

# **Drug Use Monitoring in Australia (DUMA): A Brief Description**

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# Foreword

Those who engage in both criminal activity and illicit drug use have a greater impact on the quality of life of ordinary Australians than other groups of drug users, yet we know very little about them. None of the existing data sources provides an effective monitoring strategy that focuses specifically on offenders, and which has a clear mandate to address the issue of drugs and crime. This project, Drug Use Monitoring in Australia (DUMA), will serve as an unparalleled source of information on drug use and will significantly enhance our understanding of the link between drugs and crime.

DUMA is a pilot project that seeks to measure drug use amongst those people who have been charged with a criminal offence. Data from DUMA will be used to examine issues such as the relationship between drugs and property and violent crime, monitor patterns of drug use across time, and help assess the need for drug treatment amongst the offender population.

The Australian Institute of Criminology is part of an international network of researchers that are studying drug prevalence data on offenders at selected sites. The aim is to:

- Improve the quality of data available on illicit drug use in the offender population.
- Provide an early warning system for changes in patterns of illicit drug use.
- Provide aggregated data in a timely fashion to State and Territory law enforcement agencies as well as Federal national agencies such as the Australian Federal Police, Customs, Australian Bureau of Criminal Intelligence, and National Crime Authority on the level of illicit drug use within the offender population.
- Establish a mechanism whereby local and national law enforcement can evaluate policy initiatives.

**Adam Graycar**  
**Director, Australian Institute of Criminology**  
**November 1999**

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# Contents

Foreword	<b>iii</b>
<i>Adam Graycar</i>	
Acknowledgments	<b>iv</b>
Executive Summary	<b>vii</b>
Introduction	<b>1</b>
The History of DUMA	<b>4</b>
The English Pilot Study	<b>6</b>
How DUMA Works?	<b>8</b>
Questionnaire Content	<b>13</b>
Urinalysis	<b>15</b>
Sample	<b>17</b>
Procedures	<b>19</b>
Why a Quarterly Monitoring Program?	<b>22</b>
Utility of the DUMA Data	<b>23</b>
Who is Most Likely to Use the Data?	<b>25</b>
Methodological Aims	<b>26</b>
Conclusion	<b>27</b>
Notes	<b>28</b>
References	<b>29</b>

## List of Tables

<b>Table 1:</b> Stakeholders and Sites in the DUMA Pilot Project	<b>9</b>
<b>Table 2:</b> Total Number of Arrestees and Number Interviewed, January 1999: Southport and East Perth Sites—Preliminary Data	<b>18</b>
<b>Table 3:</b> Per Cent Deemed Unfit for Interview, January 1999: Southport and East Perth Sites—Preliminary Data	<b>20</b>
<b>Table 4:</b> Response Rates, January 1999: Southport and East Perth Sites—Preliminary Data	<b>20</b>

## List of Diagrams

<b>Diagram 1:</b> General Arrangements of the DUMA Project	<b>8</b>
<b>Diagram 2:</b> Three Phases Involved in the Collection Process	<b>11</b>

# Executive Summary

This report provides an overview of the Drug Use Monitoring in Australia (DUMA) project. DUMA is a research pilot project that collects both self-report data on drug use and criminal activity, as well as a urine specimen from people who have recently been arrested and brought to a local police station for charging.

The project is a cooperative partnership between the AIC, local researchers and police. Essentially, it involves trained personnel interviewing arrestees in selected local police stations every 3 months over a three-year period.

DUMA has a number of policy aims:

- Collect prevalence data on drug use from arrestees, both drug offenders and other offenders, at selected sites in Australia.
- Improve the quality of data available on illicit drug use in the arrestee population to assist local treatment agencies.
- Provide data in a timely fashion to local law enforcement agencies for risk assessment and evaluation of local policy initiatives.
- Determine the feasibility of establishing a reliable database on drug use amongst the arrestee population against which national policy initiatives can be evaluated.
- Determine how best to present information in an accessible form.
- Determine best practice in dissemination of information to relevant bodies.

DUMA has a number of methodological aims:

- Demonstrate the feasibility of undertaking interviews with arrestees within lockups or custody suites.
- Determine whether arrestees will voluntarily provide urine specimens for research purposes.

- Develop protocols for interviewing arrestees within lockups or custody suites in the Australian context.
- Develop protocols for collection of urine specimens from arrestees in the Australian context.
- Develop appropriate training manuals and instructions for conducting the study.
- Examine issues such as the representativeness of the samples, the impact of interviewer characteristics on data collection, and the concordance between self-reported drug use and urinalysis results.

In conclusion, the broad aims of the pilot study are to determine whether the DUMA methodology can:

- Provide reliable drug prevalence data on arrestees.
- Provide aggregated data to local and national law enforcement and treatment agencies for monitoring, evaluation, and assessment procedures.
- Provide timely and high quality data to inform the policy process.

# Introduction

Throughout the 1990s, crime rates have climbed along with a number of drug indicators such as opioid overdoses. Analysts cannot satisfactorily explain the high levels of crime, particularly property crime, but they often cite drugs, specifically heroin, as the root of the problem. There is limited empirical evidence in Australia to support this claim. The *Australia Illicit Drug Report* (1999) provides minimal information on drug-related arrestees but it does not report on the link between drug use and other criminal activity (Makkai 1999). The NSW Bureau of Crime Statistics and Research noted that “Drug offences, for example, are usually only discovered by police when an arrestee is apprehended; the number of drug arrestees apprehended is affected not only by the number of persons using or selling drugs, but also by policing policy and resources” (Chilvers 1998, p. 3).

In order to determine the severity of the drug problem amongst the criminally-active population, it is essential to measure the prevalence of illicit drug use amongst this group. This involves an understanding of issues related to both the extent and the nature of illicit drug use; for example, the location of drug users in the community, the frequency, and the amount of drugs being used. Without such information, action and resources cannot be effectively tailored to combat the problem.

Thus, the indicators used to measure the prevalence of drug use must provide information on the geographic variations in drug use, when drug use changes, and changes in the types or combinations of drugs being consumed. Such indicators need to be sufficiently targeted, timely, and ongoing so that they can provide information on when a drug epidemic is occurring or subsiding. There are a number of organisations at national, state, and local levels that collect information on illicit drug use. Each of these measurement tools is designed for different purposes. The results of these collections

provide selective snapshots of drug-use patterns and behaviours and can be brought together to provide a more complete picture of the processes at work (Makkai 1999).

The Drug Use Monitoring in Australia (DUMA) project has been designed to complement the national collections while providing data at a local level for local initiatives. It seeks to measure drug use amongst people who have been arrested and brought to a police station for charging, regardless of offence. More specifically, DUMA will provide information from people closest to the streets—arrestees who have yet to be incarcerated—who are of primary interest to law enforcement. On a quarterly basis, voluntary confidential interviews and urine specimens are collected; these data are analysed to provide estimates of recent drug use in this high-risk subgroup. The program is designed to provide regular and timely data to fill a crucial missing gap in Australia's intelligence on the drug-crime nexus. Given the recent Commonwealth and State initiatives to direct drug offenders into treatment, the monitoring of arrestees becomes even more crucial in terms of:

- Knowing the size of the population.
- Examining the changes in illicit drug use and links to other criminal activity.
- Providing data for evaluating treatment amongst this critical group.

The DUMA pilot study has a number of policy aims:

- Collect data on the prevalence of drug use from arrestees, both drug-related and other offenders, at selected sites in Australia.
- Improve the quality of data available on illicit drug use in the arrestee population to assist local treatment agencies.
- Provide data in a timely fashion to local law enforcement agencies for risk assessment and evaluation of local policy initiatives.
- Determine the feasibility of establishing a reliable database on drug use amongst the arrestee population against which national policy initiatives can be evaluated.

- Determine the best way to present information in an accessible form.
- Determine the best way to disseminate information to relevant stakeholders in a timely fashion.

DUMA is not new. The program has been running for some time in the United States (National Institute of Justice 1999), a successful pilot study has been completed in England and a number of other countries (including the Netherlands, South Africa and Scotland) have launched pilots based on the United States model.

# The History of DUMA

The precursor to DUMA is the Drug Use Forecasting (DUF) program in the United States that was replaced in 1998 with the Arrestee Drug Abuse Monitoring (ADAM) program.<sup>1</sup> The DUF/ADAM program has run for more than 10 years in the United States and has played a central role in studying the drug-crime link. The specialised questionnaires (called addenda), a central part of DUF/ADAM, have enabled drug researchers and law enforcement agencies to examine key areas of concern: firearms (Decker, Pennell and Caldwell 1997), drug markets (Riley 1997), and methamphetamine use (Pennell et al. 1999). There are proposals underway to examine domestic violence and HIV/AIDS amongst this group.

The DUF/ADAM program was established in 1986 as a result of a set of data collected from arrestees who volunteered to partake in the interview and provide urine specimens in 1984 at Manhattan, New York. The data collected from 4,847 participants indicated that only 28 per cent of arrestees self-reported they used illicit drugs while, in fact, more than half tested positive for illicit drugs. The extent of drug use amongst arrestees, not arrested for drug-related offences, was much higher than expected. This project demonstrated that self-report data amongst this group should be treated with caution (Wish 1997).

The DUF program initially established sites in 12 large urban areas with populations greater than 250,000. In 1999, 35 sites were established with specific strategies to include rural communities in the monitoring program. Data from adult males are collected at all sites, data from adult females are collected at 21 sites, data from approximately 100 juvenile male arrestees are collected at 12 sites, and data on juvenile female arrestees are collected at 10 sites. The program is managed and coordinated by the National Institute of Justice (NIJ), under Federal grants.

The usefulness of the data has prompted police departments, treatment programs, and public health departments to integrate the data into their local policy and strategic responses (Smith 1993). The success of the program resulted in two major initiatives in 1997:

- Substantial funding was acquired from the Federal government to expand the number of sites from 35 in 1999 to 50 in 2000.
- Expand the program internationally with offers of “in-kind” assistance to participating countries in establishing pilot programs. This initiative, referred to as I-ADAM (International Arrestee Drug Abuse Monitoring Program), was designed to ensure comparability of methodology and data across countries. The Australian Institute of Criminology (AIC) is affiliated with the I-ADAM program.

The DUF/ADAM project has been very successful. The 1984 pilot study showed that 95 per cent of arrestees who were approached agreed to be interviewed and 84 per cent of them provided a urine specimen (Wish and Gropper 1990)—the response rate has remained high since this study. In 1997, the NIJ reported that “response rates for both adults and juveniles are consistently high. More than 90 per cent of the total sample consent to be interviewed and more than 80 per cent agreed to provide a urine specimen” (NIJ 1997a). Recent data indicate that “in most sites, about two-thirds of the adult arrestees and more than half of the juvenile arrestees tested positive for at least one drug” (NIJ 1999, p. 3). However, there are significant regional, gender, and age cohort variations in drug use; therefore, local stakeholders must make use of local data when developing and monitoring local intervention strategies. In addition to providing annual data on the prevalence of drug use amongst the arrestee population, the United States DUF/ADAM project demonstrates the power of maintaining an ongoing monitoring program (Wish 1997).

# The English Pilot study

There has been considerable anecdotal evidence and “best guesses” which speculate that a high proportion of crime is drug-related in the United Kingdom, but no substantive research could provide a valid estimate. In 1994, the British Home Office commissioned the University of Cambridge (Bennett 1998) to undertake a 2-year pilot study, in 5 police stations, on the feasibility of running the ADAM project in England.

Similar to the high response rates obtained in the United States, the response rates obtained in 3 different English sites were also high (87%, 83% and 84%). In addition, a high percentage of those (between 74% and 82%) interviewed also agreed to provide a specimen in 4 of the 5 sites and a lower rate (63%) was achieved in the fifth site. These rates are comparable with other surveys. For example, the Australian National Household Survey on Drug Use has never exceeded a 65 per cent response rate. There is no means of determining what the response rate is for convenience samples such as the IDRS injecting drug user surveys.

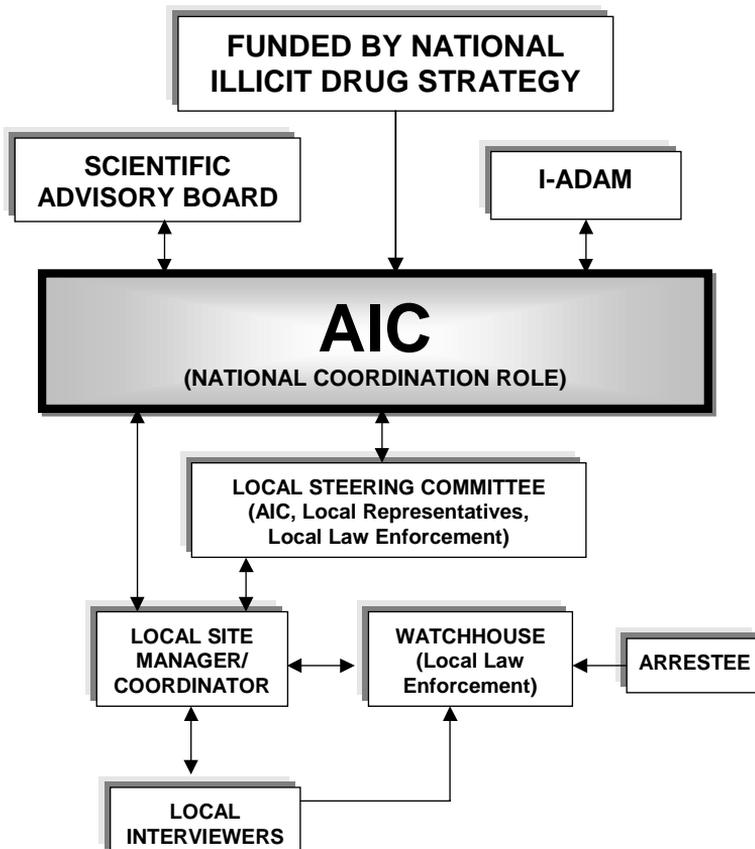
There were noticeable variations in positive urine tests amongst arrestees by region. The Manchester pilot study had the highest number of arrestees (78%) testing positive to any of the illicit drugs (including cannabis). Sunderland had the lowest number of arrestees (49%) testing positive to any illicit drug (Bennett 1998, p. 17). No arrestee tested positive to LSD in any site. Overall, 1 in 2 arrestees tested positive for cannabis, 1 in 5 tested positive for opiates, and 1 in 10 tested positive for cocaine.<sup>2</sup> In comparison, the United States data showed that a much smaller proportion of arrestees tested positive to opiates but a higher proportion tested positive to cocaine (Taylor and Bennett 1999).

Interestingly, selected findings showed that 47 per cent of arrestees held for shoplifting tested positive for opiates and one-third tested positive for cocaine. Of those held for theft of a motor vehicle, 23 per cent tested positive for opiates and 31 per cent tested positive for amphetamines. In the case of burglary of a dwelling, 11 per cent test positive opiates and 71 per cent tested positive for cannabis (Bennett 1998, p. 24). The pilot was regarded as a success and the Home Office has implemented the program on an ongoing basis.

# How DUMA Works?

DUMA is run in a partnership arrangement between the AIC, local police services, and researchers. Diagram 1 indicates the general arrangements of the DUMA project. The project has been funded by the National Illicit Drug Strategy (NIDS) to run pilot sites in 3 jurisdictions over 3 years. It is affiliated with the I-ADAM project, and the AIC consults a scientific advisory committee over technical and methodological issues.

**Diagram 1: General Arrangements of the DUMA Project**



The AIC does not partake in the primary data collection process. The data are collected by local police services, local universities, or research companies at each site. Table 1 indicates the relevant partners at each of the sites. There are memorandums that govern the working relationship between the AIC and the data collectors. Each site has its own advisory or steering committee that deals with strategic issues at the local level.

**Table 1: Stakeholders and Sites in the DUMA Pilot Project**

State	Site location	Data collectors	Police
New South Wales	Bankstown and Parramatta	Forsthye Consultants	NSW Police Service
Queensland	Southport	Marg Haurtiz and Associates	QLD Police Service
Western Australia	East Perth	National Drug Research Institute	WA Police Service

Diagram 2 describes the processes that are involved in each quarter. Essentially, the collection progresses through 3 phases with some overlap. The first phase involves the AIC and local site managers to:

- Write, revise, and edit protocols on the process of data collection, administer the questionnaire, and collect urine specimens.
- Develop the questionnaire.
- Determine the date and time of the quarterly collection.

Due to site-specific requirements, separate protocol documents are written for each site. Part of this process is influenced by what has occurred in the previous quarterly collection.

The second phase involves the local site partners to conduct interviews and collect the urine specimens at site. This phase is particularly important because local police and civilian interviewers must cooperate to bring about a successful collection. A single individual can have a dramatic affect on how well the collection progresses. For this reason, a high degree of trust has to build up between the interview team and the police. However, the interviewers must remain independent of the police if they are to gain arrestees' cooperation. In addition, site managers must closely monitor

interviewers to ensure all interviews are conducted in a professional manner and liaise with local on-site police to ensure the monitoring program works as efficiently and effectively as is possible.

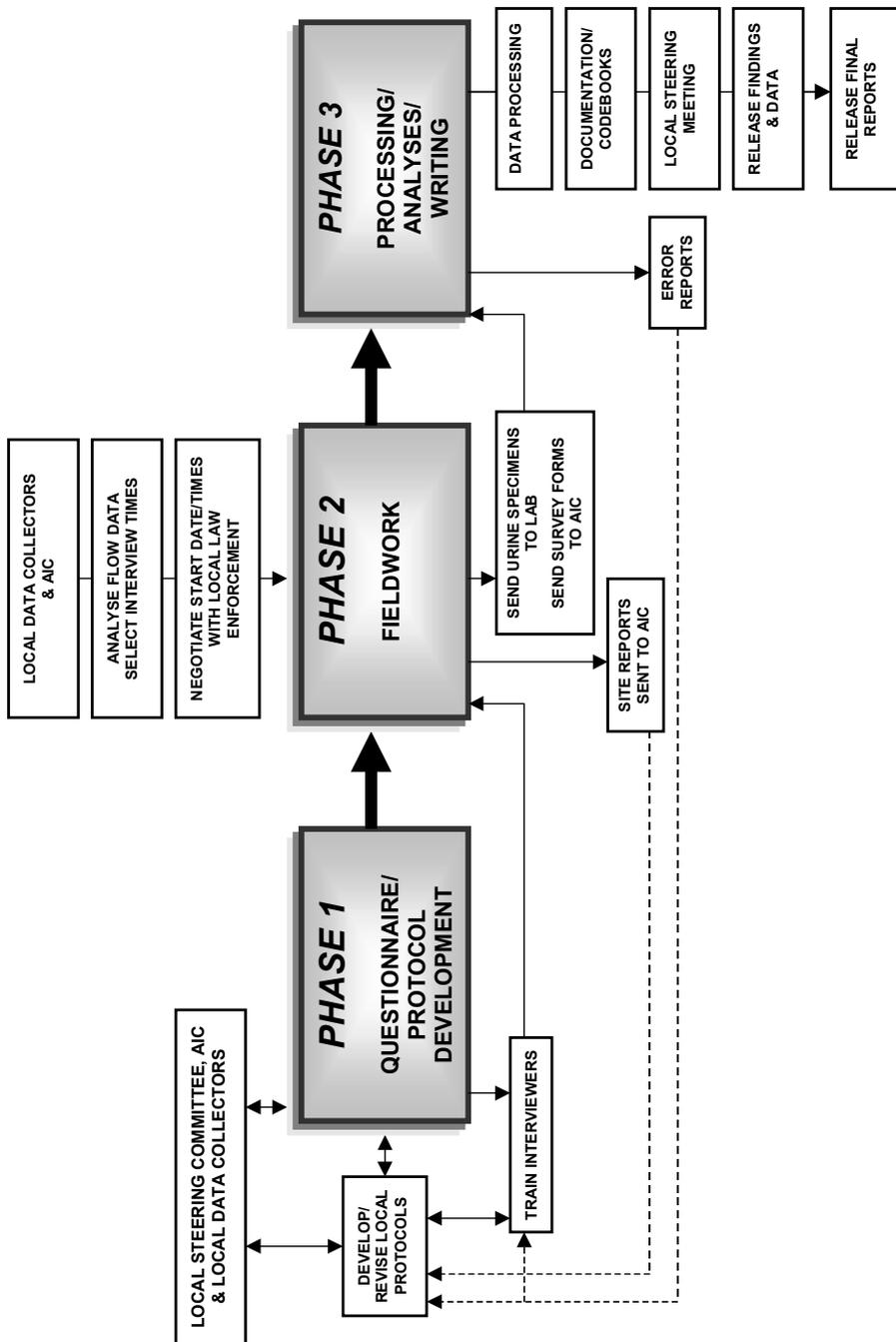
Interviewers usually cover the watchhouse for 3 weeks. There is not a 24-hour coverage of the site and only 1 interviewer is normally present at any one time.<sup>3</sup> This is due to cost/benefit calculations, flow of arrestees through the watchhouse, physical environment, and safety issues that allow only 1 interview to be conducted at the same time in some sites. The local site managers and the local police determine the most appropriate times to be in the watchhouse in terms of maximising the number of potential respondents. On completion of the survey period, local site managers mail the completed questionnaires directly to the AIC and the urine specimens are sent to the laboratory in Sydney by courier.

The third phase largely involves the AIC in processing the data and toxicological reports from the laboratory. As part of this process, error reports based on the completed questionnaires are produced for the local sites. These reports can be used in the next data collection training session. Site specific codebooks, which contain the frequency distributions of the data, are processed and sent to the stakeholders at the local site. A merged confidentialised data file of each site is also produced for stakeholders.

The third phase overlaps with the first phase. The production of final codebooks and the confidentialised file usually takes around 8 weeks from the date the questionnaires arrive at the AIC. However, toxicology reports for each site are faxed to stakeholders as soon as the AIC receives them. This is to ensure that local site managers can determine if there are any significant changes from the previous quarter as soon as possible.

Toxicology results can vary across laboratories because of differences in compounds used, laboratory processes, types of testing undertaken, and the calibration of machines. For this reason, DUMA uses a single laboratory for the testing. The AIC has a 3-year agreement with the Pacific Laboratory Medical Services (PALMS, Northern Sydney Area Health Service) to undertake the analysis of the urine specimens.<sup>4</sup> As part of the contract, PALMS provides the local sites

Diagram 2: Three Phases Involved in the Collection Process



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with the urine kits (which include temperature strips), barcodes for matching urine specimens with questionnaires, appropriate packaging for transportation, and courier services. In addition, PALMS provides technical advice to the AIC on the toxicology results.

# Questionnaire Content

The interview component of the study is designed to elicit two sets of data: basic drug-use behaviour and demographic data. This will constitute a set of core questions for all sites across Australia and countries participating in the I-ADAM project. The advantage of this questionnaire is to provide uniform data within Australia and internationally. The types of questions in the drug-use component include previous drug use, perceptions of dependency, age at first use, and participation in treatment. The demographic component includes standard questions on age, sex, education level, marital status, employment status, and income. Such data will enable local stakeholders to clearly target programs to deal with drug dependent arrestees. The average completion time for the interview is around 25 minutes.

The questionnaire is revised accordingly at the end of each quarter. Interviewers are instructed to write on the questionnaire when a question is problematic for them or the interviewee. In addition, the AIC checks all responses to determine if there are problems with the questions or if skip patterns are confusing to the interviewer. The responses are also examined to see if a question “is working”. Local site managers are asked to write a report highlighting any concerns they have with the questionnaire or the procedures. All of these factors are considered in the revision process. It is anticipated that a standard core instrument and operating procedures will be developed by the end of the pilot period.

This process has two external constraints that must be taken into account:

- The core instrument has to maintain comparability in questions with the international sites.

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- The time it takes for the questionnaire to be administered must be kept to a minimum. This is important due to the nature of the environment and nature of the subjects.

Addendum questionnaires can be added to the core questionnaire. The purpose of the addendum is to allow local site managers and researchers to address a particular topic in greater detail. For example, one site may wish to add questions about heroin use, or about treatment options, or about the availability and use of knives.<sup>5</sup> In the partnership arrangements for DUMA, the AIC can design addendum questions relevant to national interests in 2 of the 4 quarters while local sites can address particular concerns in the other 2 quarters. It is the responsibility of the local coordinating committee to draw up the general topic of the addendum components.

# Urinalysis

In addition to self-report data, the urinalysis can determine, as objectively as is possible, if the arrestee has used drugs recently. However, the urinalysis cannot:

- Determine the causal link between drug use and crime.
- Determine whether the substance affected the person at the time they were arrested.
- Differentiate between casual and chronic users or those who are dependent users.

Although Darke (1998, p. 253) has argued that self-report data from injecting drug users is “sufficiently reliable and valid to provide descriptions of drug use”, this may not necessarily apply to arrestees. There is a considerable body of research that suggests self-reported drug use amongst arrestees may vary depending on the drug and particular sub-groups. Wish, Hoffman and Nemes (1997, p. 201) have noted “The weight of evidence suggests that the relationship between a respondent’s self-reports of drug use and actual drug use behaviour is more complex and variable than had been understood. For example, the evidence is overwhelming that people under the supervision of the criminal justice system greatly underreport their recent use of illicit drugs even when interviewed by researchers under conditions of anonymity and confidentiality” (see also Stephens and Feucht 1993; Mieczkowski and Newel 1993; Mieczkowski, Barzelay, Gropper and Wish 1991; Feucht, Stephens, Walker 1994; Cook et al. 1995). One of the goals of DUMA is to determine whether self-report data from arrestees is in fact reliable and valid in the Australian context or whether it needs to be supplemented by other information such as urinalysis.

The test screens for the presence of 6 drugs—cocaine, opiates (which include heroin), cannabis, methadone, benzodiazepines (Valium for example), and amphetamines (including “speed”). All positive results for amphetamines, opiates, and benzodiazepines are tested by confirmatory gas chromatography to detect specific metabolites. This test eliminates false positives from over the counter “look-alike” medications and allows different derivatives such as codeine and morphine to be identified.

The active ingredients of cannabis can be detected up to 10 days after use for infrequent users but up to 30 days or longer for chronic uses and benzodiazepines can be detected up to 2 weeks after use. The metabolites of opiates, cocaine, and amphetamines can be detected 2 to 3 days after use (see Makkai, forthcoming, for more detailed discussion of drug testing in DUMA).

Both United Kingdom and United States researchers have suggested that the likelihood of arrestees providing false urine specimens is minuscule. In Australia, results from 2 sites showed that only 2 out of 202 people provided specimens that had been diluted with water. Arrestees are more likely to refuse to provide the specimen. Under these conditions, it is not necessary to observe the arrestee when providing the urine specimen. In handling the specimen, interviewers are required to wear latex gloves and to check the temperature of the specimen by observing the temperature strip on the urine container.

# Sample

All arrestees brought to the facilities over the designated period are asked to participate in the study. Data are collected from both males and females. As each jurisdiction has different laws pertaining to juveniles, it may be the case that some sites will never have a juvenile sample.

In Australia, the data on juveniles are only collected from the New South Wales sites at present and the survey period is normally 3 weeks, as is the case in England. In the United States, data from juveniles are collected from half of the sites and the study period is 2 weeks or less because of the high number of arrestees. The Scottish pilot will run for 4 weeks in the designated sites.

Three basic rules operate in selecting the sample:

- Arrestees must not have been held in custody for longer than 48 hours.
- Arrestees who are unfit for interview due to alcohol/drugs/medication, or who are considered mentally disordered or potentially violent are excluded.
- Arrestees deemed ineligible at the discretion of the custody sergeant or officer in charge are excluded.

Not all people arrested are brought to the police station. The police in each jurisdiction have the option to issue a notice to attend the court (or equivalent) instead of bring the person to the station. Normally, these “notices” would be for minor offending. For practical reasons, there is not a 24-hour coverage of the police station and only 1 interviewer is on site.<sup>6</sup> The time of the collection will be tailored to reflect local conditions and to maximise the number of interviews by targeting periods when the station is busy. As a result of these factors

the sample may not be statistically representative of all persons arrested.

Table 2 provides data on the total number of arrestees processed by 2 sites and the number who were approached for interview in the first quarter in January 1999. The data presented here are preliminary, the full data will be reported at a later stage of the project.

Nevertheless, these preliminary data indicate that although DUMA does not have 24-hour coverage and 1 interviewer is on site at any one time, the percentage of arrestees approached for interview is quite high. One in two arrestees processed by police during the fieldwork period were approached. This is, in fact, an underestimate of the coverage as the number available for interview during the time when interviewers were on site is smaller.

**Table 2: Total Number of Arrestees and Number Interviewed, January 1999: Southport and East Perth Sites—Preliminary Data**

Total available for interview	476
Total approached for interview	254
<i>Per cent interviewed of potential pool</i>	<i>53.3</i>

Based on the basic profile data on the total arrestee population from the police recording system over the period that the interviewers are active in the watchhouse, it will be possible to determine an approximate level of representativeness of the sample. From this, DUMA will endeavour to develop weights for the DUMA sample to allow for more accurate estimates to be calculated. Further still, it should be possible to determine whether the DUMA sample across the full year is representative of the total yearly arrestee population at that watchhouse.

# Procedures

The procedures for conducting the interviews and collecting urine specimens have been developed by the AIC based on the United States and English models and in consultation with the local site managers. Over a 3-week period, trained local staff conduct interviews and obtain urine specimens from people who have been arrested in the previous 48 hours and who are being detained in the lockup or police station.<sup>7</sup> This process occurs every 3 months. Participation is voluntary and confidential. Names and addresses are not recorded. Presentation of the data will only be at an aggregate level. Local interviewers cannot be individuals who are police officers, including part-time and reserve officers. These guarantees are extremely important in ensuring that a reasonable participation rate is achieved.

A key step in the interviewing process is to obtain informed consent from the arrestee. Specifically, it requires the arrestee to understand that the interview is part of a federally funded research project; it is confidential and voluntary. As part of this process the arrestee may choose not to answer some of the questions and may refuse to provide a urine specimen. All interviewers are required to sign a confidentiality form that prohibits them from discussing information obtained during the interview with anyone other than DUMA project supervisors. Police personnel at the local site are not allowed to read through the completed interviews. These procedures are stated clearly in the protocol manuals that are used in the training of local site interviewers.

However, there will be times when law enforcement officials believe that an arrestee is not fit for the interview. The DUMA personnel will always respect the judgement of law enforcement personnel under these circumstances. All interviewers are instructed to exercise good judgement to safeguard the well being and interests of themselves and

the entire DUMA staff. The interview is suspended if the interviewer determines there is a significant threat or risk during the interview. Early indications from the monitoring program suggest that police deem about 1 in 10 arrestees (11.5%) as not fit for interview (see Table 3). Site managers have indicated that a significant proportion are arrestees who are too intoxicated to be interviewed; hence, would not provide reliable data for DUMA.<sup>8</sup>

**Table 3: Per Cent Deemed Unfit for Interview, January 1999: Southport and East Perth sites—Preliminary Data**

Potential number available for interview	476
Deemed unfit for interview by police	55
<i>Per cent deemed unfit for interview by police</i>	<i>11.5</i>

Table 4 presents the response rates for the interview and the provision of a urine specimen. Local interviewers approached 254 people across the 2 sites, 202 people (almost 80%) agreed to be interviewed and 151 of them also provided a urine specimen. However, these data are based on the first wave of data collection at 2 sites and should be seen as preliminary.

**Table 4: Response Rates, January 1999: Southport and East Perth Sites—Preliminary Data**

Number approached for interview	254
Number agreed to interview	202
<i>Per cent agreed to interview</i>	<i>79.5</i>
Number agreed to provide urine	151
<i>Per cent of those interviewed</i>	<i>74.8</i>

All new interviewers undertake a 2-day training course and old interviewers are required to undertake a half-day refresher course prior to each collection period. This will maximise the uniformity of the data collection process across all sites. Detailed protocol manuals have been developed for each site and they are revised after each quarter. A supervisor is appointed at each site to supervise the data collection, ensure all procedures are followed, and check all completed

interview schedules to ensure they are completed correctly. Further quality control checking occurs once the questionnaires are sent to the AIC for data processing.

# Why a Quarterly Monitoring Program?

DUMA collects data on a quarterly basis. One of the aims of the DUMA pilot study is to determine whether a quarterly collection provides significant benefits that could not be achieved with a less frequent collection. There are essentially four reasons for a quarterly collection (NIJ 1999):

- It generates new data on a more frequent basis than other national collections. The timeliness of the data should assist agencies to respond more effectively and efficiently to changes or problems if they are incorporated into local decision-making processes.
- The problem of seasonal variations in criminal activity. A single survey in a year cannot account for potential variations in arrest and crime patterns, whereas a quarterly monitoring program should help to overcome this problem.
- Access to watchhouses can be a difficult process to negotiate; thus, a collection system that effectively builds up a rapport between the local data collectors and the local police that is maintained on an ongoing, but not intrusive, basis cannot be underestimated.
- Interviewers, who work in what some might regard as a difficult environment, can maintain their skills.

# Utility of the DUMA Data

It is extremely difficult to prove that illicit drug use causes criminal behaviour. More importantly, this is not the most critical point from a law enforcement perspective. Research shows that the frequency of criminal behaviour can increase when illegal drugs are involved (Dobinson and Ward 1985; Chaiken and Chaiken 1982; Ball et al. 1981). Thus, criminals who are drug dependent commit disproportionately more crime. Moreover, the population engaged in both criminal activity and illegal drug use has a greater impact on the quality of life of more people than other groups of drug users; hence, this is the group who are a key focus of drug law enforcement activity. It is clear from the research that the co-existence of crime and drugs is “powerfully associated with a deviant lifestyle in which each is common” (Tonry 1990, p. 4). The expectation is that reducing levels of drug dependency amongst the criminally active population will have significant benefits to society. At present, however, we have no idea of the extent and use of illicit drugs amongst arrestees, the nature of the illicit drug market in which they buy and sell drugs, or their access to treatment. DUMA is designed to shed light on all of these factors.

The results of the urinalysis results from the 1984 and 1986 Manhattan studies showed that cocaine use amongst arrestees almost doubled from 42 per cent in 1984 to 83 per cent in 1986. This was the period during which New York City experienced a substantial increase in the use of cocaine, especially “crack” cocaine. Yet, the National Institute of Drug Abuse’s (NIDA) Drug Abuse Warning Network (DAWN) did not identify the trend in, for example, new treatment admissions, overdose deaths or emergency room admissions, until a year later (Wish and Gropper 1990). Urinalysis data from arrestees in Washington DC in the early 1980s also showed that the use of cocaine increased drastically in that city as well. Data from United States arrestees demonstrated that this was an important sentinel group in terms of monitoring changes in illicit drug use in the United States.

Similarly, the DUF/ADAM data showed rises in marijuana use amongst arrestees in the early 1990s, particularly juveniles in Washington DC. The major drug indicator programs in the United States showed a decline in the use of marijuana throughout the 1980s and into the 1990s. However, it was 2 years later that the 2 large national surveys, Monitoring the Future and the United States National Household Survey on Drug Abuse,<sup>9</sup> showed that self-reported use of marijuana was increasing.

The usefulness of the long-term monitoring system has been shown in more recent research on United States homicide rates and DUF/ADAM drug data. This research showed that there has been a strong correlation between homicide rates and levels of cocaine use over the past decade. In cities where homicide has declined, so have the levels of cocaine use in the DUF/ADAM samples; where homicide has continued to increase, the DUF/ADAM samples have also indicated an increase in the use of cocaine (NIJ 1997b). The policy implications for reducing homicide in the United States are clear—dealing with the “crack” drug market will have a significant impact on homicide rates. The data demonstrate the usefulness of long-term data collections to monitor changes in drug and criminal behaviour; just as economists need good quality time-series data on performance indicators of the economy, criminologists require ongoing rather than cross-sectional or sporadic monitoring systems.

The United States DUF/ADAM data have also been important in demonstrating that a “feared” epidemic is not occurring. In the late 1980s, there was considerable public concern over the supposed rise in smokable methamphetamine (Ice) in the United States. The media and various commentators forecast a new problem drug. However, DUF/ADAM failed to show any increase in the rates of use of this substance and no such epidemic occurred at this time. These data can be extremely useful to law enforcement in countering claims of new and dangerous drugs that arise from time to time.

# Who is Most Likely to Use the Data?

These data will be useful to a range of groups and individuals. These include policy makers at all levels of government, law enforcement at the local, state, and national levels, treatment providers at the local level, drug and alcohol researchers, and criminologists.

The data are potentially useful in a number of ways:

- Monitoring and evaluating drug prevalence within the local area.
- Assist in planning and assessing needs for local treatment programs.
- Assist in designing new programs in the local area, such as drug courts.
- Assist in developing local drug-related indicators for drug law enforcement and health agencies.
- Staff development and training within the watchhouse to deal with drug issues.

# Methodological Aims

The DUMA pilot study has a number of methodological aims:

- Demonstrate the feasibility of undertaking interviews with arrestees within lockups or custody suites.
- Determine whether arrestees will voluntarily provide urine specimens for research purposes.
- Develop protocols for interviewing arrestees within lockups or custody suites in the Australian context.
- Develop protocols for collection of urine specimens from arrestees in the Australian context.
- Develop appropriate training manuals and instructions for conducting the study.
- Examine issues such as the representativeness of the samples, the impact of interviewer characteristics on data collection, and the concordance between self-reported drug use and urinalysis results.

# Conclusion

DUMA has received funding from the NIDS to run pilot studies in 3 sites for 3 years. These sites are located in New South Wales, Western Australia, and Queensland. Each jurisdiction has its own unique problems and concerns, as well as having different legal systems and operating procedures. The pilot will determine whether DUMA is feasible and useful to each jurisdiction while meeting national priorities.

Data collection has begun in all the sites. As part of the pilot project the AIC will produce a report presenting basic details on patterns of drug use and type of charge for all the sites at the end of each year of the pilot program. In addition, reports on specific topics will be produced and local sites are also conducting their own analyses of the data.

In conclusion, the pilot study aims to determine whether the DUMA methodology can:

- Provide reliable drug prevalence data on arrestees.
- Provide aggregated data to local and national law enforcement and treatment agencies for monitoring, evaluation, and assessment procedures.
- Provide timely and high quality data to inform the policy process.

# Notes

- <sup>1</sup> The term “arrestee” is used regardless of the terminology used within the various jurisdictions.
- <sup>2</sup> See Bennett (1998) for more detailed results and discussions.
- <sup>3</sup> In some sites, the site manager is present either continuously or intermittently. Because of different factors that operate at the site, including police safety requirements for the study, different sites have different numbers of personnel in the site at any one time. However, usually only 1 interview is conducted at a time.
- <sup>4</sup> The AIC would like to thank Dr Michael Dawson, University of Technology, Sydney, for his technical assistance in writing the tender document and in selecting the successful tender.
- <sup>5</sup> At certain sites in the United States, additional questions on heroin (Wish 1987), guns (Decker, Pennell and Caldwell 1997), and drug markets (Riley 1997) have been included in the addendum questionnaire.
- <sup>6</sup> In theory, it should be possible to arrange interviews at busy times in a station where 2 or more arrestees are available. In practice, the pilot shows that it is not possible to reliably determine when these busy times are. As a result, it is not cost effective to have multiple interviewers on site to undertake very few interviews.
- <sup>7</sup> Personal conversation with Eric Wish, who ran the first DUF site in Manhattan, New York, indicated that the most significant hurdle is not actually collecting the urine specimen but convincing interviewers that the arrestees would provide the sample.
- <sup>8</sup> Intoxication is usually the result of alcohol.
- <sup>9</sup> These surveys are conducted annually in the United States and their sample sizes are at least 4 times larger than the Australian survey sample size.

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