

NAE

Narcotics Awareness and Education Project

**THE USES OF DATA
IN DRUG POLICY
FORMULATION**

Joel M. Jutkowitz, Ph.D.

The Narcotics Awareness and Education (NAE) Project is designed to strengthen the capabilities of Lesser Developed Country (LDC) institutions to design, implement and evaluate effective drug awareness and prevention programs. The project focuses on drug demand reduction through public awareness and education. Key to the overall project strategy are activities that: generate an understanding of the nature and extent of drug abuse in a given country; develop public awareness of the problem among government policy makers, opinion leaders and the general public and of the importance of implementing comprehensive prevention programs before the drug problem gets out of hand; and assist in obtaining the support of key national leaders and institutions to develop and effectively implement national prevention strategies. Among the technical support services involved in the project strategy are technical assistance, training, research, information dissemination, and policy dialogue.

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by

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THE USES OF DATA IN DRUG POLICY FORMULATION

INTRODUCTION

Following the 18th century tradition of secular rationality, policy makers have always used data to formulate, justify and evaluate national policies. The quality of the data may vary. Data may be used selectively to support a particular viewpoint. Data gathering may be directed at defending an existing position or supporting a desire to change, but the use of data is common to policy dialogue. Generating that data, the science of statistics which originally referred to the study of political facts and figures, is a significant process for understanding and interpreting the reality that policy derives from and seeks in turn to influence.

Empirically based data plays important functions in the development of a national drug policy. Development of data regarding the drug abuse problem serves to foster the design and implementation of an effective national policy in various ways, including:

- to define appropriate objectives for action;
- to define the nature and extent of the problem;
- to allocate resources and to determine the cost effectiveness of such allocation;
- to monitor program effectiveness;
- to evaluate the impact of programs and policies as a means of measuring the overall effectiveness of policy efforts on national policy; and
- to provide the necessary information to educate and mobilize public opinion.

It should be noted that these six areas do not exhaust all the ways that data may be used, although they indicate some of the most important areas for that use. Moreover, the sequence of use in a given policy formulation and implementation process may vary. While it is often a first concern to define the nature and extent of the problem in order to set appropriate objectives, it may be necessary to conduct an analysis of resources available before policy objectives can be offered. Sometimes the public opinion uses of data are more important than their use as monitoring or evaluation tools. In each case, a most important concern is to assure that the data collected meets the requirements of the use to which that data will be put.

Data in the case of the formulation of drug policy include not only the usual forms of quantitative data gathered such as survey results, clinical reports, arrests, drug seizures, but qualitative data such as in-depth interviews, ethnographic studies, clinical case studies

and institutional histories that provide the context of the problem. Data gathering procedures involve a careful attention to appropriate methodologies, but also require the skills to weave together the information obtained within the context of events and taking into account the purpose to which the data gathering process is directed. As one noted statistician has commented,

Producing statistics...encompasses not only statistical methodology as a tool, but the whole gamut of activities that must be performed in producing statistics for the use of others -- planning, collecting, analyzing, and disseminating data. The practice of many of these functions is not based primarily on statistical science or methodology, but is an art based on a mixture of intuition, experience, and judgement, as well as scientific evidence or procedures -- in other words, the practice of a profession as well as the application of a scientific discipline.¹

This paper will examine various ways in which data can be used to shape drug policy. For each way, we will look at a set of questions that are required to formulate policy in that area and examine data requirements and concerns with respect to those questions. Finally, we will explore the consequences for policy formulation and decision making regarding those questions. We shall try to focus the discussion of the data on concrete concerns with respect to drug policy, both in the United States and in other national contexts.

DEFINING OBJECTIVES

Policy-making involves a process of strategic planning. Any process of strategy planning requires a clear definition of the objectives to be reached, the means to be used to achieve those objectives and the measurements that will be employed to determine if both the process of achieving the stated objectives is going along in a satisfactory fashion and if in fact the objectives themselves are being met. A policy maker's first concern, then, is often to define the problem that is to be addressed. The sort of policy to be adopted depends on a clear understanding of the nature of the problem.

The experience of the Agency for International Development's (A.I.D.) drug prevention (awareness and education) programs since 1984 provides a case study of the application of data to policy formulation. In this case, the national policy in question is the United States government's efforts to secure the cooperation of the governments of drug crop producer nations in the fight against drug abuse. That overall policy goal was, as we shall see in greater detail below, transformed into an effort to assist a producer country, Peru, in dealing with its own domestic drug consumption problem. The data generated by a series of research tasks provided a basis for formulating both the strategies followed by A.I.D. in implementing drug prevention activities, and the policies of the respective host

¹ Margaret E. Martin in her presidential address to the American Statistical Association as quoted in Thomas B. Jabine and Richard P. Claude, **Human Rights and Statistics**, Philadelphia, 1992, p. xii.

governments and host country private sector agencies in designing and implementing their national efforts.

The A.I.D. Mission to Peru (USAID/PERU) initiated its activities in this area by seeking to define the approach it would take through an empirically based needs assessment. The study that was commissioned consisted of: an assessment of the existing institutional capabilities in Peru to conduct drug abuse prevention activities; the attitudes of key publics toward the drug problem; the possibilities of a Peruvian response to that problem; and the viability of alternative approaches for implementing a national awareness and education effort. The needs assessment was to culminate in the design of a Peruvian national awareness and education effort to be funded by A.I.D.²

A key component was a national survey of opinion leaders, students, teachers and parents as well as a survey of residents of lower class slums (pueblos jóvenes) of metropolitan Lima.³ The assumption in choosing the sample was that an effective drug awareness and education program both had to incorporate key opinion leaders at various levels of the society and had to include the large numbers of lower class slum dwellers as participants in community prevention efforts as well as targets of those efforts. Hence, it was important to understand the orientations of all these relevant groups toward the problem. As a working hypothesis, the survey assumed that drug use in Peru and related issues such as drug trafficking were not salient issues to the opinion leaders studied, nor was the drug problem one that was given a high priority.

The conclusions ran counter to the original working hypothesis. The drug problem, defined as the use and abuse of certain substances, was seen by the national sample of opinion leaders, students, teachers and parents as a national problem, although of secondary importance when compared to the ongoing economic crisis. It was viewed as a problem that affected not only an individual's health, but had important familial, social and environmental overtones. Those interviewed felt the problem was particularly salient when it touched their families. They saw the causes of drug abuse as including social conditions as well as family problems. They looked to education as the principal means of combating the problem. They did not see a link between availability and use. Those from lower class slums in Lima placed greater emphasis on improving their social situation as a way to prevent drug use.

The study's data indicated that there was a remarkably high level of homogeneity among all groups in the sample on major issues; however, there were some differences between groups. For example, opinion leaders did pay more attention to drug trafficking than did students, teachers and parents as a group. They also showed less tolerance for

2 *The study's results are reported in Development Associates, Inc., Peru Narcotics Awareness Study, March, 1985.*

3 *Half of the national sample consisted of opinion leaders from all major areas of the society including business leaders, labor leaders, politicians, bureaucrats, civic and community leaders, judges, the military and the police. The other half consisted of students, teachers and parents. The sample was drawn from seven cities covering the principal regions of the country.*

drug use at either the familial or societal levels. However, these distinctions were not of a magnitude to warrant distinct campaigns for each of these broad audiences. An economy of effort was possible.

The survey provided the basic data that justified organizing and funding a drug abuse awareness and education effort in Peru. The survey indicated that there was sufficient concern to ensure that an anti-drug effort could get off the ground. It also indicated that the opinion leaders studied were willing to consider participation in an effort to establish such an anti-drug program. The survey also established the need for an institution or agency to serve as a focus for mobilizing public opinion and prompting action on the drug problem.

Additional aspects of the needs assessment fleshed out the results of the survey. An examination of existing public and private entities concerned with some aspect of the drug problem resulted in the conclusion that there was no extant base from which to develop a national anti-drug information and education center. A new organization would have to be created. Moreover, given the characteristics of the public sector, that center was best located in the private rather than the public sector.⁴ Given the climate of public opinion, that agency was likely to be able to draw on a broad base of support among opinion leaders and the public in general. In effect, the data gathered by the needs assessment through the survey and through less formal methods of research had refined A.I.D.'s initial objective of supporting prevention activities in Peru, defining the program most appropriate to the Peruvian context.

This initial survey of opinion leaders pointed up a need for further research to refine the definition of the problem. Those interviewed in the 1984 opinion leader survey had indicated that they felt there was a growing drug abuse problem in the country which centered on cocaine use. These perceptions were echoed in the press which talked of a massive problem of cocaine paste⁵ and cocaine abuse among teenagers. But, at the time, there was no concrete data regarding drug prevalence that supported this view. Thus, A.I.D. included in its plan the conduct of a national prevalence survey to remedy this gap in information regarding the nature and extent of drug abuse in Peru.

The Peruvian national drug prevalence survey⁶ focused on the urban population of Peru.⁷ The universe studied included individuals between the ages of 12-45 years located

4 *The march of events in Peru since 1984 has demonstrated that private sector activity in this area is more viable than government activity.*

5 *Cocaine paste or **pasta básica de cocaína** (referred to as **bazuco** in countries such as Colombia and Panama) is an intermediate product between coca leaf and cocaine which contains free ions of the cocaine alkaloid. Because of its state, cocaine paste can be smoked and has an immediate impact on the individual similar to that of crack.*

6 *For a full discussion of the results see Jutkowitz et al, **Drug Abuse in Urban Peru**, 1986.*

7 *The choice of the population was made on the basis of several factors: various indicators that the preponderance of drug abusers were located in urban settings, the focus of the study on non-traditional use of psychoactive substances rather than the traditional use of coca leaves ("chewing" of the leaf) by the largely rural indigenous populations of the highlands and the limitations of budgetary resources for the study.*

in households in all cities of 25,000 or more.⁸

The instrument used for the survey had several broad objectives:

- to represent the level of prevalence of drug use in Peru, understanding prevalence as the percent of population within the universe studied using drugs over a specified time frame; and
- to provide as broad a coverage of the problem of drug use as possible, both in terms of the substances covered and the information generated regarding those substances and related variables.⁹

Substances covered were: alcohol, tobacco, analgesics, sedatives, hypnotics, stimulants, marijuana, hallucinogens, inhalants, heroin, opium, coca leaves, coca paste and cocaine.¹⁰

The survey found that the use of marijuana, cocaine paste and cocaine was concentrated in Lima. Comparing use patterns in 1979 and 1986 in Lima, there was considerable growth of the use of marijuana, coca paste and cocaine, although levels of use were not yet of a magnitude to be considered a major problem.¹¹ The groups most at risk for use of these drugs were males in the middle and upper classes who were in their late teens or twenties. These findings suggested that Peru was: (1) facing a potential problem that was increasing in magnitude amid a climate of both public and private neglect of the need for drug prevention; and (2) still in a position where a concentrated effort at drug prevention might be able to get ahead of this potential problem.

This study, like the one before it, refined the objectives that A.I.D. and the newly established private voluntary agency had developed in designing a prevention program. The study permitted a targeting of priority audiences for prevention activities (young men in their early teens in Lima) as well as establishing a baseline for future measurement of the nature and extent of the problem at a national level.

8 *The cities excluded were those that were located within areas that represented a potential danger to the physical safety of those conducting the interviews.*

9 *Two questionnaires used in other population studies served as references for the design of the instrument: (1) the questionnaire employed in a prior (1979) epidemiological survey of drug use in Lima (Carbajal et al, 1979) and (2) the questionnaire used by Temple University under contract with the United States National Institute on Drug Abuse (NIDA) in its 1985 household survey. The latter instrument drew on the lessons learned from the series of national surveys sponsored by the United States Government over the previous decade.*

10 *The key variables that were included in the instrument were: age at first opportunity to use (for illicit substances); age of first use (measuring lifetime prevalence); most recent use; lifetime frequency of use; polydrug use; socio-demographic characteristics of the population; consequences of the use of substances for the respondent, and risks associated with the use of substances.*

11 *Up to around 12% of the respondents indicating having ever used these substances (lifetime prevalence).*

The set of data developed to define A.I.D.'s objective in Peru was not a unique occurrence. Similar data sets that define the nature and extent of drug use and the attitudes of key segments of the population regarding drugs have been generated for other producer and transit/trafficking countries over the past half dozen years. These data in countries such as Guatemala, Haiti, Panama, Paraguay, Thailand and Sri Lanka permit a more precise definition of the problem in each country and have served to shape the programs of various United States government agencies including both the Agency for International Development and the Bureau for International Narcotics Matters.¹²

As was noted at the start of this section, effective policy making requires a definition of objectives, a strategy for action. That strategy has to be attuned to the reality of the situation in order to be effective. Carefully designed studies of the dimensions of key variables provide a picture of reality which permits that definition of objectives. The conduct of such studies in the formation of drug policy requires not only a knowledge of the proper methods to measure such factors as attitudes toward the problem and the nature and extent of use, but a careful attention to other appropriate contextual variables such as the presence or absence of appropriate institutions to undertake programs. In short, the definition of policy objectives needs to be based on careful research.

ANALYSIS OF RESOURCE ALLOCATION

An important use of data in anti-drug policy making is in analyzing resource allocation. The United States Anti-Drug Abuse Act of 1988 recognizes this when it requires that a budgetary analysis form a part of the National Drug Control Strategy. That analysis focuses on certain policy distinctions, those between supply and demand, that have been major elements in the definition of approaches to drug abuse control. The strategy correctly notes that while it is possible to analytically separate supply reduction approaches from demand reduction approaches, in practice these distinctions are not clear cut. Law enforcement, for example, clearly is aimed at reducing the available supply of drugs, but law enforcement may serve to remind those in a community of the consequences of drug use and thereby lower demand. In the same vein, demand reduction programs that aim at primary prevention may serve as a means of mobilizing community support for more effective law enforcement and thus result in a reduction of access to drugs within the community. Bearing those distinctions in mind, it is clear that the data as presented in the National Strategy support the notion that there is an emphasis in terms of allocation of resources on the supply side. For 1990, the authors of the strategy recommended a split of 70% for supply reduction and 30% for demand reduction. A detailed analysis of that budget provides an understanding of the requirements of each of these areas and the consequences of those requirements for the respective assignment of resources.

12 *cf. Development Associates, Inc., Drug Awareness Needs Assessment for Guatemala, November, 1990; Development Associates, Inc., National Study of Drug Prevalence and Attitudes Towards Drug Use in Haiti, June, 1991; Proyecto Marandú, Comité Paraguay-Kansas, Estudio Sobre Salud Mental y Hábitos Tóxicos en el Paraguay, 1991; Development Associates, Inc., Survey on Drug Prevalence and Attitudes in Panama, 1992; Sri Lanka Anti Narcotics Association, Drug Use and Abuse in Sri Lanka, 1991.*

We can take, for example, the cost requirements of maintaining the system of law enforcement in all its components. Given that the source of a great deal of drugs sold in the United States is smuggling from overseas, a key element in the control of drugs is the ability to interdict drugs coming in from all over the world. Given the extensive border of the United States and given the skill of the smugglers, an interdiction effort has to use a vast array of resources to attempt to seal off drug traffic. Interdiction does not take place in a vacuum. It requires knowledge of smuggling patterns, smugglers, routes, modes of shipment and other intelligence. Successful interdiction programs lead to prosecution of the drug traffickers. This fact, coupled to other efforts by law enforcement agencies to locate and prosecute traffickers within the country, leads to a requirement for prosecutions. Successful prosecutions lead to a requirement for punishment and hence for correctional facilities. All of these activities have significant costs associated with them. Commitment of resources in one area leads to consequent commitment of resources in other areas. Hence, if we look at the figures for 1991, we can easily see how a decision to be concerned with supply reduction can lead to a pyramiding of expenses. (See Table 1.)

Cost analysis needs to be done at the level of overall budgets, but also should be undertaken within the components of a given policy. It is important to look at the overall allocations between supply and demand elements of a strategy, but it is equally important to examine the components of each element; e.g., the cost effectiveness of distinct treatment modalities in terms of such variables as length of time, personnel requirements

TABLE 1

Law Enforcement Costs, 1991

(in millions)

Intelligence	23.1
Interdiction	2,027.9
Investigation	1,288.2
Prosecution	583.7
Correction	<u>1,265.1</u>
Total	\$5,188.0

Source: National Drug Control Strategy, 1992, Budget

(types of professionals, levels of skills required), physical plant required, types of outcomes (effectiveness of initial treatment, level of recidivism).¹³

Analysis of the implications of a given policy for resource allocation permits a better understanding of the relative costs of such a policy. It permits a measurement of the cost effectiveness of a given policy, of the relative "bang for the buck" that one can achieve with a given strategy. It permits a comparison of alternative strategies not only in terms of their capacity to contribute to the resolution of the drug problem, but in terms of the costs they imply, given the benefits that may accrue. This type of analysis is vital when resources are limited and when policy makers are faced with carefully controlling those resources while assuring the maximum impact from their programs.

PROGRAM MONITORING

Program monitoring is another area where data become an important tool in drug policy implementation. Program monitoring answers the question, "How are we doing; how is a given policy being implemented?". It involves the analysis of the current performance of a given policy initiative. Timely monitoring helps detect problems or barriers to the successful achievement of a policy objective. It also helps to identify ways to overcome those obstacles.

An effective monitoring system provides information as to why a given policy is working or not working. For example, in the case of a drug prevention initiative, a monitoring system will provide diagnostic information regarding whether a given set of activities is being carried out according to the design of that initiative. It will keep track of the quality of the educational messages, their reception by the intended audience and that audience's reactions to the messages being provided. A good monitoring system offers valuable feedback to improve a program or policy in the future. It documents whether a program is being carried out as intended, which in turn enhances the possibility that the program will be effective.

Program monitoring is intended to provide information that serves to improve managerial functions such as program improvement and resource allocation. Such management-focused monitoring has to possess certain characteristics. It must be:

- decision oriented, designed to assist managers and policy makers to set clear and attainable objectives;
- process oriented, providing data on actual programs in progress;

¹³ For a broader approach to treatment cost issues as they relate to the question of compulsory treatment, see Henrick J. Harwood, et al, "**The Costs of Cocaine and the Benefits of Drug Abuse Treatment: A Cost-Benefit Analysis Using TOPS Data**", in **Compulsory Treatment of Drug Abuse: Research and Clinical Practice**, Carl G. Leukefeld and Frank M. Tims, editors, pp. 209-235. TOPS is the Treatment Outcome Prospective Study which tracks a cohort of 11,000 drug abuse patients throughout the United States.

- based on a criterion of utility, providing the sort of information a manager can use;
- focused on questions that reflect short or medium-term impacts and short or medium-term solutions; and
- oriented toward resource limitations and tradeoffs, recognizing the need to direct responses to problems toward solutions that are in keeping with budgetary and other resource constraints.

Program monitoring can take place at the level of a single program or at the level of a broad programmatic area. In the drug abuse field, both types of monitoring are common.

We can take as an example an effort that was undertaken to design a monitoring system in order to assess the effectiveness of a community-based approach to drug prevention in a small southern community, Union County, South Carolina.¹⁴ A major issue faced in this project was the lack of clear information regarding the nature and extent of drug abuse within the community. Without that information, judgements could not be made about the program's effectiveness on a year-to-year basis with a corresponding loss of the ability to make useful adjustments in the program.

That monitoring system began with the assumption that it had to consider a variety of perspectives within the community. As the report indicated, data had to come from students, school teachers, social service and law enforcement agencies.¹⁵ The system also had to be low-cost both to reduce the immediate burden on the agencies involved and assure the continuity of the system. Therefore, the design called for a series of low-cost surveys that covered the relevant actors (a teachers survey once a year, data drawn from school disciplinary records, data drawn from surveillance reports of the local alcohol and drug agency, data from local alcohol and drug arrest records). It also called for only the simplest form of data processing to reduce the burden of such efforts on the personnel responsible for managing the monitoring system. (Total time required to operate the system was estimated at 20 hours per year.)¹⁶ Thus, the monitoring system was efficient, allowed for a rapid and low-cost data gathering process and provided the feedback needed to guide the prevention effort.

Looking at program monitoring at another level, national policy in the United States in the early 80s determined that outpatient drug treatment be made a responsibility of the states rather than the federal government and that such treatment be incorporated into the

14 For a full discussion of this effort see Malcolm B. Young and Paul Hopstock, **Evaluation of the Union County/Community Drug-Free Partnership Grant**, Development Associates, December, 1990.

15 *Ibid.*, pg. 19.

16 *Ibid.*, pp. 21-22

mental health and health care system in general, rather than being set apart as a special activity.¹⁷ Faced with these shifts in policy, the National Drug Abuse Treatment System Survey was organized to provide feedback on a series of programmatic questions which in turn were relevant for refining drug treatment policy. Some of those questions and the responses received in the initial survey were¹⁸:

- **Who is receiving outpatient treatment and where do they come from?** The survey found that the majority had drug abuse as a primary diagnosis. Those in drug-free programs were more likely to be self-referred, those in methadone maintenance programs, more likely to be court referred;
- **How are outpatient programs staffed?** The survey found that a large number of the staff of these clinics were former addicts. Hence, there was a relatively low percentage of staff that had formal medical training. Methadone programs were more likely to have a higher proportion of medical personnel than drug-free programs. (This may be related to the fact that methadone programs involve maintaining clients in a permanent "patient" status through medicine.);
- **How are patients assessed in outpatient drug treatment programs?** The survey found that diagnostic and assessment techniques varied according to treatment modalities. Physical examinations were more common in methadone maintenance programs and mental health assessments more common in drug-free treatment programs. The report suggests that lack of physical examinations may be a defect in drug-free programs; and
- **What are reported treatment outcomes?** The survey indicates that while drug-free programs report better treatment outcomes than methadone maintenance programs, it is not clear that such results are due to the modality or to the type of population in that modality i.e., more study is required.

These and other questions contained in the survey have implications for the design of treatment policy. They point to the need to assure the quality and appropriateness of outpatient treatment personnel. They suggest the possibility that all the medical needs of the patients may not be met in certain treatment modalities (lack of physicals in drug-free programs). They also point to the possibility that programs based on self-referrals (drug-free programs) may have a potentially higher success rate (although this, as noted above, requires additional research). The next step is the utilization of these results and other results from this longitudinal study to adjust policies to meet the desired objectives.

Program monitoring, whether at a national level or at the level of a single community-based program, is another approach to assembling data to inform policy-making. As was noted above, program monitoring tells us whether or not a program is working as intended

17 Richard H. Price et al., "Outpatient Drug Abuse Treatment Services, 1988: Results of a National Survey," in *Improving Drug Abuse Treatment*, Roy W. Pickens, Carl G. Leukefeld and Charles R. Schuster, NIDA Research Monograph 106, 1991.

18 *Ibid.*, pp. 85-89.

and whether or not that program or policy is having the immediate effect it was intended to have. This type of data-gathering and analysis permits the policy maker the opportunity to steer policy, to make mid-course corrections that make a given policy or program more effective. In short, data gathered at this level provides that immediate feedback that makes management of a policy far more efficient and effective.

PROGRAM EVALUATION

Data can be used to determine if a program, set of programs, a policy or set of policies have achieved or are achieving their objective -- in other words to measure the effectiveness of a national policy. To undertake an evaluation of this nature, often referred to as outcome evaluation in the short term or impact evaluation in the longer term, one has to be clear what the objective of a policy is and to determine accordingly what the appropriate benchmarks are to measure achievement of that objective. If the question is framed appropriately, such evaluations can cover an entire national strategy.

Taking as an example the United States National Strategy for Drug Control and looking at its overall goal -- "to create a drug-free America," it can be argued that an appropriate measurement of that goal would be the level of drug prevalence in the United States. Success in the achievement of a drug-free America would be measured by a decline in the level of drug use in a given time frame (the operational definition of drug prevalence is the level of use within a particular time frame, e.g., last 30 days, last year, one's lifetime).

Measuring drug prevalence is not an easy task. Data that have been generated in a scientifically rigorous manner may yet lead to different conclusions regarding the underlying reality being measured. For example, much concern has been expressed over the relationship between the decline in self-reporting of drug use as measured through NIDA's National High School Senior Survey as well as the National Household Survey and the continuing high levels of other prevalence indicators.¹⁹ Other alternatives to survey results have been official surveillance systems using such indicators as arrests, seizures, drug related emergencies or deaths, admissions to treatment facilities and "epidemiological" studies which are studies focused on the appearance of cases, often in clinical settings, using the infectious disease analogy. Often the debate involves a conflict over the validity of alternative methods along the lines of if one method is correct, then other methods must be incorrect.

Part of the resolution of the conflict rests on understanding the strengths and weaknesses of each method and the appropriate range of use. Methods of measurement depend on the objective that is to be achieved. In the case of both the National Household Survey and the National High School Senior Survey, the purpose, as it has evolved over the past 15 to 20 years, has been to measure use in broad segments of the general

19 Joseph Westermeyer, "Methodological Issues in the Epidemiological Study of Alcohol-Drug Problems: Sources of Confusion and Misunderstanding", *American Journal of Drug and Alcohol Abuse*, 16 (1&2), pp. 47-55 (1990).

population. The drug epidemic of the 60s began to be visible when it stepped out of the limits of the addict's special world, the world of the social deviant, the outcast. The measurements of the extent of drug use at a national level that were developed reflected the concern on the part of policymakers and researchers with that expansion of use to major segments of the population. One critical population were youth at risk, particularly youth in high schools. The National High School Senior Survey was developed in 1975 to measure that segment of the population. Another key element of the population was covered with the National Household Survey whose earliest iterations began in 1971. The National Household Survey included an age range that went from children of 12 years old to middle-agers in their forties.²⁰ Excluded from the high school senior survey are those individuals who have dropped out of school before entering their last year. Excluded from the National Household Survey is that segment of the population, estimated to be around 2 to 3%, who cannot be located in households (the homeless, those who are hospitalized, in prison, who live in hotels and other transient arrangements).

Coverage of these other groups, some of who are referred to as "hidden" populations, require distinct approaches to data collection.²¹ Use of the set of anthropological methods known as "street ethnography" have proved effective in developing an understanding of patterns of drug use among addict populations (e.g., among methadone clients, female heroin addicts), among minorities (Puerto Ricans in New York, Mexican American homeboys (gang members) in Los Angeles), among commercial sex workers, and among users in other cultural contexts (e.g., in Jamaica and Costa Rica).²² Such studies have the advantage of locating such hidden populations and describing, often in rich detail, the characteristics of their drug use. They have the disadvantage of only permitting limited inferences regarding the extent of the use that they report.

Combining survey research with ethnographic and other qualitative measures permits a fuller image of the nature of the drug problem at any given moment in time. Comparing and contrasting the results of survey research with that of other indicators (such as hospital and other treatment-related measures) will also contribute to a fuller picture of the nature and extent of the problem. This is particularly the case with substances like cocaine where acute cases followed several years after the appearance of widespread use. Hospital reports were an indication of the crisis point in use, use whose extent had earlier been reported by survey data. On the other hand, crack demonstrates that qualitative and surveillance data may precede survey data. Crack was visible on the streets in 1985, but

20 For descriptions of each study, see Lloyd Johnston, Patrick O'Malley and Jerald G. Bachman, **Drug Use Among American High School Seniors, College Students and Young Adults, 1975-1990**, NIDA, 1991, pp. 1-4 and pp. 17-24, and **National Household Survey on Drug Abuse: Population Estimates**, NIDA, 1991, pp. 1-10.

21 For a discussion of the methodological issues associated with researching hidden populations, see **The Collection and Interpretation of Data from Hidden Populations**, NIDA Research Monograph 98, Elizabeth Y. Lambert, editor, 1990.

22 All of these studies are described briefly by Harvey W. Feldman and Michael R. Aldrich in "The Role of Ethnography in Substance Abuse Research and Public Policy: Historical Precedent and Future Prospects", in Lambert, *op.cit.*, pp. 19-21.

the National Household Survey did not report its use: the substance had not as yet made the list of substances that were studied in the survey instrument.

Repeating research over time as has been the case with both the National Household Survey and the National High School Senior Survey, both with over 15 years of trend data as of 1992, increases the reliability of such surveys both by refining the quality of the instruments used for measurement and by focusing on the trends over time, rather than the specific values in a given year. The validity of these two studies, it might be noted, is strengthened by the fact that both see the same trends over time in comparable population groups.

Taking into account the strengths and weaknesses of the various data gathering devices, and focusing on the sorts of questions that need to be answered (extent of use, type of use, intensity of use, use within hidden populations), it is clearly possible to develop a set of measurements that responds to the question raised at the beginning of this section. That question, "Can we determine with some sense of scientific rigor and replicability whether America is becoming more drug-free?", permits a judgement as to whether an overall anti-drug strategy is working.

Once again, data serves to support policy-making by providing a measure of the longer term consequences of policies. This use of data relates the objectives of a given policy to the specific outcomes over time. Such a use of data, as is always the case, requires a careful definition of what is to be measured (e.g., the nature and extent of drug use in the United States), how it is to be measured (the definition of use in terms of appropriate time periods, substances that have to be studied, specific populations within the universe to be studied), and how often it needs to be measured. These are at once scientific and policy decisions which determine the quality and veracity of measurement, the ability of data to be used as a reliable judge of policy. Such measurement, within a longer time frame, permits the feedback that is also associated with program monitoring.

MOBILIZATION OF PUBLIC OPINION

In a democracy, mobilization of public opinion is an important policy tool. That mobilization assists in securing a variety of resources: allocation of budget, use of private initiative to augment public initiative, access to human resources, etc. In the case of an anti-drug effort, that mobilization may be a critical element in promoting prevention of drug use, particularly at the level of the community and the family. Data which support an understanding of a problem, which serves to alert the public to the real dimensions of a problem may be a powerful tool in mobilizing public opinion.

The advertising industry in the United States has a long history of success in mobilizing public opinion. We all recognize a variety of "brand names" because of their efforts. That industry has turned those skills to mobilizing public opinion against drug use through an effort that goes under the name of the Partnership For a Drug-Free America. The Partnership has been engaged in advertising campaigns in a coordinated effort to lower drug use in the United States for around five years. Drawing on the skills developed in the

advertising and media industries, the Partnership makes use of data in the form of tracking polls to guide its anti-drug efforts. For example, between 1987 and 1988, the Partnership conducted extensive campaigns directed at, among other groups, college students. To measure the effectiveness of those campaigns and to guide their design, the Partnership conducts research into the various components of its campaign: the type of message, the intensity of media exposure, the media used to reach the audience. These measurements help to fine tune the campaign at the same time that they provide information about the nature of the drug problem. That information in turn is used to construct more effective messages.²³

Returning to the case of Peru that was discussed earlier in this paper, we can see how the same epidemiological survey used to measure the nature and extent of the problem served as an instrument to mobilize public opinion. As was noted above, while the national prevalence survey in Peru was being conducted, efforts were underway to create a national private, voluntary, non-profit drug prevention agency which would have access to USAID funding. The founders, drawn from a cross section of Peruvian society, included representatives of virtually all the major political parties, the judiciary, the church (both Catholic and Protestant), news media, the police, the military, businessmen, health professionals, educators, civic groups, artists and sports figures. All were united in their concern with the problem of drug abuse. The next step was to convert that concern into a viable drug prevention institution.

As the survey came to fruition and the final report was completed, the institution, CEDRO, began its operations. CEDRO hoped to shape public opinion to build support for a continuing national effort at drug abuse prevention. The survey legitimized the need for action by CEDRO. It provided the factual basis for asserting that there was a drug abuse problem which potentially could continue to grow unless efforts were made to prevent that growth.

In the first few months of the commencement of CEDRO's operations, the survey results were used to directly influence public opinion by providing the material for CEDRO's public relations activities. The formal release of the report to the public provided the opportunity for a news conference, articles in several large circulation dailies as well as material for radio and television news and discussions. The survey was used as a key resource for a series of articles in one of the most prestigious newspapers in Lima, articles that, for example, took a single statistic and used it as the basis for an entire story.

In summary, the survey was undertaken to establish a baseline for an understanding of the nature and extent of drug use and abuse in Peru. It filled a critical gap in the effort to design and develop a drug prevention program. But, the survey was not exclusively a technical resource. Because it had scientific rigor, because it contained considerable information regarding the problem, it became a public relations instrument for a newly

23 *For a discussion of these studies, see The Attitudinal Basis of Drug Use-1987 and Changing Attitudes Toward Drug Use-1988, Gordon S. Black Corporation.*

created organization, seeking to establish itself as an effective institution. The survey's political role, as an element of legitimation and a tool for institution-building is as valuable a function as its contribution to the careful design and monitoring of a prevention program.

In both cases we have cited, data made an important contribution. In this case, the contribution is twofold: data contribute to the legitimation of a particular course of action, of a policy initiative, and data is used to inform the public about a reality that concerns the public, which in turn mobilizes public opinion to help shape an appropriate response. Research provides the necessary information to both direct a message to a given audience as well as supplying the message.

CONCLUSIONS

As we noted at the outset of this paper, a basic premise of a political process such as that of the United States is that research and data analysis are vital to developing the capacity of policy makers to shape and control the policies and programs they seek to employ in the fight against drug abuse.

Data are required to understand the nature and extent of the drug problem in order to rationally define objectives. Data are required about the resources available and the implications of their allocation. Data are required about whether or not policies and programs are working as proposed, and whether or not they have the desired short-term consequences. Data are required regarding the longer-term impact of programs, the degree to which the problem is being solved by the policies being employed. Finally, in a democratic society, data are a vital tool in the promotion of a rational dialogue with the ultimate decision makers, the public, through the forum of the channels that inform public opinion.