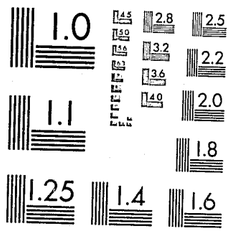

DRUG ABUSE AND CRIMINALITY: A MELBOURNE STUDY

prepared by
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AUGUST 1982

DRUG ABUSE AND CRIMINALITY:

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A Report prepared for the
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SUMMARY

This project surveys all patients taken to hospital by Ambulance Service, Melbourne, between 1st August, 1981, and 31st January, 1982, displaying symptoms of acute drug poisoning. It describes their characteristics and their criminal histories with special regard to the legality of the drugs used in their attempted suicide. The incidence of drug poisoning is compared with drug offences reported to police in the same time period.

GENERAL CHARACTERISTICS OF ACUTE DRUG POISONING PATIENTS

Sixty two percent of acute drug poisoning patients were female and 48% were under thirty years old. Women were more likely to be aged under 20 years while more men were in the 20 to 29 year age bracket. People living in Central Melbourne were over-represented compared with the general population.

Over 13% of those attempting to commit suicide had a history of psychiatric illness, 2.3% were epileptics, and 4.5% showed signs of drug addiction.

DRUGS USED BY ACUTE DRUG POISONING PATIENTS

Forty two percent of patients used more than one preparation in their attempt to commit suicide and alcohol was a contributory factor in 27.5% of cases. Tranquilisers, hypnotics and sedatives were used by 86% of all patients and comprised 58% of all drugs recorded by ambulance officers. Illegal or special permit drugs were used by 7% of the acute drug poisoning group.

Half of the known drug addicts used illegal or permit drugs in this case of acute drug poisoning.

CRIMINALITY OF ACUTE DRUG POISONING PATIENTS

Forty percent of the men who attempted to commit suicide and 20% of the women, were previously known to police. Three quarters of

these people were first recorded between the ages of 17 and 20 years and over 40% had recorded contact with the police within one year prior to this drug overdose episode.

There were no significant relationship between the legality of the drugs used and the likelihood of being known to the police.

About half of the first offences committed by people who came to notice through an acute drug poisoning incident were property offences and 10% involved protection applications.

Users of alcohol only or over-the-counter drugs were more likely to have committed offences against the person than users of illegal or prescription drugs.

Only 3% of drug overdose patients were known to have committed prior drug offences.

THE INCIDENCE OF ACUTE DRUG POISONING AND DRUG OFFENCES

More acute drug poisoning cases occurred in the Eastern Sector of Melbourne while drug offences were more frequent in the Northern Suburbs.

Nearly one third of both incidents occurred in Central Melbourne.

Drug offences were more prevalent during January than in other months of the survey, and this could be attributed to a surge in the incidence of amphetamine, cannabis and heroin offences. There was no similar increase in the incidence of acute drug poisoning behaviour.

The weekend and the evening were significant factors in the incidence of acute drug poisoning while drug offences were more uniformly distributed across days of the week and times of day.

DISCUSSION

Drug abuse in Melbourne is a continuum of behaviours ranging from single incidents of drunkenness in teenagers to addiction to illegal drugs such as heroin.

This study does not support the view expressed by some previous researchers that need and socioeconomic status are significant factors in predisposition to attempted suicide because parts of Melbourne which are known to have low indices of need have a high incidence of acute drug poisoning.

Multiple drug use and the high alcohol involvement in acute drug poisoning cases draws attention to the important role of legally available drugs in the drug abuse problem. Users of illegal drugs, known drug offenders and people showing symptoms of addiction could not be separated from users of legal preparations and users of different legal groups of drugs had similar likelihood of criminal involvement. These factors suggest that property crime committed by illegal drug users is not only an income producing exercise.

Psychological factors may be more important than economic necessity in determining the criminal behaviour of drug abusers.

ACKNOWLEDGEMENTS

I would like to thank Ambulance Service, Melbourne and Victoria Police for their co-operation in this project.

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Police Headquarters,
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19th August, 1982.

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INTRODUCTION

This project has been undertaken because the community has become increasingly concerned about the relationship between drug abuse and crime.

It describes:-

1. The population of drug abusers who come to notice of the Ambulance Service, Melbourne, displaying symptoms of acute drug poisoning;

2. The criminality of these drug abusers with special regard to the legality of the drugs used in their attempted suicide; and

3. The relationship between the incidence and characteristics of drug poisoning cases and drug offences reported to police in the same time period.

Drug Abuse

Australians have the highest use of tranquilisers in the world. Kidney disease caused by analgesic use is more prevalent than anywhere else. Our alcoholism rate ranks among the top five countries (Healy, 1977; Brown, 1978; Stoltz, 1978). Nearly half of the population use medication at least once every two days (A.B.S., 1979).

These facts tell a story of drug abuse. They show that Australians have a high incidence of inappropriate use of drugs leading to impairment of social, physical or economic functioning. However, drug abuse is noticed only when this impairment leads to the involvement of community organisations such as the health care services, the criminal justice system or welfare bodies.

The sensational media cover given to several bizarre incidents of drug abuse which came to notice through the law enforcement authorities has led to a common perception that drug abuse is synonomous with illegal drug use.

Most newspaper reporting of drug issues deals with use of narcotics or marijuana and tacitly plays down abuse of other drugs (Cowling, 1981).

This range of vision seems particularly narrow when the definition of "drug" is taken into account. The World Health Organisation defines a drug as "any substance that, when taken into the living organism, may modify one or more of its functions". Even when this definition seems too general to be relevant to drug abuse and we limit our concern to compounds which affect the mood or behaviour of the individual and are therefore particularly subject to wilful abuse, the public concern with heroin and marijuana remains out of proportion to its concern about other forms of drug abuse.

This project is designed to demonstrate the degree of overlap that exists between drug abuse which comes to notice of the police and that which comes to notice through the health authorities.

Acute Drug Poisoning

People taken to hospital by ambulance because they displayed symptoms of acute drug poisoning were selected for study because:-

(a) They are a particular group of drug abusers who come to notice only through the health authorities;

(b) They are self-selecting, that is, their selection is not influenced by operational considerations or by the perceptions of people who work in the drug field; and

(c) There is good, accurate information available.

Drug poisoning is becoming a growing problem in most countries and self-poisoning has been claimed to account for 10 to 30% of all emergency admissions to medical beds in some city hospitals in Great Britain and the United States. In Norway acute drug poisoning leads to about 6% of all admissions. (Lawson and Mitchell, 1972; Micks, 1974; Petersen and Brosstad, 1977.)

Generally drug poisoning and self-poisoning are synonomous in the adult population. That is for the purposes of this report drug poisoning, self-poisoning, drug overdose and attempted suicide are assumed to mean the same thing.

Suicide and attempted suicide are thought to be two distinct phenomena expressing different intentions (Stengel, 1960).

It is difficult to establish the real intention of the drug abuser in any particular case of self-poisoning (May, 1974) and between 75 and 90% of suicide attempts are thought to be merely gambling with death (Weiss, 1957; Ianzito, 1970). On the other hand, Scandanavian figures suggest that 70% of women and 43% of men were serious in their suicidal intention (Petersen and Brosstad, 1977). In Edinburgh, 1% of attempted suicide patients killed themselves within one year and 3.3% within three years. A further 3.5% appear to have committed further suicide attempts within one year. (Batchelor and Napier, 1954; Kennedy, 1974.)

Attempted suicide is thought to be related to drug dependency and alcoholism in a group of seductive behaviours which also includes delinquency, gambling and rioting (Blachly, 1970). These activities are seen by Blachly to have four common qualities:-

(a) Active participation in one's own victimisation;

(b) Negativism, i.e. being aware of possible adverse consequences;

(c) Imminent possibility of short term gain; and

(d) Awareness of a real risk of punishment.

Acute drug poisoning is therefore a particular form of drug abuse which presents as a health problem in the community.

A recent report from a large Melbourne hospital has shown that 4% of patients referred for drug screening had used illegal drugs and a further 8% had used the amylobarbitone-secobarbitone combination (Bury and Mashford, 1981). Drug screens are usually ordered in particularly acute

cases of drug overdose and less frequently for diagnostic reasons. About 10% of Norwegian cases were considered to be drug addicts and about 25% were alcoholics (Petersen and Brosstad, 1977). These proportions were higher for men than women.

One Edinburgh survey of acute drug poisoning has reported nearly half of the men and 11% of the women had previous criminal convictions and one fifth of the men had been in prison (Holding, et. al., 1977). Other information about the relationship between attempted suicide, use of illegal drugs and criminal behaviour appears to be sparse. This is surprising in view of the community's concern about the relationship between drug abuse and crime but it reflects the prevailing preoccupation with addiction and illegal drug use.

Drug Control

The special uneasiness in the community about certain drugs carries over into our drug control procedures. Control of drug abuse in Australia focusses on prohibition of the few drugs which are considered by the Government to be most dangerous, drugs such as heroin and marijuana, with associated heavy penalties for possession, use or distribution. A complicated system of permits and prescriptions governs availability of substances which are used therapeutically and many compounds like aspirin and paracetamol are available over the counter. Alcohol and tobacco are restricted only in their use by young people.

The history of the development of this system up to World War II is ably reviewed by Lonie (1979) who concluded:-

> "It appears that the updated laws (to 1930) had only a marginal effect on the overall consumption of drugs in Australia."

Statistics and reports which review subsequent developments suggest that their effectiveness has not significantly improved. The numbers of people charged with drug offences in Australia have increased each year except 1978 since 1976 (e.g. Australian Federal Police, 1981; 1982) and use of prescription drugs continues to rise (Webb, 1980; 1981; 1982).

The general concept of controlling particular drugs by prohibition follows the precedent set in the United States (Elliott, 1981) and other countries and ensures that Australia complies with its international obligations (Interpol, 1980; World Health Organisation, 1967; for further review see Maurer and Vogel, 1967, p. 239). Great Britain has followed a different philosophy by allowing free prescribing of all drugs until 1967 when their use by addicts came under the control of the Dangerous Drugs Act, 1967. Heroin is still routinely available for medical purposes.

New York experience suggests that even very severe penalties imposed to support the prohibition laws are ineffective in controlling or reducing heroin or other illegal drug use (Joint Committee on New York Drug Law Evaluation, 1977).

Prohibition does not seem to have been shown to be a particularly effective method of controlling drug abuse. Further, it allows the community to concentrate its concern about drugs on abusers of a few illegal drugs at the expense of those individuals who abuse those drugs which are more freely available.

Drug Related Crime

Our selective prohibition of a small segment of the broad spectrum of potentially abusable compounds available to man becomes self fulfilling. Their use is made illegal and is therefore of direct concern to the criminal justice system. By definition alone use becomes abuse. This is not immediately the case for other compounds; even if they are used in a non-medical way their abuse only involves the community when health or economic well-being becomes impaired.

Drug related crime comes in several guises:-

1. The Crime Associated with Using Illegal Drugs
   Laws prohibiting use of heroin, marijuana, cocaine and some other substances result in offences of using or possessing illegal drugs. Similarly, possession of compounds which can only be legally obtained under specific permit such as amphetamine and methadone leads directly to involvement with the criminal justice system.

2. The Crime Associated with Supply of Illegal Drugs
   Supply of illegal drugs is a criminal offence. As well diversion of drugs which can be legally obtained with a permit or prescription to illegal users is a criminal offence. These crimes are the direct consequence of the legal prohibition and control systems which have developed. Crimes in this category include importing, trafficking, manufacture, preparation or growing of illegal drugs, conspiracy, deception.

3. The Crime Undertaken to Support Drug Dependence
   Habitual use of psychoactive drugs can lead to dependence or addiction, the condition in which the user finds he relies on the substance of his choice in order to maintain his daily lifestyle. The user often becomes tolerant to the drugs upon which he is dependent in that he needs increasing amounts to maintain his feeling of well-being. It is possible for consumption of drugs to reach a level which may need financial support from income producing crime.

4. Crime Attributable to the Effects of the Drugs
   Use of drugs which affect mood or psychological function may lead to crime directly attributable to the user's change in state. For example, the user may lose self control and commit violent or other crime directed against the person. Alcohol inebriation is a well documented defence for those who commit these sorts of crimes while under its influence (Gold, 1976-77). Another aspect of this effect is crime attributable to impaired functioning in precision tasks such as driving a motor car. Driving under the influence of alcohol has become the subject of complicated legal restraints. Similarly, it is illegal to drive under the influence of other drugs but prosecution of these cases is complicated and therefore rare.

The relative significance of these possible ways in which drug abuse and crime are related is difficult to fully document. The underlying question is:-

> "Is the drug use predisposing to criminality, is criminality predisposing to drug abuse or are the two only superficially or circumstantially related?"

Nearly all the literature on this subject describes populations selected because:-

(a) They have been detected committing drug offences and have therefore drawn the attention of the law enforcement system; or

(b) They have sought treatment for addiction to illegal drugs, almost universally heroin, and so are at the most extreme end of the spectrum of drug abuse. Only one heroin user in ten uses heroin daily (Gettinger, 1979).

The degree to which these two special groups of drug abusers overlap is not known and similarly, the degree to which they represent drug abusers in general is open to conjecture. It is certainly not valid to extrapolate from either or both of these groups to the population of illegal drug users let alone to drug abusers in general.

Further, the criminogenic effects of particular drugs are oversimplified when described individually. Very few drug abusers, whether addicts or not, seem to use only one drug. For example, narcotics users in Britain and the United States and Australia are known to almost always be poly-drug users (Gordon, 1973; Inciardi, 1977; Woodward, 1980), and in New York an average of 2.2 drugs per patient was reported among patients admitted to emergency rooms for drug related disorders in 1976 (Joint Committee of New York Drug Law Evaluation 1977). Patterns of drug use by individual drug abusers appear to change with time, usually beginning with alcohol use (Inciardi, 1977).

Yet another consideration in relating drug abuse and crime is the contribution made by some factors commonly associated with both drug abuse and with criminality, such as unemployment, low income and social disorganisation (Joint Committee of New York Drug Law Evaluation, 1977).

The crime which is attributed to illicit drugs seems to be largely perceived by the community as violent crime which drug addicts commit in pursuit of drugs or money to buy drugs or which is meted out to those who interfere with the illegal drug distribution system. These sort of offences gain wide coverage from the media.

In Australia, experienced police opinion repeatedly expresses the view that increasing trends in violent crime are directly attributable to increased numbers of drug addicts:-

"The most disturbing trend to have emerged in the 1970s is drugs in connection with armed robbery." (Delianis, 1978).

This view is supported by the New Zealand Commissioner of Police (1978) who says:-

"Armed hold ups and other similar crimes are often committed by drug addicts attempting to obtain money to purchase drugs."

His statement is qualified by a subsequent comment that the main area of violence is among drug dealers.

On the other hand, American police chiefs do not consider armed robbery is part of the addiction scenario. They see street robbery, burglary, theft, prostitution and other less violent behaviour as more likely to be associated with drugs. However, they appear to agree that overall, 30 to 70% of crime is drug related (Pomeroy, 1974).

Yet another opinion is expressed by Trebach (1978) who says that Scotland Yard police officers do not consider that addicts are a special criminal problem:-

"The types of crime they usually committed, apart from buying and using illegal drugs. was 'petty stuff'."

Reichard (1946) stated many years ago:-

"The alcoholic gets drunk, comes home and beats his wife, but the addict gets high, comes home and his wife beats him."

The overwhelming evidence about crime committed by heroin addicts other than that involving the drugs themselves leads to the conclusion that it largely involves offences against property (for review see Wardlaw, 1978), and, while there is some suggestion that addicts who use stimulant drugs such as amphetamine or cocaine may tend to commit violent crime, this is generally seen as related to predisposing factors other than the effects of the drug itself (Morell and Vogel, 1967, p. 278; Ellinwood, 1971). Further, it seems that the crime which does occur is committed by a particular subset of addicts and most people finance their drug habit through semi-legitimate sources such as full-time or part-time work, or family support or selling drugs to other users

(Blumberg, et. al., 1974; Hubbard, et. al., 1977; Gettinger, 1979). Male addicts appear to commit more burglaries and robberies while female addicts engage in prostitution, drug sales and shoplifting (Gandossy, 1980).

Inversely, a very small proportion of burglaries reported in Australia or elsewhere include drugs among property taken. Only 9% of known burglars in Melbourne are known drug offenders and 1.6% are known to have been under the influence of drugs at the time of the offence. A quarter of known burglars in the United States have prior drug records (Pope, 1977a, 1977b; Burgoyne, 1979; Braybrook, 1982).

Treatment of heroin addiction using methadone has been shown to reduce the incidence of crime committed by addicts (Cushman, 1976). English data (Blumberg, 1975) based on self reported criminal activity of heroin addicts seeking treatment suggests that about half had committed non-drug related crime in the three months prior to their first treatment.

Drug arrests precededburglary arrests in two thirds of a group of burglars but, on the other hand, two thirds of the same group had a criminal arrest prior to their first drug arrest (Repetto, 1978).

In an Australian study, one half of cannabis offenders and one third of other drug offenders were not previously known to the police and about 30% of previous offences involved drugs (Wardlaw, 1978). A substantial proportion of the non-drug related criminal history of these drug offenders involved only property crime and only 3% of drug offenders had been convicted of crimes against the person.

To summarise, most of the crime committed by known drug abusers is property related crime or the crime which directly arises with use of illegal drugs. The relationship between crime and drugs is complicated but there is little evidence to support the contention that the forms of drug abuse which come to notice of the police or through addiction cause violent crime. Very little information about other forms of drug abuse seems to exist.

STUDY PROCEDURES

This report describes the characteristics of drug abusers who come to the notice of Ambulance Service, Melbourne, displaying symptoms of acute drug poisoning. It correlates the information with that collected about drug offences by Victoria Police.

Study Period

The survey covers all reported cases in the time period 1st August, 1981 through 31st January, 1982, which had been reported to the data sources by 31st May, 1982.

Selection of the Acute Drug Poisoning Group (N = 846)

All patients transported to hospital by Ambulance Service, Melbourne, in the Study Period displaying symptoms of acute drug poisoning in the opinion of ambulance officers at the scene were identified from the routine computer records maintained by the Service. Patients aged under 10 years (N = 7) were excluded from analyses.

Selection of Drug Offender Group (N = 822)

All persons reported for drug related offences in the Metropolitan Police District were identified on Modus Operandi forms routinely collated by the Crime Statistics Section of Victoria Police in the Study Period. In cases where no arrest had been made by 31st May, 1982, the incident was recorded as if one offender was involved.

Data Sources

Drug Poisoning Population Information about the patient was taken from Case Sheets which are always completed by ambulance officers who attended the incident and are kept on microfilm at Ambulance Headquarters. Names of patients and year of birth were recorded separately and these were searched in the Criminal Records Section of Victoria Police to determine the patients' prior criminal records.

Drug Offender Population Information about drug offences was taken from Modus Operandi forms completed by the policeman who attended the scene. These are collected and stored by the Crime Statistics Section, Victoria Police.

Data Collection

Information about the individual and the incident in each case was coded into format acceptable for analysis using Statistical Package for Social Sciences (Nie, et. al.,1976). No identifying information was recorded in this way. Details about the specific information collected are contained in Appendix A.

Criminal Records of Drug Overdose Patients Individuals were checked in Information Bureau records according to name and year of birth. If more than one person was recorded criminal information was recorded as Not Known. Except in exceptional obvious circumstances, e.g. Kotopulos, Kotopoulos, the spelling recorded by the ambulance officers was rigidly adhered to and this may have led to some under reporting of criminal records.

Drug Classifications All drugs were coded according to a seven digit scheme which allowed individual compounds to be recorded. Further classification of drugs according to their legal status took the order of precedence:-

illegal and permit drugs
over-the-counter drugs
alcohol only
non-therapeutic products
prescription drugs

This means that if a person used, say, amitriptyline and aspirin his drugs would be classified as over-the-counter.

Data Analysis

Statistics All information has been analysed using the Statistical Package for Social Sciences (Nie, et. al., 1976). Differences between grouped data have been tested statistically using

chi-square test. Differences between continuous variables were tested statistically using Student's t-test. All differences were regarded as significant at the 1% level. Missing data has been excluded from all analyses and this accounts for apparent inconsistencies in population sizes.

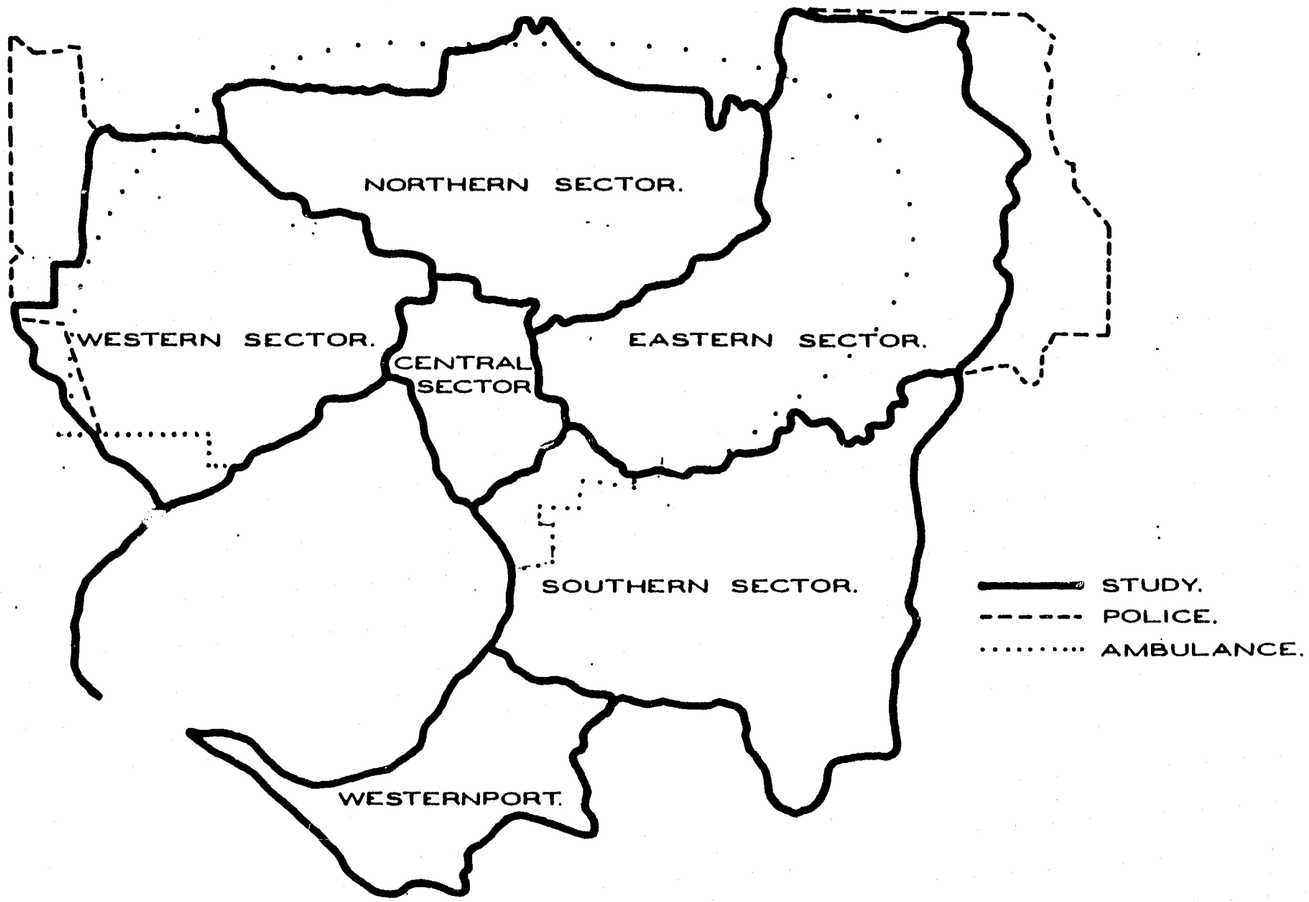
Geographical Information All geographical information has been recorded according to Sectors within the Melbourne Statistical Division (M.M.B.W.,1982) (Fig. 1). Ambulance Service, Melbourne, services a slightly different area of the city from that covered by the Victoria Police Metropolitan Region (Fig. 1). All areas outside the area designated Metropolitan Melbourne for the study are recorded as Rural Victoria. All institution addresses are recorded as Other because they give no indication of where the incident happened. Information describing the Southern and Westernport Sectors of the study were designated Metropolitan Melbourne.

Drug Information The pharmacological classification of drugs according to their usual physiological sites of action has adhered to a modified International Medical Specialties coding system. The legality of the drugs has been defined as:-

Illegal or Permit Drugs -
heroin
marijuana
amphetamine
cocaine
lysergenic acid
pethidine
morphine
methadone
solvents

Over-the-Counter Drugs -
acetyl salicylate
paracetamol
dextropropoxyphene
mepyramine
caffeine

OPERATIONAL BOUNDARIES METROPOLITAN MELBOURNE



antacids
all vitamin and mineral supplements
cough and cold preparations, etc.

Prescription Drugs -
all other therapeutic compounds

Abbreviations

The following abbreviations have been used in this report:-

N.S.	-	Not significant
M.M.B.W.	-	Melbourne Metropolitan Board of Works
L.S.D.	-	Lysergenic acid
D.F.	-	Degrees of Freedom
S.E.	-	Standard Error
A.B.S.	-	Australian Bureau of Statistics
signif.	-	Significance of Difference
No.	-	Number
AFADD	-	Australian Foundation on Alcoholism and Drug Dependence

RESULTS

All detailed tables of results are presented as appendices to enable easy reference.

1. ACUTE DRUG POISONING PATIENTS

1.1 GENERAL CHARACTERISTICS OF ACUTE DRUG POISONING PATIENTS (Appendix 1)

The population of people taken to hospital during the period August, 1981 through January, 1982, because they demonstrated symptoms consistent with acute drug poisoning was different in distribution of both gender and age from the population of Metropolitan Melbourne (M.M.B.W. 1981).

Table 1 Age Distributions of General and the Acute Drug Poisoning Populations

Age	Drug Poisoning Patients (N = 771)	Population aged over 15 years (M.M.B.W., 1981) (N = 1,961,248)
15 to 29 years	46.5%	35.4%
30 to 44 years	31.4%	25.7%
45 to 59 years	14.0%	21.8%
60 years and over	6.9%	17.1%

In the drug overdose population, 62% were women and the average age was 33.31 years (± 0.53 S.E.). There were significant differences between the ages of men and women within the drug overdose group. Women in the study population were more likely to be aged under 20 years than the men and, although men were over-represented in the 20 to 30 year age bracket their smaller overall contribution meant that there was still a greater frequency of young female patients than young male patients (Table 1.1). People who live in the Central Sector of Melbourne were more prevalent in the drug overdose population than in the general population of Melbourne.(Table 2) and the under-representation of people from the Southern Sector probably reflects the boundary differences between the operational area of Ambulance Service, Melbourne,

and the Melbourne Metropolitan Board of Works (Fig. 1, p. 18). There was no significant difference between the places of residence reported by men and women (Table 1.2) or in the different age groups (Table 1.3) in the attempted suicide population.

Table 2 Comparison of the Residential Addresses of the Drug Poisoning Population with the Residents of Metropolitan Melbourne

Residential Address	Drug Poisoning Patients (N = 733)	General Population (M.M.B.W., 1981) (N = 1,961,248)
Central Melbourne	26.1%	10.2%
Western Sector	16.4%	14.0%
Northern Sector	21.5%	21.2%
Eastern Sector	19.0%	27.5%
Southern Sector	11.5%	27.0%
Other	5.5%	0%
	100.0%	100.0%

Ambulance officers reported that 13.3% of all patients in the Study Population had a history of psychiatric disorder and a further 2.3% were epileptics. Over 4% were reported to show signs of drug addiction such as intravenous injection sites.

In summary, women and people aged under thirty years appear to be more likely to attempt to commit suicide using drugs than men and older people. The women in the group appear to be younger than the men. Those who live in Central Melbourne are over-represented relative to the distribution of the general population and there appears to be some predisposition among epileptics and those with psychiatric histories towards drug overdose behaviour.

1.2 DRUGS USED IN ACUTE DRUG POISONING (Appendix 2)

The drugs used by patients to attempt suicide have been classified according to standard pharmacological procedure which defines the part of the body or physiological function for which they are normally prescribed. In a subsequent section of this report classification according to legal availability has been used.

Number of Drugs Used

Forty two percent of people in the Study Population used more than one preparation in their attempt to commit suicide (Mean = 1.49 preparations $\bar{+}$ 0.05 S.E.) and this polydrug use is compounded in those who use preparations which contain more than one substance. In 3.5% of cases alcohol alone was considered to be the chemical agent contributing to the poisoning episode and in a further 24% alcohol was reported in combination with other drugs. There was no significant difference in the number of preparations used by men and women in the Study Population but women were less likely to use alcohol (Table 2.1). It may be assumed that many of the younger patients who had used alcohol in this acute drug poisoning episode were merely drunk through intolerance to the drug. Patients aged over 40 years were less likely to be polydrug users than younger people in the attempted suicide population, but this difference was not statistically significant (Table 2.2). Alcohol was involved in nearly one third of the cases involving patients aged over 30 years (Table 2.3) and only half that proportion of cases aged under 20 years. Acute drug poisoning is a form of polydrug abuse and alcohol is a contributing factor in many cases, particularly those involving young men.

Types of Drugs Used

The drugs used in attempted suicide were different from those prescribed for the general population (Webb, 1982) (Table 3).

Table 3 Classification of Drugs Used in Acute Drug Poisoning Compared with those Prescribed to the Australian Population

Drug Classification	Acute Drug Poisoning (Preparations per 100 population)	(% of all drugs)	Australian Prescribing Index (Webb, 1982) (Prescriptions/100 population/ per year)	(% of all drugs)
Nil	3.8	(2.5%)	-	-
Illegal Drugs	7.0	(4.7%)	-	-
Alimentary Tract	3.5	(2.3%)	32.4	(5.2%)
Blood and Blood Forming Organs	0.6	(0.4%)	17.9	(2.9%)

Table 3 (Cont.)

Drug Classification	Acute Drug Poisoning (Preparations* per 100 population)	(% of all drugs)	Australian Prescribing Index (Webb, 1982) (Prescriptions/100 population/ per year)	(% of all drugs)
Cardiovascular System	3.1	(2.1%)	127.2	(20.4%)
Dermitological Preparations	0.4	(0.3%)	24.6	(3.9%)
Genito Urinary System and Sex Hormones	0.7	(0.5%)	46.3	(7.4%)
Hormones other than Sex Hormones	0.6	(0.4%)	-	-
Anti-infectives	2.7	(1.8%)	119.8	(19.2%)
Musculoskeletal System	1.9	(1.3%)	25.6	(4.1%)
Anaesthetics	0.1	(0.1%)	-	-
Analgesics	12.3	(8.2%)	48.8	(7.8%)
Antiepileptics	2.9	(1.9%)	4.2	(0.7%)
Antiparkinsonism	0.7	(0.5%)	2.4	(0.4%)
Psycholeptics: Tranquilisers, Hypnotics and Sedatives	86.4	(57.9%)	46.7	(7.5%)
Psychoanaleptics: Antidepressants	15.6	(10.4%)	22.1	(3.5%)
Parisitology	0.2	(0.1%)	-	-
Respiratory System	4.8	(3.2%)	55.0	(8.8%)
Other	2.0	(1.3%)	50.5	(8.1%)
Total	149.3	(100.0%)	623.5	(100.0%)

* Calculated on first four preparations only

Psychoactive drugs are used more in the drug overdose situation, particularly those in the tranquiliser, hypnotic and sedative group, while cardiovascular and diuretic preparations appeared to be used more rarely than among the general users of prescription drugs. Illegal or special permit drugs were used by 7% of drug overdose patients. These drugs comprised nearly 5% of all preparations cited by ambulance officers as contributing to this suicide attempt.

The drug preparations used by men and women in their attempt to commit suicide were significantly different from each other (Table 2.4).

More of the drugs used by men were illegal drugs, antiepileptic or parkinsonism drugs or alcohol only, while women were more likely to use cardiovascular or musculoskeletal preparations.

In summary, acute drug poisoning is often a polydrug phenomonen and about 85% of drugs used by both men and women were psychoactive drugs. There were differences between the sexes in their use of minor drug categories. Alochol was involved in about 28% of drug related suicide attempts.

1.3 CRIMINALITY OF ACUTE DRUG POISONING PATIENTS (Appendix 3)

The population of patients who were taken to hospital displaying symptoms of acute poisoning was checked against police records to determine their known criminal involvement. Information about criminality is presented in relation to the individual's sex, age, known drug addiction and the legitimacy of the drugs which was used in this suicide attempt.

Legality of Drugs

About 7% of all suicide attempts involved illegal drugs or those which required a permit for their use. There was a tendency for more men than women to use illegal drugs (Table 4) and women were more likely to have used prescription drugs, but this difference was not statistically significant.

Table 4 Legality of Drugs used by Men and Women in their Attempted Suicides

	Alcohol only	Over-the-Counter	Prescription	Illegal or Permit	Total
Frequencies					
Men	18	22	211	18	275
Women	16	34	369	16	442
Total	34	56	580	34	717
Percentages					
Men	6.5	8.0	76.7	8.7	38.4
Women	3.6	7.7	83.5	5.2	61.6
Total	4.7	7.8	80.9	6.6	100

The legality of the drugs used was also related to the age of the user with more young people using illegal drugs or only alcohol while more of the 31 to 40 age group used prescription drugs (Table 5).

Table 5 Legality of Drugs Used by Different Age Groups in their Suicide Attempts

Age	Alcohol only	Over-the-Counter	Prescription	Illegal or Permit	Total
Frequencies					
10 to 19 years	7	10	53	14	84
20 to 29 years	7	19	180	24	230
30 to 39 years	4	4	145	3	148
Over 40 years	13	13	155	5	172
Total	31	53	533	46	665
Percentages					
10 to 19 years	8.3	11.9	63.1	16.7	12.6
20 to 29 years	3.0	8.3	78.3	10.4	34.6
30 to 39 years	2.5	6.7	89.0	1.8	25.0
Over 40 years	7.0	6.5	83.8	2.7	27.8
Total	4.7	8.0	80.1	6.9	100.0

Chi-square test = 44.44
D.F. = 9
Signif. = .00000

Alcohol was associated with the suicide attempt in a larger proportion of cases involving prescription drugs than in other groups (Table 3.1). The type of liquor involved appeared to be more likely to be spirits in illicit drug users while prescription and over-the-counter drug users seemed more likely to have used beer or wine.

There was a significant relationship between the legality of drugs used in acute drug poisoning cases and the signs of addiction reported by ambulance officers (Table 3.2). However, about half of the known addicts used only prescription drugs in this suicide attempt.

In summary, illegal drugs are more likely to be used by young people and tend to be more likely to be used by men in their suicide attempts.

Alcohol use was often combined with all legal categories of drugs used to attempt suicide but the type of liquor used differs with spirits being more often associated with illegal or permit drug abuse.

Only half of the known drug addicts used illegal or permit drugs in this case of acute drug poisoning.

Criminal Records

Twenty nine percent of all attempted suicide patients were known to the police prior to this attempt to commit suicide. The men in the Study Population were twice as likely to have criminal records as the women and they were more likely to be multiple offenders (Table 3.3). Over one third of those in the 20 to 30 year age bracket were known to the police before this suicide attempt (Table 3.4) and contrary to expectations based on exposure, all other age groups had similar police involvement.

There was no significant relationship between the legality of the drugs used in this suicide attempt and the likelihood of being known to the police (Table 3.5) but known addicts were more likely than other drug overdose patients to have a criminal record (Table 3.6).

The age at which the first known offence of acute drug poisoning patients was recorded is not related to his sex (Table 3.7) or to the legality of the drug which was used. Over three quarters of people known to the police became known when they were between 17 and 20 years of age. As well, 44% had recorded contact with the police during 1981 and a further 13% had contact in 1980 (Table 3.8). Men with criminal records were not more likely to have had recent police involvement than women and there was no relationship between age or the legality of drugs used in this suicide attempt and their last police contact.

In summary, nearly 40% of the men and 20% of the women who attempted to commit suicide using drugs were previously known to the police. Their first contact with the law was between the ages of 17 and 20 years in 78% of these cases and over 40% have had recorded contact with the police within the year prior to this drug overdose episode.

Reasons for Police Knowledge

Most of the people known to the police were known for reasons other than their involvement with drugs. About 3% of all drug overdose patients had a drug related criminal record (Mean 0.07 drug episodes, ± .02 S.D.), and half of those people were only recorded once in relation to drugs. There was no significant difference in the drug histories of men and women in the Study Population, or in the users of different legal categories of drugs (Table 3.9).

Over one half of the individuals known to the police were first recorded for offences against property, mainly theft and burglary offences (Table 3.10). A further 10% became known through a protection application made to the court in an attempt to divert the individual from criminal involvement and this was four times more prevalent in women than men. Women were also more likely to be recorded for theft, often from shops, while men had a greater likelihood of burglary and motor vehicle offences and offences against the person.

Differences between the first offences recorded for different age groups of drug overdose patients were not significant but theft seemed to be more prevalent among those now aged under 20 or over 40 years while motor vehicle offences were more usual first offences among those now aged between 30 and 40 years (Table 3.11).

There was a significant relationship between the legal category of drugs used to attempt suicide and the aggregated major non-drug offences recorded on the first, second and last time the patient came to notice of the police (Table 3.12). Serious assaults were more likely to have been committed by over-the-counter drug users than any other group, while alcohol users were over-represented among sex offenders. Illegal drug users were over-involved in motor vehicle offences, prostitution and protection applications.

Very few illegal drug users are known to police through their prior drug histories. There is no evidence to suggest that drug abusers who use illegal drugs to attempt suicide are significantly more likely to be involved in crime committed against the person than abusers of prescription or over-the-counter drugs or alcohol. There is also no

support for the proposition that burglary and theft are particularly associated with illegal drug use but rather it seems that this sort of behaviour is associated with drug abuse in general.

2. COMPARISON OF THE CHARACTERISTICS OF DRUG RELATED SUICIDE ATTEMPTS AND DRUG OFFENCES

This section of the report describes the times and places of two forms of drug abuse which come to public notice through different systems: the law enforcement system and the health system. A total of 1661people came to notice of these authorities in Metropolitan Melbourne during the period August, 1981 through January, 1982, because they were detected committing drug offences or because they attempted to commit suicide using drugs.

2.1 PLACE OF INCIDENT (Appendix 4)

There was a significant difference between the sectors of the city in which drug offences and acute poisonings occurred (Table 6).

Table 6 Places of Drug Offences and Incidents of Attempted Suicide

	Drug Offences (N = 822)	Drug Overdose Cases (N = 839)
Central Melbourne	32.7%	30.4%
Western Sector	13.3%	15.1%
Northern Sector	23.7%	19.5%
Eastern Sector	13.4%	18.6%
Southern Sector	14.8%	19.9%
Westernport	1.1%	0.0%
Other	0.0%	4.6%
Rural Victoria	1.0%	1.8%
	100.0%	100.0%

Chi-square = 66.78
D.F. = 7
Signif. = 0000

Acute drug poisoning was more prevalent in the Eastern Sector whereas drug offences were more likely to be detected in the Northern Suburbs. Differences between the incidence of these two forms of drug abuse which can be seen in the Southern Sector figures are affected by differences between the areas of operational responsibility accepted by the metropolitan police and the metropolitan ambulance service.

These factors explain the distribution of different legal categories of drugs which are observed in different parts of the city (Table 7).

Table 7 Legality of Drug Use Leading to all Detected Drug Offences and Acute Drug Poisoning Cases transported by Ambulance in Metropolitan Melbourne

	Alcohol only (N = 41)	Over-the-Counter (N = 62)	Prescription (N = 610)	Illegal or Permit (N = 785)	Total
Central Melbourne	3.0%	2.8%	37.5%	56.3%	31.1%
Western Sector	1.4%	7.0%	42.3%	47.0%	14.2%
Northern Sector	3.1%	2.8%	36.9%	56.6%	21.5%
Eastern Sector	3.3%	3.3%	50.4%	42.7%	16.3%
Southern Sector	2.1%	2.6%	34.7%	60.1%	12.8%
Westernport	0.0%	0.0%	11.1%	88.9%	0.6%
Other	6.5%	32.6%	64.5%	3.2%	2.1%
Rural Victoria	0.0%	22.7%	50.0%	27.3%	1.5%
Total	2.7%	4.1%	40.4%	52.0%	100.0%

Chi-square Test = 115.48
D.F. = 28
Signif. = .00000

The legality of drugs which contribute to drug abuse as measured by two different behaviours are different from each other (Table 4.1) and this difference reflects the different reasons for selection. Police are more likely to report offences involving illegal and permit drugs and other compounds only come to their notice when they contribute to burglaries or other similar offences. 14.6% of drug offences involve more than one preparation compared with 37% of attempted suicide cases.

Illegal and permit drugs were over-represented in the Northern Sector and Central Melbourne and incidents which involve prescription compounds or alcohol occurred more frequently in the Eastern Suburbs.

Most drug control measures have been traditionally directed towards use of illegal drugs and it is therefore relevant to consider the most usual of these compounds individually.

The illegal drugs used in attempted suicides and contributing to drug offences were different from each other with marijuana contributing to two thirds of drug offences and only four, or 8% of drug overdose cases involving those patients using illegal drugs.

Table 8 Distribution of Illegal Drugs Used in Attempted Suicide and Drug Offences

	Attempted Suicide (N = 51)	Drug Offences (N = 753)	Total (N = 804)
Amphetamine	21.6%	17.0%	17.4%
Cannabis	7.8%	64.1%	61.4%
Heroin	45.0%	16.6%	17.9%
Cocaine, L.S.D., Solvents	21.0%	2.2%	3.1%
Total	6.8%	93.6%	100.0%

Chi-square = 129.74
D.F. = 6
Signif. = 0000

The distribution of the main illegal drugs used in attempted suicide incidents was not significantly different in cases from different parts of the city with heroin and amphetamine being the most predominant (Table 4.2). There were significant differences, however, in the distribution of drugs associated with drug offences which occurred in different parts of the city. Heroin contributed to twice the proportion of offences which occurred in the Central city compared with any other sector and amphetamine was under-represented in the Western Sector (Table 4.3).

To summarise, different areas of the city have a different relative incidence of drug poisoning and drug offences. These differences

are largely reflected in the drugs which contribute to these two indices of drug abuse but there appears to be some significant differences in the particular illegal or permit drugs which came to notice in different geographical areas.

Overall

The Eastern Suburbs have the least aggregated indication of need while the Northern Suburbs and Central Melbourne are the areas with most need in Metropolitan Melbourne (Armstrong and Wearing, 1980).

It seems that drug abuse is more likely to come to notice of the health authorities when it involves incidents in higher socio-economic areas. It is more likely to come to notice of the police when it involves incidents in lower socio-economic areas.

2.2 TIMES OF DRUG OFFENCES AND ACUTE DRUG POISONING INCIDENTS (Appendix 5)

Month of Year

The monthly distributions of drug offences and drug related suicide attempts were significantly different from each other, more of the drug offences being detected in January than in any other month (Table 5.1). This increase in drug offences did not accompany any increase in the incidence of acute drug poisoning and seasonal variations in this behaviour which have been reported overseas were not seen in Melbourne (Ianzito, 1970).

There was a significant difference in the legality of drugs which contributed to the aggregated incidence of drug offences and attempted suicides in the different months of the study. A higher proportion of prescription drugs was observed in September, October and November while more illegal or permit drugs were involved in August, December and January (Fig. 9). Incidents involving only alcohol were more prevalent in December. These differences cannot be accounted for by the difference in the relative time distributions of drug offences and drug overdose cases.

Table 9 Legality of Drug Use Leading to all Detected Drug Offences and Attempted Suicides in Metropolitan Melbourne, August 1981 to January 1982

	Alcohol only (N = 41)	Over-the-Counter (N = 62)	Prescription (N = 610)	Illegal or Permit (N = 785)	Total (N = 1,498)
August	2.4%	0.4%	53.7%	43.5%	16.6%
September	1.7%	2.6%	60.4%	35.2%	15.6%
October	2.2%	2.2%	57.3%	38.2%	18.1%
November	3.5%	2.0%	63.3%	31.2%	13.5%
December	5.0%	0.5%	50.9%	47.7%	15.0%
January	1.0%	1.9%	53.2%	43.9%	21.2%
Total	2.5%	1.6%	56.2%	39.7%	100.0%

Chi-square Test = 29.85

D.F. = 15

Signif. = .0058

When particular illegal drugs used in drug overdose and drug offence incidents are considered separately, there does not appear to be any association between the drug used in attempted suicide and the month of the incident (Table 5.2). However, the January surge in the drug offender figure was attributable to increases in the incidence of amphetamine, cannabis and heroin offences in that month (Table 5.3). The incidence of amphetamine offences was particularly high in August and November and marijuana offences were low in November. It is possible that this low November figure reflected availability of the drug because the crop from the new growing season becomes available about December and January. Other drugs involved in drug offences were almost always prescription drugs taken during burglaries of pharmacies or surgeries. These offences were particularly prevalent in November and December.

Drug abuse measured through the incidence of acute drug poisoning cases does not seem to be a seasonal occurrence. However, drug offences appear to be more prevalent over the summer months. There does not appear to be any particular illegal drug which contributes differentially to this holiday surge.

Day of Week and Time of Day

There was a significant difference between the days of the week in which drug offences and drug overdose incidents were reported (Table 5.4). A smaller proportion of drug offences were reported on Saturdays and Sundays than on other days while Wednesday and Monday were least important for drug related suicide attempts. The times of day when the incidents occurred were also different in each group, even when the drug offence incidents in which time could not be specified were excluded (Table 5.5). Nearly half of drug overdose cases occurred in the evening but drug offences are more equally distributed over the day.

These differences between the time at which these drug abuse incidents occur probably reflect operational factors. Fewer policemen are available for general duties on weekends than weekdays and very few offences resulting from drug warrant searches will be reported on weekends. These operations are more likely to be carried out on the early morning on week days.

On the other hand, the ambulance service responds immediately to a call for help and their times are not affected by the internal organisation of the system. On that basis, it is probably reasonable to assume that drug abuse which comes to notice is more likely to occur at weekends and in the evenings than at any other time.

DISCUSSION

The information which has been collected in this project lends itself to discussion of three main areas of concern in the field of drug abuse. These involve consideration of the relationship between:-

(a) Drug abuse and legal drug control measures;

(b) Drug abuse and criminality; and

(c) The incidence of drug offences and acute drug poisoning.

Drug Abuse and Legal Drug Controls

Patients taken to hospital as acute drug poisoning cases in Melbourne appear to have generally similar characteristics to those in other countries. Women are twice as frequent as men and people aged 20 to 30 years contribute 40% of the overdose population. The women who attempt suicide using drugs tend to be younger than the men. (Freeman, et. al., 1970; Ianzito, 1970; Mayo, 1974; Holding, et. al., 1977; Bury and Mashford, 1981), although they appear to begin using drugs several years later (Gandossy, et. al., 1980).

Freeman and others (1970) have suggested that their financial situation is a more significant factor for men who attempt suicide using drugs than for women under similar circumstances and Holding and others (1977) consider attempted suicide is more prevalent among the lower classes.

There is a significant tendency for people who live in Central Melbourne to be over-represented among the population who attempt suicide. This sector of the city has a high proportion of people aged 15 to 29 years, i.e., in the age group most at risk (M.M.B.W., 1981). It is also associated with most indices of need, particularly unemployment (Armstrong and Wearing, 1981). However, it seems unlikely that these socio-economic factors strongly influence the tendency toward suicidal behaviour because the Northern Sector is second in its need classification but is not over-represented among the overdose population. The Eastern Suburbs which show low indices of need have a high incidence of acute

drug poisoning relative to the incidence of drug offences.

About 40% of Scottish and American drug overdoses had a record of psychiatric illness (Ianzito, 1970; Holding, et. al., 1977), and 6% of Edinburgh cases are epileptics (Batchelor and Napier, 1954). Melbourne ambulance officers' reports of 13.3% psychiatric patients and 2.3% epileptics in Melbourne could therefore be an underestimate of the contribution which these disorders make to the problem, but they are supported by information about the proportion of anti-epileptic contributory drugs observed in this survey.

The drugs used in attempted suicide predictably over-represent psychotropic drugs such as tranquilisers and anti-depressants and the drugs used are similar to those seen in other studies of attempted suicide. The high incidence of alcohol involvement is consistent with British and Scandanavian information (Freeman, et. al., 1970; Holding, et. al., 1977; Petersen and Brosstad, 1979).

The high incidence of prescription drug use observed in this group of drug abusers indicates the importance of the medical profession in any attempts which the community makes to reduce drug abuse. Illegal drugs contribute to a relatively small proportion of drug overdose cases and the few marijuana cases observed has some implications about its continued illegality (AFADD, 1982). Either marijuana does not contribute to drug overdose situations or ambulance officers do not perceive it as sufficiently important to document it. This latter explanation seems unlikely when the incidence of alcohol recorded on Ambulance Case Sheets is taken into account.

Many patients in the acute drug poisoning group used several preparations and alcohol is clearly an important contributory factor. Its involvement in 29% of cases is similar to that observed in other surveys of drug overdose patients (Freeman, et. al., 1970; Holding, et. al., 1977).

Further, only half of the known drug addicts in the group of drug overdose patients used illegal or permit drugs on the occasion which brought them to notice and there was no significant relationship between the legality of the drug used and the likelihood of having prior drug offences known to the police (Table 10).

Table 10 Indicators of the Spectrum of Drug Abuse in Acute Drug Poisoning Cases

Drug Category used in this Attempted Suicide	Proportion of known addicts Using Drug	Proportion involving alcohol	Proportion with prior Drug Offences
Alcohol only	0	100.0%	0%
Over-the Counter	0	13.0%	2%
Prescription	53%	29.0%	2%
Illegal or Permit	47%	17.0%	7%
Total	4%	29.0%	2%

These factors support those who are concerned about our society's double standards with regard to drug control (e.g. AFADD 1981). Drug abuse as it presents to the Ambulance Service is a polydrug phenomonen. Drug abuse as it presents to the Police Department is a polydrug phenomonen. The chemicals involved range in legitimacy from alcohol to heroin. The same people abuse a whole spectrum of drugs and their wide separation in terms of community concern and legislative controls appears artificial. Further, there is little evidence to suggest that legal prohibition is a successful method of reducing drug abuse, whether it be alcohol abuse (e.g. Blocker, 1979; Engleman, 1979) or heroin abuse (e.g. Joint Committee on New York Drug Law Evaluation, 1977).

Existing data about drug use in Victoria is mainly collected by different agencies in terms of sex, age, drug type and place and there is little co-ordination of the information obtained by different organisations. The Sub-committee on Drug Statistics (1982 roposes better inter-departmental co-operation but does not suggest any extension of the information collected. This survey appears to have shown that, while this sort of individual, limited data may have valuable management implications, it will almost certainly leave unanswered crucial questions about drug abuse in the community.

Drug control procedures involve the medical profession, the teaching profession, the welfare professions and the criminal justice system. It is important to emphasise that laws are not enough and new approaches from other involved disciplines need to be given more status in the eyes of the media and the public.

Drug Abuse and Criminality

The relationship between drug abuse and criminality is relatively simple compared with the relationship between drug abuse and legal drug controls.

Nearly one third of individuals who were taken to hospital with acute drug poisoning had a criminal record. This figure was twice as high for men as for women and very little of the reported crimes involved drug offences.

This proportion of drug overdose patients with police records is higher than can be expected in the general community. For example, 11% of drivers tested under Victorian Preliminary Breath Test Station legislation have criminal records (Hendtlass, et. al., 1981) while 16% of drivers involved in metropolitan casualty crashes were known to police. Drinking drivers were two to three times more likely to have a criminal record than non-drinking drivers and their proportions were very similar to those observed in this group of drug overdose patients.

The legal status of the drugs involved in attempted suicides was not significantly related to the criminality of the user and although there is evidence that the offences committed by users of different drug categories are significantly different from each other, the data suggests that alcohol and over-the-counter drug abuse is more likely to be associated with offences against the person. This finding is consistent with those of overseas experts (Austin and Lettieri, 1976; N.Z. Commissoner of Police, 1976). These results are not surprising given the evidence that drug abuse often involves more than one compound and there seems to be little regard for the legality of the drugs when selection is made.

It is interesting, however, that 50% of crime committed by drug abusers who have come to notice as the result of an acute drug poisoning incident comprised property offences. This figure is similar to that observed in studies of drug offenders (Wardlaw, 1978) and of drug addicts (Inciardi, 1977). Different crime patterns reported for male and female addicts (Grandossy, 1980) were also seen in the first offences of this group of acute drug poisoning cases. It seems that

the types of offences committed by drug abusers who come to notice in different ways are similar to each other and that it is more likely to involve property related crime.

This data poses difficult questions about the relationship between drug abuse and criminality. Many drug controls have been imposed in the expectation that they will reduce property related crime associated with illegal drug use. The most important approaches have included:-

1. Control of drugs at their source This has involved Interpol, the diversionary programmes for Thai farmers and the establishment of special Manufacturing Squads within the Drug Bureaux of some Police Forces.

2. Control of drugs at their point of distribution The Misuse of Drugs Act, 1967, in Britain legitimises use of traditionally prohibited compounds but puts their control strictly into the hands of the Home Office (Home Office, 1980).

3. Control of drug users In Santa Barbara, California, legislation was introduced which required heroin users to be jailed for 90 days. There was a 0.5% decrease in robberies and 5.3% decrease in burglaries reported in the area (Votey, 1981). Further projects undertaken in New York where heavy penalties for narcotics use were imposed failed to show any significant effects on crime (Joint Committee on New York Drug Law Evaluation, 1977).

The data presented in this report suggests that there is a general relationship between drug abuse and criminogenicity and the relationship is not restricted only to illegal drug users (Table 11).

Table 11 Criminality of Acute Drug Poisoning Patients

Drug Type	No Criminal Record	Proportion of Offences Against Person	Proportion of Offences Against Property	Proportion of Other Offences
Alcohol only	76%	11%	39%	50%
Over-the-Counter	74%	15%	50%	35%
Prescription Drugs	72%	10%	44%	46%
Illegal or Permit Drugs	52%	2%	50%	48%

It gives further support to the opinion that:-

> "In itself, no drug leads to crime and drugs cannot create or give rise to anything not already inherent in the person who consumes them." (Reboredo, 1980)

It is well known that reported crime grossly underestimates the actual number of offences committed (e.g. Inciardi, 1979), but the relative figures for users of each drug type carry more meaning since police selection procedures are the only significant factor which may contribute artificially to the differences.

On the other hand, the argument that narcotics control itself leads to property crime committed by addicts by raising the price of drugs (Gettinger, 1979) is not supported by this study. Addicts do not always use expensive prohibited drugs and, as well, the property crime committed by abusers of alcohol, prescription and over-the-counter preparations is not significantly different from that committed by illegal drug users. Inciardi (1977) found that criminal activity in people who were now heroin addicts began well before their use of heroin, although the intensity of this behaviour increased with the onset of illegal drug use (Austin and Lettieri, 1976). Trebach (1979) considers that addiction does not cause crime.

Most drug use reported in Australian surveys involves alcohol, and prescription or over-the-counter preparations and less than 5% involves illegal drugs other than cannabis (Interdepartmental Working Party, 1981; A.B.S., 1979). The crime committed by abusers of prescription

drugs is therefore probably far more significant than that committed by illegal drug users.

The Incidence of Drug Offences and Acute Drug Poisoning

Drug abuse is more frequent in Central Melbourne than it is in any other part of the city. This is common to both drug offence and drug overdose incidents and is too large to be accounted for entirely by the large daily influx of workers who live in the suburbs. Other areas of the metropolitan area seem more predisposed to either drug overdose incidents, as in the Eastern Suburbs, or drug offences, as in the Northern Sector.

These geographical differences between drug offences and drug overdose cases appear to be partly accounted for by socio-economic factors (M.M.B.W., 1981). The Northern Sector has a household income equal to the average for the metropolitan area, it has a large proportion of people aged under 30 years and a high proportion of blue collar workers, whereas the Eastern Sector has a high household income, low proportion of population aged under 30 years, and a high proportion of white collar workers. It seems that acute drug poisoning is more likely to be associated with people who live in wealthier parts of the city while drug offences are more likely to be associated with people who live in the less advantaged suburbs.

The effects of drug control operations known to have taken place in the study period are difficult to measure through the health system because of the small numbers of particular illegal and permit drugs involved in acute drug poisoning cases.

About the same number of drug offenders used amphetamines as used heroin. This relative proportion is much higher than any previously reported figures in Australia (Australian Federal Police, 1982; Wardlaw, 1978) and it indicates an important trend toward use of locally manufactured substances. It can be expected to foreshadow an upsurge in use of other drugs which lend themselves to backyard production.

In October a big amphetamine manufacturing plant was closed by police following several weeks of surveillance. There were fewer

amphetamine related drug overdose incidents in subsequent months but the numbers are too small to be conclusive. Amphetamine related offences did not decrease significantly. It is possible, however, that the high number of amphetamine arrests in January partly reflect the increased drug available prior to police closing yet another backyard factory in early March.

Heroin seizures, and the arrest of important couriers, made by Joint Task Force members early in January do not appear to have had any immediate effect on the drug's contribution to acute drug poisonings or to drug offences. It seems that the availability of heroin is large enough to cushion the acute effects of losing one syndicate in the distribution network.

CONCLUSION

Drug abuse in Melbourne is a continuum of drug using behaviours ranging in severity from a single incident of drunkenness by teenagers intolerant to alcohol to addiction to illegal drugs such as heroin. The entire spectrum is represented in the population of acute drug poisoning patients.

This project has shown that it is not possible to categorise drug abusers according to their drug of abuse or to the legality of their drug use.

Most cases of drug abuse which came to notice of the ambulance service involved several different substances. Known illegal drug users often presented under the influence of prescription drugs. Many of those who used illegal drugs on the occasion which brought them to notice were not known to police. Alcohol was used alone and in company with all legal categories of drugs.

The relationship between drug abuse as expressed by acute drug poisoning behaviour and criminality appears to be very similar to that seen in drug abusers selected because they are heroin addicts seeking treatment or because they have been detected committing drug offences.

There does not seem to be a significant relationship between the legal category of the drugs used and the known criminality of the user. Drug abusers seem more likely to have committed property offences such as theft and burglary than offences against the person and there is some evidence to suggest that alcohol abusers are more likely to have committed violent crime than other groups of drug users.

Economic factors associated with the cost of illegal drug abuse do not seem important in determining criminal behaviour. The high incidence of theft and burglary offences among all categories of drug abusers and the large number of people who are known to have committed crimes in the same year as they attempted to commit suicide suggests that psychological factors may be more important determinants of the relationship between criminality and drug abuse.

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APPENDIX 1

General Characteristics of Acute Drug Poisoning Patients

Table 1.1 Distribution of age and sex of acute drug poisoning patients

FREQUENCIES

Age	Sex: Men	Women	Total
10 to 19 years	24	80	104
20 to 29 years	123	147	270
30 to 39 years	74	115	189
40 years & over	72	142	214
Total	293	484	777

PERCENTAGES

	Men	Women	Total
10 to 19 years	8.1	16.5	13.3
20 to 29 years	41.7	30.3	34.6
30 to 39 years	25.1	23.7	24.2
40 years & over	24.4	29.3	27.4
Total	37.7	62.3	100.0

Chi-square test = 19.27

D.F. = 3

Signif = .0007

Table 1.2 Residential Address of Men & Women in Acute Drug Poisoning Group.

FREQUENCIES

Sex

Residential Address	Men	Women	Total
Central Sector	76	141	217
Western Sector	50	87	137
Northern Sector	81	98	179
Eastern Sector	56	102	158
Southern Sector	34	62	96
Other	16	30	46
Total	313	520	833

PERCENTAGES

	Men	Women	Total
Central Sector	24.3	27.1	26.1
Western Sector	16.0	16.7	16.4
Northern Sector	25.9	18.8	21.5
Eastern Sector	17.9	19.6	19.0
Southern Sector	10.9	11.9	11.5
Other	5.2	5.8	5.5
Total	36.7	62.4	100.0

Chi-square test = N.S.

Table 1.3 Residential Addresses of Acute Drug Poisoning Population According to Age.

FREQUENCIES

Age

Residential Address	10 to 19 years	20 to 29 years	30 to 39 years	40 years & Over	Total
Central Melbourne	27	74	42	50	193
Western Sector	17	41	37	30	125
Northern Sector	13	53	46	55	167
Eastern Sector	28	48	34	41	151
Southern Sector	11	34	20	25	90
Rural Victoria	3	9	5	6	23
Other	2	9	3	4	18
Total	101	268	187	211	767

PERCENTAGES

	10 to 19 years	20 to 29 years	30 to 39 years	40 years & Over	Total
Central Melbourne	26.7	27.6	25.5	23.7	25.2
Western Sector	16.8	15.3	19.8	14.2	16.4
Northern Sector	12.9	19.8	24.6	26.1	21.7
Eastern Sector	27.7	17.9	18.2	19.4	19.7
Southern Sector	10.9	12.7	10.7	11.8	11.7
Rural Victoria	3.0	3.4	2.7	2.8	2.9
Other	2.0	3.4	1.6	1.9	2.2
Total	13.1	34.9	29.4	27.4	100.0

Chi-square test = N.S.

APPENDIX 2

Drugs Used in Acute Drug Poisoning

Table 2.1 Alcohol Involvement of Men & Women In Acute Drug Poisoning Cases

FREQUENCIES

Sex	Alcohol Involvement: No Alcohol	Yes Unkown	Wine	Beer	Spirits	Total
Male	204	64	9	21	17	315
Female	395	62	15	17	21	510
Total	599	126	24	38	38	825

PERCENTAGE

Male	64.4	20.3	2.9	6.7	5.4	38.2
Female	77.3	12.2	2.9	3.3	4.1	61.8
Total	72.4	15.2	2.9	4.6	4.6	100.0

Chi-square test = 20.54
D.F. = 5
Signif. = 0.0045

Table 2.2 Number of Preparations Used by Different Age Groups in Acute Drug Poisoning Group

FREQUENCY

Number of Preparations	Age 10 to 19 years	20 to 29 years	30 to 39 years	40 years & Over	Total
Nil	6	7	5	8	26
One	47	125	85	110	367
2 or 3	28	94	70	59	251
Greater than 3	5	9	48	7	29
Total	86	235	168	184	673

PERCENTAGES

Nil	7.0	3.0	3.0	4.3	3.9
One	54.7	53.2	50.6	59.7	54.5
2 or 3	32.6	40.0	41.7	32.1	37.3
Greater than 3	5.8	3.8	4.8	3.8	4.3
Total	12.8	34.9	25.0	27.3	100.0

Chi-square test = N.S.

Table 2.3 Alcohol Involvement of Different Age Groups in Acute Drug Poisoning.

FREQUENCY

Alcohol Involvement	Age 10 to 19 years	20 to 29 years	30 to 39 years	40 years & Over	Total
No Alcohol	86	201	127	144	558
Yes, Unknown	10	40	31	33	114
Wine	1	9	12	6	25
Beer	1	15	11	10	35
Spirits	5	10	7	13	34
Total	103	307	167	192	766

PERCENTAGES

No Alcohol	83.5	74.7	67.6	69.9	72.8
Yes, Level Unknown	9.7	15.0	16.5	16.0	14.9
Wine	1.0	2.2	6.4	2.9	3.3
Beer	1.0	4.8	5.9.	4.9	4.6
Spirits	4.9	3.3	3.7	6.3	4.4
Total	13.4	35.0	24.8	26.8	100.0

Chi-square test = N.S.

Table 2.4 Types of Drugs Used by Male & Female Acute Drug Poisoning Patients.

FREQUENCIES

Drug Classification	Sex Male	Female	Total
Amphetamine	7	6	13
Marijuana	1	3	4
Heroin	13	10	23
Cocaine, L.S.D., Solvents	4	8	12
Alimentary Tract	5	20	25
Blood & Blood Forming System	1	3	4
Cardiovascular System	7	17	24
Dermatolcgical Drugs	1	4	5
Genitourinary Urinary System & Sex Hormones	0	6	6
Hormones other than Sex Hormones	0	1	1
Anti-infectives	5	7	12
Musculo Skeletal System	1	9	10
Anaesthetics	0	1	1
Analgesics	30	62	92
Anti-epileptics	14	10	24
Anti-parkinsonism	3	2	5
Psycholeptics : tranquillisers, etc.	238	420	568
Psychcanaleptics : anti-depressants, etc.	46	71	117
Parisitology	1	1	2
Respiratory System	14	24	38
Sensory Organs	-	-	-
Other	8	6	14
Alcohol Only	17	11	28
Total	416	702	1,118

Table 2.4 (Cont'd.)

PERCENTAGES

Drug Classification	Sex Male	Female	Total
Amphetamine	1.8	0.9	1.2
Marijuana	0.3	0.4	0.3
Heroin	3.3	1.4	2.1
Cocaine, L.S.D., Solvents	1.0	0.6	1.1
Alimentary Tract	1.3	2.8	2.2
Blood & Blood Forming System	0.3	0.4	0.3
Cardiovascular System	1.8	2.4	2.1
Dermatological Drugs	0.3	0.6	0.4
Genitourinary Urinary System & Sex Hormones	0.0	0.9	0.5
Hormones other than Sex Hormones	0.0	0.1	0.1
Anti-infectives	1.3	1.0	1.1
Musculo Skeletal System	0.3	1.3	0.9
Anaesthetics	0.0	0.1	0.0
Analgesics	7.7	8.8	8.2
Anti-epileptics	3.6	1.4	2.1
Anti-parkinsonism	0.8	0.3	0.4
Psycholeptics : tranquillisers, etc.	61.2	59.8	50.8
Psychoanaleptics : anti-depressants, etc.	11.8	10.1	10.5
Paristology	0.3	0.9	0.2
Respiratory System	3.6	3.4	3.4
Sensory Organs	0.0	0.0	0.0
Other	2.1	0.9	1.2
Alcohol	4.4	1.6	2.5
Total	37.2	62.8	100.0

Chi-square = 34.84

D.F. = 22

Signif. = .0001

* Based on first four drugs reported by Ambulance Officers.

APPENDIX 3

Criminality of Acute Drug Poisoning Patients

Table 3.1 Alcohol Involved in Acute Drug Poisoning Incidents Different Legal Categories of Drugs.

FREQUENCIES

Drug Type	Alcohol Involvement: No Alcohol	Unspecified Alcohol	Wine	Beer	Spirits	Total
No Drugs		26	1	1	3	31
Over the Counter	49	3	0	2	2	56
Prescription Drug s	412	88	24	28	26	578
Illegal Drug s	39	2	0	0	6	47
Total	507	112	25	34	37	715

PERCENTAGES

No Drugs		83.9	2.9	11.8	8.8	4.8
Over the Counter	87.5	15.4	0.0	3.6	3.6	7.8
Prescription Drugs	71.3	15.3	4.2	4.8	4.5	80.8
Illegal Drugs	83.0	4.2	0.0	0.0	12.8	6.6
Total	70.9	15.6	3.5	4.8	5.2	100.0

Chi-square Test = 85.41
D.F. = 12
Signif. = 00000

Table 3.2 Legality of Drugs Used by Known Addicts in Acute Drug Poisoning Cases.

FREQUENCIES

Drug Type

Signs of Addiction	Alcohol only	Over the Counter	Prescription Drugs	Illegal or Permit	Total
Not Reported	34	56	564	32	686
Reported	0	0	17	15	32
Total	34	56	581	56	718

PERCENTAGES

Not Reported	5.0	8.2	82.2	4.7	95.5
Reported	0.0	0.0	53.1	46.7	4.5
Total	4.7	7.8	80.9	6.5	100.0

Chi-square Test = 90.61
D.F. = 3
Signif. = 00000

Table 3.3 Police Involvement of Male & Female Acute Drug Poisoning Patients

FREQUENCIES

Sex	No Prior Record	One Time	2 to 5 times	6 to 10 times	Over 10 times	Total
	Police Involvement					
Male	195	24	43	20	34	316
Female	422	47	24	9	18	520
Total	617	71	67	29	52	836

PERCENTAGES

Male	61.7	7.6	13.6	6.3	10.8	37.8
Female	81.2	9.0	6.3	1.7	3.5	62.2
Total	73.8	8.5	8.0	3.5	6.2	100.0

Chi-square Test = 59.19
D.F. = 4
Signif. 00000

Table 3.4 Age Groups of Acute Drug Poisoning Patients Known Known to Police.

FREQUENCIES

Police Knowledge	Age 10 to 19 years	20 to 29 years	30 to 39 years	40 Years & Over	Total
Known to Police	25	93	51	47	216
Not Known to Police	75	168	132	162	537
Total	100	261	183	209	753

PERCENTAGES

Known to Police	25.0	35.3	24.7	23.0	28.4
Not Known to Police	75.0	64.7	75.3	77.0	71.6
Total	13.4	39.5	21.3	25.8	100.0

Chi-square Test = 10.80

D.F. = 3

Signif. = .0081

Table 3.5 Relationship between Legality of Drug Used and Police Knowledge

FREQUENCIES

Police Knowledge	Drug Type Alcohol	Over the Counter	Prescription	Illegal	Total
Known to Police	8	14	153	2	201
Not Known to Police	25	40	399	23	506
Total	33	54	552	25	707

PERCENTAGES

Known to Police	24.2	25.9	27.7	47.7	28.7
Not Known to Police	75.8	74.1	72.3	52.3	71.3
Total	4.8	7.9	80.8	6.4	100.0

Chi-square Test = N.S.

Table 3.6 Police Knowledge of Known Addicts in Drug Overdose Population.

FREQUENCY

Signs of Addiction	Police Knowledge: Known to Police	Not Known to Police	Total
Not Reported	204	561	765
Reported	20	13	33
Total	224	574	798

PERCENTAGES

Not Reported	26.7	73.7	4.1
Reported	60.6	39.4	95.9
Total	28.1	71.9	100.0

Corrected Chi-square = 16.40
D.F. = 1
Signif. = .0001

Table 3.7 Age of First Non-Drug Offence for Male & Female in Acute Drug Poisoning Patients

FREQUENCIES

Age at First Non-Drug Offence

Sex	10 to 16 years	17 to 20 years	21 to 30 years	Over 30 years	Total
Men	5	29	0	1	35
Women	6	44	7	1	58
Total	11	73	7	2	93

PERCENTAGES

Men	14.3	82.9	0.0	2.9	37.6
Women	10.3	75.9	12.1	1.7	62.4
Total	11.8	78.5	7.5	2.2	100.0

Chi-square Test = N.S.

Table 3.8 Year Acute Drug Poisoning Cases Last Recorded by Police

FREQUENCY

Sex	Year 1981	1980	1970 thru' 1979	Before 1979	Total
Men	33	9	27	6	75
Women	14	5	10	3	35
Total	47	14	37	9	107

PERCENTAGES

Men	44.0	12.0	36.0	8.0	70.1
Women	43.8	15.6	31.3	9.4	29.9
Total	43.9	13.1	34.6	8.4	100.0

Chi-square Test = N.S.

Table 3.9 Number of Prior Drug Related Incidents reported by Police for Acute Drug Poisoning Patients.

FREQUENCIES

Number of Drug Episodes	Drug Type Alcohol only	Over the Counter Drugs	Prescription Drugs	Illegal or Permit Drugs	Total
Nil	34	55	566	40	695
1	0	1	8	2	11
2 or 3	0	0	3	1	4
Total	34	56	577	43	710

PERCENTAGES

Nil	100.0	98.2	98.1	93.0	97.9
1	0.0	1.8	1.4	4.7	1.5
2 or 3	0.0	0.0	0.5	2.3	0.5
Total	4.8	7.9	81.3	6.1	100.0

Chi-square Test = N.S.

Table 3.10 Acute Drug Poisoning Subjects Known to Police - First Offence (Non-Drug)

FREQUENCIES

First Non-Drug Offence	Sex: Male	Sex: Female
Homicide & Assault	8	3
Sex Offences & Indecent Exposure	7	2
Burglary	17	3
Theft	30	37
Motor Vehicle Offences	11	1
Conspiracy & Deception	1	3
Firearm	2	4
Prostitution	0	6
Traffic	14	6
Protection Application	5	14
Other	25	6
Armed Robbery	0	0
Total	120	85

Chi-square Test = 46.057
D.F. = 10
Signif. = 0000

Table 3.10 Acute Drug Poisoning Subjects Known to Police - First Offence (Non-Drug)

PERCENTAGES

First Non-Drug Offence	Sex: Male	Sex: Female
Homicide & Assault	6.7	3.5
Sex Offences & Indecent Exposure	5.8	2.4
Burglary	14.2	3.5
Theft	25.0	43.5
Motor Vehicle Offences	9.2	1.2
Conspiracy & Deception	0.8	3.5
Firearm	1.7	4.7
Prostitution	0.0	7.1
Traffic	11.7	7.1
Protection Application	4.2	16.5
Other	20.8	7.1
Armed Robbery	0	0
Total	58.5	41.5

Table 3.11 First Non-Drug Offences of Different Age Groups of Acute Drug Poisoning Patients.

FREQUENCIES

First Non-Drug Offence	Age 10 to 19 years	20 to 29 years	30 to 39 years	40 Years & Over	Total
Assault	1	8	0	2	11
Sex Offences & Indecent Exposure	2	2	3	1	8
Burglary	3	8	4	4	19
Theft	9	24	14	19	66
Motor Vehicle	1	6	5	0	12
Conspiracy & Deception	0	1	2	1	4
Firearms	0	3	1	1	5
Prostitution	0	6	0	0	6
Traffic	0	10	6	3	19
Protection Application	6	6	4	1	17
Other	2	12	8	9	31
Total	24	86	47	41	198

Chi-square Test = N.S.

Table 3.11 First Non-Drug Offences of Different Age Groups of Acute Drug Poisoning Patients.

PERCENTAGES

First Non-Drug Offence	Age 10 to 19 Years	20 to 29 Years	30 to 39 Years	40 Years & Over	Total
Assault	4.2	9.3	0.0	4.9	5.6
Sex Offences & Indecent Exposure	8.3	2.3	6.4	2.4	4.0
Burglary	12.5	9.3	8.5	9.8	9.6
Theft	37.5	27.9	29.8	46.3	33.3
Motor Vehicle	4.2	7.0	10.6	0.0	6.1
Conspiracy & Deception	0.0	1.2	4.3	2.4	2.0
Firearms	0.0	3.5	2.1	2.4	2.5
Prostitution	0.0	7.0	0.0	0.0	3.0
Traffic	0.0	11.6	12.8	7.3	9.6
Protection Application	25.0	7.0	18.5	2.4	8.6
Other	8.3	14.0	17.0	22.0	15.7
Total	12.1	43.4	23.7	20.7	100.0

Table 3.12 Association between Legality of Drug Used in Acute Drug Poisoning Cases and Non-Drug Offences Recorded *

FREQUENCY

Non-Drug Offences	Drug Type: Alcohol Only	Over the Counter	Prescription Drugs	Illegal or Permit Drugs	Total
Assault	0	3	14	0	17
Sex Offences & Indecent Exposure	2	0	13	1	15
Other Offences Against the Person	0	0	2	0	2
Burglary	2	1	31	5	39
Theft	7	9	78	11	105
Motor Vehicle Offences	0	0	24	6	30
Conspiracy & Deception	0	0	12	1	13
Firearms Offences	0	1	3	]	5
Prostitution	0	1	6	3	10
Traffic Offences	2	1	31	4	38
Protection Application	0	0	19	8	27
Other	5	4	70	4	83
Total	18	20	303	44	384

Table 3.12 Association between Legality of Drug Used in Acute Drug Poisoning Cases and Non-Drug Offences Recorded *

PERCENTAGES

Non-Drug Offences	Drug Type: Alcohol Only	Over the Counter	Prescription Drugs	Illegal or Permit Drugs	Total
Assault	0.0	15.0	4.6	0.0	4.4
Sex Offences & Indecent Exposure	11.1	0.0	4.3	2.3	3.9
Other Offences Against the Person	0.0	0.0	0.7	0.0	0.5
Burglary	11.1	5.0	10.2	11.3	10.1
Theft	38.8	45.0	25.7	25.0	27.3
Motor Vehicle Offences	0.0	0.0	7.9	13.6	7.8
Conspiracy & Deception	0.0	0.0	4.0	2.3	3.4
Firearms Offences	0.0	5.0	1.0	2.3	1.3
Prostitution	0.0	5.0	2.0	6.8	2.6
Traffic Offences	11.1	5.0	10.2	9.1	9.9
Protection Application	0.0	0.0	6.3	18.2	7.0
Other	27.8	20.0	23.1	9.1	21.6
Total	4.7	5.2	78.9	11.4	100.0

* Calculated using main offences in 1st, 2nd & last encounter with the Police.

Chi-square Test = 118.859

D.F. = 27

Signif. = 0000

APPENDIX 4

Comparison of Places Where Drug Offences & Drug Poisoning Occurred.

Table 4.1 Legality of Drug Use Detected by Police and Ambulance Services in Different Areas of Metropolitan Melbourne During Study Period.

FREQUENCIES

Drug Type	Geographic Location: Central	Western Sector	Northern Sector	Eastern Sector	Southern Sector	Other	Total
No Drugs	14	3	9	7	4	2	39
Illegal & Permit	195	86	138	66	97	18	596
Over the Counter	9	5	3	2	3	4	26
Prescription	256	123	175	171	91	41	857
Total	474	217	325	246	195	61	1,518

PERCENTAGES

No Drugs	3.0	1.4	2.8	2.8	2.1	2.2	2.6
Illegal & Permit	41.1	39.6	42.5	26.8	49.7	38.3	39.0
Over the Counter	1.9	2.3	0.9	2.8	1.5	4.9	1.7
Prescription	54.0	56.7	53.8	69.5	46.7	32.2	56.5
Total	31.2	14.3	21.4	16.2	12.8	4.1	100.0

Chi-square Test = 71.66
D.F. = 15
Signif. = 0000

Table 4.2 Geographic Distribution of Most Usual Illegal Drugs Used in Acute Drug Poisoning Incidents

FREQUENCIES

Illegal Drug	Geographic Location: Central	Western Sector	Northern Sector	Eastern Sector	Southern Sector	Westernport	Other	Total
Amphetamine	6	1	2	3	1	0	0	13
Cannabis	2	0	1	0	1	0	0	4
Heroin	11	3	4	3	2	0	0	23
Cocaine, L.S.D., Solvents	5	1	1	2	1	0	1	11
Total	24	5	8	8	5	-	1	51

PERCENTAGES

Amphetamine	25.0	20.0	25.0	37.5	20.0	0.0	0.0	25.5
Cannabis	8.3	0.0	12.5	0.0	20.0	0.0	0.0	7.8
Heroin	45.8	60.0	50.0	37.5	40.0	0.0	0.0	45.1
Cocaine	20.8	20.0	12.5	25.0	20.0	0.0	10.0	21.6
Total	47.0	9.8	15.7	15.7	9.8	0.0	2.0	100.0

Chi-square Test = N.S.

Table 4.3 Geographic Location of Most Usual Illegal Drugs Contributing to Drug Offences

FREQUENCIES

Geographic Location

Illegal Drug	Central	Western Sector	Northern Sector	Eastern Sector	Southern Sector	Westernport	Other	Total
Amphetamine	50	10	37	20	13	0	1	131
Cannabis	136	°78	118	65	88	8	4	494
Heroin	72	15	24	1	11	1	1	125
Cocaine, L.S.D., Solvents	3	6	6	6	1	0	0	22
Total	262	106	185	92	113	9	6	772

PERCENTAGES

Amphetamine	19.0	9.4	20.0	21.7	11.5	0.0	16.7	17.0
Cannabis	51.9	70.7	63.8	70.6	77.9	88.8	66.7	64.0
Heroin	27.5	12.9	13.0	1.1	9.7	11.1	16.7	16.2
Cocaine, L.S.D., Solvents	1.1	5.7	3.2	6.5	0.9	0.0	0.0	2.8
	33.9	13.7	24.0	11.9	14.6	1.2	0.8	100.0

Chi-square Test = 79.81
D.F. = 18
Signif. = 0000

APPENDIX 5

Times of Drug Offences & Acute Drug Poisoning Incidents.

CONTINUED

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Table 5.1 Comparison of Acute Drug Poisoning Incident & Drug Offences by Month

FREQUENCIES

Month

Incident	August	September	October	November	December	January	Total
Acute Drug Poisoning	133	140	157	125	144	150	849
Drug Offence	140	123	132	107	117	203	822
Total	273	263	289	232	261	353	1,671

PERCENTAGES

Acute Drug Poisoning	45.7	16.5	18.5	14.7	17.0	17.7	50.8
Drug Offence	17.0	15.0	16.1	13.0	14.2	24.7	49.2
Total	16.3	15.7	17.3	13.9	15.6	21.1	100.0

Chi-square Test = 15.16
D.F. = 5
Signif. = .0097

Table 5.2 Illegal Drugs Used in Acute Drug Poisoning Incidents

FREQUENCIES

Months	Illegal Drug: Amphetamine	Cannabis	Heroin	Cocaine, L.S.D., Solvents	Totals
August & September	6	2	8	6	28
October & November	3	1	9	4	27
December & January	2	1	6	9	12
Total	11	4	19	13	51

PERCENTAGES

August & September	54.5	50.0	34.8	46.1	54.9
October & November	27.3	25.0	39.1	30.8	52.9
December & January	12.4	25.0	26.1	23.1	23.5
Total	21.6	7.8	45.0	25.5	100.0

Chi-square Test = N.S.

Table 5.3 Incidence of Drugs Contributing to Drug Offences each Month.

FREQUENCY

Month	Amphetamine	Cannabis	Heroin	Cocaine, L.S.D., Solvents	Other	Total
			Drug			
August	25	89	21	5	20	160
September	16	63	14	7	16	116
October	19	87	17	2	53	178
November	19	53	21	3	30	126
December	16	85	17	2	60	180
January	39	116	36	3	14	208
Total	134	493	126	22	193	968

PERCENTAGES

August	15.6	55.6	13.1	3.1	12.5	16.5
September	13.7	54.3	12.1	6.0	13.8	11.9
October	10.7	48.9	9.6	1.1	29.8	18.4
November	15.1	42.1	16.7	2.4	23.8	13.0
December	8.9	47.2	9.4	1.1	33.3	18.6
January	18.8	55.8	17.3	1.4	6.7	21.5
Total	13.8	13.0	13.0	2.3	19.9	100.0

Chi-square Test = 163.4 1

D.F. = 20

Signif. = 0000

Table 5.4 Comparison of Acute Drug Poisoning Incidents & Drug Offences by Day of Week.

FREQUENCIES

Incident	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
	Day of Week							
Acute Drug Poisoning	107	122	108	124	124	129	130	844
Drug Offences	104	146	131	142	124	95	80	822
Total	211	268	239	266	248	224	210	1,666

PERCENTAGES

Acute Drug Poisoning	12.7	14.5	12.8	14.7	14.7	15.3	15.4	50.7
Drug Offences	12.7	17.8	15.9	17.3	15.1	11.6	9.7	49.3
Total	12.7	16.1	14.3	16.0	14.9	13.4	12.6	100.0

Chi-square Test = 22.40

D.F. = 6

Signif. = .0010

Table 5.5 Comparison of Acute Drug Poisoning Incidents & Drug Offences by Time of Day.

FREQUENCIES

Incident	Time of Day 00001 - 0800 hours	0801 - 1600 hours	1601 - 2400 hours	No Precise Time	Total
Acute Drug Poisoning	170	262	416	1	849
Drug Offences	175	201	279	165	820
Total	345	463	695	166	1,669

PERCENTAGES

Acute Drug Poisoning	20.0	30.9	49.0	0.1	50.9
Drug Offences	21.3	24.5	34.0	20.1	49.1
Total	20.7	27.7	41.6	9.9	100.0

Chi-square Test = 196.69
D.F. = 3
Signif. =.0000

APPENDIX A

Data Collection

Information was collected according to the following coding system.

Data Item Number	Data Description	Cases - Acute Drug Poisoning (ADP) or Drug Offences (DO)
1	Study Number	ADP/DO
2	Date of Incident: Day/Month/Year	ADP/DO
3	Time of Incident	ADP/DO
4	Place of Incident	ADP/DO
5	Police Involved	DO
6	Age	ADP/DO
7	Sex	ADP/DO
8	Place of Birth	DO
9	Medical History - epileptic, psychiatric, etc.	ADP
10	First Drug Named	ADP/DO
11	Second Drug Named	ADP/DO
12	Third Drug Named	ADP/DO
13	Fourth Drug Named	ADP/DO
14	Number of Compounds Reported	ADP/DO
15	Occupation	DO
16	Number of Prior Offences Recorded Number of Offences Reported at Time	ADP DO
17	Number of Prior Drug Offences Number of Drug Offences Reported	ADP DO
18	Number of Prior Traffic Offences Number of Traffic Offences Reported	ADP DO
19	Known to Police	ADP/DO
20	Number of Preparations Involved	ADP/DO
21	Number of Times Processed	ADP
22	Number of Times Processed for Drugs	ADP

23	Number of Times Processed for Traffic	ADP
24	Number of Aliases	ADP/DO
25	First Drug Episode: Main Drug Offence/Year/Result	ADP
	Main Drug Offence	DO
26	Second Drug Episode: Main Drug Offence/Year/Result	ADP
	Second Drug Offence	DO
27	Last Drug Episode: Main Drug Offence/Year/Result	ADP
	Third Drug Offence	DO
28	First Non Drug Episode: Main Non Drug Offence/Year/Result	ADP
	Main Non Drug Offence	DO
29	Second Non Drug Episode: Main Non Drug Offence/Year/Result	ADP
	Second Non Drug Offence	DO
30	Last Non Drug Episode: Main Non Drug Offence/Year/Result	ADP
	Third Non Drug Offence	DO
31	Place of Incident: Private house, etc.	DO
32	Conscious State of Patient	ADP
33	Signs of Addiction	ADP
34	Alcohol Involved	ADP
35	Place of Residence	ADP/DO

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END