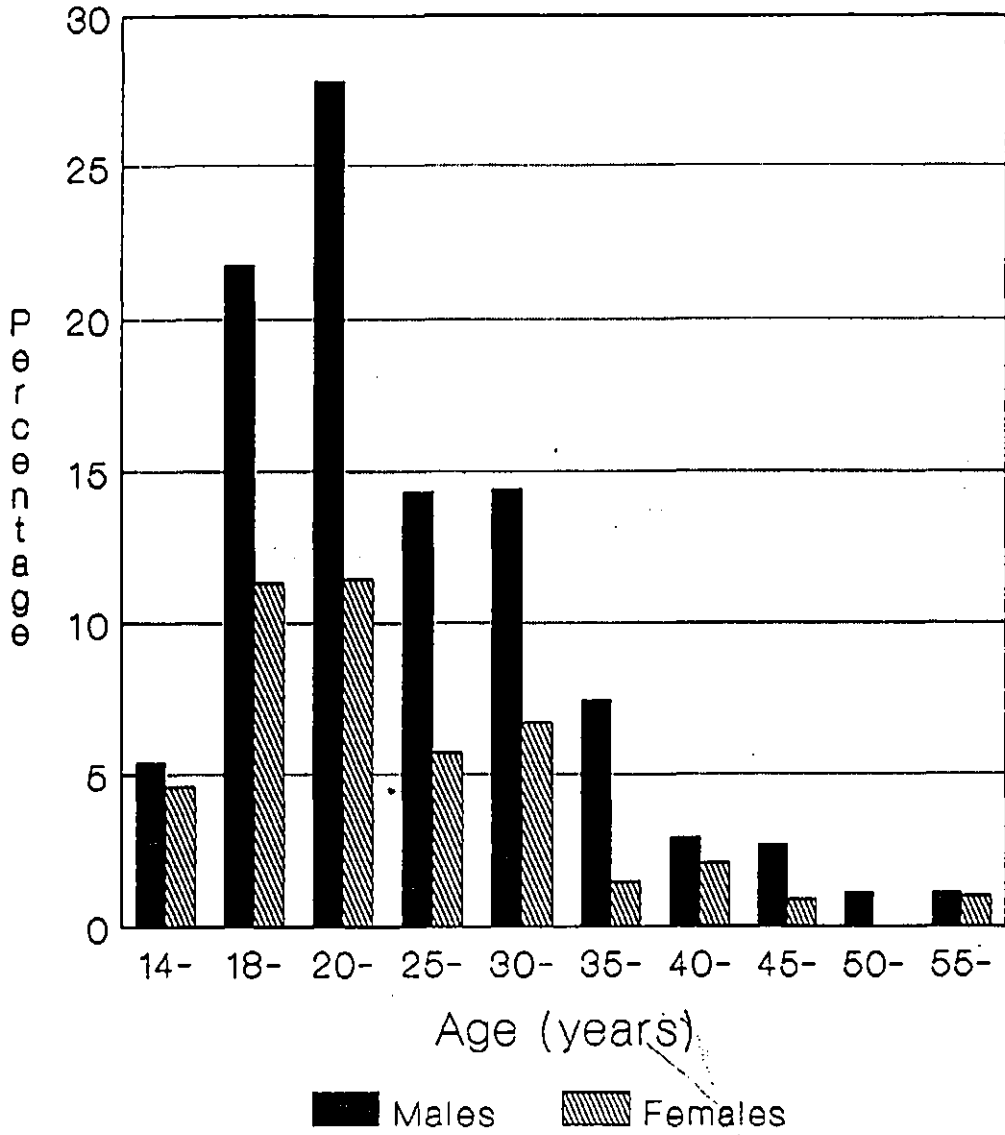


FIGURE 5

Community Prevalence Survey Self-reported illicit speed etc use

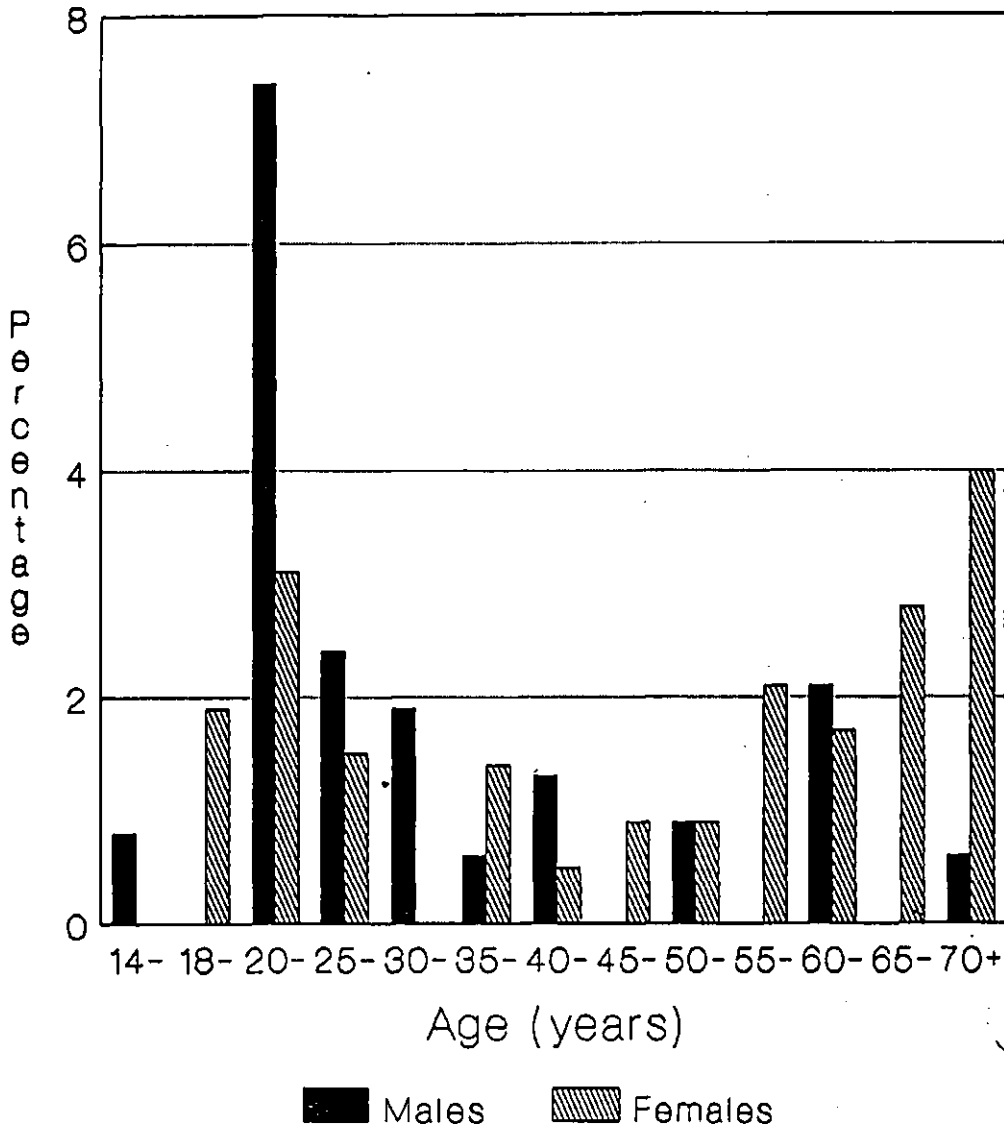


FIGURE 6

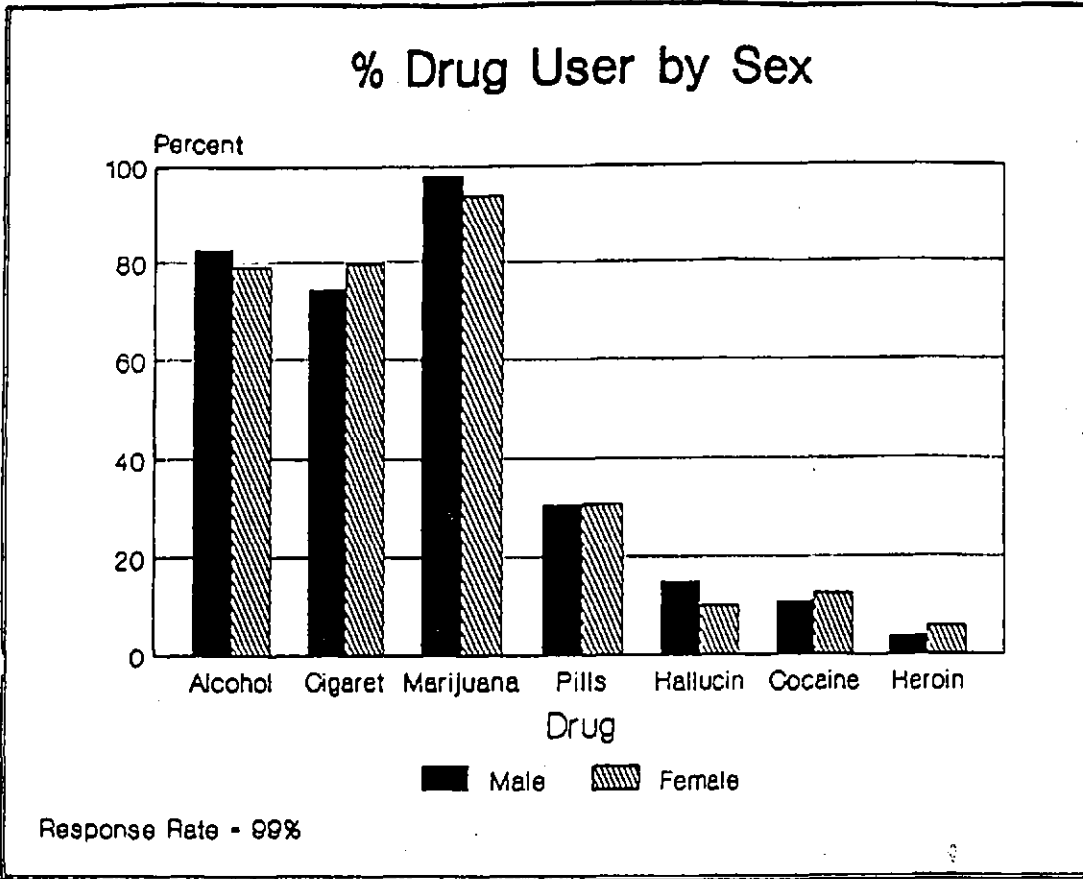


FIGURE 7

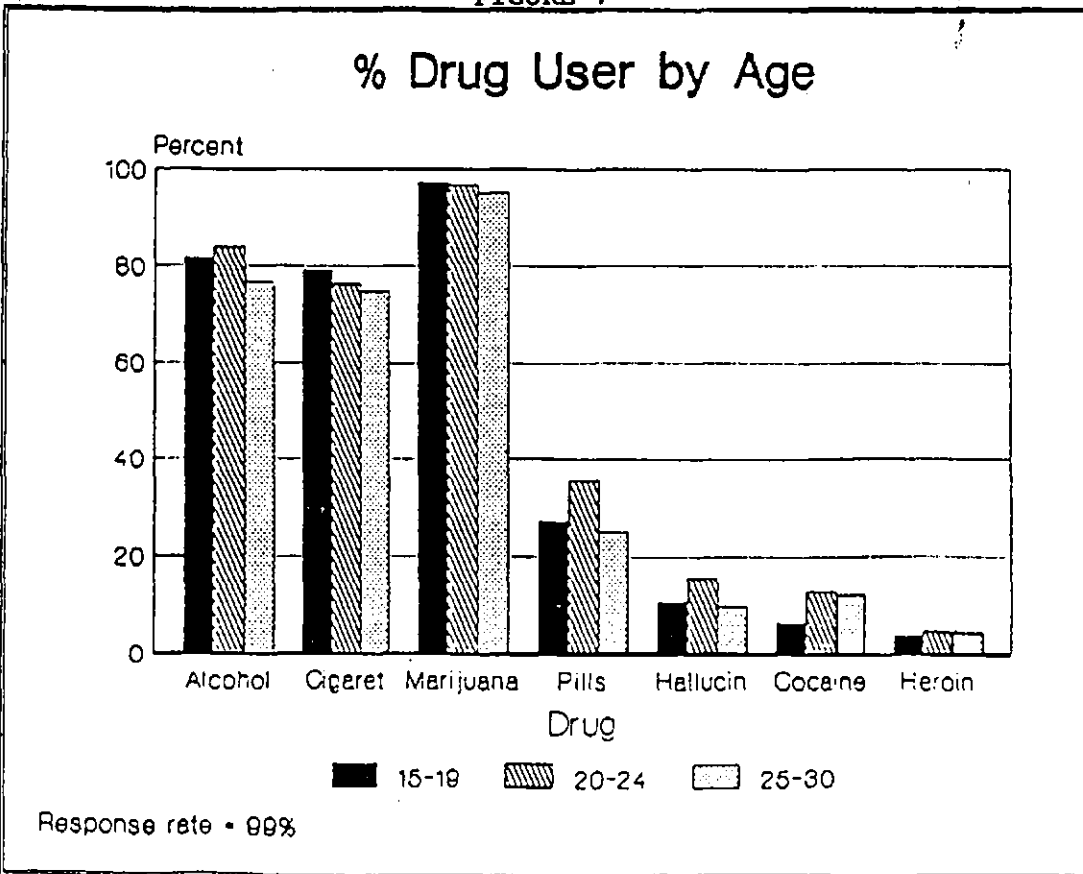


FIGURE 8

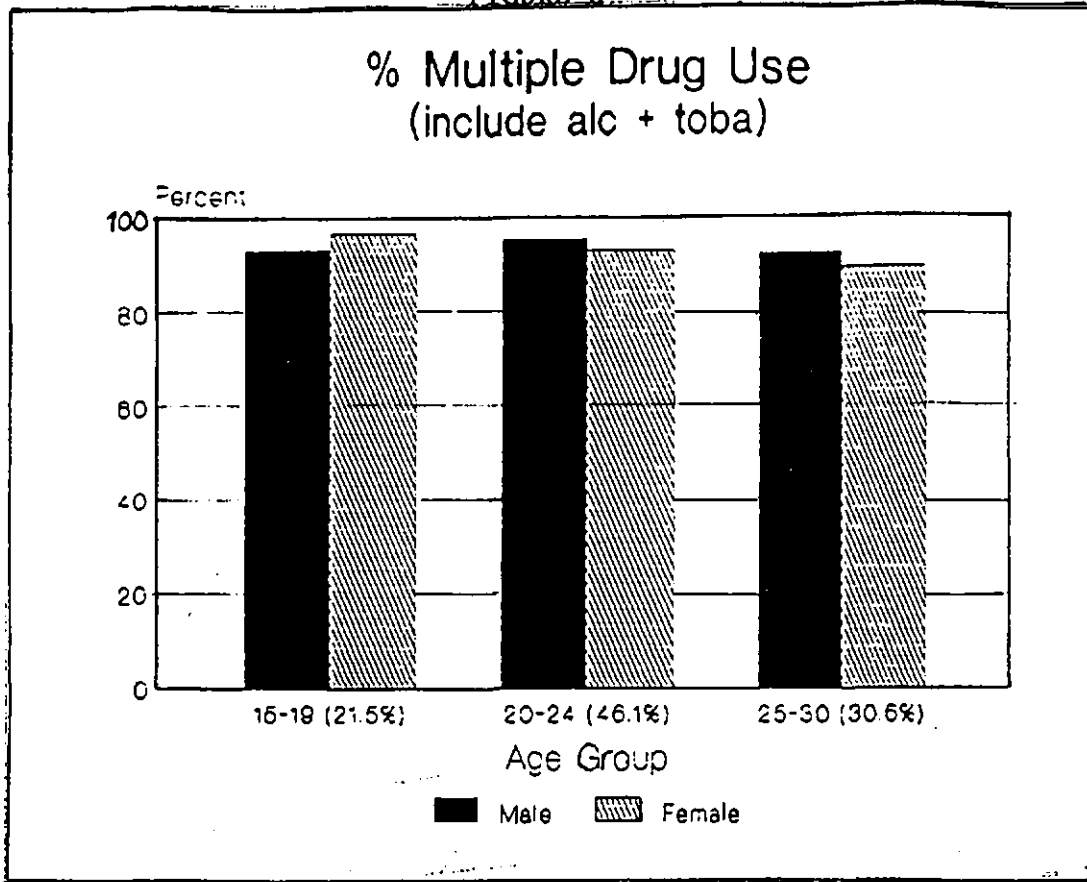


FIGURE 9

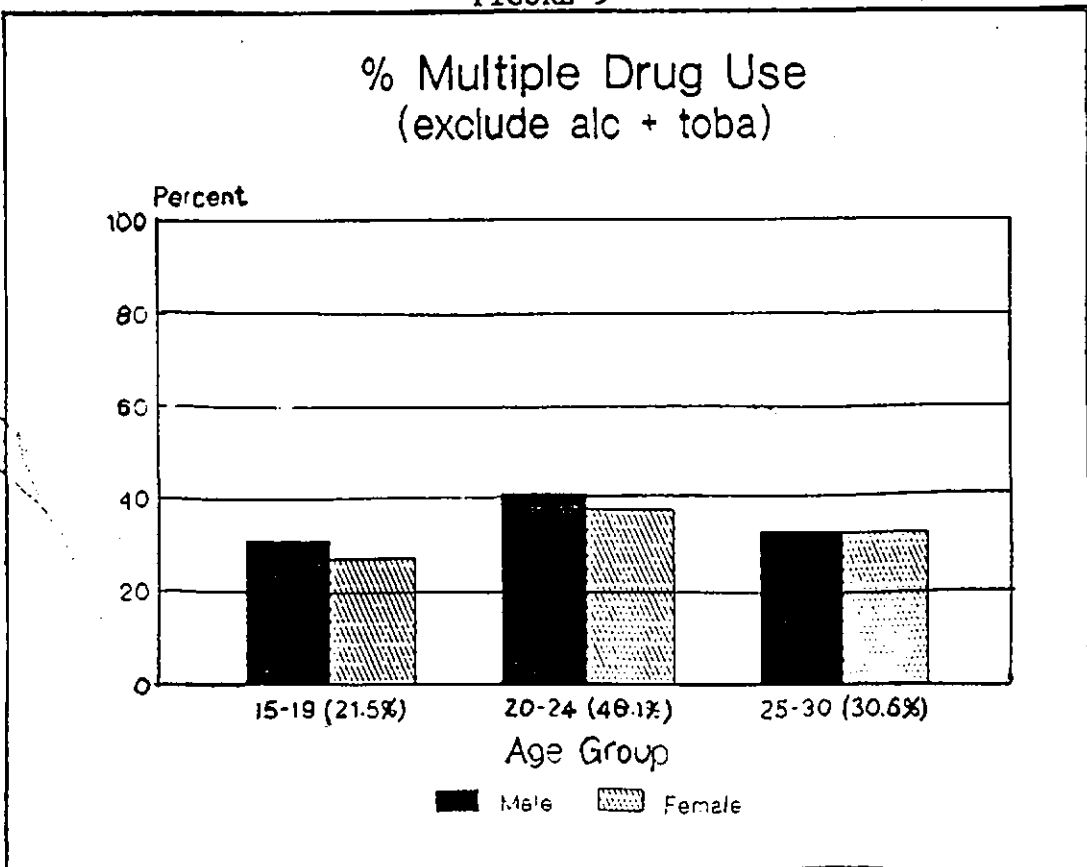


FIGURE 10

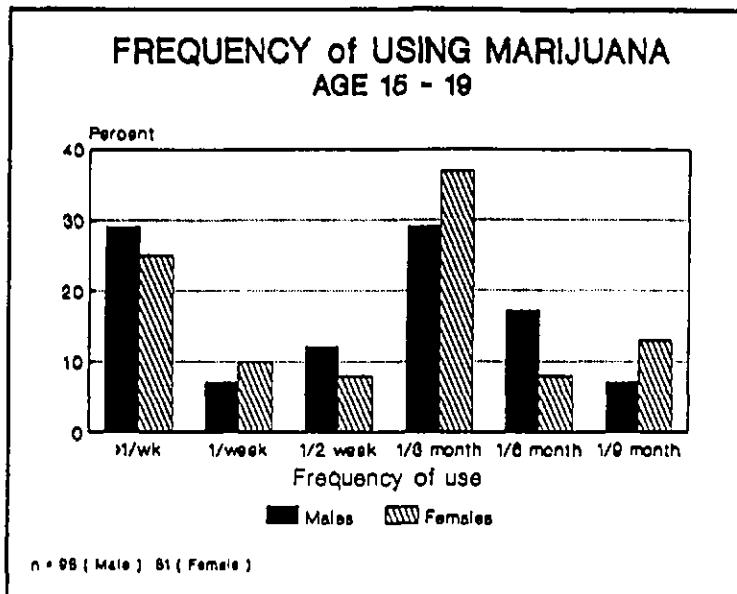


FIGURE 11

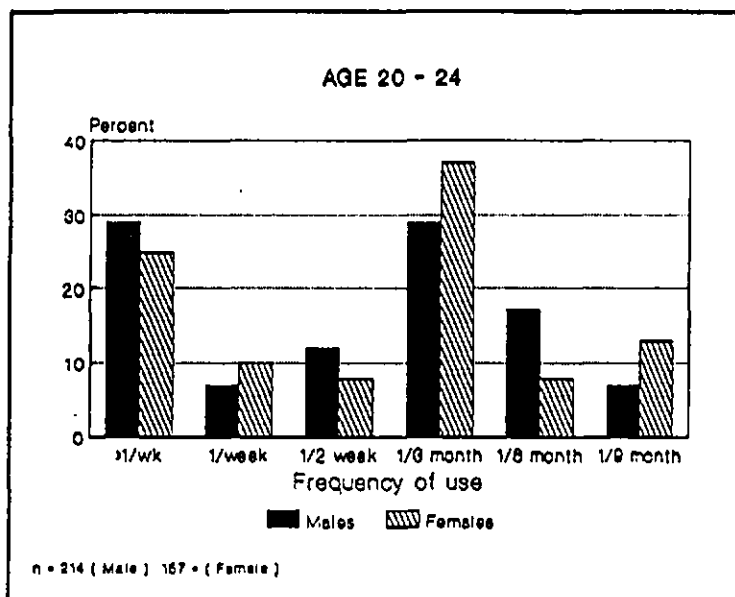


FIGURE 12

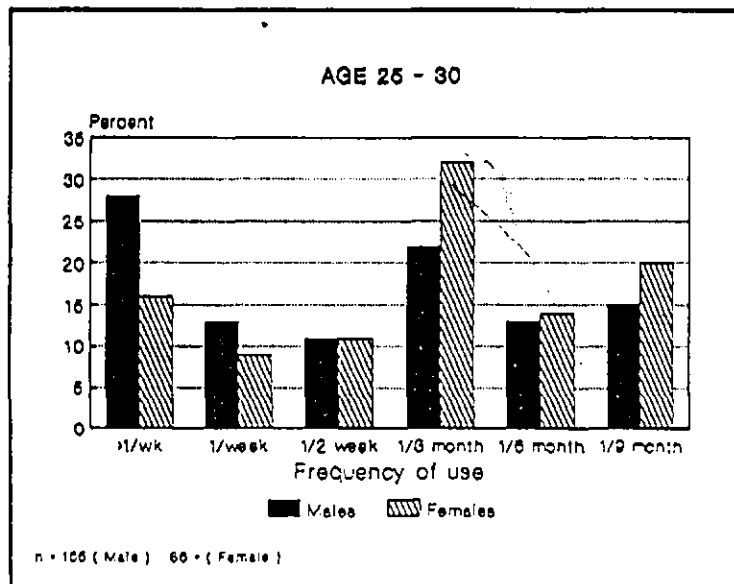


FIGURE 13

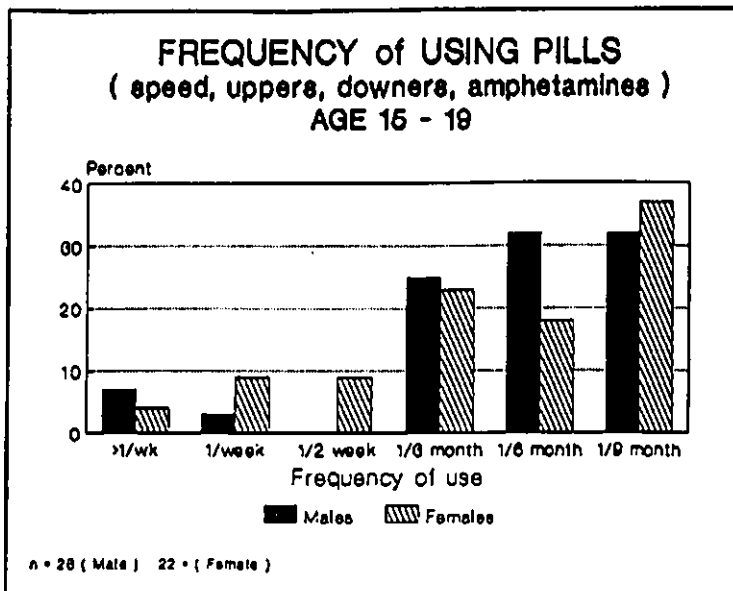


FIGURE 14

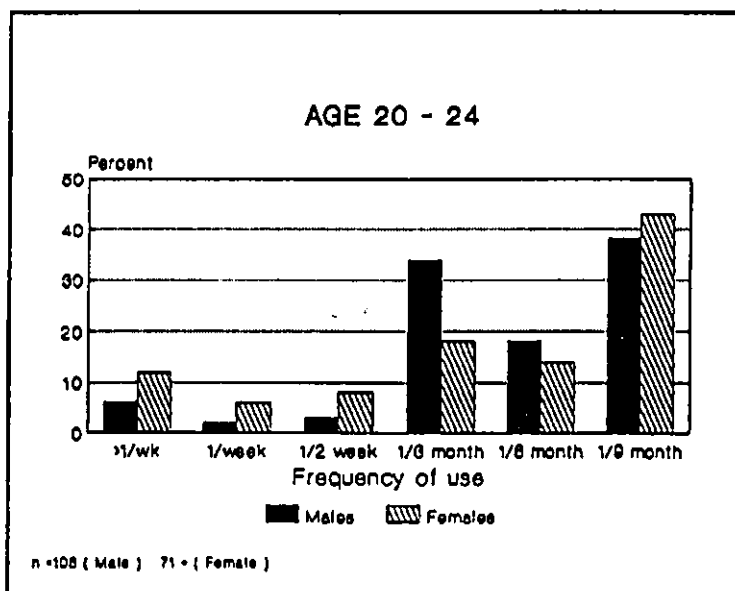


FIGURE 15

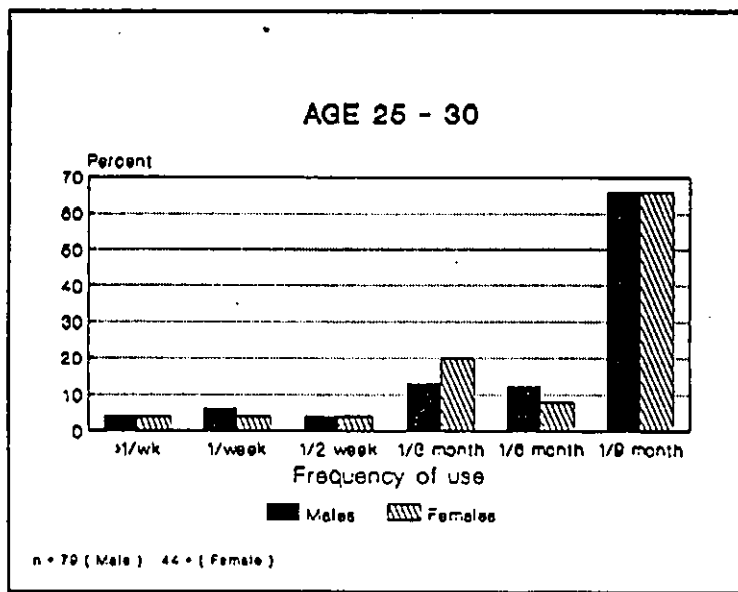


FIGURE 16

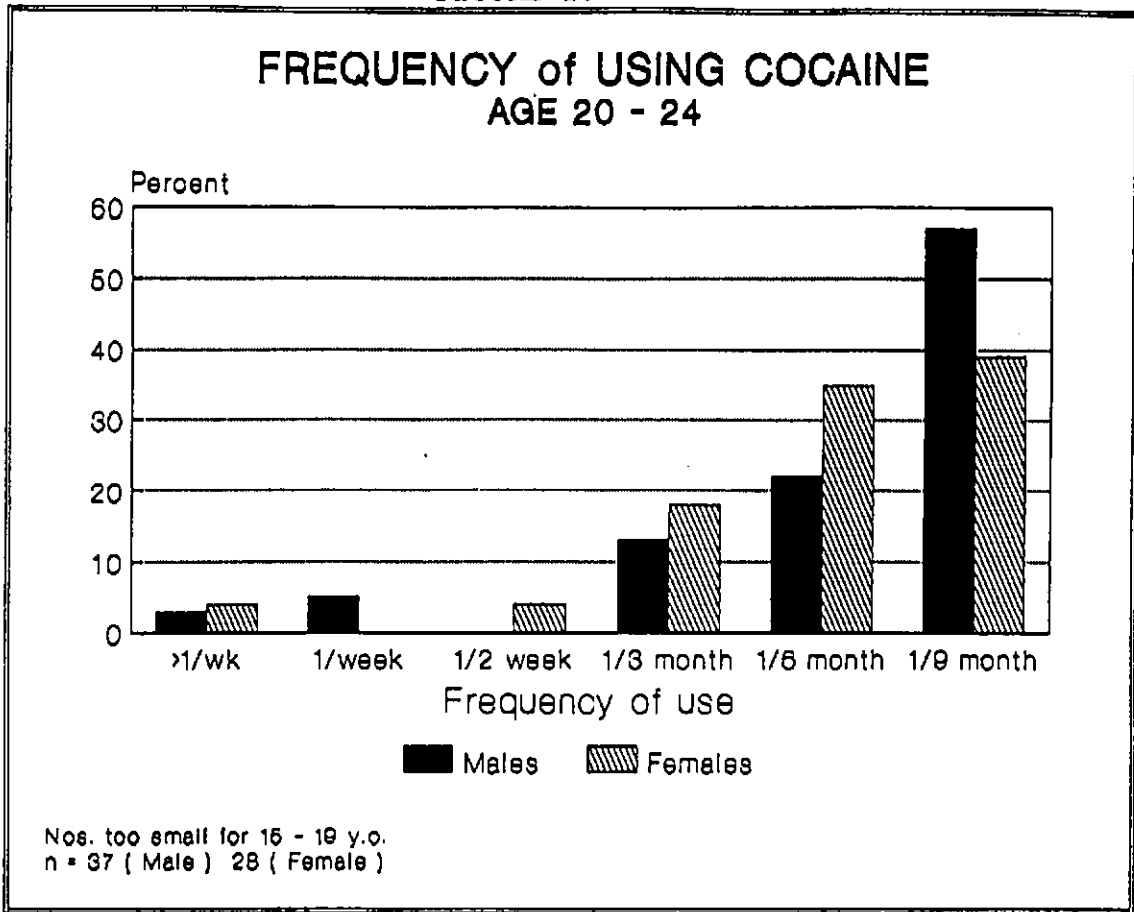


FIGURE 17

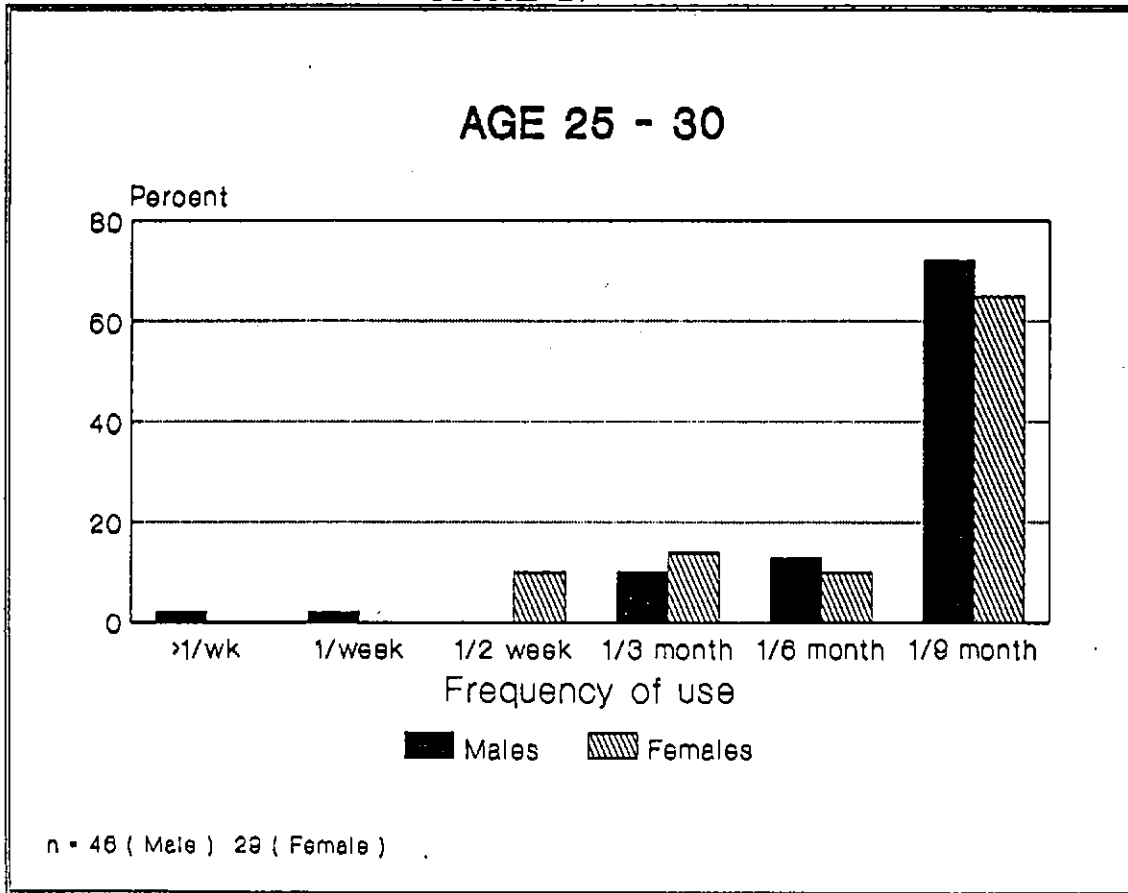
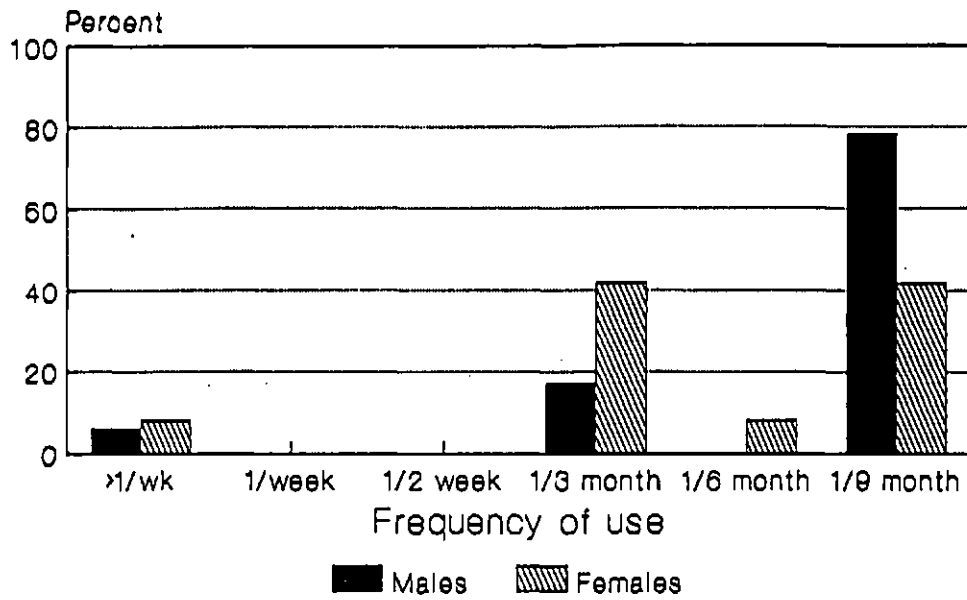


FIGURE 18

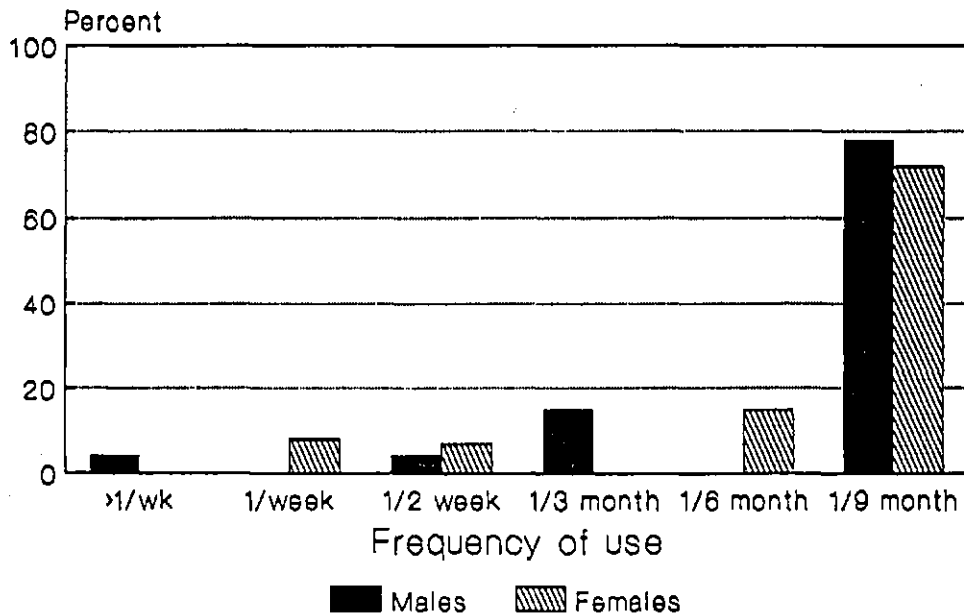
FREQUENCY of USING HEROIN AGE 20 - 24



n = 18 (Male) 12 = (Female)
NB Numbers too small in 15-19 y.o.

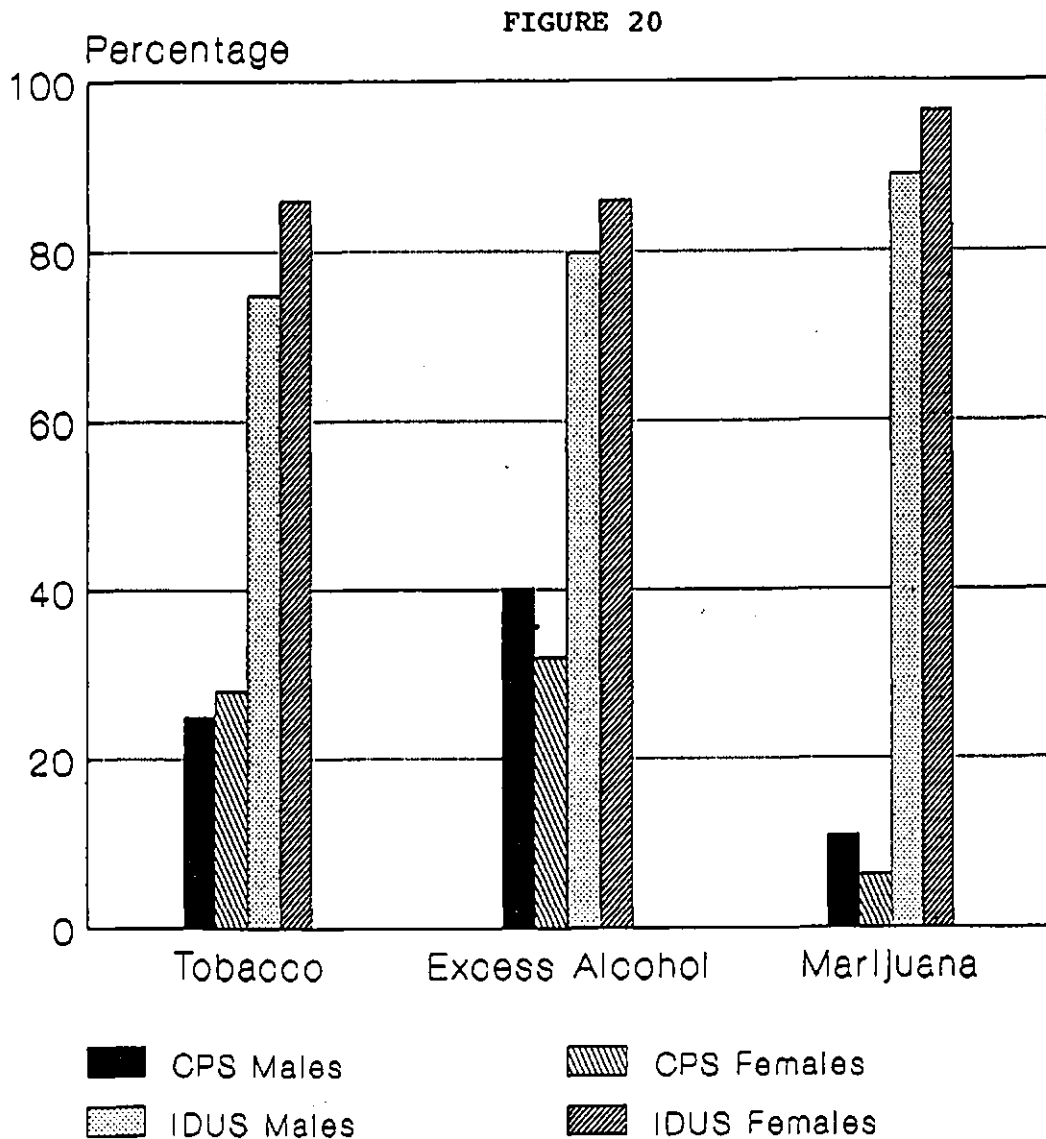
FIGURE 19

AGE 25 - 30



n = 28 (Male) 14 = (Female)

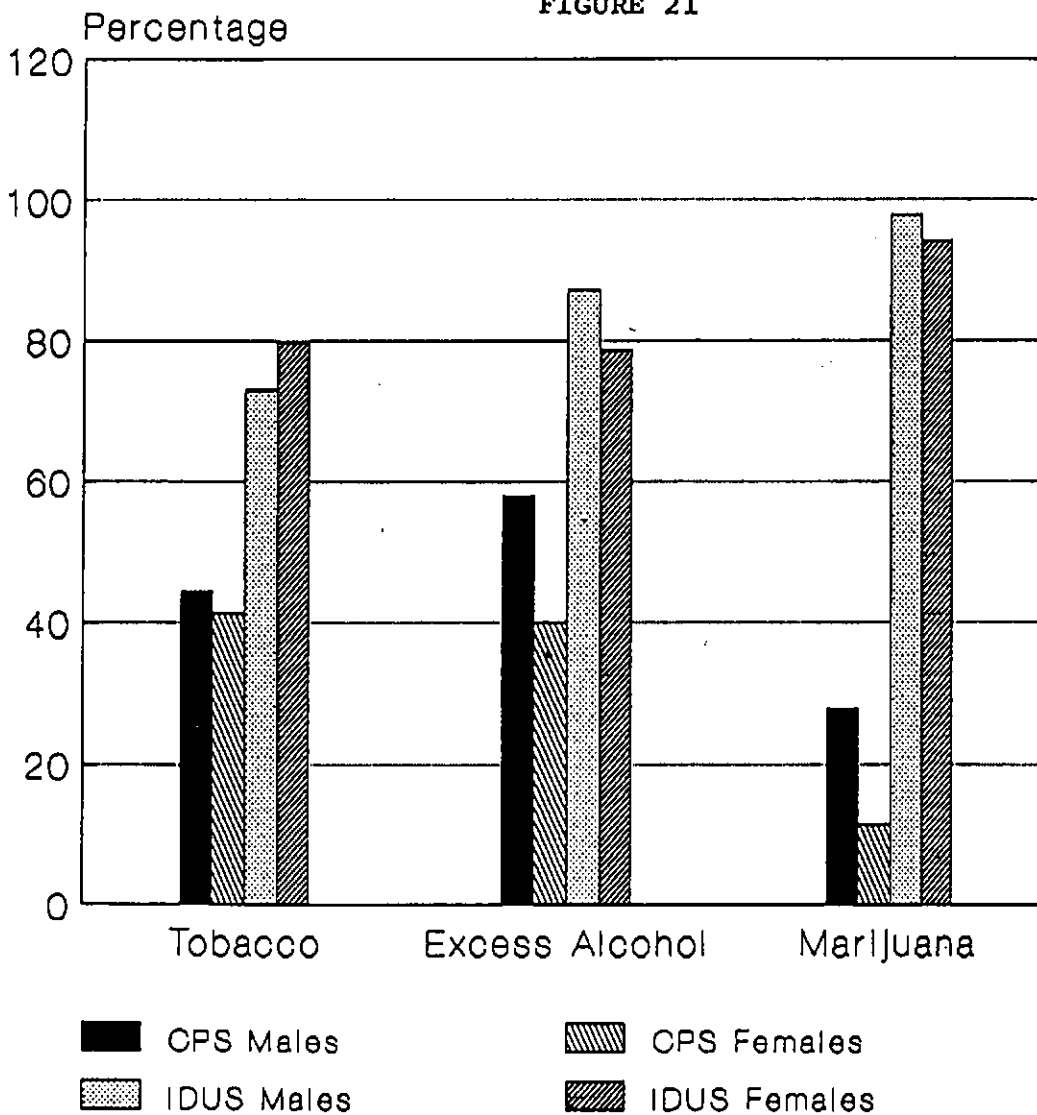
**COMMUNITY PREVALENCE SURVEY & ILLICIT
DRUG USERS SURVEY
15-19 AGE GROUP*Tobacco, Excess Alcohol, Marijuana**



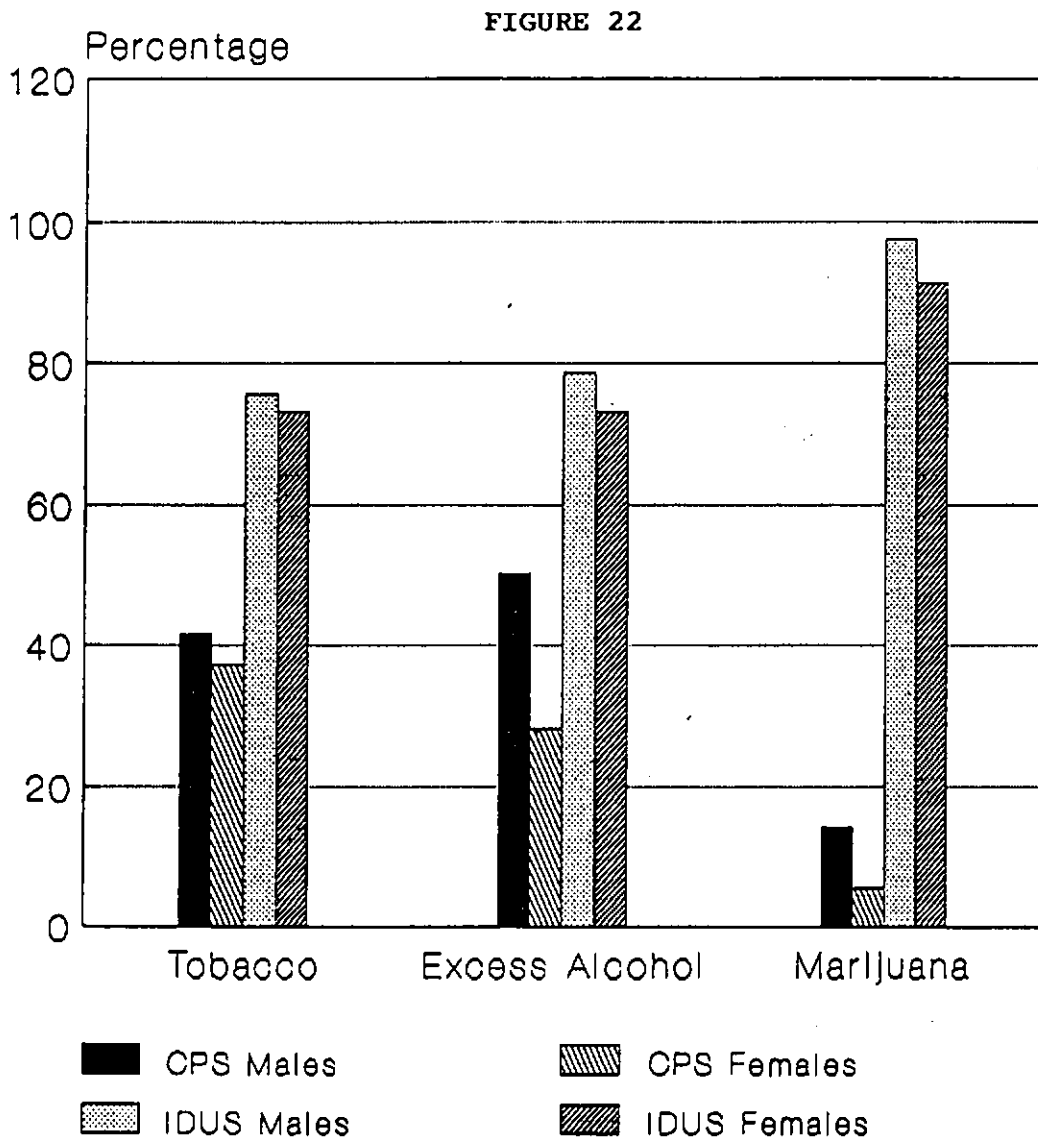
*CPS 14-19 y.o., IDUS 15-19 y.o.

COMMUNITY PREVALENCE SURVEY & ILLICIT
 DRUG USERS SURVEY
 20-24 AGE GROUP
 Tobacco, Excess Alcohol, Marijuana

FIGURE 21

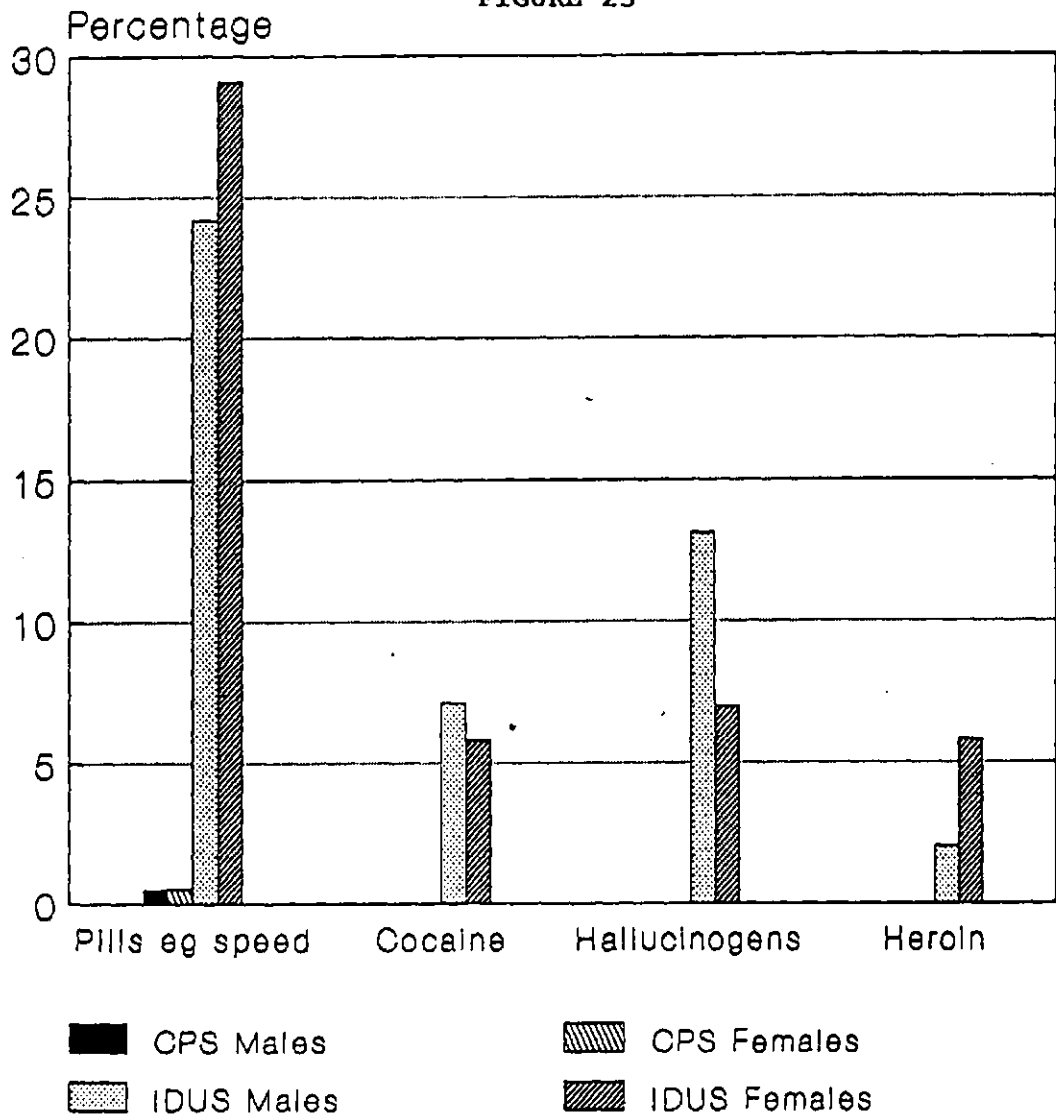


COMMUNITY PREVALENCE SURVEY & ILLICIT
 DRUG USERS SURVEY
 25-30 AGE GROUP
 Tobacco, Excess Alcohol, Marijuana



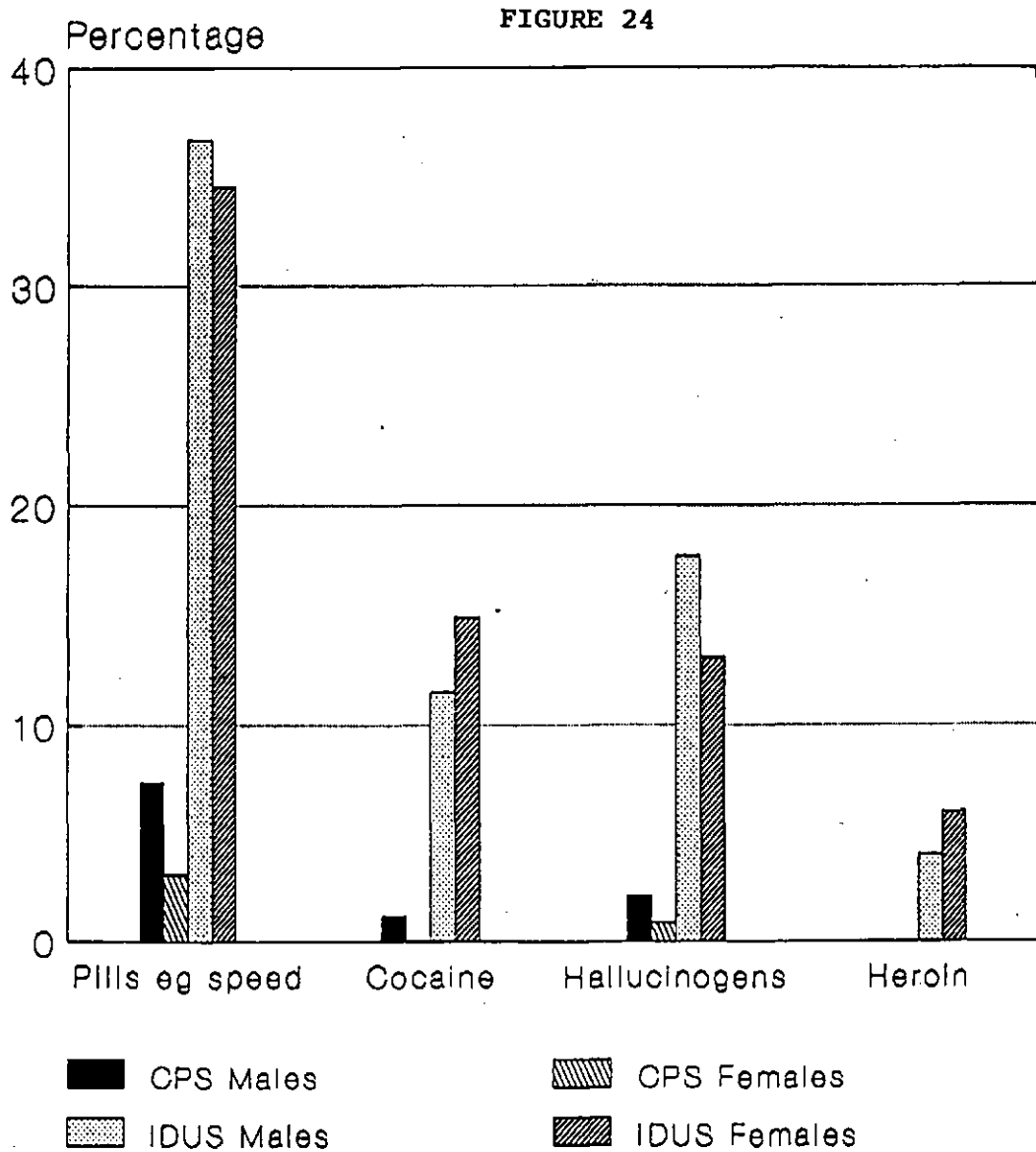
**COMMUNITY PREVALENCE SURVEY & ILLICIT
DRUG USERS SURVEY, 15-19 AGE GROUP*
Pills, Cocaine, Hallucinogens, Heroin**

FIGURE 23



*CPS 14-19 y.o., IDUS 15-19 y.o.

**COMMUNITY PREVALENCE SURVEY & ILLICIT
DRUG USERS SURVEY, 20-24 AGE GROUP
Pills, Cocaine, Hallucinogens, Heroin**



**COMMUNITY PREVALENCE SURVEY & ILLICIT
DRUG USERS SURVEY, 25-30 AGE GROUP
Pills, Cocaine, Hallucinogens, Heroin**

FIGURE 25

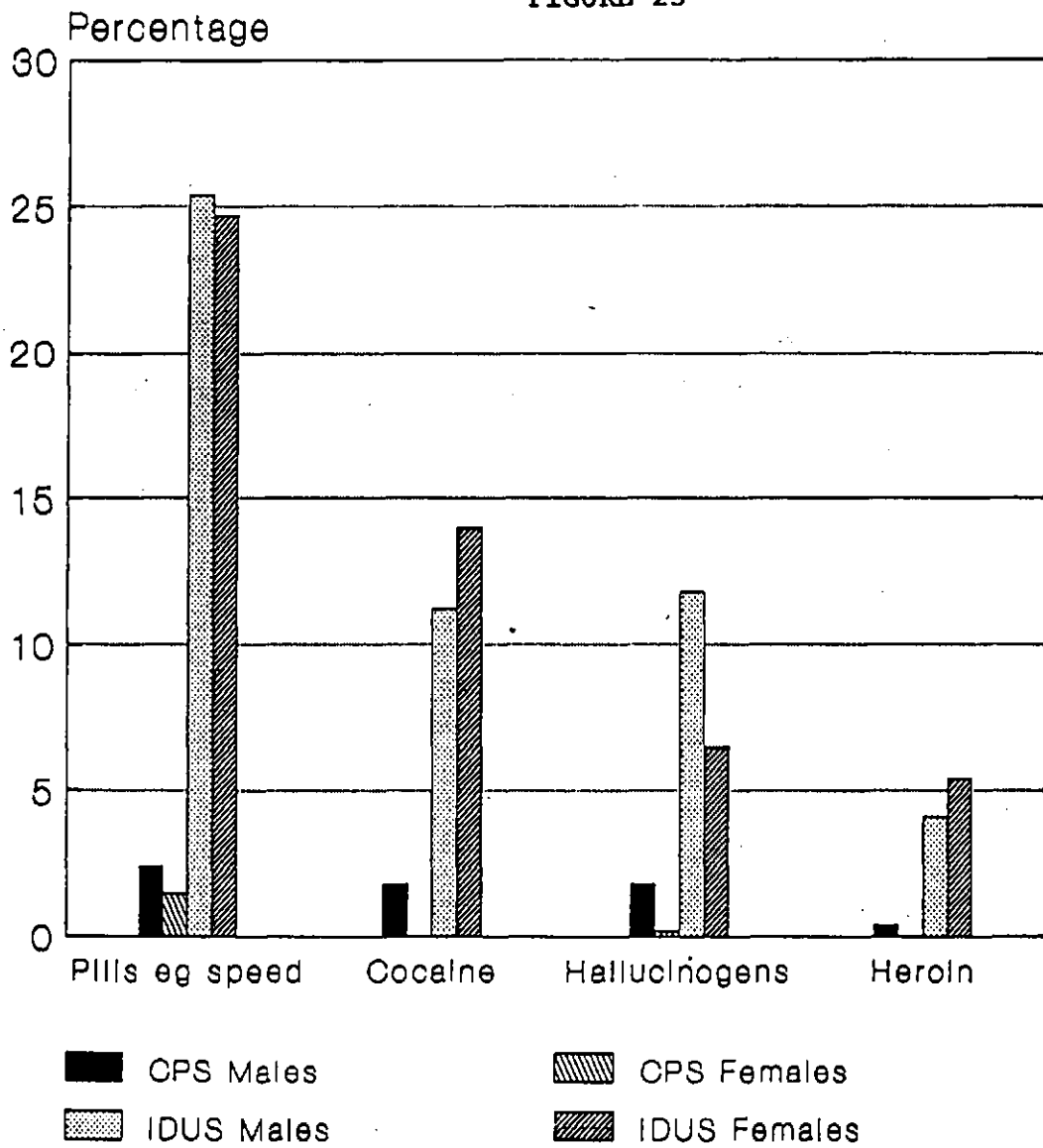


FIGURE 26

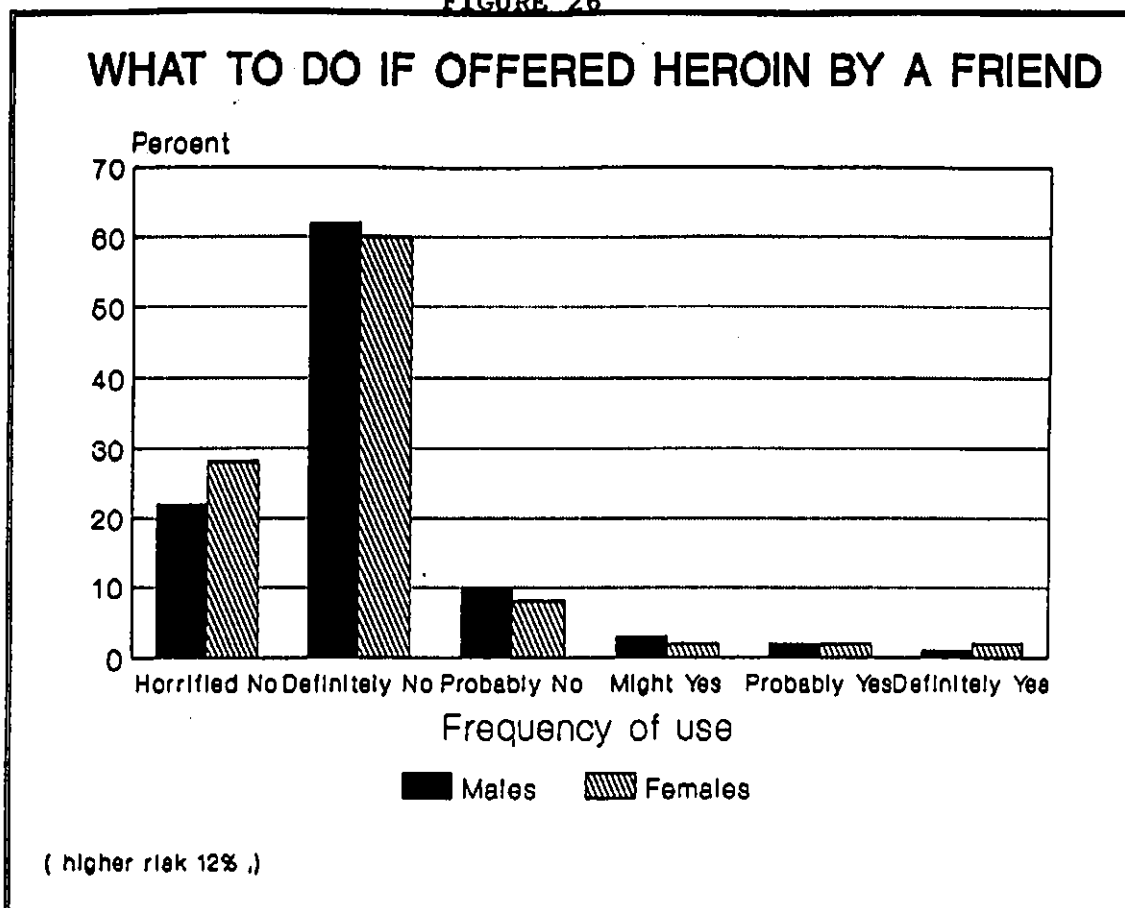


FIGURE 27

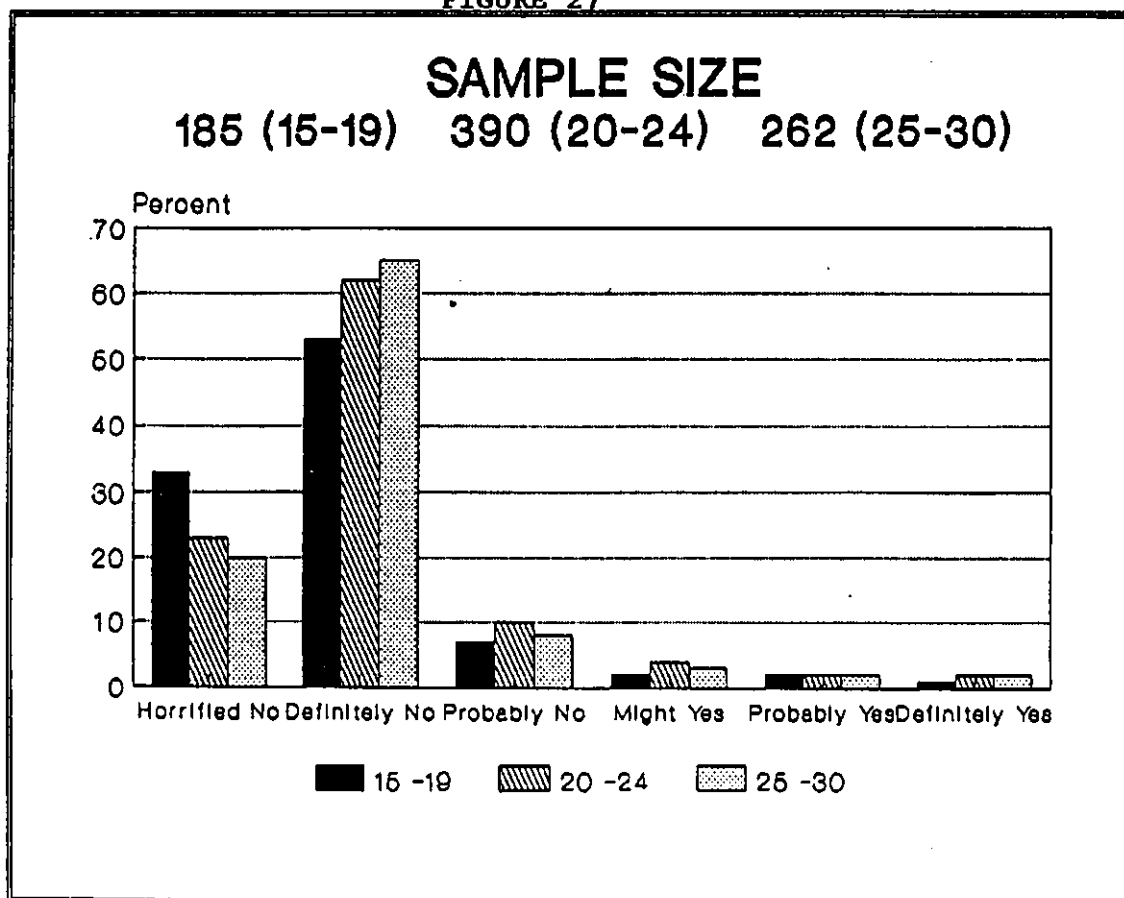


FIGURE 28

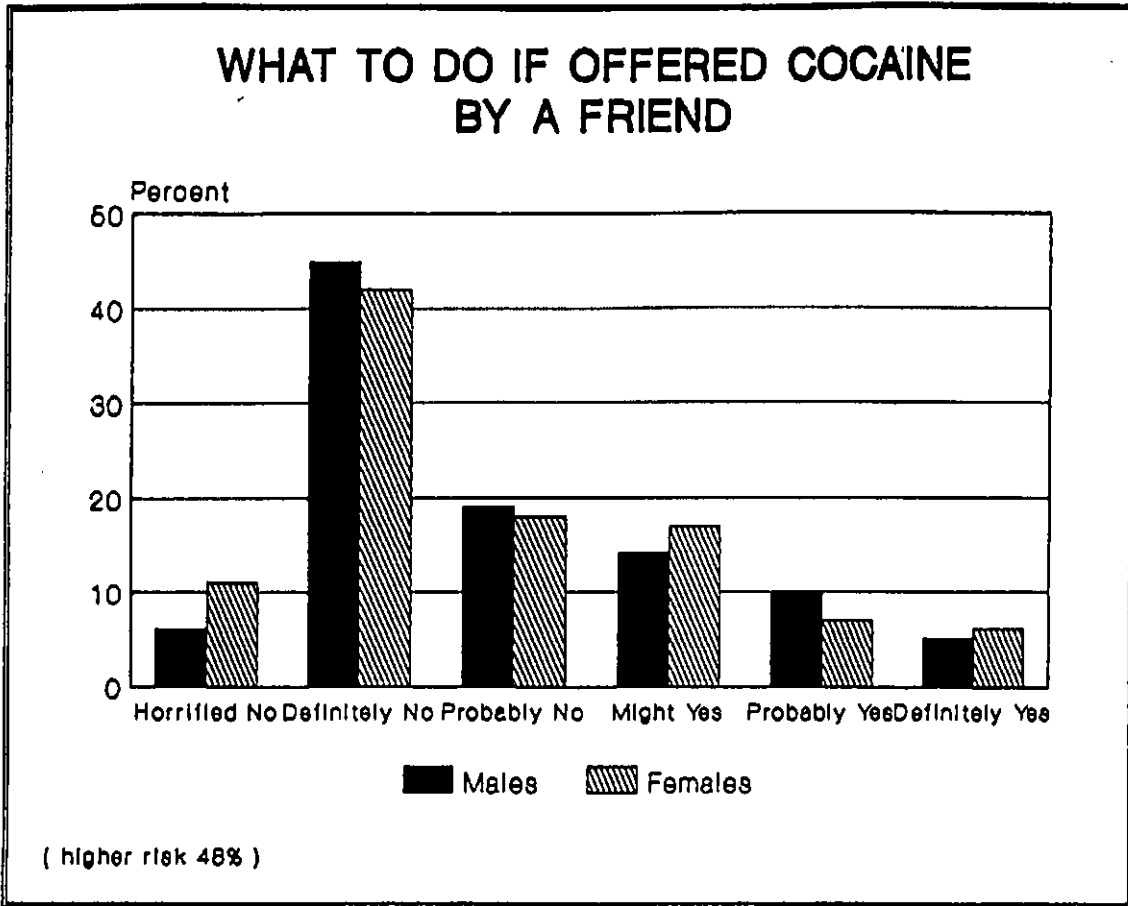


FIGURE 29

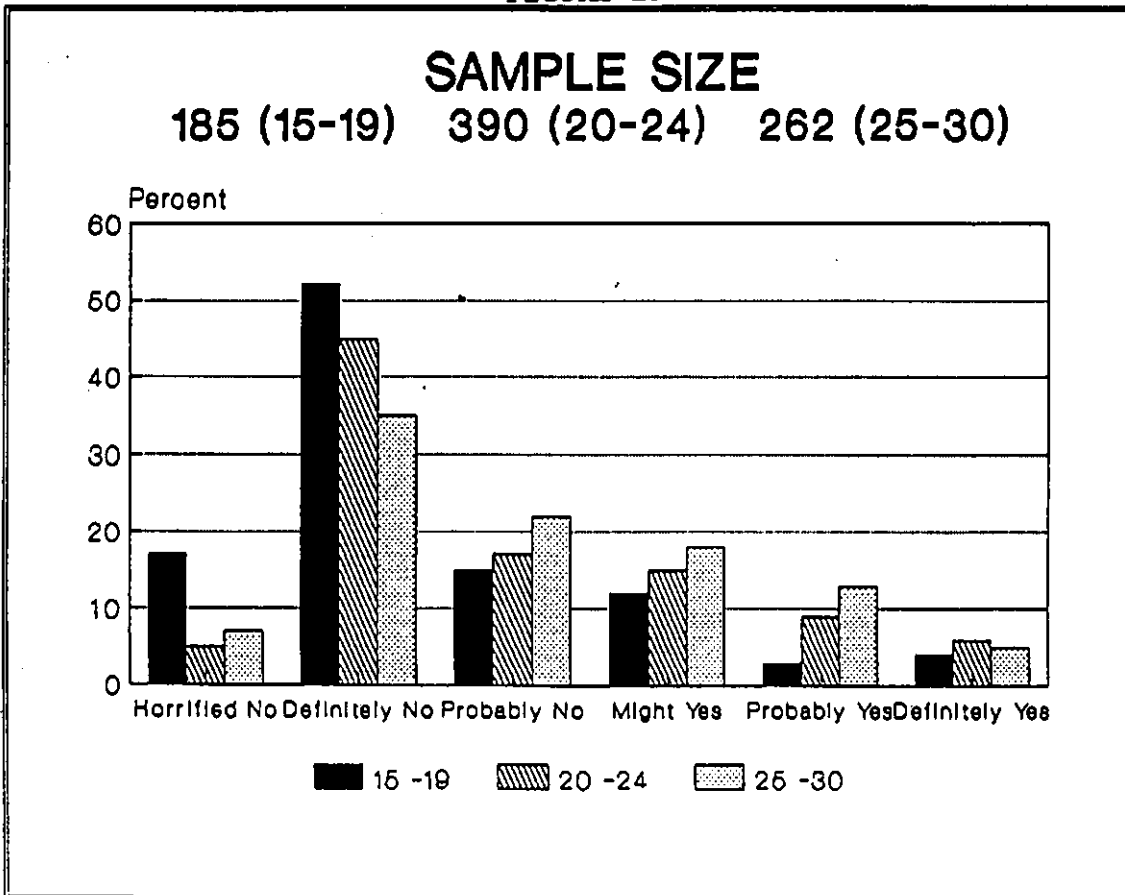


FIGURE 30

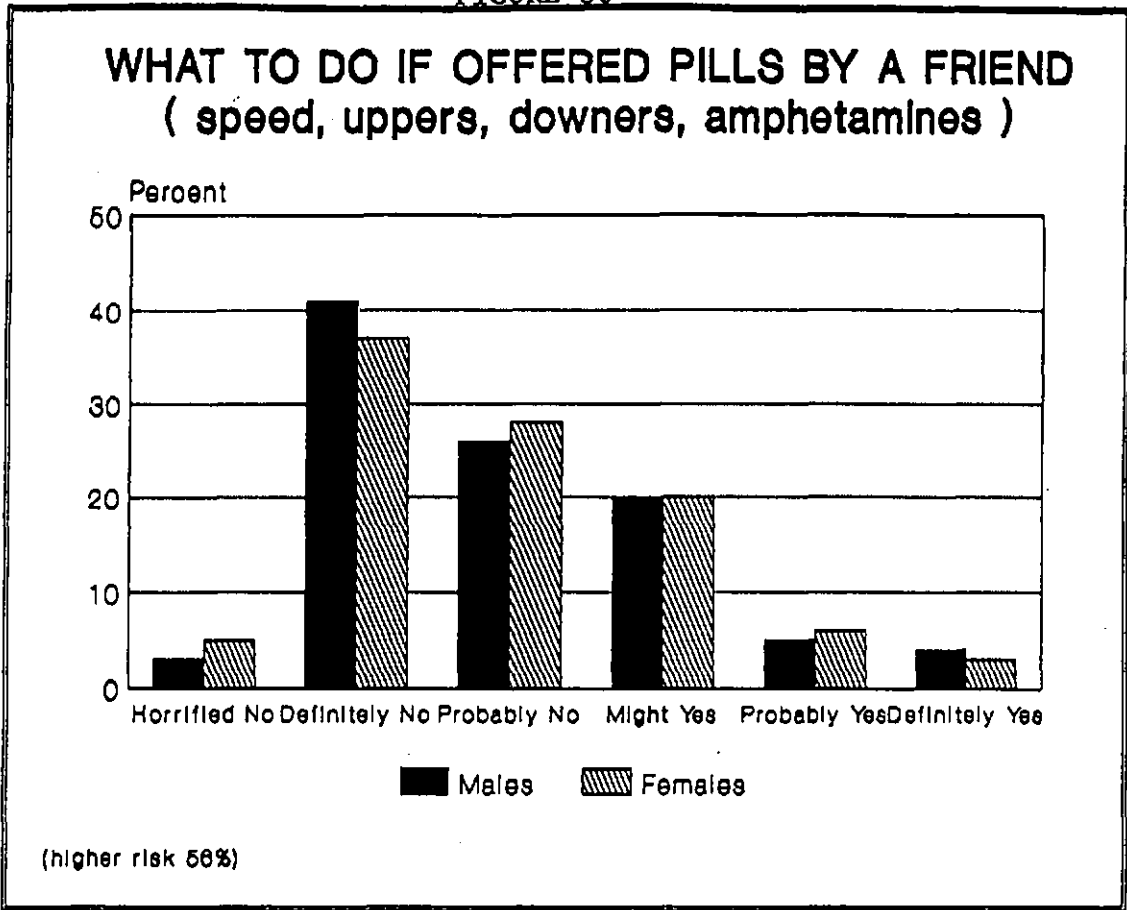
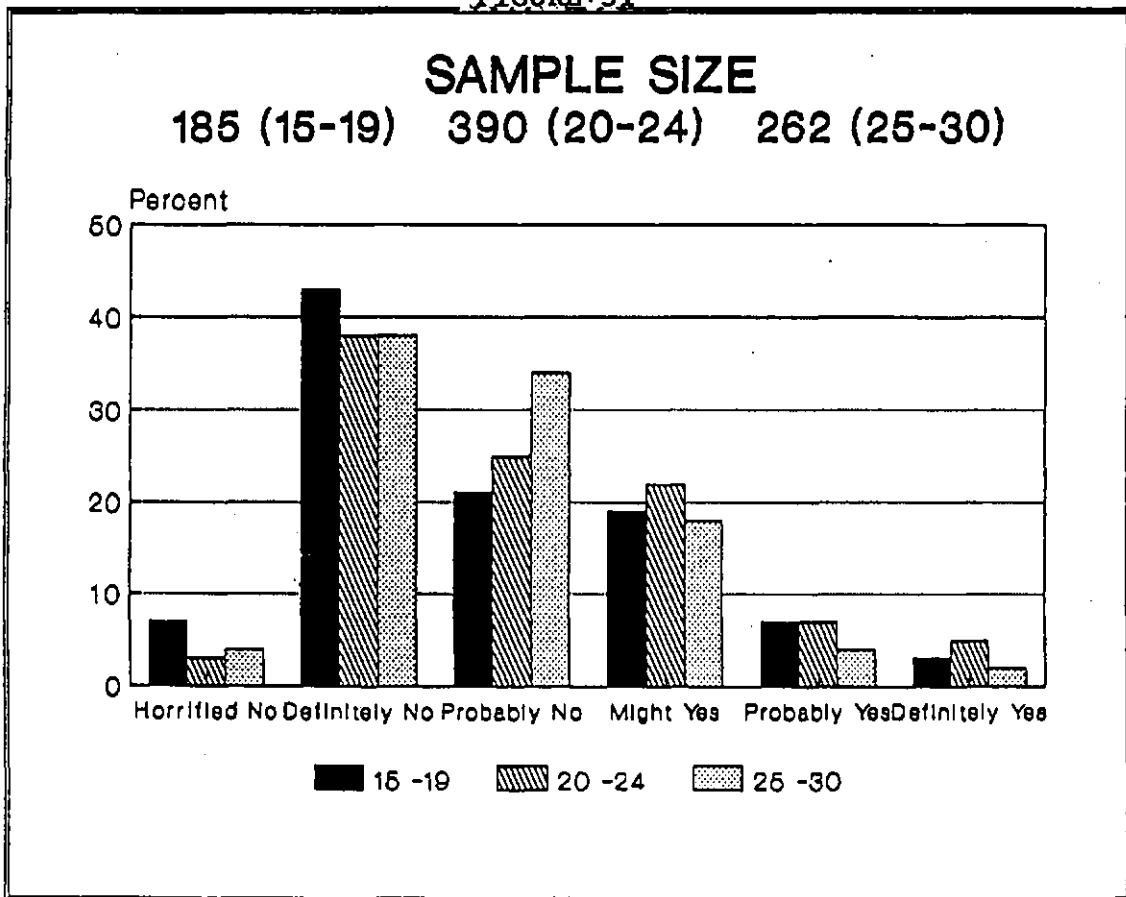
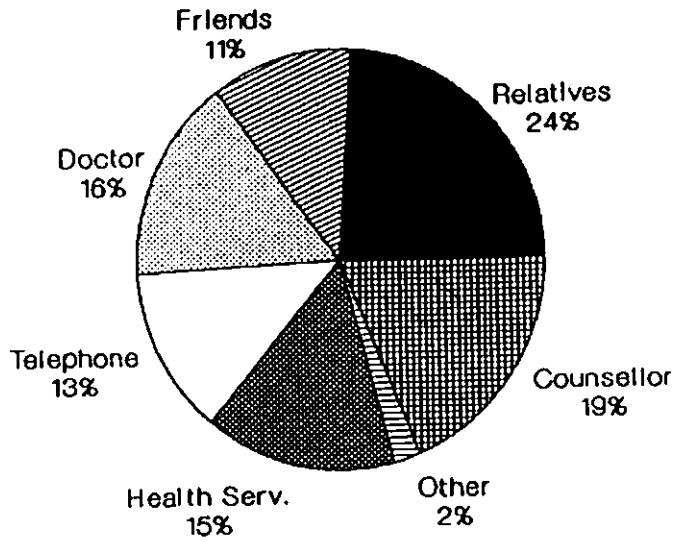


FIGURE 31

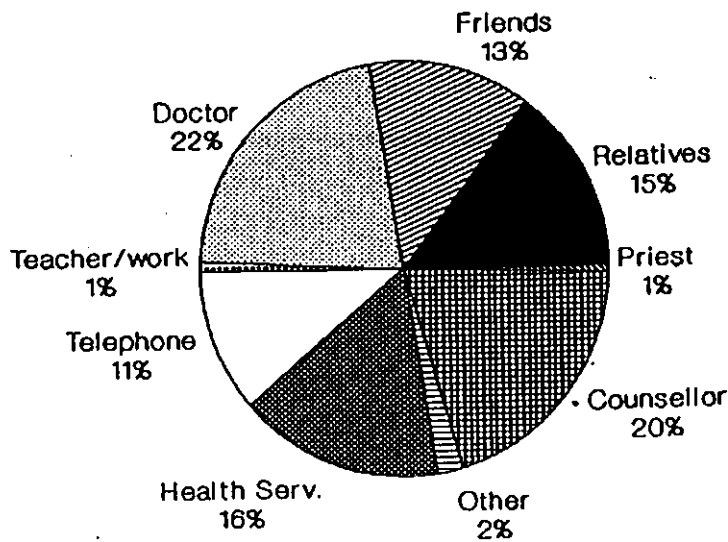


WHO WOULD GO TO FOR HELP WITH DRUGS

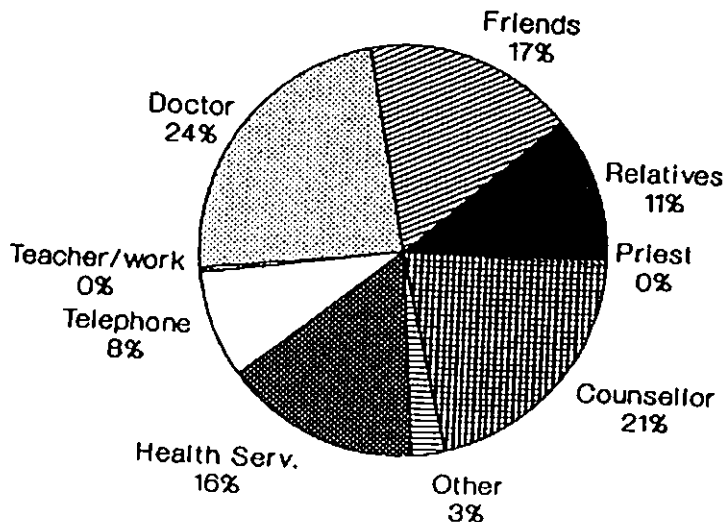
FIGURE 32



15 - 19 YEARS



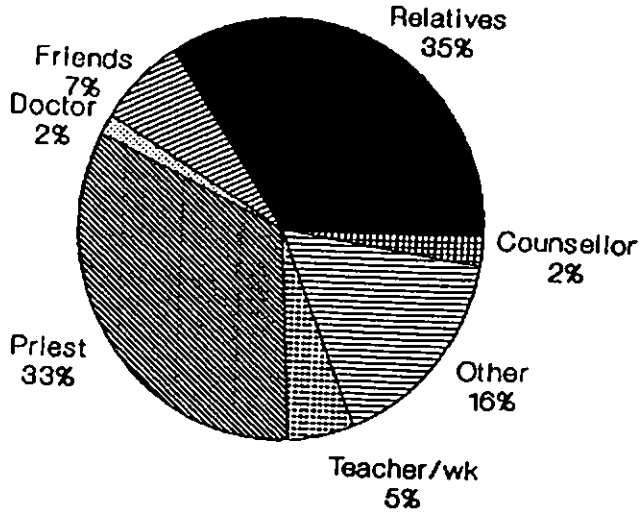
20 - 24 YEARS



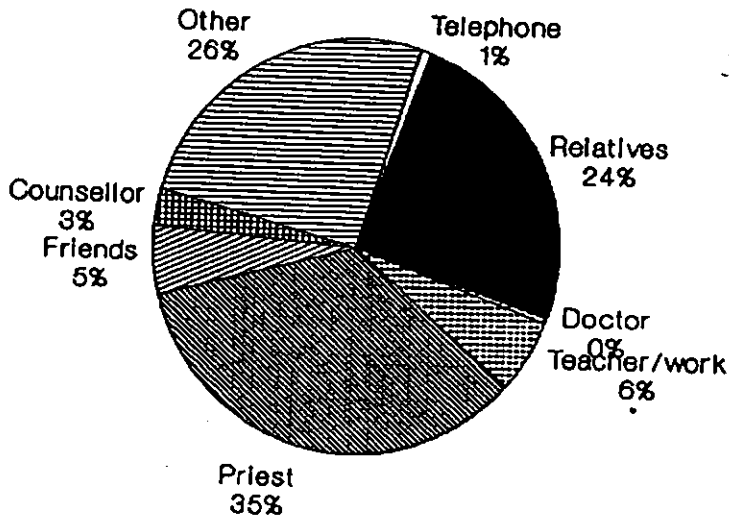
25 - 30 YEARS

WHO WOULD NOT GO TO FOR HELP WITH DRUGS

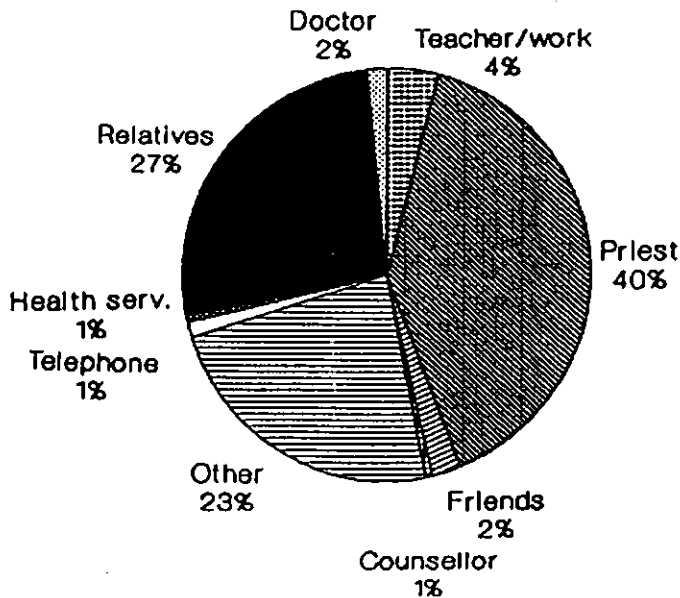
FIGURE 33



15 - 19 YEARS



20 - 24 YEARS



25 - 30 YEARS

NSW DEPARTMENT OF HEALTH
DIRECTORATE OF THE DRUG OFFENSIVE

Prepared by:
Carolyn Muir
May 1988

INDICATORS OF ILLICIT DRUGS IN NSW

INTRODUCTION:

The following summarises the range of indicators by which we can attempt to describe the current levels, patterns and trends of illegal drug use in NSW.

The selected indicators are chosen on the basis that each contributes to the understanding of the illicit drug situation in NSW and that they provide the broadest possible base for comparison with indicators used in other States.

Some measures are more up to date than others. This is due to the volume of data involved. For example ABS collections may take some time to compile; in some cases the collection has been discontinued; or it is the result of a special study.

The NSW indicators are presented under the following broad headings.

- . Patterns and Levels of Drug Use
- . Drugs and Crime
- . Drug Related Deaths
- . Drug Treatment Programs
- . AIDS
- . MDMA

In closing an overall impression on illicit drugs based on these indicators is offered.

PATTERNS AND LEVELS OF DRUG USE

1. SURVEYS OF ADULT DRUG USE:

Population surveys have produced valuable information about drugs such as alcohol and tobacco. In large part this is due to their acceptability in our society and because of their legal status.

They do however have significant limitations in estimating the extent of illegal drug use. Specifically, it has been argued that:-

1. Subjects are less likely to honestly report about their use of illegal drugs.
2. Where school aged children are the population, those regularly using illegal drugs may already have dropped out of school and are less likely to be present for a survey of school students.

As a result, information on illegal drug use by the adult population in NSW is minimal. It is hoped that the recent Household Survey conducted by the NCADA Evaluation Task Force may, in part, redress this.

2. SURVEYS OF SCHOOL STUDENTS:

Surveys of school children, however, have been conducted on a regular basis in NSW since 1971 and are considered a valuable tool in planning and evaluating drug prevention measures in schools and for monitoring the nature and extent of drug use in this population. The reliability of self report of drug use (either licit or illicit) has been measured by a series of internal checks. Ensuring the anonymity of the respondent has also proved a significant aid in ensuring reliability.

In 1983 and 1986 secondary students were surveyed using the same sampling method and questions so that figures from these two years may be safely compared.

Table 1: is based on weekly drug use by Yr 10 students and shows figures from all surveys since 1971.

Between 1971 and 1980, some of the recorded differences may be due to changes in the way questions were worded and need to be interpreted with caution.

It should be recognised, however, that between 1971 and 1980, some of the recorded differences may be due to changes in question and sample construction.

3. SURVEY OF TAFE STUDENTS:

This study took place in late 1986 with the survey format closely following that of the 1983 and 1986 surveys of Secondary School students.

It attempted to compare the drug use patterns of the same age group in colleges of TAFE who may or may not have an extra income. Table 2 presents the overall frequency of drug use for students sampled (N=2527).

Figure 1 combines results for use in the last month amongst Year 10 school students in 1983 and 1986 with the 1986 results for the 15-19 year old group of TAFE students.

The figure indicates that for school students, there was a decline between 1983 and 1986 in the number of users (who had used in the last month) for all drug groups. However the decline in the number of marijuana users was not significant.

It is interesting to note that the 1986 Figures for TAFE students are very similar for every drug except the higher use of alcohol and marijuana. Significantly, marijuana use was most likely to be associated with males who recorded high levels of alcohol use

The most obvious difference when considering the use of illegal drugs is that cannabis use is much higher amongst TAFE students than similar aged students who are still at school.

4. SPECIAL STUDY:

As part of the evaluation in NSW of the "GET REAL" drug awareness campaign, a survey was conducted of 15 - 18 year old recreational drug users who had used drugs other than alcohol and marijuana.

The sample was actively recruited in specific areas of Sydney and interviewed in public places. The results therefore cannot be generalised to all 15 - 18 year olds in Sydney.

Drugs are listed in rank order of those used most (Figure 2 and Table 3). Amphetamines were the most commonly used drugs, while opioids and inhalants were used least.

The results indicated that the sample comprised three distinct groups: stimulant users, sedative users and opioid users.

1. Stimulant Users: Used amphetamines, cocaine, hallucinogens and/or designer drugs, did not use inhalants, tend to be older and used drugs for the enjoyable effects.

2. Sedative/Inhalant Users: Used tranquillizers, barbiturates and/or inhalants, tended not to use cocaine, be unemployed and use drugs to cope rather than for enjoyment.

3. Opioid Users: Tended to be older teenagers, be unemployed, use drugs to cope, use cocaine and barbiturates and not use inhalants.

5. DRUG INFORMATION LINE CALLS:

The Alcohol and Drug Information Service (ADIS) commenced in November 1982 and was originally shared between 3 locations to maintain a 24 hour service.

In April 1986 as a result of NCADA funding, ADIS became centralised as the Statewide Drug Hotline with a 24 hour 7 day a week service manned by 8 full time counsellors with on line computer access to a drug services information database.

The service is based in the inner city of Sydney and is administered by St Vincents Hospital Drug and Alcohol Services unit. Four toll free lines were made available for non-metropolitan callers.

Table 4 and Fig.3 show the nature of the calls to ADIS over the three and a half year period to May 1987. The low number of calls in 1985 was due to disruption of the service while ADIS became centralised and 'on line' to computer information.

An increase in the proportion of calls about opioids (1985), amphetamines and polydrug use was observed. Cocaine and cannabis showed no substantial increase.

DRUGS AND CRIME

1. COURT APPEARANCES INVOLVING ILLEGAL DRUGS:

A summary of court appearances for all drug offences in NSW from 1978 to 1986 is presented in Table 5 from data supplied by the NSW Bureau of Crime Statistics and Research. These statistics only included those who received a conviction.

Between 1979 and 1985 there was a steady increase in the number of cases involving Cannabis, Opiates, Stimulants and Cocaine. For Stimulants and Cocaine this trend continued into 1986 but there appears to have been a dramatic drop in the cases involving Opiates and Cannabis. Several explanations could account for this change.

1. The Drug Misuse and Trafficking Act was introduced at the beginning of 1986 so that police efforts were concentrated on trafficking and distribution of drugs rather than Possession or Use offenses which had made up a large proportion of Opiate and Cannabis cases previously.

2. Also due to this Act some cases came to be heard in the Higher Courts.

3. Police practices may be becoming less effective in detecting drug offenses.

4. In the case of opiates, consideration must be given to the possible effect of the Methadone program which was enlarged towards the end of 1985 and went through a period of very rapid growth in early 1986.

Cases involving hallucinogens seem to have had a history of fluctuations since 1978 so the apparent increase in this type of case probably has little meaning.

2. DRUGS FOUND DURING ANALYSIS OF POLICE SEIZURES:

Drugs identified in samples sent by police for chemical analysis are shown in Table 6 and Fig 4. This data indicate an increase in the number of samples containing heroin, cocaine and amphetamines.

3. HEROIN USERS POPULATION ESTIMATE:

Research in this area is being undertaken in NSW by Dr Ron Sandland of Siromath.

In April 1986 Dr Sandland reported on the latest phase of his work in which he has developed a statistical model to estimate the heroin user population while allowing for changes in police enforcement practices (eg. an increase in arrest rate due to an increase in the size of the drug squad) and the effect of previously arrested users coming under police surveillance and therefore being more likely to be arrested.

The model is believed to estimate the number of persons who are at risk of arrest because of their heroin use. This means that it is possible that some users who have a controlled pattern of irregular use would not be included in the estimate. It is contentious whether such users form a relatively large or small proportion of all heroin users.

The results of the estimation model are presented in Table 7. These estimates indicate a 163% increase in the size of the heroin population over a four year period.

The Directorate of the Drug Offensive is currently negotiating to acquire the statistical model from Siromath along with the software to modify the police data and to apply the model to it. This will allow for regular updating of the estimate of the users.

5. PRICE AND PURITY DATA:

In the USA heroin price and purity is widely used as an indicator of the availability of the drug and as an evaluation tool for drug law

enforcement efforts.

From 1977 to the end of 1985, seizures of heroin by police were analysed at the Division of Analytical Laboratories. Fluctuation in the purity of samples was minimal indicating that the drug was at a reasonably constant level of availability over this period. (Fig 5).

In NSW at present there is no systematic collection of this data. This is due to the introduction in 1986 of the Drug Misuse and Trafficking Act

Now, any powder found to contain heroin in any proportion is regarded as pure heroin for the purposes of the act. This resulted in purity measurements being no longer required by law and this indicator was no longer investigated.

Because of the potential value of having price and purity data systematically measured and available, the Bureau of Crime Statistics has submitted for funding, a proposal to undertake a feasibility study for collecting this data on an ongoing basis by identifying any operational barriers to its implementation.

Mr Ian Dobinson from the Bureau will be speaking on this issue.

DRUG RELATED DEATHS

1. ABS CAUSE OF DEATH DATA:

Information about drug related deaths is available from several sources, the main one being the Australian Bureau of Statistics. At the time of writing, the 1986 figures are available. However they have not yet been grouped using the International Classification of Diseases and indices described by Drew L.R.H. (1). For previous years the drug groupings are only separated as Opiates, Barbiturates and Other drugs with Other including such drugs as cocaine, cannabis, amphetamines and hallucinogens. (Table 8).

Using these groupings it is evident that opiate deaths are increasing and clearly exceed the number of deaths due to barbiturates. This trend appears to be very similar to the change in the national death rate for these two drugs Figs 6 & 7. The Other group of drug related deaths shows a marked increase after 1983 but only by disaggregating this group could it be confirmed as to which particular drug/s is causing this trend.

2. SPECIAL STUDY:

As part of the evaluation of the NSW Methadone Program, an officer of the Directorate has collected data on all deaths since 1982 where opiates were found in a part of the body of the deceased.

Circumstances surrounding the death were obtained from court files and

used to decide upon the degree of involvement of the narcotic in the death.

The data and report are as yet unpublished but first indications from the data appear to show an increase in these deaths to the end of 1985 and then a marked reduction (Table 9 and Fig 8).

1985 was when when the Methadone program underwent a substantial expansion, but whether the two are related is still to be determined.

The figures in Table 8 should not be quoted at this time and all exceed the number of cases in this category as reported by the ABS because of the wider criteria for inclusion.

DRUG TREATMENT PROGRAMS

1. NON GOVERNMENT RESIDENTIAL AGENCIES:

Admission to non government residential drug treatment agencies or Therapeutic Communities and the NSW Methadone Program show some interesting trends when compared especially in relation to narcotic users.

The Directorate of The Drug Offensive administers both the CARA (Client At Residential Agencies) Data Collection which commenced in January 1985 and the Methadone Statistics Unit which began reporting at the end of 1985.

Figure 9 illustrates the total numbers of clients in each system within the same time frame. The 12 months period between January 86 and January 1987 shows an enormous increase in the scale of the Methadone Program and a drop (though to a far lesser degree) in the admissions to drug agencies.

When the pattern of admissions for clients having a primary narcotic problem is considered (Figure 10) it could be suggested that the increase in places and the methadone program could have been the cause of the drop of admissions to drug agencies especially in those with narcotic problems.

Two other measures from the CARA collection are of interest here. The percentage of clients admitted who had previously been on a Methadone Program increased during this 12 months period, as did the proportion of clients reporting a primary problem with Methadone itself.

These patterns would seem to suggest an overlap between the populations using these two treatment methods although the agencies basically provide a drug free treatment while the Methadone Program aims to substitute one drug for another.

Figure 11 shows the pattern of admissions of clients reporting a

primary problem with illicit drugs other than narcotics over a two and a half year period from January 1985 to July 1987.

Stimulant users are the only group showing an overall (though still slight) increase.

Narcotic users, after decreasing dramatically in 1986 would appear to be on an upward trend around July 1987.

The figures from which these graphs are drawn (Table 10) would also seem to indicate a fairly constant proportion (3:1) for clients having had previous treatment and clients who are new to treatment.

2. URINALYSIS:

The Department Health's Oliver Latham Laboratories conduct drug screens on urine from clients in:

1. The non government residential drug agencies
2. The government or public methadone program
3. Some sections of private methadone program
4. Prison drug programs (as from May 1988)

Due to a major up-grade of computer software and recording processes, hard figures over several years were not available but the following verbal advice was offered by the Laboratory Director.

Over the last 2 years

Amphetamines - Steadily increasing. Initially occurrences were localised but now attaining a wider spread geographically.

Cocaine - Low levels and stable.

Non Morphine - Rarely seen

Type opiates

Ecstasy - not seen until recently but very isolated occurrences.

AIDS:

In NSW, notification of all cases of AIDS or HIV infection is mandatory. The figures thus obtained are compiled by the AIDS Bureau in Sydney but are considered to be a serious underestimation of the prevalence of infection.

As at mid March 1988 in NSW, 537 Category A cases had been notified and 295 Deaths due to HIV infection had been reported.

Homosexual/bisexual practices and Blood Products account for

transmission of the infection in over 90% of cases reported up to December 1987. The highest number of notifications appears in the 30 - 39 years age group (42%).

For Category B and C HIV infection, the proportion of younger people (under 29) seroconverting as a proportion of all seroconversions is rising.

Notifications involving IV drug use (alone or combined with another risk group) have risen from 25 in November 1986 to 157 in March 1988. This indicated that IV drug use is a risk factor in 7.8% of all cases notified to date.

It cannot be assumed however that this indicates the prevalence of HIV infection amongst IV drug users in general.

At present HIV testing is not compulsory for clients entering the Methadone Program but where a narcotic dependant individual tests HIV positive, he is given priority to join the public sector program.

Some government funded residential drug treatment agencies require HIV testing as a condition of entry to the program. As of July 1987 CARA data collection forms have included questions relating to HIV testing and results. Several cases not otherwise notified have been identified as a result.

MDMA - ECSTASY

In NSW there is no hard data available about the drug MDMA better known as Ecstasy, but contacts made during the GET REAL campaign, mentioned earlier, provide a reliable source of anecdotal information on the drug scene within the Sydney area.

It appears that MDMA, used as early as 1914 overseas, became popular in Sydney towards the end of 1984 and into 1985 when it was brought to Australia by enthusiasts who had used it as an adjunct to psychotherapy.

Since that time according to our contact who works in the TV and film industry, Ecstasy has been manufactured in Australia and has been

popular at parties (in much the same way as cocaine) for the over 18 set, in the inner city and eastern suburbs of Sydney.

By February of this year it had become very popular with the recreational drug using street kids of the inner city round King's Cross and Paddington, where it is freely available and sells for \$35 - \$55 per capsule at a particular King's Cross Hotel.

It was the opinion of our contact that these young recreational drug users were now becoming bored with Ecstasy and were ready to find something new to try out.

CONCLUSIONS

1. MARIJUANA use in the adult population is unknown. In younger age groups, an increase in use appears to be related to an increase in freedom and income.

Legislation has caused a reduction in the number of possession and use convictions involving marijuana.

Morbidity due to marijuana is evident in about 20% of clients admitted to drug treatment agencies.

2. AMPHETAMINES minimal use by students at school or TAFE but used by 70% of street kids.

All other indicators appear to show.

3. COCAINE would appear to be freely available but there is no sign of an increase in morbidity associated with its use.

4. HEROIN as with most illicit drugs, use is minimal in the school population. However all other indicators point to an increase in use and morbidity.

The Methadone Program has influenced the patterns of use and treatment for narcotics but the causal relationships are not well defined.

5. AIDS detection remains a problem. The incidence is increasing and the seroconversion rate to the disease is increasing in young people.

The comparisons presented in Table 18 are based on Year 10 students, as this was the reference group in the earlier surveys. It presents usage at the "Regular" level (i.e. at least weekly).

Table 1 : Weekly Drug Use (% of Year 10 students using at least weekly)

	1971 (n=3300)	1973 (n=3369)	1977 (n=492)	1980 (n=395)	1983 (n=755)	1986 (n=1216)
Alcohol	22.4	31.3	37.6	32.7	50.4	36.9
Tobacco	28.6	30.0	40.4	35.1	34.8	28.2
Analgesics	15.8	15.0	11.4	20.8	29.9	28.9
Sedatives	3.6	3.6	3.0	3.3	2.4	1.7
Marijuana	1.6	3.6	8.3	6.3	12.0	9.0
Hallucin.	0.6	1.1	0.6	1.0	2.0	1.2
Narcotics	0.4	0.8	0.6	0.3	0.4	0.9
Stimulants	3.9	2.6	1.6	0.3	1.5	2.0

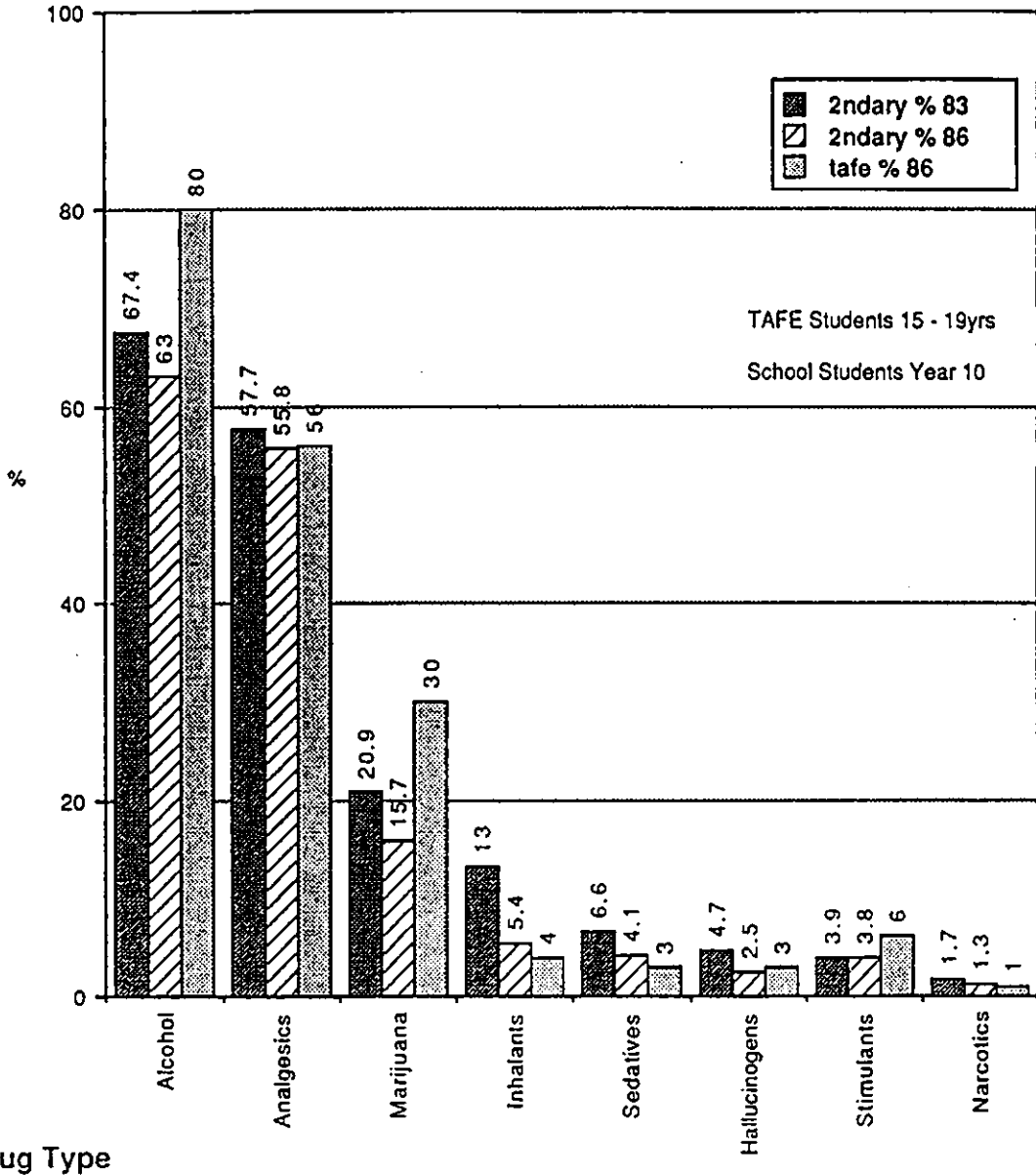
Notes

1. "Weekly" For all drugs except hallucinogens, the "weekly" category was formed by the sum of the two other categories - "most days of the week" and "occasionally during the last week". In 1980, 1983 and 1986 this category was based on "use on at least 3 days (times) in the past month".
2. Hallucinogens - "Weekly" - In 1971, 1973 and 1977 regular use was based on "at least 3 trips per month". For 1980, 1983 and 1986 it was based on the classification in Note 1.
3. Solvents and aerosols are absent from this table because they were included in the survey for the first time in 1983.

TABLE 2 — DISTRIBUTION OF DRUG USE
FOR STUDENTS SAMPLED N = 2527

DRUG	AGE GROUP	N	NEVER	PAST	YEAR	MONTH
			%	%	%	%
ALCOHOL	15 - 19	1 599	12	88	88	80
	20 - 25	815	14	86	86	80
TOBACCO	15 - 19	1 663	30	70	40	31
	20 - 25	837	36	64	41	33
MARIJUANA	15 - 19	1 631	43	57	46	30
	20 - 25	831	43	56	39	23
PAIN RELIEVERS (ANALGESICS)	15 - 19	1 600	9	91	84	56
	20 - 25	809	11	89	79	50
SEDATIVES	15 - 19	1 656	89	11	7	3
	20 - 25	831	87	13	6	3
TRANQUILLISERS	15 - 19	1 660	90	10	6	2
	20 - 25	830	91	9	4	2
HALLUCINOGENS	15 - 19	1 661	88	12	7	3
	20 - 25	834	79	21	6	2
NARCOTICS	15 - 19	1 658	97	3	2	1
	20 - 25	832	97	3	1	1
SLIMMING TABS	15 - 19	1 654	91	9	6	3
	20 - 25	830	89	11	5	2
STIMULANTS	15 - 19	1 652	84	16	12	6
	20 - 25	831	79	21	13	5
SOLVENTS	15 - 19	1 654	76	24	8	4
	20 - 25	831	85	15	4	2

Fig 1: TAFE/School Student Drug Use (used in the last month) 1983/86



Drug Type

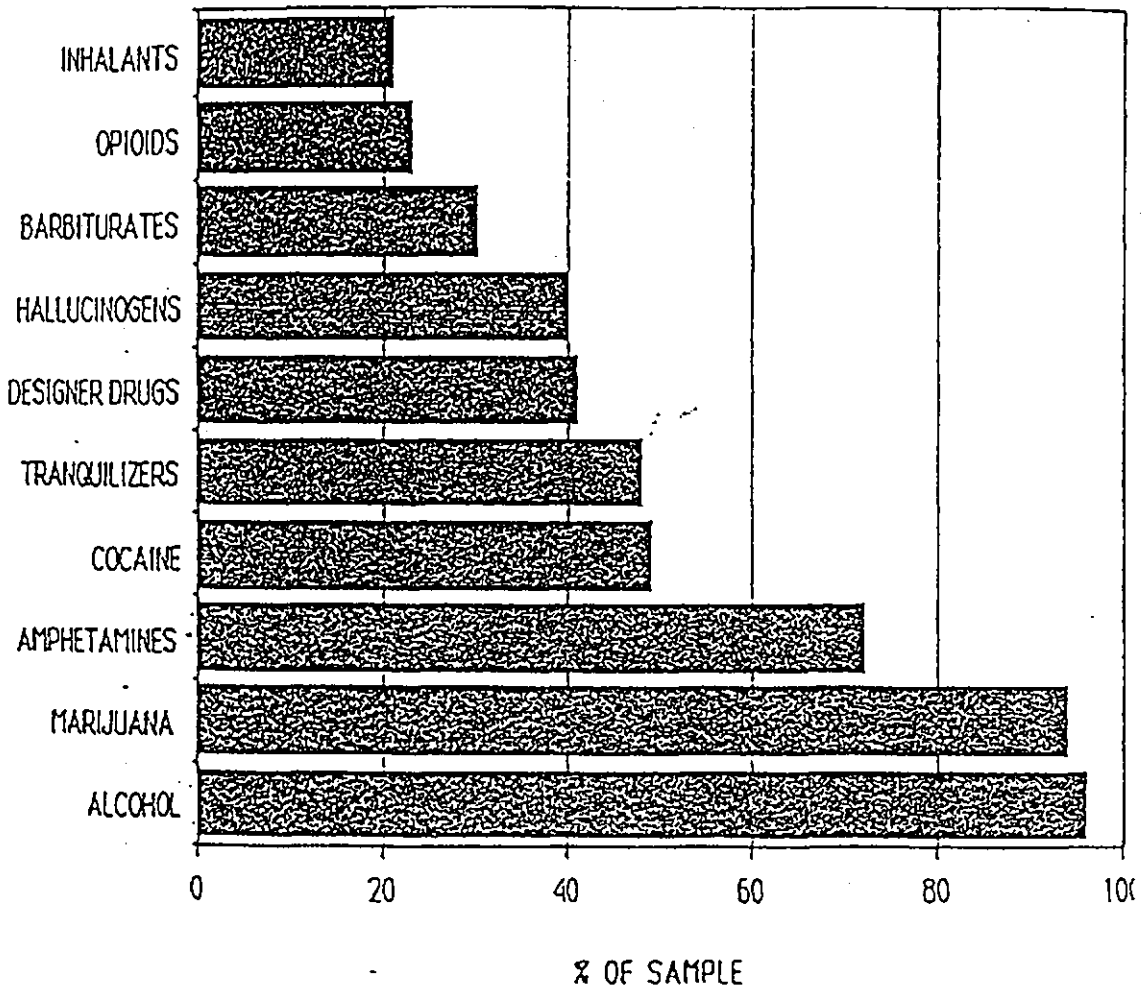
source: NSW DAA Report A 87/1

'A Survey of TAFE Students: Their Use of Tobacco Alcohol Other Drugs'

Prill M, Newman N, Relich J. Surveys and Evaluative Studies Div.

NSW Dept. of TAFE.

FIGURE 2: DRUGS USED IN PREVIOUS MONTH



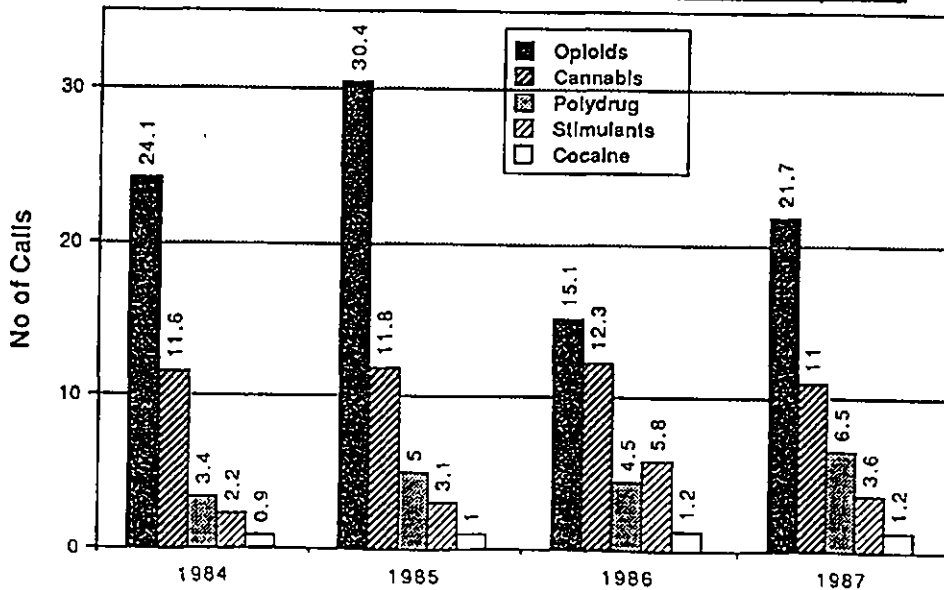
Source: NSW DAA Report A 87/4

Table 3. Drug use in the month prior to being interviewed.

Drug	None	1-3 times a mth	1-3 times a week	4+ times a week
Alcohol	4.2	14.7	56.7	24.4
Marijuana	6.0	21.5	49.0	23.3
Amphetamines	28.3	56.9	12.7	1.9
Cocaine	51.0	41.5	6.3	1.2
Tranquilizers	51.9	33.0	11.3	3.6
Designer drugs	59.1	36.2	4.5	0.2
Hallucinogens	60.4	37.6	1.3	0.6
Barbiturates	69.8	22.3	6.4	1.0
Opioids	76.7	16.6	3.2	3.3
Inhalants	78.9	13.5	5.9	1.3

TABLE 4: CALLS TO DRUG HOTLINE SERVICE (ADIS)**DRUG TYPE ACROSS FOUR SAMPLES**

SAMPLE	1984	1985	1986	(Jan - May) 1987
N =	5745	1501	5757	5045
OPIOIDS	24.1	30.4	15.1	21.7
CANNABIS	11.6	11.8	12.3	11.0
POLYDRUG	3.4	5.0	4.5	6.5
STIMULANTS	2.2	3.1	5.8	3.6
COCAINE	0.9	1.0	1.2	1.2
HALLUCINOGENS	0.6	0.4	0.7	0.7

FIG 3 : CALLS TO DRUG HOTLINE SERVICE (ADIS)

Source: Alcohol and Drug Information Service Annual Report 1986/87

TABLE 5: N.S.W. LOCAL COURT APPEARANCES FOR DRUG OFFENCES
RESULTING IN A FINDING OF GUILT 1978-1985

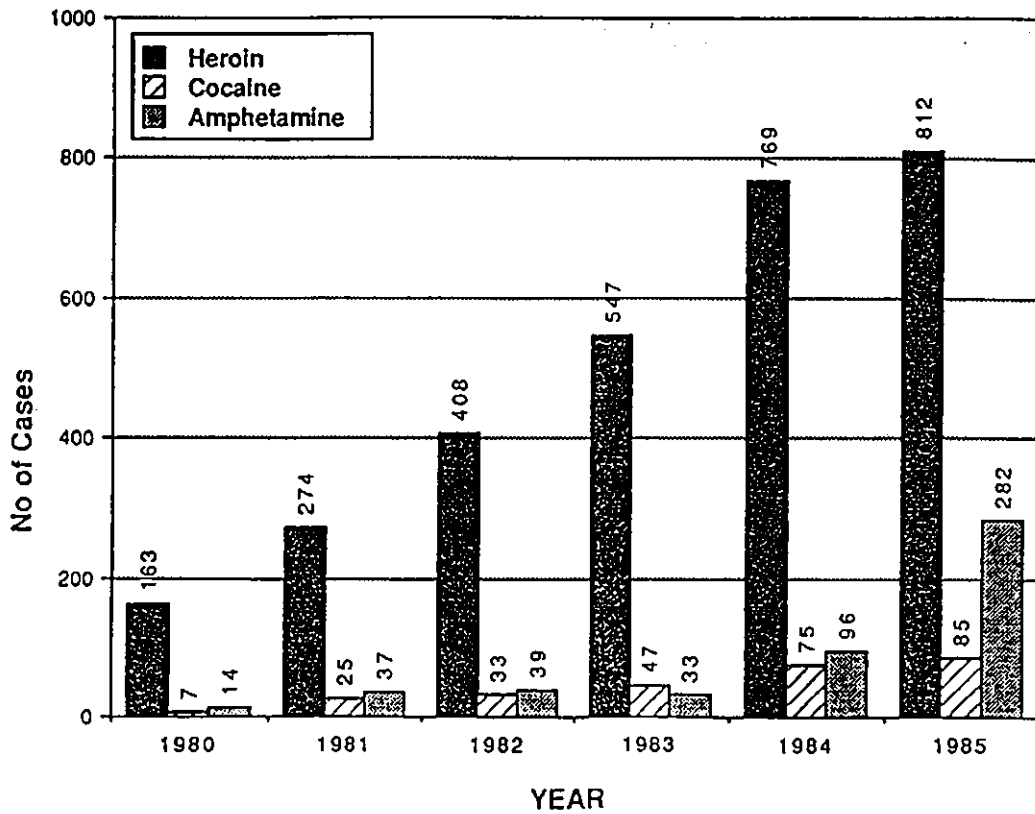
	1978	1979	1980	1981	1982	1983	1984	1985	1986
Cannabis	2,494	3,167	3,857	4,997	5,060	5,429	7,152	7,412	5,614
Opiates	1,037	787	605	799	1,101	1,353	1,832	2,139	1,316
Hallucinogens	61	47	69	46	69	46	39	47	70
Stimulants	37	37	37	55	88	95	221	399	419
Sedatives	224	258	271	183	152	118	116	114	69
Cocaine	19	6	7	6	20	26	41	42	26
Other	0	5	2	4	7	4	7	8	9
	3,872	4,307	4,848	6,090	6,497	7,071	9,408	10,161	7,573

Source: Court Statistics 1985, NSW Bureau of Crime Statistics and Research,
Department of the Attorney-General and of Justice.

**TABLE 6: Drugs Found in Cases Analysed by the Drugs Section,
Divn. of Analytical Laboratories, NSW Dept. of Health (1980-1985)**

DRUG	1980	1981	1982	1983	1984	1985
Heroin	163	274	408	547	769	812
Cocaine	7	25	33	47	75	85
Amphetamine	14	37	39	33	96	282

Fig 4: Drugs Found in Police Seizures



Source: Division of Analytical Laboratories, NSW Dept. of Health

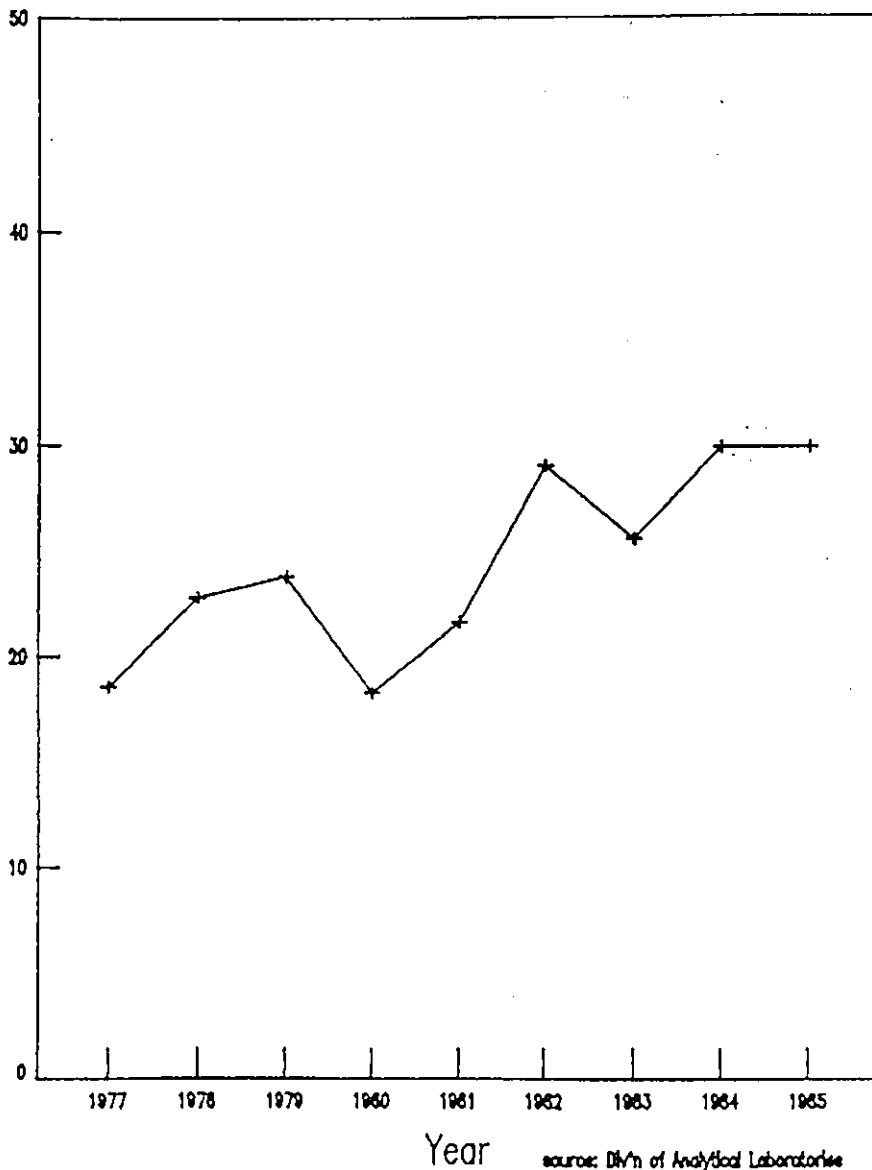
**TABLE 7: ESTIMATED SIZE OF HEROIN USER POPULATION
IN N.S.W. 1979-1983**

PERIOD	NUMBER
JAN-JUNE 1979	4,013
JULY-DEC 1979	4,511
JAN-JUNE 1980	5,172
JULY-DEC 1980	5,108
JAN-JUNE 1981	6,803
JULY-DEC 1981	8,111
JAN-JUNE 1982	9,324
JULY-DEC 1982	9,091
JAN-JUNE 1983	12,680
JULY-DEC 1983	11,890

SOURCE: R. SANDLAND, 1986, "Estimation of the Number of Heroin Users in N.S.W. using Police Arrest Data: Development of a Statistical Model". Drug and Alcohol Authority, Research Grant Report B86/1.

Fig.5: Mean % Purity of 'Street Deal'
Heroin seized by NSW Police 1977-1985

% Purity of Heroin



source: Div'n of Analytical Laboratories
NSW Department of Health

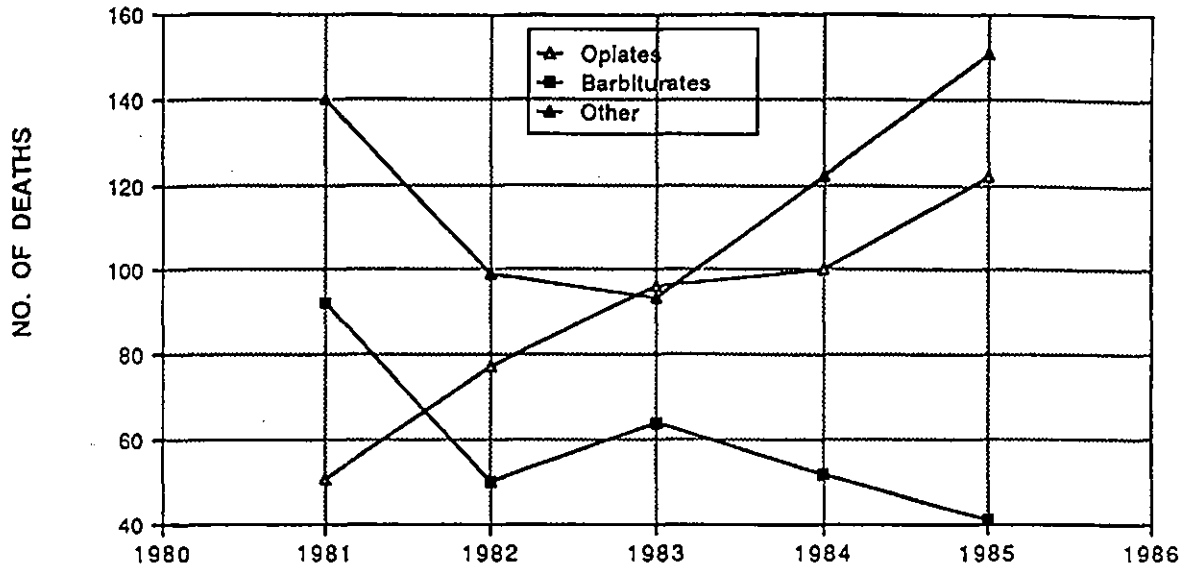
TABLE 8: ESTIMATED NUMBER OF DRUG-RELATED DEATHS IN NSW, 1981 - 1985.
(MALE AND FEMALE)

Drug Involved and cause of death (1)	1981		1982		1983		1984		1985	
	M	F	M	F	M	F	M	F	M	F
<u>TOTAL DEATHS - - ALCOHOL</u>	1027	331	996	372	966	322	719	256	832	353
<u>TOBACCO</u>	4377	1712	n.a.	n.a.	4020	1777	4331	1708	4868	1924
<u>OTHER DRUGS</u>										
Drug dependence-										
Morphine type	44	7	44	25	58	21	55	21	81	30
Barbiturate type	11	11	4	7	8	10	9	8	4	5
Other	9	3	5	2	8	8	8	6	12	5
Accidental poisoning-										
Opiates and related narcotics	n.a.	n.a.	7	1	14	5	18	6	9	2
Barbiturates	11	16	7	7	5	2	4	4	2	3
Other	27	40	18	13	9	11	27	18	20	25
Suicide-										
Barbiturates	21	22	18	26	20	19	12	12	14	12
Other	33	40	33	40	33	38	44	34	64	41
Poisoning - undetermined whether accidental or purposely administered										
Barbiturates	0	0	0	0	0	0	1	2	0	1
Other	0	0	2	2	0	0	0	2	2	3
TOTAL OPIATES		51		77		98		100		122
TOTAL BARBITURATES		92		50		64		52		41
TOTAL OTHER		140		99		93		122		151

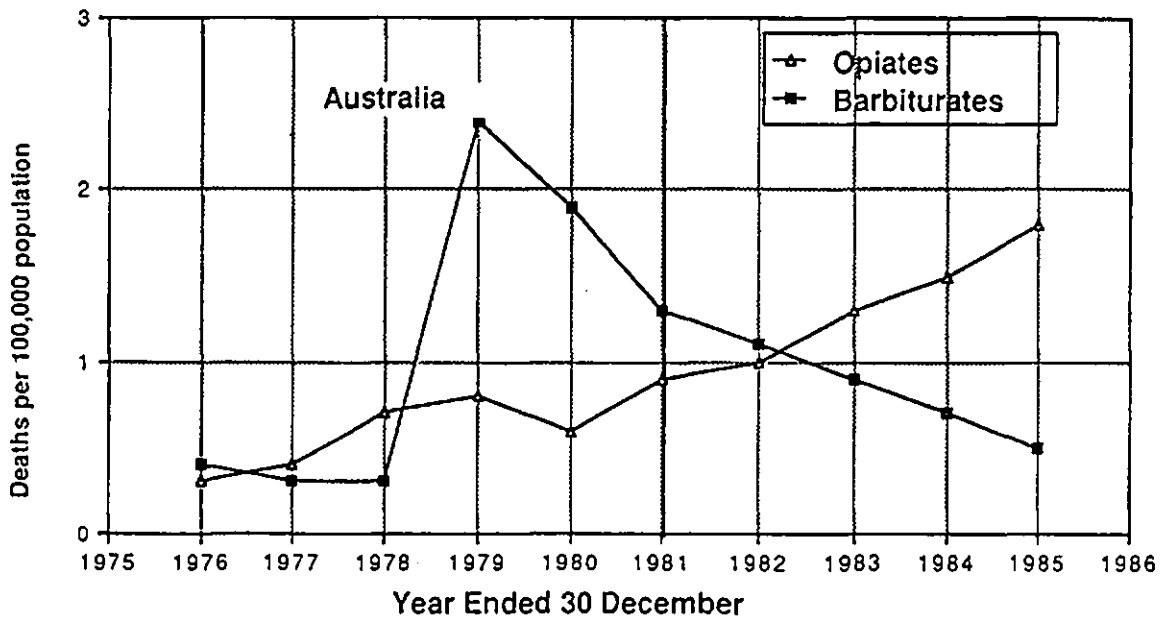
Source: A.B.S.

Note: (1) The International Classification of Diseases, 9th Revision, was used to categorise the causes of death.

(2) n.a. : not available.

FIG 6 : NSW Drug Related Deaths 1981 - 1985

Source: Australian Bureau of Statistics

Fig 7 : Opiate & Barbiturate Death Rates 1976/85

Source : Commonwealth Department of Health

TABLE 9: OPIOID RELATED DEATHS

	1982	1983	1984	1985	1986
Male	73	113	130	142	120
Female	49	46	64	76	52
Total	122	159	194	218	172

Source: Preliminary data from a methadone evaluation project NSW Directorate of the Drug Offensive

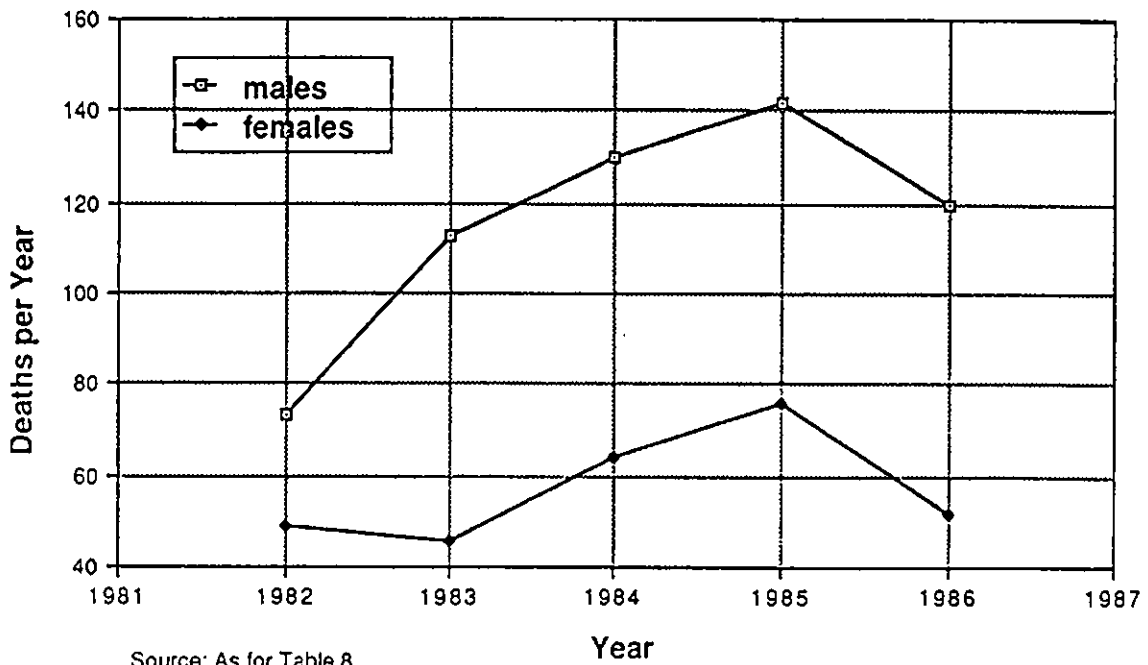
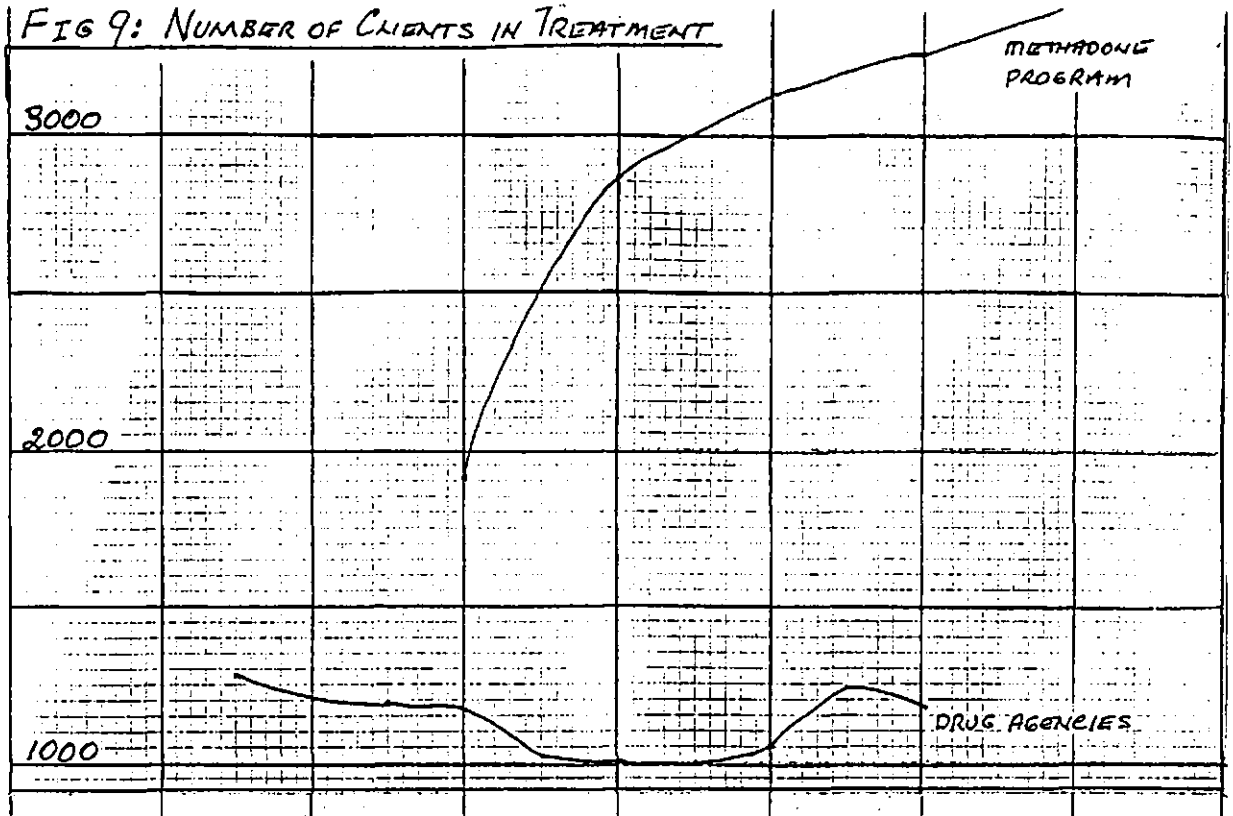
Fig 8 : Opioid Related Deaths

FIG 9: NUMBER OF CLIENTS IN TREATMENT



CLIENTS IN DRUG AGENCIES AS % OF TOTAL ADMISSIONS

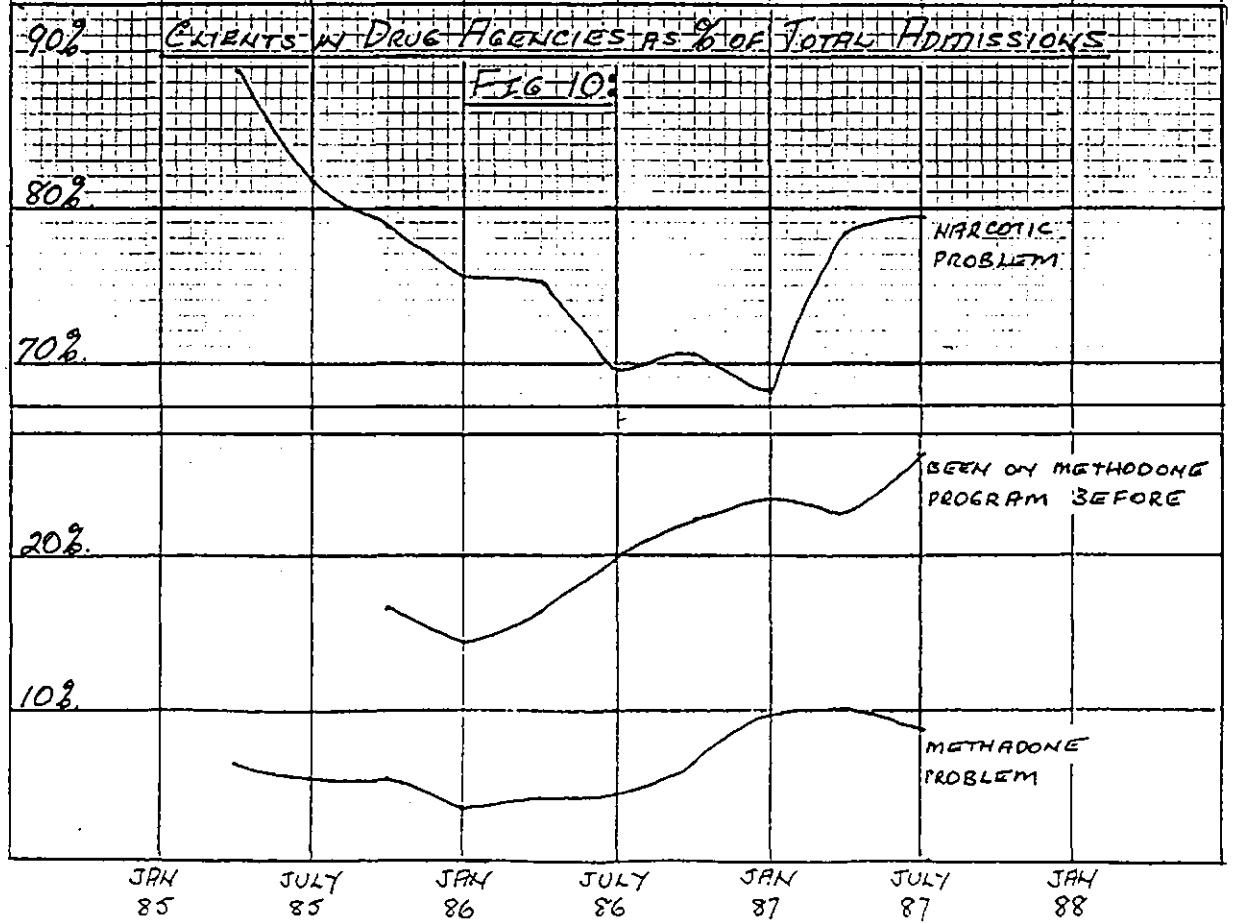


FIG. 11:

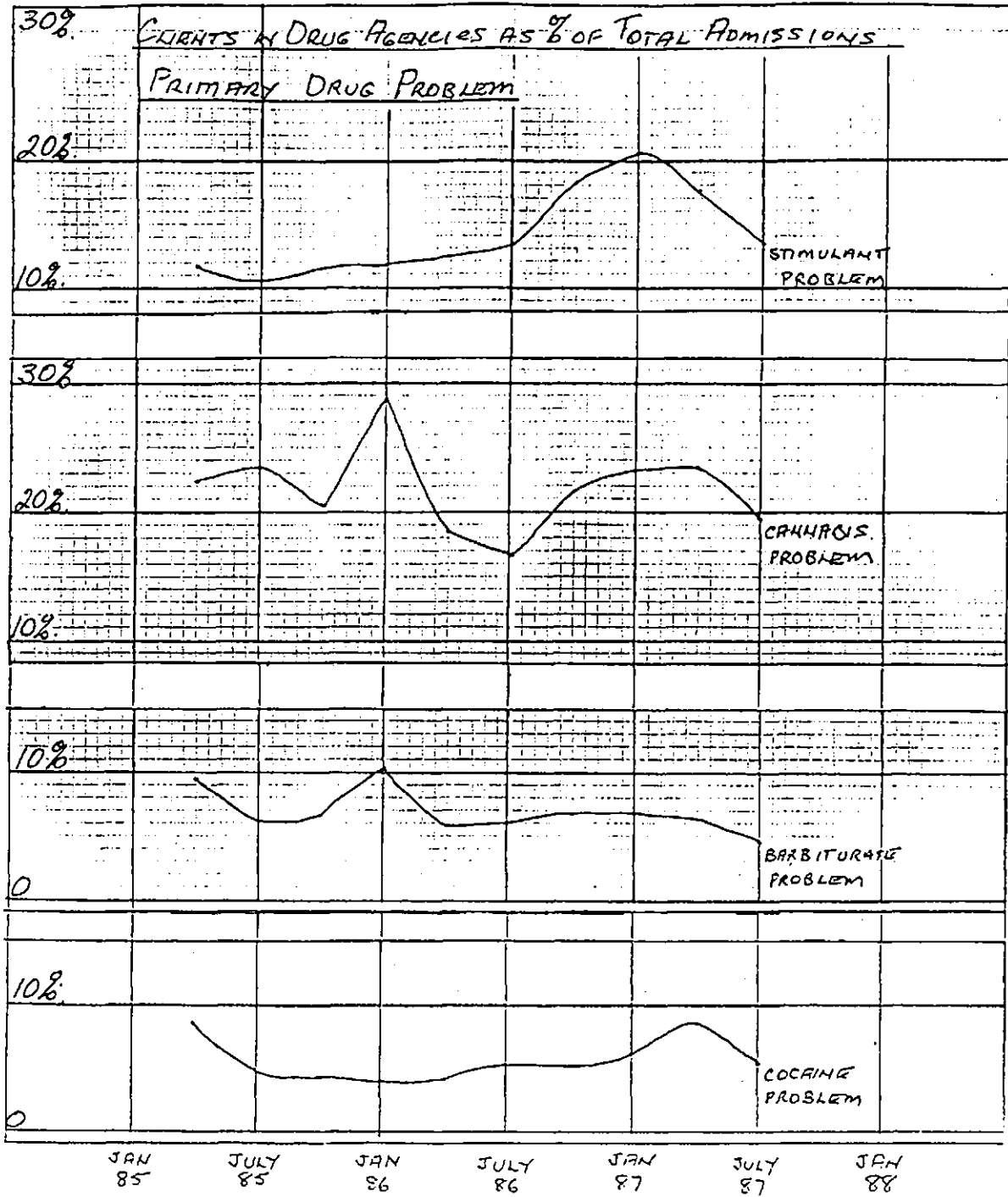


TABLE 10:

CLIENTS IN RESIDENTIAL DRUG AGENCIES AS % OF TOTAL ADMISSIONS PER QUARTER

Y E A R	1 9 8 5				1 9 8 6				1 9 8 7		
Q U A R T E R	1	2	3	4	1	2	3	4	1	2	
IST TIME IN TREATMENT	29.6	27.9	24.5	28.1	25.5	22.0	22.6	20.0	25.3	23.3	
HAD PREVIOUS TREATMENT	69.2	71.6	73.7	71.0	74.3	77.9	77.2	79.4	74.4	76.6	MEAN:
ON METHADONE PROGRAM BEFORE			16.6	14.2	16.1	20.0	22.2	23.4	22.8	26.5	MEAN:
TOTAL ADMISSIONS	1283	1206	1202	1179	1023	1012	1006	1052	1243	1170	
<u>PRIMARY DRUG PROBLEM</u>											
NARCOTICS	88.9	81.9	78.9	75.6	75.4	69.6	70.4	68.2	78.3	79.4	
CANNABIS	22.3	23.6	20.6	28.7	18.4	16.6	21.7	23.1	23.6	19.5	
STIMULANTS	11.8	10.6	11.4	11.8	12.3	13.3	18.3	20.6	17.7	13.3	
BARBITURATES	9.5	6.2	6.4	10.1	5.8	6.0	6.7	6.7	6.3	4.6	
METHADONE	6.6	5.5	5.6	3.3	4.1	4.6	6.5	9.8	9.9	8.7	
COCAINE	8.5	4.8	4.6	3.9	4.1	5.1	5.1	6.1	8.4	5.1	

STATISTICAL INDICATORS OF DRUG USE AND ABUSE IN VICTORIA

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1.0 INTRODUCTION

The purpose of this paper is to describe some data sources that have been identified as drug use and abuse indicators in Victoria, with particular reference to the National Drug Abuse Data Network (NDADS).

The aim is not just to provide Victorian data on certain aspects of drug abuse, but rather to identify the types of data sets that are presently available and explain their potential for monitoring, especially with respect to time. For that reason, the emphasis is on sources which provide reasonable time series data and for consistency in this paper, 1980 has been arbitrarily selected as the base year.

The data from Victoria, are some which have been assembled for practical reasons (such as regional planning processes) and other jurisdictions will have a different emphasis based on local experience. Hopefully, the Victorian data will contribute to the national picture and facilitate progress towards identifying a uniform Australia-wide dataset before too long. The time-series are therefore cited simply as examples of what is currently available in Victoria, along with an explanation of their possible uses.

1.1 Treatment Statistics.

These data have been obtained from the following three areas:

- (a) public hospital morbidity statistics;
- (b) government alcohol and drug treatment institutions; and,
- (c) certain state funded non-government treatment agencies.

Notable deficiencies in the overall dataset are information from general psychiatric services, which is currently available; from private hospital morbidity statistics, which are not currently available; and, from private medical practitioners which may be available from Commonwealth sources.

Such data are particularly useful in establishing the cost of alcohol and drug abuse to the community. Appendix Tables 13 and 14 are attached and can be considered together as examples of how public hospitals' output statistics might be used to allocate costs for alcohol and drug related diseases. Clearly, it is possible to use the proportional contribution of alcohol to disease and obtain a similar proportional estimate of relevant occupied bed-days. Such occupied bed-day costs are regularly published by the Health Department Victoria in respect of all public hospitals.

1.2 Mortality Statistics.

These data are among those specifically included in the NDADS collection and are obtained from the official death register of the Victorian Registrar of Births Deaths and Marriages. Mortality is a dichotomous variable and has been extensively used as the dependant variable to assess the hierarchy of importance of different forms of drug abuse. Because of that, it is useful in this introduction to anticipate an obvious result and place certain drugs in perspective.

In 1982, Drew examined the contribution of drugs to deaths in Australia. He found throughout Australia there were about 20,000 drug related deaths. If these figures are disaggregated in proportion to the Australian and Victorian populations of drinking age (say, 15 years and over) it implies at least 5,500 such deaths in Victoria each year. The drugs of major concern are alcohol and tobacco, and the causes of death of primary significance (other than those associated with tobacco use), are alcohol related road traffic accidents, suicide and alcoholic liver disease.

Using the Commonwealth methods, estimates for the overall number of deaths from various drugs in Victoria can be obtained and are shown in Table 1.

TABLE 1

Deaths in Victoria from all Causes and Drug-Related Deaths
Estimated from Drew (1982) from 1980 to 1987

YEAR	ALL CAUSES OF DEATHS	ALCOHOL	TOBACCO	OTHER DRUGS			TOTAL ALL DRUGS
				Opiates	Barbiturates	Other	
1980	29,374	947	4290	23	74	82	5416
1981	29,034	904	4242	35	51	67	5299
1982	30,611	937	4422	40	44	79	5522
1983	29,022	835	4341	52	36	100	5364
1984	29,202	844	4386	53	37	101	5421
1985	31,257	853	4432	53	37	103	5478
1986	30,175	901	4443	65	24	102	5535
1987	30,580	900	4643	74	22	103	5742

Source: ABS Causes of Death Catalogue No: 3303.0
Drew (1982) Technical Information Bulletin No: 69
National Drug Abuse Data System.

Data from the State Coroner will confirm the Drew estimates as reasonable.

1.3 Youth Studies.

In this section reference is made to two surveys which have been reported in Victoria. First, the survey of 10,000 secondary school students in years Seven, Nine and Eleven (Ministry of Education & Health Department Victoria, 1986); and secondly, a similar survey of drug use among young people in Victorian youth training and reception centres (Crundall, 1987). These surveys illustrate the utility of carefully planned research projects which take a snapshot of drug use prevalence at particular times with different study populations.

1.4 Indicators of Criminal Activity.

Alcohol and drug abuse are generally believed to be associated with various crimes. For example, it has been reported that property offenders have high levels of narcotic use (Dobinson & Ward, 1985); and it is well known that the Judiciary and the Victorian Law accept that actions influenced by alcohol and drugs are possible mitigating factors with certain crimes.

1.5 DIRECT Line Telephone Counselling.

DIRECT line is a telephone service and was established to provide telephone counselling, information and referral in relation to alcohol and drugs to anyone in Victoria.

Statistics obtained from this service may reflect changes in drug trends. They provide limited data on the sociodemographic characteristics of concerned callers and probably have potential as variables in epidemiology, and in particular multivariate modelling.

1.1 TREATMENT STATISTICS.

In Victoria, treatment provided for alcohol and drug related diseases often occurs in an institutional or non-government agency setting and client information management systems have received major attention in recent years.

In Table 2. are shown some of the major indicators of output for the four main government treatment agencies over the financial years 1981 to 1987. Interesting trends have occurred since the advent of the Drug Offensive, the most conspicuous of which are increased numbers of outpatients receiving treatment and a general increase of the length of stay for inpatients.

The Health Department Victoria has a regional structure and separate data are assembled for each region. In Figure 1 statistics are shown from each of the major client data sources on a regional basis. In this way, it is possible to obtain an impression of the relative importance of the various sectors of the alcohol and drugs services market and observe segmentation in country and metropolitan areas. Similarly, Table 3 shows the regional distribution of particular drugs mentioned during client registration procedures. These data have been obtained from both government and non-government sources and for the purpose of comparative analysis have been weighted by the respective regional population figures and are expressed in rates per 10,000 total population. As can readily be seen there are distinct differences between metropolitan and country areas.

NUMBER OF CLIENTS BY TYPE OF ALCOHOL AND DRUG TREATMENT AGENCY (ALCOHOL AND DRUG ABUSE)

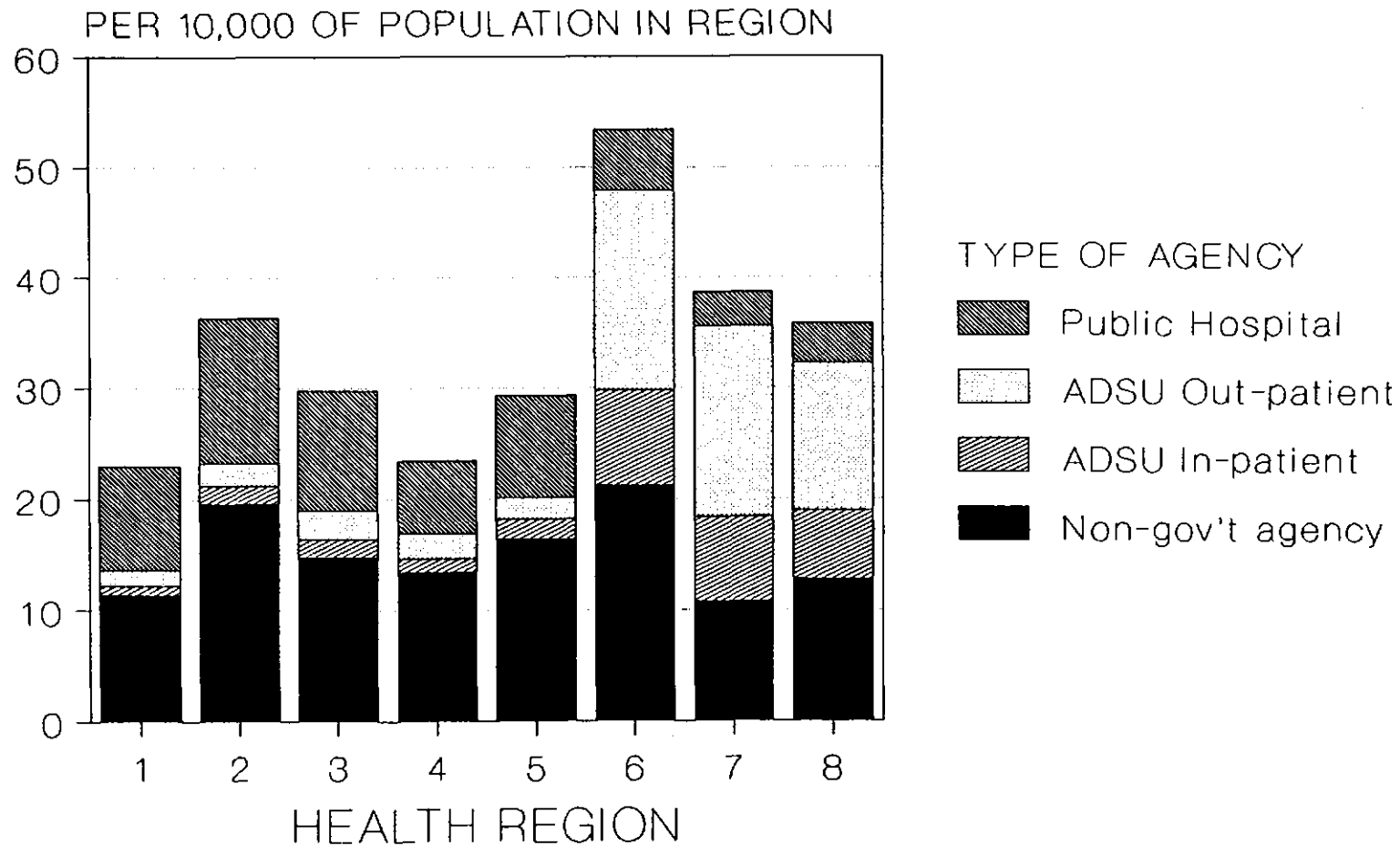


FIGURE 1

TABLE 2

Number of Resident Admissions, Average Lengths of Stay and
Outpatient/Daypatient Visits at Selected Institutions for the
Periods 1 July to 30 June, 1981 to 1987

<u>CENTRE & YEAR</u>	<u>RESIDENT ADMISSIONS</u>	<u>AVERAGE LENGTH OF STAY</u>	<u>OP/DP VISITS</u>
<u>Pleasant View</u>			
1981-82	924	6.7	10,866
1982-83	1143	8.5	11,351
1983-84	974	n.a.	14,248
1984-85	995	10.8	10,702
1985-86	1067	11.30	22,964
1986-87	1075	18.37	25,594
<u>Gresswell</u>			
1981-82	810	19.7	3,056
1982-83	679	23.3	3,194
1983-84	827	n.a.	n.a.
1984-85	953	18.85	n.a.
1985-86	901	20.94	2,816
1986-87	915	26.95	2,025
<u>Smith Street</u>			
1981-82	712	6.60	4,495
1982-83	729	6.70	6,503
1983-84	605	n.a.	n.a.
1984-85	584	6.80	11,862
1985-86	617	6.98	18,767
1986-87	608	8.36	10,630
<u>Heatherton</u>			
1981-82	276	24.4	3,112
1982-83	254	24.3	2,825
1983-84	206	n.a.	n.a.
1984-85	189	30.77	2,134
1985-86	222	24.21	2,031
1986-87	220	26.66	2,502

Source: DAISy (Drugs and Alcohol Information System)
Health Department Victoria

TABLE 3

Number of Clients to Funded Non-Government Agencies, Alcohol and Drug Services Unit In-Patient and Out-Patient Facilities and Public Hospital In-Patient Facilities by Type of Substance of Abuse by Health Region (per 10,000 of population in each Region): Preliminary Analysis of Data from 1984-1987

	Health Region							
	1	2	3	4	5	6	7	8
Alcohol	14.9	26.4	21.0	20.3	21.2	33.8	23.9	19.0
Drugs (exc. P.H.)								
Opioid	2.9	2.1	4.4	1.4	2.8	9.8	6.3	7.9
Amphetamines	0.7	2.0	1.5	0.5	0.9	2.0	1.4	2.1
Barbiturates	0.8	0.8	0.4	0.0	1.4	0.9	0.6	0.8
Cannabis	1.0	1.3	0.4	-	1.1	0.5	0.6	0.7
Cocaine	-	-	-	-	-	0.0	-	0.1
Drugs (P.H.)	1.7	2.8	1.1	0.4	1.2	1.3	0.9	0.9
All Drugs	7.1	9.0	7.8	2.3	7.4	14.5	9.8	12.5
Other & N.K.	0.8	0.8	0.8	0.5	0.7	5.0	4.7	4.2
TOTAL	22.8	36.2	29.6	23.1	29.3	53.3	38.4	35.7

Source: DAISy
Health Department Victoria.

One of the principle aims of the Drug Offensive was to incorporate methadone into treatment to assist opioid users to achieve abstinence from the use of illicit opiates and improve their general health status and social functioning. In Table 4 the increased use of methadone in treatment programs is clear since the advent of the Drug Offensive in 1985. Care is needed in interpreting methadone statistics because this form of treatment is only one of a range of options available to physicians and one possible treatment modality is not a primary measure of the incidence or prevalence of opiate dependency.

TABLE 4

Numbers of Methadone Patients Advised to the Commonwealth for the
Period February 1985 to December 1987

TIME	PUBLIC PATIENTS	PRIVATE PATIENTS
February 1985	75	75
June 1986	202	78
December 1986	197	132
March 1987	217	172
June 1987	213	232
September 1987	215	299
December 1987	216	328
March 1988	234	337

Source: DAISy
Health Department Victoria.

2.0 MORTALITY STATISTICS.

2.1 Road Deaths

In Victoria, alcohol use and heavy drinking in particular, are by far the greatest concern as a cause of road deaths. In 1980, at least half of the motor vehicles drivers and motor cycle riders killed had blood alcohol levels in excess of the legal limit of 0.05 percent and half of these in turn exceeded 0.15 percent (Road Trauma Committee, 1982). In another study based on attendances at Victorian hospitals, between 1978 and 1980 the legal blood alcohol level was exceeded in more than one-third of the male driver casualties at the time of their crash and in one-fifth it was above 0.15 percent (McDermott & Hughs, 1983).

In Table 5 are shown the deaths resulting from motor vehicle traffic accidents in Victoria for years ended 31 December, 1980 to 1987. Clearly, alcohol related road traffic accidents are a matter for major community concern and the loss of life is more serious in numerical terms than for any drug category apart from tobacco.

TABLE 5
Persons Killed in Road Traffic Accidents in Victoria
1980 -1987

YEAR	FATALITIES
1980	657
1981	766
1982	709
1983	664
1984	657
1985	683
1986	668
1987	705

Source: Australian Bureau of Statistics
 Catalogue Number 9401.0

2.2 Drug Related Deaths

The distribution of deaths as formally determined by the Coroner is the best data available that definitively allocate drug related deaths in relation to certain substances. The Commonwealth funding provided for NDADS has enabled data now collected by the Toxicology Branch of the State Laboratories to be systematically searched and has resulted in the assembly of Table 6. These data also provide the means to directly compare the estimates of Drew (1982) with hard data on the contribution of alcohol and drugs to overall mortality. As indicated above these new data have shown those estimates of six years ago to be quite valid.

Table 6 shows an increase of illicit drug related deaths in the period since 1980. The data were sorted on the basis of the presumed most likely drug as a cause of death on the basis of its known toxicity; and blood or other tissue fluid concentrations. Retrospective data were assembled from a large number of unsorted files and further opportunities will be taken to assemble the necessary data, so that long term trends in drug related deaths will be able to be detected. As can be seen, many drugs classified as psychotropic agents figure significantly as a cause of death and are often readily available on medical prescription.

In Victoria, when a drug is suspected or associated with a death the matter is referred to the Coroner who is often advised of the results of chemical analysis of such deceased persons. Toxic levels of drugs do not invariably indicate the Coronal finding but are useful in describing trends in drug-related deaths.

TABLE 6

Number of Deaths in Victoria from Narcotic, Psychotropic
and Other Unintended Drug Overdoses from 1980 to 1986

YEAR	DRUG CATEGORY			TOTAL
	Narcotic	Psychotropic	Other	
1980	10	20	8	38
1981	-	-	-	-
1982	-	-	-	-
1983	25	34	13	72
1984	61	31	3	95
1985	76	26	12	114
1986	44	17	4	65

Source: Toxicology Branch
State Chemistry Laboratory

There are also other circumstances where persons die from natural causes or from apparently drug unrelated causes where drugs are found to be present. In those circumstances it is virtually impossible to assign a drug-related cause to the death. In Table 7 are shown the total number of deaths where the Coroner was presented with evidence of the presence of drugs for the calendar years 1983 to 1986.

TABLE 7

Deaths in Victoria where Alcohol and Drugs were Possible
Contributing Factors for the Period 1 January to 31 December
1983 - 1986

YEAR	OVERDOSE				TOTAL
	Drug Abuse	Suicide	Other	Miscellaneous	
1983	72	65	4	286	427
1984	95	65	1	324	485
1985	114	61	8	297	480
1986	65	87	2	409	563

Source: Toxicology Branch
State Chemistry Laboratory

2.3 Deaths From Volatile Substances

In Victoria, the 1986 Survey of Drug Use Among Victorian Postprimary Students showed a high proportion of students who had ever used volatile substances.

Twenty percent of the Year 11 students had used them; 25 percent of the Year 7 students; and 30 percent of the Year 9 students. The use of volatile substances is hazardous and can result in sudden death. A breakdown of deaths by sex and year is shown in Table 8. As can be seen, the number of deaths is low in Victoria compared with other drugs, but since these deaths invariably occur among young people it requires special consideration. Recent changes to the formulae of halogenated aerosol products are now being reflected in a decreased incidence of deaths from aerosol products. However, the generally low incidence of death from such products presents problems for governments' credibility in publicising the dangers of products having such widespread acceptance by youth.

TABLE 8

Deaths Due to Volatile Substances in Victoria from
1 January 1980 to 8 January 1988

YEAR	MALES	FEMALES	SUBSTANCES
1980	3	1	cresol, halocarbons, nitrous oxide, natural gas
1981	4	0	aromatic hydrocarbons, propane
1982	4	0	acetylene, aromatic hydrocarbons, acetone, halocarbons
1983	4	6	halocarbons, trichloroethane, propane, chlorobenzene, aromatic hydrocarbons
1984	1	1	aromatic hydrocarbons, propane
1985	3	2	propane, halocarbons, natural gas
1986	6	4	propane, halocarbons, ether aromatic hydrocarbon, trichloroethane
1987	3	1	propane, aliphatic and aromatic hydrocarbons, halocarbons
1988	1	-	aliphatic hydrocarbon

Source: Toxicology Branch
State Chemistry Laboratory

3.0 DRUGS AND YOUTH

In September 1985, the Health Department Victoria and Ministry of Education undertook a major survey of the drug taking habits of Victorian postprimary students. This survey involved a sample of all male and female students attending Years 7, 9 and 11 and involved almost 10,000 students.

It is intended only to refer to this survey in a superficial way and to convey some appreciation of the hierarchy and importance of individual drug groups. In Table 9, taken from the report of the school survey are shown the prevalence measures for each drug category for students aged between 12 and 17 years old. As can be seen, over 90 percent of students aged 16 to 17 years indicated that they had drunk alcohol at least once.

Tobacco was also very widely used, with 76 percent of 16 and 17 year old students having tried it at least once. Use of marihuana at 26.3 percent was more prevalent than the use of any other illicit drug. Inhalants had been used by 20 percent of Year 11 students and this was less than students from Years 7 and 9 where the prevalence was considerably higher.

In the categories of prescription and over-the-counter medications, patterns of use were similar to Victorian adults. Use of narcotics stimulants, and hallucinogens were at low levels, but warrant continued education to reinforce the dangers which were familiar to most students.

TABLE 9

Percentage of Students in Victoria who Ever Used Particular Drugs
According to Age at September, 1985

(Percent)

DRUG	AGE IN YEARS			OVERALL
	12-13	14-15	16-17	
Alcohol	56.1	80.7	90.4	76.6
Tobacco	47.8	70.0	76.3	65.8
Marihuana	3.4	16.0	26.3	15.1
Inhalants	25.8	30.2	20.7	26.8
Analgesics	95.5	97.8	98.7	97.4

Source: Victorian Schools Drug Survey, 1986.

In a subsequent study, my colleague Crundall (1987) mainly replicated the Schools Drug Survey among young people in Victorian youth training and reception centres. In relation to these students he found more extensive usage of illicit drugs. This confirms the generally held belief that illicit drugs are often associated with delinquency and are more prevalent among socially disadvantaged children.

In Table 10 the prevalence of use of certain drugs are compared between randomly selected secondary students and young people in custody or care of the Department of Community Services Victoria.

TABLE 10

Prevalence and Mean Frequency of Use Among Year Seven Students and Comparable Young People in Institutions

DRUG	PERCENTAGE OF USERS		FREQUENCY OF USE	
	Students	Young People	Students	Young People
Analgesics	95.2	70.8	20.70	17.76
Sleeping Tablets	23.4	31.2	10.81	17.43
Sedatives	10.9	39.2	7.80	21.85
Other Medicines	9.11	64.4	19.60	16.11
Alcohol	55.8	75.3	10.57	26.18
Tobacco	47.6	80.6	13.26	31.90
Marijuana	3.4	56.5	9.86	27.99
Hallucinogens	2.0	23.0	8.40	19.73
Stimulants	2.5	33.7	10.13	20.27
Narcotics	1.8	22.0	9.63	24.47
Inhalants	25.5	43.3	7.21	21.50

Source: Crundall (1987)

4.0 DRUGS AND CRIME

Over 50 percent of persons proceeded against for crime are juveniles and more than 60 percent for burglary and other property offenses (Victoria Police, 1986). Alcohol and drugs have only a small impact on juvenile crime. For example, less than 0.5 percent of young offenders were believed by arresting officers to have a narcotics problem (Victoria Police, 1986).

Evidence of the impact of alcohol and drugs on adult crime varies widely. Some studies have put the impact rate as high as 80 percent. Whilst other workers such as Hendtlass and Braybrook, 1984 put it at 10 percent for convicted burglars. My colleague Jones (1988) in Figure 2 has shown that only 15 percent of offenders on Community Based Orders had drug or alcohol conditions on the order.

Persons Commencing Community Based Orders 1987 and those with Alcohol or Drug Conditions Imposed

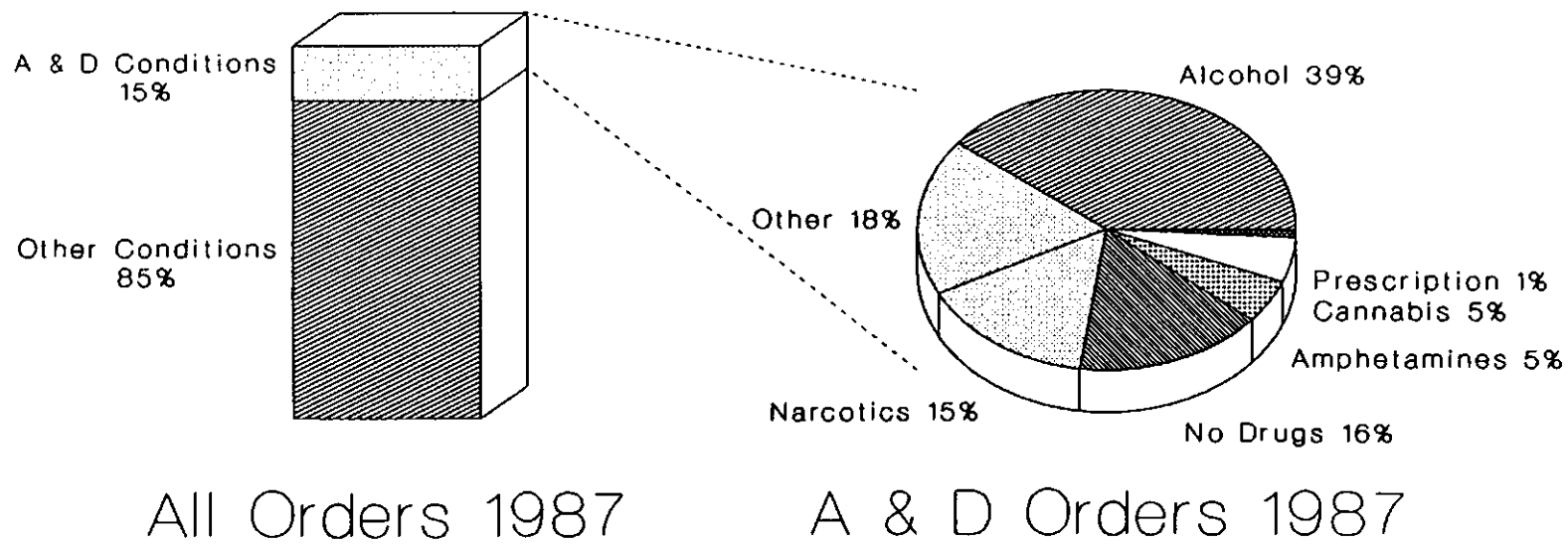


FIGURE 2

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The development of common standards and improvements in computer compatibility between agencies in the crime-related field has led to data sharing and reduced duplication. For example, Table 11 shows the age profile by type of drug abused for persons on Community Based Orders for the last calendar year.

TABLE 11
Age of Persons Commencing Community Based Orders
with Drug and Alcohol Conditions by Type of Drug for the Period
1 January - 31 December, 1987

	FIVE YEAR AGE GROUPS									
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
No Drugs Indicated	13	28	10	9	5	10	5	3	0	2
Narcotics	3	23	36	16	8	1	0	0	0	0
Amphetamine	10	8	5	2	0	0	0	0	0	0
Alcohol	29	73	47	34	17	13	9	2	2	5
Prescription	0	1	2	1	1	1	0	0	0	0
Cannabis	4	9	6	5	0	0	0	0	0	0
Poly Drug or U/K	15	28	28	11	7	2	0	0	0	0
TOTAL:	74	107	134	78	38	27	14	5	2	7

SOURCE: DAISy
 Health Department Victoria

5.0 DIRECT LINE TELEPHONE COUNSELLING

During the 1986-87 financial year DIRECT line received approximately 12,000 calls and a statistical analysis was performed in the ten-month period to the end of February 1987. As with most of the above data sources caution should be used in interpreting telephone statistics: for example bias may occur through a small number of regular callers, with a skewed distribution on the variables recorded and this causes bias in apparent patterns of drug use. Even so, telephone data has the potential to highlight the appearance of new drugs on the basis of a single confirmable case and also may contribute to the creation of complex indices to measure drug prevalence and regional distributions especially using multivariate statistical methods.

Of calls analyzed to date, the majority were received from persons using drugs (30 %) with 11% of calls from concerned parents; 8.4 % from friends; 5.4 % from partners of the person using; and 3.6 % of calls received from health and welfare professionals. Table 12 provides an example of the type of information that can be obtained from this source and shows substance /sex breakdown of drug use patterns.

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TABLE 12

Percentage Breakdown of Sex of Users by Major Drug Type Used
for DIRECT Line Telephone Service 1986/87

DRUG TYPE	SEX OF USER	
	Female	Male
Alcohol	12.9	23.8
Heroin	12.8	13.9
Cannabis	8.8	20.3
Minor Tranquillisers	18.3	5.5
Amphetamines	7.6	8.7
Polydrug	9.4	12.1
Major Tranquillisers	10.2	0.6
Other	20.0	15.1
TOTAL	100.0	100.0

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APPENDIXTABLE 14

Number of Alcohol and Drug Related Separations from Public Hospitals
in Victoria and Length of Stay for the Period 1 July, 1984 to 30 June, 1985

ICD-9 CODE	DIAGNOSIS	NUMBER OF SEPARATIONS	LENGTH OF STAY	
			Actual	Average (Days)
291	ALCOHOLIC PSYCHOSES			
291.0	Delirium tremens	59	802	13.6
291.1	Korsakov's psychosis, alcoholic	38	1218	32.1
291.2	Other alcoholic dementia	52	1008	19.4
291.3	Other alcoholic hallucinosis	6	45	7.5
291.4	Pathological drunkenness	1	3	3.0
291.5	Alcoholic jealousy	5	26	5.2
291.8	Other	128	843	6.6
291.9	Unspecified	8	68	8.5
292	DRUG PSYCHOSES			
292.0	Drug withdrawal syndrome	63	507	8.0
292.1	Paranoid and/or halluc. states induced	17	84	4.9
292.2	Pathological drug intoxication	1	4	4.0
292.8	Other	9	70	7.8
292.9	Unspecified	12	86	7.2
303	ALCOHOL DEPENDENCE SYNDROME	822	6995	8.5
304	DRUG DEPENDENCE			
304.0	Morphine type	243	2201	9.1
304.1	Barbiturate type	27	200	7.4
304.3	Cannabis	2	3	1.5
304.4	Amphetamine type & other psychostimulant	4	46	11.5
304.5	Hallucinogens	1	1	1.0
304.6	Other	8	88	11.0
304.7	Combinations of morphine type with other	2	3	1.5
304.8	Combinations excluding morphine type	3	23	7.7
304.9	Unspecified	36	328	9.1
305	NONDEPENDENT ABUSE OF DRUGS			
305.0	Alcohol	222	477	2.1
305.1	Tobacco	4	8	2.0
305.2	Cannabis	1	6	6.0
305.4	Barbiturates and Tranquillisers	4	28	7.0
305.5	Morphine type	3	4	1.3
305.7	Amphetamine type	5	9	1.8
305.9	Other, mixed or unspecified	22	139	6.3

357.5	Alcoholic polyneuropathy	12	182	15.2
425.5	Alcoholic cardiomyopathy	71	908	12.8
571	CHRONIC LIVER DISEASE AND CIRRHOSIS			
571.0	Alcoholic fatty liver	5	13	2.6
571.1	Acute alcoholic hepatitis	122	1499	12.3
571.2	Alcoholic cirrhosis of liver (Laennec's)	169	2352	13.9
571.3	Alcoholic liver damage, unspecified	232	2975	12.8
648	OTHER CURRENT CONDITIONS IN THE MOTHER CLASSIFIABLE ELSEWHERE BUT COMPLICATING PREGNANCY, CHILDBIRTH AND PUERPERIUM -			
648.3	Drug dependence	10	92	9.2
648.5	Congenital cardiovascular disorders	14	101	7.2
692	CONTACT DERMATITIS AND OTHER ECZEMA			
692.3	Due to drugs and med. contact with skin	4	15	3.8
693	DERMATITIS DUE SUBST. TAKEN INTERNALLY			
693.0	Due to drugs and medicaments	29	232	8.0
760	FETUS OR NEWBORN AFFECTED BY MATERNAL CONDITIONS WHICH MAY BE UNRELATED TO PRESENT PREGNANCY			
760.7	Noxious influences transmitted via placenta or breast milk	4	8	2.0
763	FETUS OR NEWBORN AFFECTED BY COMPLICATIONS OF LABOUR AND DELIVERY			
763.5	Maternal anaesthesia and analgesia	10	20	2.0
779	OTHER AND ILL-DEFINED CONDITIONS ORIGINATING IN THE PERINATAL PERIOD			
779.4	Drug reactions and intoxications specific to newborn	2	11	5.5
779.5	Drug withdrawal syndrome in newborn	18	177	9.8
790	NONSPECIFIC FINDINGS ON EXAMINATION OF BLOOD			
790.3	Excessive blood level of alcohol	2	8	4.0
960	POISONING BY ANTIBIOTICS	75	248	3.3
961	POISONING BY OTHER ANTI-INFECTIVES	48	140	2.9
962	POISONING BY HORMONES AND SYNTHETIC SUBSTITUTES	59	371	6.3
963	POISONING BY PRIMARILY SYSTEMIC AGENTS	94	274	2.9

964	POISONING BY AGENTS PRIMARILY AFFECTING BLOOD CONSTITUENTS	52	320	6.2
965	POISONING BY ANALGESICS, ANTIPYRETICS AND ANTIRHEUMATICS			
965.0	Opiates and related narcotics	103	275	2.7
965.1	Salicylates (including aspirin)	48	130	2.7
965.4	Aromatic analgesics, note elsewhere classified (including paracetamol and phenacetin)	328	1286	3.9
965.5	Pyrazole derivatives	3	6	2.0
965.6	Antirheumatics (antiphlogistics)	41	89	2.2
965.7	Other non-narcotic analgesics	13	85	6.5
965.8	Other	13	34	2.6
965.9	Unspecified	4	15	3.8
966	POISONING BY ANTICONVULSANTS AND ANTI-PARKINSONISM DRUGS	187	893	4.8
967	POISONING BY SEDATIVES AND HYPNOTICS	255	923	3.6
968	POISONING BY OTHER CENTRAL NERVOUS SYSTEM DEPRESSANTS	10	31	3.1
969	POISONING BY PSYCHOTROPIC AGENTS	1085	5768	5.3
970	POISONING BY CENTRAL NERVOUS SYSTEM STIMULANTS			
970.0	Analeptics	1	8	8.0
970.1	Opiate antagonists	0	0	0.0
970.8	Other	0	0	0.0
970.9	Unspecified	0	0	0.0
971	POISONING BY DRUGS PRIMARILY AFFECTING THE AUTONOMIC NERVOUS SYSTEM	51	135	2.6
972	POISONING BY AGENTS PRIMARILY AFFECTING THE CARDIOVASCULAR SYSTEM	262	1603	6.1
973	POISONING BY AGENTS PRIMARILY AFFECTING THE GASTROINTESTINAL SYSTEM	18	60	3.3
974	POISONING BY WATER, MINERAL AND URIC ACID METABOLISM DRUGS	112	400	3.6
975	POISONING BY AGENTS PRIMARILY ACTING ON THE SMOOTH & SKEL. MUSCLES & RESP. SYS.	70	142	2.0
976	POISONING BY AGENTS PRIMARILY AFFECTING SKIN AND MUCOUS MEMBRANE, OPHTHALMOLOGICAL, OTORHINOLARYNGOLOGICAL AND DENTAL DRUGS	53	136	2.6
977	POISONING BY OTHER AND UNSPECIFIED DRUGS AND MEDICAMENTS	164	567	3.5

19

978	POISONING BY BACTERIAL VACCINES	11	16	1.5
979	POISONING BY OTHER VACCINES AND BIOLOGICAL SUBSTANCES	2	4	2.0
980	TOXIC EFFECT OF ALCOHOL			
980.0	Ethyl alcohol	63	104	1.7
980.1	Methyl alcohol	5	11	2.2
980.2	Isopropyl alcohol	1	1	1.0
980.3-.9	Fusel oil, other & unspecified	18	27	1.5
995	CERTAIN ADVERSE EFFECTS NOT ELSEWHERE CLASSIFIED			
995.0	Anaphylactic shock	62	126	2.0
995.2	Unspecified adverse effect of drug	81	392	4.8
995.4	Shock due to anaesthesia	1	1	1.0

APPENDIXTABLE 15Extent of Contribution of Alcohol Misuse to Diseases According to the Ninth Revision of the International Classification of Diseases

ICD-9 DIAGNOSIS ASSOCIATED CODE WITH ALCOHOL MISUSE	PERCENT
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Alcohol Abuse-Specific Illnesses

291	Alcohol psychosis	100
303	Alcohol dependence syndrome	100
305.0	Alcohol abuse	100
571.0	Alcoholic fatty liver	100
571.1	Acute alcoholic hepatitis	100
571.2	Alcoholic cirrhosis of liver	100
571.3	Alcoholic liver damage, unspecified	100
980.0	Toxic effects of ethyl alcohol	
425.5	Alcoholic cardiomyopathy	100

Cancer

140-149	Malignant neoplasm of lip, oral and pharynx	2 to 43
150	Malignant neoplasm of esophagus	28.8 to 80
151	Malignant neoplasm of stomach	3 to 20
153	Malignant neoplasm of colon	3
154	Malignant neoplasm of rectum, rectosigmoid junction, and anus	3
155.0	Liver, primary	12.6
157	Malignant neoplasm of pancreas	1.2 to 75

Mental Disorders

296	Affective psychoses	2.8 to 42
300	Neurotic disorders	5.6

Infectious Diseases

011	Pulmonary tuberculosis	10.2 to 70
012	Other respiratory tuberculosis	10.2 to 70

480-486	Pneumonia	1.1 to 4
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Gastrointestinal Tract

456	Varicose veins of other sites	26.7
531	Gastric ulcers	1.2
536	Disorders of function of stomach	0.8
532	Duodenal ulcer	0.8 to 6.7
533	Peptic ulcer, site unspecified	0.6 to 24.4
534	Gastrojejunal ulcer	1.8
5.35	Gastritis and duodenitis	2.9
577	Diseases of pancreas	11.6 to 68

Liver Disease

571	Chronic liver disease and cirrhosis	64.75
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Nervous Disease

345	Epilepsy	3.3
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Heart

427.3	Cardiac arrhythmias	1.3 to 3.7
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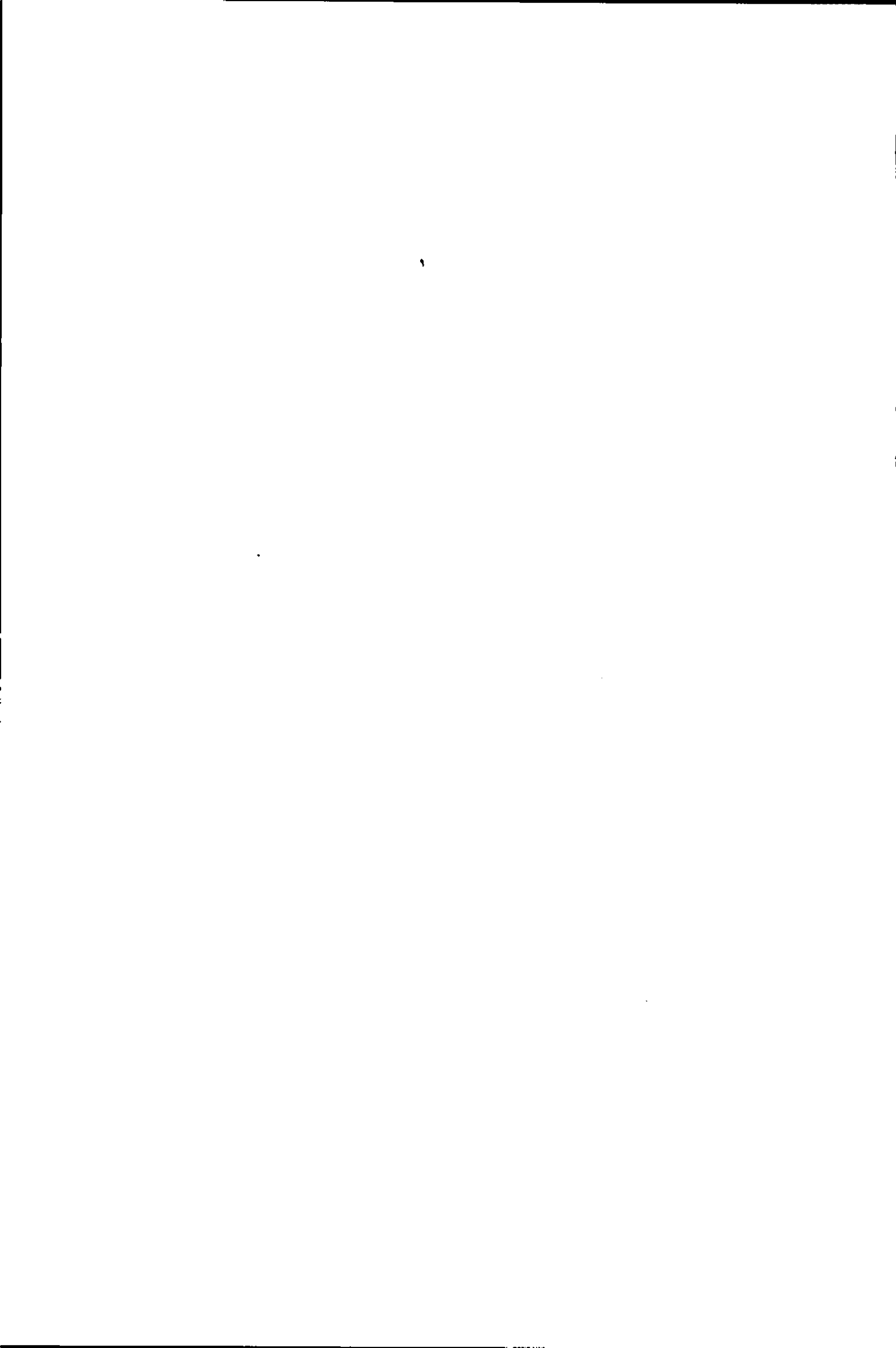
Endocrine System

240-246	Disease of thyroid gland	0.8 to 34.8
250-259	Diseases of other endocrine glands	0.8 to 34.8

Nutritional Deficiency

260-269	Nutritional deficiencies	4.3 to 60
274	Gout	1.7 to 25.3
273	Other and unspecified metabolic diseases	1.4

Source: Research Triangle Institute
Economic Costs to Society of Alcohol and Drug Abuse
 and Mental Illness : 1980.
 PO Box 12194 Research
 Triangle Park, North Carolina 27709



**An overview of indicators of illicit drug use
in Queensland**

**1st National Drug Indicators Conference
Canberra, 10-12 May, 1988**

**Mel Steur
John McMillan
Alcohol and Drug Dependence Services
Department of Health, Queensland**

1. INTRODUCTION

This paper presents an overview of the illicit drug use situation in Queensland. The picture is composed from data from a variety of sources which may be interpreted, with caution, as proxy indicators of illicit drug use. The purposes of the paper is:

- (i) to present and describe the trends in indicators of illicit drug use, and
- (ii) to discuss some of the idiosyncrasies and limitations of the data from different sources.

The specific indicators discussed are:

- (i) Drug-related Mortality - No. of deaths per annum where the cause of death is associated with primary diagnosis of drug dependence or drug use or with an external cause identified as a drug (Source: Australian Bureau of Statistics - Cause of Death).
- (ii) Drug-related Hospital Morbidity - No. of separations per annum from Queensland Hospitals with the primary diagnosis of drug dependence or drug use or with an external cause identified as a drug (Source: Queensland Department of Health - Hospital Morbidity).
- (iii) Admissions to Drug Treatment Facilities - No. of admissions per 6 months to Queensland drug treatment facilities with a primary diagnosis of drug dependence or drug use or with an external cause identified as a drug (Source: Queensland Department of Health - Mental Health Statistics).
- (iv) Drug Offences - No. of offences per annum reported by Queensland Police where the offence is related to illicit use of drugs. (Source: Queensland Police Department).
- (v) Addicts Receiving Methadone - No. of drug addicted persons per quarter who received treatment on the Methadone Maintenance Program. (Source: Alcohol and Drug Dependence Services - Monitoring of Dangerous Drugs).
- (vi) Telephone Calls to Drug Information Service - No. of Telephone calls per quarter received by Queensland Alcohol and Drug Information Service which were related to drug use. (Source: Alcohol and Drug Dependence Services - Alcohol and Drug Information Service)

2. DRUG RELATED MORTALITY

Over an eight year period from 1979 - 1986 the number of drug related deaths in Queensland has been relatively constant at about 80 deaths per annum (with exception 1980 - 1981). When these data are adjusted for estimated population figures, the overall death rate associated with illicit drug use, in fact, has declined marginally (from 3.4 per 100,000 to 3.0 per 100,000). However, the picture is highly drug-specific. Deaths associated with opiates and related narcotics more than quadrupled during this period to reach a peak in 1984 of 23 deaths (or 0.9 per 100,000), but over the next two years declined to approximately half of the peak figure. The vast majority of these deaths have been consistently in the 15-34 age group. Mortality from barbiturates/sedatives/tranquillizers has tended to decline consistently and gradually over the same period; however the most recent figure still stands at more than three times the number of deaths from opiates/narcotics. The age at death is spread across a wide age group from 15 to 84 years with modal number of deaths being in the 35 - 54 age group. Drug deaths from both solvents and from both amphetamines and antidepressants were very low and very erratic (numbering about 0 - 3 per annum). Mortality from other/mixed/unspecified drug types was erratic also, ranging from 5 - 23 per annum, spread evenly across most age groups.

3. DRUG RELATED HOSPITAL MORBIDITY

Hospital Morbidity data for the period 1980-1985 indicate a general decrease in the total number of cases treated for drug-related conditions possibly associated with illicit drug use. When adjusted for population growth, the decrease is more pronounced going from 114 separations per 100,000 to 96 separations per 100,000. The number of cases associated with opiates and related narcotics remained fairly constant over this period averaging 140 per annum. Cases associated with anti-depressant use increased by 770% from 26 cases in 1980 to 226 in 1985. On the other hand, cases associated with solvents decreased by 33% over this period. The age distribution for cases involving solvents is highly positively skewed with about 77% of cases in the 0-4 age group, and deliberate misuse must be must be discounted for this age group. However, cases involving solvents outside this age group also decreased by 22% over this period. While the number of cases involving barbiturates/tranquillizers increased during 1985, the rate per 100,000 of population was approximately the same as in 1980, and in the intervening period rates were at significantly lower levels. Cases associated with other/mixed/unspecified drug use also decreased throughout this period. However cases associated with amphetamines and other psychostimulants were too few and erratic to allow any statements regarding trends.

Two important omissions from the hospital morbidity data should be noted. Firstly, the data do not include outpatient cases and secondly, there are no data for 1982. The two year delay in processing hospital morbidity data further limits the usefulness of these data to monitoring current trends.

4. ADMISSIONS TO DRUG TREATMENT FACILITIES

Data reporting admissions to drug treatment facilities operated by Alcohol and Drug Dependence Services in Queensland from 1980 to June 1987 indicate that there was a 470% increase in the number of persons receiving treatment for opiate and related narcotic drug use. The figure escalated rapidly from early 1984, far exceeding the growth rate in the population and not associated with any changes in admissions policy. The other major category in the data was persons treated for other/mixed/unspecified drug use which peaked at 557 persons in the first six months of 1983 and decreased to about 300 persons by four years later. However this most recent figure was still about 50% higher than in 1980. For all categories of drug use, the modal number of admissions was in the 20 - 29 age group. As the Category of other/mixed/unspecified drug use represents about 40% of current admission, the sensitivity of these data to trends in non-narcotic drug use is severely restricted.

5. DRUG OFFENCES.

Over 12 years the number of incidents of illicit drug use dealt with by Police increased from 1681 (82 per 100,00) in 1975 - 76 to a peak of 8095 (320.7 per 100,000) in 1984 - 85 with a subsequent decrease of 6392 offences (243.5 per 100,000) in 1986 - 87. (The relationship between these data and number of persons arrested for drug offences is not clear; however, for the years in which relevant data were published (1982 - 1987) the total number of persons arrested was a constant proportion of the total number of offences). Drug offences involving Heroin have shown a linear upward trend increasing by about 20 incidents per annum to current levels of 279 incidents in 1986 - 87. Drug offences involving Morphine also showed a linear increase until 1983 - 84, peaking at 21 incidents, but have been at much lower levels for the last 3 years. Similarly, Cocaine offences have remained relatively minor in absolute numbers, but have shown a clear annual increase throughout most of the 1980's.

Offences involving drugs classified by police as other hard drugs (which refers to various synthetic narcotics, stimulants and depressants increased dramatically during the early 1980's to a peak of 235 incidents in 1983 - 84 and since then have been reported at about half that level. Offences involving cannabis (in leaf form) increased 400% over a 10 year period to peak at 7423 incidents in 1984 - 85 and have decreased by 22% since then. Offences involving hashish followed a similar pattern, however the rate of increase was about 200% over the same 10 year period. Offences involving mushrooms have been much more erratic over 12 years (perhaps reflecting weather patterns). It seems that across all drug types with the exception of Heroin, there has been a noticeable decrease in the number of offences in the last 1 - 2 years. Whether this represents a change in Police practices or in actual use of illicit drugs is not known. (New legislation regarding the use of illicit drugs was introduced in Queensland in 1986). It is also noteworthy that while cannabis and hashish offences together constituted about 90% of drug offences last year, and while offences involving these drugs have increased markedly since 1975 - 1976, both Heroin and Cocaine offences have had a relative rate of increase of about twice that of cannabis/hashish over the same period.

6. ADDICTS RECEIVING METHADONE

The number of persons receiving treatment on the Methadone Maintenance Program in Queensland from 1984 - 88 showed a period of growth and decline during 1985 - 86, followed again by steady increases for the last eighteen months. Numbers in the March quarter this

year were 949 persons. It is not clear what factors may have been responsible for these data. The period of growth and decline in 1985 - 86 corresponded to a period of restrictions in the NSW Methadone Program. At the same time there was no change in treatment policy for the Queensland Program. Hence the 1985 - 86 peak may be attributed to temporary interstate movement superimposed on what would otherwise have been a simple linear trend. On the other hand, the peaks and troughs on the graph of the Methadone Program are the inverse of the peaks and troughs on the graph of Heroin offences from Police Department data. Consequently, an alternative explanation may be that numbers on the Methadone Program, in part, are inversely related to the street availability of Heroin.

7. TELEPHONE CALLS TO DRUG INFORMATION SERVICE.

The number of telephone calls to the Drug Information Service operated by Alcohol and Drug Dependence Services in Queensland since April 1986 indicates that enquiries related to amphetamines, opioids and tranquillizers have remained constant over a two year period. Calls related both to opioids and to tranquillizers have averaged about 200 per quarter, while calls related to amphetamines have averaged about 35 per quarter. In contrast, the numbers of calls related to cannabis has varied considerably over the same period, although the highest levels were recorded in the first month of operation, with the average being about 250 per quarter. Data regarding calls about Cocaine are not reported, as these could not be disaggregated until recently.

8. COMMENTS

There are a number of problems with data of this type which limits the interpretations that one may deduce reasonably from these data.

First, the data suffer from the usual problems of data collected by other agents for a purpose other than the subsequent use to which they are put. The major problem of this type is that the categories used in defining values for variables may not be appropriate or sensitive to current needs. In this instance, when the purpose is to monitor illicit drug use, there must be some question mark over the validity of data from all sources, with the possible exception of the Police Department. Where the drug type is one where its use is always defined as illicit, there would be no problem. However, for most drug types identified in these data, there will be some uncertainty regarding whether or not the use of the drug, in fact, was illicit; a greater problem with some drug types (e.g.; tranquillizers, solvents) than with others.

Secondly, data from within any one source are differentially sensitive to different drug types. Morbidity and Mortality data tend to be very insensitive to use of drugs such as hallucinogens. The problem is compounded when comparing data across several sources, as sensitivity also varies between different sources.

As mentioned previously, some data sources are of limited use due to the large proportion of the cases for which the type of drug use is not specifically identified. Hospital morbidity data are limited by not including out-patients.

It should be clear that no significance can be attached to the absolute values of the various indicators of illicit drug use. As the figures for any indicator represent an unknown proportion of the actual number of persons using any drug, the figures for any one point in time are virtually meaningless. For the same reason, comparisons across drug types even on the same indicator also are meaningless - i.e. one cannot make estimates about the relative numbers of users of different types of drugs at any one point in time. The various indicators become potentially useful only in the context of a time-series where trends may be interpreted. However, conclusions even about trends must be made with caution, as interpretation rests heavily upon the assumption that the uncontrolled factors which determine the sample represented by the time-series data remain constant over time. In addition to drug use, these factors include drug awareness, publicity, availability of treatment facilities, admissions policies, diagnostic reliability, policing practices, drug purity and availability and so on. As these factors are known to be variable, the interpretability of drug indicators time-series data is highly questionable. Further more, as these problems are compounded across jurisdictions, it should be clear that no interstate comparisons of these data are possible.

In short, the drug indicators reported in this paper are biased, unreliable, confounded with other variables and based upon indeterminate samples of the target population. Consequently, it seems that the only conclusions about the target population reasonably can be drawn from the data reported in this paper are ordinal statements regarding the amount of use of a particular drug type as compared to its amount of use at some other point in time, provided the evidence across a number of different indicators is logically consistent.

9. CONCLUSION

In the light of the preceding comments, and by way of attempting to draw together the implications of the various indicators of illicit drug use in Queensland, the following trends seem evident.

(1) OPIATES

There has been a probable increase in the use of opiates and related narcotics over the last 8 - 10 years. The modal age group is 15 - 24 years.

(11) BARBITURATES/TRANQUILLIZERS

There has been a probable decrease in the use of barbiturates/tranquillizers over the last 8 - 10 years. The modal age group is 15 - 34 years.

(iii) ANTI-DEPRESSANTS

There has been a probable increase in the use of anti-depressants over the last 8 - 10 years. The modal age group is 15 - 34 years.

(iv) SOLVENTS

There has been a probable decrease in the use of solvents over the last 8 - 10 years. The modal age group is 0 - 4 years.

(v) HALLUCINOGENS

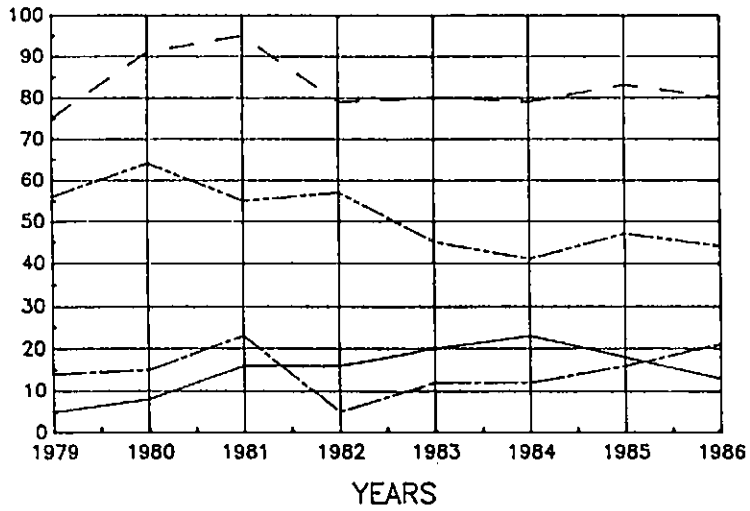
The evidence related to the use of hallucinogens is insufficient to draw any reasonable conclusions.

(vi) AMPHETAMINES AND OTHER PSYCHOSTIMULANTS

The evidence related to the use of amphetamines and other psychostimulants is insufficient to draw any reasonable conclusions.

MORTALITY BY DRUG TYPES

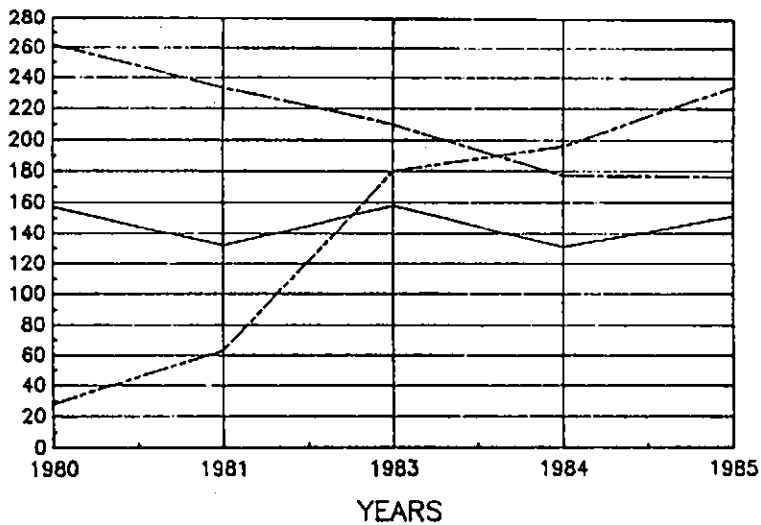
OPIATES BARB&TRANQ UNSPECIFIED TOTAL



HOSPITAL MORBIDITY

SEPARATIONS X DRUG TYPES

OPIATES ANTI-DEPRESSANTS SOLVENTS



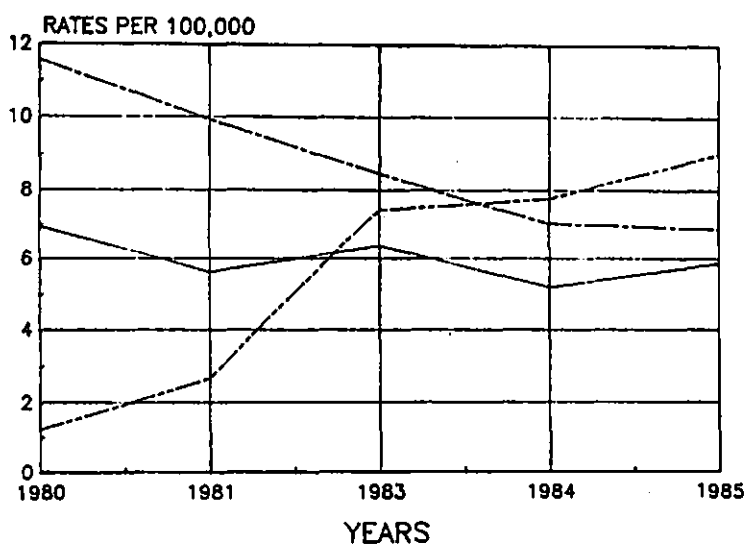
HOSPITAL MORBIDITY

RATES X DRUG TYPE

OPIATES

ANTI-DEPRESSANTS

SOLVENTS



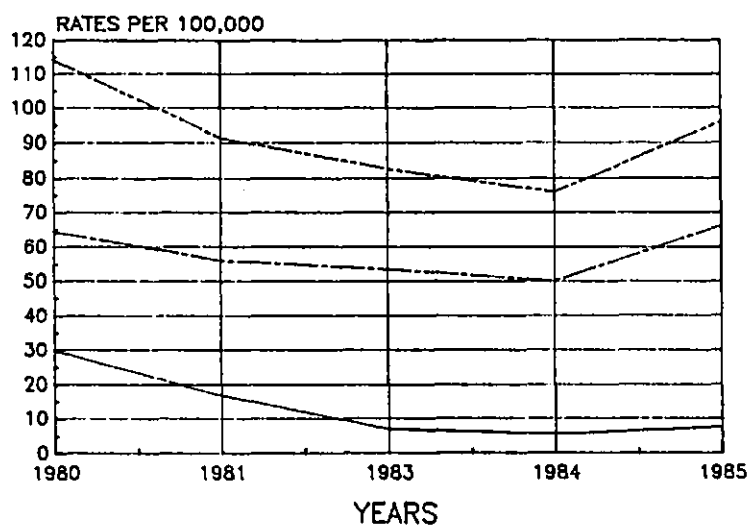
HOSPITAL MORBIDITY

RATES X DRUG TYPE

UNSPECIFIED

TOTAL

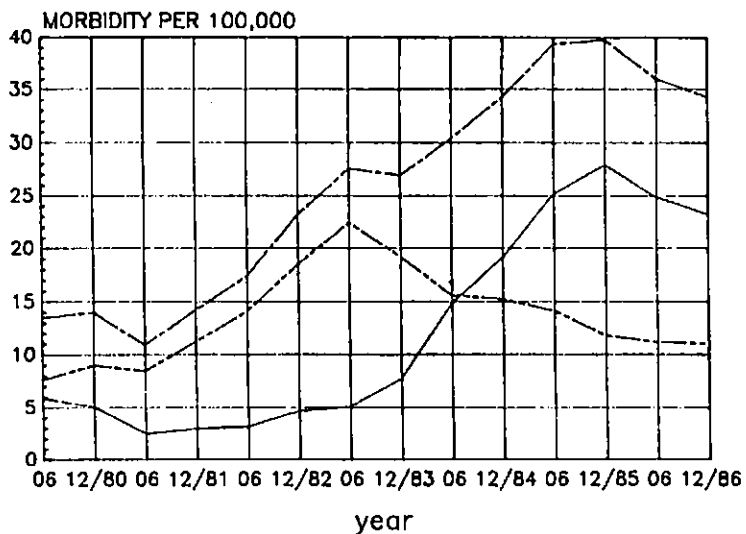
BARB. & TRANQ



DRUG TREATMENT FACILITIES

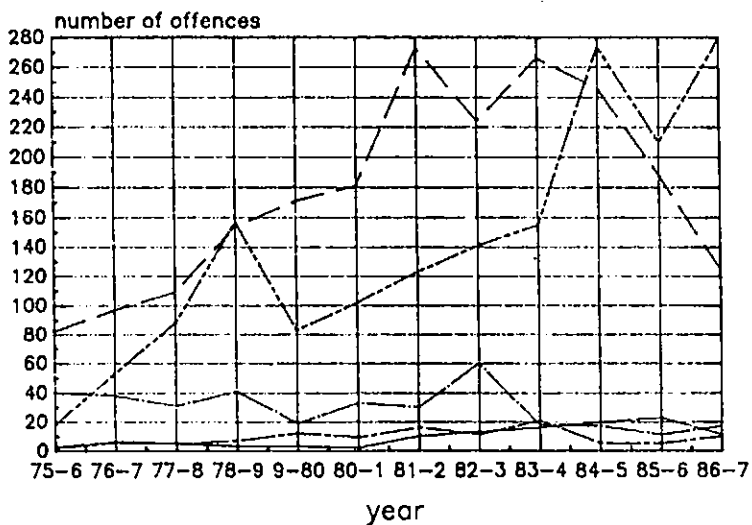
RATES BY DRUG TYPES

OPIATES UNSPECIFIED TOT PER 100,000



Drug Offences

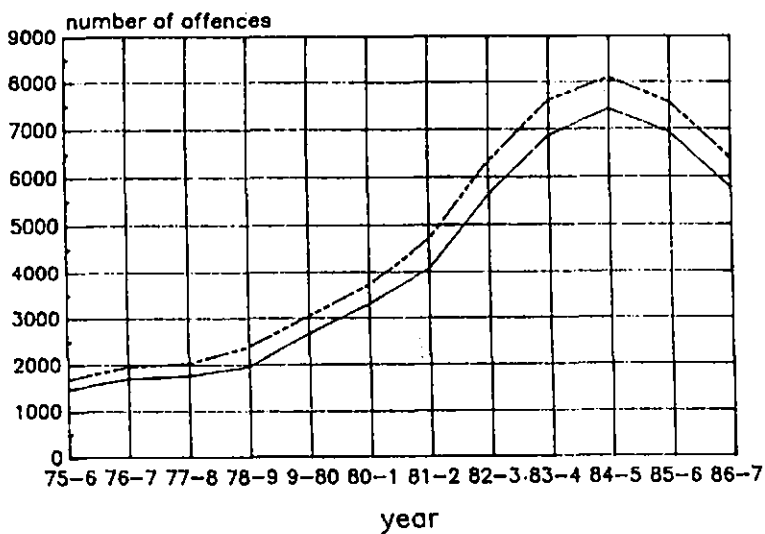
cocaine heroin morphine mushroom hashish



Drug Offences

cannabis

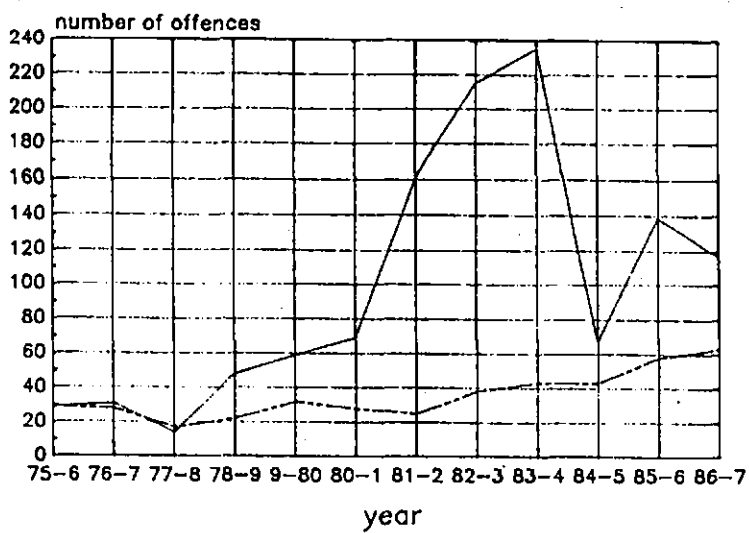
total



Drug Offences

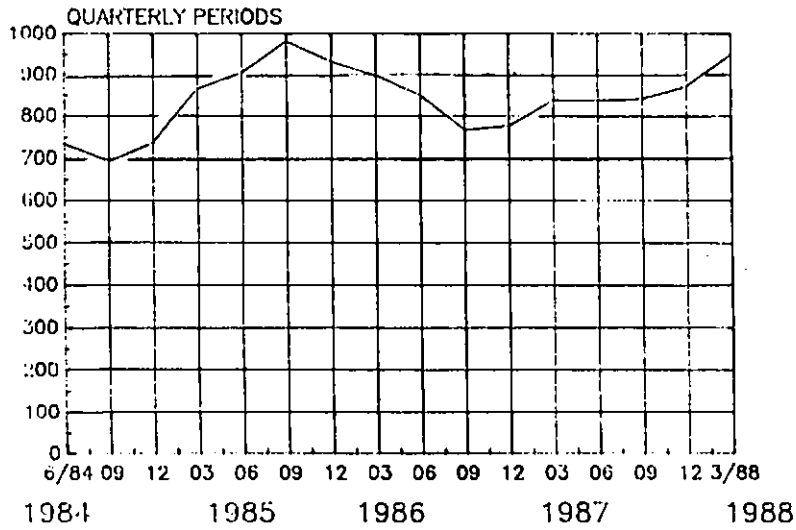
other hard drugs

other soft drugs



PERSONS TREATED ON METHADONE PROGRAM

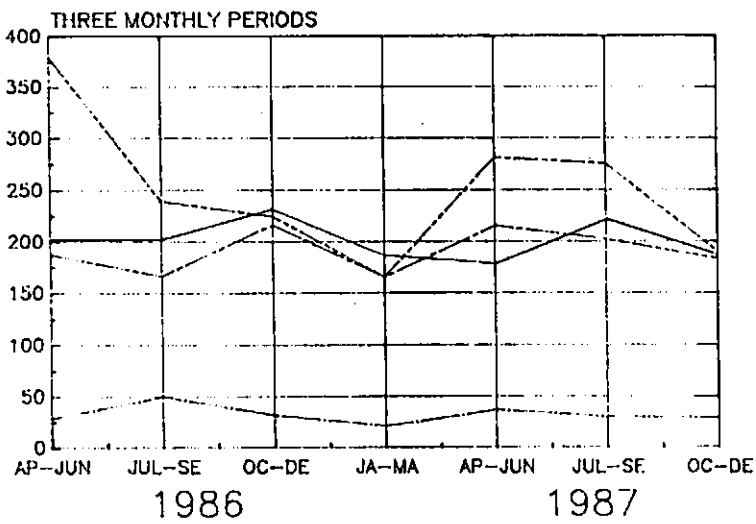
total pers



ALCOHOL AND DRUG INFORMATION SERVICE

NUMBER OF PHONE CALLS X TYPE

TRANQUILLIZER CANNABIS OPIOIDS AMPHETAMINES



ILLEGAL DRUG ABUSE INDICATORS REPORT

WESTERN AUSTRALIA

1988

L Hayward PhD
Coordinator
Western Australian Drug Data Collection Unit
Epidemiology Branch
Health Department of Western Australia

This report presents data from a number of sources which can be used as indicators of illegal drug abuse trends in this State.

Government departments in this State are in various stages of computerisation, and there are several potentially useful sources of information that cannot be tapped at present, although many of these will have data available in the next financial year.

There are however a number of already established sources of data, and that information will be presented here today. These include:

1. Alcohol and Drug Information Service

This is a 24 hour telephone service providing information, confidential counselling and referral on alcohol and other drug problems for users, relatives, friends, health and welfare professionals and the general public. Data is routinely collected on each call and includes information such as type of drug mentioned, the status of the call (user, friend etc.) age, sex, and the outcome of the call i.e., counselling, referral to agency etc.

2. Drug-Related Overdose Deaths

This data comes from the Registrar General's Office, and is supplied on computer tapes which include demographic details and a single ICD-9 code for cause of death. This source of information underestimates drug related deaths because of the use of a single cause coding system, for example, accidents occurring whilst under the influence of a drug would not be picked up using this system. In future, however, almost all drug-related deaths will be traced in this State because of the development of a data base at the Coroner's Office. Coronial files include details of forensic findings, interviews with witness etc. Since the coronial data base will have a multiple cause coding for death, future drug-related deaths will be traced. Data on drug-related deaths are thought to be indicators of changes in the number of intravenous drug users and changes in availability, purity, and price of drug.

3. Drug-Related General Hospital Discharges

The Hospital Morbidity Data System (HMDS) in Western Australia covers all short-stay hospitals in the State. Discharges from these hospitals are identified as having a principal condition and contributing conditions, and this data along with demographic data are entered into the HMDS. It is possible for double counting to occur, that is, the data refer to the number of people discharged each year, not to individuals. The number of discharges related to illegal drug use are likely to increase as the number of users increase.

4. Infectious Disease Notification System

A number of diseases in this State are notifiable by law. Hepatitis and AIDS can both be used as indicators of intravenous drug use. Unfortunately, for Hepatitis notifications, only data on Hepatitis A and B are entered in the data base, Hepatitis nonA-nonB notifications are kept but not recorded.

5. State Drug Arrests, Charges and Seizures

This information is available from the Police Department but is not computerised, all data supplied is compiled manually. It would be expected that the numbers of drug seizures and charges would grow as the availability and use of a particular drug increases.

6. State Treatment Agencies for Opiate Abuse

(a) METHADONE ADMISSIONS

Until this year all data on Methadone treatment was kept manually. Beginning 1988 this information is placed on computer. Included in the data base are demographic details, urinalysis results, AIDS testing results, length of treatment information etc.

(b) CENTRAL DRUG UNIT

This is a detoxification service for opiate dependents. A computerised data base has been used since the beginning of 1987.

R E S U L T S

1. Alcohol and Drug Information Service (ADIS)

There has been a steady growth in the total number of calls received, from 269 in April 1986 to 647 in February 1988. This increase probably reflects the fact that the service only started in 1986 and has become more widely known in the last 2 years. Nevertheless it is interesting to look at the percentage of total calls made relating to particular drug types in each 6 month period since the inception of ADIS.

In the three six months periods calls relating to most drug categories have remained stable (see Table 1). There has been a small drop in the percentage of heroin-related calls and calls regarding polydrug use, along with the emergence of calls in the last 6 month period regarding the drug Ecstasy (MDMA), the enquiry rate, however, is still very low.

2. Drug-Related Overdose Deaths

These figures exclude suicides, and includes all cases of accidental or undetermined death (see Table 2 for ICD-9 codes and drug categories).

Total drug-related deaths increased from 13 to 32 between 1981 and 1985 and fell slightly to 21 in 1986 (see Table 3). The fall in deaths between 1986 and 1985 was accounted for almost entirely by a fall in opiate deaths (see Table 4). Deaths related to opiates are more likely to be male and in the 20-40 age group. Deaths related to barbiturates show a more even sex distribution with the majority of deaths in the 30 years and older age groups.

3. Drug-Related General Hospital Discharges

Total discharges where illegal drug use was indicated as the main condition for hospitalisation have fluctuated from 1981 to 1987.

Hospital stays related to barbiturate use are the most common, followed by opiate and cannabis use (see Table 5). The 40+ age group account for one third to one half of illegal drug discharges, (see Table 6) and this age group is also the most likely to use barbiturates (see Table 7). Overall, females are more likely to be discharged following illegal drug use than males (see Table 8), with the exception of opiate and cannabis discharges where males are more likely to be discharged than females (see Table 9).

4. Infectious Disease Notification System

(a) AIDS

The AIDS notification system started operation in 1983, and has been fully implemented since 1984. The number of cases reported have been fairly steady since 1985, 98 new cases were reported in 1987. Table 10 shows a breakdown of AIDS cases by risk factors for the years 1984 to 1987. The percentage of cases where IV drug use is reported to be the likely mode of transmission have gone from zero in 1984 to 10% of cases in 1987. To date, no IV drug user under the age of 20 years has been notified as an AIDS case. The majority of IV drug users fall in the 20-34 year age bracket (see Table 11).

(b) HEPATITIS

Only cases of hepatitis A and B are entered into the data base, unfortunate since hepatitis nonA - nonB is associated with intravenous drug abuse. There have been fluctuations in hepatitis A from year to year, hepatitis B, however, has steadily increased from 155 cases in 1984 to 408 cases in 1987 (see Table 12).

Hepatitis B affects a variety of age groups, however a majority of the notifications occur in the 15 to 34 year group (see Table 13).

5. State Drug Arrests, Charges and Seizures

In the period 1984-1985 to 1986-87 drug arrests rose significantly from 3,600 to 5,499. These increases were most noticeable in the under 18 years and over 21 year age groups, with the 18-21 year old arrests staying stable (see Table 14). It is difficult to know whether this growth in arrests is related to changes in police practices or increases in drug offences, if the latter, the growth of drug arrests in the under 18 year age group is cause for concern.

The majority of charges are for cannabis-related offences, followed by heroin, with a slowly growing charge rate for amphetamine use. Charges in the other areas remain quite low (see Table 15).

The quantities of drug seized by the police have also increased in the period. Especially noticeable are increases in the amounts of heroin, cannabis and amphetamines seized (see Table 16).

6. State Treatment Agencies for Opiate Abuse

(a) METHADONE

In the 4 quarters of 1987 an increase in new admissions to the methadone programme is evidence (see Table 17).

(b) CENTRAL DRUG UNIT

The increase in first admissions to the methadone programme was paralleled by an increase in first admissions to the Central Drug Unit Detoxification Service. In the first half of 1987 there were 69 first admissions and 175 first admissions in the second half (see Table 18).

S U M M A R Y

Indicators of drug abuse in this State show that the drugs that appear to be most used are opiates, barbiturate and cannabis. Between 1980 and 1987 there seems to have been a growth in opiate use (indicated by mortality, AIDS and Hepatitis B notifications, new admissions to opiate treatment programmes and drug seizures), a small growth in the use of psychostimulants (indicated by changes in seizures, ADIS telephone calls) and no real change in indices of other drug use. Whilst the number of cannabis arrests and seizures have gone up, they are almost entirely accounted for by increased seizures and arrests for cannabis plants, and probably reflects the State governments "dob in a neighbour" style campaign.

It is important to note that the data in this report is likely to reflect changes in social attitudes and government policies regarding drug misuse. The apparent increase in some indices may be accounted for by changes in availability of facilities, priorities of police, public education, all of which have been affected by the NCADA campaign in the last few years. Changes in the indices may not necessarily represent an actual growth in the use of illegal drugs, but improvements in methods used to document drug related problems and increases in funding to areas related to drug abuse.

T A B L E 1

ALCOHOL AND DRUG INFORMATION SERVICE

	July - Dec 1986 # Calls	% Total	Jan - June 1987 # Calls	% Total	July - Dec 1987 # Calls	% Total
Alcohol	845	36	965	36.3	1323	35
Heroin	335	13.5	329	12.8	343	9
Cannabis	345	14.7	436	15.8	469	12
Psychostimulants	68	2.5	77	2.8	117	3.5
- cocaine	-	-	22	<1	36	1
- crack	-	-	10	<1	10	<1
- other	-	-	45	1.6	71	2
Hallucinogens	22	<1	12	<1	28	<1
Polydrugs	192	14.6	241	9	132	4
Ecstasy (MDMA)	-	-	-	-	18	<1

T A B L E 2

ICD-9 CODES AND DRUG CATEGORIES

CATEGORY OF DRUG	ICD-9 CODES
Opiates, related narcotics, morphine type	304.0, 304.7, 305.5, 965.0, E850.0
Barbiturates, sedatives and hypnotics, tranquilizers	967, 969.1-969.5, 304.1 305.4, E851, E852, E853
Hallucinogens (LSD, cannabis derivatives, mescaline etc.) marijuana	969.6, 304.5, 305.3, E854.1
Psychostimulants - amphetamines	969.7, 304.4, 305.7, E854.2
Cocaine	304.2, 305.6
Cannabis	304.3, 305.2

TABLE 3

YEAR BY DRUG BY SEX (MORTALITY)

DRUG BY SEX		1981	1982	1983	1984	1985	1986
Opiates	M	3	3	8	4	18	11
	F	1	0	1	5	8	4
Barbiturates	M	4	2	2	4	3	3
	F	4	3	3	8	3	3
Cocaine	M	1	0	0	0	0	0
	F	0	0	0	0	0	0
TOTAL DEATHS		13	8	14	25	32	21

TABLE 4

YEAR BY DRUG BY AGE (MORTALITY)

DRUG TYPE	AGE GROUP	1981	1982	1983	1984	1985	1986
Opiates	15-19	0	0	0	1	0	0
	20-29	2	3	8	8	17	7
	30-39	1	0	1	0	8	6
	40+	1	0	0	0	1	0
Total Opiates		4	3	9	9	26	15
Barbiturates	15-19	0	0	0	1	2	0
	20-29	3	2	0	3	0	1
	30-39	5	0	1	1	1	4
	40+	0	3	4	7	3	1
Total Barbiturates		8	5	5	12	6	6
Cocaine	20-29	1	0	0	0	0	0
Total Cocaine		1	0	0	0	0	0

T A B L E 5

ILLEGAL DRUGS BY YEAR (MORBIDITY)

	1981	1982	1983	1984	1985	1986	1987	TOTALS
Opiates	2	6	1	4	4	4	1	22
Barbiturates	20	12	8	9	15	10	8	82
Hallucinogens	2	1	0	0	1	0	0	4
Psychostimulants (amphetamines)	0	1	0	1	1	0	0	3
Cocaine	0	0	0	1	0	1	0	2
Cannabis	0	0	3	5	3	7	3	21
Total	24	20	12	20	24	22	12	194

T A B L E 6

ALL ILLEGAL DRUGS: YEAR BY AGE (MORBIDITY)

AGE GROUP	1981	1982	1983	1984	1985	1986	1987
15 - 19	4	1	0	3	3	3	3
20 - 29	10	6	4	5	7	7	2
30 - 39	4	3	2	3	0	4	3
40+	6	10	6	9	14	8	4

T A B L E 7

OPIATE, BARBITURATE AND CANNABIS USE BY AGE GROUP
FROM 1985 TO 1987 (MORBIDITY)

AGE GROUP	OPIATES			BARBITURATES			CANNABIS		
	85	86	87	85	86	87	85	86	87
15 - 19	1	0	0	0	2	0	1	0	0
20 - 29	3	1	0	0	3	0	1	5	1
30 - 39	0	1	0	0	1	1	0	2	2
40+	0	2	1	6	6	3	1	0	0

T A B L E 8

ILLEGAL DRUGS: YEAR BY SEX (MORBIDITY)

	1981	1982	1983	1984	1985	1986	1987
MALE	9	6	4	12	14	12	3
FEMALE	15	14	8	8	10	10	9

T A B L E 9

TYPE OF DRUG BY SEX (MORBIDITY)

	Opiates	Barbiturates	Hallucinogens	Psychostimulants	Cocaine	Cannabis
SEX						
M	15	31	1	0	1	12
F	7	51	3	3	1	9

T A B L E 10

AIDS NOTIFICATIONS BY RISK FACTOR BY YEAR

RISK FACTOR	1984	1985	1986	1987
Homosexual	6	77	91	63
Bisexual	0	13	14	19
Intravenous Drug Use	0	6	13	9
Prostitution	0	0	3	3
Heterosexual	0	3	1	5
Haemophilia	7	7	4	5
Blood Transfusion	0	2	2	2
Total AIDS Cases	13	102	119	106

T A B L E 11

AIDS REPORTED IN IV DRUG USERS BY AGE BY YEAR

AGE GROUP	1984	1985	1986	1987
20 - 24	0	0	3	4
25 - 29	0	4	4	3
30 - 34	0	2	5	0
35 - 39	0	0	1	1
40+	0	0	0	1

T A B L E 12

HEPATITIS A & B NOTIFICATIONS FROM 1984 TO 1987

YEAR	T Y P E A	O F	H E P A T I T I S B
1984	66		155
1985	148		305
1986	504		328
1987	137		408

T A B L E 13

HEPATITIS B NOTIFICATIONS BY AGE BY YEAR

YEAR	0 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55+
1984	12	55	52	26	3	7
1985	27	101	111	40	8	19
1986	41	100	95	44	18	25
1987	48	123	121	51	27	38

T A B L E 14

DRUG RELATED ARRESTS BY YEAR BY AGE

AGE GROUP	1984 - 85	1985 - 86	1986 - 87
Under 18 years	431	648	1,037
18 - 21 years	1,427	1,521	1,469
Over 21 years	1,742	2,478	3,213
Total	3,600	4,647	5,499

T A B L E 15

STATE DRUG CHARGES* BY TYPE BY YEAR (POSSESSION & USE)

DRUG TYPE	1984 - 85	1985 - 86	1986 - 87
Heroin	204	265	227
Cannabis (plants)	612	677	1,010
(leaf)	2,661	3,495	3,816
(resin)	108	119	119
Cocaine	2	3	4
Amphetamines	11	12	38
L.S.D.	8	18	22
Other Drugs	N/A	N/A	84

*Double counting can occur, with one person having more than one charge against them.

T A B L E 16

STATE DRUG SEIZURES (AMOUNTS) BY YEAR BY TYPE

DRUG TYPE	AMOUNT SEIZED		
	1984 - 85	1985 - 86	1986 - 87
Heroin	1.339 kilos	1.018 kilos	4.454 kilos
Cannabis - plants	33,297	37,704	63,353
- leaf	362.829 kilos	300.924 kilos	234.392 kilos
- resin	188.498 kilos	3.648 kilos	3.964 kilos
Cocaine	0.65 grams	32.86 grams	4.37 grams
Amphetamines	43.0 grams	97.4 grams	267.0 grams
L.S.D.	143 doses	513 doses	1,518 doses

T A B L E 17

METHADONE NEW ADMISSIONS: 1987

	Jan-March	April-June	July-Sept	Oct-Dec
Total Patients	303	281	302	405
New Admissions	27	27	17	73

T A B L E 18

CENTRAL DRUG UNIT DETOXIFICATION SERVICE

	1 9 8 7	
	January - June	July - December
Assessments	135	285
Admissions	97	216
First Admissions	69	175
Males	68	150
Females	29	66
Average Age	27	27
Age Range	16-46	18-20

...



INDICATORS OF ILLEGAL DRUG USE : SOUTH AUSTRALIA

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PAPER PRESENTED AT THE
"FIRST NATIONAL DRUG INDICATORS CONFERENCE"
AUSTRALIAN INSTITUTE OF CRIMINOLOGY
CANBERRA AUSTRALIA

10th - 12th MAY 1988

Note: The views expressed in this paper do not necessarily
reflect the views of the Drug and Alcohol Services Council

1. INTRODUCTION

1.1 Data Sources

This report presents a general overview of the nature and extent of illegal drug use in South Australia, using as key indicators the following data sources:

- Admissions to drug treatment agencies
- AIDS data - including the number of intravenous (IV) drug users diagnosed as HIV antibody positive.
- Drug related mortality data
- Drug caused morbidity data
- Police arrest data
- Court statistics
- Price/purity estimates
- Data derived from other sources - surveys, and other estimates.

1.2 Qualifications

Data presented in this report have been derived from a wide variety of sources. While most of these data systems are comprehensive and reliable, it needs to be recognized that many people who use drugs on an irregular basis for recreational purposes never come to the attention of authorities. Hence, their use patterns and activities do not appear in official statistics. Data and comments in this report must be read with these qualifications in mind.

Where qualifications related to specific data collections, these are mentioned in the appropriate section of the report.

1.3 Definitions

In this report, certain terms are used in the following way:

- "Drug" - relates to psychotropic substance use, but excludes alcohol, tobacco and most instances of solvent misuse.
- "Illegal" - refers to drug use and associated activities which are proscribed by law in South Australia.
- "1982/83" - most government statistics are prepared on a financial year basis. In the text, when years are shown as 1982/83, 1983/84 etc, this refers to the period from 1st July to 30th June in the following year.

2. INDICATORS OF ILLEGAL DRUG USE

2.1 Treatment Agency Admissions and Attendances

It is generally accepted that treatment agency data are only partially related to the extent of drug abuse in the community, reflecting as much levels of treatment availability and service utilisation as actual trends in drug use and abuse (Commonwealth Department of Health, 1981). Nevertheless, such data can provide a useful insight into the social and demographic characteristics of those individuals who have identified themselves as having a "drug problem" serious enough to warrant counselling and/or treatment.

In South Australia, most treatment services for persons dependent upon illegal drugs are provided by the Drug and Alcohol Services Council (D.A.S.C. or the 'Council'), which is a government agency incorporated within the South Australian Health Commission.

Since 1982/83, the total number of admissions to DASC inpatient treatment units has remained fairly stable at around 3,500 per annum, but the total number of individuals involved with these admissions has increased by approximately one-third, to around 1,500 persons in 1985/86. The vast majority of these people are admitted with

alcohol as their primary area of concern, although, as Table 1 shows, an increasing proportion of clients are presenting themselves with a drug problem only, or a combined alcohol and licit drug problem (e.g. alcohol and benzodiazepines).

Table 1 Numbers and Percentages of DASC Inpatient Admissions and Individuals, 1982/83 to 1985/86

FINANCIAL YEAR	ADMISSIONS				INDIVIDUALS			
	*Principal Area of Concern				*Principal Area of Concern			
	Alcohol No. %	Drugs No. %	Alcohol & Drugs No. %	Total No. %	Alcohol No. %	Drugs No. %	Alcohol & Drugs No. %	Total No. %
1982/83	3143 (87)	389 (11)	75 (2)	3607 (100)	925 (83)	153 (14)	35 (3)	1113 (100)
1983/84	3077 (82)	377 (10)	311 (8)	3765 (100)	1494 (80)	241 (13)	136 (7)	1871 (100)
1984/85	2541 (72)	535 (15)	466 (13)	3540 (100)	1182 (67)	343 (20)	234 (13)	1759 (100)
1985-86	2197 (64)	489 (14)	730 (22)	3416 (100)	922 (62)	310 (21)	246 (17)	1478 (100)

* The presenting problem of a client (principal area of concern) is one of 3 types: alcohol, drugs or alcohol in combination with drugs

Unfortunately, current methods of data collection do not provide information on the types of drugs used by DASC clients. However, measures are now underway to modify and automate the Council's Client Data System so that in future this information can be readily obtained.

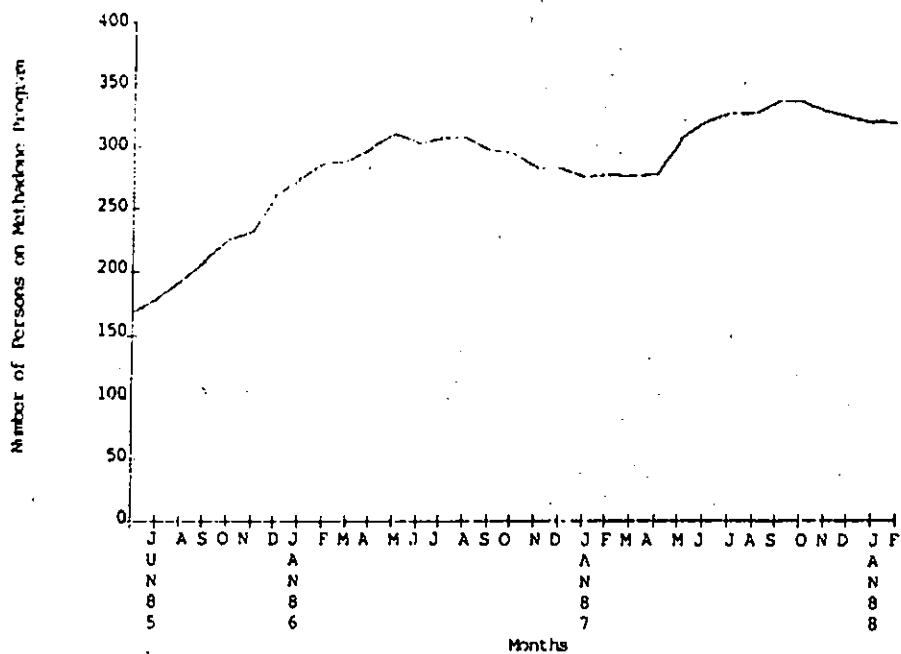
In the meantime, the most reliable and readily available information on illegal drug users seeking treatment is data on admissions and attendances at those DASC units which specialise in the treatment of drug dependent persons.

The Family Living Program, which operated until April 1986, provided a long-term, live-in, drug free rehabilitation program for illicit drug users. The number of individuals attending Family Living increased from 46 in the 1982/83 financial year to 95 in 1984/85. The Community House Program, which replaced Family Living in 1986, became a predominantly outpatient facility. During the 1986/87 financial year, 59 individuals attended this program and 99 per cent had drug related problems.

The Drug Dependence Clinic is the only authority in South Australia approved to operate a methadone substitution program. As of 31 March 1988, 323 people were on this program, of which 175 (or 54 per cent) were male, and 148 (46 per cent) were female. The average age of the population was 30 years, and almost 45 per cent had been on the program for a period of twelve months or less.

Figure 1 shows the number of persons on the program since guidelines for the use of methadone in the treatment of opiate dependency were endorsed and approved by the Federal and State Health Ministers in May 1985. From this graph it can be seen that there was a rapid increase in client numbers from June 1985 to May 1986. This was followed by a period of relative stability until May 1987 when there was a further rise. Since August 1987 numbers on the program have stabilized around the 320 mark.

Figure 1 Number of Persons on Methadone Program, South Australia
June 1985 to February 1988



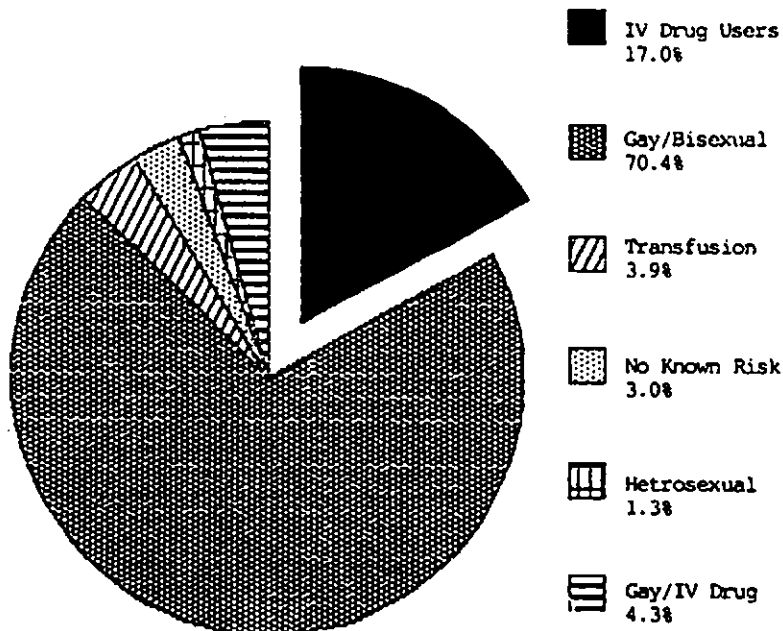
Source: Drug and Alcohol Services Council (DASC) Statistics.

In interpreting these statistics, it should be noted that a number of significant changes were taking place to DASC programs and facilities during this period. Hence, some fluctuations in attendances and admissions could be due to these factors. Taking this into account, nonetheless, it is evident that in South Australia the number of persons seeking treatment for opiate dependency virtually doubled during the period June 1985 to February 1988.

2.2 AIDS Data

As at 31 December 1987, a total of 230 individuals were diagnosed as HIV (Human Immunodeficiency Virus) antibody positive in South Australia. Figure 2 shows that, of this number, 39 (or 17 per cent) were intravenous (IV) drug users. A further 10 individuals (4.3 per cent) were both homosexual and IV drug users.

Figure 2 Classification of Persons Diagnosed as HIV Antibody Positive, South Australia, December 1987



Source: SAHC, Public Health Service, AIDS Programme

Table 2 shows that although the number of IV drug users diagnosed as HIV antibody positive has increased by almost 70 per cent during 1987, this group still only accounts for around 17 per cent of the total number of individuals confirmed as HIV antibody positive in South Australia.

Table 2 Number and Proportion of Individuals Diagnosed as HIV Antibody Positive who are Intravenous (IV) Drug Users or both Homosexual and IV Drug Users, South Australia, December 1985 to December 1987

Date	Total Confirmed Positive	IV Drug Users		Homosexual IV Drug Users	
		No.	%	No.	%
31/12/85	90	22	24.4	3	3.3
31/3/86	105	22	21.0	4	4.0
30/6/86	117	24	20.5	6	5.0
30/9/86	138	22	16.0	9	6.5
31/12/86	149	23	15.5	10	6.7
31/3/87	182	30	16.5	10	5.5
30/6/87	198	34	17.2	10	5.1
30/9/87	218	37	16.9	10	4.6
31/12/87	230	39	17.0	10	4.3

Source: S.A.H.C., Public Health Service, AIDS Programme

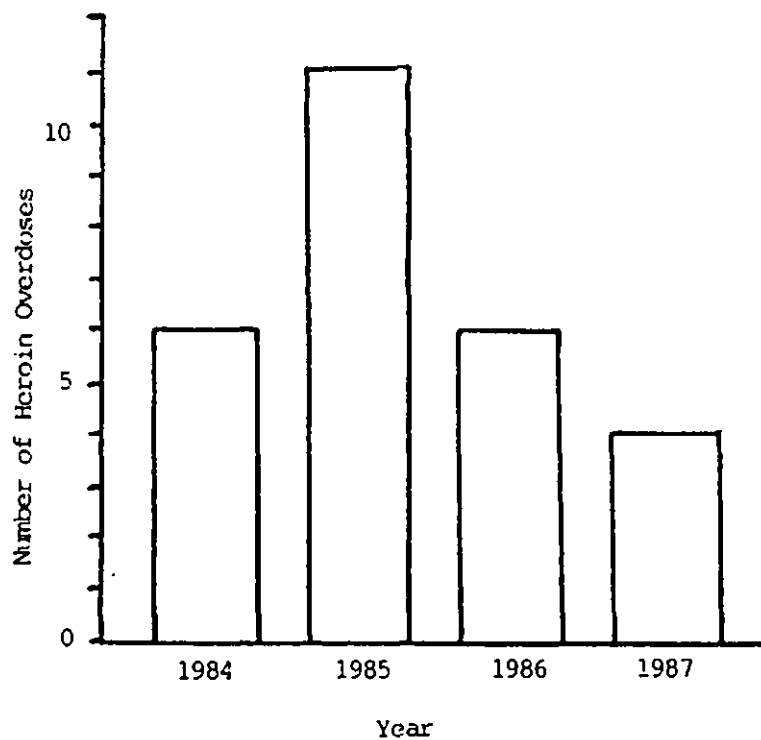
2.3 Drug Related Mortality Data

Mortality data for South Australia, derived from information supplied by the Australian Bureau of Statistics, indicates that deaths from opiate use totalled 14 in 1985. This figure includes 6 accidental poisonings and 3 suicides. Barbiturate deaths for the same year totalled 3 (2 accidental poisonings and 1 suicide). As yet, data for 1986 are not available.

Statistics obtained from the State Coroner's Office show that in the four year period since 1984, 28 persons have died from heroin overdoses in South Australia. The vast majority of these (75 per cent) were male, and most (89 per cent) were aged between 19 and 30 years. As Figure 3 shows, 11 of these deaths occurred in 1985. According to police sources, during 1985 there was a marked increase in the supply of heroin on the local market.

Deaths from heroin overdoses are usually linked to the purity of the drug. Whilst suicide is the reason for some deaths, most are of an accidental nature and occur because heroin purity is unusually high.

Figure 3 Number of Heroin Overdoses, South Australia, 1984-87



Source: State Coroner's Office, South Australia

2.4 Drug Caused Morbidity Data

Prior to 1984, hospital morbidity data in South Australia was collected under the auspices of the Australian Bureau of Statistics, in conjunction with the State Health Authority. Responsibility for this collection transferred to the Inpatient Separations Information System (ISIS) Unit of the South Australian Health Commission in 1984.

The ISIS Unit collects hospital separation data from all public (recognised) hospitals, and some private hospitals in South Australia (a recognised hospital is one which is deficit financed under the Hospitals Agreement).

The principal conditions diagnosed for each separation are coded according to the Ninth Revision of the International Classification of Diseases, Clinical Modification (ICD-9-CM).

Data for 1985 (the latest currently available) show that 467 separations were attributed to opiate use. This accounted for almost 7 per cent of total drug caused separations. Barbituates accounted for 76 separations (1.1 per cent of total drug caused separations), while cannabis contributed to 4 separations (one-tenth of one per cent). No separations were attributed to cocaine use in 1985.

2.5 Police Arrest Data

The number of offences involving the illegal use of drugs recorded by South Australian Police since 1974/75 are presented in Table 3. Caution should be exercised when interpreting these data for the following reasons:

- (a) as is the case in other Australian states and in countries overseas, enforcement statistics may reflect police activity rather than levels of illegal drug use.
- (b) the actual number of drug offenders is likely to be substantially less than the number of drug offences, given that it is quite common for an individual to be arrested and subsequently charged with multiple drug offences.
- (c) the number of drug offences is not a reliable indicator of change in illegal

drug use, for no account is made for changes in the size of the general population over time. A rate, expressing the number of offences per 100,000 population, allows more valid comparisons over time and between jurisdictions. These rates are included in Table 3 and represented diagrammatically in Figure 4.

TABLE 3 Number of Drug Offences Recorded by Police and Rates per 100,000 population, South Australia, 1974/75 to 1986/87

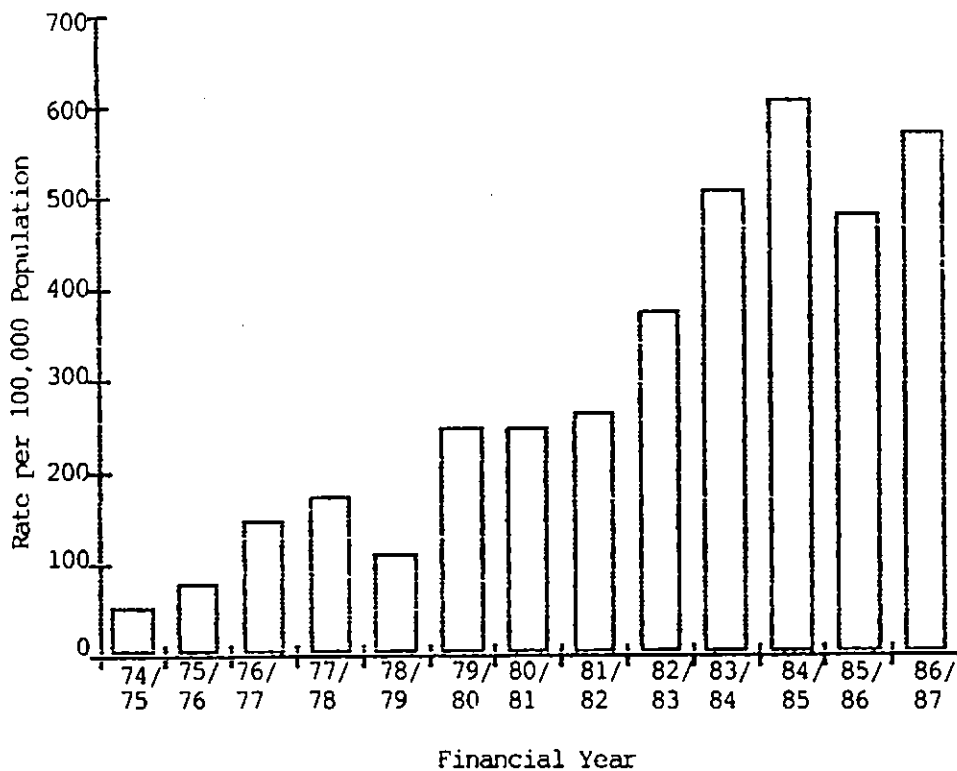
Financial Year	Drug Offences Reported or Becoming Known	Rate per 100,000 of the Estimated Mean Resident Population
1974/75	690	55.00
1975/76	1013	79.76
1976/77	1905	148.83
1977/78	2230	172.63
* 1978/79	1445	111.27
* 1979/80	3198	245.17
1980/81	3216	244.97
1981/82	3470	262.12
1982/83	4963	371.82
1983/84	6829	506.64
1984/85	8175	601.81
1985/86	6555	479.31
1986/87	7797	565.45

* Note: Police report that statistics for 1979/80 were inflated by a processing backlog experienced during the preceding financial year. Consequently the number of crimes reported during 1979/80 is artificially high, whilst the 1978/79 figures have been significantly under-enumerated.

Source: Data derived from South Australian Police, Annual Reports of the Commissioner of Police.

From both Table 3 and Figure 4 it can be seen that the number of drug offences reported by or becoming known to South Australian Police increased throughout the 1970's and up to the 1984/85 financial year. Again, it should be stressed that these increases may not depict the true level of drug offences, but rather reflect increased police activity in this area.

Figure 4 Rate of Drug Offences per 100,000 population reported by and known to Police, South Australia, 1974/75 to 1986/87



- Note: 1. At the time of producing these statistics, the estimated new resident population of South Australia during 1986/87 was not available. The resident population as at 31 December 1986 was used in the offence rate calculation for this year.
2. Police report that statistics for 1979/80 were inflated by a processing backlog experienced during the preceding financial year. Consequently the number of crimes reported during 1979/80 is artificially high, whilst the 1978/79 figures have been significantly under-numerated.

source: Data derived from South Australian Police, Annual Reports of the Commissioner of Police.

The reduction of almost 20 per cent in drug offences between 1984/85 and 1985/86 can be partly explained by the introduction of the Controlled Substances Act in May 1985. Prior to 1985, it was common for an offender to be charged with multiple drug offences from the same set of circumstances. The new Act now allows for only one offence to be counted.

The fall in the number of drug offences between 1984/85 and 1985/86 was, however, only temporary, for during the 1986/87 financial year, numbers increased by almost 19 per cent to 7797.

Table 4 presents a more detailed classification of recorded drug offences, and demonstrates that most arrests still relate to simple possession and use of drugs. Offences against "pushers", those who sell drugs or possess drugs for sale, actually make up a declining proportion of total drug offences.

Table 4 Proportion of Recorded Drug Offences by Classification, South Australia, 1980/81 to 1986/87

Offences Group	% Drug Offences						
	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Possession or Use of Drugs	61.6	62.7	57.9	57.8	56.3	56.0	54.2
Possess Implements of Drug Use	19.3	25.7	28.5	27.7	31.8	34.1	35.3
Obtain Drugs by Forgery	6.9	0.8	2.7	0.8	0.5	1.3	0.8
Selling Drugs, Possess for Sale	6.3	5.7	5.6	5.4	5.1	4.8	4.5
Make or Cultivate Drugs	5.8	5.0	4.8	7.4	5.8	3.7	5.0
Other Drug Offences	0.1	0.1	0.5	0.9	0.5	0.1	0.2

Source: Data derived from South Australian Police, Annual Reports of the Commissioner of Police.

A large proportion of recorded drug offences involve cannabis and its derivatives. Table 5 shows that in 1986/87 over 95 per cent of offences involving the possession or use of drugs related to cannabis. Similarly over three quarters of offences involving the sale of drugs involve cannabis (Table 6), but there has been a significant change in the nature of drug trafficking offences in the five years from 1982/83 to 1986/87. The proportion due to cannabis trafficking has declined by almost 9 per cent, whereas heroin has increased by over 5 per cent.

Table 5 Proportion of Possession or Use Offences by Type of Drug, South Australia, 1982/83 to 1986/87

Drug	% Possession Offences				
	1982/83	1983/84	1984/85	1985/86	1986/87
Cannabis and derivatives	96.7	96.8	94.0	93.2	95.1
Heroin	0.8	1.4	2.8	2.3	1.7
LSD	0.3	0.0	0.1	0.0	0.0
Other Hallucinogen	0.0	0.5	0.0	0.0	0.0
Amphetamine	1.5	0.8	2.4	3.2	1.9
Cocaine	0.1	0.2	0.1	0.2	0.0
Other	0.6	0.3	0.6	1.1	1.3

source: Data derived from South Australian Police, Annual Reports of the Commissioner of Police.

Table 6 Proportion of Selling Drugs, Possess Drugs for Sale Offences by Type of Drug, South Australia, 1982/83 to 1986/87

Drug	% Selling Offences				
	1982/83	1983/84	1984/85	1985/86	1986/87
Cannabis and derivatives	87.5	88.3	84.0	78.1	78.7
Heroin	3.9	7.0	6.2	10.3	9.5
LSD	1.4	0.00	0.2	0.0	0.3
Other Hallucinogen	0.0	0.0	0.2	0.3	0.0
Amphetamine	5.7	3.5	7.3	9.2	4.3
Cocaine	0.4	0.5	1.0	1.6	0.9
Other	1.1	0.7	1.1	0.5	0.3

source: Data derived from South Australian Police, Annual Reports of the Commissioner of Police.

Amphetamine offences have varied markedly over the last five years. The number of possession offences have ranged from 33 in 1983/84 to 119 in 1985/86.

It should be mentioned that the use of amphetamines is cyclic and this may explain the variability in offences over time. In addition, amphetamines are sometimes misrepresented as cocaine. Currently treatment agency personnel report an increased incidence of people seeking help for amphetamine problems.

The number of recorded offences involving LSD is relatively small in comparison with other illegal drugs. Since 1982/83, only 17 offences relating to the possession of LSD were recorded and 9 of these were during the 1982/83 financial year.

Cocaine related offences have remained relatively constant at around 5 per annum since the mid 1970's.

Offences relating to the sale of heroin have been increasing throughout the 1980's; from 11 in 1982/83 to 36 in 1986/87.

However, the recorded illegal use of heroin appears to have fallen in recent years. After reaching a peak of 130 offences in 1984/85, numbers have declined to 73 in 1986/87. The establishment of Drug Assessment and Aid Panels in 1985 may explain this apparent decline.

Drug Assessment and Aid Panels were established as a result of the proclamation of the Controlled Substances Act. These panels are seen as a pretrial diversionary program. Persons who are reported or charged by Police for "simple possession offences" other than marijuana are referred to the panel for an assessment. The panel's job is to determine if the offender has the potential for lifestyle change if he/she is integrated into the health care arena instead of being processed by the criminal justice system.

The total number of referrals to the Panels for 1986/87 was 185 (this compares with 254 for 1985/86). The number of individuals referred to the Panels (as some individuals had been referred on more than one occasion) totalled 168 for the 1986/87 period (this compares with 239 for 1985/86).

Of those individuals referred during 1986/87, 111 (66 per cent) were male and 57 (34 per cent) were female. Over 70 per cent of these individuals were aged between 20 and 29 years. Nine per cent were aged 19 years or under. Almost 60 per cent were unemployed, 68 per cent were single, while 12 per cent were living in a defacto relationship.

Simple possession of amphetamines represented the highest proportion of referrals to the Panels during 1986/87 (36 per cent), followed by heroin (31 per cent) and possession of implements only (22 per cent).

2.6 Court Statistics

Unlike Police statistics, which count the actual number of offences reported or detected, court data record the number of appearances by persons who have been arrested or summoned to answer some charge. Court statistics therefore avoid double counting of offenders.

As is the case in other Australian states, the great majority of criminal cases in South Australia (as estimated 95 per cent) are dealt with in a Court of Summary Jurisdiction. Data relating to the Courts is collated and reported upon by the South Australian Office of Crime Statistics.

Reports prepared by the Office of Crime Statistics, show that there has been a significant increase (approximately 47 per cent) in the number of drug offences heard before a Court of Summary Jurisdiction during the period 1982/83 to 1985/86, with numbers rising steadily until 1985/86 and declining slightly thereafter. Once again, caution is recommended when interpreting these data as changes may be the result of variations in police activity, rather than changes in the level of drug abuse.

Table 7 presents a breakdown of drug offences appearing before Courts of Summary Jurisdiction by type of drug. Again, the vast majority of drug cases (84.8 per cent in 1985/86) relate to cannabis or its derivatives. Only 3 per cent of drug cases in 1985/86 related to heroin.

Table 7 Number of Drug Appearances in Courts of Summary Jurisdiction by Type of Drug, 1 July 1982 to 30 June 1986

Drug Type	1982/83	1983/84	1984/85	1985/86
Indian Hemp	2081	2857	3474	2727
Heroin	31	65	92	99
Other Drug	80	57	91	389*
TOTAL	2192	2979	3657	3215

* Note: The high figure recorded for 'other drug' in 1985/86 has been explained by problems associated with administrative procedures following the introduction of the Controlled Substances Act in 1985. The Office of Crime Statistics believe, however, that given the proportion of marijuana cases in previous years, one can assume that a high proportion of the 'other drug' category relate to cannabis offences.

Source: Department of Attorney-General, Office of Crime Statistics, Courts of Summary Jurisdiction, 1987

On 30 April 1987, regulations were approved under the Controlled Substances Act to introduce cannabis expiation notices (ie 'on the spot' fines for the possession or use of small amounts of marijuana). At the time of its introduction, it was generally believed that (initially at least) the notices would reduce the total number of cases appearing before Courts of Summary Jurisdiction. Recent research conducted by the Office of Crime Statistics, however, indicates that the reduction in court prosecutions may not be as significant as first anticipated. Of the 3,540 cannabis expiation notices issued from the introduction of the system on 1 May 1987 to 29 February 1988, only 1,567 (or 44.3 per cent) have been paid. Over half of the people issued with notices have therefore chosen not to pay the fine, but instead will be prosecuted in the usual manner.

2.7 Price/Purity Estimates

Table 8 presents information obtained from a street source (and verified from two further sources) on current (1988) and 1987 street prices of illicit drugs in South Australia.

It should be noted that prices can vary considerably, depending on the quality, quantity and availability of the particular drug.

Sources point out that amphetamines and LSD are sometimes impregnated in blotting paper which is then divided into small squares of approximately 5 mm. These squares currently sell for about the same price as a tablet (i.e. between \$5 and \$15).

Data obtained from the Forensic Science Centre for the period October to December 1987 show that, in total, 21 illicit cocaine preparations were sampled for purity. Purity of these powders ranged from 75.6% to 81.4% (a mean of 79.3%). The total mass of the powders sampled was 560g.

There were three (highly publicized) cocaine seizures in South Australia between May 1987 and February 1988. Reports verified from two sources indicate that the purity of material seized in these cases ranged from 92 per cent to 100 per cent.

Table 8 Street Prices of Illicit Drugs in South Australia, 1987, 1988

Drug Type	Quantity	1987 Price		1988 Price	
Heroin	1 'Taste' (1/4 gram)	\$50	- \$100	\$50	- \$100
	1 'Street' gram	\$200	- \$400	\$200	- \$400
	1 'Weight' gram	\$400	- \$800	\$400	- \$800
	1 ounce (28g) cut 35%	\$4,500	- \$6,000	\$4,500	- \$6,000
Cannabis	1 money bag (3-5 grams)	\$20	- \$30	\$30	- \$50
	1 'Buddha' stick	\$20	- \$50	\$30	- \$50
	1 'Deal' (1 ounce/28 grams)	\$200	- \$300	\$280	- \$500
	1 Pound (approx. 450 grams)	\$1,500	- \$3,000	\$2,000	- \$4,000
Hashish	1 'Deal' (approx. 5 grams)	\$40	- \$80	\$40	- \$80
	1 ounce block (28 grams)	\$450	- \$800	\$450	- \$800
	1 kilogram block	\$8,000	- \$12,000	\$8,000	- \$12,000
Hashish Oil	1 deal (Plastic phial)	\$50	- \$80	\$50	- \$80
	1 ounce (28 grams)	\$500	- \$800	\$500	- \$800
	1 kilogram	\$10,000	- \$17,000	\$10,000	- \$17,000
Cocaine	1 'Taste' or 'Line' (1/4 gram)	\$30	- \$50	\$30	- \$50
	1 gram	\$200	- \$350	\$200	- \$350
	1 ounce	\$4,200	- \$7,300	\$4,200	- \$7,300
Amphetamine	1/2 gram	\$100	- \$150	\$100	- \$150
	1 gram	\$200	- \$350	\$200	- \$350
L.S.D.	1 'Trip' or tablet ('Tab')	\$5	- \$15	\$5	- \$15

Note: Prices may vary considerably depending on quality, quantity and availability

Source: Street source, verified by two other sources

It is generally thought that most of the cocaine involved in these seizures had been intended for the New South Wales market. Police sources indicate that while there is very little information about the use of cocaine in South Australia, it is widely believed that it is a "recreational drug" and used mostly by those in the higher income bracket.

2.8 Data Derived From Other Sources

(a) Surveys

In 1986, the Drug and Alcohol Services Council began work on a five-year survey designed to examine schoolchildren's use of and attitudes towards a range of licit and illicit drugs.

In its first year, the survey involved over 3,500 students attending South Australian primary and secondary schools from Years 7 to 11 inclusive.

Results from the 1986 survey found that alcohol, tobacco, painkillers and other medicines are the drugs most commonly used by students. More than 70 per cent of students report using these drugs at some time, and at least 20 per cent report weekly use of these substances (Cormack, Kaleniuk, Smith and Bungey, 1987).

Of the illegal drugs, marijuana is the most popular, although at all age levels, the majority of students have never used the drug. Use increases with age, from approximately one per cent of 11 year olds to around 38 per cent of 16 year olds (Note: use of marijuana tends to peak at ages 16-18 and diminishes thereafter). Results indicate that most of those who have used marijuana are not regular users of the drug, although one in ten of 15 and 16 year old students are using it on a weekly basis (Cormack, et al, 1987).

Use of other illegal drugs (hallucinogens, stimulants and narcotics) is rare among the students surveyed. Over 95 per cent of students have never used hallucinogens, 95 per cent have never used stimulants, while 97 per cent reported never to have used narcotics (Cormack, et al, 1987).

(b) Other Estimates

The Royal Commission into the Non-Medical Use of Drugs (Sackville, Hackett and Nies, 1979) suggested that throughout the mid to late 1970's, the non-therapeutic use of opiates had increased in South Australia, although it found the rate of increase impossible to estimate.

In a study prepared for the Commission, Mant & Thomas (1979) used the capture-recapture method to estimate the number of opiate users in South Australia during the mid 1970's. They produced four estimates which ranged from 574 to 1672. Subsequently, Farmer (1984) used an improved mathematical formula to recalculate these estimates. The revised estimates ranged from 331 to 877.

Concerns in the early 1980's that the heroin problem had intensified in South Australia led to the Drug and Alcohol Services Council preparing an update of the Mant & Thomas study using the improved formula (Cooke, Farmer & Marlowe, 1986). This study found that the estimated number of opiate users in South Australia in the early 1980's ranged from 530 to 725.

An updated estimate for the 1985/86 financial year has been conducted by DASC, and is awaiting final clearance from the South Australian Minister of Health and Community Welfare before being released.

3. OVERVIEW OF ILLEGAL DRUG USE

Based on information presented in this report, the illegal drug situation in South Australia can be summarized as follows:

3.1 Illegal Drug Use in General

- . Treatment Agencies - are seeing more polydrug users.

- . Offences - police and courts data reflect a consistent increase in the number of drug offences from 1970 to 1984/85. After this time, a reduction in the numbers occurred probably due to legislative initiatives (e.g. establishment of Drug Assessment and Aid Panels, and introduction of 'on the spot' fines for personal use of marijuana offences). Latest statistics show that the number of offences is rising again.

3.2 Cannabis

- . Morbidity - is negligible.
- . Offences - more than three-quarters of drug use and trafficking offences relate to cannabis.
- . Price - in past year, prices have risen by 50% and more.
- . Student Use - there are few regular users.

3.3 Opiates

- . Methadone Program - from mid 1985 to early 1988, the number of persons on the program has almost doubled.
- . AIDS - IV drug users account for about 17% of IV antibody positive cases.
- . Deaths - numbers are fairly low, and most are male.
- . Morbidity - only 7% of hospital drug separations (which include alcohol but not tobacco) relate to heroin.
- . Offences - heroin use and trafficking figures remain low, but have tripled over the past five years. Heroin represented 31 per cent of referrals to the Drug Assessment and Aid Panels during 1986/87.

- . Price - has remained stable over the past year.
- . Student Use - is rare.

3.4 Barbiturates

- . Deaths - are few.
- . Morbidity - only account for 1% of hospital drug separations.

3.5 LSD

- . Offences - are few.

3.6 Amphetamines

- . Offences - use is cyclic in nature and number of offences fluctuate markedly. They represented 36 per cent of referrals to the Drug Assessment and Aid Panels in 1986/87.
- . Price - has remained stable.

3.7 Cocaine

- . Offences - are few.
- . Purity - has remained constant and reasonably high (around 80%).
- . Price - has remained stable.

4. THE NEED TO STANDARDIZE METHODOLOGY

In preparing this report, it became apparent that there is a critical need to standardize the methodology of illegal drug indices in a number of areas. These include:

- definitions
- counting rules
- developing "core" or generic survey materials
- data presentation
- report writing

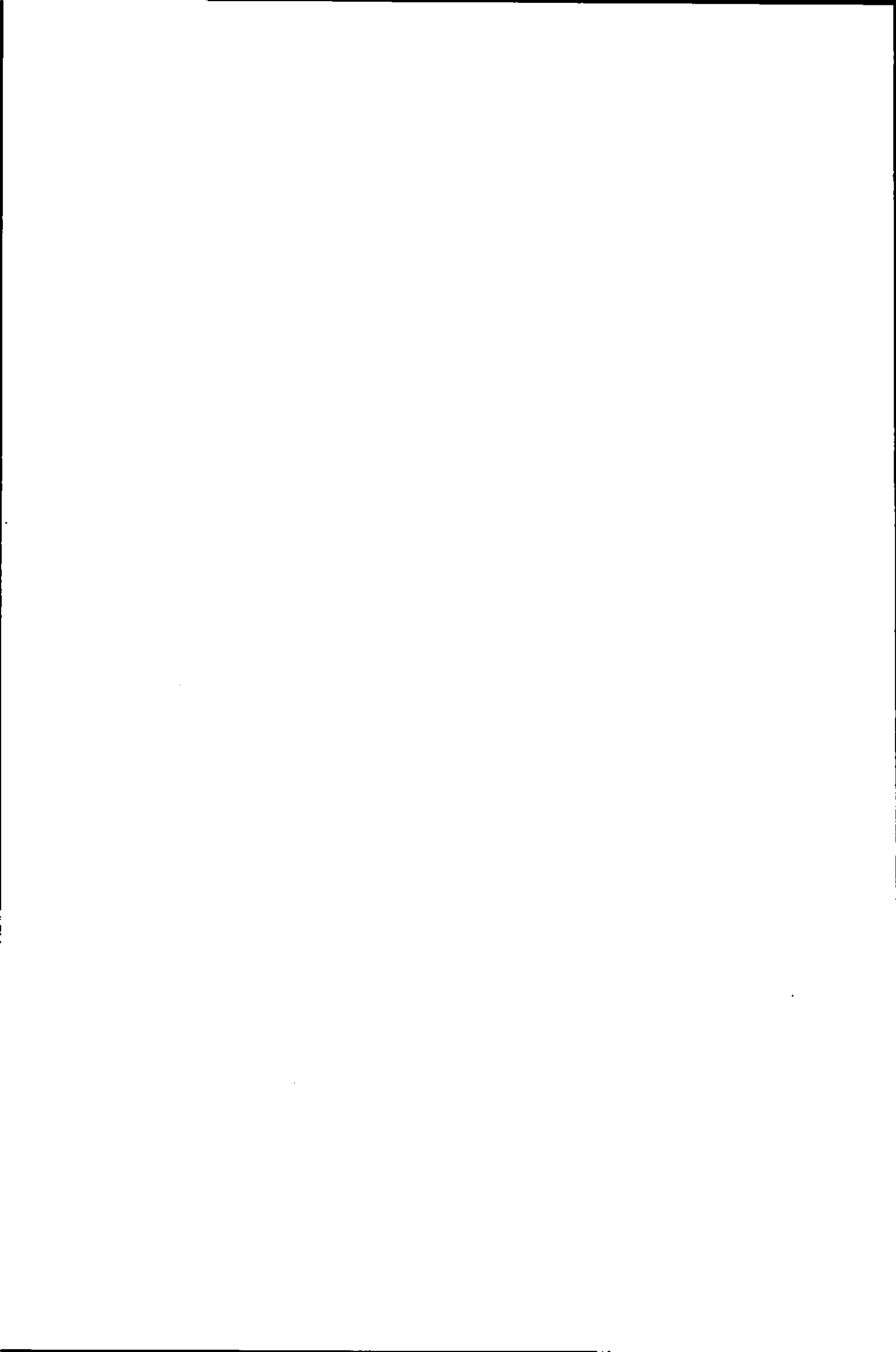
Only standardized methodology will permit the valid comparison of data across jurisdictions, among different populations, and across types of drugs.

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The authors wish to acknowledge the assistance of the following organisations in supplying data for this report:

Australian Bureau of Statistics (South Australian Office)
 Department of the Attorney General, Office of Crime Statistics
 Drug Assessment and Aid Panel
 Drug Dependence Clinic, Warinilla
 Forensic Science Centre
 ISIS Unit, South Australian Health Commission
 Public Health Service AIDS Programme, South Australian Health Commission
 Registrar of Births, Deaths and Marriages
 State Coroner's Office



ACT DRUG INDICATORS PROJECT
FIRST NATIONAL DRUG INDICATORS CONFERENCE
CANBERRA 10 - 12 MAY 1988

ILLEGAL DRUG USE - THE TASMANIAN EXPERIENCE

Prepared by:

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MAY 1988

INTRODUCTION

I would like to state at the outset that the following data are in no way intended to present an overall picture, or indeed, conclusive evidence concerning current levels or patterns of illegal drug use in Tasmania. Be it enough to say that we do not deny there is illicit drug use in the State. However, from what little data are available the evidence suggests that there is not any high degree of use compared to the mainland, (vernacular meaning Continental Australia).

I would add that whilst we share the problems and concerns with our mainland colleagues it would seem that we do not have the scale of your problems.

Having imposed the aforementioned rider I should say that one of the contributory factors to the relatively low use of illegal drugs has to do with the population size.

I would like therefore, to start with a brief analysis of some population figures. At 30 June 1986 the State of Tasmania had a population of 446,885 persons . This figure was divided as follows:-

- aged less than 15	107,008
- aged 15 - 24	76,386
- aged 25 - 64	215,320
- aged 65 +	48,171

The capital, Hobart, had a population of 180,250. Launceston, the major city in the North of the State had a population of 90,690. On the North West Coast the Burnie/Devonport Statistical subdivision had a population of 77,140.

Drug and Alcohol Service
John Edis Hospital
Hobart

- Methadone Maintenance

It is probably a well known fact by now that Tasmania does not have a Methadone Maintenance Program, although, the Alcohol and Drug Service at John Edis Hospital does use Methadone for detoxification purposes. In addition some accommodation is made for patients on official programs in other States who have had to come to Tasmania for a specific purpose. Arrangements are made for strictly controlled short term administration, about 2 to 3 weeks only.

It is interesting to note the data on patients admitted to John Edis Hospital for the years 1985/86 and 1986/87 (see Appendix 1). Of the total admissions in 1985/86, 84.2% presented with alcohol dependence syndrome and 1.7% were opioid dependent. The figures in 1986/87 were 75.7% and 1% respectively.

With regard to the Launceston and Northern Alcohol and Drug Service and the North West Coast Service (see Appendix 2) the figures also show a large number presenting with alcohol dependency syndrome.

STATE DRUG BUREAU

The State Drug Bureau Annual Report for 1985/86 stated that drug related crimes and offences are on the increase, not only in Tasmania, but in the rest of Australia.

The Report also gives information concerning the availability and price of the following illegal drugs - Cannabis, Heroin, Cocaine and Amphetamines.

CANNABIS SATIVA

Cannabis Sativa and Hashish have still been readily available throughout the State. The 1985/86 price of Cannabis was approximately \$70 for a deal which consisted of approximately 10-14 grams. Cannabis was also sold in kilo lots with the price varying between \$1600-\$2000 per kilo.

HEROIN

In the 1985/86 period there were only a small number of seizures of Heroin, with the price appearing to have remained constant during the year at \$165 per 00 capsule or \$330 per gram.

From comparison with other Annual Reports the use of heroin in the State is declining and it would appear that past users of heroin are turning to Amphetamines to support their habits.

COCAINE

Although there were few seizures of cocaine during the year intelligence reports indicate that it is still being used in this State but is normally associated with middle class people who are apparently in a better financial position to afford the drug.

The price of cocaine was approximately \$2000 an ounce and on the street \$200 a gram.

AMPHETAMINES

These drugs are readily available in this State and the use of them has shown a marked increase in the past 12 months, so much so that amphetamines would now be the second most popular drug of abuse, after Cannabis. Intelligence reports suggest that a large number of persons are using them and that the drugs are imported

into Tasmania mainly from Victoria and New South Wales.

The 1985/86 price of amphetamine varies between \$60 and \$120 per gram depending on the quality and availability and is sold at prices varying between \$1700-\$2000 an ounce.

Appendices 3 and 4 contain data on the Age Statistics for Persons Charged for the 10 year period 1976/77 to 1985/86 and Categorization of Drugs for the 10 year period 1976/77 to 1985/86 respectively.

CURRENT PRICES

These of course vary according to availability and purity. However, from enquiries it would appear Cannabis is quite expensive being approximately \$450 for a 1 ounce deal with Amphetamines being in the order of \$90 for a 'street gram'. There does not seem to be any pricing information for heroin and cocaine. It is suspected that what does exist in the State (i.e. heroin and cocaine) is procured from mainland sources.

GOVERNMENT ANALYST LABORATORY

For the period 1 January 1987 to 31 March 1988, (14 months) thirteen (13) fatal cases were submitted to the Laboratory for analysis. Only one death involved a narcotic drug (i.e. oxycodone).

Whilst not entirely related to illegal drugs use it is interesting to note a comment from the Laboratory in that a trend which has become apparent over the past year or so has been the declining incidence of benzodiazepine-type drugs encountered in the specimens submitted. Whilst it is recognised that the benzodiazepines on their own have rarely, if ever, caused death, they can be potentiated by other drugs including alcohol. However, the evidence is not presenting in the majority of cases being submitted for analysis.

LIFELINE - 24 HOUR TELEPHONE SERVICE

On perusal of the total telephone calls for the period 1 January 1987 to 31 December 1987 the following percentages give an indication of the primary drugs of concern:-

Alcohol	55.6%
Non-Specific	17.2%
Tranquillizers and Sleeping Tablets	10.2%
Marihuana	7.9%
Prescription Drugs	3.0%
Anti-depressants	2.7%
Amphetamines	1.7%
Cocaine	1.2%
Heroin	0.5%

HOSPITALS

The Director of the Accident and Emergency Unit at the Royal Hobart Hospital has confirmed that the Unit would, on the average, receive one intravenous drug case per month. In fact, in the last two years the index markers to cases of IV drug use i.e. Hepatitis B, Endocarditis and Widespread Sepsis have been extraordinarily rare.

Figures from the Mersey General Hospital at Latrobe on the North West Coast indicate that for the period 1982 to 1986 (4 years) three IV drug cases presented at the hospital. One of these cases came from the mainland.

COMPUTER MONITORING OF DRUGS

This project is undertaken by the Pharmacy Section of the Department of Health Services in Hobart. The project collects information relating to drug prescribing and dispensing for the purposes of - (inter alia) research into the use of narcotic drugs, control of the supply of narcotics to drug users and early detection of diversion of drugs from licit to illicit use.

In the two years 1986 and 1987 the Department has received 68 notifications from medical practitioners of drug dependency. Of these, 36 related to possible illicit drug use. Of the 36, 20 were people from the mainland.

COMMUNITY AGENCIES

Recent investigations into the feasibility of collecting data from community welfare agencies indicate that they could be valuable sources of information. A cross section of such agencies already contacted include shelters, church based groups and marriage guidance. The people who work in these agencies have a very good feel for the situation and often have extensive experience.

So far, the most widely expressed views, inter alia, have been:-

. Alcohol/drug use is closely linked with lack of self esteem often due to prolonged unemployment.

- . Despite the lack of money a huge proportion (in the order of 80%) of the clients smoke tobacco.
- . Use of alcohol , often combined with tobacco, is very high amongst the clients and often directly contributes to their problems.
- . Abuse of tranquillizers is quite high especially amongst the homeless.
- . Amongst young people in the age group 15-25 - especially "homeless" (ones who go to shelters) - amphetamines are very popular and will be used in preference to cannabis when they are available. The use of cannabis is quite high amongst this same group (50%-75%) and it seems to be fairly freely available.

At this early stage no data are available from the welfare agencies.

SUMMARY

- . The dearth of available data on illegal drug use in the State renders the construction of an overview exceedingly difficult.

- . Because of the absence of a methadone maintenance program the State has been less attractive to opiate dependent clients at the Drug and Alcohol Service.

- . Figures relating to alcohol dependency syndrome suggest that alcohol is the major drug of abuse in the State.

- . For cannabis, heroin, cocaine and amphetamines the information from the State Drug Bureau appears to be the only routine indicator available since the other agencies see relatively few cases involving these drugs.

- . The use of higher priced drugs such as cocaine is normally associated with people who are in a better financial position to afford the drug.

- . The available data do not point to any high degree of intravenous drug use.

- . Cannabis and Amphetamines seem to be the most popular illegal drugs of abuse.

- . Official notifications of drug dependency in the last two years indicate that approximately 50% are related to possible illicit drug use with half of these people coming from the mainland.

- . It would appear from intelligence sources that there is a local 'narcotic fraternity', (the number of persons being somewhat unknown) who seem to be recreational users.

APPENDIX 1

John Edis Hospital
Inpatient Data

	<u>ICD No.</u>	<u>1985/86</u>	<u>1986/87</u>
<u>TOTAL ADMISSIONS</u>		<u>569</u>	<u>600</u>
Alcohol Dependence Syndrome	303.0	479	454
<u>Drug Dependence</u>			
Morphine Type	304.0	8	5
Barbiturate Type	304.1	4	1
Cannabis Type	304.3	1	-
Amphetamine Type	304.4	2	-
Combinations of Morphine Type with any other	304.7	2	1
Unspecified	304.9	-	28
<u>Non-Dependent Abuse of Drugs</u>			
Alcohol	305.0	58	83
Tobacco	305.1	-	2
Cannabis	305.2	3	-
Hallucinogens	305.3	1	-
Barbiturates & Tranquillizers	305.4	1	-
Morphine Type	305.5	2	-
Unspecified	305.9	-	18
Other diagnoses		8	8

APPENDIX 2

<u>1986/87</u>	<u>ICD No.</u>	Launceston Service	North West Service
<u>TOTAL OUTPATIENTS</u>		<u>268</u>	<u>156</u>
Alcohol Dependence Syndrome	303.0	94	43
<u>Drug Dependence</u>			
Morphine Type	304.0	3	-
Barbiturate Type	304.1	3	1
Amphetamine Type and other psychostimulants	304.4	3	4
Other	304.6	1	1
Combinations of Morphine type with any other	304.7	1	-
Unspecified	304.9	11	1
<u>Non-Dependent Abuse of Drugs</u>			
Alcohol	305.0	52	48
Tobacco	305.1	30	1
Cannabis	305.2	-	5
Barbiturates & Tranquillizers	305.4	2	1
Unspecified	305.9	12	7
Other diagnoses		56	44

APPENDIX 3

AGE STATISTICS FOR PERSONS CHARGED FOR 10 YEAR PERIOD 1976/77 TO 1985/86

AGE GROUPS		1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
		1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Under 15	M	-	-	-	-	-	4	1	3	-	2
	F	-	-	-	-	-	-	3	1	-	-
15 - 19	M	232	158	162	234	202	349	83	145	128	126
	F	62	29	27	89	55	40	14	22	29	24
20 - 24	M	290	264	483	459	646	786	163	240	251	193
	F	70	31	74	97	97	42	33	43	53	33
25 - 29	M	109	165	187	164	212	339	106	174	141	100
	F	28	49	13	162	40	61	11	38	38	42
30 - 34	M	10	19	67	134	168	241	61	47	63	57
	F	12	10	8	14	23	30	7	10	9	9
35 - 39	M	3	7	10	22	35	45	31	22	28	20
	F	-	3	2	36	8	4	2	3	4	2
40 - 44	M	1	5	-	11	33	10	1	8	6	4
	F	1	15	3	-	-	-	1	-	-	-
45 - 49	M	-	-	3	6	2	5	2	2	5	1
	F	-	-	-	-	-	-	-	-	1	-
Over 50	M	1	-	2	34	4	1	5	2	6	5
	F	-	-	-	-	-	-	2	2	1	-
TOTALS		649	620	914	1064	1303	1780	453	651	628	508
		173	137	127	399	223	227	73	119	135	110

CATEGORIZATION OF DRUGS FOR 10 YEAR PERIOD 1976/77 to 1985/86

	1976 1977	1977 1978	1978 1979	1979 1980	1980 1981	1981 1982	1982 1983	1983 1984	1984 1985	1985 1986
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Cannabis	212	213	312	367	405	513	428	590	619	524
Narcotics	23	30	21	34	38	17	27	62	80	55
Restricted Substances	6	8	5	27	35	13	22	11	14	12
TOTAL	241	251	338	428	478	543	477	663	713	591

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INDICATORS OF DRUG ABUSE IN THE ACT
DATA FROM GOVERNMENT TREATMENT AGENCIES

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PAPER PRESENTED AT THE
FIRST NATIONAL DRUG INDICATORS CONFERENCE
AUSTRALIAN INSTITUTE OF CRIMINOLOGY
CANBERRA

10-12 MAY 1988

Note: The views expressed in this paper do not necessarily reflect the views of the Alcohol & Drug Service.

INTRODUCTION

This report describes the characteristics of clients presenting to government treatment agencies in the ACT. The data are similar to those collected for the ACT Drug Indicators Project, a research program which aims to develop and refine the methodologies of estimating the incidence, prevalence and character of illegal drug use (Stevens et al, 1987). Data from government treatment agencies will be included in future reports of the ACT Drug Indicators Project. However, the data from government treatment agencies are presented here to complement that already collected by the ACT Drug Indicators Project team (Stevens et al., 1987, 1988) and thus provide an overview of the nature and extent of drug abuse in the ACT as indicated by clients presenting to treatment agencies.

METHOD

Sample

The sample consisted of all clients who presented for treatment at the Alcohol & Drug Service, ACT Health Authority, during the period 1 July 1987 to 31 March 1988. Six hundred and ninety-four individuals presented for treatment during the 9 month study period. Services provided to the clients included referral, counselling, treatment and rehabilitation (including methadone maintenance) and inpatient and outpatient detoxification (including methadone reduction).

Measurements

The Alcohol & Drug Service implemented, on 1 July 1987, a client information system (ADSCIS) designed to systematically obtain information on all clients presenting to the Alcohol & Drug Service for treatment. As part of ADSCIS data were collected from the entire sample in the following areas:

- demography and current family circumstances;
- family background, education and employment history;
- past and present health status;
- legal history and current criminal charges;
- alcohol and other drug use and treatment history.

These data are comparable to those collected by the ACT Drug Indicators Project (Stevens et al., 1987).

In addition, ADSCIS was extended to include the collection of data on selected risk factors for acquired immune deficiency syndrome (AIDS). These data were collected on all clients undergoing either a methadone maintenance or methadone reduction program after 1 January 1988. Data were recorded on standard forms by the counselling, nursing and medical staff of the Alcohol & Drug Service using information obtained during assessment interviews or counselling sessions. Only preliminary analyses of selected client characteristics, drug use and AIDS risk factors will be presented here.

Data Analysis

Frequency data were analysed by chi-square tests. Continuous data were analysed by two-tailed t-tests. A significance level of differences was set at $p < .05$.

RESULTS

Sex and primary drug problem

Of the 694 clients receiving treatment during the study period, 506 (72.9%) were male and 188 (27.1%) were female (Table 1). An excess of males among clients presenting to treatment agencies has been reported previously (Travers and Hendtlass, 1978; Beckerman and Amaroo, 1984; Dorn and South 1985) and cannot be explained by sex differences in the prevalence of alcohol and other drug problems alone.

The primary drug problems of the clients are shown in Table 1. In the total sample, 60.8% of the attendances related to alcohol and 36.3% related to opiates. Less than 3% of the sample presented with problems related to other drugs and, because the number of these clients was small, they were excluded from subsequent analyses. There was a significant difference in the distribution of primary drug problems in males and females. Males were more likely to present with problems related to alcohol, while females were more likely to present with problems related to opiates.

Age

The age distribution of the sample, broken down by sex and primary drug problem, is shown in Table 2. For both sexes, clients with primary alcohol problems were significantly older than clients with primary opiate problems. Only for clients with primary alcohol problems was there a significant difference between the sexes, with females being older than males.

Marital status

Not surprisingly, given the age structure of the sample, just under 40% of the clients had never been married (Table 3). For both sexes, clients whose primary drug problem related to alcohol were more likely to be married, separated, divorced, remarried or widowed, while clients whose primary drug problem related to opiates were more likely to be single or in a defacto relationship.

There was no difference between the marital status of male and female opiate users. However, for alcohol users, males were more likely to be single, separated or in a defacto relationship, while females were more likely to be married, divorced, remarried or widowed. These differences in marital status between the various client groups are probably due, in part, to the age differences in the sample.

Educational level

In the ACT, nearly 20% of the adult population has a degree or diploma and a similar proportion have a trade or other certificate (Australian Bureau of Statistics, 1987). In comparison, our sample tends to have a fairly low level of educational achievement (Table 4). The majority of clients (57.8%) had not completed secondary school. For 22.3% of the sample, a secondary education was the highest level of education achieved. Only 9% had a trade certificate, while 3.9% and 7.1% of the sample had a partial or complete tertiary education respectively.

There was no difference between the educational level of female alcohol and opiate users. However, for males, the educational background of alcohol users was more diverse than that of opiate users. Male alcohol users were more likely to have stopped their education at primary school or to have completed a trade course or undertaken some form of tertiary study. Male opiate users were more likely to have stopped their education at some time during secondary school.

Within each primary drug problem group, there was no difference between the educational level of male and female opiate users, and the difference between the sexes for alcohol users was only just significant reflecting the underrepresentation of women in the trades.

Employment status

The employment status of the sample is shown in Table 5. Of the total sample, 47.4% of the sample was employed, 37.0% unemployed and 15.6% were not in the labour force. There was a significant difference between the employment status of alcohol and opiate users for both males and females. For both sexes, alcohol users were more likely to be employed, on a social security benefit (not unemployment) or retired, while opiate users were more likely to be unemployed. For females, alcohol users were also more likely to be engaged in home duties while opiate users were more likely to be students.

Employment status was not independent of sex for either alcohol or opiate users. For both primary drug problems, males were more likely to be employed or unemployed, while females were more likely to be on a social security benefit or engaged in home duties.

Previous treatment

The number of clients who had received previous treatment for alcohol or other drug problems is shown in Table 6. The majority of clients (70.1%) had received some form of previous treatment. The likelihood of previous treatment was not independent of primary drug problems in either males or females. For both sexes, primary opiate users were more likely to have received previous treatment than primary alcohol users. Within each primary drug problem group, there was no relationship between previous treatment and sex.

Other drug use

The distribution of other drugs used by clients in the three months prior to their presentation for treatment is shown in Table 7. The vast majority of clients (67.7%) reported at least some form of other drug use. Cannabis was mentioned most frequently (46.3% of clients) followed by benzodiazepines (24.8%), prescribed medications (20.5%), amphetamines (14.4%), anti-depressants (6.4%), cocaine (5.5%), barbiturates (3.3%) and hallucinogens (2.3%). Of the clients with primary alcohol problems, 7.0% of males and 1.3% of females reported opiate use. When the other drug use of clients with primary alcohol and opiate problems was compared it was found that, for males, opiate users were more likely to report the use of cannabis and amphetamines, while alcohol users were more likely to report the use of prescribed medications. For females, opiate users were more likely to report the use of cannabis. No other significant differences were found.

When the other drug use of males and females was compared it was found that, for clients with primary alcohol problems, males were more likely to report the use of cannabis, while females were more likely to report the use of benzodiazepines. For clients with primary opiate problems, males were more likely to report the use of cannabis, while females were more likely to report the use of barbiturates and prescribed medications. No other differences were found.

Prior criminal record

The majority of clients (68.8%) had a prior criminal record (Table 8). Criminal record was independent of primary drug problem in males but not females. For females, opiate users were more likely to have a criminal record than alcohol users.

Criminal record was associated with sex for both alcohol and opiate users. For both primary drug problems, males were more likely to have a criminal record than females.

Current criminal charges

The number of clients with current criminal charges is shown in Table 9. Of the total sample, 28.3% of clients were facing current criminal charges. For both sexes, there was no significant difference between the number of alcohol and opiate users facing current criminal charges. However, within each primary drug problem group, males were more likely than females to be facing current criminal charges.

AIDS : risk behaviour among clients admitted to methadone programs

In the ACT, 77 human immunodeficiency virus (HIV) seropositive cases have been identified to date. Of these 77 cases, 6 were intravenous drug users. Of the intravenous drug users, 4 were clients of the Alcohol & Drug Service.

The primary modes of transmission of HIV among intravenous drug users are the sharing of contaminated needles and syringes and, to a lesser extent, sexual contact (Scottish Home and Health Department, 1986). The distribution of these AIDS risk factors among clients admitted to methadone programs is shown in Table 10. As there were no significant differences between the distribution of AIDS risk factors in males and females, the results are presented for the sample as a whole. The results may not be representative of intravenous drug users in general. However, of the opiate users presenting to the Alcohol & Drug Service for treatment, the majority (72.5% of males; 82.6% of females) went on a methadone program (either maintenance or reduction).

Of the sample of 111 clients, 73.4% stated that they were at no or minimal risk of contracting AIDS. This was despite the fact that 91.9% of the sample reported that they had at some time shared needles. Furthermore, of these persons, 49.0% had shared needles more than 10 times in the last 6 months and 65.7% did not always share needles with a single individual. With respect to sexual practices that placed clients at risk of contracting AIDS, 9.0% were either homosexual or bisexual, 30.3% had more than one sexual partner in the last 6 months and 23.6% sometimes, and 68.2% never, used condoms.

It is clear that a substantial proportion of our sample of intravenous drug users are at high risk for HIV infection. However, the majority of our sample were unaware of, or denied, their risk of contracting AIDS (see also Edgoose and Baillie, 1987).

DISCUSSION

Treatment agency data only provide an indication of the nature and extent of alcohol and other drug problems in general. This is because the number and types of clients may reflect such things as the capacity of the service rather than the demand for services, the ideology of treatment staff, or the price and availability of the drug of choice. Despite these limitations, treatment agency data can be used as one indicator of wider trends, and provide valuable information about the characteristics of people with alcohol and other drug problems, the primary drugs concerned and the major presenting problems. Furthermore, treatment agency data can serve as one pointer to future service needs and help to identify those issues which require further investigation. With these points in mind, the following results are particularly worthy of note.

First, the number of women presenting for treatment is lower than one would expect. Although work has been done in Australia on the special needs of women with respect to treatment services (Duquemin, 1987), the client pool of female alcohol and other drug users is still largely untapped, and more work is needed if treatment services are to attract, and successfully treat, women with alcohol and other drug problems.

Second, alcohol is still the most widely abused drug among clients presenting for treatment. This is in line with the results of various official enquiries into drug use in Australia which show that legal drugs, particularly alcohol and tobacco, are the cause of most drug problems and drug-related deaths (eg Senate Standing Committee on Social Welfare, 1977; Royal Commission into the Non-medical Use of Drugs, 1979; Commonwealth Department of Community Services and Health, 1987). However, polydrug use was extremely common among our clients, and treatment agencies need to be aware of, and prepared to deal with, the multiple drug problems of clients.

Our clients presented with a variety of problems apart from their alcohol and other drug use. They tended to lack the social support of a steady relationship. They had a limited education and a substantial proportion were unemployed. The majority had received, and presumably failed in, some other form of alcohol or other drug treatment prior to their presentation to the Alcohol & Drug Service. A substantial proportion had a prior criminal record and, to a lesser extent, current criminal charges. Although there were some differences between the problems faced by primary alcohol and opiate users, both primary drug problem groups demonstrated serious legal and social problems. It has been suggested that the important differences between alcohol and other drug users are not the particular drug used, but the behaviours associated with, or the consequences of, alcohol and drug use (Flaherty et al., 1986). Treatment activities directed at the behaviours associated with alcohol and other drug use may be more successful than those directed solely at eliminating the use of specific drugs.

Finally, the prevalence of AIDS risk behaviour among methadone clients has obvious implications for the spread of HIV among intravenous drug users. An expansion of methadone programs may help to contain the spread of AIDS, although this will not address the problem of HIV transmission among non-opiate intravenous drug users. Needle exchange programs may help to further contain the spread of HIV among intravenous drug users based on the experience of needle exchange programs in Amsterdam (Bunning et al., 1986), and an evaluation of a needle exchange program in Sydney (Wodak et al., 1987). Studies of homosexual men in Australia suggest that education alone is not effective in reducing AIDS risk behaviour (Ross and Herbert, 1987). Unfortunately, what will be most effective in changing AIDS risk behaviour among intravenous drug users is still not known.

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TABLE 1

PRIMARY DRUG PROBLEM (%)			
DRUG	MALES (N=506)	FEMALES (N=188)	TOTAL (N=694)
ALCOHOL	67.0	44.1	60.8
OPIATES	31.6	48.9	36.3
BENZODIAZEPINES	0.6	3.2	1.3
CANNABIS	0.4	2.1	0.9
AMPHETAMINES	0.4	1.6	0.7

TABLE 2

AGE DISTRIBUTION		
	PRIMARY DRUG PROBLEM	
	ALCOHOL	OPIATES
MALES		
N	339	160
MEAN AGE (YEARS)	34.26	28.53
STANDARD DEVIATION	10.66	5.57
FEMALES		
N	83	92
MEAN AGE (YEARS)	39.65	28.55
STANDARD DEVIATION	12.67	7.10

TABLE 3

MARITAL STATUS (%)					
MARITAL STATUS	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
SINGLE	37.1	25.3	51.7	38.8	39.2
DE FACTO	9.0	5.1	20.4	29.4	13.9
MARRIED	24.9	29.1	12.9	16.5	21.5
SEPARATED	13.4	11.4	8.2	8.2	11.2
DIVORCED	14.3	22.8	6.8	3.5	12.2
REMARRIED	0.6	2.5	0.0	0.0	0.6
WIDOWED	0.6	3.8	0.0	3.5	1.3

TABLE 4

EDUCATIONAL LEVEL (%)					
EDUCATIONAL LEVEL	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
PRIMARY	5.0	2.9	0.8	4.1	3.7
PART SECONDARY	52.6	58.0	54.8	55.4	54.1
SECONDARY	16.9	23.2	28.2	33.8	22.3
TRADE	13.6	0.0	8.1	0.0	9.0
PART TERTIARY	4.3	4.3	3.2	2.7	3.9
GRADUATE	5.3	7.2	4.8	4.1	5.3
POSTGRADUATE	2.3	4.3	0.0	0.0	1.8

TABLE 5

EMPLOYMENT STATUS (%)					
EMPLOYMENT STATUS	PRIMARY DRUG PROBLEMS				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
EMPLOYED	56.0	36.0	46.9	25.3	47.4
UNEMPLOYED	34.3	20.0	49.7	41.0	37.0
SOCIAL SECURITY BENEFIT (NOT UNEMPLOYMENT)	6.5	13.3	2.1	9.6	6.8
HOME DUTIES	0.3	25.3	0.0	20.5	5.9
STUDENT	1.9	1.3	1.4	3.6	1.9
RETIRED	0.9	4.0	0.0	0.0	1.0

TABLE 6

PREVIOUS TREATMENT (%)					
PREVIOUS TREATMENT	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
YES	58.1	65.5	87.8	83.7	70.1
NO	41.9	34.5	12.2	16.3	29.9

TABLE 7

OTHER DRUG USE (%)					
OTHER DRUG USE	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
CANNABIS	38.2	21.3	71.0	55.6	46.3
BENZODIAZEPINES	20.3	33.3	26.7	31.6	24.8
PRESCRIBED MEDICATIONS	23.5	34.7	6.2	21.3	20.5
AMPHETAMINES	13.7	10.3	20.8	16.9	14.4
ANTI-DEPRESSANTS	6.7	10.7	4.8	3.9	6.4
COCAINE	4.4	2.7	8.9	6.5	5.5
BARBITURATES	1.9	4.0	2.1	10.5	3.3
HALLUCINOGENS	2.5	0.0	3.5	1.3	2.3
OPIATES	7.0	1.3	-	-	-

TABLE 8

PRIOR CRIMINAL RECORD (%)					
PRIOR CRIMINAL RECORD	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
YES	74.7	31.0	79.5	56.9	68.8
NO	25.3	69.0	20.5	43.1	31.2

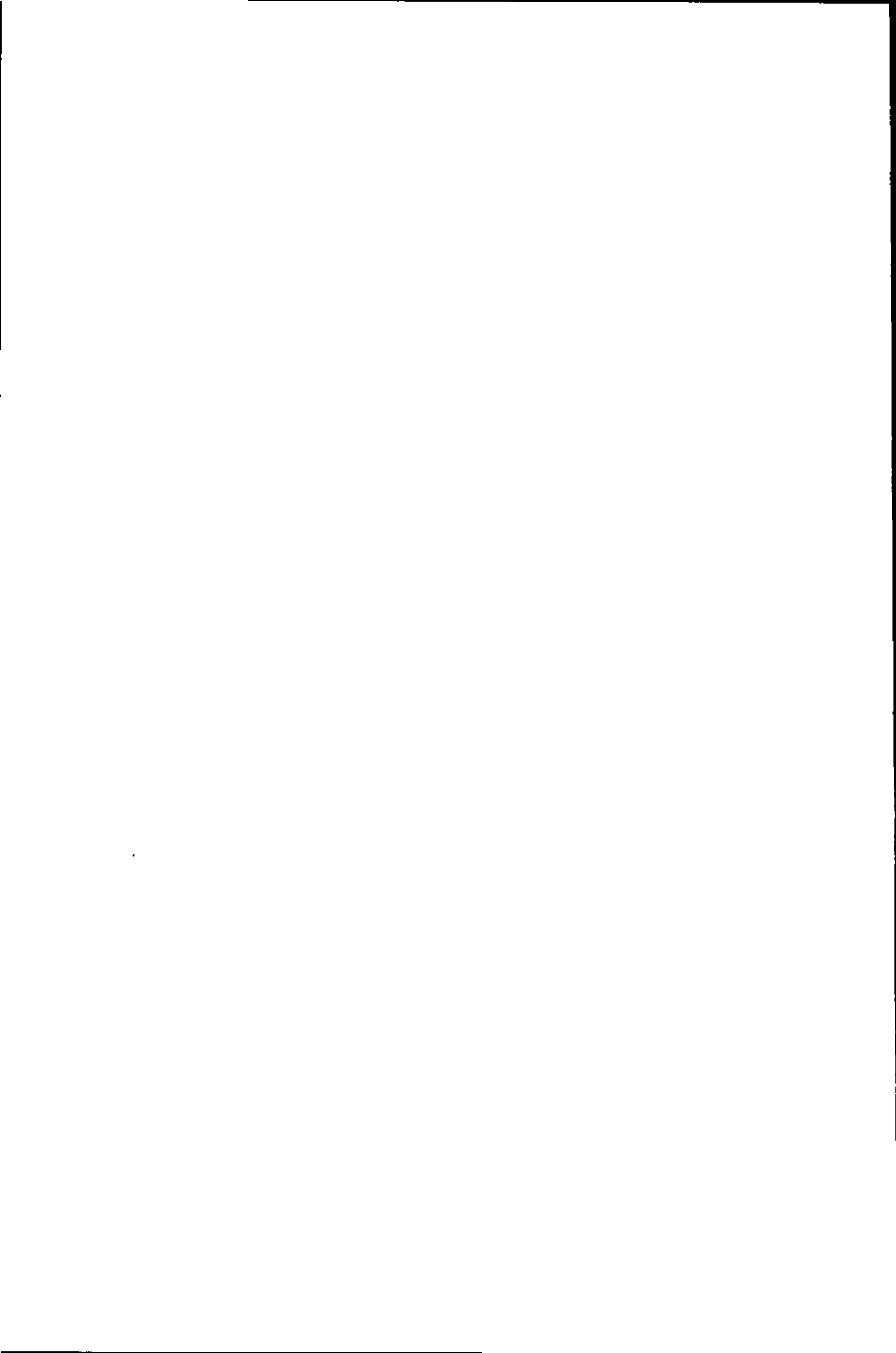
TABLE 9

CURRENT CRIMINAL CHARGES (%)					
CURRENT CRIMINAL CHARGES	PRIMARY DRUG PROBLEM				TOTAL
	ALCOHOL		OPIATES		
	MALES	FEMALES	MALES	FEMALES	
YES	31.4	16.1	34.2	18.1	28.3
NO	68.6	83.9	65.8	81.9	71.7

TABLE 10

AIDS RISK BEHAVIOUR (%)	
CLIENT SELF-ASSESSED RISK OF CONTRACTING AIDS	
NO RISK	31.2
MINIMAL	42.2
MODERATE	16.5
HIGH	10.1
EVER SHARED NEEDLES	
YES	91.9
NO	8.1
FREQUENCY OF NEEDLE SHARING	
LESS THAN 10 TIMES IN LAST 6 MONTHS	51.0
MORE THAN 10 TIMES IN LAST 6 MONTHS	49.0
PEOPLE CLIENT SHARES NEEDLES WITH	
ALWAYS THE SAME 1 PERSON	34.3
USUALLY THE SAME 1 PERSON	34.3
MORE THAN ONE PERSON	31.4
SEXUAL PREFERENCE	
HETEROSEXUAL	91.0
HOMOSEXUAL	4.5
BISEXUAL	4.5
NUMBER OF SEXUAL PARTNERS IN LAST 6 MONTHS	
NONE	6.4
ONE PARTNER ONLY	63.3
TWO OR THREE PARTNERS	19.3
FOUR OR MORE PARTNERS	11.0
USE OF CONDOMS	
ALWAYS	5.5
USUALLY	2.7
SOMETIMES	23.6
NEVER	68.2

RESEARCH PROJECT DATA BASES



**PAPER PRESENTED TO THE FIRST NATIONAL DRUG INDICATORS CONFERENCE
Canberra 10-12 May 1988**

HEROIN DISTRIBUTION IN NEW SOUTH WALES

Ian Dobinson and Patrizia Poletti

The study reported here is the third in a series (Dobinson and Ward 1985 and 1987) and explores the lives and activities of a group of active heroin user/sellers. By targeting this group it was hoped not only to collect information on the economics of their heroin use, but also to observe individual networks created by the distribution of heroin, including data on a respondent's dealings and relationships with both suppliers and customers.

Because the group targeted is at the so-called "street" level, it is recognised that the interviews only provide detailed information on the lower strata of the heroin distribution "chain". By combining this information, however, with that collected from drug law enforcement officers and criminal intelligence agencies, this study also attempts to describe the most common networks (or levels) through which heroin passes, from importation to "street" use.

In 1985 (Dobinson and Ward) it was suggested that great caution should be exercised in attributing data from one such study to an overall user population. As was suggested then by Potteiger (1981), problems, such as those encountered by multiplying one study's results by an estimated user population and the subsequent errors (see Singer, 1971), may be overcome, and a more reliable description of the user population obtained, by gathering data from multiple samples drawn from both active and captive heroin user groups.

By describing the lifestyles and activities of another group of regular heroin users and an overview of the ways in which heroin is distributed in the Sydney Metropolitan Area, this study, in conjunction with Phases I and II, has important implications for both drug law enforcement and treatment policy.

This trilogy also stands as an unique approach to the study of drug use in one geographical area, in this case New South Wales. Apart from this, the current study represents a new direction in the criminological research of drug use in this country. Although considerable research has been done on the behaviour of active drug users in the U.S.A., and to a lesser extent in Great Britain, similar research, in Australia, has only been of a limited nature(see Davies, 1986 and his study of a small group of heroin users in the Kings Cross area and Mugford 1987 on the lifestyles of active cocaine users).

The present study draws on the experience of overseas research, especially that in the ethnographic tradition. The United States, in particular, has a history of ethnographic research into drug use. (see for example Preble and Casey, 1969, Goldstein, 1981 and Johnson et al, 1985).

Heroin distribution

As part of their research on the economics of regular heroin use, data was also collected by Preble and Casey, Goldstein and Johnson and his colleagues on the drug distribution activities of low level heroin users in New York City.

Preble and Casey, however, went further and attempted to describe the general levels through which heroin would pass from importation to the street. They also described the possible "cuts" (adulterations) made to the heroin and the profit margins generated at each level. The authors used as their information sources, data from narrative user case studies as well as specific case and other information obtained from various drug law enforcement and other criminal justice agencies.

Mark Moore, in his book "Buy and Bust" has also attempted to describe certain models of heroin distribution. Through the use of narrative case studies and prior research (for example Preble and Casey) he outlines four models which might operate at the lower levels of the distribution "ladder." Such descriptions provide details on the amounts purchased, the cost, their cutting, repackaging, resale, and the estimated number of customers. By utilising this information together with price and quantity data obtained by drug law enforcement he further attempts to quantify the New York heroin distribution system. Although Moore accepts that there are methodological problems with this approach (not the least of which is its reliance on law enforcement data) he feels it is nevertheless very important.

"(t)he distribution system operating in New York City accounts for a reasonably large fraction of the total volume distributed in the United States. Consequently, if one can successfully describe the system in New York, one will have succeeded in describing a large proportion of the domestic-heroin system" (1977, p. 67). Given the similarly dominant position of Sydney in the distribution of heroin in Australia, the current study is of equal importance.

Heroin distribution in Sydney

Given that major cultural differences exist, there would appear to be little if any transferability of the results carried out in overseas research to the local situation. Consequently, as has been previously emphasised (Dobinson and Ward 1985 and 1987) there is a need for locally-based research.

To date nothing has been done which has attempted to describe the lifestyles of active heroin user/dealers in this country nor has there been an attempt to systematically describe how heroin is distributed from the 'customs barrier' to the streets.

Although this may paint a gloomy picture with regard to our understanding of the so-called "drugs problem", some recently completed research as well as other studies currently underway should be noted. Davies (1986), for example, in his expose on heroin use in Australia describes a three week period he lived with a group of regular heroin users in Kings Cross. By observing in great detail their activities over this period, he provided a very interesting insight into the lives of five people as it related to their buying and using of drugs, their incomes and their leisure time.

As part of a Drug Indicators study in Canberra, the Australia Institute of Criminology is also proposing to undertake fieldwork investigation of the illicit drug scene. Also in conjunction with the Institute, Dr Stephen Mugford is continuing to collect data from active cocaine users in Sydney, Canberra and Melbourne.

The present project is an attempt to emulate some of the methodologies adopted in overseas research. In this regard the study by Johnson and his colleagues is of particular relevance, with the current study group, as it relates to their roles as heroin sellers, possibly being what the New York researchers call "house connections" and "jugglers" (Johnson et. al., 1985, pp. 62-63).

Apart from describing the behaviour of a group of active heroin user/sellers, this study also attempts to outline the general pathways through which heroin passes from importation to the street. Once more overseas research, although of some guidance methodologically, has little actual relevance to the local "scene". To date our understanding of drug distribution in Australia has been restricted to that collected by Royal Commissions (see for example the Woodward, Williams and Stewart Royal Commissions) and

investigative journalists (such as Bob Bottoms) who have concentrated more on crime syndicates and their members than on an overview of how a drug such as heroin reaches our streets. McCoy (1980) and Hall (1981), for example have described in detail the drug operations of such organised crime syndicates as Mr Asia, the Windsor Castle set and the Double Bay "mob", together with associated examples of gangland murder.

By utilizing data from user/seller interviews and through selected interviews with undercover drug law enforcement officers as well as other law enforcement agencies this study seeks to provide an overview of the most common levels through which heroin passes once it has "breached" the customs barrier.

Design and methodology

The methodological objectives of this study were two fold, being to:

- (a) obtain detailed information about the activities of a group of active heroin user/sellers; and
- (b) describe the most common pathways through which heroin passes once it has crossed the customs barrier.

Heroin user/sellers

The fact that this study was the third in a series proved highly advantageous. Much of the interview instrument had been previously tested and subsequently fine tuned since the first study (Dobinson and Ward, 1985) began in 1983. Although one member of the research team (Pat Ward) left at the completion of phase two (Dobinson and Ward 1987) a great deal of experience had been built up both in terms of research expertise as well as an insight into the lifestyles of regular heroin users and the drug sub-culture.

The current study, however, did involve a new direction in the Bureau's research on heroin use. Whereas the previous studies gathered data on usage, crime and income during pre-arrest and pre-treatment periods from so-called captive samples, this project sought to obtain such information from active users relating to a seven day period prior to the interview. By not drawing from "captive" samples, such as treatment agencies and gaols it was also hoped to avoid the reporting bias that may result from such sample selection (for a fuller discussion of this bias see for example Datesman and Inciardi, 1979 and Gould, 1974).

Although certain problems are overcome by accessing an active user group it must still be appreciated that this study group is typical only of those who live largely off the streets and who are intrinsically involved in the drug network. Once again, therefore, caution must be stressed in applying the findings from this study to any larger user population.

The Design Stage

As mentioned, the design of the project was greatly assisted by the fact that two heroin user studies had already been successfully completed by the Bureau. Early decisions on the data to be collected, especially as it related to demographics, history of drug and alcohol use and historical involvement in crime, were easily made. The fact that common data has now been collected in these areas for three distinct study groups has also allowed for some interesting comparisons.

Although this part of the design was easily settled the same was not true for that part of the interview instrument which sought to collect information on current drug usage and selling behaviour. Further important decisions also needed to be made in relation to the methods of accessing this user/seller group and their recruitment as possible respondents. With regard to the latter it was also evident that certain selection criteria (in terms of amounts used and sold) would have to be set.

Reference has already been made to the uniqueness of this project in an Australian context and the guidance obtained from the New York study by Johnson and his team (Johnson et. al. 1985). The success of that project, the types of data obtained and the methodologies used provided both incentive and assistance in the early design phases of the current study. Although the New York study concentrated on the economics of low level street heroin use it also sought to collect information on the drug distribution activities of its respondents. This was particularly influential in the early design of those questions that related to drug selling in the current study. It was evident, however, that the present study aimed to access individuals somewhat higher in the distribution chain than had Johnson. Further, the current study was also seeking to describe drug distribution in far more detail than did the New York team. Individuals we wished to contact were to act as a focal point in terms of their dealings and relationships with the people they bought their heroin from as well as their dealings and relationships with the people they sold to. The New York study together with earlier American research (Preble and Casey, 1969) was, however, largely responsible for the overall methodology adopted. The establishment of a field office, methods of contact with user/sellers and the style of questionnaire adopted mirrored much of that utilized by the New York team.

Having made these decisions a series of draft questionnaires were commenced. At the same time it also decided to establish a working party to confer both on early drafts as well as the operational facet of the project. This process took two forms. The first involved liaising with other research officers at the Bureau. Once items had passed this stage they were then referred to a group which involved, the project team, a social worker (Rankin Court Methadone Program)

and a senior drug counsellor (Bourke Street Drug Advisory Centre). These two agencies represent the government's major inner city drug treatment centres. Notification of the study and its objectives were also communicated to the Wayside Chapel (providing drug and alcohol treatment and education services), Odyssey House (a reception centre for a major non-government therapeutic community) and the Australian Prostitutes Collective (providing prostitute support services). Such contacts, it was felt, would facilitate both the credibility of the project in the local area as well as possible recruitment locations for the local user population.

It was also imperative that the police be "onside". In this regard initial meetings were had with two officers of the Drug Law Enforcement Bureau. The purposes of these meetings were to firstly inform the police of the project, obtain their approval and support and to then subsequently ensure that there was no interference. From the project's inception it was accepted that the possible arrest or questioning of subjects in the vicinity of the field office or police surveillance of this location could be very detrimental to the study's chances of success. Although no written guarantees were given the project received the support of the Commissioner with an officer of the Drug Law Enforcement Bureau being appointed as the Police liaison officer for the project. Through this officer a meeting was also arranged with the Superintendent of A Division which took in the area where the field office was located. Once again verbal assurances of "hands off" were obtained. In fact during the operations of the field office no police interference occurred and although some respondents were arrested on drug charges neither they or anyone else ever considered that the project team had provided the police with any information.

The Field Office or 'Storefront'

The 'storefront methodology' was originally pioneered by Preble (see Preble and Casey 1969) in New York. It involved the establishment of a field office in an area where users were likely to congregate and to which subjects would come and undertake a formal interview. Given the specificity of the data to be collected such an approach was far more efficient than say approaching people in the streets and/or observing their behaviour (for a fuller discussion of the storefront methodology see Johnson et al, 1983: Appendix A).

Having adopted this technique the next step was to find a suitable location. Although the area in which the field office was to be located (Kings Cross/Darlinghurst) was never in question, problems were encountered in finding suitable office space. These problems included i) a shortage of suitable premises, ii) the high cost of commercial rents, iii) a 12 month minimum lease requirement and iv) an unwillingness of landlords to rent premises for such a project. Enquiries as to the availability of space from local government, government departments, treatment agencies and community welfare centres also proved fruitless.

Aproximately two months before the end of Stage 1 of the project (six months was allocated for project design, establishing the field office and piloting) information was received that office space might be available in the most unlikely of locations. In March 1987 the Darlinghurst Police Station was closed (its operation being incorporated within the Sydney Police Centre). The building was subsequently taken over by Inner City Health Services and plans were set in motion for internal refurbishment. During the interim (six months) the building was to be vacant. First impressions were that such a study as this could not possibly be located in an old police station, especially one as notorious as Darlinghurst. It was, however, ideally situated, being only walking distance from Kings Cross, Darlinghurst, East Sydney and also Surry Hills (the suburb directly south of the main target area and one which also was known to have a substantial user population). The station was also located at a major stopping point for bus services from Sydney's eastern beach suburbs (again areas known to be major locations for heroin distribution). The previous occupancy of the premises was a problem, however, but after consultation with the working party, Bureau staff and other individuals it was even thought that it may have a positive impact on respondents. In fact this impression was borne out by a number of respondents who took great delight in wandering about the old cell area reminiscing about the times they had been "busted". Others were also impressed by the fact that the premises were now going to be put to far "better" use.

Having gained the approval of Inner City Health, the project team occupied a fairly large office adjacent to the main entrance to the station. This area was divided so as to accommodate two interviewers (the authors). Relevant posters and information on drug use and health (especially AIDS) were obtained, the latter being distributed on request. Free condoms and needles and syringes were also provided, all of which served to enhance the credibility of the project and the rapport between interviewer and respondent.

The Interview Schedule

A structured questionnaire was once again used as the basis for the interview. Unlike the two previous studies (Dobinson and Ward, 1985 and 1987), however, this study sought to collect substantially more information and provide far more detail about heroin buying, using and selling. Following the New York example (Johnson et al, 1985) two distinct questionnaires were developed. The first related to the subjects demographic background and life history of drug and alcohol use as well as involvement in crime. The second was based on the seven days prior to interview and attempted to obtain a diarised account of events during this period.

Like the previous study (Dobinson and Ward, 1987), the life history section sought to collect information on:

- (a) demographic background;
- (b) history of drug and alcohol use;
- (c) circumstances of first heroin use;
- (d) overall criminal history; and
- (e) treatment and abstinence.

Certain additional information, however, was collected. This included data on criminal convictions, terms of imprisonment (both adult and juvenile) and current legal status (eg. bail, bond, parole etc.). The last of these was of particular relevance given the recent concerns of police that drug offenders on bail were continuing to offend.

Whereas the life history section was easily administered the seven day-diary proved far more complicated. Respondents were asked to provide daily information about the drugs they obtained, what they used and what they sold. A 'day' was defined as from the time they awoke to the time they went to bed. Other daily information included numbers of transactions and the size and cost of 'deals'. In many cases much time was spent collecting daily information as well as correcting certain inconsistencies when they occurred. Some respondents would also remember things 'they had forgotten' and those would have to be subsequently 'added' usually after a particular question or series of questions had concluded. A description of the information collected is set out below. This included:

- (a) alcohol and drugs obtained;
- (b) alcohol and drugs used;
- (c) drugs sold.
- (d) drugs distributed in other ways (eg. gifts, services);
- (e) number of suppliers;
- (f) description of suppliers (eg. part-time, full-time, friend, acquaintance);
- (g) quantities distributed by suppliers;
- (h) suburban location where heroin bought and sold;
- (i) number of customers;
- (j) description of customers (eg. regular, occasional, new strangers, friends, acquaintances);
- (k) income (eg. social security, employment, property crime, loans etc.);
- (l) expenditure (eg. rent, food, travel etc.);
- (m) precautions taken when buying and selling; and
- (n) an understanding of heroin distribution.

Before continuing it is felt that some justification for the payment of subjects should be given. Firstly, it was considered fair to pay respondents for their time. As it was estimated that each interview would take at least one and a half hours \$30 was seen as adequate compensation. Secondly, in order to attract the right sort of individual and for them to divulge very confidential and incriminating information both the interview and referral payments needed to be a sufficient incentive. Questions may also be raised about this group's need for money given the often sizeable amounts earned and expended. As will be seen from the results, very few respondents made a net profit, and as one stated "every little bit helps." Finally, on the issue of respondent payment, Bruce Johnson has this to say: "Ed Preble's (1980) observation has come true. What originally seems to be a mean motive, an addict's desire for money, has been transformed into a rewarding research relationship that will contribute to society for many years to come, and possibly improve the future social response to both drug abuse and crime." (Johnson et al, 1985: xxi)

The other method of checking credibility was the use of cross-checks within the questionnaire itself. Where dollar amounts expended on heroin and other outgoings did not correspond to income levels respondents were asked to explain these inconsistencies. In the majority of cases subjects were able to remember further details which accounted for any such differences. Even so, some respondents did not seem to be particularly credible or were unable to provide sufficient detail due to poor memory or being too "stoned". Their questionnaires were marked in this regard and during the editorial phase were closely checked. Efforts were also made to determine their level of involvement through "street" contacts. Fifteen subjects and their questionnaires were subsequently "culled" as a result of this process. This left a final study group of 143, seven of which were couples i.e. they bought and sold as a single unit and accordingly completed separate life histories but only one diarised section of the questionnaire.

Although there will always be a question mark as to the reliability of such self-report information certain actions and statements provided some degree of external verification about the truthfulness of the data obtained. It was noted that approximately six respondents were very active in referring other subjects, in fact one utilized the referral process as a regular source of income for the duration of the interview phase. Such individuals related to us many hours of tracking down other sellers that they knew and would often make appointments days in advance to fit these subjects in. Information was also received from an outside source that one of these "de-facto" fieldworkers was making quite a nuisance of himself by pestering some fairly big dealers in the Kings Cross area. Some of these referrals also related to us that such individuals had tried many times before they were finally prepared to attend the field office. In some cases arguments arose between these "de-facto" field workers as to who had actually made the initial contact and done the

Interviewing was commenced in the first week of August 1987 with two interviews completed over a four day period. This caused some alarm but was attributed to the introductory phase of any interview study. In fact the second week took a dramatic turn around with 21 subjects being interviewed. This high rate of turnover was to continue with the result that the target number of interviews (150) was completed in approximately half the allocated time (seven weeks instead of three to four months). This also meant a change of role for the fieldwork co-ordinator who spent almost all of his time vetting prospective respondents.

It was quite obvious that the monetary incentive of \$30 per interview was the major "drawcard". Apart from this subjects were also encouraged (a \$20 referral fee) to bring other user/sellers to the field office. They were paid this amount because it was their responsibility to physically accompany them, provide them with an outline of the projects objectives, the types of questions to be answered and reassure them as to the non-involvement of the police and the confidentiality of their answers (the confidentiality issue will be covered more fully later). At first sight one might envisage that referrals could have been "worded up" as to the contents of the questionnaire but certain safeguards were used. Firstly prospective subjects underwent a fairly rigorous questioning by the fieldwork co-ordinator. Subjects were initially questioned as to their heroin usage. In most cases the fact that they were regular users was easily discernible by physical traits, for example, "pinned" eyes and "track" marks. Some respondents even attended the field office soon after they had used. These people sometimes had to be re-scheduled for appointment as they were either too "stoned" or kept "nodding off". Once the co-ordinator was satisfied as to their usage, they were then questioned about their selling activities in relation to their level of consumption. If this did not "add up" they were asked to reconcile such inconsistencies. In many of these cases it often became obvious that the individual was not suitable and was politely asked to leave. The fieldwork co-ordinator has estimated that approximately one in ten subjects were either rejected because of such inconsistencies or in some case, outright, as it was obvious that they did not meet the eligibility criteria. In a few cases this resulted in heated argument but at no stage was there any violence.

Having been deemed eligible by the co-ordinator they were again questioned by the interviewers as to general usage and selling levels prior to the questionnaire being administered. In only four cases did this show up inconsistencies with these respondents completing only the life history part of the interview (for which they were paid \$10). The major problem here was that these individuals related information about the past (in some cases this was only matter of a few weeks, in others many months) rather than what had occurred in the previous seven days and as they had not sold at all in the previous week they were deemed inelligible.

fixed as the minimum requirements. Respondents had to be both regular sellers as well as regular users. We wanted to avoid users who might have sold drugs infrequently on an opportunistic basis. Such regular activity would also provide information on particular networks in terms of the number of suppliers, the number of clientele and the relationship between the respondent and these other individuals. At first it was considered that a benchmark in terms of heroin quantity would ensure that we attracted regular sellers.

In this regard it was stipulated that an individual must obtain at least one weight gram of street heroin per day, a proportion of which was used and the remainder sold. Within the first week of interviewing, however, this was found to be too rigid. For example some individuals did not buy every day, but bought large amounts every second day. Others did not sell every day especially on Sunday and Monday. There were also respondents, who were both regular users and sellers but were obtaining amounts of less than one gram or might have obtained one gram two days of the week and smaller amounts on the remaining days. It was felt that to exclude them would be to miss valuable information about this level of heroin distribution. Similarly other subjects were predominantly middle men or runners between supplier and customer. They were also not excluded so as to provide some insight into these activities.

Accordingly, we finally settled on a criteria whereby individuals had to have:

- (a) obtained heroin on at least 3 days during the week prior to the interview; and
- (b) sold heroin on at least 3 days of this week.

Although the criteria of one gram per day was dropped preference was given to subjects who had obtained seven or more grams of heroin in the week prior to the interview, a proportion of which they used and the remainder of which they sold. Even so there were few exceptions to the three day requirement. In three cases respondents had either not obtained heroin on at least three days or had not sold for at least this period. Two subjects had obtained large amounts of heroin on two days but had used and sold on more than three of the seven days. One subject who had used every day and had obtained heroin on three days had sold on only two days (large amounts). They have been included because they still provided details of what was regular activity.

Recruitment of subjects

Prior to setting up the field office the working party had to consider the employment of a field work co-ordinator. As with the New York study (Johnson et. al., 1983, p. 246) such a person needed to have close contacts with the local user population. Efforts were therefore made to identify an individual who was most likely to be an ex-user, who had most probably sold heroin in the past and who had the necessary contacts with a fair cross section of the local user population. The fact that a government methadone program was located in the target area provided a large pool of possible applicants.

Approximately two months before the opening of the field office a suitable person was found who, after being satisfied with the bona fides of the project, agreed to the offer of employment. This person had been on methadone for nearly three years and prior to this had been a regular heroin user for five years. He was also a voluntary worker with the Australian Prostitutes Collective and therefore had close contacts with many of the street "workers". Apart from this he had been actively involved in attempts to establish an organisation called ADIC (Aids Drug Information Collective) which, amongst other objectives, was seeking to combat Aids amongst intravenous drug users through a liberal needle and syringe exchange. Accordingly he had access to existing distribution networks and a good reputation amongst the treatment and welfare agencies in the area which were seen as possible recruitment points for the study.

His initial tasks were to firstly "spread the word" about the study (a two page brochure was produced for circulation) to user/sellers he knew personally as well as to locations where possible respondents might congregate for example treatment agencies, chemists and certain doctors surgeries. As to the recruitment of actual subjects, his initial responsibility was to seek out a small number of individuals to pilot test the questionnaire, this being of particular relevance to the diary section of the interview instrument. Due mainly to time constraints, however, only two pilot interviews were carried out. In normal circumstances this would have been less than satisfactory except for two major facts. Firstly, the first part of the questionnaire (life history) was almost identical to those parts used in the previous two studies and had been adequately tested and fine tuned. Secondly the diarised section had borrowed heavily from those questions and format used by Johnson and his team and as such we were very confident of their applicability.

It should also be noted that no problems at all resulted from the pilot interviews. As with Johnson (1983, Appendix A) it was also decided that, if necessary changes could be made during the course of the data collection. Fortunately no changes to the questionnaire were necessary.

Prior to the piloting it was necessary to fix the eligibility criteria for the study. Although it was clear from the outset that we wanted to interview active heroin user/sellers problems arose in fixing a "bottom line" for eligibility. Certain characteristics were

Finally, use was also made of the information provided by respondents. Subjects were asked about the quantities and cost of the heroin they obtained on a daily basis as well as their estimate of the amount of heroin they felt their main supplier(s) distributed. The last question in the interview schedule subsequently asked about their own understanding of the distribution network in which they were involved and where they felt they might "stand" on the distribution "ladder". In some cases their information was quite specific and in others more general. It has also been used in developing descriptions of the most common distribution systems in N.S.W.

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referring. Although these six respondents referred many others it is felt that they did not bias the results in any way.

In some cases respondents were also encouraged to approach their own suppliers as to their willingness to be involved. Although the vast majority felt that there would be "no chance" or their suppliers weren't users (and therefore not eligible anyway) some subjects were able to refer their major supplier to the field office. Finally in the last week of the interview phase a highly trusted and credible respondent, who had referred a few other subjects, informed the team that most user/sellers in the area had very likely been interviewed as everyone he had recently asked about doing the study had already done so.

Heroin distribution systems

Reference has already been made of the American (Preble and Casey, 1969; Moore 1977) projects which attempted to provide hypothetical descriptions of likely heroin distribution systems. It was considered to be an essential part of the current study to provide local descriptions of such systems. Accordingly similar data sources were accessed by the project team. The major source was drug law enforcement reports, especially of cases where undercover operations were utilized and which had attempted to trace the source of the heroin to the highest level possible. In this regard low level user/sellers were often used as informants to get to higher level distributors. Five undercover officers of the N.S.W. Drug Law Enforcement Bureau were interviewed (in three cases the interview was taped) and provided descriptions of a number of cases in which they had been involved. They were specifically requested to choose those cases which showed some movement between levels of the distribution network they were trying to "bust". These officers also provided information about price and purity at particular levels as well as an overview, in some cases, of the possible pathways through which heroin moves once past the customs barrier.

Similar case study information was also provided by the Commonwealth/State Joint Drug Task Force. This agency provided information about the higher levels of the distribution "ladder" as well as some information about overseas drug sources, especially South East Asia. The last law enforcement agency visited was the Australian Bureau of Criminal Intelligence. Although much of their information was "restricted" a four year breakdown of all N.S.W. heroin seizures at the customs barrier since 1984 was obtained. Data concerning the size, street value, purity (where available) and mode of importation (eg. person, mail cargo etc.) were also provided. This, together with the information provided by the other two law enforcement agencies, has allowed certain assumptions to be made about what might have happened to this heroin had it not been intercepted. It also provided interesting information about source countries and methods of importation.

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COCAINE USE IN UPPER INCOME GROUPS IN AUSTRALIA: AN APPROACH

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1. INTRODUCTION

"No adequate statistics can be obtained to describe the extent of the drug culture (in the United States of America), but according to the Drug Enforcement Administration, the average age of first-time drug use is now $12\frac{1}{2}$. By senior year in high school, 54% of all teenagers have smoked marijuana and more than half of them use it regularly. By that age too, 17% have experimented with cocaine, and 40% of those continue to use it" (The Guardian Weekly, 17 April 1988).

Other media reports and public opinion, mainly from overseas, also suggest that cocaine is used more in adult life by higher-income, more highly-educated groups of the community. Very little is known about cocaine use and beliefs about drugs in Australia. For this reason, the Commonwealth Department of Health has commissioned a number of studies in this area under its Federal and State Drug Offensive program. If some of the overseas patterns are repeated here, cocaine use might become a major issue in Australia. If health-care planning and resource allocation are to be effective, the actual pattern of cocaine use in Australia must be known.

This paper describes the approach of one of the studies, a survey of two more highly-educated, higher-income groups. The particular groups will not be identified in any detail to preserve anonymity, and because their

identification is of little relevance to the conduct or outcome of the survey. Suffice it to say that one of the groups comes from the financial and banking field in one of Australia's large cities, and the other comes from a tertiary education institution.

2. APPROACHES TO THE METHODOLOGY

Cocaine use is a "sensitive" question since the importation, processing, distribution, and use of cocaine are all illegal in Australia. This means that any survey must guarantee anonymity and attempt to protect respondents from the possibility of legal action arising in any way from the survey itself. The survey and its staff must be "neutral", concerned only to find the facts, leaving it entirely to others to decide what actions, if any, are appropriate in response to the findings of the survey. The rules of "non-participant observation" must be strictly observed, with the survey staff deliberately accepting neither social nor clinical responsibility for influencing the respondents in any way. In some "medical" surveys, for example, conflicting responsibilities may arise for a participating doctor, hence the need to emphasize neutrality in a survey concerned with an illegal substance. If the identity of an individual "offender" became known to a member of the survey staff, the rules of behaviour of a good journalist - to "protect sources of information" even in the face of penal sanctions - must be observed.

Two methods often recommended for ensuring anonymity in relation to "sensitive questions" are the randomised-response question, and the anonymous

sealed-envelope questionnaire. SIROMATH at first found the first of these attractive. The methodology was first described by Warner (1965), and various extensions and modifications are summarised in Cochran (1977). It appears to have been used successfully by Goodstadt and Gruson (1975) in Canada. They found that when used on high school students, the randomised-response procedure produced significantly fewer response refusals, and yielded higher drug-use estimates when compared with direct questioning. Other Canadian researchers, however, continued to use direct questioning in their surveys of Ontario adults in 1982 and 1984 (Smart et. al., 1984). In their later study (Smart and Adlaf, 1985), they correctly argued that, even if direct questioning tends to underestimate true drug usage, their estimates of change from one survey to the next should remain unbiased. However, perhaps with the passage of time and a reduction of fear of prosecution arising from survey responses, evidence is accumulating that direct questioning need not necessarily lead to underestimation of drug use.

Thus, in their 1981 study of response errors, Marquis et. al. (1981) synthesized studies which compared self-reported drug use either with that identified by urine testing, or with that based on official records. Contrary to the expectation of many, they say, they found little evidence for an average bias in self-reports of drug-related behaviour, although there are specific areas that warrant concern. In the same year, Brewer (1981) undertook a direct comparison of the randomised-response technique with direct questioning on the subject of marijuana use in Canberra residents aged 15-39. His study was undertaken after the Australian Bureau of Statistics (Goode and Heine, 1978) found that the randomised-response

technique "did not significantly increase the number of affirmative responses, and was rather time-consuming." Brewer himself found that, against the earlier evidence, the randomised questions gave estimates of drug usage much lower than those used directly. He concluded that respondents did not like, or understand, the randomisation technique.

In the light of this evidence, it was decided to use only direct questioning in the SIROMATH survey, bearing in mind that the contract was specifically to estimate cocaine use, and not to conduct a more academic exercise into appropriate methodologies. Similarly, as estimating cocaine use in the specified populations was the objective, the very interesting "snowball survey" of peer-identified cocaine users was not considered appropriate for this study.

3. THE SEALED-ENVELOPE TECHNIQUE

Whatever remaining anxieties we had about the validity of a respondent's "confession" to the interviewer of using an illegal substance, and about any potential risk to our interviewers (from the respondent or from the law enforcement authorities), were resolved by using a "sealed-envelope" technique. Respondents are asked to complete their questionnaires which contain no personal identification information, and return it in a sealed envelope to the interviewer. The role of the interviewer is then to identify the respondent, hand the questionnaire to the respondent, answer any questions about the study or the questionnaire, and collect the completed questionnaire when it has been sealed. While in theory a cocaine user

would, on average, take longer to complete the questionnaire than a non-user, the time taken for completion of a questionnaire (as contrasted with an interviewer-completed recording schedule) is sufficiently variable that no positive identification of a cocaine user will be possible.

4. SAMPLING

For neither of the organisations being studied have we been offered a full sampling frame. Nevertheless, each organisation has a known structure of units (primary sampling units), and public documents identify the number of senior members of those units, but not their actual size (in terms of the number of potential respondents in them). Accordingly, we are obliged to use the method of sampling primary units with "probabilities proportional to a measure of size" as described, for example, by Moser and Kaiton (1971) or Cochran (1977). In the event, this has led to nearly all of the large primary units being included, and relatively fewer of the small ones. Within the selected primary units, a random sample of individuals of fixed size will be selected.

5. QUESTIONNAIRE

After a brief demographic section, including academic standing, respondents are asked about their beliefs, opinions, and knowledge of drug taking, particularly relating to cocaine, ending with their views on legal

penalties. The third section of the questionnaire asks about the respondent's use of various licit and illicit substances, ending with a few questions about (unnamed) acquaintances in their own profession whom they know (or suspect) use cocaine. Finally, those who have at any time taken cocaine are asked more detailed questions on their use of the drug, its positive and negative effects, and their expectations of future use and effects.

6. PROGRESS

There have been several delays arising from staff changes and the financial market's crash. At the time of writing, the questionnaire has been prepared, pre-piloted, and approved by an ethical committee. Piloting has been arranged. Varied enthusiasm by the administrators of the two organizations has influenced the planning of the study to date. It is hoped that speedy progress will be achieved at the completion of the pilot interviews.

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THE WESTERN AUSTRALIAN ILLICIT DRUG CHARGES

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Australian Institute of Criminology, Canberra, May 10-12 1988

1. INTRODUCTION

The decision to establish the Western Australian Illicit Drug Charges Statistical Collection can be attributed to both policy and research issues, and so represents an example of a partnership between science and policy. As noted by Edwards and Busch,¹ such partnerships are rather unusual in the illicit drugs area.

During recent years numerous enquiries have been conducted by the Australian and State Governments into the problem of illicit drugs, and highlights the concern which policy makers have about the topic. In 1971 the Senate Select Committee on Drug Trafficking and Drug Abuse² stated that much more research is needed into all aspects of drug abuse. But six years later the Senate Standing Committee on Social Welfare³ noted that a commitment to general research into drug use had not eventuated, and recommended the adoption of a "National strategy on cannabis". The Royal Commission into the Non-Medical use of Drugs in South Australia⁴ recommended that research into alcohol and illicit drugs in South Australia should be given some priority. Reasons for this recommendation included the high levels of public anxiety about the "drug problem", and to the misunderstanding which the community has about the problem and the means of dealing with it.⁵

The Australian Royal Commission of Inquiry into Drugs⁶ recommended the establishment of Drug Information Centres as a major step to overcome research and statistical shortcomings with respect to alcohol and other drugs. The Commission⁶ emphasised that its extremely difficult task of framing recommendations for policy initiatives in the drug field was made all the more complicated by deficiencies in the statistical information available to it. Subsequently a proposal was made to establish a pilot Drug Information Centre in Western Australia, which would have included education, research and statistical functions.⁷ The report noted that the relative isolation of Western Australian made it an ideal location for such a pilot Centre.

The Communique of the Special Premiers' Conference on Drugs⁸ identified illicit drugs as one of the major areas of focus for the National Campaign Against Drug Abuse. In accordance with this, the proposal⁹ which led to the selection of Perth as the site for the national prevention research centre specified that illicit drugs would be one of the three major areas of activity for the proposed Centre. The proposal⁹ also gave details of a number of statistical illicit drug studies which the Centre could conduct during the first two or three years of its operation. Subsequently, the submission¹⁰ from the Curtin University of Technology for the establishment of the national prevention research centre on the campus of the Curtin University also included a commitment to illicit drugs as a priority area of activity for the Centre.

Within Western Australia the establishment of the Statistical Collection of Illicit Drug Charges has been preceded by a number of enquiries. For instance, the 1973 Report of the Honorary Royal Commission Appointed to Inquire into and Report upon the Treatment of Alcohol and Drug Dependents in Western Australia¹¹ stressed the need for ongoing and meaningful research. A report¹² prepared at the request of the Select Committee of the Legislative Assembly Appointed to Inquire into Alcohol and Other Drugs in Western Australia drew attention to the lack of statistical information on illicit drug related problems in Western Australia. The Select Committee¹³ recommended that greater resources be allocated to the collection of information relating to the true extent of the problems of alcohol and other drug use.

From a research perspective, the papers in *Drug Problems in Britain: A Review of Ten Years*¹⁴ highlight the problem of a county adopting its research priorities to the sudden burgeoning of the problems of illicit drugs. As noted above, an effective partnership between science and policy was not established.¹ To quote, "The research worker who is asked to advise on preventive policy finds himself in the position of criticising much that has been done in the name of prevention, without being able to point toward any very effective alternatives."
(page 311).¹ Reports^{15, 16} of the Advisory Council on the Misuse of Drugs also drew attention to the need for additional resources, and the

need for the evaluation of prevention and treatment programmes as part of an overall approach.

Within Australia similar statements about illicit drug related research have been made. Wardlaw¹⁷ stated that our knowledge of the relationship between illegal drug use and crime is relatively poor. Subsequently the same researcher drew attention to how little detailed information is actually available on illegal drugs in Australia.¹⁸ An important project to help overcome this problem is the study of the relationship between heroin and property crime by Dobinson and Ward.^{19, 20} The sentencing of drug offenders,^{21, 22} the process of diversion,²³⁻²⁶ and the estimation of the number of heroin users^{27, 28} have also been the subject of research, but overall there have been very few scientific studies conducted of illicit drug-related problems in Australia, especially from the viewpoint of prevention.

Against the above background of policy statements drawing attention to the need for illicit drug-related research in Australia, but the very few studies actually conducted, the decision was made to establish the Western Australian Illicit Drug Charges Statistical Collection. The project is a joint activity between the Western Australian Alcohol and Drug Authority, and the National Centre for Research into the Prevention of Drug Abuse, Curtin University of Technology, and has been undertaken to provide a State Statistical Collection pending the implementation of a comparable national activity.

In the next section the content of the Statistical Collection will be described, while the all important confidentiality provisions will be detailed in Section 3. Next, the uses of the Statistical Collection will be outlined, followed by a brief discussion of some of the limitations of the Statistical Collection.

2. STATISTICAL COLLECTION

When the decision was made in April, 1986 to establish the Statistical Collection, the proposal was to obtain details of all illicit drug charges in Western Australia during the ten previous years (January 1, 1976 to December 31, 1985). Recognition of the importance of longitudinal data led to the selection of the ten year period, rather than only the previous one or two years.

From an operational perspective, all charges under the following Acts were illegible for inclusion in the Statistical Collection: -

Misuse of Drugs Act of Western Australia (all sections);

Police Act of Western Australia (Section 94B(1), Section 94B(2), and Section 94BA);

Poisons Act of Western Australia (Section 41A, Section 42, and Section 43);

Narcotic Drugs Act of the Commonwealth (all sections); and

Customs Act of the Commonwealth (Section 50(4), and Section 112(2B), but both Sections restricted the narcotic goods offences).

Appendix I contains details of the above Sections of the Police Act, the Poisons Act, and the Customs Act.

From January 1, 1977 the Crown Law Department commenced a register of all illicit drug charges heard in the District and Supreme Courts. As it was not feasible to search the District and Supreme Court records for 1976, the Statistical Collection does not contain details of the charges for 1976, but does contain details for the following nine years.

In Western Australia 29 Courts of Petty Sessions are staffed by Crown Law Department staff. The other 96 Courts of Petty Sessions have either a

Police Officer or a Mining Registrar as the Clerk of Courts. No details of illicit drug offences were obtained for the years 1976 to 1982 for these 96 Courts, all of which were in small country towns, and often in remote locations. However, details of any illicit drug charges for 1983 to 1985 were obtained. By contrast, for the 29 Courts with Crown Law Department staff details were obtained for all the ten years.

With the two exception in the above paragraphs, the Statistical Collection contains details of all illicit drug charges in Western Australia for the ten years from January 1, 1976 to December 31, 1985.

For each Court appearance the Statistical Collection contains biographical data, details of each offence, plea (guilty or not guilty), outcome (guilty or not guilty), details of penalty if applicable, date of offence, date of Court hearing, and details of in which Court the charge was heard (Supreme, District, Court of Petty Sessions, Children's Court). For the penalty the Statistical Collection contains, where appropriate, details of the maximum and minimum jail sentence, the fine, duration of the good behaviour bond, hours of community service work, months of Probation, whether required to attend treatment as a condition of Probation, and if so, the name of the Agency.

Table 1 shows the number of drug offences in Western Australia by financial year from July 1, 1976 to June 30, 1986, as recorded in the Annual Reports of the Western Australian Police Department.²⁹ The Table shows that the Statistical Collection will contain approximately 26 000 charges. However, often a person will be charged simultaneously with two or more offences, with the consequence that the actual number of records in the Statistical Collection will be lower. For instance, in 1983-84 there were 2740 arrests which resulted in 3591 charges for drug-related offences.²⁹

From Table 1 it can be seen that 8.5% of the offences during the ten years to June 30, 1986 were committed by persons under 18 years of age, 34.2% by 18 to 21 year olds, and 57.3% by persons over 21 years of age. Some 43.0% of all the offences in Table 1 were committed during the last two years included in the Table.

In terms of the type of charges in the Statistical Collection, Table 2 shows that for 1984-85 some 69.4% of all the State charges were for cannabis, and a further 24.2% for the possession of prohibited implements and utensils. Only 4.1% were for heroin.²⁹

During 1981 Table 3 shows that 7.5% of all the convictions for drug offences in Western Australia occurred in the Supreme and District Courts, 86.7% in Courts of Petty Sessions, and 5.8% in Children's Courts.³⁰

3. CONFIDENTIALITY

The many and varied confidentiality provisions which apply to the Statistical Collection will be briefly described in this Section. Needless to say, at all times confidentiality is regarded as a key factor in the operation of the Statistical Collection.

The information from the Crown Law Department, Police Department, and the Department of Community Services was only provided on the written guarantee by the WA Alcohol and Drug Authority that the data would be treated as highly confidential, and only used for research purposes. Additionally the commitment was given that in the various research reports which will be prepared using the data that results will, of course, only be presented for groups of persons, not individual persons.

The computer files are on only one very high security computer. Only two persons (A.H.S. and P.S.) have access to the files.

To further enhance confidentiality, the project is registered under the Epidemiological Studies (Confidentiality) Act of the Commonwealth. Secrecy relating to prescribed studies conducted under this Act is as follows:-

"4. Subject to sections 5 and 7, a person who has assisted, or is assisting, in the conduct of a prescribed study shall not, either directly or indirectly, except for the purpose of the conduct of that study, make a record of, or divulge or communicate to any person, any

information concerning the affairs of another person acquired by him by reason for his having assisted, or assisting, in the conduct of that study."

Concerning the non-production of documents in court, the above Act specifies as follows:-

- "8. (1) A person who has assisted, or is assisting, in the conduct of a prescribed study shall not be required -
- (a) to produce in a court, or permit a court to have access to, a document prepared or obtained in the course of the conduct of that study, being a document concerning the affairs of another person; or
 - (b) to divulge or communicate to a court any information concerning the affairs of another person acquired by him for reason of his having assisted, or assisting, in the conduct of that study.
- (2) A person who has assisted, or is assisting in the conduct of a prescribed study has been given access, by virtue of an authorization under section 5, to a document shall not be required -
- (a) to produce in a court, or permit a court to have access to, that document, being a document concerning the affairs of another person; or
 - (b) to divulge or communicate to a court any information concerning the affairs of another person acquired by him by reason of his having had, or having, that access."

4. USES OF THE STATISTICAL COLLECTION

The purpose of this Section is to briefly outline some of the possible uses of the Statistical Collection of Illicit Drug Charges.

a. Changes Over Time

The aim of these analyses will be to determine how in the (a) Children's Courts, (b) Courts of Petty Sessions, (c) District and Supreme Courts, and (d) all Courts combined the number and types of charges have changed during the ten years covered by the Statistical Collection.

b. Misuse of Drugs Act

The Misuse of Drugs Act, 1981 is the major of the two statutes passed by the Western Australian Parliament in 1981. The Act effected a complete revision in the criminal law in relation to prohibited drugs. At the same time the Parliament passed an Act to repeal the law previously in force. The question to be addressed here is what effect did the Misuse of Drugs Act as from September 1, 1982 have? In other words, is there a discontinuity in the data at September, 1982? These analyses will overlap with those in a. above.

c. Treatment Evaluation Studies

It is important that evaluation studies be conducted of illicit drug treatment programmes. One possible use of the Statistical Collection will be to monitor the number of illicit drug charges of persons included in both the control and treatment groups for evaluation studies.

d. Penalties

The aim of these analyses will be to determine whether a group of people who were given a "light" penalty had more or less subsequent charges than a similar group of people given a severe penalty. This type of analysis could be repeated for quite a range of offences, and also for different age-sex groups of offenders.

e. Community Service Orders

Particular attention will be given to the question of the effect on the number of subsequent charges of imposing a Community Service Order.

f. Hypothesised Cannabis - Heroin Progression

The two questions to be addressed here are as follows:-

To what extent do persons convicted of cannabis charges subsequently appear on heroin charges?

To what extent do persons convicted of heroin offences have a prior record of cannabis charges?

g. Drug Trafficking

The longitudinal nature of the Statistical Collection will enable analyses to be conducted to determine the extent to which persons convicted of drug trafficking had a prior record of minor drug offences.

h. Economic Conditions

In addition to studying issues within the range of data included in the Statistical Collection, research studies will be conducted to determine the relationship between changes in the number and type of drug offences and changes in economic conditions (e.g., inflation, unemployment). For instance, during and after periods of high youth unemployment is there an increase in the number of young persons charged with illicit drug offences?

i. Methadone Policy

The WA Alcohol and Drug Authority has for a considerable number of years prescribed methadone to persons with opiate-related problems. During this time the methadone programme has had a number of changes in its prescribing practices. The longitudinal nature of the Statistical Collection will enable the relationship between changes in the Authority's methadone programme and changes in the number and types of drug offences to be examined.

5. LIMITATIONS OF THE STATISTICAL COLLECTION

The various limitations of the Statistical Collection will be briefly described in this Section.

As noted in Section 3 above, it was not practicable to obtain details of charges heard in the District and Supreme Courts during 1976. Nor has any information been obtained for the years 1976 to 1982 for the country Courts of Petty Sessions where there are no Crown Law Department staff.

Of particular importance is the fact that the Statistical Collection is restricted to offences which result in the laying of a charge. The number and type of charges in the Statistical Collection will undoubtedly be influenced by changes in Police and Customs enforcement practices.

The matching of the various offences for any given person can be quite challenging, not forgetting that a charge heard in a Court of Petty Sessions may be referred to the District or Supreme Court. Of course, if a person uses an alias then it is not possible to obtain a perfect record for that person. As the Statistical Collection is restricted to charges heard in Western Australian Courts, there will be no details of any prior or subsequent offences heard in Courts in the other States, Territories or overseas.

At a practical level the size of the Statistical Collection can mean that some computer runs are quite costly, although with the appropriate use of sub-files the number of expensive runs will be minimised.

6. CONCLUSIONS

The establishment of the Western Australian Illicit Drug Charges Statistical Collection with details of virtually all illicit drug charges in the State for a ten year period provides an opportunity for researching a very important aspect of illicit drug-related problems in Australia.

While continuing to give special emphasis to all aspects of confidentiality, it will be possible to use the Statistical Collection to test specific hypothesis about illicit drug-related behaviour, such as those described in Section 4. As noted in the Introduction, there appears to be widespread agreement as to the need for this type of research, for the results of the proposed studies should enable both prevention and treatment efforts to be more effective.

7. ACKNOWLEDGEMENTS

Appreciation is expressed to the many persons and organisations who assisted with the compiling of the Statistical Collection. In particular, the Commissioner of Police, the Under Secretary for Law, and the Director General of the Department for Community Services gave approval for the release of the relevant information for research purposes only. Clerks-of-Courts at metropolitan and country Courts were especially helpful. Data entry was undertaken by Ms L. Evans, Research Assistant, WA Alcohol and Drug Authority. Funds for the project were provided by the National Centre for Research into the Prevention of Drug Abuse, Curtin University of Technology.

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APPENDIX IDETAILS OF SECTIONS OF THE POLICE ACT, POISONS ACT, AND CUSTOMS ACTPOLICE ACT

94B (1) If any person -

- (a) manufactures or prepares cannabis or prepared opium; or
- (c) being the occupier of any premises permits those premises to be used for the purpose of the preparation of opium for smoking or the sale, distribution, or smoking of, cannabis or prepared opium; or
- (d) being the owner or lessee of any premises knowingly permits such premises to be used for the purpose of cannabis or opium smoking; or
- (e) is concerned in the management of any premises used for any such purpose as aforesaid; or
- (f) has in his possession any pipes, or other utensils for use in connection with the smoking of opium or any utensils used in connection with the preparation of opium for smoking; or
- (g) smokes or otherwise uses cannabis or prepared opium, or is found in any place which is then being used for the purpose of cannabis or opium smoking,

he shall be guilty of an offence against this Part of this Act.

In this subsection the expression "owner" includes the person entitled to receive the rent of premises and the person to whom the rent of premises is paid.

(2) If any person -

- (a) has in his possession any drug to which this part of this Act applies;
- (b) sells or supplies or offers to sell or supply to another any drug to which this Part of this Act applies; or
- (c) has in his possession any drug to which this Part of this Act applies with intent to sell or supply it to another,

he is guilty of an offence against this Part of this Act, unless -

- (d) in the case of an offence against paragraph (a) of this subsection -
 - (i) he is authorised under the Poisons Act, 1964, or the regulations made thereunder to be in possession of the drug; or
 - (ii) the drug was sold or supplied or requested to be sold or supplied to him by a medical practitioner or veterinary surgeon or on and in accordance with a prescription complying with that Act or those regulations;
- (e) in the case of an offence against paragraph (b) or (c) of this subsection he is authorised under the provisions of the Poisons Act, 1964 or the regulations made thereunder to manufacture, prepare, sell, distribute or supply the drug and the sale, supply, offer to sell or supply or intended sale or supply of the drug is or was in all respects in accordance with such authority.

94BA. (1) If any person has in his possession or at his order or disposition any money, valuable security or thing received directly or indirectly by way of, or for the purpose of, the commission of an offence against the provisions of this Part of this Act or the regulations, or as or for the consideration for the commission of any such offence, or any acknowledgement, note, or other thing

purporting or intended to entitle the bearer or any other person to receive any money or money's worth in such circumstances, he is guilty of an offence against this Part of this Act and is liable to the like penalty as if he had been convicted of the unlawful sale to another of a drug to which the Part of this Act applies.

(2) Where a person is convicted under subsection (1) of this section, the court shall order any money, security, acknowledgement, note or other thing found to relate to that offence to be forfeited to Her Majesty.

POISONS ACT

41A. (1) Subject to this Act the Commissioner may grant to any person a licence to cultivate, sell, purchase or have in his possession any prohibited plant.

(2) A licence granted pursuant to this section shall be subject to such conditions as may be prescribed and as the Commissioner may in his discretion impose.

(3) A person shall not cultivate, sell, purchase or have in his possession any prohibited plant unless he is licensed under this section to do so.

42. A person who forges or fraudulently alters, or utters knowing it to be forged or fraudulently altered, any prescription or order for a drug of addiction or a specified drug commits an offence against this Part.

43. (1) A person who knowingly by any false representation (whether oral or in writing or otherwise) obtains from a person licensed to manufacture, sell or distribute any drug of addiction or specified drug, or from a medical practitioner, dentist or veterinary surgeon, any drug of addiction or specified drug, or by such false representation causes or induces a person so licensed or a medical

practitioner to administer to him by injection or otherwise any drug of addiction or specified drug, commits an offence against this Part.

(2) A person who knowingly by any false representation (whether oral or in writing or by conduct or otherwise) causes or induces a pharmaceutical chemist to dispense any prescription that is forged or fraudulently altered, or obtained in contravention of the provisions of this section, knowing the same to be forged or fraudulently altered or obtained, commits an offence against this Part.

43A. (1) Subject to subsection (2) of this section, any person, who being authorized by this Act to be in possession of any drug of addiction or specified drug, sells or supplies any drug of addiction or specified drug to a person who -

(a) is not the holder of a licence issued under this Act authorizing him to be in possession of the drug of addiction or specified drug so sold or supplied and is not otherwise so authorized by this Act; and

(b) does not first furnish to that firstmentioned person a prescription of a medical practitioner or veterinary surgeon authorizing the sale or supply of the drug of addiction or specified drug so sold or supplied,

commits an offence against this Part.

(1a) A person who commits an offence against subsection (1) of this section is liable on summary conviction by a court constituted by a stipendiary magistrate sitting alone, to a fine of four thousand dollars or to imprisonment for a term of ten years or to both the fine and imprisonment but the court convicting the person for the offence;

- (a) shall commit him for sentence before the District Court of Western Australia which may pass sentence for the offence in accordance with this section and may make such order in relation to the convicted person as might be made by a court of summary jurisdiction convicting a person of an offence;
 - (b) by warrant shall commit the convicted person to gaol until the sittings of the court by which he is to be sentenced or admit him to bail to appear before that court for sentence.
- (2) Subsection (1) of this section does not apply to or in relation to the sale or supply of a drug of addiction or specified drug -
- (a) by a medical practitioner in the lawful practice of his profession; or
 - (b) by a person in a case where a medical practitioner or veterinary surgeon has requested him to sell or supply the drug of addiction or specified drug to another person before that lastmentioned person furnishes him with a prescription for the drug of addiction or specified drug.

CUSTOMS ACT

50. (4) Where a licence or permission granted, after the commencement of this sub-section, under the regulations is subject to a condition or requirement to be complied with by a person, the person shall comply with the condition or requirement and, if he fails to do so, he is guilty of an offence punishable upon conviction -
- (a) if the licence or permission relates to goods that are not narcotic goods - by a fine not exceeding \$10 000; or
 - (b) if the licence or permission relates to goods that are narcotic goods - as provided by section 235.

112. (2B) Where a licence or permission granted, after the commencement of this sub-section, under the regulations is subject to a condition or requirement to be complied with by a person, the person shall comply with the condition or requirement and, if he fails to do so, he is guilty of an offence punishable upon conviction -

- (a) if the licence or permission relates to goods that are not narcotic goods - by a fine not exceeding \$10 000; or
- (b) if the licence or permission relates to goods that are narcotic goods - as provided by section 235.

Table 1

Number of drug-related charges by age of offender in Western Australia
from July 1, 1976 to June 30, 1986

Year	Age			Total
	Under 18 years	18-21 years	Over 21 years	
1976-77	72	428	459	959
1977-78	72	365	757	1194
1978-79	72	414	654	1140
1979-80	29	431	912	1372
1980-81	51	637	1347	2035
1981-82	87	556	1254	1897
1982-83	156	860	1557	2573
1983-84	326	1282	1983	3591
1984-85	542	1880	2448	4870
1985-86	798	2015	3449	6262
Total	2205 (8.5%)	8868 (34.2%)	14820 (57.3%)	25893 (100%)

Source: Annual Reports of the Western Australian Police Department.²⁹

Table 2

Number and type of drug-related charges by age and sex of offender
in Western Australia from July 1, 1984 to June 30, 1985

State Charges Relating to	Males			Females			Total
	Under 18 years	18-21 years	Over 21 years	Under 18 years	18-21 years	Over 21 years	
Cannabis	326	1106	1482	39	161	267	3381 (69.4%)
Cocaine	0	0	2	0	0	0	2 (0.1%)
Heroin	1	8	149	0	2	44	204 (4.1%)
Hallucinogens	0	4	3	0	1	1	9 (0.2%)
Implements & Utensils	162	516	362	9	67	63	1179 (24.2%)
Other prohib. & Presc. Drugs	3	10	33	2	1	8	57 (1.2%)
Scripts	0	1	26	0	3	8	38 (0.8%)
Total	492	1645	2057	50	235	391	4870 (100.0%)

Source: Annual Report of the Western Australian Police Department for the year ended June 30, 1985.²⁹

Table 3

Convictions for Drug Offences in Western Australia by Type of Court, 1981

Class of Offence	Supreme and District Courts	Courts of Petty Sessions	Children's Courts	Total
Possession/ use of drugs	90	1379	99	1568
Dealing and trafficking in drugs	53	13	-	66
Manufacturing, growing and other offences	-	252	11	263
Total	143 (7.5%)	1644 (86.7%)	110 (5.8%)	1897 (100.0%)

Source: Australian Bureau of Statistics.³⁰

ALCOHOL AND DRUG USE PATTERNS OF PRISONERS IN PERTH*

David Indermaur¹ and Kathy Upton²

INTRODUCTION

The need for comprehensive information on the substance abuse patterns of people coming to prison has been discussed by a number of sources (e.g. Krefft and Brittain, 1983 in the United States; Mott, 1986, in the United Kingdom and Northcott et. al., 1987 in Western Australia). In Western Australia a series of studies and surveys attempted to provide some indication of the extent of the problem (e.g. Johnson and Egan, 1985; Indermaur, 1986). These short surveys contributed to the formation of a Substance Abuse Working Party set up by the (then) Western Australia Prisons Department to address the question of substance abuse problems amongst the prisoner population and to provide recommendations for future action. Although the Working Party undertook a small survey into the extent of substance abuse problems amongst prisoners it recommended that a comprehensive analysis be completed to provide a firm basis for the development of programmes in the identified areas. The main objective of the present study was to measure the extent and nature of substance use and abuse amongst offenders entering Perth metropolitan prisons.

In recent times there has been considerable interest in the use of drugs by offenders. Both McLean (1988) and White and Boyer (1985) have used a standard alcohol screening device (the Michigan Alcoholism Screening Test) to identify alcohol problems amongst prison inmates. White and Boyer (1985) classified 43% of their Tasmanian sample as "alcoholics" and McLean classified 50-60% of his New Zealand sample as having substantial alcohol problems. A survey by the Western Australian Probation and Parole Service suggested that alcohol could be identified as a contributing factor to offences in 53% of cases (Papandreou et. al., 1985). Similar results are reported in studies from the United States. For example, Roffman and Froland (1976) estimate that between 20% and 50% of United States prisoners have major drug and alcohol problems, based on a review of survey data.

Considering opiate abusers, the United States Department of Justice (1983) reports that almost a third of all state prisoners

*The author wishes to acknowledge the financial assistance of the Commonwealth Department of Health and the support of the Western Australia department of Corrective Services.

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in 1979 were under the influence of an illegal drug when they committed the offence for which they were convicted, and more than half had taken drugs during the month prior to their crime. Barton (1980) interviewed 10,400 prisoners in the United States and reports that 30% had a history of heroin use. Chaiken and Chaiken (1982) surveyed 2,200 prisoners in three American States and found that an average of 28% reported regular use of heroin before their imprisonment.

In Western Australia, two surveys undertaken for the (then) Prisons Department show similar results. The first (Johnson and Egan, 1986) surveyed 402 prisoners held on remand, 21% of the respondents reported a regular (at least weekly) use of heroin before their imprisonment. Of ninety prisoners held at Fremantle maximum security prison who responded to a survey, 31% reported using heroin once or more per week prior to incarceration (Indermaur, 1986). Dobinson and Ward (1984) found slightly higher than average proportions of heroin users amongst property offenders in New South Wales prisons.

Studies of the prevalence of substance abuse amongst prisoners in Australia suggest that the incidence of abuse is considerably higher in some areas and for some groups. For example, Gorta (1985) interviewed women prisoners in New South Wales and found that 78% reported using drugs before coming to prison.

In Western Australia aboriginal alcoholism is a major concern. Duckworth and colleagues (1982) surveyed aborigines in prison in the north of Western Australia. 74% of the 96 prisoners studied classified themselves as being 'really drunk' at the time of the offence. A further 18% said that they had been drinking but were not drunk, and only 8% said that they were sober.

In a Massachusetts based study of 32 inmates, Cordilia (1985) found an association between heavy drinking immediately before a crime and type of crime committed, ie., spontaneous, low-profit crimes for financial gain. She states that while professional criminals often drank heavily, it was not prior to committing a crime as this was seen as debilitating.

Information on substance abuse patterns is important for both service delivery and planning purposes. Variables that are significant in certain locations need to be identified if strategic interventions are to be effective.

To achieve the objectives of the present study a number of measures were developed and applied to the target population (prisoners received into metropolitan institutions between June and September 1987). The key measure is a comprehensive interviewer administered questionnaire.

METHODOLOGY

2.1 THE SCREENING INSTRUMENT

There is mounting evidence that, at least with self referred substance abusers, self report measures are not only as good as

clinical measures but perhaps considerably more useful (Wallace and Haines, 1985, Skinner et. al., 1984; Berndt, et. al., 1982). Clinical indicators are limited in the types of drugs they can detect, and there are logistical problems related to reaching offenders within a sufficiently short time after the commission of an offence. Add to this the fact that clinical indicators could only ever provide an indication of substance use for one particular point in time and their utility in the development of a general data base becomes quite limited. However, urine testing of arrestees can be quite useful in providing a somewhat objective snapshot view of certain drugs consumed by arrestees as demonstrated recently by Wish (1988) in the United States.

The use of self report measures in prisons has special problems, such as under-reporting, over-reporting and general concerns regarding reliability. However, a number of prison based studies have employed self report measures (e.g. Dobinson and Ward, 1984; White and Boyer, 1985)

The task of screening for drug and alcohol problems in prison poses a particular challenge. The first task is to ensure that the instrument is appropriate to the target population. We found that most screening devices had been developed at outpatient clinics with self referred, and usually middle class, clients. The prison population is markedly different; mainly male (95%), lower class, unemployed, and forcibly detained.

The prison population is also distinct in terms of attitudes toward alcohol and drugs. This became apparent during the pilot testing. Many of the prisoners interviewed consumed significant amounts of drugs and/or alcohol but were often unconcerned with their drug use and did not respond to items which sought their degree of worry or reflection on their drug use. Many of the established questionnaires include items such as "How often during the last year have you found it difficult to get the thought of alcohol out of your mind?" (World Health Organization Core Screening Instrument, Saunders and Aasland, 1987). These items rely on the respondent having some internal conflict regarding their drug use, which is usually absent amongst the prisoner sample, for a number of reasons.

One complete and established screening test was to be incorporated into the screening instrument for comparative purposes. To overcome the problems referred to above, it was decided that the most useful items were those that focused on actual behaviours rather than thoughts or feelings about substance use. This guided our selection criteria. In searching the literature for tests which may be appropriate for use with a prison population the following screening tests were considered:

- * The World Health Organization Epidemiological Data Gathering Device. (Hughes et. al. 1980)
- * The Trauma Scale. (Skinner, 1984)
- * The Short Michigan Alcoholism Screening Test (SMAST). (Pokorny et. al., 1972)

- * The CAGE. (Ewing, 1984)
- * The World Health Organization Core Screening Instrument. (Saunders and Aasland, 1987).
- * The Canterbury Alcoholism Screening Test (CAST). (Elvy, 1984)
- * The Drug Abuse Screening Test (DAST). (Skinner, 1982)

Although the Trauma Scale (Skinner, 1984) does focus on objective unambiguous information, it may not be valid with our population who are more likely to suffer fractured limbs and head injuries even before they start drinking. Mainly for comparative purposes, but also because of its apparent robustness (e.g. see Bernadt et. al., 1982) the brief MAST was chosen for the present study. McLean (1988) reports that his analysis of the MAST based on a survey of New Zealand prisoners indicates that the test is valid for that group and it has a sound internal structure.

It should be noted that probably the most recent similar studies to the present one, at least in regards to prisoner alcohol use, is that of White and Boyer (1985) and McLean (1988). White and Boyer administered the brief MAST to all sentenced prisoners received into Risdon prison in Tasmania in the 12 months between October, 1982 and October, 1983. Of the 462 prisoners tested 43% were classified by the brief MAST as having indications of alcohol dependence. From an earlier study in Western Australia (Northcott et. al., 1986) we expected similar proportions amongst Western Australian prisoners. McLean found higher proportions of "alcoholics" in his New Zealand sample of 129 male inmates and 102 female inmates. 59% of the male sample and 52% of the female sample were classified as "alcoholics" according to the MAST criteria.

For the drug section, items from the Drug Abuse Screening Test (DAST) were selected, again according to their emphasis on 'objective behaviour'.

Certain items of the World Health Organization Epidemiological Data Form (Hughes et. al., 1980) important for epidemiological purposes were included, as were items from Dobinson and Ward's (1984) study.

2.2 THE CLASSIFICATION SCHEMA.

A classification system is needed to guide the analysis of substance abuse patterns.

One of the main criticisms of many of the existing screening devices is that they only attempt to measure dependency. A more contemporary approach to alcohol problems (and this can be directly extended to other drug problems) is to recognize the existence of dependence (or a dependence syndrome) in addition to other disabling aspects of substance use. Essentially this approach recognizes that problems with substance abuse can occur in three dimensions;

1. Problems directly related to use or consumption. Edwards et al. (1981) and Pols and Hawks (1986) delineate hazardous use, harmful use, dysfunctional use and unsanctioned use. "Use" can

also be determined according to established standards such as light, medium and heavy (Australian Bureau of Statistics, 1986)

2. Disabilities associated with use (usually injuries and crime).
3. Problems associated with dependency (adaptation, tolerance, addiction etc.).

The recent Victorian study of a cohort of drink driving offenders indicates that the amount of alcohol consumed is one of the best predictors of future convictions and is the single most important preventable cause of future convictions (Christie et. al., 1987).

The large percentage of prisoners with substance abuse related offences underlines the need for a systematic way of describing substance abuse problems and treatment interventions. It is significant that 25% of all Western Australian prisoners' major offences were substance related in the year to June 1987 (Western Australian Department of Corrective Services Annual Report, 1987). Of these 76% were alcohol related.

The following conceptual model or classification system was formulated.

Figure 1. A Schematic Representation of Alcohol and Drug Related Disabilities.

Dimensions ---->

	USE	DEPENDENCY	ASSOCIATION WITH CRIME	SELF PERCEPTION OF ABUSE
ALCOHOL	Not heavy	Not dependent	No	No
	Heavy	Dependent	Yes	Yes
DRUGS	Not regular or heavy user	Not dependent	No	No
	Regular/heavy user	Dependent	Yes	Yes

For each of these dimensions certain items within the screening instrument can be coded and weighted to produce an overall score. Criteria were developed in accordance with established standards.

World Health Organisation standards guided the consumption measure for drugs and alcohol. Dependency on alcohol is determined in accordance with scoring criteria on the SMAST. Dependency on drugs is determined by scoring the items extracted from the DAST. Problems in the area of "drugs and crime" or

"alcohol and crime" are determined by means of direct questions about the history of problems with substance abuse and crime.

In addition to the six groups described above the subjects' own perception of substance abuse was measured.

2.3 PROCEDURE

2.3.1 The Sample

The sample frame consisted of all persons "received" as prisoners at the seven metropolitan prisons for the 4 months of June through September, 1987.

Since the project aimed to interview all "distinct person" receivals in this period the procedure is more accurately described as a census. Table 1 lists the numbers of receivals at the nominated institutions during the target months and the proportion of these that were screened (78%). Most of those not interviewed were serving such short sentences that they were released before they could be interviewed.

Table 1. Number of "Distinct Persons" Received in the Study Time Frame and Number Interviewed.

Institution	Total	Number and percent
	Persons Received	Interviewed
Bandyup Women's Prison	142	86 (61%)
Barton's Mill Prison Farm	21	16 (76%)
Canning Vale Prison	79	52 (66%)
Canning Vale Remand Centre	376	288 (77%)
Fremantle Prison	320	236 (74%)
Karnet Prison Farm	15	6 (40%)
Wooroloo Prison Farm	249	233 (94%)
Unknown		9
Total	1184	926 (78%)

Table 2 provides a profile of the sample population. The profile generally matches the overall population of "distinct person receivals" as reflected by figures available from the most recent Annual Report of the W.A. Department of Corrective Services (1986-87).

Table 2 Demographic Characteristics of the Sample Compared to Distinct Person Receivals into Metropolitan Prisons in the Year 1986-1987.

	SAMPLE	RECEIVALS (1986-87)
NUMBER	926 (100%)	2735 (100%)
MEDIAN AGE	24	24
ETHNICITY (where recorded = 91% of cases)		
Aboriginal	191(22.7%)	602(22.8%)
Non aboriginal	649(77.3%)	2133(77.2%)
RECIDIVISM		
First imprisonment	368(39.7%)	1699(37.1%)+
OFFENCE TYPE		
Against the person....	18.7%.....	(12.9%)+
Against property.....	36.9%.....	(22.6%)
Against justice.....	5.5%.....	(11.0%)
Against good order....	4.6%.....	(4.5%)
Alcohol related.....	7.0%.....	(19.3%)
Cannabis related.....	5.9%.....	(5.0%)
Heroin related.....	1.7%.....	(0.6%)
Other drugs related...	0.0%.....	(0.4%)
Driving/traffic.....	19.7%.....	(21.9%)
Miscellaneous.....		(2.4%)
PRISON		
Fremantle.....	26%.....	25%
Remand Centre.....	31%.....	24%
Canning Vale.....	6%.....	12%
Wooroloo.....	25%.....	25%
Bandyup (women).....	9%.....	10%
Karnet.....	7%.....	2%
Bartons Mill.....	2%.....	2%

+These figures are based on the percentage of total receivals rather than "distinct person receivals" for which information was not available. For offence type, the calculation is made on the basis of the major offence of each person received.

2.3.2 Application of the Measurement Instruments

The collection of raw data may be described by way of the separate stages at which measurement instruments were applied:

STAGE 1: Initial Administration of the Screening Instrument

New receivals were identified and an attempt made to interview each of them. Five interviewers conducted the initial interviews on the prison sample. Four of the interviewers (two men, two women) were professional persons, trained in the social sciences, working for the Department of Corrective Services, and one was a trained interviewer from the Australian Bureau of Statistics. Each interviewer was individually trained to use the screening instrument in an interview setting, by the Project Co-ordinator and Research Officer.

The interviewer would begin by introducing him/herself, stating that the following series of questions were for a research project and assuring the subject that all answers were confidential and would not effect their charge or sentence. The interviewer then asked the subject questions from the screening instrument, recording the subject's answers directly on the questionnaire. Large "prompt" cards were used for some of the questions presenting multiple choice answers for those questions relating to types of drugs. Each interview took between 5-15 minutes, an average being 9 minutes.

Tests of association (chi-square) were conducted to test for the effect of interviewer, interviewer gender, and interviewer type on the main dimensions under study. No significant effects were found and therefore it is assumed that there were no attributes of the interviewer that had a large or significant impact on questionnaire results. This finding supports the assertion that the screening instrument is robust and can be used by a range of personnel.

STAGE 2: Medical Assessment

Staff from the medical branch in each prison provided information on prisoners' substance abuse. In two prisons the medical officer completed forms for each prisoner following the routine examination conducted for each reception. In the remaining five prisons, nursing staff, with the consent of the medical officer in charge, completed the forms from information contained on the medical files based on the examination.

Prisoners' rights to medical confidentiality were maintained. Details of medical conditions were not provided by medical staff but only summary information as to the existence of physical signs that are often associated with substance abuse.

STAGE 3: Prisoner File Examination

Files held by the Department of Corrective Services for prisoners with previous offences were examined by a records clerk. Information from specific types of documents that was determined as evidencing a potential substance abuse problem was recorded. Drug and alcohol related offences were noted for those prisoners with a previous record. This information was gauged from Warrant Histories (obtained from the Police Department) and Court records.

STAGE 4: Professional Case Assessment

Clinical psychologists and social workers employed by the Western Australia Department of Corrective Services assessed a randomly selected list of prisoners from the sample for signs of substance abuse. At the conclusion, a proforma was completed, designed to summarise whether the interviewer had found indications of a substance abuse problem and on which dimensions the problem was indicated.

At least three separate measures were collated for each prisoner

in the sample: the initial interview, medical screen and prisoner file analysis. Table 3 lists the numbers of each record type gathered.

Table 3. Numbers for Each Record Type.

RECORD TYPE	NUMBER	PROPORTION OF TOTAL SAMPLE
Initial Screen.....	926.....	100%
Medical Screen.....	926.....	100%
Prisoner File Screen.....	926.....	100%
Professional Case Assessment..	79.....	8%

RESULTS

3.1 PATTERNS OF USE

3.1.1 ALCOHOL USE

National Health and Medical Research Council (NHMRC) sources (Pols and Hawks, 1986) recommend that consumption of 28 to 42 "units" or standard drinks per week be considered "hazardous" (equivalent to approximately 40 grams of absolute alcohol per day). Consumption of more than 42 units (standard drinks) per week is classified as "harmful". This criteria generally agrees with the standards used by Wallace and Haines (1985) and Bungay (1986). These figures are determined for men. The criteria for females is different as a result of metabolic differences between the sexes. For females consumption of 14 - 28 units per week is considered hazardous and more than 28 units per week is considered harmful. These figures also agree with a study by Wallace et. al. (1985) which showed that although there was considerable lack of consensus on the questions of safe limits of alcohol consumption among a sample of alcohol experts, the mean suggested level for men was approximately 24.0 units per week and 16 units per week for women. Wallace et. al. (1985) also report that the British Health Education Council recommended weekly consumption below 21 units for men and below 14 units for women.

According to the NHMRC criteria, based on the "consumption" questions of the interviewer administered questionnaire, 30% of the men and 36% of women in the sample consume hazardous amounts of alcohol. 27% of men and 16.3% of women in the sample reported consumption of harmful amounts of alcohol.

How do these figures compare with the general community? The Australian Bureau of Statistics (ABS) conducted a survey of alcohol use patterns in Perth in October, 1985. The way the ABS classified alcohol use was different to the criteria used above. Alcohol use was defined as "heavy" if the average consumption exceeded 49 units per week. This is well above the criteria for harmful use referred to above (42 units). Drinking was classified as medium if it was between 24.5 and 49 units per week. By this classification most drinkers classified as "medium" by the ABS are consuming hazardous levels according to the NHMRC recommendations. This disparity is not unusual. The NHMRC figures are considered more useful in terms of reflecting health

problems. However, the ABS figures will be used for comparative purposes.

Figure 3 lists the proportion of the sample classified according to their reported consumption of alcohol. The breakdown in the prison sample is compared with the Australian Bureau of Statistics figures (October, 1985). The A.B.S. survey figures relate to consumption by the respondent in the week immediately preceding the interview. Therefore, the figures in the two types of groups result from slightly different questions and should simply be considered as an indication of the likely differences between the two groups.

Figure 3 also shows that while the majority of both the general community and the prison population are categorised as light drinkers, there are significantly greater numbers of medium and heavy drinkers in the prison sample. Very few prisoners appear to be non-drinkers, based on self-report results.

Christie et. al. (1987) has recently published work on the alcohol consumption patterns of offenders convicted of drink driving offences in Victoria. Alcohol consumption patterns reported by the 426 male drink drivers were somewhat similar to the patterns of prisoners in the present study (8% reported no use, 72% light use, 15% medium use and 5% heavy use).

Using a criteria for excessive alcohol consumption of 42 units per week for men and 21 units per week for women, Wallace and Haines (1985) found that 11% of men and 5% of women in the sample from the British general community indicated excessive alcohol consumption on the basis of a self report questionnaire.

Closer to home, Bungay and Winter (1986) conducted a study of the drinking patterns of South Australian adults in 1983. Bungay and Winter used the A.B.S category of "heavy drinker" (i.e. greater than 75 ml. per day on average for men) although they relabelled it as "high risk group" for men (women classified as high risk were those classified as heavy or medium drinkers under the A.B.S. system). Bungay and Winter's results are quite similar to those reported for the A.B.S. survey in Perth in 1985. For females, 95% of women were classified as non drinkers or light drinkers, 2% as heavy drinkers and 3% as medium drinkers. For males, 84% were classified as non drinkers or light drinkers, 10% as medium drinkers and 6% as heavy drinkers.

One of the interesting trends that appear from comparing the A.B.S. surveys is the increasing medium and heavy alcohol use amongst women and a decreasing medium and heavy use amongst men. McLean (1980,p50) cites his research as "confirming recent concerns about the high and growing incidence of alcoholism among some New Zealand female groups". Comprehensive and large national and state surveys of alcohol use are necessary to monitor important demographic changes in the use and abuse of this popular drug. The increasing number of females in the high risk groups is of particular concern and likely to have significant social consequences. Further, it should be remembered that the A.B.S. categories underestimate the women in the high risk groups

because they use the same scale for males and females, and as mentioned earlier the criteria used are higher than those used by most medically based researchers.

3.1.2 ALCOHOL DEPENDENCY

The instrument used to measure dependency to alcohol was the brief Michigan Alcoholism Screening Test (see Appendix 2). This is one of the most common measures used for this purpose and was mainly chosen to allow comparisons with other populations. **48.5% of the sample were classified as alcoholic by this measure.** This figure compares with the 43.5% reported by White and Boyer (1985) for a sample of 440 sentenced prisoners in Tasmania's Risdon prison.

One of the main criticisms of the SMAST is that it detects dependence on alcohol past and present. Many of the questions start with "have you ever....?". In other words a reformed alcoholic would also be classified as "dependent". To overcome this problem we coupled the consumption measure with the SMAST to count prisoners reporting hazardous levels of consumption and also classified as dependent on the SMAST. **20.3% of males and 29.8% of females were thus classified as current alcohol dependents.**

3.1.3 ALCOHOL AND CRIME

One of the main disabilities associated with alcohol is crime. This disability is usually, but not always, associated with heavy alcohol use and dependence on alcohol. If the prisoners reported consuming more than 10 drinks before committing their last offence or reported having one or more drink/driving charge we classified them as having an alcohol-crime disability. **65.2% of the sample were indicated. 54.6% reported one or more drink driving charges.** This compares with a figure of 58.2% found by White and Boyer (1985) in Tasmania.

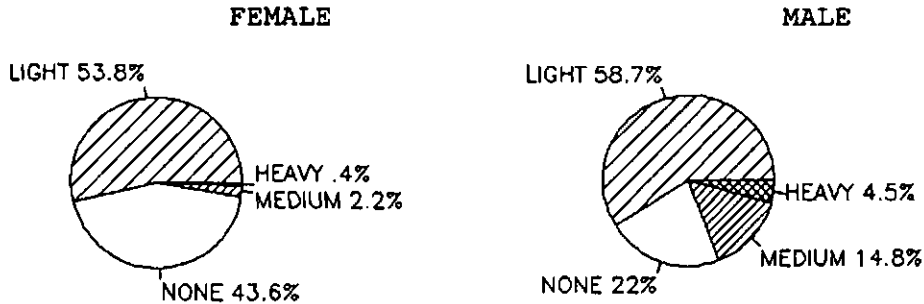
23.2% reported 3 or more convictions (White and Boyer found 35.3% of their sample had 3 or more drink driving convictions). It should be remembered that White and Boyer were specifically studying sentenced prisoners. The present study considered all prisoners coming into metropolitan prisons.

A further comparison may be made with Hensman's (1969) survey of 188 inmates of Wandsworth Prison in the United Kingdom. 68% had been drinking immediately prior to their last offence as compared to the 52% of our prison sample. Hensman showed that 55% had been drunk at the time of the offence, while 38% of our prison sample reported drinking 10 or more drinks before committing the offence for which they were in prison.

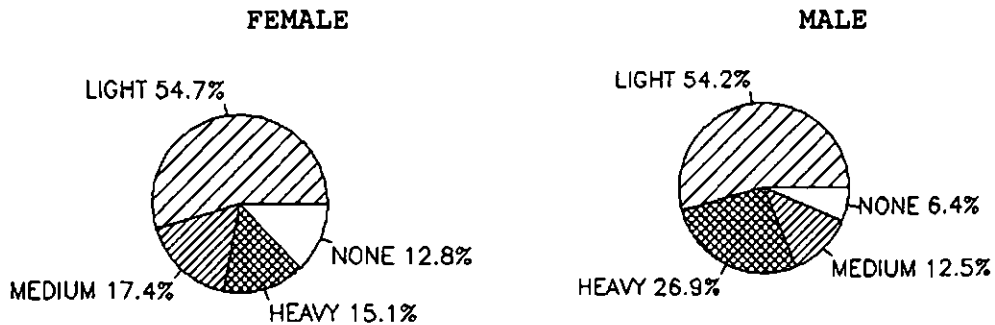
More recently, the U.S. Justice Department's Bureau of Justice Statistics (1988) announced the results of a survey of 13,700 State inmates in the United States. One half said they were under the influence of drugs and/alcohol at the time they committed their crimes (which does not comment on the extent that they had been drinking).

Figure 3 Consumption Level by Sex Compared with Australian Bureau of Statistics Survey of Perth Community in 1985.

1. A.B.S PERTH SURVEY, 1985



2. PRISON SURVEY, 1987



Such results are reminiscent of the Senate Standing Committee report of 1977 which estimated that 73% of men who committed violent crime had been drinking prior to the commission of the crime (which does not comment on the extent that they had been drinking).

3.1.4 PERCEPTION OF ALCOHOL PROBLEMS

One of the aspects that is not often studied is the prisoner's own perception of an alcohol problem. We asked the following two questions: "do you think alcohol had anything to do with you being in prison this time?" 47.8% of the sample answered 'yes'. Secondly, "do you have any concerns about your use of alcohol?" This time only 26.8% of prisoner answered in the affirmative i.e.,

perhaps it is alright to blame alcohol for imprisonment but not to be "concerned" about it. It further emphasises the greater utility of questions that focus on concrete behaviours (eg., linking actions to prison) rather than more subjective questions.

Overall, 52.4% were either "concerned" or thought alcohol had something to do with their imprisonment. One of the crucial questions here is "how many of those classified as having various problems are concerned about their use of alcohol". Table 4 lists the proportion of prisoners in the alcohol use categories who are classified as "concerned" about their alcohol use. This table should be of considerable interest to those planning programs that rely on prisoners volunteering or seeking help on their own behalf.

Table 4 Prisoners with Various Alcohol Problems who are Concerned About their Use of Alcohol.

ALCOHOL PROBLEM GROUP	PROPORTION OF GROUP CONCERNED ABOUT THEIR USE OF ALCOHOL
Hazardous consumption.....	50%
Haz. consumption and dependent.....	66%
One or two drink driving charges.....	28%
Three or more drink driving charges.....	43%
Alcohol/crime association.....	37%

3.1.5 DRUG USE

Table 5 indicates the percentages of prisoners who have "ever tried" certain drugs. These drugs are classified according to World Health Organization standards and include all the suggested categories.

As Wish (1986) demonstrates by comparing the results of urine testing with self report of arrestees in New York the "ever used" measure is probably an underestimation of actual numbers who have tried various drugs.

Table 5 also includes the median age of first use for those who have ever tried drugs and the proportion of the sample reporting use of the drugs in the past year.

Table 5 Drug Use Histories of Prisoners in the Sample (n=926)

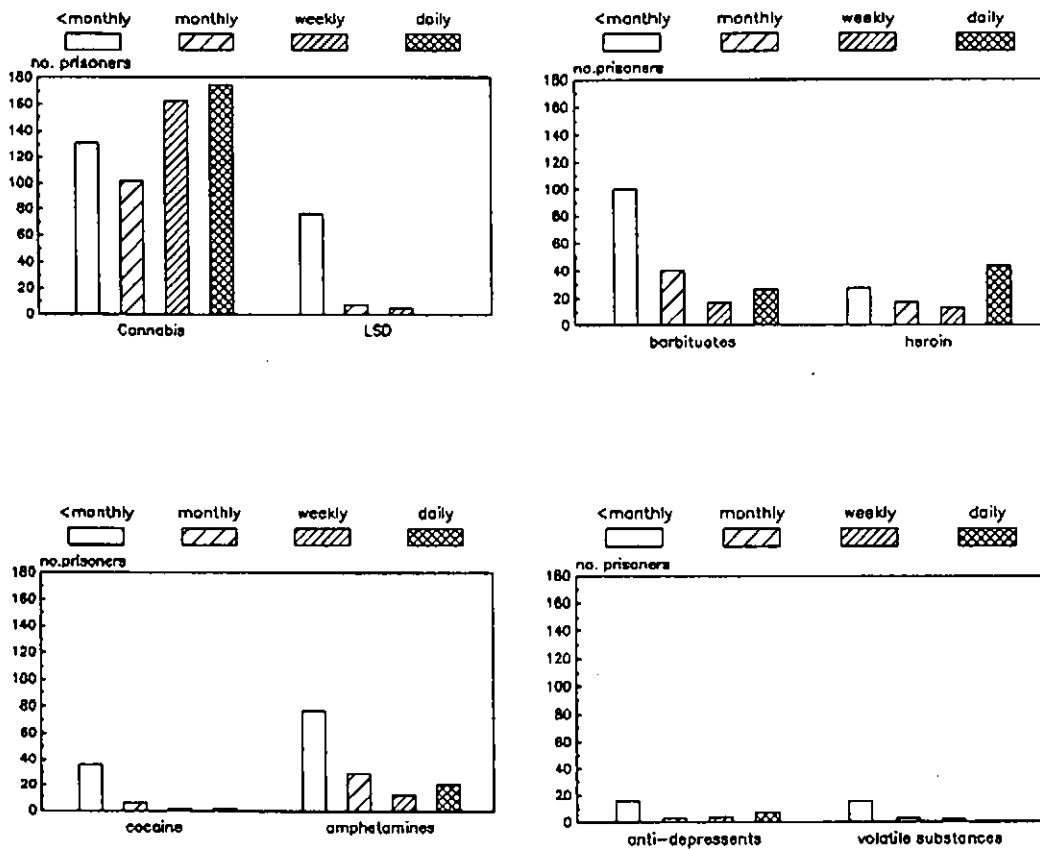
	A. % Who Have Ever Tried	Median Age of First Use	B. % Using in Last Year	C. <u>A</u> <u>B</u>
CANNABIS	74.4	15.5	61.5	82%
LSD	27.4	16.5	9.6	35%
BARBITURATES	35.5	17.5	19.8	56%
HEROIN	19.7	17.5	11.0	56%
COCAINE	13.5	17.5	5.0	37%
AMPHETAMINES	26.2	17.5	15.0	57%
ANTI-DEPRESSANTS	6.2	17.5	3.3	53%
VOLATILE SUBSTANCES	8.8	13.5	2.3	26%

It appears that cannabis is the most commonly tried drug and it is tried by most prisoners. Barbiturates and amphetamines are the next most common drugs reported as having been tried. The late teen years appear to be the most likely time for drug experimentation. This means that most prisoners started using drugs before coming to prison. Preventative programs would be better targeted at the younger population. Apart from cannabis most drugs are used on a regular basis by only about half of the number of prisoners that have ever tried them. The proportion of "ever tried" who have used in the last year is represented in Table 5 by column C.

Figure 4 indicates the patterns of use for those prisoners who have used drugs of various types within the last year. Table 6 presents the values from which these graphs are derived. As these figures indicate, some drugs are widely used, some are used moderately and others seem to be more "all or nothing" (e.g. heroin). Overall 24% of the sample reported using cannabis on a daily basis or other drugs on a daily or weekly basis. 24.2% of the male sample and 25.6% of the female sample were rated as heavy/regular drug users.

Table 6 Number of Times Drugs Used in the Last Year (figures refer to the numbers of prisoners reporting each usage frequency)

Drug	<Monthly	Monthly	Weekly	Daily	TOTAL
Cannabis.....	131.....	102.....	163.....	174	570
LSD.....	76.....	8.....	5.....	0	89
Barbiturates.....	100.....	40.....	17.....	27	184
Heroin.....	28.....	17.....	13.....	44	102
Cocaine.....	36.....	6.....	2.....	2	46
Amphetamines.....	77.....	29.....	12.....	21	139
Anti-depress.....	16.....	3.....	4.....	7	30
Vol.substances.....	16.....	3.....	2.....	0	21

Figure 4 Frequency of Drug Use for Group Reporting Current Use

Regarding the 30 days preceding imprisonment, Figure 5 shows the extent of use of various drugs. The recent U.S. Justice Department's Bureau of Justice Statistics (1988) reported that 43% of the 13,700 inmates they surveyed had been using drugs daily during the month before their offence. This would seem to indicate that the problem of criminal drug use is much more pronounced in the United States than in Western Australia.

Figure 5 Use of Drugs in the 30 Days Preceding Imprisonment

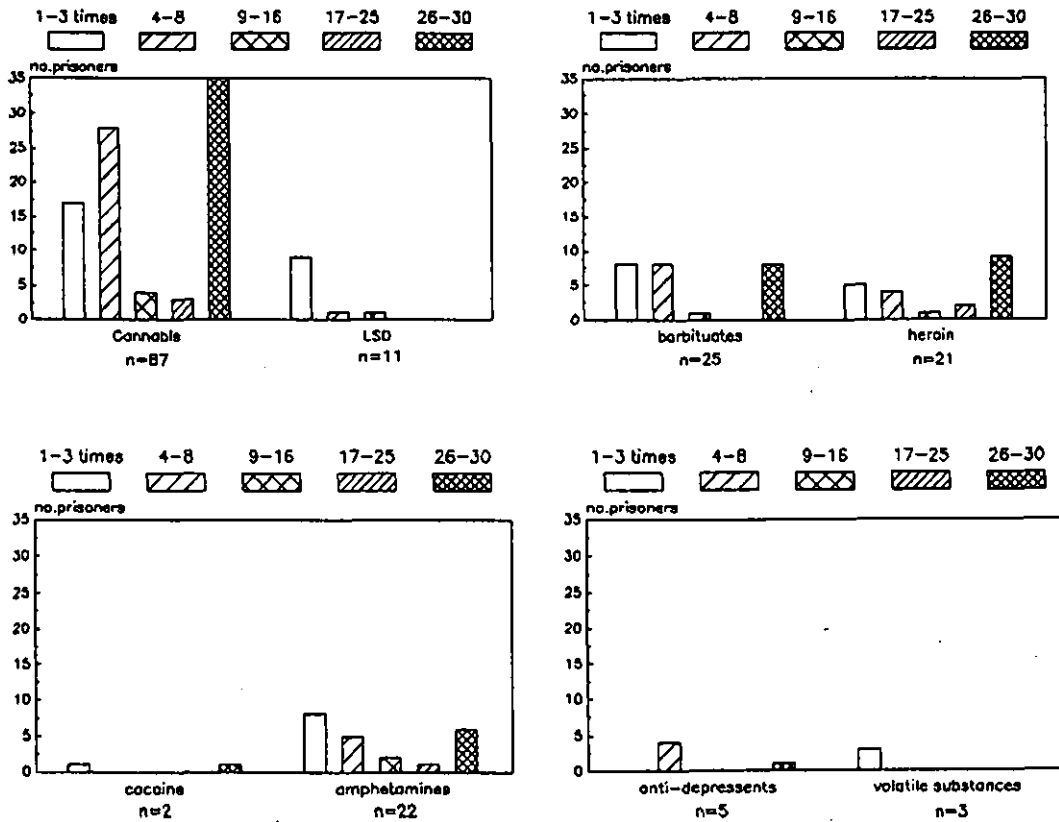


Table 7 Frequencies of Number of Times Drugs Used in 30 Days Before Coming into Prison

Drug	No. times used in 30 days before prison					TOTAL
	1-3	4-8	9-16	17-25	26-30	
Cannabis.....	17	28	4	3	35	87
LSD.....	9	1	1	0	0	11
Barbiturates.....	8	8	1	0	8	25
Heroin.....	5	4	1	2	9	21
Cocaine.....	1	0	0	0	1	2
Amphetamines.....	8	5	2	1	6	22
Anti-depress.....	0	4	0	0	1	5
Vol. substances....	3	0	0	0	0	3

3.1.6 DRUG DEPENDENCY

The instrument used to provide an indication of dependency on drugs is an abridged version of the Drug Abuse Screening Test (Skinner, 1983) together with three additional items. According to this measure 7.8% of the sample are classified as showing signs of drug dependency. As with alcohol we coupled the consumption measure with the dependency measure to arrive at a figure for current drug dependents. For consumption we considered anyone using cannabis on a daily basis or other drugs on a weekly or daily basis to be current heavy consumers. Following this procedure, 5.8% of the sample were classified as current drug dependents.

Skinner's original DAST was applied to a self-referred clinical population. He recommends caution in generalising his results to other populations, stating that one could expect less open responses in a criminal justice setting (Skinner, 1982).

Only 22% of those prisoners classified as alcohol dependent were also classified as drug dependent. This constitutes 4% of the total sample who may be considered both alcohol and drug dependent. Prisoners classified as alcohol dependent were not found to be drug dependent on the whole, and the reverse was true for drug dependent prisoners.

3.1.7 DRUGS AND CRIME

As with alcohol, one of the main areas of concern is criminal behaviour related to drug use. This was measured by three direct questions, shown in Table 8 with the proportion of the sample answering in the affirmative. 15.7% of the sample answered 'yes' to at least two of these questions and are therefore considered to have problems in this area. The U.S. Department of Justice (1988) survey in the United States of 13,700 inmates in the United States found that 35% of inmates said they were under the influence of drugs at the time of the offence they were in prison for.

Table 8 Drugs and Crime

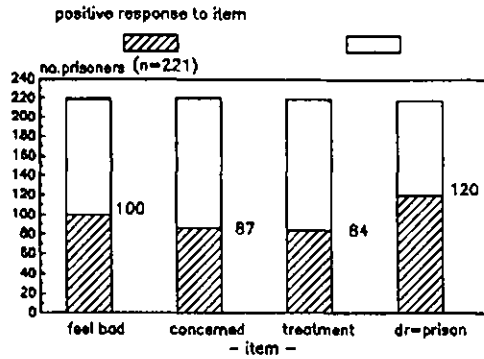
POSITIVE RESPONSE TO ITEM:	PROPORTION OF SAMPLE (N=926)
ON DRUGS AT TIME OF OFFENCE.....	17%
OFFENCE COMMITTED TO PAY FOR DRUGS.....	9%
HAS BEEN CHARGED WITH A DRUG OFFENCE...	25%

3.1.8 PERCEPTION OF DRUG PROBLEMS

It seems that a greater proportion of those with drug problems also perceive they have a problem compared to that group using alcohol. Four questions tapped prisoners' concerns about drug use. These are shown in Figure 6 with a breakdown of the various drug problem groups that have been discussed. A total of 17% were categorised as perceiving themselves to have drug problems on the basis of their responses to this dimension.

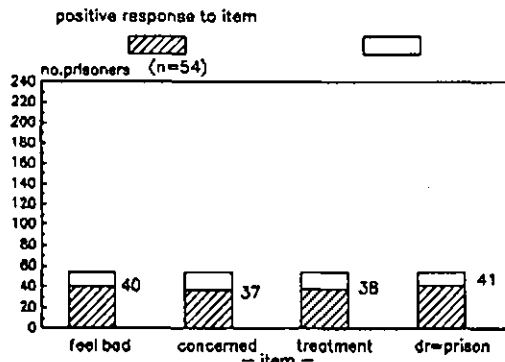
Figure 6 Proportion of Prisoners Classified as Drug Abusers Expressing Concern with Drug Use

1. HEAVY/REGULAR DRUG USERS (daily cannabis use; daily/weekly use of other drugs)

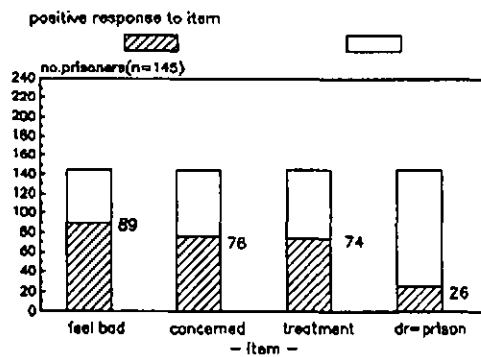


Item Key
Feel Bad = Do you ever feel bad about your drug use?
Concerned = Do you have any concerns about your use of drugs?
Treatment = Would you like to receive assistance or treatment if it was available?
Dr=prison = Do you think drugs had anything to do with you being in prison?

2. CURRENT DRUG DEPENDENTS (heavy/regular users who are also indicated as being dependent)



3. DRUG-CRIME ASSOCIATION GROUP (positive responses to two items on Table 8)



3.2 IMPORTANT VARIATIONS IN ABUSE PATTERNS

It is important to understand how alcohol and drug abuse varies between groups of offenders. For example, there are differences related to gender, age and race. The variation in terms of criminological factors such as type of offence and previous imprisonment is also important to the understanding of how drug abuse is distributed in the offending population. The distribution pattern of substance abusers over each prison is significant for intervention planning.

3.2.1 Alcohol Use

Age did not appear to be a significant factor relating to alcohol abuse. However, race accounted for the largest discrepancy between groups. 42.4% of aboriginal prisoners are in the "hazardous" category, compared to only 25% of the non-aboriginals.

There were noticeable variations in the proportion of alcohol abusers between prisons. Wooroloo had the largest proportion of heavy drinkers (34.3%). As a minimum security prison it contains a greater percentage of prisoners on relatively minor charges, such as those that are alcohol-related, and also has a larger percentage of aboriginals.

Hazardous use is also more common amongst those who have been to prison before. 33.8% of recidivists were classified as hazardous users compared with 20.8% of those in prison in Western Australia for the first time. This would seem to suggest a relationship between offending and the hazardous use of alcohol.

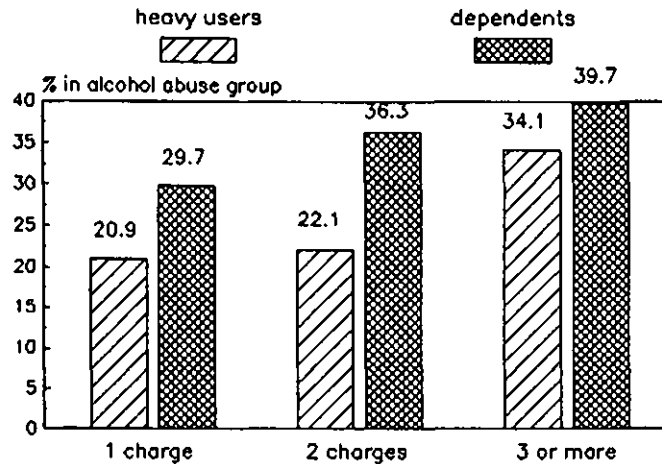
3.2.2 Alcohol Dependency

The analysis of variation in alcohol dependency was restricted to alcohol dependents reporting current hazardous consumption levels.

As with alcohol consumption the biggest variation occurred with race. Aboriginals were almost twice as likely to be classified as current dependents - 30% compared to 17% for non-aboriginals.

The proportion of current dependents was 2½ times higher for those that had been to prison before (25% for recidivists compared to 11% for first timers).

The type of offence the prisoner entered prison for was an important source of variation. The main offence was available for only 83% of the sample. Of these, the proportion classified as current dependent was 21%. Examining offence types, offences against the person recorded 28% as current dependents, offences against justice 31% and alcohol related offences 26%. For those prisoners with one or more drink driving offences the proportion of current dependents increased as shown in Figure 7.

Figure 7 Drink Driving Charges and Current Alcohol Dependents

3.2.3 Alcohol and Crime

Prisoners were classified as demonstrating an alcohol/crime association if they had one or more drink driving charge or they had consumed more than 10 drinks prior to their last offence. In our analysis we only considered those that reported hazardous levels of consumption.

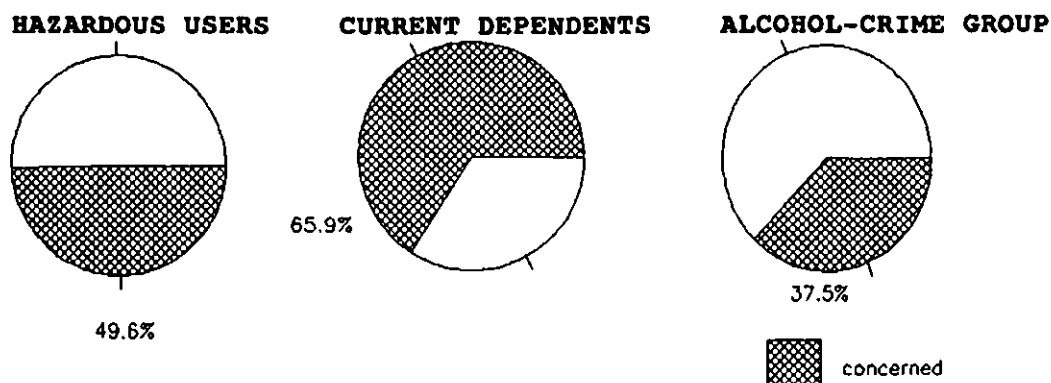
According to this criteria 25% of the sample were classified in this category. The largest proportion was found at Wooroloo (32%). The remaining prisons did not vary considerably in proportion although for Bandyup (the women's prison) showed the lesser percentage of 14% with an alcohol/crime association.

Again the biggest variations were found according to race and previous imprisonment. Aboriginals are twice as likely to fall into the alcohol/crime group compared to non-Aboriginals as were those who had been to prison before.

3.2.4 Perception of Alcohol Problems

For this discussion we sought the proportion of prisoner expressing concern about their alcohol use from within the groups reporting hazardous levels of consumption and current dependents or those who were classified in the alcohol and crime group. Figure 8 lists the proportion of prisoners in these groups who also expressed concern about their alcohol use.

Figure 8 Percentage of Prisoners in Abuse Categories Expressing Concern about their Alcohol Use



3.2.5 Drug Use

Prisoners who reported using cannabis on a daily basis or other drugs on a weekly or daily basis over the last year were classified as regular drug users. 24% of prisoners fell into this category. The proportion was slightly higher (29%) amongst younger prisoners (those under 20) and those between 27 and 33 years old (29%). Non aboriginals were more than twice as likely to be regular drug users (29% compared to 12%).

3.2.6 Drug Dependency

As with alcohol, we restricted this category to regular users who were also classified as dependent. Overall 6% of the sample fell into this category (54 prisoners). Of these most were aged between 23 and 33 years (69%). The proportions were higher at the remand centre (9%) and Bandyup (12%). As these figures indicate, women were twice as likely to be classified as "current drug dependents" than men.

Consistent with the previous results, more non-aboriginals were classified as current drug dependents (7.3%) than were aboriginals (1.0%). Heroin related offences recorded a greater number of drug dependents than did other offence categories.

3.2.7 Drugs and Crime

Overall 15.7% of prisoners fell into this category. The proportions were higher at the remand centre (23.3%) and Bandyup (17.4%). Predictably, only 5.8% of aboriginal prisoners fell in this category.

3.2.8 Perception of Drug Problems

Figure 6 illustrates the type of concern expressed by the three main abuse groups. It appears that drug abusers demonstrate a greater awareness of abuse than do alcohol abusers particularly for that group classified as having problems with drugs and crime.

3.3 THE VALIDITY OF THE INITIAL SCREENING MEASURE

One of the important questions for research in this area is "how valid or meaningful are the measures used?" How well does the measure match other indications of substance abuse? In this area different sources often give vastly different indications of the extent of the problem. This is particularly the case for drugs, which because of their illegal nature, tend to result in much speculation and little reliable data.

The present study incorporated a number of measures which provided an estimation of convergent validity (the degree to which different measures give the same result). Five separate types of assessment were taken (see Figure 2) in addition to the initial screen. The same dimensions were applied to each data source in order to compare measurement scales. The categorisation made on the basis of the initial screen was then matched against the categorisation achieved on the basis of the other assessment measures. Table 11 summarises these results.

The first question to be addressed is "how good are the validation measures?" It was found that the classification based on the medical screening generally tended to result in very few (3.1%) prisoners as alcohol dependent. This was partly because this classification procedure relied on the existence of symptoms of alcohol withdrawal, which are not often observed. Placed against the initial screening measure the results of the medical screening classification were used to assess the ability of the initial screen to in fact "correctly" detect those few alcohol dependents.

The prisoner file measure is really only useful for those prisoners who had been to prison before and therefore likely to have documents that may comment on the substance abuse of the prisoner. This measure was considered for the sub-sample of prisoners who had been to prison before. As with the medical screening measure, the essential statistic is the number of prisoners classified as abusers on the prisoner file who were classified in the same way by the initial screening measure.

One of the key checks in the validation process is to subject the validation measures to the same tests as applied to the measure being tested. In the present case the expectation is that there should be considerable overlap between the prisoners classified as abusers on the medical screen and those classified as abusers on the prisoner file. However, the degree of agreement between classifications based on these measures was generally quite small. In order to overcome some of the problems with the validation measures themselves we decided on a pragmatic option, the use of the professional case assessment.

The professional case assessment is probably the best measure to test the classification system for a number of reasons. Firstly, the raw data for this measure is already formatted by professional case workers according to the eight point classification system. Secondly, this test is quite realistic. It essentially measures the efficiency with which the screening measure can classify in the same manner as professional case workers. These results are presented in Table 9.

The professional case assessment has the advantage of face validity. This assessment is the alternative to questionnaire based screening. It is the most thorough and complete indication available regarding the existence of forms of substance abuse in the subject.

Table 9 Specificity Measures for Classification Groups

('Specificity' here is the proportion of prisoners classified as abusers on criteria measures classified likewise on the initial screening measure)

classification	medical screen (n=926)	prisoner file (n=560)	prof. case assessment (n=80)
alcohol use	XXXXX*	61.4	66.7
alcohol dependency	71.4	60.7	75.0
alcohol/crime	77.8	97.5	76.3
alcohol-perception	XXXXX	XXXXXX	75.0
drug use	37.8	XXXXXX	41.5
drug dependency	27.8	15.9	15.9
drugs/crime	XXXXXXX	45.8	63.6
drug-perception	XXXXXXX	XXXXXX	61.8

*XXXX = No corresponding classification for this screen type

3.4. A BRIEF SCREENING INSTRUMENT

The results of the present study suggest the probable value in the application of a short screening instrument for the detection of individuals with alcohol problems. This brief screening instrument would be useful if applied soon after a prisoner is received into prison. On the basis of the results of this screening test, referrals could be made to appropriate professionals.

A good deal of research points to the importance of consumption as the most important factor to be determined in screening individuals for alcohol problems. The important work recently published by Christie et. al. (1987) on predictors of recidivism of Victorian drinking drivers found that only three factors were related to reconviction (heavy drinking, low social class, and a family history of "problems with drinking"). Notable by its absence was any predictive value of the MAST measure of alcohol dependency. As Christie et. al. (1987) point out, consumption was the only predictor variable that is amenable to change at the individual level. It should be noted, however, that McLean (1988) suggests that the MAST has an important role to play in screening prisoners for alcoholism counselling. In his New Zealand study, McLean provides evidence to support the value of the MAST in detecting alcohol abuse amongst prison inmates.

The results of the present study were examined for dimensionality by means of correspondence analysis (Greenacre, 1984) of drug and alcohol usage patterns. Questions associated with clustering and therefore important as indicator variables for the presence of alcohol problems are those associated with "help" and "success" (have you ever gone for help, was treatment successful). These two questions were good indicators of those with a large number of problems. The chi-square components of the total chi square of 18,116 due to the the first two eigenvectors were 3977 and 2018, denoting a high percentage explained (33%). For drugs the most powerful indicator of problems was a positive response to the question "have you sought treatment for your drug problem". Also high amounts of heroin, LSD, amphetamines and barbiturates used indicate large numbers of problems (>50%) but this is not the case for cannabis(<40%).

The results of the correspondence analysis suggest that any brief screening instrument for drug and alcohol problems should include a question on past attempts to get treatment for drug or alcohol problems as these are good indicators of the presence of actual problems as indicated by the more extensive self report.

DISCUSSION

4.1 SCREENING

The routine administration of a brief screening measure similar to that used in the project on offenders entering prison would enable the detection of most individuals who have a substantial drug or alcohol problem. The results of the study suggest that one or two simple questions on consumption levels of drugs and alcohol and past attempts to get treatment are useful in selecting those who should be followed up. Further, certain categories of offenders such as drunk drivers should be more intensively assessed or routinely exposed to a systematic programme. In general terms the proportion of problem drinkers is so great that mass programs could be justified.

Given the prevalence of alcohol related problems there is an argument for the section of the screening instrument on alcohol to be routinely applied to incoming prisoners. This would take approximately 5 minutes in most cases and could be seen as an adjunct to other treatment interventions.

A second distinct advantage is that it is expected (based on the experience of the project) that the simple administration of the measure will result in heightening the awareness of at least some individuals to their alcohol and drug problems. The administration of the measure, therefore can act not only as a detection procedure but also as an actual intervention.

A third advantage is that the screening will allow the maintenance of the data base and a means to evaluate other interventions and events in the criminal justice system.

4.2 TARGETING GROUPS FOR INTERVENTION.

As a result of the project certain distinct groups emerge as targets for intervention. The five main groups are:-

4.2.1 Aboriginal alcohol abusers.

The over representation of aboriginals in all the alcohol abuse categories stands out. Specific programs that are culturally appropriate need to be developed or supported and expanded to meet this need. The recent development of an alcohol education programme specifically tailored for aboriginals in Western Australia Department of Corrective Services is a welcome and timely initiative in this area.

4.2.2 Alcohol abusers not concerned with their alcohol use.

Perhaps one of the most important groups to consider is that which includes individuals who are classified as having an alcohol problem which they do not express a concern about. Without this basic awareness or concern there is little chance that these individuals will do something about their alcohol abuse. Therefore, these individuals perhaps present the greatest risk to the community and their families since they are unlikely to be open to suggestions to reduce their alcohol consumption.

This group should be the target of a campaign aimed at alerting them to the possible dangers associated with heavy alcohol consumption.

4.2.3 Drunk Drivers.

The large number of prisoners with one or more drink driving charge suggests this problem needs special attention. It is recommended that prisoners sentenced for drink driving charges attend a day long course modelled along the lines of the Western Australia Department of Corrective Services (Community Based Corrections) Alcohol Education Programme.

The recent study by Christie et. al. (1987) found that a third of a cohort of drink drivers committed further alcohol related offences within nine years. Christie et. al. (1987) point out (citing Vingilis, 1983) that a conviction for drink driving may be one of the most useful and objective indicators of alcohol related problems. However, this must be considered against the background that Christie et. al. (1987) cite Australian studies to suggest that up to 30% of young adult men report driving occasionally with blood alcohol concentration above the legal limit.

4.2.4 Women Alcohol and Drug Abusers.

Although women did not appear to consume the same amount of alcohol as men in absolute terms, the physiological differences between the sexes is such that in real terms a greater proportion of women prisoners consume hazardous quantities of alcohol. It is of particular concern that figures available from other studies in Australia (e.g. Bungay and Winter, 1986) suggest that excessive alcohol consumption by women is on the increase. Further study on this trend should be conducted to monitor its development. More importantly social policy needs to be implemented to address this growing problem.

Although the number of women in the present study was fairly small (because of the lower numbers of women coming to prison) dependence on drugs was more prevalent in this group than with their male counterparts. Special attention should be given to the needs of women with drug dependency problems.

4.2.5 Drug Abusers.

While the drug abusing section of the prison population is proportionally smaller than the alcohol abusing section, it is still of sufficient concern to warrant some form of intervention. Suitable locations for programmes would be the Remand Centre and Bandyup. Figures regarding the proportion of drug abusers who express concern about their abuse suggest that "consciousness raising" is not required to the same degree for drug abusers as with alcohol abusers. Rather, the emphasis should be placed on developing a drug free lifestyle in conjunction with learning coping strategies. This is particularly relevant when it is pointed out that cannabis is the most common drug used. The reason cited by prisoners for its use was for its relaxant qualities.

Continuing to monitor drug abuse patterns is important as a number of studies point out that some drugs become epidemic in a population. The recent work by Wish (1987) in the United States reports the saturation of cocaine use amongst arrestees tested in New York city.

4.3 Intervention strategies

The results of the Drug Abuse Screening Project suggest that whereas sizable proportions of people coming to prison seem to have disabilities associated with drug and alcohol use, only a relatively small proportion of these express concern with their drug and alcohol use. The results of the present study support assertions by Mclean (1988) that a substantial rehabilitative effort in the criminal justice system in relation to alcohol abuse is justified.

The first priority should be service delivery to those seeking treatment or assistance with a substance abuse problem. Therefore, increasing the availability or accessibility of programs is supported. However, as mentioned previously, probably not enough is being done to raise the awareness of those who are unconcerned with their problem. The fact that these individuals have come to prison suggests that their behaviour is affecting others in the community. It is not suggested that coercive treatment be established, rather that prisoners be exposed to material that will encourage reflection on the risks of substance abuse.

It is recommended that treatment interventions in Corrective Services include both those who express concern and those who may have problems but don't express concern. Further, treatment

interventions need to be appropriately geared to the main target groups to effect the maximum efficiency. For example, the Western Australia Department of Corrective Services has recently developed an alcohol education programme for aboriginals.

One advantage of the full screening procedure was that the series of questions posed required the offender to focus on their substance (ab)use and consider it from a number of perspectives. It was observed that many interviewees became increasingly aware through their interviews that they had a number of alcohol related problems. In this respect the actual administration of the screening instrument can be viewed as an active form of intervention which increases the offenders awareness of problems associated with substance (ab)use.

The administration of the screening instrument may even be more effective than lecturing to offenders as it puts the offender in an active rather than a passive role. Obviously the relative effectiveness of forms of intervention needs to be determined by means of carefully controlled research. However, Christie et. al. (1987) point out that as "consumption" was the only predictor of recidivism that was amenable to change, programmes that are targetted at drink drivers that are related to the reduction of alcohol consumption are likely to be more appropriate than are goals that are aimed at specifically at modification of of the drink driving nexus.

The results of the present study confirm other work (e.g. Kandel and Logan, 1984) that suggest that strategies aimed at the prevention of drug abuse should aim at the 15 to 17 year old as this is the most common period of first use of various drugs.

On a more general level given the prevalence of alcohol use in the target population state wide or national strategies need to be developed which address this section of the population. For example, given that a large part of the offender population is from the lower socio economic group, cost or price of alcohol is a significant factor. In this regard encouraging the consumption of low alcohol beer through differential pricing is likely to be meaningful. The over representation of young offenders in the present study confirms other results that show that drinking is a popular youth activity. This obviously has implications for the marketing of alcohol and the much smaller attempt to prevent alcohol abuse. Cavanagh and Clairmonte (1985, p134) point out that:

"While women's importance as a consuming segment is unparalleled in size, the youth market assumes paramount importance for yet another reason. Because of legal proscriptions against alcohol sales to adolescents in most DME's [Developed Market Economies] alcohol advertising TNC's [Trans National Corporations] can hone in the entry level age group to recruit consumers at a formative age. To make further deep forays into this segment, TNC's often strive to reshape certain existing brands so as to enhance their youth appeal. By recourse to commercials depicting the attractiveness of dangerous and exiting occupations Phillip Morris has moved in on this market".

4.4 Further Research

Continuing to "count" the number of people with alcohol and/or drug problems is important in the sense that the extent of the substance abuse related problems should be continually monitored in the community at large and in specific high risk groups such as offenders. However, over the last 20 years there have been a number of estimates of the exact extent of alcohol and drug problems in communities often with the intention of pointing out how widespread these problems are in certain communities or groups. It is safe to say that the general extent of the problem has been established. It is now more relevant to discuss measures that address the conditions which support the development and maintenance of abusive behaviour. Perhaps in some ways the fascination with statistics has allowed researchers, governments and institutions to avoid confronting the difficult problem of creating conditions conducive to the diminution in the use and abuse of substances.

Having made the point that there is indeed strong evidence of widespread alcohol use and abuse and many problems associated with the abuse, some points should be made regarding causality and attribution. It is very common in the literature and particularly in the less academic circles to find talk about substance use being related to and associated with certain anti-social behaviour such as aggression and crime. However, a truly scientific approach can only view these events as occurring together. There is no particular reason to assume that one "causes" the other. A feasible hypothesis, particularly regarding alcohol abuse and crime is that these two events are both attributes of particular communities or groups. For example it is likely that both alcohol abuse and crime are common attributes of the lifestyle of many young males in Australia, it is quite a different thing to assume that alcohol abuse leads to crime. This assumption may not be stated in many discussions of the problem but link phrases such as "is associated with" may easily be misinterpreted by the uninformed reader.

If as many studies seem to indicate, alcohol abuse is endemic in present Australian communities, then perhaps even drink driving related fatalities have to be considered against the baseline of the prevalence of drink driving amongst all road users. For example, what proportion of general road users are intoxicated whilst driving and what proportion of these result in fatalities. Such an analysis is likely to be more helpful in preventing road fatalities at this time, as an attempt can then be made to isolate those aspects of the intoxicated driver that are associated with the fatalities which could then lead to a more finely tuned preventative campaign or legislative changes.

Similarly, the present study found that almost 50% of offenders admitted having 10 or more drinks prior to the commission of the offence they were in prison for. It could be that this was a common and perhaps even normal level of intoxication for the

individuals involved (in fact earlier questions related to consumption would support this). Therefore, the assumption that the consumption of alcohol had a primary part to play in the commission of the offence is questionable given that any sample of the offenders behaviour would reveal heavy use of alcohol. Again the important question becomes what else was happening during this period of intoxication that may have encouraged the commission of the offence.

The preceding discussion is made simply to counter some of the more missionary inclinations of the debate in this area. It seems to be very clear that the level of alcohol abuse in the Australian community is a problem and, on the basis of medical reasons alone, should be reduced. The really interesting issue is what the community and Government can, or is willing to, do about it. On a more detached note, how far is the community willing to allow alcohol abuse to go before the courses of action that have been recommended by various expert bodies (such as the strict enforcement of the legal drinking age and a ban on the advertising of alcohol) are adopted.

The more relevant analyses regarding escalating alcohol abuse problems in the community are sociological (eg. Sargent, 1979) and political. Perhaps the most useful way to close this discussion is the opening quote from Cavanagh and Clairmonte's (1985) important work "Alcoholic Beverages: Dimensions of Corporate Power"

"To speak and write of alcohol problems without reference to the burgeoning transnational corporations that produce and market alcoholic beverages is akin to a discourse on Hamlet without reference to the Prince. Yet, this is precisely what certain institutions and individuals have done for decades and continue to do to this day."

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April 1988

Popular Attitudes to Drugs and the Role of the Media*

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Prepared for presentation at the First National Drug Indicators
Conference, Canberra, 10-12 May 1988

* This paper is taken from Chapter 2 of McAllister and Moore, *Drugs, Public Opinion, and Policy: The Sociology of Drug Use in Australia*. The project is funded by a National Drug Information Research Grant from the Commonwealth Department of Community Services and Health. For assistance at various stages of the project, we are particularly indebted to David McDonald, Mal Gibson, and Roger Jones. The 1985 Social Issues in Australia Survey was originally collected by Reark Research, on behalf of the Commonwealth Department of Health. Neither the original collectors of the data nor the funding body bear any responsibility for the analyses and interpretations presented herein.

Popular Attitudes to Drugs and the Role of the Media

The attitudes individuals hold towards drugs have long been considered important determinants of patterns of drug use. A range of studies have demonstrated a strong link between beliefs about drugs, most notably their relative danger for the individual, and patterns of use (see, for example, Battistich and Zucker, 1980; Kandel, 1974). Altering attitudes towards drugs and demonstrating the risks involved in their use has been a central component of health education programs in a range of countries since the 1950s (Champion and Bell, 1980). In allocating scarce resources to such programs, the assumption is that attitudes will mould behaviour and, ultimately, use.

This assumption is also implicit in the extent to which producers of licit drugs advertise their products in magazines and newspapers. In seeking to sell their products, they try to mould attitudes by downplaying the risks of use and emphasising instead the 'positive' aspects of their use, such as relaxation, enjoyment and social interaction. This is particularly the case with tobacco advertising, where the evident health risks contrast sharply with the advertising image that is presented to the public (Northern Territory Department of Health, 1984).

From this perspective, popular attitudes towards drugs are an important component in the complex interaction of factors which determine the incidence and prevalence of drug use. The importance of attitudes is hardly surprising, since they have long been considered primary determinants of behaviour and their study has formed an important part of modern social science, notably in social psychology. Indeed, at the turn of the century, social psychology was often defined as 'the scientific study of attitudes' (Triandis, 1971: 2).

Although attitudes have been defined in various ways, one constant theme is what Triandis (1971: 2) calls the 'readiness to respond'. Allport (1935), for example, combines this in his influential definition and views attitudes as 'a mental and neutral state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related'. For Allport and

many of his followers, attitudes are usually seen as consisting of three components, *cognition*, *affection*, and *behaviour*. Since the number of differences in any individual's environment is potentially infinite, *cognition* is essential in bringing order to the world by categorising the range of stimuli that exist. Ultimately, it is of prime importance in facilitating the individual's survival in a complex and demanding world. Cognition, then, assumes that individuals have formed categories which they use when thinking about the social world.

After the construction of certain categories which the individual uses to order and interpret the world, the second component is *affection*. This involves the emotion that charges the idea so that an individual will react in a certain way, either positively or negatively, when presented with a particular category. Usually, this reaction will be a consequence of some experience with the category in question (Fishbein, 1965). Finally, the behavioural component involves a predisposition to action once a category has been perceived and evaluated (Triandis, 1971: 2). Thus, having categorised an object and formed either a positive or negative view of it, individuals will utilise this information in helping to shape their behaviour towards the object.

Although it may not necessarily be the case that the three components are consistent--that individuals will follow through the logical consequences of their affection towards an object into behaviour--the balance of probability would be that their behaviour would accord with their reaction to the object. The theoretical relationship between affection and behaviour in relation to drugs is shown in Figure 1. Two dimensions are identified, the affective reaction to the drug (positive or negative) and the degree of contact with it (avoiding contact or seeking it). The behavioural consequences result in four ideal types: *reverence* (if the drug is positively valued but generally avoided); *acquisition* (positively valued and sought after); *indifference* (negatively valued and avoided); and *elimination* (negatively valued and sought after).

[Figure 1 about here]

According to the typology in Figure 1, most licit drugs fall into the category of acquisition. Thus, for example, many individuals will regard alcohol and, to a lesser extent, tobacco, in a positive way, and seek contact with it. By contrast, a wide range of drugs will produce indifference, mainly tranquillisers and other prescribed drugs. Drugs such as heroin and cocaine

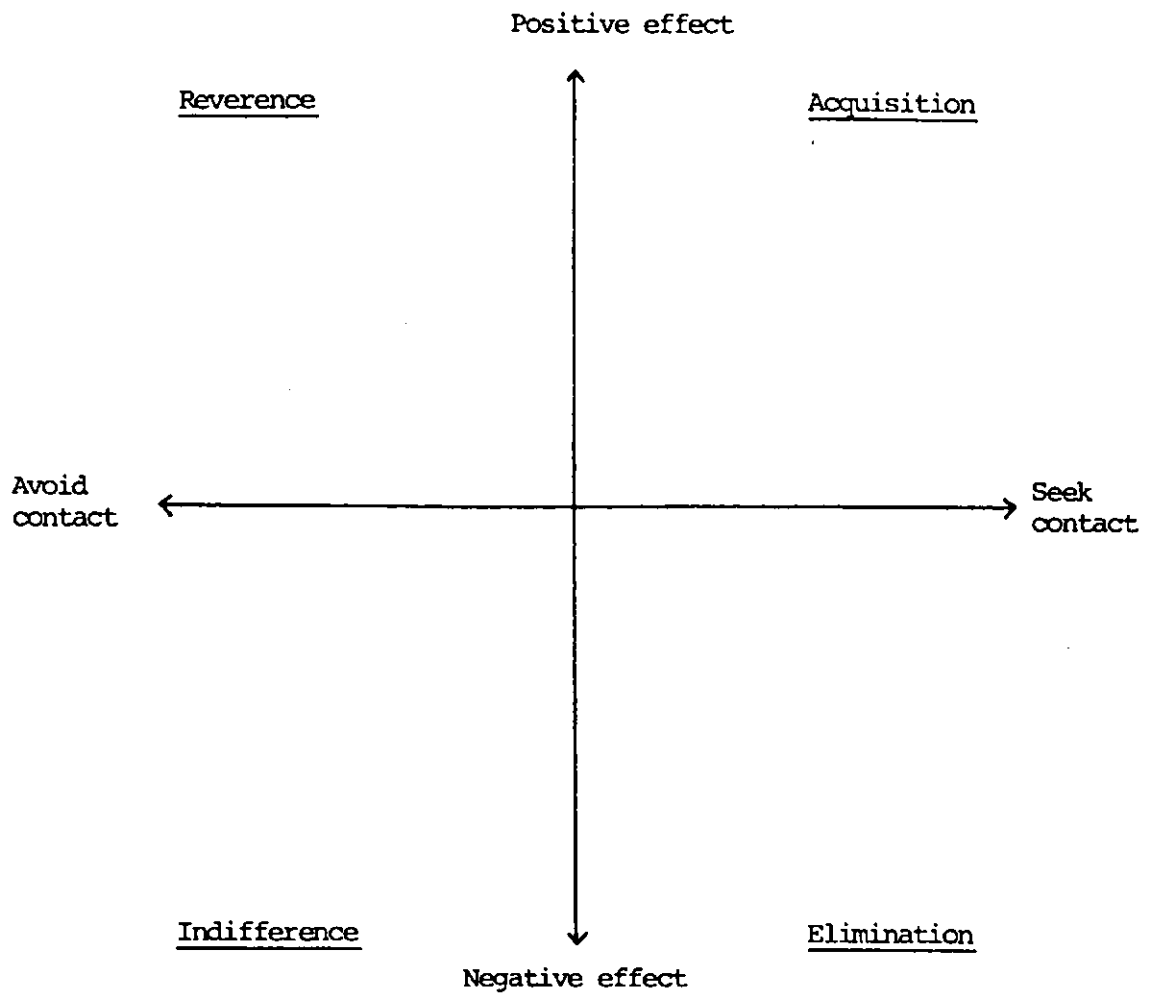


Figure 1: Two dimensions of behaviour towards drugs. Adapted from Triandis (1971: 13).

would elicit a desire to eliminate them. Finally, in modern societies, few, if any, drugs are revered, but this is a common phenomenon in primitive societies where drugs are a more integral part of religion and other symbolic practices.

In this paper we are concerned with these three levels of attitudes to drugs: the cognitive, the affective, and the behavioural, the latter exemplified in the typology shown in Figure 1. In the first section, we examine the cognitive element, and the role of attitudes to drugs vis-a-vis attitudes towards other issues and social problems, both for the individual and for the society as a whole. Secondly, we are concerned with the affective component and the extent to which individuals differentiate between drugs in seeing them as a social problem and as dangerous. Finally, we relate these attitudes towards drugs to behaviour by analysing patterns of drug use. In particular, we examine the sources of these attitudes in media exposure, and analyse the importance of different types of media exposure for the use and consumption of tobacco and alcohol.

1. Drugs in Social Context

Drugs, and their use by the individual and by the wider society of which he or she is a member, form one part of the social world of the individual. In this section we examine the relationship between drugs and other aspects of this social world. In particular, the focus is on two aspects, the problems which personally affect the individual and the social problems facing the society as a whole. Both tap different dimensions of social reality. The predominant factors shaping individuals' concerns about various issues will be personal matters, such as any direct experiences they may have had with them. By contrast, a person's perceptions of the broader societal problems will be through his or her interaction with other individuals, exposure to the mass media, and additional factors such as the particular predispositions and beliefs of the individual.

In so far as individuals are able to categorise various substances as drugs, there is little disagreement among the respondents in the 1985 Social Issues Survey about what does and does not constitute a drug. Five substances--heroin, LSD, cocaine, barbiturates and amphetamines--were

considered to be a drug by 97 percent or more of the respondents, with heroin, in particular, receiving 100 percent endorsement that it was a drug. Around 94 percent considered marijuana to be a drug, while alcohol was placed in this category by 82 percent, and tobacco by 75 percent. At the other end of the scale, only 9 percent considered salt to be a drug, and 11 percent sugar. Cognitively, then, respondents had little problem in classifying substances normally considered to be drugs into that category.

Table 1 shows the main personal concerns of individuals, broken down by age and gender, from the 1985 Social Issues Survey. The question was an open-ended one, and respondents were asked to name the problems most concerning them. First and second mentions were permitted and coded; the results shown here have been collapsed from the original 38 categories of concerns that were voiced by the respondents.¹ The results for the sample as a whole show that the main concerns of individuals are economic: 14 percent considered their job to be their first concern (reflected in mentions of 'unemployment', 'work' and 'career'). A further 4 percent mentioned financial problems, such as lack of money and a concern with taxation. By contrast, concerns about drug use were placed at the other end of the scale, and were mentioned by only 2 percent of the respondents, exceeding only concerns about behaviour and the economy (mentioned by 1 percent each).

[Table 1 about here]

As we would expect, the primary concerns of individuals vary according to their gender and their stage in the lifecycle. Males aged between 20 and 39 have most concern for financial matters, and 19 percent mentioned this as most important. Nearly one in 10 of women aged 40 or over mentioned personality factors (such as boredom, loneliness and independence) as concerns. Once again, however, drug use remains a comparatively mild concern among all these groups. It is of slightly less emphasis among older males (1 percent cited it as a problem), but otherwise, it is neither more nor less likely to be seen as a problem by the other groups than for the population as a whole.

In general, then, individuals report relatively little personal concern with drug use. This can be explained by two factors. Firstly and most obviously, the vast majority of the population use drugs sensibly, and it is

Table 1: Main Concerns of Individuals, by Age and Gender^a

	All	Male			Female		
		14-19	20-39	40+	14-19	20-39	40+
<u>Economic Concerns</u>							
1. Job	14	11	19	10	10	17	13
2. Finance	4	10	5	1	8	7	2
3. Housing	3	1	6	2	0	3	2
4. The economy	1	2	0	1	2	1	2
(Mean)	(6)	(6)	(8)	(4)	(5)	(7)	(5)
<u>Personal Concerns</u>							
5. Personality	6	2	4	7	3	6	9
6. Inter-personal relations	2	3	2	2	4	2	2
7. Health	3	4	4	3	4	2	2
(Mean)	(4)	(3)	(3)	(4)	(4)	(3)	(4)
<u>Social Concerns</u>							
8. Social issues	2	1	2	2	1	2	2
9. Drug use	2	2	1	1	2	2	2
10. Behaviour	1	0	1	2	0	1	2
(Mean)	(2)	(1)	(1)	(2)	(1)	(2)	(2)

^a The exact question was: 'Firstly, thinking about issues or problems that concern you personally at the moment, what are the most important issues or problems affecting you personally right now, or recently?' Categories were collapsed as follows: jobs (unemployment; work, career), finance (lack of money; education costs; taxation), housing (housing; cost of housing), economy (high interest rates; inflation, economy), personality (school, education pressure; coping with everyday life; boredom, loneliness; independence), inter-personal relations (family relations; personal relations; peer pressure), health (personal, family health; old age; AIDS), social issues (threat of war; conservation; medicare; crime; religion), drug use (drugs, drug addiction; soft drugs; drinking, under-age drinking), behaviour (poor morals, lack of discipline).

Source: 1985 Social Issues Survey

only for a very small percentage that it becomes a serious problem in their lives, or in the lives of those they are close to, such as a child or a partner. Secondly, as has been argued by Maslow (1954), individuals will act to fulfil a variety of basic needs which are ranked according to their relative importance for the individual. Thus, such material needs as food, clothing and shelter will rank as more important than non-material needs such as entertainment or personal fulfilment. Given this hierarchy, it is not surprising, therefore, that most individuals will register an interest in economic concerns, over and above social concerns such as drug use.

While the majority consider drug use and its associated problems to be of little personal concern, they perceive it to be a much greater problem in the society as a whole. The Social Issues Survey asked respondents to rank 18 issues according to their importance for society. Table 2 shows the results for eight of those issues, the remaining 10 being excluded because they were mentioned by less than 5 percent of the respondents.² Once again, economic problems headed the list, this time in the form of high unemployment, which was mentioned by 22 percent of respondents. However, the use of illegal drugs was the first mentioned problem among only slightly fewer respondents—17 percent—which are almost twice that of the third priority, the nuclear threat. By contrast, drinking alcohol was mentioned by only 5 percent of the sample, while tobacco smoking (which is not shown in the table) was viewed by less than 1 percent as the most serious problem in Australian society.

[Table 2 about here]

Once again, there were significant variations by age and gender. Among both males and females, the concern with high unemployment declines with age and, indeed, among males aged 40 years or over, the use of illegal drugs displaces it as the major concern in society. The nuclear threat emerges as a considerable concern to the young, particularly among males, who rank it higher than illegal drugs. AIDS is also predominantly a preoccupation of the young, and while slightly more than one in 10 of the young regard it as the major problem, this falls to half that number among those aged 40 or over.

Table 2: Most Serious Problems Facing Society, by Age and Gender^a

	All	Male			Female		
		14-19	20-39	40+	14-19	20-39	40+
1. High employment	22	23	24	18	25	24	20
2. Use of illegal drugs	17	16	14	23	19	11	19
3. Nuclear threat	9	19	8	4	15	11	8
4. Divorce	8	3	8	7	5	9	10
5. Inflation	6	3	7	8	2	7	5
6. AIDS	6	12	6	5	11	4	5
7. Organised crime	5	5	8	5	2	3	4
8. Drinking alcohol	5	5	4	4	4	4	6
9. Other	23	15	22	25	17	28	24
Total (N)	101 (2,791)	101 (189)	101 (580)	99 (610)	100 (190)	101 (570)	101 (652)

^a The exact question was: 'which one do you think is the most serious problem facing the Australian community today?'

Source: 1985 Social Issues Survey

As a personal concern, drugs are a marginal issue for the bulk of the population; economic concerns are considered to be of substantially greater importance. As a broader societal concern, however, illegal drugs are one of the most frequently mentioned problems, and indeed, for one group, they are the most important. We have already suggested some reasons for the general lack of personal concern about drugs. By contrast, the strong social concern about illegal drugs represents interpretations of events and behaviour which are beyond the individual's own direct experiences.

In determining these perceptions of drugs and drug use, the role of media is crucial. It is the media which structures information about events and concerns in the society as a whole, not only reporting events but also placing a social interpretation on them. As is shown in the study of attitudes of young Australians, commissioned by the Australian government (ANOP, 1985), and also by Morgan (1983) in discussing popular attitudes in the United States, once the media has established that the prevailing outlook amongst their target population is conservative, they will ensure that their programming caters for and reinforces these values. In sections 3 and 4 we examine the role of the media in greater detail.

2. Perceptions of Different Types of Drugs

Society adjudicates in various ways about what substances are considered to be drugs. Socially, some substances are more acceptable than others, and while alcohol is widely accepted, tobacco is becoming less so. Legally, society prescribes certain sanctions to control the use of certain drugs. This involves several elements. First, what substances people call drugs are important and are, in part, shaped by social and legal sanction. As we have already seen, there is little ambiguity about the substances categorised as drugs within the general population. A second element is the drugs that are perceived to be part of the 'drug problem'. Finally, there is the perceived danger which exists in the use of certain drugs; once again, this is partly socially conditioned.

Table 3 shows the rank order of drugs that respondents in the survey considered to be part of the 'drug problem'.³ Not surprisingly, two drugs predominate: heroin is mentioned by 51 percent as constituting the 'drug

problem', while just over half that proportion, 28 percent, mentioned marijuana. By contrast, few respondents saw the main licit drugs as part of the problem: alcohol was mentioned by 5 percent, while tobacco was viewed in the same light by only 1 percent. In terms of age, those aged between 20 to 39 years were more likely to consider heroin to be a major problem, while marijuana was more likely to be mentioned by the youngest age group, those aged between 14 and 19 years. Alcohol was seen as somewhat of a greater problem for the older respondents than among the young. The differences between males and females in the sample are negligible.

[Table 3 about here]

We can gain a further perspective on what drugs individuals consider to be social problems by factor analysing types of drug use. Factor analysis is a statistical technique which identifies an underlying statistical structure from a set of correlated and conceptually related measures (Kim and Meuller, 1978). It is particularly appropriate in identifying an underlying pattern from a series of items, where the exact relationship between the items is not clear. A factor analysis examining 10 types of drug use is shown in Table 4.

The factor loadings identify two distinct patterns, shown by the correlations between the individual items and the first and second factors. The first factor identifies hard drugs as a serious community problem, and is represented by items dealing with such illicit drug use as cocaine, heroin and inhalant use. Excessive use of tranquillisers also falls into this category, though the factor loadings suggest a moderately strong relationship with the second factor as well. The second factor, represented by tobacco, alcohol and marijuana use, identifies soft drugs as a community problem. The patterns of factor loadings on the first factor (all of .69 or greater) show that, with the partial exception of tranquillisers, this is statistically distinct from the second factor (which shows loadings of .58 or better). The high scale reliability of these two factors is shown by the coefficients of .93 (for hard drugs) and .61 (for soft drugs).

[Table 4 about here]

The third element in popular perceptions of drugs is the perceived danger of certain drugs. This has been shown to correlate strongly with use,

Table 3: Drugs Considered to be part of the 'Drug Problem'^a

	All	Male			Female		
		14-19	20-39	40+	14-19	20-39	40+
Heroin	51	44	57	48	40	58	47
Marijuana	28	41	25	27	48	21	28
Cocaine	7	10	4	11	6	6	6
Alcohol	5	2	7	6	2	4	6
Tranquillisers	2	1	2	1	1	3	3
Tobacco	1	0	1	1	1	0	2
Other/none	6	2	4	6	2	8	8
Total (N)	100 (2,791)	100 (189)	100 (580)	100 (610)	100 (190)	100 (570)	100 (652)

^a The exact question was: 'when people talk about "a drug problem", which drugs do you think of?'

Source: 1985 Social Issues Survey

Table 4: Drug Usage Considered Serious Community Problems^a

	Percent 'completely agree'	Inter-item correlations					Factor		(Scale reliability)
		1	2	3	4	5	6	I	
<u>Hard Drugs</u>									(.93)
1. Cocaine use	51							.87	.11
2. Using hallucinogens	45	.79						.86	.13
3. Use of amphetamines	34	.69	.72					.83	.25
4. Excessive use of barbiturates	41	.64	.64	.73				.81	.28
5. Sniffing glue/petrol/solvents/rush	41	.62	.66	.69	.63			.79	.20
6. Heroin use	65	.71	.63	.56	.64	.56		.78	.12
7. Excessive use of tranquilisers	35	.53	.56	.69	.71	.63	.49	.69	.42
<u>Soft Drugs</u>									(.61)
8. Tobacco smoking	25							-.08	.88
9. Excessive drinking of alcohol	47	.38						.36	.65
10. Marijuana use	34	.37	.30					.30	.58

^a Varimax rotated factor loadings from a principal components factor analysis with unities in the main diagonal. The eigenvalues of the first two factors (together with variance explained in brackets): 5.4 (14%); 1.3 (13%). The exact question was: 'I would like you to consider a number of activities that some people say are serious problems affecting the general community. Using this card as a guide, how strongly do you agree or disagree that ... is a serious problem affecting the general community?'

Source: 1985 Social Issues Survey

in so far as users will tend to downplay the risks of their habit, while non-users will emphasise the risks (Hill and Gray, 1984; Johnston *et al*, 1983). Table 5 shows, in the first column, the percentage who considered each drug to be either 'very dangerous' or 'too dangerous' to use. Here a clear pattern emerges, with four drugs, alcohol, tobacco, tranquillisers and marijuana, being seen as least harmful. Indeed, it is perhaps surprising, given its illicit status, that marijuana is seen as less dangerous than a drug available on prescription, tranquillisers. By contrast, six drugs are seen as dangerous, ranging from amphetamines, which 75 percent of the sample put into this category, to heroin, which is mentioned by 95 percent. The factor loadings from the factor analysis confirm this pattern.

[Table 5 about here]

In terms of community problems and risks, then, there is a clear distinction in popular opinion between 'hard' and 'soft' drugs. In general, hard drugs are interpreted as constituting the major part of the drug problem, as posing the greatest social problems, and being potentially the most dangerous to use. This contrasts sharply with the statistics on the costs of different types of drug use to society. In terms of premature deaths, it was estimated that in 1984 tobacco caused 16,346 premature deaths in Australia, and alcohol 3,174 deaths. By contrast, opiates (mainly heroin) caused 229 deaths, with all other drugs combined accounting for 483 deaths (Commonwealth Department of Health, 1986). In short, tobacco and alcohol caused almost 30 times more premature deaths than any others drugs in Australia. In the next two sections, we examine the role of the media in shaping some of these attitudes.

3. The Role of the Media: Previous Research

Researchers have long been interested in investigating the influence of the mass media in moulding popular attitudes. Unfortunately most of this research does not produce information to link the relationship between attitudes and any changes in behaviour. The generally accepted view regarding the effect of mass media communications on attitudes suggests that they may help form attitudes toward new subjects where little prior opinion exists, or influence attitudes that are weakly held. In addition,

Table 5: Relative Risks Involved with Drugs, Factor Loadings^a

	Percent 'very' or 'too' 'dangerous'	Inter-item correlations						Factor		(Scale reliability)
		1	2	3	4	5	6	I	II	
<u>Soft drugs</u>										
										(.55)
1. Alcohol	15							-.10	.79	
2. Tobacco	23	.34						.10	.63	
3. Tranquillisers	35	.31	.13					.18	.60	
4. Marijuana	30	.21	.26	.20					.24	.53
<u>Hard Drugs</u>										
										(.82)
1. Hallucinogens	89							.81	.06	
2. Cocaine	90	.66						.81	.06	
3. Amphetamines	75	.53	.53					.73	.27	
4. Heroin	95	.44	.48	.35				.68	.09	
5. Inhalents	89	.46	.38	.43	.35			.65	.08	
6. Barbiturates	76	.36	.36	.51	.42	.28		.58	.36	

^a Varimax rotated factor loadings from a principal components factor analysis with unities in the main diagonal. The eigenvalues of the first two factors (together with variance explained in brackets) are: 3.6 (36%); 1.5 (15%). The exact question was: 'Do you think that (drug) is not dangerous at all, okay if you know how to do it, somewhat dangerous, very dangerous, or too dangerous to even try?'

Source: 1985 Social Issues Survey

communications may be able to strengthen one attitude at the expense of others, particularly when the strength of the other attitudes is evenly balanced. Finally, they can alter strongly held attitudes when the communications are able to report new facts about the environment or 'when they suggest new courses of action which an individual sees as satisfying his wants and needs better than his previous behaviour' (O'Keefe, 1971: 243).

Media campaigns have been most effective when the desired attitude coincides with the wishes of the target population. In other words, media communication can be very effective in reinforcing predispositions (O'Keefe, 1971). As stated by Klapper (1960: 12-13), mass communication usually 'does not serve as a necessary and sufficient cause of audience effects, but rather functions among and through a nexus of mediating factors and influences', including selective exposure and selective retention.

In evaluating the power of mass media-oriented educational campaigns to change attitudes to drugs (including alcohol and tobacco), Kinder (1975) concludes, after reviewing available studies in the field, that to date no valid and reliable data exist to either prove or disprove an effect. According to Kinder, some professionals involved in the area of drug prevention hold the opinion that the mass media, through its use of scare tactics and sensationalism, may have glamourized the drug issue and led to increased experimentation. Furthermore, by presenting attractive advertisements for drugs whilst also presenting information about the dangers of drugs, the mass media are sending conflicting messages to their clients, thus lowering the credibility of the informational component in any anti-drug education campaign. Kinder (1975: 1045) also claims that, in the area of drug-related attitudes, 'there is a theoretical framework which appears to predict that the mass media will be of little effectiveness in inducing...attitude changes'.

A study by O'Keefe on the impact of anti-smoking commercials, while concluding that 'mass communications, including those presented on television, are greatly limited in their ability to affect behaviour', revealed the 'apparent ability of many people to live with a greater amount of disequilibrium, imbalance, or dissonance than might generally be suspected'. Although most smokers responded that smoking was hazardous to their health, relatively few planned to do anything to restore cognitive consistency

and, in fact, many 'stated definite plans not to bring about any such reconciliation between attitude and behaviour' (O'Keefe, 1975: 248).

Alcohol and tobacco advertising in Australia is regulated by a complex combination of voluntary and legal processes, the key element being the industry self-regulation process through which the alcohol, tobacco, advertising and media groups regulate the advertising actions of their members. The most important legislative statutes controlling advertising are the Commonwealth *Broadcasting and Television Act* and the *Trade Practices Act*. The former was amended in 1976, making it an offence to advertise cigarettes on radio and television as of 1 September 1976 and giving power to the Australian Broadcasting Tribunal to establish standards relating to the advertising of other products, including alcohol.

The *Trade Practices Act* makes it an offence to engage in false or misleading advertising and provides a means of registering the industry's self-regulating procedures. Although prohibited from radio and television, advertising of cigarettes and cigarette tobacco may appear in all other media including print, posters and cinema, however it must first be submitted for approval to the Australian Publisher's Bureau. Similarly all material advertising alcoholic beverages must be submitted for approval to the relevant media body--the Australian Publishers Bureau, the Federation of Australian Radio Broadcasters or the Federation of Australian Commercial Television Stations (Northern Territory Department of Health, 1984).

The States and Territories also have legislation to regulate advertising and various attempts have been made in Western Australia, South Australia, Tasmania and the Australian Capital Territory to replace with outright bans the voluntary code which applies to tobacco advertising, 'though none of these has yet resulted in any legislative changes (Woodward, 1984). The most recent and, to date, the strictest state legislation is found in Victoria where there are bans on all outdoor advertising of tobacco products. The ACT is also currently looking at updating the 1927 *ACT Tobacco Ordinance*. In 1979 the World Health Organisation recommended that there should be a total ban on tobacco advertising, but to date this has been adopted only in Norway, Sweden and Singapore (NSW Department of Health, 1988).

In Australia, considerable dissatisfaction exists within the health lobby over current rules governing alcohol and tobacco advertising. A

comprehensive report by the Northern Territory Drug and Alcohol Bureau (1984; see also NSW Drug and Alcohol Authority, 1984) concludes that the present system is inoperable and specifically criticises the inadequacy of the voluntary codes, the partiality of the Advertising Standards Council, which tends to favour the advertisers, and the use of advertisements which are aimed at young people and which associate prowess at sport and the enjoyment of health-giving activity with the consumption of alcohol and tobacco.

The inadequacy of the current voluntary codes and the type of breaches which occur is illustrated by Woodward (1984), who describes how Rothmans, despite a clause in the code (written by the advertising and tobacco industries themselves) prohibiting the use in cigarette advertisements of persons with major appeal to children, used Paul Hogan to launch the *Winfield* brand of cigarettes. This was the last brand launched on television before the ban of direct television advertising became effective, and has been shown to be the brand consistently preferred by children.

There are conflicting claims regarding the effect of advertising on overall tobacco consumption—for instance, the Advertising Federation of Australia cites Norway as a country experiencing increased tobacco use despite the ban on advertising, whereas the 1980 Australian Royal Commission of Inquiry into Drugs claimed that the ban was followed by a decline in the per capita consumption of cigarettes and tobacco of 2.7 percent, which would suggest that advertising does have some impact on tobacco use. The World Health Organization (1979) took the same position as the Australian Royal Commission and in its recommendations called for a total ban on tobacco promotion, stating that, although 'evidence on the specific effectiveness of a tobacco advertising ban is not easy to obtain, as those in operation have generally been partial, unaccompanied by health education, or imposed in societies where all advertising is restricted', the experience of Norway provides promising evidence that a comprehensive education programme including an advertising ban may reduce smoking behaviour (WHO, 1979: 56).

Despite the insistence of the advertising, tobacco and alcohol industries that advertising in the media does not lead to increased consumption of alcohol and tobacco, and the apparent lack of reliable research data to support the effect of media exposure on consumption, governments and health bodies

are unanimous in their belief that media advertising does have a significant effect on consumption and therefore should be totally banned, or industry self-regulation more tightly controlled, if smoking is to be reduced. The proponents of this view in Australia include such organisations as the Senate Standing Committee on Social Welfare, the House of Representatives Standing Committee on Road Safety, the Aboriginal Development Commission, the Australian Federation of Consumer Organisations, the Road Safety Councils, the Australian Broadcasting Tribunal and the Australian Health Ministers' Conference.

The role of the media in promoting drug use and, more specifically, the effect of advertising, thus remains a matter of dispute among researchers. One consequence of this has been a general inconsistency in the policies which have been put forward to control tobacco and alcohol advertising. Although the World Health Organisation has, for almost a decade, advocated a ban on the promotion of tobacco products, few countries have yet followed this lead.

4. The Role of the Media: Empirical Results

Quantifying the role of the mass media in determining attitudes to drugs and drug taking behaviour poses several major problems. First, in this analysis we employ measures of media exposure, such as hours of daily television viewing, but we do not have any measures of the content of the media the individual is exposed to. Measuring the content of the media and its impact rather than the act itself has posed a fundamental methodological problem and is one reason why research on the effect of advertising on tobacco and alcohol use has been so inconclusive (see, for example, Eiser *et al*, 1978a, 1978b; Kohn and Smart, 1984; Kotch *et al*, 1986). Second, as the NSW Drug and Alcohol Authority (1984: 3) has pointed out, many of the factors at work are complex and contain reciprocating influences. As a result, the interpretation of research results has to be treated with some caution.

In this section, we relate mass media exposure (defined as television, radio and the print media) to attitudes towards drugs, and estimate their conjoint influence on the use and consumption of tobacco and alcohol.⁴ Exposure to the mass media is defined by eight variables. First, three variables represent television exposure: hours of ABC television watched per

day, a mixture of commercial and ABC television, and commercial television only. Second, the print media is measured by the number of newspapers the respondent reported reading regularly per week, and by the number of women's magazines and rock and popular magazines they reported as normally reading. Finally, radio is represented by the number of ABC and commercial radio stations regularly listened to. Attitudes to drugs are measured by four scales, derived from Tables 4 and 5, and reflect the danger of using certain drugs and viewing drugs as community problems.

Figure 2 shows the relationship between media exposure, attitudes to drugs, and tobacco and alcohol use, in the form of a multivariate path model. The figures are standardised regression coefficients, which show the relative importance of the paths. Although social structural factors are controlled for in the model, for brevity the paths are not shown. Turning to the relationship between media exposure and attitudes to drugs first, the paths show that the media do have a significant influence in determining attitudes towards drugs. First, respondents who were exposed to commercial radio and television were more likely not to believe that soft drugs were either dangerous or a community problem. Second, exposure to women's magazines, perhaps because of their emphasis on health and health-related concerns, produced the opposite belief, that soft drugs were indeed dangerous. Finally, exposure to both ABC television and to a mixture of commercial and ABC was more likely to produce an awareness that hard drugs were a community problem.

[Figure 2 about here]

Exposure to the mass media also has direct effects on tobacco and alcohol use, although only for two types of media. Increased newspaper readership is likely to reduce tobacco use, while it increases alcohol use. Watching more commercial television has no effect on whether or not the person is likely to use alcohol, but it does have a substantial impact in increasing tobacco use. These effects can be put in some perspective by examining the strength of attitudes on use. For example, believing that soft drugs are dangerous has about the same influence in reducing tobacco use as watching commercial television has in increasing it (coefficients of $-.10$ and $.09$, respectively).

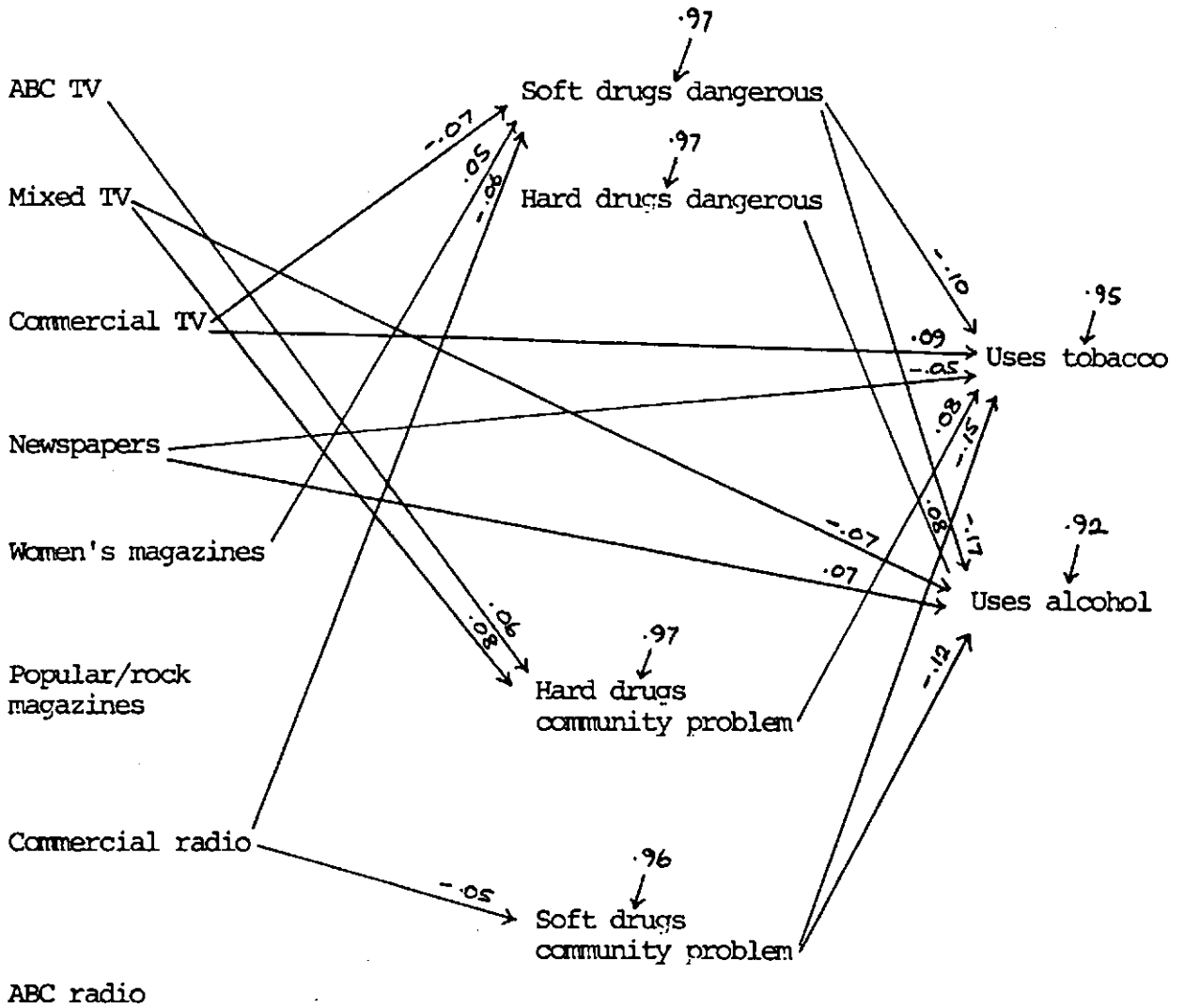


Figure 2: The relationship between media exposure, attitudes to drugs, and tobacco and alcohol use. All paths are significant at p .01 or better.

Source: 1985 Social Issues survey.

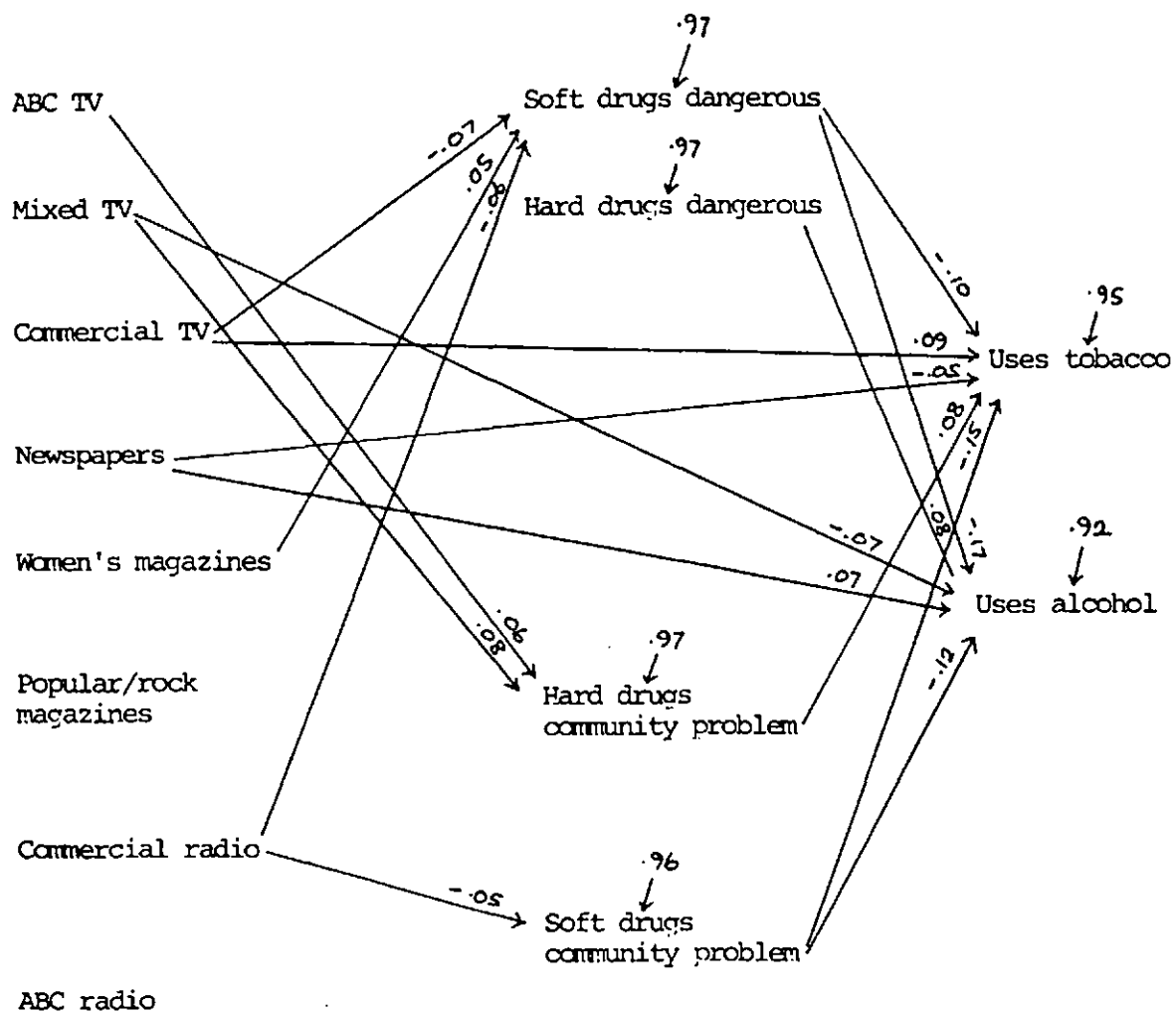


Figure 2: The relationship between media exposure, attitudes to drugs, and tobacco and alcohol use. All paths are significant at $p .01$ or better.

Source: 1985 Social Issues survey.

These results suggest a complex interaction between media exposure, attitudes to drugs, and tobacco and alcohol use. While the media has direct effects on drug use, it also has an indirect effect on use through its ability to mould attitudes and beliefs about drugs. While the data do not permit us to examine the content of the media in question, it is possible to speculate about their role in shaping attitudes and drug use. First, commercial television and radio's impact in promoting positive attitudes to soft drugs and their use may be a consequence of their coverage of cigarette and alcohol-sponsored sport. Second, the effect of the ABC television viewing (and mixed ABC and commercial viewing) in bolstering the view that hard drugs are a community problem may be a consequence of their more in-depth coverage of these issues in documentaries and news programs.

Figure 3 shows the impact of the same sets of factors on the consumption of tobacco and alcohol; in each case, these models are estimated only for users.⁵ The top path model in Figure 3 shows that cigarette consumption is substantially influenced by media exposure, while attitudes towards drugs have no significant impact whatsoever. Among the media variables, television has the strongest and most consistent impact, increased viewing leading to greater consumption. Within the three types of television viewing, commercial television has the greater impact, with a coefficient of .15. Greater exposure to commercial radio also increases consumption, while readership of pop and rock magazines reduces it, net of other things. By contrast, alcohol consumption is less dependent on the media, and only television appears to have any effect on it, with exposure to commercial and mixed television reducing consumption.

[Figure 3 about here]

The effect of television on consumption is further refined in Figure 4, which graphs the effect of hours of ABC and commercial viewing per day on the daily consumption of cigarettes and weekly consumption of alcoholic drinks. The impact of commercial television on cigarette consumption is substantial, and after a slight decline in consumption between two and three hours average viewing per day, consumption increases significantly. The average person viewing six hours of commercial television per day would be smoking 19.6 cigarettes per day, compared to 13.8 cigarettes for someone watching two and a half hours per day. Television has the reverse impact on

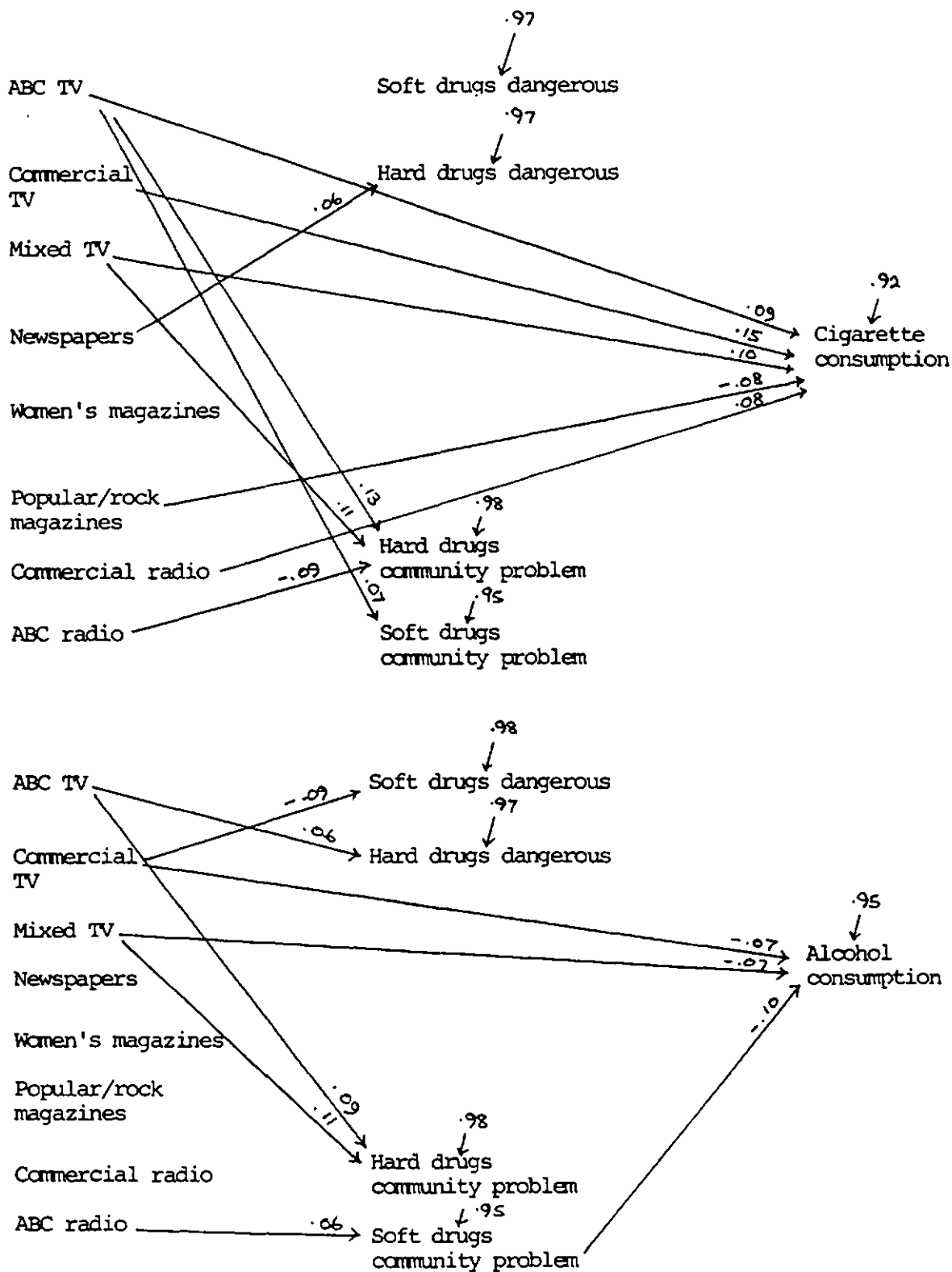


Figure 3: The relationship between media exposure, attitudes to drugs, and cigarette and alcohol consumption. The model for cigarette consumption is estimated only for smokers (N=920), and for alcohol consumption, for alcohol users only (N=1,903). All paths are significant at p .05 or better.

Source: 1985 Social Issues survey

alcohol consumption, and while someone watching six hours of commercial television would, on average, be consuming 10 drinks per week, their counterparts watching two and a half hours would be consuming almost twice that amount.

[Figure 4 about here]

These figures may, in fact, reflect something about the social situations in which consumption takes place. While tobacco is consumed both inside and outside the person's home, alcohol will be mostly consumed outside the home. Thus, someone watching a lot of television would have the opportunity to consume substantial quantities of cigarettes. By contrast, someone watching similar amounts of television would have less opportunity to drink alcohol in similar quantities simply because the main source of alcohol consumption would lie outside the home.

In summary, exposure to the mass media in Australia plays an important role in determining drug use, directly on drug taking behaviour and indirectly through the attitudes and beliefs that it helps to mould. In determining use, attitudes to drugs are similar in their magnitude to media exposure. By contrast, in shaping consumption, the media are considerably more important overall than attitudes to drugs. These results would tend to suggest that initiation into the habit of using tobacco and alcohol is the consequence of an interaction between social structure, media and attitudes. Once the habit is formed, consumption is mainly a matter of media exposure: the attitudes that the user holds towards the drugs are of comparatively little importance.

4. Conclusion

In this paper, we have examined the role of popular attitudes towards drugs in helping to shape drug use, in this case tobacco and alcohol use. At the elementary level of cognition, individuals are easily able to categorise certain substances as drugs. At the more complex level of affection, however, individuals will view drugs according to the social context in which they are placed. Thus, when asked about individual concerns, drugs rank substantially below concerns such as the state of the economy and health. By contrast, when

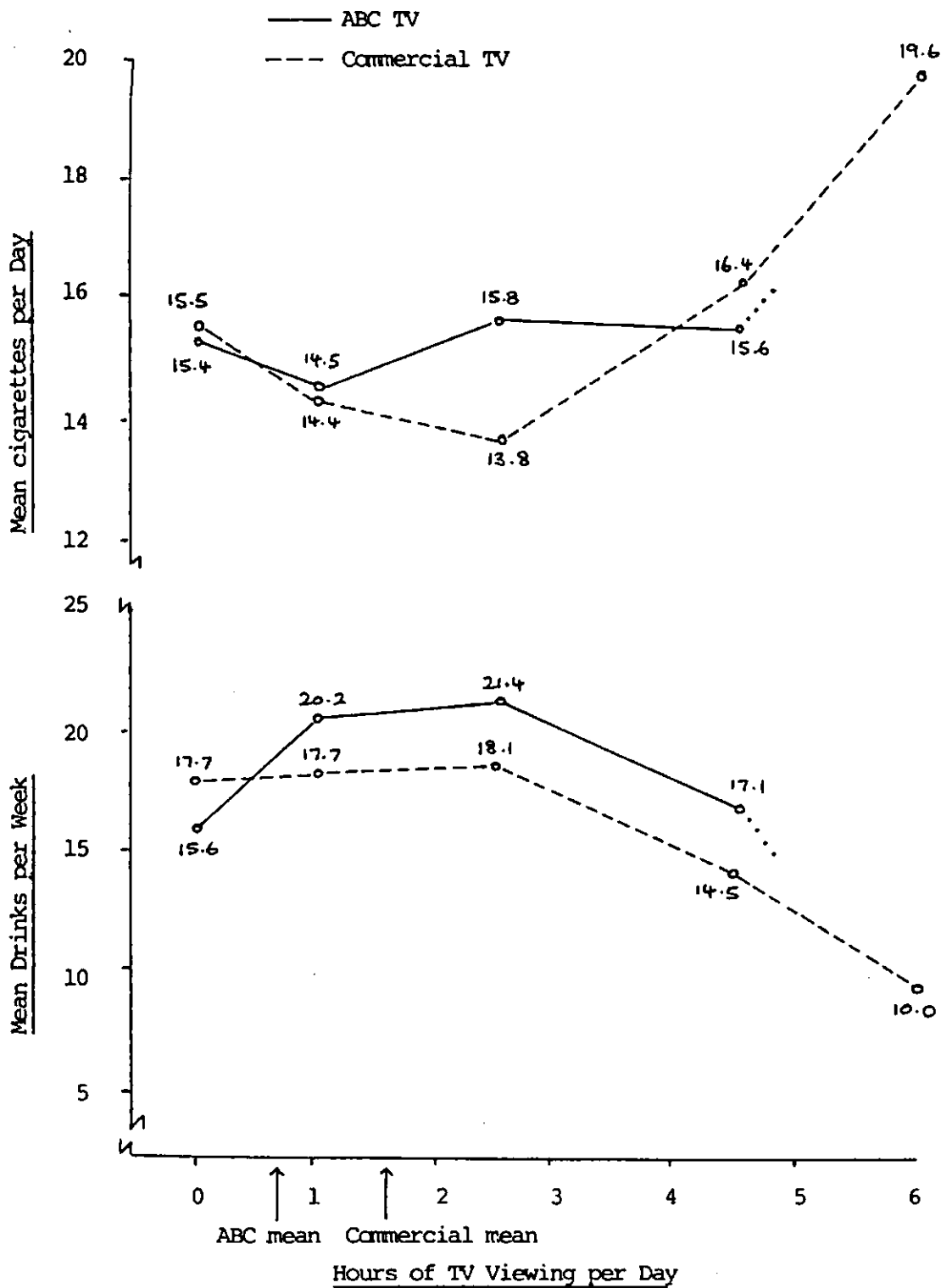


Figure 4: Tobacco and alcohol consumption by television viewing. Estimated only for smokers (N=920) and alcohol users (N=1,903). Dotted lines denote too few respondents for reliable estimation.

Source: 1985 Social Issues in Australia survey.

asked to rank societal problems, the use of illegal drugs ranks second only to unemployment within the general population. Indeed, contrary to the statistics on mortality, heroin is seen as the major component of the drug problem, while tobacco and alcohol are hardly mentioned. Finally, individuals distinguish clearly between 'hard' and 'soft' drugs in their attitudes, bracketing marijuana with the 'soft' licit drugs, tobacco and alcohol.

Extending the analysis through to behaviour, the multivariate results show that attitudes have an important role in determining drug use. Perhaps more significantly, however, the analysis demonstrates that the role of the mass media is a major factor, firstly, in determining attitudes towards drugs and hence has an indirect effect on use, and secondly, in directly effecting use. Indeed, it would appear that the role of the media is a central factor in shaping patterns of tobacco and alcohol consumption.

A major implication of these results concerns the regulation of tobacco and alcohol promotion through the media. Although our methodology does not permit us to make direct statements about the role of advertising in drug use, the different results for the various types of media would tend to suggest that media programming and its inclusion of advertising (or lack of it) clearly has a significant direct and indirect effect on tobacco and alcohol use. Restrictions on the promotion of tobacco and alcohol products through the media should, then, reduce their use. In addition, the findings that greater exposure to women's magazines and ABC produce an enhanced awareness of the dangers of soft and hard drugs, respectively, would imply that the actual treatment tobacco and alcohol receive in the media in day to day reporting is also a significant factor in shaping attitudes, as indeed some researchers have argued (McEwen and Hanneman, 1974; Greenberg, 1984).

Footnotes

1. The question also asked for the respondent's second mention, but for reasons of space, that additional information is not analysed here.
2. As in Table 1, the question asked for first and second mentions, but for brevity they are not analysed here.
3. Overall responses of less than 1 percent have been excluded from Table 3.
4. In these models, we test only the use and consumption of alcohol and tobacco, whereas it could be legitimately argued that media exposure and attitudes would have at least as important effect on marijuana and hard drug use. Unfortunately, we lacked reliable measures of the use and consumption of these drugs in the survey, and for that reason the results across all the drugs were not directly comparable and were therefore excluded.
5. In Figure 3, the presentation of the models for tobacco and alcohol are separated, because non-users of each drug have been excluded from the analyses.

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DISCUSSION POINT

THE SIGNIFICANCE OF RECREATIONAL DRUG USERS:
THE EXAMPLE OF THE COCAINE STUDY

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INTRODUCTION

Studies of drug¹ users are many and varied and they all tend to aim at explaining the same set of questions - namely what sorts of people use drugs and why²? The dominant trend in studies that attempt to answer these questions, an approach that I call the 'pathology paradigm', tends to answer these questions in terms of the inadequacies of the users and the deficits that their drug use seeks to meet. I shall argue, however, that there are three key difficulties which most studies face. These difficulties undermine the value of many studies and tend, as I shall hope to show, to give misleading answers to the central questions.

These difficulties arise because prejudices that many researchers have are backed up with an approach to data gathering that does not yield a genuinely representative picture of drug users.

On the other hand, there are good *a priori* reasons to suppose that the picture that we could derive from studying recreational users might be rather different. Although these users are less 'visible' they represent the bulk of users and there is every likelihood that the 'deficits' that show up in studies of problem users explain more about their problems than their drug use *per se*. In the second part of this paper I shall show that when we examine data from a study of recreational users, a group less commonly studied than problem or dependent users, the picture that emerges is indeed quite different from the picture that tends to emerge from the bulk of research.

THE PATHOLOGY PARADIGM: A SKETCH AND SOME WEAKNESSES

In this section I shall sketch briefly the basic ideas of the pathology paradigm and outline what I see as its principal problems. The attempt is not to provide a comprehensive literature review of research, that would be quite a different task. Rather I want to emphasise the logic of research and the weaknesses of the whole approach, not of particular studies.

The basic view of this paradigm is that drug use is an abnormal state of affairs. There are two versions of this paradigm, one more psychological, which is the main version and the one I will concentrate upon first, the other sociological.

The assumption that the main version of the pathology paradigm works from is one in which we can

separate out two broad classes of persons, the healthy and the sick. Healthy people do not use drugs, so it follows that those who do are to some degree sick. Since the majority of illicit users who surface in the public gaze are those who use a great deal of the substances of their choice, and since such illicit use is often accompanied by other aspects of ill-health, this view has a certain plausibility³. It isn't hard to present real life cases of people who seem to fit the bill, and who by any sensible standard do seem to exhibit some degree of pathology.

In this view, the victim of the drug problem (the user) is seen as the location of the problem. Sometimes the person has psychological defects, such as an inadequately developed sense of self, some unresolved personal problems or a self destructive tendency. On other occasions the problem is more a matter of a skills defect with drug use seen as an (inappropriate) coping mechanism.

In the sociological version, the individual drug user is more the hapless victim of an unfair or exploitive world, but in any event the use is again the result of a defect, albeit social rather than personal.

A parallel problem is that the alleged reason(s) for use, insofar as reasons are considered⁴ at all, is seen to be understood in terms of a deficit model. That is, researchers pose the question 'What is it that these people lack, that their drug use (inappropriately) provides?'. The problem with this is that the deficit is a presumption, not a conclusion. The idea that there is a deficit is thus not scrutinised as problematic or in need of demonstration, and the possibility that the reason for use lies in other sources than a deficit is not explored⁵. (Such failures of theoretical imagination undermine the attempt to provide a really useful approach to explaining these phenomena, although they can be very comforting to those who hear them, since they obviate the need for really hard thinking.)

There are a number of problems with this pathology paradigm. Three stand out immediately, which I will term the historical problem, the methodological problem and the theoretical problem. These three problems are inter-connected and I will take the time here to deal with them in some detail.

The *historical problem*, as I have termed it is endemic in the drug treatment literature. It centres upon a set of assumptions which sound rather crude when stated baldly, and which many commentators would repudiate if presented in an overt form. Nonetheless they continually creep back into the covert parts of the reasoning of those commentators.

What are these assumptions? Let me be provocative and put them into a stereotypical format for effect and also simplicity. There are certain substances which are illegal to use⁶. There are very sensible reasons why these, and not others, are illicit. Wise people chose to ban them in the past because of their dangers, and people who use them now are foolish and self destructive, or at least willfully negligent of their own well-being. Indeed, since the use of chemicals for pleasure isn't natural, we should be mildly critical of all such use. Furthermore, since there is no rational reason for their use, anyone who uses them is doing so for irrational reasons. Thus their accounts of the reasons for their use should be treated with suspicion and 'read'

symptomatically for what they tell us about the users pathology.

Of course, almost no one argues as crudely as this, and for good reason. Nonetheless, the logic of their research continually implies these assumptions.

Let us examine these arguments. First, the implied historical account is extremely dubious. (See Mugford, 1982 for a treatment of the historical issues.) Serious attempts to find an explanation of why alcohol, tobacco and caffeine are widely available in Western countries, while opiates, stimulants (such as cocaine) and cannabis remain illegal produce no such sanguine result. In fact, it seems to be far more to do with the historical contingencies of which drug was "indigenous" to imperial cultures, and which had large scale capital investment in it that explains legality today than any accurate health cost calculus. The 'wise' men (sic) of history had on their minds other issues, issues to do with moral reform (the Temperance movement); with securing the professional hegemony of the medical profession over drugs; with buttering up the Chinese government in order to open up China to foreign trade; with controlling racial minorities by stigmatising their drug use; and so forth. These, rather than an enlightened and wise choice of substances for pleasure based use were what was actually going on.

A similar point, perhaps not so well known, concerns the question of the 'naturalness' of taking drugs for pleasure. Such a view would seem to imply two things. That there are societies where there is no drug use, or, since humans are perverse creatures (Original Sin ?) other species don't use drugs. What is the reality? Despite the fact that some groups (e.g. Seventh Day Adventists) foreswear all psychotropic substances, at the overall level, *no such society is known in the range of societies described by historians and anthropologists*, and the use of psychotropic drugs for pleasure is not restricted to the human species, with documentation available for a variety of other species (such as the predilection of elephants for alcohol).

Of course, many commentators know all this, but they cannot escape the moral values of their day enough to take seriously the implications of it. They continue to see one person's choice of (e.g.) alcohol for pleasure as not indicative of personal pathology *per se*⁷ while the choice of another for cocaine is pathological. Some will defend this by saying that since the first is legal and acceptable and the other not, then the first choice is normatively less problematic than the other. This is true, but now we should ask not "Why does X choose cocaine ?", but rather "Why is X prepared to break the law ?" This is a different question and one which most researchers shy away from.

These problems are connected with issue of user accounts. The lack of a relativistic perspective which treats all use of psychotropic substances equally⁸ incapacitates this paradigm. The matter which should only be a carefully drawn conclusion (that user accounts are suspect) is piggybacked in on the earlier assumptions and becomes a starting point of the work.

These difficulties would be less damaging if it were not for the *methodological problem*. This problem hinges on the issue of representativeness. When one sets out to study drug users, where does one find them?

In the criminal justice system (e.g. gaol) or in the health system (e.g. hospital) is the simple answer. Since the covert assumption of pathology is already imported into such research, this answer rings no warning bells. The selection procedure fits the model. We know that users are defective, why be surprised if we find them in the places where defectives gather?

We should, however, be very worried about such a strategy. In practice, the proportion of people who end up in the places where they will be visible to such research is small. In the case of cocaine for example, the estimates are that around 93-95% of users will not have such a problem. Thus "knowledge" of cocaine users gained in this tradition is based upon an extremely small minority. The same basic point, albeit with different proportions, applies to all illicit drug use. Moreover, there is every reason to presume that this is a non-random and highly unrepresentative sub sample of users.

Since the direction of the bias is clearly toward a much greater chance of selecting someone who fits the pathological model, we now see a dangerous circularity. It is presumed that people who use drugs are defective. A research strategy is employed that is constructed so that it is likely to select those with defects. People with defects are found. *Ergo*, the proposition that users are defective is 'demonstrated'. Both this problem and the one following, are exacerbated by the tendency to decry the users own accounts of their use. This ensures that deviant data or interpretations are discounted in advance⁹.

This brings us to the final problem of our trio, the *theoretical problem*. Suppose we find a group of drug users. Suppose they exhibit certain pathologies. Can we infer a connection between them, and if so in what direction? *A priori* there are at least three possibilities. First, there is the possibility that the pathology in some sense caused the drug use. Then there is the possibility that the drug use caused the pathology. Finally, there is the possibility that the relation is spurious.

Such a relation could easily arise under the following conditions. Suppose that in any study the association sought is between X and Y. Y is thought to be the effect, so the presence of Y is a selection criterion, and all cases exhibit Y. Suppose that X is not connected with Y, but that X is associated with being available for study. We will now observe a clear relation between X and Y that is spurious. It is my contention that many of the 'findings' that emerge from the dominant pathology paradigm are flawed because of the linked set of problems outlined here. I suggest that the most that we can learn from this research (and it is not trivial, but far less than its pretensions would suggest) is something about the kinds of characteristics that are exhibited by those people whose personal problems, deficits or whatever are likely to make them at risk (a) of having some problems with drug use, and (b) are at risk of being studied from within this paradigm. That is, that the presumed set of connections between personal characteristics and drug use, in which the former causes the latter, is clouded by a serious problem of spuriousness.

Before this is thought to be far fetched, it may be salutary to remind ourselves of the work of Mack (1970). Mack argued that there were two broad classes of criminals, ordinary criminals, the kind one can find any day in a gaol, and 'able' criminals. He argued that the latter were systematically different from the former, and

that the differences were related to the likelihood of incarceration. Able criminals were not likely to be caught, convicted or incarcerated. Such research lends credibility to the form of my argument here.

In short, the pathology paradigm is, I argue, deficient in two respects. It presumes a history that is incorrect, but which fits its own prejudices. These prejudices are no more than the conventional wisdom of our day writ covertly. Secondly, it is guilty of a circularity of reasoning and method that produces for display, by an indefensible means, the kinds of persons it presumes to characterise the problem it purports to be unravelling. It may tell us something, but what it tells us is not what its protagonists think it tells us.

THE ISSUE OF RECREATIONAL USERS

The problem of most studies in the pathology paradigm hinges in part, as I have shown above, upon the fact that there are serious problems of subject selection, with those likely to have problems being differentially likely to be selected in drug use studies. Of course, there is a covert 'progression' model at work here as well. Again and again in discussion, and in the questions that the lay public now routinely ask, this issue resurfaces. "Does marijuana lead to heroin?" we are continually asked. Or, "At what stage does such and such occur?" Always such questions presuppose definite and specific paths down which a majority pass unless luck or some other agency intervenes.

Yet the reality is quite different. With all drugs including legal substances like alcohol, the pattern of use can be characterised as follows. There are large numbers of people who try the drug (experimental use). Of these, a substantial proportion will go on to use the drug for recreational use. Of the recreational users, a minority will begin to use the drug on a regular basis to the point where some kind of habit will form (dependent use). Of these, a substantial proportion will reduce their use, or eliminate it, on a voluntary basis without rehabilitation. A minority will be unable to control their use despite subjective desires to do so, and will need help. Another minority, usually drawn from the dependent rather than the recreational population, will be arrested for their possession/use of the drug, or for activities related to possession/use thereof (the latter ranging from arrest for housebreaking to pay for heroin through to drink driving). These people will also show up, often very grudgingly, in rehabilitation locales. Also, the majority of the knowledge that we have about users of illicit drugs is drawn from the latter two minorities.

Recreational users thus form a kind of 'silent (better still, invisible) majority' of users. Moreover, since the majority of them never 'progress' to more problematic levels of use, it is clear that any serious study of use should concentrate upon them. Understanding the majority who do not have problems will tell us far more about the origin of problems than studying the minority who have them. This is particularly salient when we remember the tendency of the pathology paradigm to speak as if the findings it came up with applied to all users.

It follows that there is good reason to suppose that recreational users may be the key, if there is a single

'key', to understanding drug use. It is to the proof of this particular pudding that I now turn.

THE COCAINE STUDY AS AN EXEMPLAR¹⁰

During 1986 and 1987, I carried out, with the help of various colleagues, a study of recreational cocaine users in Sydney, Melbourne and Canberra. The full details of sample methodology and so forth are contained in Mugford (1987), but some relevant details are sketched here¹¹.

Since the purpose of the study was to describe recreational users, rather than estimate use levels, the central issue was getting the right kind of person, rather than worrying about the representativeness of the sample, a feature that would be impossible to guarantee in the strict statistical sense anyway. The imprecise idea of 'right kind' was dealt with by concentrating upon two aspects. First, because of the popular image of cocaine users¹², where possible we attempted to get middle class respondents, and we did this by concentrating upon middle class intermediaries. Secondly, to avoid the circularity problems discussed above, we concentrated upon respondents who had never been arrested for cocaine use, and had not received medical treatment for dependence. The second of these was easy. Cocaine users are rarely arrested or dependent (Smart, 1986 estimates that in North America this applies to 93% of users).

Contact, at least of one whole set of users, proved remarkably simple (see Mugford, 1987 for further discussion of this.) A snowballing procedure was followed in Sydney, where it ran easily and generated 40 respondents, in Canberra, where we easily generated 20, and in Melbourne. In the latter city, two interviewers were at work. The first used this method and obtained a quota of 10 respondents. The second, with our enthusiastic support, tried a slightly different tack. The general thrust was the same, but he concentrated upon trying to obtain interviews with 'high-flying' members of the so-called 'fast lane'. We encouraged him because these people would be immensely interesting to interview, and because he is an experienced journalist.

This proved a very difficult and unrewarding avenue. The Sydney interviewer also attempted to follow up such leads, especially when we reached the point where 'new' respondents seemed to be merely adding 'more of the same' to our knowledge. He, too, had the same difficulties. (The implications of this are raised in Mugford, 1987.)

The study employed a combination of a self completed questionnaire, followed by an interview. This was a time consuming activity (averaging about 3 hours in all) and very early in the piece it became evident that there was a real matter of *quid pro quo* to be dealt with. After consultation with a few knowledgeable contacts, we settled upon the idea of paying respondents a fee of \$50 for their co-operation. In general this worked well.

The data gathered in the questionnaire part of the procedure was designed to be standard and easily compared with other groups. So, for instance we selected a measure of well-being that has been widely used in

Australia in social-psychiatric studies (the GHQ); we used a variety of questions that had been used in the large drug study carried out for the Dept. of Health by Reark in Dec. 1985 (which one of us - SKM - had helped design); we drew attitude items from the National Social Science Survey run by Kelley/Cushing at ANU; and so on.

As far as the interview was concerned, we concentrated upon raising, in the broadest and least presumptive fashion that we could devise, a general schedule of questions. Interviewers were instructed to depart from the schedule at will as long as they ensured that all the topics were covered, and to introduce additional questions when they seemed called for. No topics were excised at the interview stage if the respondents felt they were relevant.

All 73 respondent questionnaires and interviews have been processed and a wide variety of results are available. In the following paragraphs we will compare the results obtained from the respondents with other results that allow us to say something about similarities and differences between these people and other Australians drawn from a random sample of the population. As noted earlier we included a number of questions from the National Social Science Survey (NSSS, 1985) in our study, thus allowing direct comparisons to be made with a general population sample. As the age structure of the cocaine users was between eighteen and thirty-nine, we restricted the NSSS data to that range as well. Further, to control for the fact that our sample was (as we elaborate below) un-married and non-religious, we used two sub-sets from the NSSS: what we shall call "NSSS 225" (225 respondents who were un-married, non-religious and between 18-39 years old) and "NSSS 218" (218 respondents who were married, religiously affiliated and between 18-39 years old). That is, one group who were closely similar in all three respects, another dissimilar except in age. The idea here was to explore the extent to which these socio-demographic factors appeared to be significant correlates of beliefs and attitudes. As we shall see, there were some pronounced differences between these groups.

There is not sufficient space here to explore all the data that we have analysed, and greater detail is provided in Cohen (forthcoming, esp. Chap 5) and in Mugford and Cohen (forthcoming). Let us begin, therefore, with an overall summary.

In terms of socio-demographic characteristics, the Australian cocaine users are remarkably similar to those contacted in overseas studies. While high in educational achievement, their income levels are relatively low and they represent a broad spectrum of occupational categories.

In analysing the basic health status of the cocaine users, the results are fairly positive. While there are certain problem areas, particularly in relation to mental health, they could not be classified as severe, that is, 'pathology' is a weak explanatory device.

On a range of variables concerned with "social integration", the results are somewhat conflicting. While the cocaine users are not highly integrated at the institutional level (they are un-married, neither politically nor

religiously aligned, belong to no voluntary organisations etc.) they are well integrated at the inter-personal level (strong kin and friendship ties, high satisfaction with aspects of life etc.). The conclusion reached is that while not of the "mainstream" this is a group who are basically well-adjusted, happy and satisfied with their lives.

Finally, the attitudes on present day social issues completes the picture of a group with a fairly liberal outlook and "alternative" approach to life.

Let us turn now to some of the details.

The first notable feature of our sample was the ratio of women to men; thirty-two females (44%) to forty-one males (56%). In Sydney the split by gender was exactly half and half(20:20). This was particularly interesting given there was no intent on behalf of the researchers to contact equal numbers of men and women. In other studies where there was no set policy on the sex of the sample, the numbers of men have usually far outweighed the number of women, something in the order of 75-85% men (see, for example, Smart, 1986; Cohen, 1987).

The age range was eighteen to forty-nine years, with a mean of 27.6 and a median of 26. The main concentration of respondents fell in the age bracket 20-35 years old, with only four subjects over the age of 35. This result is also in line with previous research, where the indications were that illicit drug use tends to be the domain of the young.

The education levels were all well above average. Only twelve respondents (16%) had not attended a tertiary institution of any kind. Of the sixty-one who did, thirty-five obtained a degree, diploma or trade qualification. Only six had trade certificates (electrical and hairdressing being four of these) while the majority of degrees and diplomas were in the Arts area. These included ten Bachelor of Arts and three Diplomas of Art and Art Education. There were only four degrees in the sciences which included one Master of Science.

The high levels of education were not borne out in the incomes of the sample. For the 1985-86 tax year, our base for the questionnaire, approximately 70% reported pre-tax incomes of under \$20,000 a year, with half of these under \$10,000. Only five respondents reported incomes over \$30,000 a year (see TABLE 1). This provides a clear illustration of our inability to locate users from the so-called "glitterati" set. Again, this result is consistent with the U.S. studies, where incomes of over \$25,000 are also uncommon. The low incomes are put in some perspective when we examine the type of work being carried out by the respondents. Only thirty-six (49%) were working full-time for pay. Of the remainder, twenty-three (31.5%) were employed part-time, eight (11%) were engaged in full-time study and six(8%) were unemployed.

TABLE 1 PRE-TAX PERSONAL INCOME

<u>INCOME BRACKET (\$)</u>	<u>FREQ'CY</u>	<u>PER CENT</u>	<u>CUMULATIVE %</u>
0 - 4999	14	19.4	19.4
5000 - 9999	12	16.7	36.1
10000 - 14999	11	15.3	51.4
15000 - 19999	15	20.8	72.2
20000 - 24999	10	13.9	86.1
25000 - 29999	05	6.9	93.1
30000 - 34999	03	4.2	97.2
35000 - 39999	00	0.0	97.2
40000 - 44999	00	0.0	97.2
45000 - upward	02	2.8	100.0

While subjects did not rate a high income as particularly important, they were still dissatisfied with their present income level. Asked directly about their satisfaction with the amount of money they earn, 36% expressed some degree of dissatisfaction. This actually constituted one of the major reasons for dissatisfaction with work, rating second only to concerns over job security (see TABLE 2). When asked the slightly more theoretical question of how important is a job that provides a high income, only 15% ranked this as a very important factor. In fact, this ranked as the least significant factor with an "interesting job", "using skills and abilities" and "a feeling of accomplishment" considered the most important.

There was a wide range of occupations amongst respondents. Using a ten category classification, the majority were located in semi-professional and professional areas. Industries that were well represented included the film/music/entertainment/media cluster (12 people, 16%), salespersons (10 people, 14%) and a number from areas such as law, education and health (22 people, 30%).

The levels of job satisfaction were extremely high. Using five point scales, where one and two express dissatisfaction, three neutrality, and four and five degrees of satisfaction, the highest percentage of dissatisfaction was only 42% for concerns over job security (see TABLE 2). The results square well with the general income levels as well as the job categories, and the concern over security can be understood when it is remembered that a number of people are engaged in non-tenured work areas such as the film and entertainment industry. This last factor is also witnessed in the general employer categories. A quarter of respondents are actually self-employed. Just over forty per cent are employed by private companies, where security is obviously better than self-employment but not as good as the public sector (the remaining 34% of employed respondents working for either the state or federal governments).

TABLE 2 WORK DIS-SATISFACTION

<u>WORK FACTOR</u>	<u>% DIS-SATISFIED</u>
Importance of work	17
Chance to use skills etc.	25
Security and predictability of future	42
People met at work	11
Income	36
Pride in work	11
Degree of say in decisions at work	27
OVERALL SATISFACTION	15

The cocaine users contacted in this study reported generally satisfactory levels of both physical health and mental well-being. One of the several measures we employed was the twenty eight item General Health Questionnaire (GHQ) as a measure of mental health. It was developed by psychiatrists as a tool for detecting people with diagnosable psychiatric disorders and is "focussed on the hinterland between psychological sickness and health" (Goldberg and Hillier, 1979: 139). The questions are concerned with two types of phenomena: inability to carry out ones normal "healthy" functions and the appearance of new symptoms of a distressing nature (Goldberg and Hillier, 1979). GHQ scores were calculated using the "GHQ scoring method": 0 for a 'normal' answer and 1 for an 'abnormal' one. The distinction is then made between a low score (0 - 4) and a high score (5 - 28). From TABLE 3 it can be seen that a majority of our respondents (64%) were in

TABLE 3 GHQ SCORES FOR COCAINE USERS AND FOR GOLDBERG AND HILLIER'S PATIENT SAMPLE

GHQ SCORE	COCAINE SAMPLE	CLINICAL STATUS GROUPS (G&H)				
		<i>NORMAL</i>	<i>SUB CLINICAL</i>	<i>MILD</i>	<i>MOD.</i>	<i>SEVERE</i>
	[N=72*]	[N=50]	[N=57]	[N=64]	[N=23]	[N=6]
	%	%	%	%	%	%
High scores						
12-28	12	0	9	33	61	100
6-11	18	10	21	53	35	0
5	6	6	7	6	0	0
Low scores						
0-4	64	84	63	8	4	0

* One missing case

the low score category. For purposes of comparison, included in TABLE 3 are data from Goldberg and Hillier's study of 200 patients. From this it appears that the cocaine users most closely approximate the sub-clinical category, although the cocaine users have a slightly higher percentage in the top of the high scores group. Whether there are in fact a significant number of the cocaine users with disorders is impossible to determine here, but as a group, they would appear to fall in that "psychological hinterland" which Goldberg and Hillier describe. They are obviously not enjoying perfect health but the disorders they are experiencing, are for the most part, not severe. Moreover, when the effects of age, marital status and other socio-demographic factors are added in, it is unlikely that this picture is at all different from what would be obtained from a strictly parallel set of non-users.

There is only a slight relationship between high levels of cocaine use and high GHQ scores. Sixty per cent of those with GHQ scores above five used cocaine in the range from daily to weekly, when at their peak use period. Similarly, 63% of those with high GHQ scores used cocaine within two to three weeks prior to interviewing. There was also a small distinction between those who identified themselves as present users and those who were past users of the drug. Just over one-third of present users had high GHQ scores while only one-fifth of past users had such scores. A final interesting factor is the relationship between heroin use and the GHQ score. While use of heroin per se is not correlated with high GHQ scores, seven of the eight identified as regular heroin users had scores in the 6-19 range.

The picture of respondent's health we've presented so far correlates fairly closely their own estimations of it. When asked how they would rate their own health, in comparison with people of the same age and sex, only four cocaine users (5.5%) believed themselves to be in excellent health. The majority, thirty-nine respondents (53.4%) placed themselves in good health, while twenty-five (34.2%) said fair and five (6.8%) thought poor health. When these figures are compared with those from the National Social Science Survey (NSSS), a few differences are noted. In the "NSSS 218" sample (married, religious, 18-39 year olds), 27% rated themselves in excellent health while only 17% thought they were in fair health. The figure for good health was 53.9%, almost identical to the cocaine users. As far as the "NSSS 225" sample is concerned, they are basically the same as "NSSS 218": 25.3% in excellent health; 52.9% in good health; 17.4% in fair health; and 4.4% in poor health. Again, the image of the cocaine users is of a group with health just below what might be expected in a general population equivalent.

A related issue to be examined concerns use of medicines, alcohol and tobacco. Overall the results are fairly positive. Four of the six medicines - sedatives, tranquilisers, pep pills and cough medicine - are used by between ten and twenty per cent of all respondents. Only one or two of these use at a rate which could be considered dangerous, that is, more than ten days per month. Thirty-three (48%) report using vitamins on a regular basis but there can only be a small potential for harm from such usage. The highest frequency was for pain relievers with forty-nine (67%) using drugs such as panadol, aspirin and cold tablets. In this case, the vast majority use pain relievers on no more than five days per month. When it is remembered that this is a group of illicit drug takers it is not surprising that they are prepared to use common, legal drugs without medical prescription.

From TABLE 4 it is obvious that they are heavy users of both tobacco and alcohol; 49% smoking every day and 37% drinking alcohol on twenty or more days a month. Of the smokers, 40% are "pack-a-day" smokers - either twenty or twenty-five cigarettes, the two standard size of cigarette packs. A further 15% smoke more than twenty-five cigarettes a day. Only three people claim to be non-drinkers. Alcohol is also regularly consumed, albeit with slightly less high levels. Sixty per cent of drinkers have less than three to four drinks on any given drinking occasion. Twenty-eight per cent of drinkers have between five and eight drinks while eleven per cent have above nine drinks per occasion.

TABLE 4 TOBACCO AND ALCOHOL CONSUMPTION

<u>FREQUENCY OF USE</u> (DAYS PER MONTH)			<u>SMOKERS</u>	<u>DRINKERS</u>
	<u>NO.</u>	<u>%</u>	<u>NO.</u>	<u>%</u>
NONE	18	24.7	3	4.1
1-2 DAYS	4	5.5	4	5.5
3-5 DAYS	2	2.7	6	8.2
6-9 DAYS	4	5.5	12	16.4
10-19 DAYS	4	5.5	21	28.8
20 OR MORE	5	6.8	15	20.5
EVERY DAY	36	49.3	12	16.4

We turn now to a range of factors which we are related to social integration.

First, while 45% are in de facto relationships, not one is currently in a legal marriage. Given the extraordinarily high number of married persons in the population at large in the age range of our sample (18-39) this is quite a striking result.

A similar result emerges when we examine the area of religious affiliation. Whatever the average person means when they fill out the 'religion' box on forms like our questionnaire, the majority do make some identification. This was not the case with the cocaine users. Only five identify in any way with an organised religion. The same was true for membership of voluntary organisations: only eight respondents were involved with some community based group.

When we turn to political affiliation the pattern continues. Forty-one (56%) do not support a political party, and of those thirty-two that do, nine support minor or fringe parties (NDP, Communist, etc.). Of the remaining twenty-three, seventeen support the Labor Party and six support the Liberal Party.

All these results point to an appearance of low levels of social integration. While this may be true in the strict institutional sense, there are other indicators which suggest high levels of social integration at the more inter-personal level.

To begin, the evidence on family relationships points to a picture of "normality", and one quite unlike either that of the broken-homes-leads-to-delinquency chain, or the dependent-drug-users-are-over-attached-to-their-family, a view that is sometimes favoured by other schools of thought. On the broken homes issue, the picture is quite clear. Sixty-four (88%) of respondents were living with both their parents when aged fourteen (a generally useful measure); seven were with one of their parents; and two were with foster parents. On the other hand, apart from six of the younger respondents who are still students, this is not a group living at home in adulthood. Relations with kin were good, without evidence of their being 'suffocating'.

A similar pattern emerges on other indicators of social integration at the inter-personal level. The respondents were asked how many people, apart from a 'partner' (where relevant), that they felt really close to. The format used was derived from a study of the aged in Sydney (see Kendig, 1986), and data from that survey indicate that a response of two or more such close contacts could be considered a reasonable level of contact. This applied to 89% of the cocaine users, and 66% were able to identify five or more. A rough measure of the density of the networks was gauged from how many of the people in the friendship networks know each other. 18% report that all the friends know each other; 47% most know each other; 23% most know a few others; and 10% most know no others.

Those involved in de facto relationships seemed, for the most part, to be enjoying stable and on-going situations.

Since, following the kind of logic first espoused by Durkheim, we might consider both excessive integration and a shortage of integration to be a problem, the results here indicate a strongly positive picture. Almost all the respondents have adequate levels of significant others, and the pattern of connections between them appears optimal.

The relatively high level of inter-personal integration exhibited by our respondents might then lead one to suppose that they would, in general be a fairly well-adjusted and happy group. Comparisons with the results from the survey of the general population also confirm the sense of "normality" about the cocaine users.

On a three point rating of happiness, the cocaine users rate themselves only slightly less happy than the NSSS samples. In fact, what difference there is, is with the "NSSS 218" sample, i.e. with the group that is unlike them except in age,. With the similar group (NSSS 225) there are no differences. Thirty-seven per cent of the NSSS 218 people rate themselves 'very happy' as opposed to only nineteen per cent of the cocaine users.

On a series of questions about levels of satisfaction with various aspects of their lives, the majority of the cocaine users were, with the exception of two areas, 'satisfied'. The levels of satisfaction were however slightly lower than was the case with the NSSS samples, particularly the "NSSS 218" group.

Some of the differences in happiness and satisfaction can be explained when we remember the "NSSS 218" is both a religiously affiliated and a married group. So, for example, the fact that 77% of "NSSS 218" were satisfied with the purpose and meaning in their life compared to 63% and 55% for the "NSSS 2225" and cocaine samples respectively is not a surprising result.

Given that cocaine is a drug which is supposed to make one more talkative, sociable etc., we might expect that - if use is a 'compensation' - users are people who are not particularly confident or at ease in social situations. To examine this idea we employed the measures of "affiliative tendency" and "sensitivity to rejection" derived from Mehrabian and Ksionsky (1974) and recently employed by Henderson *et. al.* (1981). These consist of a series of statements (eighteen for affiliative tendency and twenty for sensitivity to rejection) which respondents are asked whether they agree or disagree with.

For affiliative tendency a "correct" answer is given a score of one (for example, with the statement "having friends is very important to me", an answer in the affirmative scores one) and therefore a maximum score of eighteen is possible. The cocaine users scored highly on this measure. The scores ranged between five and sixteen with a median of twelve. Eighty per cent of the sample scoring above ten. The results for sensitivity to rejection were equally positive. With this measure, a low score was the optimum i.e. the lower the score the less sensitive to rejection. Statements were along the lines "I sometimes take criticisms too hard" and "I tend to associate less with people who are critical". Here, the range was between zero and thirteen with a median of seven.

These results indicate a group who are basically sociable and not particularly sensitive to rejection. This again provides support for the argument that the cocaine users are a group of well adjusted, happy and socially capable individuals and little support for a pathology interpretation.

Finally in this section we shall analyse the attitudes of the cocaine users on a range of social issues. What emerges is a group with a fairly liberal, progressive outlook. This is in keeping with the fact that they do not belong to the institutional "mainstream" and while not supporting political parties to any extent, their leaning is to the left and the Labor Party. In contrast, the NSSS samples are largely conservative, particularly on the more controversial issues such as aboriginals, drug laws etc.

The first series of questions to be examined deal with various options open to the government and whether respondents are in favor or opposition to them. The largest distinctions between the cocaine users and the NSSS samples occur with what might be called "law and order" issues. Only 11% of the cocaine group are in favour of the death penalty for murderers while 52% of the "NSSS 218" and 43% of the "NSSS 225" are in favour. Similarly, on the question of stiffer sentences for law breakers, 77% and 60% of the NSSS samples ('218' and '225' respectively) are in favour, while only 14% of the cocaine users hold such a view. On the question of whether marijuana should be legalized, not surprisingly, 94.5% of the cocaine sample are in favour. In contrast, only 28% of NSSS 218 are in favour while the NSSS 225 are much less conservative with 47% supporting legalising marijuana. On a number of other issues the differences between samples are still evident, although not as pronounced. For example, on the question of whether divorce should be made more difficult to obtain, 19% of the cocaine group are in favour as opposed to just 23% of NSSS 225 and 37% of NSSS 218. One notable exception to the trend is in relation to the idea of re-distributing wealth in favour of ordinary working people. While we might have expected the more conservative NSSS samples to oppose this suggestion, in actual fact, 55% of NSSS 218 and 60% of NSSS

225 were in favour. 66% of cocaine users were also in favour of this.

The next set of questions dealt with the amount of money being spent on various problems in Australia. Respondents were asked to indicate whether too much money, too little or the right amount was being spent on them. Again, there is a fundamental left-right split between the cocaine users and the general population samples.

The most striking result concerned the money spent on the military, armaments and defence - 85% of cocaine users believed too much was being spent, while 51% (NSSS 218) and 41% (NSSS 225) of the general population samples thought too *little* was being spent in this area. On three other issues (improving the conditions of aboriginals; helping the unemployed; and foreign aid) far greater percentages of the cocaine users than the NSSS samples believe too little is being spent. Their views converge on some of the less controversial points. Low percentages (less than fifteen per cent) across the board believe that too much is being spent in the areas of education, the roads, social services, science and technology and the environment.

The most interesting result is in relation to whether too much is spent on dealing with drug addiction. Twenty per cent of the cocaine sample believe too much is spent while only 4% and 3% of the NSSS 218 and NSSS 225 samples respectively hold such a view. This result can perhaps be explained by the fact that at the time of interviewing, the National Campaign Against Drug Abuse (NCADA) was in full swing and many of the interviewees expressed dissatisfaction with it. Basically, they felt their own experiences and knowledge of the drug scene bore no relation to the information that was being propagated in the campaign and thus they saw it as a complete waste of time and money.

The attitudes toward drug use are fairly much what one would expect from an illicit drug using group. While basically cynical of any official view they are also well versed in the realities of drug use.

CONCLUSION

While much more could be documented about the cocaine sample, the results detailed above, as well as many others I skip for reasons of space, all point in the same direction. That is, only the weakest case can be made for the applicability of the pathology paradigm as a potential explanation of drug use of the type we have studied. The more one is able to draw parallel samples from the wider population, matched for socio-demographic and political characteristics, the less there seems to be a user/non-user difference. Indeed, and this is one of the striking findings of the research, *the real problem is even to find an adequate parallel group*. By the time adequate controls are placed on the groups to match for age (young), religious affiliation (none), politics (leftish liberal, disaffected from the mainstream), marital status (not married) and so on, even large samples like the NSSS are reduced to a small handful, who may, for all we know, include illicit drug users.

It is stretching the utility of the paradigm to presume that all these correlates are the evidence of pathology, at least that seem to us to be the case. (Perhaps extreme moral conservatives would try!)

Rather we believe that the results demonstrate quite clearly that the principal factors that show, in an empirical or statistical fashion what the user vs non-user differences are, come back again and again to matters of 'lifestyle'. What our results show is that there is at least one such group whose lifestyle includes cocaine use. In a sociological sense, it seems unlikely that this use preference is anything like as strongly defining a characteristic as are the broader factors in the lifestyle. I have explored the significance of the 'lifestyle' problem in detail elsewhere¹³, where I have shown, for example, that if we want to understand the increase in drug use in the present period in Western countries then, while recognising an element of contingency (drugs have their fads and fashions), we have to ask about the growth of modernity, about the development of hedonism and the performing self, the commodification of time and of leisure and the growth of entertainment.

In turn, the interpretation in this paper fits with a number of other things. For example, following the lead shown by the work of Norman Zinberg, related work by Phil Cohen (forthcoming) has shown that it is factors related to social ties (etc.) that explains how users monitor and control their use levels. Such monitoring and control is a routine feature of user cultures both licit and illicit and is quite at odds with the kinds of images perpetrated by those who run research from within the pathology paradigm.

In summary, the connection of pathology and use is extremely dubious. However, unlike some of the more sanguine prophets of past years, who promised nirvana through chemicals, I don't argue in favour of drug use as a counter to those who argue against it. On this I stand firmly in the neutral corner. It is clear that people use drugs, that many get pleasure from this, and that some suffer harm. I am not able to argue that the harm justifies banning the pleasure, but neither do I argue that the pleasure means that harm can be shrugged off. What I think the pathology paradigm can do, is to explore the conditions, intrapersonal, interpersonal and societal, under which some people come to grief as the result of their use.

In this it is a vital 'special case' of the more general perspective I have argued for above. Nonetheless, it is clear that the main route to understanding the wider scene, to posing and answering questions like "Which kinds of people use drugs and why?", lies in quite another place. To attempt serious answers to these (and other) questions we have to spend time doing far more studies of the 'invisible majority' of drug users, that is, those recreational users who normally do not cross our research vision unless we make a special effort.

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FOOTNOTES

¹ From here on I shall, unless indicated otherwise, use 'drugs' to mean illicit drugs.

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- ² There are other questions that tend to be skated over, but probably should be asked. Some of these are taken up in another paper that I have written, an extended and revised version of parts of this paper, entitled "Pathology, Pleasure, Profit and The State: Towards an Integrated Theory of Drug Use". Copies are available on request from the author.
- ³ It should be emphasised that many of the illnesses are the corollary of illegality rather than drug use *per se* but this subtlety gets repeatedly ignored.
- ⁴ As I shall show below, some writers eschew examining reasons at all.
- ⁵ Deficit models are very popular in the social sciences where 'social problems' are concerned. A parallel set of assumptions can be found in the literature about violence. See, for example my paper "Sport, Commerce and 'Hooliganism' : Trends in Sport Related Violence", delivered to the *Crime in the Future* conference, Hobart, Oct. 1987.
- ⁶ And certain others that are illegal under some circumstances, such as without a medical prescription.
- ⁷ Of course, they would see heavy use of alcohol as problematic.
- ⁸ Equality does not mean approval. It is perfectly possible to be dubious about all drugs, legal and illegal, without trying to see some as 'better' than others simply because of their legal status. It should be clear that ALL drugs have the capacity to harm people if taken regularly and in substantial quantity. Beyond that, harm is a matter for research evidence, and there is no simple relation between legality and (relative) safeness as the case of tobacco vividly illustrates.
- ⁹ This is not to propose an alternative of naive belief of user's accounts. I think that we know enough about people in general, and drug dependent people in particular, to realise both that there will be a measure of lies and self deceptions mixed into many accounts. The problem is not a healthy scepticism of such accounts, but a discounting in advance.
- ¹⁰ I gratefully acknowledge the help of Phil Cohen in the work described in this section.
- ¹¹ Since the research was a team effort, I shall use the term 'we' throughout this section.
- ¹² An image that the research showed was in many ways mistaken.
- ¹³ "Pathology, Pleasure, Profit and The State: Towards an Integrated Theory of Drug Use". Copies are available on request from the author.

NATIONAL DATA BASES

FIRST NATIONAL DRUG INDICATORS CONFERENCE

CANBERRA 10-12 MAY 1988

NATIONAL DRUG DATA BASES:

THE NATIONAL DRUG ABUSE INFORMATION CENTRE

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FIRST NATIONAL DRUG INDICATORS CONFERENCE**NATIONAL DRUG ABUSE INFORMATION CENTRE****INTRODUCTION**

It is almost axiomatic that major social interventions, such as those addressing illegal drug use and related problems, need to be based on a firm framework of information about the extent and nature of drug use and related problems. It has not been clear, either in Australia or overseas, that such data have, in fact, provided the foundation for decision making in this area in the past.

A substantial number of reviews have pointed to the need for such data. One of the most influential recent reports, at the international level, which addresses this issue is the Comprehensive Multidisciplinary Outline of Future Activities in Drug Abuse Control which was developed by the June 1987 International Conference on Drug Abuse and Illicit Trafficking which was convened by the Secretary-General of the United Nations (1). The CMO, as the report is known, has as its first

two targets in the area of the prevention and reduction of the illicit demand for narcotic drugs and psychotropic substances the following:

- . Target 1 - assessment of the extent of drug misuse and abuse.

- . Target 2 - Organisation of comprehensive systems for the collection and evaluation of data.

A practical view on this, at the international level, has recently come to us through the deliberations the WHO expert working group which met in Canberra, Australia, in March 1988 and developed a consensus statement "Towards Healthy Public Policy on Alcohol and Other Drugs". That statement points out that nations must not wait until all the data are available before action is taken:

Enough community and national concern exists in all countries for workable national policies to be formulated now rather than later. A number of nations have already demonstrated that concerted action can proceed to address these pervasive problems even though resources are limited. Nations cannot wait until all the data, technology and other resources are available. (2)

Closer to home, most of the large number of Royal Commissions and other enquiries into illegal and legal drug misuse and related problems have pointed to the need for good data systems. Perhaps the most important, in recent times, has been the Williams Commission - the Australian Royal Commission of Inquiry Into Drugs. Substantial attention was given in that Commission's report to the need to develop and use effective information systems. It developed specific recommendations on the establishment of a national drug information centre and a related network of State and Territory drug information centres and a parallel system of criminal drug intelligence (3). Between 1979, when that Commission's report was released, and the 1985 launch of Australia's National Campaign Against Drug Abuse, substantial action had taken place to review the recommendations of the Royal Commission and to determine how best they should be, and could be, implemented. Action had already commenced in a number of areas to implement the recommendations.

With this background, it is not surprising that Australia's National Campaign Against Drug Abuse (NCADA), seeks to establish systems to overcome the dearth of data needed for policy development and evaluation in both the legal and illegal drugs area. The Special Premiers' Conference on Drugs, which established the NCADA in 1985, noted the importance of data in this area. The Campaign strategy document states that:

Reliable data for monitoring programs, the development of new approaches and the evaluation of programs are required. There is no authoritative collection of data on which reliable estimates of the size of the problems associated with illegal drug use can be based (4).

The strategy goes on to note that data systems need to be established, as follows:

In order to identify the most appropriate targets of action and to measure progress in achieving the objectives of the campaign, basic data concerning drug use, drug problems and drug programs will need to be collected, processed and published.

Already considerable work has been undertaken, on a national basis, to establish where effort will most profitably be directed concerning data collection. It will be necessary to use fully existing data sets, to establish details of characteristics of treatment agencies and their clients and to develop new data sets where appropriate.

Special studies will be needed to provide more reliable estimates of the numbers and types of drug users, particularly illicit drug users. (5)

It is on the basis of this clear statement, within the NCADA strategy, that the National Drug Abuse Information Centre was funded and developed.

THE NATIONAL DRUG ABUSE INFORMATION CENTRE

Prior to the launch of the NCADA, the then Commonwealth Department of Health (now Commonwealth Department of Community Services and Health) had been active, in conjunction with the eight State and Territory Health Departments and Drug and Alcohol Authorities to review the existing drug abuse data and processes available to obtain and use them, with the view to implementing, as far as appropriate, the recommendations of the Williams Royal Commission. This activity was being undertaken under the auspices of the Commonwealth/State Health Committee on Drugs of Dependence, which reported direct to the Australian Health Ministers' Conference. The launch of the NCADA, with its clear commitment to increased activity in this area provided the impetus for the rapid implementation of data management activity. At one of its early meetings, the Standing Committee of Officials of the Ministerial Council on Drug Strategy (SCO of MCDS) resolved that a consultancy should be commissioned to recommend on the aims and implementation strategies for what was then known as the national drug related data collection system. Those recommendations were to take into account activities in both the social development (health and welfare areas) and the law enforcement areas, but to focus primarily on the former.

Dr Roger Jones and Professor Ian McAllister were the principals in the consultancy group which undertook this task. They visited each State and Territory to review the existing systems and to seek the views of experts in the area and, in June 1986, submitted their report to the Commonwealth entitled "The establishment of a national drug related data collection system; a report to the Commonwealth Department of Health" (6).

The report was considered by SCO who directed that, before decisions were made on its implementation, a further document be prepared spelling out in another form the aims and objectives of the data system. This was done by the Director of the Commonwealth's National Drug Abuse Information Centre and led to agreement by all States and Territories, through the MCDS in 1987, that the establishment of the national data system proceed along the general lines recommended by the consultants.

The system has been established as follows. The Commonwealth has established the National Drug Abuse Information Centre with the following objectives:

- . To facilitate the identification of the most appropriate targets and strategies for the NCADA; and
- . To measure progress in achieving the Campaign's objectives.

This is achieved by developing, collecting, processing, analysing and disseminating data on drug use, drug related problems and programs which aim to prevent or treat drug related problems.

The sum of \$1 million per annum, indexed, has been allocated to this area of the NCADA. The broad approach to the National Drug Abuse Information Centre is along the lines recommended by the Williams Commission, namely, the establishment of:

- . A National Drug Abuse Information Centre; and
- . A State/Territory Drug Abuse Information Centre located within each jurisdiction.

The individual State and Territory units are primarily responsible for the collection of data within their respective jurisdictions, while the national unit is primarily responsible for developing and implementing national data collections, developing common formats for State and Territory data collections (in conjunction with State and Territory authorities) and aggregating State and Territory data to produce national data.

To supplement data obtainable from Commonwealth and State sources, the national centre also sponsors a program of research to fill gaps in current information about drugs in Australia. It does this in conjunction with the NCADA Research Into Drug Abuse Program to ensure that no wasteful duplication of resources occurs.

Through the processes outlined above, a National Drug Abuse Data System (NDADS) has been established; the MCDS has agreed to its content and the timetable for its development. In addition, the Commonwealth has allocated funds to each State and Territory to assist it in contributing to the overall national data system. Funds are also available through the NCADA Commonwealth/State cost-shared program to assist States and Territories in developing data collections within their own jurisdictions.

A substantial number of new data collections have been initiated in priority areas and existing data, from diverse sources, are being collated at the national level into a form which will enable them to be used to help achieve the objectives of this part of the NCADA. A full list of the data sets being developed is at Attachment A. It will be noted that all drugs are covered (both legal and illegal and the illegal use of legal drugs); it involves both the use of existing data

sets and the development of new ones; and includes data which will be contributed, in due course, by the Australian Bureau of Criminal Intelligence once its National Drug Data Base (Law Enforcement Component) is further developed.

Some of the special features of the National Drug Abuse Data System are as follows:

- . It is a national approach operating with a substantial degree of cooperation between data collection agencies.
- . All drugs are included, and while the problems associated with illegal drugs receive particular attention, the NCADA's focus includes the legal drugs which have such a high impact on the health and well-being of society at large.
- . Health related drug data are collated at a central point, which makes it possible to have a national overview and to achieve improved consistency of data, which, in turn, facilitates aggregation and comparison of data.
- . Relevant law enforcement data, including those to be provided by the Australian Bureau of Criminal Intelligence, are to be included in the system; and

- . Since no simple, unitary data collection is adequate (given the complexity of the drugs field) multiple data sources are a characteristic of the National Drug Abuse Data System. Expertise in the evaluation of the meaning of data is an essential component.

The dissemination of the data collected and developed under the National Drug Abuse Data System is receiving particular attention. The main audiences are government decision makers, both public servants and ministers; the mass media; drug and alcohol workers; researchers; and the general public. The data are disseminated, therefore, in ways which provide public information and enable the data to be used for the shaping of policy.

The National Drug Abuse Information Centre has a number of publications which disseminate these data, including the following:

- . Statistics on Drug Abuse in Australia (annually since 1985).
- . Alcohol in Australia 1988.
- . Alcohol: The Facts (1987)
- . Statistical Updates (monthly from August 1987).

In addition, the NCADA media/information campaign, the "Drug Offensive", makes use of the data produced through the national system to help select targets for its mass media activities. Reports are provided every six months to the Ministerial Council on Drug Strategy on the development of the system and reports in specific areas receiving attention by the Ministerial Council, such as cocaine in Australia, are provided.

CONCLUSION

The development of the National Drug Abuse Data System, through the National Drug Abuse Information Centre and the associated network of State and Territory Drug Abuse Information Centres, is one of the many worthwhile achievements of the National Campaign Against Drug Abuse. It is providing, for the first time, a substantial degree of data in priority areas to help guide and monitor the Campaign and to keep the public accurately informed about drug abuse matters. In developing the system, we are keen to draw on existing and newly developed data sources rather to duplicate them.

The future of the NCADA is, at this stage, not determined in detail. All governments have agreed that the Campaign will be extended for a further three years but the nature of the next triennium has yet to be determined. Decisions will be made by

the Ministerial Council on Drug Strategy on the basis of a substantial evaluation of the first three years of the Campaign, currently being undertaken. The evaluation report, which will be considered by Ministers in October 1988, will include recommendations for the future of the data management part of the Campaign. The evaluation will also draw heavily on the data developed through the National Drug Abuse Data System which should, in itself, point to the usefulness of this component of the NCADA strategy.

The members of the Commonwealth/State working party which meets annually to overview the implementation of the National Drug Abuse Data System are presenting separate papers to this conference outlining the data on illegal drug use and associated problems which have so far been developed under, or in association with, the National Drug Abuse Data System. These papers demonstrate the achievements of the System to date and show the potential for the future. The excellent cooperation displayed in developing and implementing the system, between the Commonwealth, the States and Territories, other government and non-government agencies and professional researchers, augurs well for its future. Under the guidance of the National Drug Abuse Information Centre, the National Drug Abuse Data System should continue to meet the goals identified

by the Williams Royal Commission, the United Nations Conference and the Ministerial Council on Drug Strategy to ensure that drug policies and programs in Australia are based on good quality data presented in a useable and timely manner. At the same time, the quality of public information and the resulting quality of public debate in the drugs area should be enhanced.

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- (3) Australian Royal Commission of Inquiry Into Drugs, Report, Book F, Canberra: AGPS, 1980.
- (4) National Campaign Against Drug Abuse, Campaign document issued following the Special Premiers' Conference, Canberra, 2 April 1985, Canberra: AGPS, 1985, p.3.
- (5) *ibid.*, p.7.
- (6) Roger Jones and Ian McAllister, The Establishment of a National Drug Related Data Collection System; a report to the Commonwealth Department of Health, Canberra: June 1986.

NATIONAL DRUG ABUSE DATA SYSTEM**COMPONENTS**Mortality

1. National Forensic Case Reporting System
2. National Drug Poisonings Case Reporting System
3. Aetiological fractions for drug-caused morbidity and mortality
4. Number of drug-caused deaths
11. Death due to volatile substances
12. Road traffic crashes
18. AIDS transmitted by intravenous drug use

Morbidity

2. National Drug Poisonings Case Reporting System
3. Aetiological fractions for drug-caused morbidity and mortality
5. Drug caused hospital morbidity
6. Clients of methadone treatment programs
7. Clients of treatment service agencies
9. Aboriginal drug use and drug problems
12. Road traffic crashes
18. AIDS transmitted by intravenous drug use
19. Analgesic nephropathy

Drug Use

8. School students' drug use
9. Aboriginal drug use and drug problems
10. Data collection strategies on use of illicit drugs
14. ABS survey on tobacco and alcohol consumption patterns
15. Apparent consumption of alcohol and tobacco
16. Prescription and non-prescription therapeutic drugs
17. Apparent consumption of Schedule 8 drugs
18. Schedule 8 prescription monitoring systems.

Other

13. Offences involving illegal drugs
20. Data from welfare and community agencies
21. Data on drug use in prisons
22. Various indications of drug related problems.
24. Expenditure of public funds on drug abuse interventions.

- Notes:
- . individual datasets are at various stages of development and implementation.
 - . some datasets appear more than once in this listing as they provide data in more than one category.

AUSTRALIAN CUSTOMS SERVICE

INTELLIGENCE DRUG DATABASE

Don McDowell

INTRODUCTION

This paper deals with the role of the Australian Customs Service (A.C.S.) in relation to the traffic in illicit drugs to Australia. The paper provides a focus on the functions and activities of the A.C.S. Intelligence service in gathering drug-related data, recording and processing information and preparing intelligence assessments for use by the A.C.S.

The paper has been prepared in support of a series of discussion sessions on national data bases as part of the First National Drug Indicators Conference, Canberra, 10-12 May 1988, hosted by the Australian Institute of Criminology.

Any examination of the Customs Intelligence drug data recording and processing arrangements is dependant upon an understanding of the overall role of Customs in protecting the Australian community. The first sections of this paper define the role of Customs and the overall functions and responsibilities of its Intelligence service before dealing, in detail, with the specific activities carried out by Intelligence in recording and processing data relating to illicit drugs.

CUSTOMS FUNCTIONS

The objectives of the Australian Customs Service are threefold:

- . *Community Protection* - the ACS is the front line of defence against illegal imports and exports. It is responsible for exercising effective control over the movement of people, goods, ships and aircraft into and out of Australia.
- . *Industry Assistance and Development* - the ACS implements many of the Government's industry assistance measures, such as tariffs, quotas, bounties and subsidies.
- . *Revenue Collection* - the ACS collects Customs and Excise revenues for the Commonwealth Government and protects that revenue from evasion and fraud.

It is in the context of the first objective that the ACS is concerned with the question of trafficking in illicit drugs. In this, its role is specifically to both identify and interdict the passage of illicit drugs through the Customs "barrier".

THE INTELLIGENCE ROLE

The role of the Customs Intelligence service is:

- . to identify those persons or organisations intent on breaching Customs-related legislation and practices, as well as identifying the commodities involved with such abuse; and
- . to provide timely, accurate advice as to the background, intentions, capabilities, vulnerabilities and limitations of those persons and organisations connected with practices and commodities involved in the abuse of Customs related legislation.

To achieve its major responsibilities, Customs Intelligence spans five distinct major functional areas, as follows:

- . *Provision of tactical intelligence.*
Intelligence has the responsibility for providing tactical intelligence concerning imminent or actual breaches of Customs administered legislation, direct to Customs units operating in the immediate area.
- . *Development of operational and strategic assessments.*
Intelligence is responsible for providing the analysis and reporting on specific intelligence material, as well as the development of risk assessment projections, where the nature of such reports and assessments is such that they have the potential to impact broadly on Customs operations and/or planning.
- . *Analysis and reporting of "educational" or "awareness" intelligence.*
Processing and reporting information gleaned from national and overseas sources (concerning, for example, trends in methods of concealment, routing, disguise of prohibited imports and fraud methodologies), the dissemination of which is essential for the continued awareness of individual Customs officers at the barrier.
- . *Development and maintenance of intelligence databases and information sources to cover specific Custom Intelligence interests.*
 - Input, quality control and access to computerised database holdings of information not readily available from other sources.
 - Provision of inter-agency information services.

Provision of liaison services.

Establishment and maintenance of intelligence and law enforcement information services between Customs, other agencies and overseas organisations.

In relation to illicit drugs, the provision of such a comprehensive range of operational support activities carried out by Intelligence is absolutely pivotal to the successful and efficient implementation of Customs' operational responsibilities.

THE NEED FOR AN INTELLIGENCE DRUGS DATABASE FACILITY

Customs Intelligence services two primary client groups:

- . Corporate Management - concerned with the policies and direction of the operational effort of the ACS, the overall management and deployment of resources.
- . Operational units - concerned with detecting and interdicting breaches of the Customs barrier.

Analysis of operational results, assessment of preventive measures in place and, where possible, the prediction of the nature of future threats to the barrier all require systematic collection, integration and analysis of data relevant to the intelligence problem - combatting drug trafficking.

There is, thus, a requirement to provide an intelligence service that operates on three distinct levels:

- . *informational*
- . *advisory*
- . *predictive*

DATA COLLECTION

In meeting its responsibilities to advise Customs management on the threat posed by illegal drug-trafficking activities, Customs Intelligence needs to be able to identify trends in illegal activities already happening at the Customs barrier, comparing these with experience of Customs organisations overseas and, where justifiable, using these trends as an element of prediction of likely future smuggling activities.

All drug seizures involving Customs at the barrier are reported and entered into a database. The format of the database demands the use of a prescribed set of field- and text-related protocols that have been purpose-designed to ensure not only ready access and retrieval, but to form the basis for statistical modelling of trends. Thus, all key concepts concerning each seizure are covered by keyword and/or symbol protocols for entry to enable rapid sorting and reporting to occur during retrieval.

The first and all-important step in achieving this goal requires Customs officers to routinely report on all seizure incidents related to drug trafficking. Reporting of this data is usually by telex, from the line unit to Intelligence in Canberra, immediately following a seizure event. Each report covers a wide range of information about each incident, grouped into the following major categories:

- . details of the incident - place/date
- . details of the offender(s)
- . drug commodity details - drug type/weight/amount/source
- . method of transport - ship/flight/from/route
- . means of entry - air pax/baggage/cargo/etc
- . means of concealment - how/where/wrapping
- . reason for selection by Customs officers

INTEGRATION AND PROCESSING

All seizure reports (as at 10 May 1988 there were 3243 records in the system, dating from 1983) are logged into the Intelligence drug database in Canberra. The database system is solely operated by Intelligence analysts using a PC-based *local area network*. This LAN runs an integrated software package to enable easy, flexible access not only to the database records, but also to spreadsheet and graphic capabilities, as well as word processing facilities.

Statistical analysis of the incident records is carried out on a regular basis both to check previously observed trends and to determine changes in patterns of activity.

INTELLIGENCE ASSESSMENTS

Reports and assessments are produced for Customs clients, both corporate and operational, by analysts using the combined facilities of the integrated software, ready for printing and publication.

While most of the raw report data is protected by low-grade security classification, reports and assessments will vary according to the sensitivity of information included. For the most part, statistical trend analyses tend to be available (in published form) on a limited distribution for official use only within government circles.

OTHER DATABASES USED BY CUSTOMS

In addition to maintaining its own subject-specific database on drug incidents, Customs shares the major mainframe database facility with the Australian Federal Police, using the INTEL II and DORS (Drug Operations Reporting System) systems for drug related law enforcement activity records (as well as for Customs commercial law enforcement records, in the case of INTEL II).

Both INTEL II and DORS are primarily database systems that record, against each event, information arranged in a range of fields that describe the key points of each event and provide the facility for textual description. Although the systems are keyword coded for ease of retrieval, neither is yet served by the sort of statistical modelling and reporting facility appropriate to analytical needs. While each, therefore, is immeasurably useful as a reference tool, they are limited, at this stage, in their use for analytical modelling purposes.

CONCLUSION

Future developments of the shared ACS/AFP mainframe intelligence database systems, as well as the commencement of the ABCI law enforcement component of the national drug database system, will provide all participating law enforcement agencies with significant improvements in the access, quality and coverage of drug-related information.

The capture and integration of such data, already seen in the DORS system, provides the basis for improved *informational* services to clients with the opportunity benefit of forging even closer cooperation between enforcement agencies.

To effectively meet its *advisory* and *predictive* roles, Customs Intelligence will require continuing access to Customs-specific drug seizure data available in such a way as to allow for the massaging, reporting and statistical modelling processes essential to the intelligence effort.

ACT DRUG INDICATORS PROJECT

**A PROGRAM OF RESEARCH FUNDED BY
THE NATIONAL CAMPAIGN AGAINST DRUG ABUSE**

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ACT DRUG INDICATORS PROJECT

BACKGROUND INFORMATION

The ACT Drug Indicators Project is a three year program of research funded by the National Campaign Against Drug Abuse (NCADA) which aims to develop and refine methodologies for estimating the incidence, prevalence and character of illegal drug use, to construct and monitor indicators of relative changes in drug use levels and patterns over time, and to assess how best to integrate information from different agencies and sources to provide a broader and more accurate picture of illegal drug use than is currently available. It is intended that the methods developed in the ACT will act as models for similar data collection systems in other jurisdictions.

In addition to collecting data from community agencies dealing with drug problems, the project will also conduct intensive interviews with drug users throughout the community in order to provide comprehensive local information on drug-taking careers, patterns of help-seeking, choices of sources of drugs, and the economic behaviour of illegal drug users and markets in the ACT.

The specific objectives of the project are:

1. To develop convenient and reliable methods of monitoring drug use (with an emphasis on illegal drug use) in local settings.
2. To assess the reliability and validity of information on drug use patterns obtained from public and private sector sources.
3. To develop and test different methods for estimating incidence and prevalence of drug use in defined communities.
4. To assess how best to integrate information from different sources and indicators into a drug problem index.
5. To collect qualitative data on drug-taking careers, patterns of help-seeking, and characteristics of local markets for specific illegal drugs (heroin, cocaine, and cannabis).
6. To produce quarterly reports on drug indicators for use in policy formulation, planning of service provision, and evaluation of intervention strategies, and to contribute accurate and reliable data to inform the public debate about drugs.

THE IMPORTANCE OF DRUG USE INDICATORS RESEARCH

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There is broad agreement that data available on the extent and nature of illegal drug use in Australia are inadequate for policy formulation, planning of service provision, and evaluation of intervention strategies. In addition, the absence of comprehensive data in which confidence can be placed concerning their reliability and validity, contributes to a climate of debate about drug matters characterised by claims about, for example, the number of heavy users of heroin, which owes more to ideology, emotion and institutional advantage than to accurate measurement and cool deliberation. The result is a debate which is often irrational and ill-informed, with consequent policy which may do more damage than it prevents.

This situation has been noted by almost every formal inquiry into drug matters in Australia in recent years. The South Australian Royal Commission into the Non-Medical Use of Drugs commented in its Final Report in 1979 that:

A good deal of important information is not available locally ..., relatively little systematic research has been conducted to assess trends in the extent and patterns of drug use in Australia. Surveys of varying quality and scope, official and unofficial, have been undertaken, but the results can seldom be related to one another because of different survey design. Important measurements such as the prevalence of the use of opiate narcotics have rarely been made, but this has not inhibited the flow of estimates from both well informed and poorly informed sources (p. 11).

The Commission recommended that 'a system of monitoring indicators of all drugs should be developed on the basis of existing records, as a matter of urgency' (p. 357).

In 1980, the Australian Royal Commission of Inquiry into Drugs similarly pointed to the absence of comprehensive data on drug use in this country. In his Report, Mr Justice Williams emphasised that the Commission's 'extremely difficult task of framing recommendations for policy initiatives in the drug field was made all the more complicated by deficiencies in the statistical information available to it' (D 59). Williams suggested the establishment of Drug Information Centres to collect and disseminate the widest possible range of non-criminal intelligence.

Other official inquiries have expressed similar criticisms of the lack of basic information about the size and characteristics of illegal drug use in Australia.

The list includes the Senate Select Committee on Drug Trafficking and Drug Abuse (1971), the WA Honorary Royal Commission of Inquiry into the Treatment of Alcoholism and Drug Dependence (1973), the Senate Standing Committee on Social Welfare (1977), the Tasmanian Select Committee on Victimless Crime (1978), the NSW Royal Commission into Drug Trafficking (1979) and the Select Committee of the Legislative Assembly Appointed to Inquire into Alcohol and Other Drugs in Western Australia (1984).

A number of academic critics have drawn attention to the parlous state of available drug data. Elliott (1982, 1983, 1986) has criticised the estimates of illegal drug use produced by a number of Royal Commissions, all of which worked with inadequate data bases and with inadequately developed methodologies. Wardlaw (1978, 1986) has pointed to the lack of data on drug use as it relates to the criminal justice field.

The response to these criticisms has, in general, been one of masterly inactivity. A few sporadic attempts at developing more reliable estimates of numbers of illegal drug users have been made by agencies such as the NSW Drug and Alcohol Authority (e.g. Sandland 1983, 1986). However, it is only since the beginning of the National Campaign Against Drug Abuse (NCADA) in 1985, with its recognition of the dearth of relevant data and the need to develop new collection systems (Commonwealth Department of Health, 1985), that there has been significant nationwide activity in the data area. This activity has included the establishment of the National Drug Abuse Data System, the developmental work on the Australian Drug Data Base (Law Enforcement Component) within the Australian Bureau of Criminal Intelligence (ABCI), and the funding of specific research efforts, such as the ACT Drug Indicators Project.

One of the major challenges faced by all these initiatives will be to ensure that the studies which flow from them are comprehensive, comparable across jurisdictions and, most important, produce data extending over time so that accurate trend information becomes available. Experience in the United Kingdom and the United States is that multi-source integrated data collection efforts, both at national and local levels, can make a valuable contribution to the identification of significant trends in drug use and in guiding responses to these trends in terms of policy and service provision (Hartnoll et al. 1985, National Institute on Drug Abuse n.d.).

In 1985, during an overseas study tour, I examined a number of drug trend monitoring systems which incorporate the collection, integration and analysis of routine, multi-source data on drug use indicators with field research on drug users and drug use which is designed to provide detailed information about groups which have been the subject of little previous research (such as recreational drug users who have never come to official attention).

With this background, the Australian Institute of Criminology proposed to establish in the ACT a team to develop or refine data collection methodologies suited to Australian conditions and resource levels to monitor illegal drug use in the local area in a comprehensive and long-term manner. The project has been funded by NCADA for three years and involves trialling a number of methods for monitoring trends, estimating the size and nature of local drug markets and providing detailed qualitative information on specific groups of drug users.

Essentially, the research falls into two categories. The first involves the compilation of quarterly drug use indicators by collecting and analysing routine statistics provided by a wide range of health, welfare, and enforcement agencies (both government and non-government). In some cases the project team has negotiated with these agencies to collect specific data which had not previously been gathered systematically or routinely. In others, we have used existing reporting systems, usually with some additions or modifications to ensure comparability of data across agencies. This phase of the project will allow us to describe the population and its problems and needs in some detail, and to monitor changes over time. This phase of the project will also test the viability of statistical techniques which seek to ascertain through interviews with drug users what proportion of users known to them have been in treatment or arrested on a drug charge (and, therefore, recorded by the relevant indicators).

The second, complementary, research component involves the use of qualitative data collection techniques to gather information on actual drug using/dealing behaviour amongst those who do not enter the official statistics. An expanding literature has demonstrated the value of field observations, interviews and an ethnographic approach in providing detailed descriptions of proscribed behaviour, such as illegal drug use (Douglas 1972, Johnson et al. 1985, Preble and Casey 1969, and Weppner 1977). Such information, as well as being useful in its own right, also helps to clarify vague concepts and develop research hypotheses as an aid for policy formulation or further analysis. The use of techniques such as key informant studies, snowball sampling and networking (Biernacki & Waldorf 1981, Granovetter 1974) are aimed at producing a wider range of data than is normal, which can be integrated with information collected from community agencies to give a more comprehensive and accurate picture of the size and characteristics of the illegal drug-using population.

The intended products of this project will include quarterly trend reports which detail the monthly returns from the agencies involved in the study, special reports on particular areas or issues which are deemed of special interest, annual reports which begin to analyse trends emerging as quarters are compared, a manual setting out how to establish a drug indicators system, a detailed report on the methodological conclusions of the study (including estimates of sizes of particular drug-using populations), and a report based on the qualitative interview data collected from drug users who have not come to official attention. (The latter is being facilitated by the gazettal of the project under the provisions of the Epidemiological Studies (Confidentiality) Act 1981 (Commonwealth), which allows us to provide a legally-protected guarantee of confidentiality for personal information collected during the interviews.)

Basic Principles

The basic principles underlying this study have been borrowed from the project's 'role model', the London Drug Indicators Project. Essentially, the emphasis is on diversity of sources as being the only practical way to begin to overcome the biases and incompleteness which characterise much of our current drug data base. Each source reflects only part of the problem, of the population, or of the market, but a careful comparison and combination of

data from different sources will produce a more complete overall picture. Thus, as Hartnoll et al. (1985) point out, it is important to:

- * Include both statistical and descriptive data.

Assessment does not exclude personal observations and experience. On the contrary, bare statistical data only becomes meaningful when enriched with understanding of the context from which it was derived. By itself, however, personal knowledge is insufficient. systematic quantitative data provides a necessary counter-balance to wise but selective perception and creative but variable recall.

- * Cover as wide a variety of agencies, drug takers and other sources of information

People coming into contact with any particular agency are rarely representative of all drug-takers. They may be somewhat more representative of individuals whose drug use is extensive or problematic, but even that can be a misleading assumption.

Further, different agencies have different roles. They therefore perceive (and report) drug problems from different perspectives. Thus the police may perceive cannabis as the major problem because it accounts for over 80% of arrests, or see all addicts as villains because by definition the police focus on crime. Casualty officers are more likely to emphasise medical problems associated with chaotic multiple-drug use. For many years, psychiatry failed to recognise intermittent heroin users because they rarely turned up in their consulting rooms.

The same selectivity applies to the perceptions of drug-takers themselves. Patterns and perceptions of drug use in one circle may be dramatically different from those found in another.

- * Employ as many different methods as possible

Any method makes assumptions of uncertain validity and incorporates errors of unknown importance. Although it may be possible to anticipate at least the direction if not the magnitude of the resulting error, it remains essential to draw on more than one method, preferably several, which neither rest on the same assumptions nor rely on the same data (p. 11).

In short, a multi-dimensional picture is essential if we are to claim that we have anything like an accurate understanding of the nature and extent of illegal drug use in our communities.

Data Sources

The following are the major data sources which are being assessed by the ACT Drug Indicators Project:

1. Routine monthly data from
 - government treatment and referral centres and hospital units;
 - non-government treatment centres;
 - welfare agencies;
 - police; and
 - probation and parole services.
2. Needle exchange data (a much more limited range of information than from other agencies).
3. Other sources being investigated
 - ambulance services;
 - hepatitis register;
 - casualty unit throughput;
 - Coroner's Court data; and
 - price/purity data.
4. Qualitative data from the interview study.
5. Focus groups of key informants surveyed regularly over an extended period.
6. Special studies (e.g. analysis of drug cases being processed through the courts).

Analytical Methods

The major analytical methods being employed by the project include:

1. Aggregation, integration and analysis of agency data.
2. Capture/recapture methods.
3. Snowball interviews.
4. Nomination techniques.
5. Key informant monitoring.

Why Collect These Data?

The basic assumption behind this project is that rational, cost-effective and accountable strategies for attempting to modify problem drug use must be based on a comprehensive empirical assessment of the nature and extent of that use and on monitoring changes in its occurrence or characteristics over time. The project aims to provide an integrated data set which will provide information which is widely acknowledged to be missing at the present time. The data will be used to:

1. Provide an empirical basis for developing policy, targeting services and evaluating the impact of interventions.
2. Identify emerging trends which will necessitate changes in approach, facilities or policies to deal with.
3. Contribute to an informed and rational debate about drug use and drug policy.
4. Expand the knowledge we have about drug-taking, drug markets, pathways to use, coping mechanisms, natural history of drug use, and utilisation of services.
5. Provide information for use in developing educational or preventive strategies.

In conclusion, we see the ACT Drug Indicators Project as a model for developing the sorts of data collections for local communities which have long been identified as the missing basis for adequate service-provision planning and policy-making. When added to the collections being developed by the National Drug Data System and the ABCI, such data will at last allow us to speak with some authority about the 'drug situation' in Australia.

AGENCY DATA: THE FIRST SIX MONTHS OF RESULTS OCTOBER 1987 TO MARCH 1988

Ms Adele Stevens
Research Fellow
ACT Drug Indicators Project

INTRODUCTION

This paper reports on the agency study of the ACT Drug Indicators Project. The agency study is one element in producing a system whereby we plan to attempt to estimate the incidence, prevalence and character of illegal drug use in the ACT area and to monitor relative changes in drug use levels and patterns over time.

This is the first time in Australia that a project has comprehensively and routinely combined data on illegal drug use from the health and welfare sectors and criminal justice agencies.

The agency study commenced with visits to all the relevant government and non-government agencies in the ACT and Queanbeyan to explain the project and seek co-operation in the provision of data. Agencies were asked to fill out forms on each new admission, or in the case of the police, drug arrests. The completed forms are collected and processed monthly. This procedure produces monthly admission/arrest data which are then combined into quarterly reports on drug use trends and associated matters.

The format for the admission/arrest forms was trialled with some of the agencies in May and June; and the data collection system was piloted in August and September 1987. In this paper, I will report on the aggregated data gathered over this six-month period from October 1987 to March 1988 inclusive. The data were originally analysed and reported in the quarters ending December 1987 and March 1988 (Stevens, Wardlaw, Mugford &

Deane 1988a and 1988b). Where there are interesting differences between the data in the two quarters, I will refer to the quarterly report analysis.

THE AGENCIES

The agencies contributing data for the Project range from government to non-government organisations and are listed in Table 1. The Alcohol and Drug Service of the ACT Health Authority includes a 10-13 person detoxification unit, the Hospital Unit which conducts the only methadone program in the ACT area, and an outpatient type of counselling service from both Hospital and Community units. The non-government sector consists of four agencies: two therapeutic communities (Karralika and WHOS), one detoxification unit using non-drug natural methods (Crisis Detoxification Centre) and, a drop-in type counselling service run by the Drug Referral and Information Service. The criminal justice sector is represented by the Probation and Parole services in the ACT and Queanbeyan, and the Queanbeyan Police and the ACT Drug Squad (Australian Federal Police) who both report on the drug arrests for their respective areas. Queanbeyan is further represented by the Queanbeyan Alcohol and Drug Service, a government agency, which provides an outpatient type of counselling service. We felt it was necessary to include Queanbeyan in the study as the town, although in New South Wales, functions in part as a suburb of Canberra.

AGENCY REPORTS

Agencies reported 351 new admissions/arrests which represented 338 individuals, some individuals being admitted or arrested more than once by either the same or another agency. A comparison of the number of reports of new admissions/arrests for the first quarter and the second quarter is shown in Table 1.

There was a substantial increase in the number of reports for the second quarter which is partially due to the inclusion of data from the Alcohol and Drug Service of the ACT Health Authority (28 reports). However, there was

Karralika had re-opened after having been shut for renovations for over six months.

Table 1
Agency Cases
October-December 1987 and January-March 1988

Agency	REPORTS PER AGENCY			
	Oct.-Dec. 1987		Jan.-March 1988	
	No.	%	No.	%
Alcohol and Drug Service (ADS)				
Hospital Unit	*		13	6.4
ADS Detoxification Unit	*		9	4.4
ADS Community Unit	*		6	3.0
Crisis Detoxification				
Centre (CDC)	36	24.3	48	23.6
Drug Referral and Information				
Centre (DRIC)	16	10.8	18	8.9
Karralika Therapeutic Community	19	12.8	9	4.4
We Help Ourselves (WHOS)	15	10.1	14	6.9
ACT/Oceanbayan Corrective Services	13 ⁺	8.8	6	3.0
Australian Federal Police (ACT)	36	24.3	44	21.7
Oceanbayan Alcohol and Drug Service	6	4.1	5	2.5
NSW Police (Oceanbayan)	7	4.7	31	15.3
Totals	148		203	100.0

* Reports available for the month of March 1988 only.

+ Reports from the ACT Corrective Services only in October to December 1987.

COMPOSITION OF THE SAMPLE

Discussing the sample raises the question of whether persons (cases) or reports should be the basis for counting, since there is some overlap due to multiple 'admissions'. If persons are the basis for counting, the base number will be slightly smaller with some possible under-reporting of drug use. If 'total reports' are the basis, the numbers will be larger and there will be some over-reporting.

In this report, demographic data on the sample characteristics are based on 338 cases, the number of individuals seen in both quarters. Similarly the

multiple 'admissions'. If persons are the basis for counting, the base number will be slightly smaller with some possible under-reporting of drug use. If 'total reports' are the basis, the numbers will be larger and there will be some over-reporting.

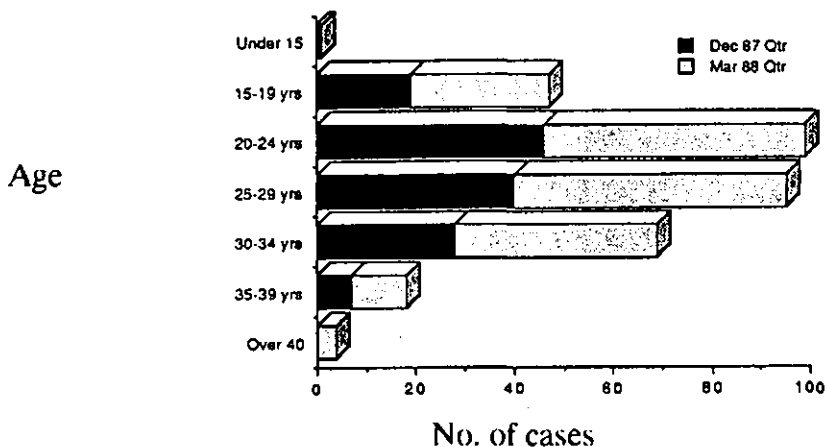
In this report, demographic data on the sample characteristics are based on 338 cases, the number of individuals seen in both quarters. Similarly the remainder of the reports are based on cases except for the reports on the police data concerning types of charges and the drug treatment agency data on primary or presenting drug problem on admission. This system provides a conservative analysis, yet covers the important data on all reports in the three areas where it is particularly relevant.

SAMPLE CHARACTERISTICS

Of the 338 cases which constitute the cohort of individuals for the six-monthly period, the majority were male (76%) and young. Seventy per cent of the sample were under 30 years of age, with a mean age of 27 years and a range from 11 to 48 years (see Figure 1).

Figure 1

Cumulative Age Distribution October 1987-March 1988

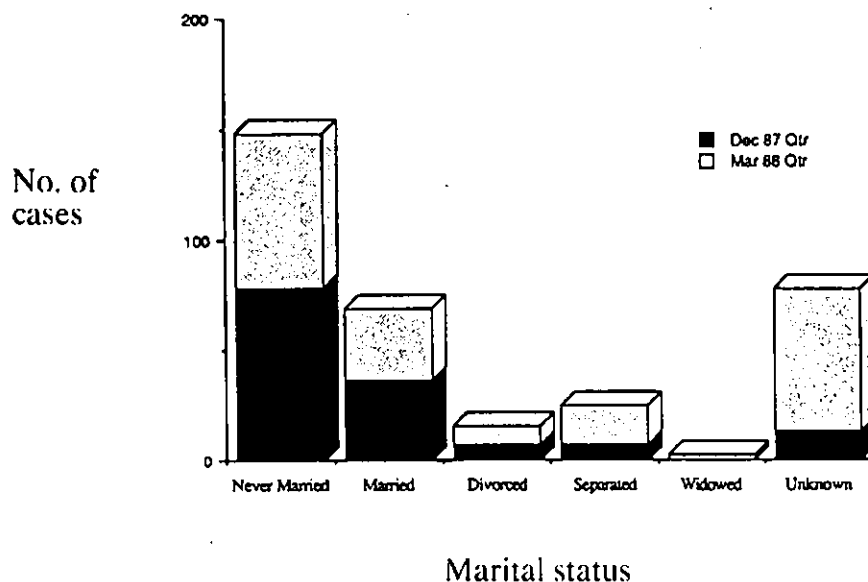


These findings are consistent with the data from other Australian studies of treatment agency clients (Stanhope 1983 and 1984, Dobinson & Ward 1987) and drug offenders (Wardlaw 1978, Dobinson & Ward 1985, and Hendtlass 1983).

Given the age structure of the group, it is not surprising that over half of the sample had never been married. One quarter were currently married, including those in de facto relationships (see Figure 2). We do not differentiate between those currently married and those in a de facto relationship as we felt we could not ask all the agencies to check if their clients were legally married or in de facto relationships. In the second quarter, marital status, unfortunately, was unknown or not recorded for a third of the sample. There is no reason, to assume however, that the missing data are not randomly distributed.

Figure 2

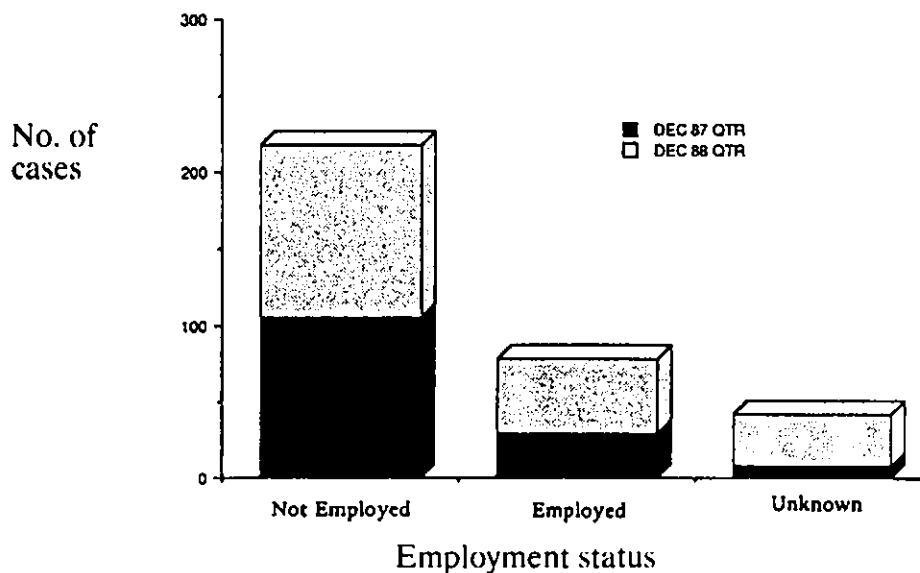
Cumulative Marital Status Distribution
October 1987-March 1988



Employment status was known for 296 cases (88%), of whom 78 cases (26%) were employed (see Figure 3). Of the remainder, details of employment status was known for 184 cases who were seen by the drug treatment and welfare agencies. This is broken down as follows: The majority (108 cases, 59%) were unemployed, seven people were students, nine were employed in home duties and one third (60 cases) were on pensions (ie. sickness, supporting parent or other such benefit, not unemployment benefits). No details of employment information were reported by the police for the remaining 34 cases.

Figure 3

**Cumulative Employment Status Distribution
October 1987-March 1988**



These findings are consistent with other Australian studies which found that drug offenders and drug treatment clients were more likely to be unemployed (30-67%) and more likely to be on a sickness benefit than the general population (Hendtlass 1983, Stanhope 1983 and 1984), with just over one quarter being in employment (Dobinson & Ward 1985 and 1987).

In summary, it can be seen that the population of drug users who enter treatment or who are caught in the legal system in the ACT area is

comparable with samples of similar populations studied elsewhere in Australia.

DRUG USE (N = 195)

Reported drug use patterns vary greatly depending on the reporting agency, with drug arrests usually relating to a single drug whereas drug treatment and welfare agencies commonly report multiple drug use among clients. For this reason, data from the police are reported separately from the drug treatment and welfare data.

Data from the corrective service agencies do not fall neatly either with the police arrest data or with the drug treatment agency data. Multiple drug use reports, however, are not uncommon in the corrective services agencies, therefore corrective service agencies have been included with drug treatment agencies in the presentation of this data. Furthermore we were unwilling to report the corrective services data separately, and, as corrective services operate, in part, as a welfare agency, it seemed appropriate to report their data with the drug treatment agencies.

Drug reports by agency type are shown in Table 2. As can be seen, three-quarters of drug arrests involve offences relating to cannabis (78%), followed by heroin (17% of arrests), with seven arrestees being charged with offences relating to amphetamines. One person was charged with an offence relating to cocaine, an unusual occurrence in the ACT jurisdiction. The relatively high proportion of arrests involving heroin is of interest because Australia-wide this figure is usually much lower. While the reasons for this difference are difficult to identify, it may indicate that police in the ACT area are more successful in targeting heroin users or that as a matter of policy they concentrate more resources on the harder drugs. This trend will be monitored over the course of the study.

Table 2

Drug Type by Agency Type
October 1987-March 1988

Drug Type		AGENCY TYPE		Total Cases	
		Drug Treatment and Welfare	Police ⁺		
Heroin	(no.)	164	20	184	
	(%)	74.0	17.0	54.0	
Methadone/other Opiates	(no.)	28	0	28	
	(%)	13.0	0	8.0	
Cocaine	(no.)	39	1	40	
	(%)	18.0	1.0	12.0	
Amphetamines/other Stimulants	(no.)	58	7	65	
	(%)	26.0	6.0	19.0	
Cannabis	(no.)	164	90	254	
	(%)	74.0	78.0	75.0	
Hallucinogens	(no.)	16	0	16	
	(%)	7.0	0	5.0	
Sedatives/Hypnotics	(no.)	79	0	79	
	(%)	35.0	0	23.0	
Alcohol	(no.)	135	0	135	
	(%)	61.0	0	40.0	
Other Drugs	(no.)	10	0	10	
	(%)	5.0	0.0	3.0	
Total Drug Mentions		(no.)	693	118	811
Total Persons Reported		(no.)	223	115	338
		(%)	66.0	34.0	100.0

* CDC, DRIC, Karralika, WHOS, Corrective Services (ACT and Queanbeyan), Queanbeyan Alcohol and Drug Service and ACT Health Authority Alcohol and Drug Service.

+ Australian Federal Police (ACT) and NSW Police (Queanbeyan).

NB. Some slight variations occur in the percentages due to rounding.

A different picture emerges from the drug treatment and welfare agency data. In this case, heroin, cannabis and alcohol are each reportedly used by a majority of the clients (see Table 2). Poly-drug use is common, with an average of three different drugs being reportedly used by each client. Legal drugs are often used in concert with illegal drugs. As the focus of this study is on illegal drug use, we collected the data from the drug treatment and welfare agencies on only those clients who use an illegal drug or have come to the agency seeking help for an illegal drug problem. In the participating non-government agencies, this accounts for nearly 90 per cent of the clients whereas in the government sector such as the Health Authority, over half of the clients who present with a drug problem report no illegal drug use, and therefore are not included in this study. Because we are concentrating on illegal drug use, care should be taken in interpreting our data on alcohol for this substantially under-represents the problem alcohol poses for clients in the government agencies.

In both quarters, approximately 40 per cent of drug treatment and welfare clients report using sedative/hypnotics and 25 per cent report using amphetamines. Eighteen per cent of clients reported using cocaine.

PRESENTING/PRIMARY DRUG (N = 149)

In planning treatment services it is important to know which drugs cause the problems which impel users to seek help. The original data form provided to treatment agencies contained a section asking which drug caused the client to present for treatment. A number of agencies found it difficult to provide this information since, in their view, it was not possible to specify one drug as the primary problem in many cases. This is because of the widespread phenomenon of poly-drug use. Consequently, few usable data were collected initially on this item. Because the information is considered important, however, we negotiated further with the agencies and changed the question to one requiring reports on the presenting drug problem(s).

be seen from Table 3, the majority of clients (71%) presented with a problem associated with heroin use. Alcohol, even for this group of illegal drug users, remains the next most common problem whilst only small numbers identify a problem associated with cocaine, amphetamines or benzodiazepines. Nine clients (6%) indicated that cannabis was a major problem, although our data do not differentiate between medical and legal problems.

Table 3
Treatment Agencies
Presenting/Primary Drug Problem
December 1987-March 1988

Presenting Drug	PROBLEMS REPORTED	
	No.	%
Heroin	106	71.0
Methadone	4	3.0
Cocaine	2	1.0
Amphetamines	7	5.0
Cannabis	9	6.0
Benzodiazepines	5	3.0
Alcohol	25	17.0
Other Drugs	2	1.0
Poly-drug	5	3.0
Total Problem Reports	165	
Total Admissions	149	

Notes:

1. The percentage of drug problems for each drug is calculated from the total number of admissions. Because some clients present with more than one major drug problem, the total number of presenting drug problems is greater than the number of admissions. Therefore the total of the percentage of presenting drug problems is greater than 100.
2. There were three cases for whom data on presenting/primary drug problem was missing. These cases were excluded from the analysis for the purposes of this Table.

DRUG TREATMENT AND WELFARE CLIENTS

Drug treatment and welfare agencies are able to supply more detailed information on drug use and drug treatment than are the police. This section reports on the extra data obtained from the 223 clients in the drug treatment and welfare group.

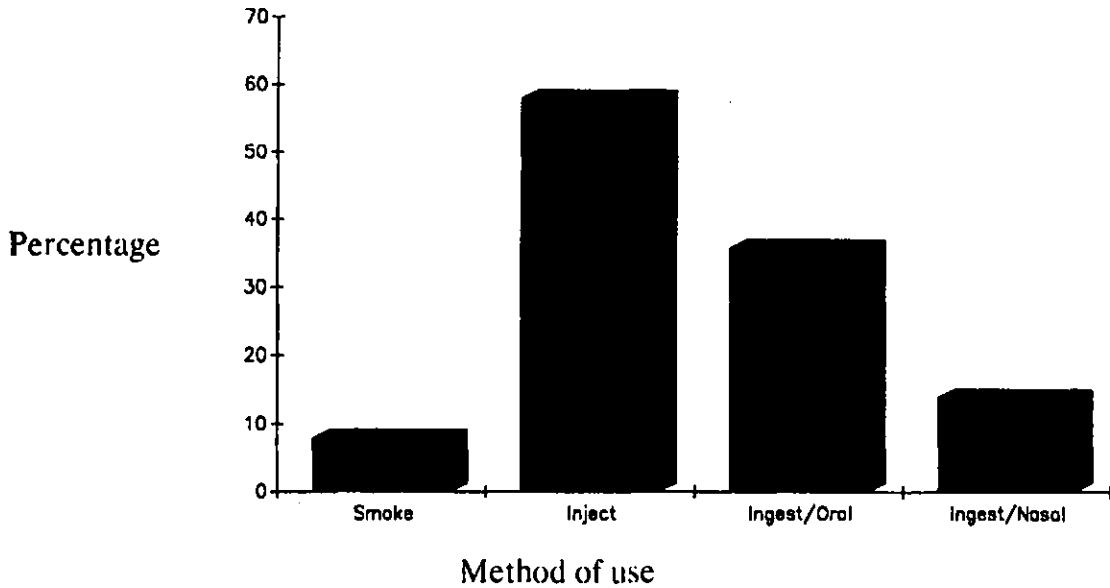
(a) Mode of drug use

In the ACT area, heroin use is predominantly by injection. All but four heroin users reported injecting; two smoked, one snorted and one used heroin orally.

Amphetamine use is more variable. Amongst the 50 amphetamine users, injection is the most common mode of use (29 cases, 58%), followed by oral ingestion (18 cases, 36%). The full picture is shown in Figure 4 where it can be seen that the total percentage is greater than 100 per cent. The reason for this is because there were 58 responses for 50 cases, some clients reported more than one mode of use.

The relatively large proportion of users who inject amphetamines is a matter of policy concern given the increased salience of intravenous drug use as a route of transmission of HIV (the AIDS virus). While most concern has been expressed to date about intravenous heroin use, the present data suggest that particular attention also needs to be paid to amphetamine users.

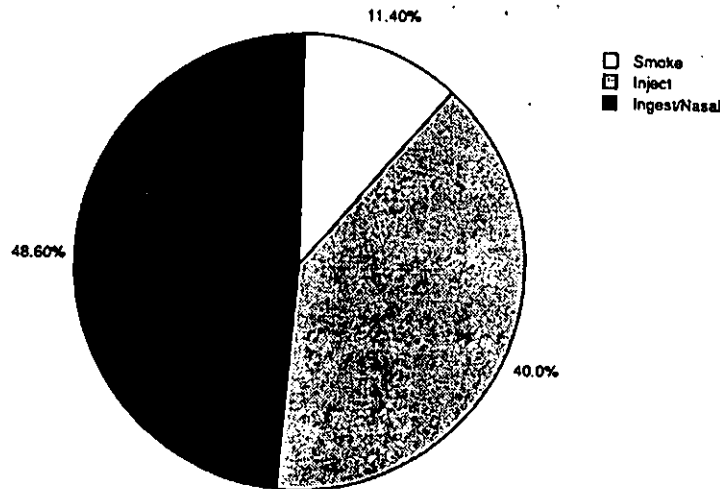
Figure 4

**Method of Use of Amphetamines (percentages)
October 1987-March 1988**

The pattern of cocaine use is rather different as is shown in Figure 5. Of the 35 users, almost half 'snorted' the drug, while 11 per cent (4 cases) reported smoking it ('freebasing') and 40 per cent reported injecting it. In the six months from 1 October 1987 to 31 March 1988, 35 cases were reported in which cocaine use is mentioned. In the same period, however, only two cases were reported in which cocaine was the 'problem' drug, leading to treatment request, and only one arrest involving cocaine.

Figure 5

Method of Use of Cocaine (percentages)
October 1987-March 1988



In Australia information on the mode of use of illegal drugs is not readily available. In an ethnographic comparative study which included the principal use patterns of heroin users in Sydney, London and Amsterdam, Sargent (1988, forthcoming) found that the majority of the Sydney (26/30) and London (20/30) users injected heroin whereas less than one third of the Amsterdam sample injected. Drug use, including the mode of use varies in different cultures depending on the 'historical processes in particular types of societies which have varying laws and policy' (Sargent, forthcoming), and can be linked to differences of history, culture and process (Wardlaw, 1983). The changing pattern of heroin use as the drug spreads to new groups of users under changed economic and social conditions has been well documented by Pearson (1987).

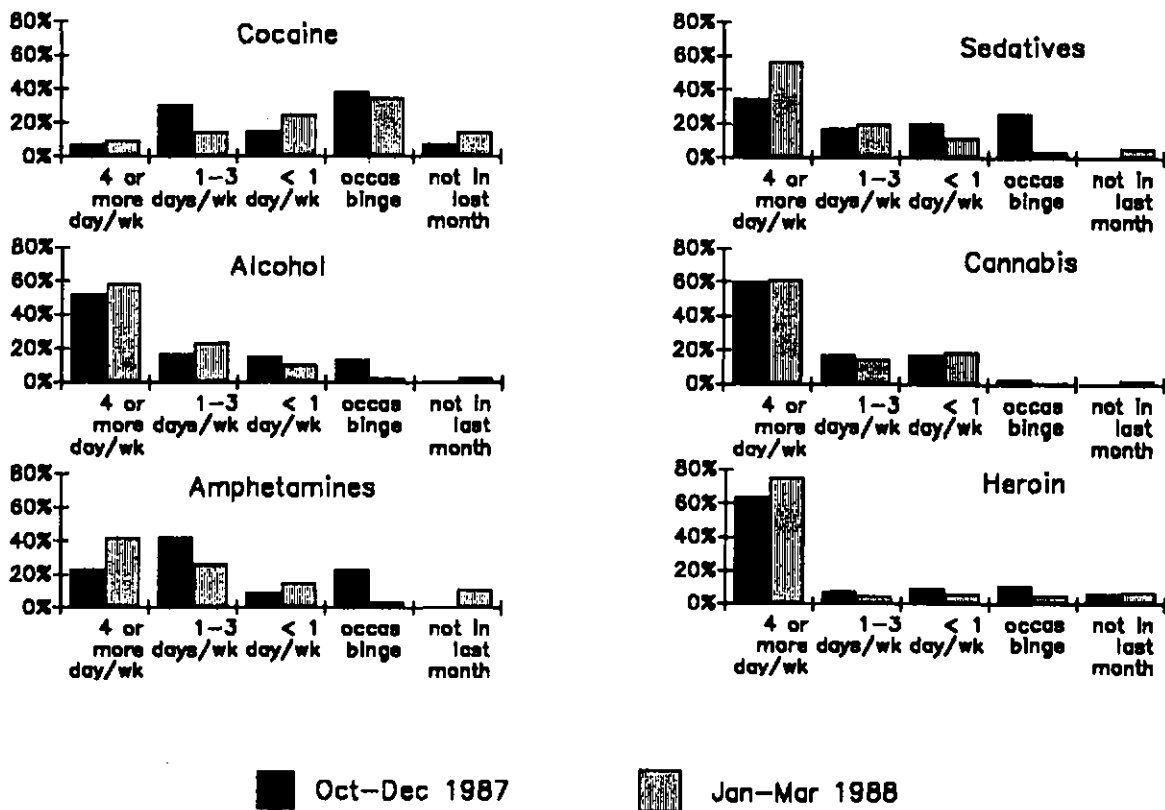
The marked variability of use patterns over time and by region emphasises the significance of and need for detailed local studies such as the ACT Drug Indicators Project.

(b) Frequency of Use

As would be expected in a population entering treatment, the majority of users reported relatively heavy use. Over 50 per cent of the people who used heroin, cannabis, and alcohol reported using these drugs on at least four or more days per week (see Figure 6). Daily use of the drug is likely in this group. Cocaine use is quite different. The majority of cocaine users report occasional heavy use, otherwise designated as an 'occas. binge' in Figure 6.

Figure 6

Frequency of Drug Use per Week
October 1987-March 1988



Note: Sedatives include Barbiturates, Benzodiazepines and other tranquillisers

Although it may be no more than a short term fluctuation, an interesting comparison in the two quarters is an apparent change in the frequency of use of amphetamines. In the first quarter, amphetamine users were more likely

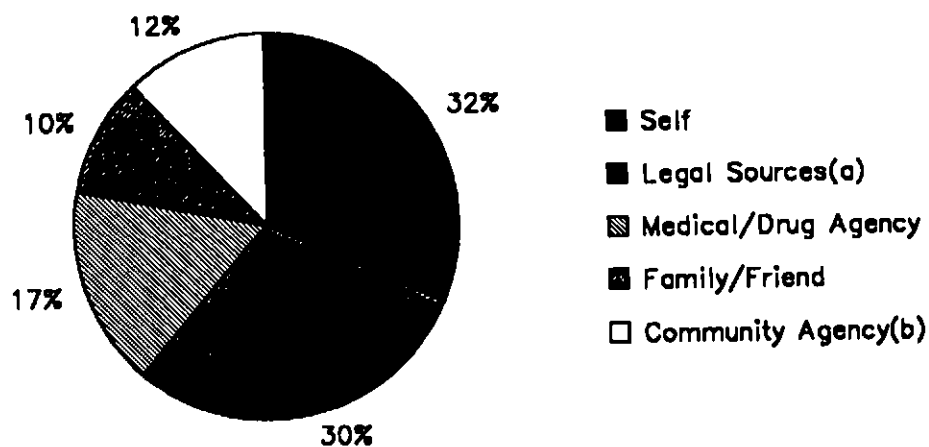
consistent with the experiences of drug treatment agency staff who have reported that clients are moving to a more frequent use of 'hard' drugs (eg. amphetamines and heroin) because of the lack of availability of cannabis in the ACT area over the last few months. Although longer term data will be required to confirm this trend, it is only by monitoring exercises such as the ACT Drug Indicators Project that an accurate picture can be constructed.

(c) **Referral Source (N = 223)**

The two largest sources of referral are legal sources (30%) and self referral (32%). The relatively high rate of self referral is not surprising when considered in relation to the drug treatment history of the group.

Figure 7

**Sources for Drug Treatment and Welfare Agency Cases
October 1987-March 1988
(percentages)**



(a) Legal sources: Corrective Services, court, solicitor, police

(b) Community agencies: eg. refuge/shelter, minister of religion, local welfare groups including Alcoholics Anonymous and Narcotics Anonymous.

(d) Previous Drug Treatment (N = 223)

Approximately 70 per cent of the sample had previously attended a drug treatment agency at least once, and most of these had undertaken two or three treatment courses (see Table 4). Conversely, 31 per cent reported no previous drug treatment.

Table 4

**Number of Previous Treatment Episodes
for Clients Presently in Treatment
October 1987-March 1988**

	OCT.-DEC. '87 NO.	JAN.-MARCH '88 NO.	NO.	TOTAL %	VALID %
None	26	31	57	25.6	31
One	9	17	26	11.7	14
Two	14	14	28	12.6	15
Three	15	13	28	12.6	15
Four	7	7	14	6.3	8
Five or more	12	19	31	13.9	17
Unknown	17	22	39	17.5	-
Totals	100	123	223	100.2 [*]	-

* Percentage greater than 100 due to rounding.

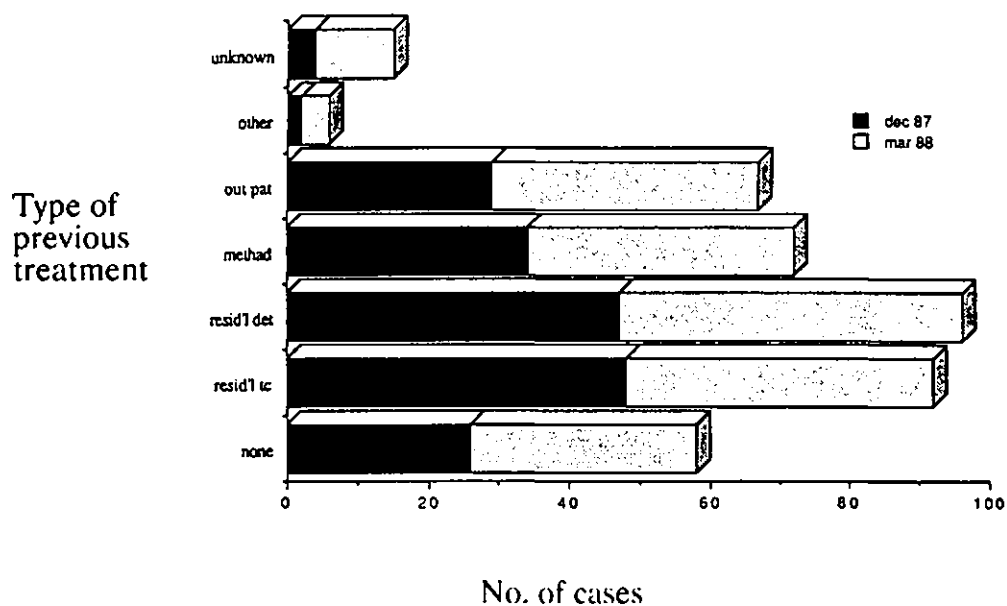
There has been little documented about the previous treatment history of both drug offenders and new admissions at the drug treatment agencies in Australia. Dobinson and Ward (1985), in a prison study of property offenders who were heroin users, found that 53 per cent had had some form of previous drug treatment. In a later study of treatment agency clients, Dobinson and Ward (1987) noted that 75 per cent had previously been in a treatment situation. Luger (1983), in a somewhat cynical fashion, notes that 'Many addicts have become "therapeutic bums" travelling from one agency to another testing the waters'. However, Luger does not provide any statistics regarding the number and types of prior drug treatment among treatment agency clients.

Dobinson and Ward (1985 and 1987) note that it is common for those who have been in treatment to have tried various methods of treatment. For example, treatment agency clients had undertaken an average of four previous treatment episodes per client whereas the heroin using property offenders had undertaken on average three previous treatment episodes. The reasons treatment clients give for ceasing treatment and returning to drug use are varied and have been discussed elsewhere (Dobinson & Ward 1987, pp. 44-45).

In the ACT, the types of previous treatment for drug use were as diverse as reported in the Dobinson and Ward studies. Clients reported having tried various modes of treatment (see Figure 8). The 161 clients who had been in previous treatment reported a total of 333 different treatment episodes, with attendance at a residential detoxification unit being the most common treatment choice (40%) followed by a residential therapeutic community (36%).

Figure 8

Types of Previous Treatment
for Clients Presently in Treatment
October 1987-March 1988



CRIMINAL RECORD (N = 338)

This section reports on data about the criminal behaviour of all individuals seen in the six-monthly period (ie. drug treatment and welfare clients and drug offenders).

(a) Prior Criminal Record

A prior criminal record was fairly common among the sample. Only 18 per cent of the drug treatment and welfare group reported having no criminal record, while the police reported that 32 per cent of those on a drug arrest had no prior record (see Table 5). This is an interesting and unexpected finding. We did not anticipate that a prior criminal record would be more common among the drug treatment sample than among drug arrestees. Because of the limited time span of data (just six months), it is unwise to draw any specific conclusions at this stage. Future reports will analyse trends on this measure and explore the potential explanations and implications in more detail.

Drug offences were the most common prior offence amongst the drug treatment and welfare group with over half (52%) having a prior drug offence, whereas only 32 per cent of those reported by the police had a prior record for drug offences.

Comparing these results with other Australian studies is not simple. Although criminality among methadone clients, both before and during treatment, has been relatively well documented in Australia (see Reilly et al., 1987 for a review of criminality among clients in Australian methadone programs), the incidence of prior criminal record for clients in general drug treatment programs has generally not been studied. Therefore, it is difficult to make comparisons between the ACT population and other drug treatment clients in Australia.

Table 5

Prior Criminal Record: Agency Type by Conviction
October 1987-March 1988

Previous Conviction		AGENCY TYPE		Total Cases
		Drug Treatment and Welfare	Police	
None	(no.)	40	37	77
	(%)	18.0	32.0	23.0
Drug Offence	(no.)	116	37	153
	(%)	52.0	32.0	45.0
Offence Against Person	(no.)	33	13	46
	(%)	15.0	11.0	14.0
Robbery and Extortion	(no.)	42	6	48
	(%)	19.0	5.0	14.0
Break & Enter, Fraud Other Theft	(no.)	90	23	113
	(%)	41.0	20.0	34.0
Prostitution Offence	(no.)	14	0	14
	(%)	6.0	0	4.0
Property Damage	(no.)	25	5	30
	(%)	11.0	4.0	9.0
Offence Against Good Order	(no.)	36	8	44
	(%)	16.0	7.0	13.0
Drink Drive Offence	(no.)	44	14	58
	(%)	20.0	12.0	17.0
Other	(no.)	26	9	35
	(%)	12.0	8.0	10.0
Unknown	(no.)	33	23	56
	(%)	14.0	20.0	16.0
No. of Individuals [*]	(no.)	223	115	338
	(%)	66.0	34.0	100.0

* Because multiple convictions are often reported, the column totals exceed the number of individuals, and therefore are not given.

A comparison with other methadone treatment clients shows some similarities. Dalton, Duncan and Taylor (1976), in a study evaluating the first methadone treatment program in Australia, reported that 86 per cent of clients had a prior criminal conviction on entering treatment. In a more recent study of a Sydney methadone program, Reilly et al. (1987) found that 88 per cent of clients entering the program had one or more prior convictions. In comparison, in the ACT area, 85 per cent (in the 1987 quarter) and 78 per cent (in the first quarter of 1988) of clients entering a treatment or welfare program reported a prior criminal record.

Turning to those arrested for drug offences, data from our study shows there is a slightly greater degree of criminality evident within the ACT drug offenders than has been reported among other drug offenders in previous Australian studies. Wardlaw (1978) in an Australia-wide study and Hendtlass (1983) in a Victorian study of drug offenders, both reported a prior criminal record rate of 55 per cent in their samples. In the ACT area, 58 per cent (in the 1987 quarter) and 74 per cent (in the first quarter of 1988) had a prior criminal record.

(b) Current Charges

As Table 6 indicates, over one third of the drug treatment and welfare clients had no current criminal charges. In both groups, drug offenders and treatment clients, approximately one quarter were charged with a non-drug offence (eg. a property or traffic offence). Thirty four per cent of the drug treatment and welfare clients faced a current drug charge.

Table 6
Current Charges by Agency Type
October 1987-March 1988

Current Charges		AGENCY TYPE		Total Cases
		Drug Treatment and Welfare	Police	
None	(no.)	79	0	79
	(%)	36.0	0	24.0
Drug Charge	(no.)	75	115	190
	(%)	34.0	100.0	57.0
Other Offence	(no.)	56	28	84
	(%)	26.0	24.0	25.0
Unknown	(no.)	26	30	56
	(%)	12.0	26.0	16.0
No. of Individuals *	(no.)	223	115	338
	(%)	66.0	34.0	100.0

* Because multiple charges are often laid, the column totals exceed the number of individuals, and therefore are not given.

CHARGE TYPES: POLICE DATA (N = 118)

Drug Charges

During the six-month period there were 118 arrests with three individuals being arrested more than once. A total of 195 charges were laid, with many individuals being charged with more than one drug offence at arrest. This section reports on the types of drug charges for all drug arrests during the first six months of the study.

The majority of drug charges were for a possession offence (53%), and generally were for the possession of cannabis (see Table 6). Apart from possession offences, the numbers are relatively small. The next most common offence was for use (14%) closely followed by 'supply' (13%).

Table 7
Types of Drug Charges by Drug Type
October 1987-March 1988

Drug Charge		DRUG				Total Charges	
		Heroin	Ampheta- mines	Cocaine	Canna- bis	No.	%
Use	(no.)	6	2	0	20	28	14.0
Possession	(no.)	15	5	1	83	104	53.0
Supply	(no.)	7	1	0	18	26	13.0
Manufacture	(no.)	0	0	0	10	10	5.0
Conspiracy to Supply	(no.)	8	0	0	0	8	4.0
Other (eg. possess equip. for admin.)	(no.)	0	0	0	19	19	10.0
Totals	(no.)	36	8	1	50	195	
	(%)	18.0	4.0	0.5	77.0	100.0	

There was some variability from quarter to quarter in drug charges and it is not possible to generalise from the results in one quarter except in very general terms (eg. the most common offence is for possession of cannabis). Further, in the second quarter, there was a fourfold increase in charges by the Queanbeyan police which clearly had a significant impact. In order to solve some of these difficulties, we plan to release a report after one year of data collection which will look at these issues in detail and also will provide the opportunity to analyse the data from the ACT and Queanbeyan police separately. A further likely impact in this area is the creation, on 18 April 1988, of a Drug Squad in Queanbeyan to cover the Southern Region of New South Wales.

CONCLUSION

The ACT Drug Indicators Project has now reached a position where we have demonstrated that it is possible to set up a multi-agency data system which integrates information about drug use patterns from both the legal and criminal justice system and from the health, welfare and drug treatment agencies in both government and non-government sectors.

The system provides for the continuous collection of data, thereby creating a method for the monitoring of drug use trends. Further, data over the two quarters have generally been consistent and are comparable with data from other Australian studies. There is every indication that the data produced by the ACT Drug Indicators Project are both valid and reliable.

Several interesting findings have emerged from the project so far. First, the study has provided evidence of the very high incidence of injection as a mode of administration of heroin, and to a lesser extent of amphetamines. Second, poly-drug use is common and there is a high incidence of alcohol use (indicating heavy drinking patterns) among illegal drug users. Lastly, only a low incidence of problems occur, either medical or legal, among users of cocaine.

ACKNOWLEDGEMENTS

This research would not have been possible without the co-operation of the staff of all the agencies involved who, in spite of their heavy workloads, prepared the data forms for our compilation each month. Their assistance is greatly appreciated.

I also owe a debt of gratitude to all my colleagues with the ACT Drug Indicators Project for their help and encouragement in the initial setting up of this aspect of the Team's research.

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APPENDIX TABLE 1

AGE DISTRIBUTION

AGE GROUP	OCT.-DEC. '87 NO.	JAN.-MARCH '88 NO.	TOTAL
Under 15 years	1	0	1
15-19 years	19	28	47
20-24 years	46	53	99
25-29 years	40	55	95
30-34 years	28	41	69
35-39 years	7	11	18
40 years and over	0	4	4
Missing cases	2	3	5
Total cases	143	195	338

APPENDIX TABLE 2

MARITAL STATUS

	OCT.-DEC. '87 NO.	JAN.-MARCH '88 NO.	NO.	TOTAL %	VALID %
Never Married	79	69	148	43.8	56.9
Married, incl de facto	37	32	69	20.4	26.5
Separated	7	18	25	7.4	9.6
Divorced	7	9	16	4.7	6.2
Widowed	0	2	2	0.6	0.8
Unknown	13	65	78	23.1	-
Totals	143	195	338	100.0	-

APPENDIX TABLE 3

OCCUPATIONAL STATUS

	OCT.-DEC. 1987	JAN.-MARCH 1988	TOTAL
Employed	29	49	78
Not Employed:			
. unemployed	47	61	108
. pensioner (other than unemployed c.g. sickness, supporting parent,)	29	31	60
. student	4	3	7
. home duties	4	5	9
. details not known	22	12	34
Unknown Employment Status	8	34	42
Totals	143	195	338

APPENDIX TABLE 4

SOURCE OF REFERRAL:
DRUG TREATMENT AND WELFARE CLIENTS

	OCT.-DEC. '87 NO.	JAN-MARCH '88 NO.	NO.	TOTAL %	VALID %
Self	28	42	70	31.4	32
Medical/Drug Agency	17	20	37	16.6	17
Legal Sources	29	37	66	29.6	30
Family/Friend	12	10	22	9.9	10
Community Agencies	14	12	26	11.7	12
Unknown	0	2	2	0.8	-
Totals	100	123	223	100.0	* 101

* Percentage is greater than 100 due to rounding.

USER INTERVIEWS

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ACT Drug Indicators Project

The objective of this paper is to describe a particular strategy for the collection of data on illegal drug use: that of ethno-graphic or field methodology.

Broadly speaking, this methodology has been used for many decades by anthropologists to gather qualitative information regarding those under study as they go about their daily lives in their natural environment. Initially, employment of this strategy to study people involved in illegal behaviour was slow to start, primarily because writers such as Sutherland and Cressey (1960) believed it was impossible for researchers to undertake such investigation.

However, in the 1960s Polsky's work on 'Hustlers, Beats and the Others' caught the attention of those working in Criminology. Although difficult in many respects, this methodology has proven to be rewarding and has become increasingly popular.

In 1966, Edward Preble pioneered the ethnographic or field methodology in the Drugs-Crime area with his study describing the life and activities of heroin users in New York city in the context of their street environment. Having worked for 12 years on the streets researching neighbourhood activities, he was able to enlist the assistance of long term acquaintances to participate in this project. Although part of his sample comprised patients at the Manhattan State Hospital Drug Addiction Unit, as he states 'the main feature of this study was the life-history interview with individual subjects from the streets' (Preble & Casey 1966, p. 4).

Since then, there has been an increasing awareness of the value of this research technique which can provide a very detailed and descriptive picture of the segment of society under study. The advantages of the life-history, in-depth interview in the research areas of illegal drug use, and criminal and deviant behaviour are recognised as useful tools in overcoming the shortcomings of previous research strategies. Frequently, this technique is used in conjunction with other research methodologies and there are many examples of this in the literature.

Using the Methodology in the ACT Drug Indicators Project

In the ACT Drug Indicators Project we decided to use this methodology to give us a clearer understanding about the daily life, life-history, drug using history, and attitudes of the local illegal drug user. We are finding that these interviews are enhancing the picture which is developing through the core statistical data at present being collected from the Non Government Treatment Agencies, law enforcement agencies and the ACT Health Authority. The core data encompasses the whole illegal drug-using

population which is in treatment and/or which is caught up in the legal process, both in the ACT and in Queanbeyan, NSW.

The sample for the field study component of this project is made up of illegal drug users who have not been in treatment for illegal drug use, nor arrested on a drug charge for at least 12 months prior to the interview.

The interview schedule was devised in part from similar studies recently carried out (Johnson et al. 1985; Inciardi 1981; Dobinson 1987) and partly from my own research experience in New Zealand. Broadly, the schedule covers the following areas:

- Demographic, information
- Current living situation
- Life history
- Drug use history
- Treatment and Abstinence (if applicable)
- Criminal history (other than drug use) if applicable

As stated earlier, the aim of the interview is to provide a fuller picture about the local drug-user, his/her life history, drug-use history; and his/her attitudes and opinions relating to treatment, methadone, drug laws and other pertinent issues.

The literature covering ethnographic research has raised many methodological questions, such as: unbiased and comprehensive sample selection, confidentiality, selection of venue for interviews, payment or not for information received, validity of information, ethics of the researcher and possible risks to the researcher. These issues have been fully considered by our team and will now be addressed in respect to our study.

Sample Selection

There are many ways in which research samples are drawn up. I do not intend to describe these as they are not relevant to this methodology. I think it is suffice to say that clearly our sample is not intended to be a representative sample of our target group. As we do not know the extent of the drug-using population in the ACT, random sampling, for example, would not be a useful sampling technique.

One strategy for collecting qualitative information, from the field is the store-front, drop-in method whereby prospective respondents from a particular neighbourhood get to know about the study and volunteer to participate by going to a particular location in that neighbourhood (Preble 1979-80; Johnson & Goldstein 1983; Dobinson 1987). This strategy was not considered appropriate for the ACT study. Canberra, unlike larger cities, was not thought to be suitable for such a venue. Rather, we decided upon interviewing in the field, using the snowball sampling technique which has been widely used in qualitative research. Using this method, the sample is gathered through referrals from one or two individuals who have a network of acquaintances using illegal drugs. This technique is particularly useful where the focus of study is a sensitive issue. Also, through this method, it is possible to tap into a variety of different user networks.

This sampling technique sometimes has been employed in earlier research which has used the store-front methodology. Interestingly, not a great deal has been written about the detail of how the snowball method is conducted. However, Granovetter (1974), Fischer (1977), Biernacki & Waldorf (1981) have discussed its pros and cons to some extent.

For our purposes, we have been fortunate in having a few contacts who have given me their trust. Through their recommendation, my contacts have been made. I have found it to be the case, as the literature has suggested, that more often than not the snowball 'peters out' after one or two contacts have been made. Whilst it is one thing to have the full trust of someone introduced to me, it is another thing altogether for the interviewee to convince his/her friends that I can be trusted with very personal details of their life.

Confidentiality

This brings me to the big issue of confidentiality. Having located the willing respondent and having agreed to a suitable venue for interview satisfactory to both of us, the next task is to establish my position and credibility as a researcher who is anxious to learn firsthand about the world of the illegal drug user. I have followed Preble's good advice which is to be open and honest about my work. I do not pretend to understand the world I'm anxious to learn about. I explain the fact that our study is covered by the *Commonwealth Epidemiological Studies (Confidentiality) Act 1981* which protects not only the respondent, but also any information I am given, as well as protecting me from the police, courts and so on. I explain the purpose and general nature of my questions and most importantly, from the confidentiality point of view, I explain that I am not interested in the identification of the respondent.

After an initial chat the interview proper begins. It is administered in a very informal way. I take brief notes - the topics flow according to the respondent's wishes and the interview can take up to four hours. Sometimes, a second interview has been negotiated depending on the quality and quantity of available information. The interview notes are written up fully within 24 hours of the interview. Other techniques for recording data in the field, such as using a tape-recorder, have been considered and rejected. Tape-recorders can be intrusive and transcribing tapes is very time consuming.

If interviewing in the street - in a park or in a bar, for instance, cards can be used to reduce conspicuousness. Polsky (1967, p. 40) has outlined do's and don'ts for interviewing in such locations to minimise embarrassment for the interviewee.

Payment for Information

Ethnographic researchers have found various ways in which to repay respondents for their information. Weppner (1977) has discussed this issue and the arguments put forward at a National Institute of Drug Abuse Workshop held in the USA in 1976. Some researchers have attempted to help their respondents in such ways as appearing in court for them, lending them money or helping them get employment. Others found it easier to pay cash for information. Johnson (1985) and his team agreed with this view

recognising that addicts have a continuous need for money. However, as Agar (1977) argued, payment is unnecessary and can introduce bias. Weppner (1977) found that when respondents trusted you they are flattered by your interest and readily assume the teaching role.

I have found that for those who have accepted cash payment for information, in general, the interviews have been less full and informative than those interviews for which payment has not been accepted.

Reliability and Validity of Information

These issues have been covered fully in recent literature. It is generally recognised that self-reporting from our target group should not be accepted naively at face value. Some researchers believe that the illegal and deviant nature of the lifestyle of this group may influence the respondent to be untruthful about his/her life style. Such information can be over, or under, reported as well. When interviewing in an institutional setting, for example, much of the data can be retrospective and interviewees may have difficulty in accurately recalling certain events. Therefore, it is important to check or verify the data wherever possible.

Various ways have been devised to check out such information. Sometimes data are checked by questioning several members of the same network about a specific event; sometimes an independent source, such as a family member is enlisted to verify information. In other cases, records from hospitals and/or law enforcement agencies have been used to check certain particulars in a questionnaire.

Our questionnaire has been developed with questions included to cross-check certain information. This is common practice in ethnographic interviewing. Stephens (1972) in a special study set up to investigate the degree of truthfulness of addict respondents found that, in general, addicts make truthful responses in self-report research situations. This he found is particularly so if they know they have nothing to gain by lying, or if they know their answers can be checked.

The researcher's competence and familiarity with interviewing procedures and the phenomena being studied is decidedly an advantage. Although our study is by no means complete, already I am finding that certain questions are producing comparable answers which would indicate, in certain areas at least, that the information I am being given is truthful. Furthermore, I am asking questions about the interviewee's life today; therefore I do not believe our field study is facing the problems which other studies have noted, particularly those studies which have relied heavily on retrospective information.

Nevertheless, the problems encountered and discussed by some ethnographers, such as Adler (1985) on effects of drug use on data-gathering have been noticeable in some cases during my interviewing sessions. Respondents under the influence of cannabis or heroin are frequently sleepy and thus confused. Cocaine users, on the other hand, have demonstrated the opposite effect; their inhibitions have diminished and their interest in the interview has increased.

Risks to the Researcher

Consideration has been given in the literature to likely risks to the researcher which may arise when working in the field. Such risks as police detection, or arrest, dangers involved guarding secrets and confidences about illegal drug activity or the danger of being harmed by the respondent have been suggested.

The protection given our study by the *Epidemiological Studies (Confidentiality) Act 1981* is of invaluable assistance. As well, all necessary precautions are taken when selecting a venue for interviewing and the fact that we do not have any interest in the identification of the interviewee all add to the reduction of danger for the interviewer.

Conclusion

This research is 'in progress' and therefore it would be premature to comment on the findings to date. Even so, I have found, as Inciardi (1977) found in his street study of pickpockets, that the population I am studying is a highly wary and highly mobile group who work and communicate on their own terms. Although ultimately they are willing to participate in my research they will rarely go out of their way to do so. Consequently, making contact and undertaking lengthy interviews is a frustrating and time-consuming business.

Nevertheless, it is thought that the benefits of this methodology, undertaken in the natural environment of the illegal drug user, make the effort worthwhile. The local information gathered this way from the user's point of view should not be undervalued for it is essential to the understanding of their very variable and complex world.

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