URINE-TESTS OF ARRESTEES AS A WAY TO IDENTIFY HIDDEN DRUG ABUSERS: AN EXPLORATORY STUDY OF THE DISTRICT OF COLUMBIA

FEBRUARY 1991

TOBORG ASSOCIATES, INC.

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by
Mary A. Toborg
John P. Bellassai
and
John R. Sheridan

February 1991

Prepared under Grant No. 86-IJ-CX-0075 from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view or opinions in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

Toborg Associates, Inc.
8401 Corporate Drive
Suite 420
Landover, Maryland 20785
(301) 306-0900

ACKNOWLEDGMENTS

A study of this scope could not have been completed without the assistance of a great many persons. We would particularly like to thank Charles B. DeWitt, Director, National Institute of Justice (NIJ), and James K. Stewart, former Director, NIJ, for their continued interest and support for the project. Special thanks are also due to Bernard A. Gropper, Ph.D., program manager for the project, who provided many helpful suggestions during the course of the study. Participants at the Annual Meetings of grantees in the Alcohol, Drugs and Crime Program--managed by Dr. Gropper--also offered helpful comments about the project.

The study would not have been possible without the support of the DC Pretrial Services Agency (PSA), which provided access to urine-testing data and suggestions about the project itself. We would especially like to thank John A. Carver, Director; and Kathy Boyer, Director of Administrative Services; for their assistance.

Mr. Simon Holliday, head of the Single State Agency for the District of Columbia; Mr. John Johnson, Administrator, Alcohol and Drug Abuse Treatment Services Administration (ADASA); and Mr. George McFarland, Director of Research, ADASA, provided help in the process of obtaining approval to use selected treatment admissions data in connection with the project.

Eric D. Wish, Ph.D., former NIJ fellow and Adele Harrell, Ph.D. of The Urban Institute both provided insightful comments about the followup interview component of the project. Also, Mr. Tim Ryan assisted us in the development and testing of the interview instrument as well as in the training of the interviewers. We appreciate their assistance, as well as that of the individual interviewers who participated in the project.

Mr. Walter Ridley, Director, DC Department of Corrections, assisted us in obtaining access to inmates who were part of our sample, so that they could be interviewed. Mr. Michael Hagstad, Substance Abuse Services Administrator, DC Department of Corrections, also helped with this task, as did the administrators of the individual institutions.

Finally, we would like to thank Faye Logan, who served as administrative assistant to the project, and handled a wide range of secretarial, administrative, and logistical tasks.

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I. BACKGROUND

A. Introduction

This study of hidden drug abusers in the District of Columbia stems from the pretrial urine-testing program, operated by the DC Pretrial Services Agency (PSA) since March 1984.[1] The program attempts to test all adult defendants, shortly after arrest, for the presence of any of five drugs in their urine: cocaine, phencyclidine (PCP), opiates, methadone or amphetamines.

Based on the urine-test results, a group of drug users was identified who, but for the urine-testing program, would be "hidden" from the criminal justice system--that is, these arrestees tested positive for drug use but did not admit drug use to the PSA interviewer, had not been arrested for a drug charge, and did not report that they were currently in treatment for drug use. Because a threshold problem in attempting to interrupt the cycle of drugs-and-crime is that drug users must first be identified, the population of hidden drug users is an important one to study for policy purposes. Who are these hidden drug users? Are they just starting their drug-and-crime careers, in which case they would be key targets for early intervention programs aimed at interrupting those careers before they become fully developed? Are these drug users also hidden from the treatment system? If so, early intervention efforts after arrest would be particularly important, since these drug users would be untouched by prior treatment efforts. Alternatively, are the hidden drug users simply individuals who had previously escaped detection by the criminal justice system, despite lengthy drug-and-crime (and perhaps treatment) experiences?

Because the appropriate policy response will vary with the answers to questions such as these, it is important to learn more about this population of hidden drug abusers. To increase the current state of knowledge about this population was the primary goal of this exploratory study.

To date, hidden drug abusers identified through pretrial urine-testing programs have received little attention, despite

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[1]Results of prior analyses by Toborg Associates, Inc., of this program are summarized in Mary A. Toborg, John P. Bellassai, Anthony M.J. Yezer, and Robert P. Trost, Assessment of Pretrial Urine Testing in the District of Columbia (Washington, DC: National Institute of Justice Issues and Practices Series, December 1989).

the emphasis of national drug policy on expanding such programs.[2] Because hidden drug abusers are the only drug abusers identified by urine-testing who are not identified by other means as well, analysis of this population would seem a particularly important aspect of the overall assessment of the efficacy of pretrial urine-testing. Thus, this study undertook a variety of analyses designed to increase the state of knowledge about these hidden drug abusers.

Besides the hidden drug abusers identified through urine-testing, there is, of course, another population of hidden drug abusers who are criminally active--namely, drug abusers who commit crimes but are not arrested for them. Statistical estimates of this population were developed as part of this project, by using the pretrial urine-testing data on arrested drug abusers. In this way, estimates were made of the size of the total population of drug abusers who are involved in criminality--including those who are not arrested as well as those who are.

Thus, the present study deals with two different types of "hidden" drug abusers who are engaged in criminality. These consist of (1) arrested drug abusers who would be hidden in the absence of the arrestee urine-testing program; and (2) those drug abusers who are engaged in criminality but are not arrested.

Before presenting the findings from this study of hidden drug abusers, we first discuss several topics that provide important perspective on the project as a whole. These are as follows:

- a brief review of the literature on drug-crime relationships, with special emphasis on studies of the District of Columbia;
- a description of the pretrial urine-testing program in the District of Columbia; and
- key findings from prior research on the pretrial urine-testing program in the District of Columbia, including the extent to which hidden drug abusers were identified.

These topics are discussed in the subsequent sections of this chapter. Following these discussions, we briefly describe the scope of the project and the organization of the remainder of this Final Report on its findings.

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[2]See, for example, The White House, Office of National Drug Control Policy, National Drug Control Strategy (Washington, DC: US Government Printing Office, January 1990), pp. 16, 26.

B. Drug-Crime Relationships

The relationship of drug use to criminality has received increasing attention in recent years, and many studies have demonstrated the strong connection between the two behaviors.[3] Although largely focused on users of heroin, rather than other drugs, these studies have consistently found that higher levels of illicit drug use are accompanied by higher levels of criminality. Moreover, this criminality is not limited to the offenses of drug possession and sale but, instead, spans a wide variety of criminal activities.

Although there has been much debate and disagreement over whether drug use and criminality are causally related, there is general consensus--and overwhelming evidence--that the two behaviors are highly correlated (which could be due simply to their sharing a common etiology). Such a strong correlation is alone sufficient to justify the widespread interest in developing ways to try to reduce drug use among criminal justice populations as a potential means of attaining a corresponding reduction in their criminality.

No attempt will be made here to review in detail the extensive literature on drug-crime relationships. However, the following key points from recent studies provide an overview of major conclusions from this body of literature:

- Drug users, particularly heroin addicts, engage in substantial amounts of income-generating crimes. After reviewing the existing literature regarding drug-crime relationships, Gandossy, et al., concluded that, "This is true when analyzing the charges against drug-using arrestees, convictions of addicts in prison, arrest

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[3]See, for example, Robert P. Gandossy, et al., Drugs and Crime: A Survey and Analysis of the Literature (Washington, DC: National Institute of Justice, US Department of Justice, May 1980); Mary G. Graham, Controlling Drug Abuse and Crime: A Research Update (Washington, DC: National Institute of Justice Research in Action, March/April 1987); Bernard A. Gropper, Probing the Links Between Drugs and Crime (Washington, DC: National Institute of Justice Research in Brief, February 1985); James A. Inciardi, ed., The Drugs--Crime Connection (Beverly Hills, CA: Sage Publications, 1981); Mark H. Moore, "Controlling Criminogenic Commodities: Drugs, Guns, and Alcohol," in James Q. Wilson, Crime and Public Policy (San Francisco, CA: Institute for Contemporary Studies Press, 1983); and Eric D. Wish and Bruce D. Johnson, "The Impact of Substance Abuse Upon Criminal Careers," in Criminal Careers and "Career Criminals," Volume II, ed. Alfred Blumstein et al. (Washington, DC: National Academy Press, 1986).

records of treatment populations, or the observations of street addicts."[4]

- Heroin users are just as likely as other offenders to commit such violent crimes as homicide, sexual assault and arson--and they are even more likely than other offenders to commit robbery and weapons offenses. A study by Wish, et al., in the District of Columbia found that the percentage of arrest charges for violent crimes was lower for drug users than non-users but that the arrest rates were similar for many violent offenses. This result occurred because drug users committed so many more crimes than non-users.[5]

- Drug use has often been identified as a good predictor of subsequent criminality. For example, Chaiken and Chaiken found that a history of drug use was one of the characteristics shared by "violent predators" incarcerated in three states.[6] Similarly, in a study seeking to identify high-rate offenders for "selective incapacitation" purposes, Greenwood isolated seven important factors, and two of these concern drug use (i.e., illegal drug use as a juvenile and illegal drug use during the prior two years).[7] Moreover, two recent studies of defendants facing federal charges found that drug use increased the likelihood of pretrial misconduct.[8]

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[4]Gandossy, et al., op cit., p. 52.

[5]Eric D. Wish, et al., An Analysis of Drugs and Crime Among Arrestees in the District of Columbia (Washington, DC: National Institute of Justice, December 1981), p. A-5.

[6]Jan M. Chaiken and Marcia R. Chaiken with Joyce E. Peterson, Varieties of Criminal Behavior: Summary and Policy Implications (Santa Monica, CA: The RAND Corporation, August 1982), p. 16.

[7]Peter W. Greenwood with Allan Abrahmse, Selective Incapacitation (Santa Monica, CA: The RAND Corporation, 1982).

[8]William Rhodes, et al., Pretrial Release and Misconduct in the Federal District Courts (Washington, DC: Bureau of Justice Statistics, 1984); see also the Bureau of Justice Statistics Special Report, entitled Federal Offenses and Offenders: Pretrial Release and Misconduct, January 1985, which summarizes this study. An earlier study of federal defendants was conducted by Liese Sherwood-Fabre, An Experiment in Bail Reform: Evaluating Pretrial Release Services Agencies in Federal District Courts, unpublished Ph.D. dissertation, Indiana University, 1984; this is also the Final Report of a National Institute of Justice Graduate Research

- Reducing the level of drug usage can reduce the level of criminality for heroin addicts. For example, a study by Ball, et al., of heroin addicts in Baltimore concluded, based on information reported by the addicts interviewed by the research team, that those addicts' rates of criminality were four to six times higher when they were using heroin than when they were abstaining from it.[9]

- Persons apprehended by the criminal justice system may be helped if they are required to participate in a treatment or urine-testing program that is accompanied by supervision.[10] For example, a study by McGlothlin, et al., of parolees who participated in the California Civil Addict Program found that supervision with urine-testing led to lower rates of drug use and criminality than did either supervision without urine-testing or no supervision.[11] Additionally, analysis by Collins and Allison of data from the Treatment Outcome Prospective Study (TOPS) found that persons who entered treatment because of a criminal justice referral stayed in treatment longer than other individuals. Moreover, among persons who entered outpatient drug-free

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Fellowship.

[9]John C. Ball, et al., "The Criminality of Heroin Addicts When Addicted and When Off Opiates," in James A. Inciardi, ed., op. cit.; and John C. Ball, et al., "The Day-to-Day Criminality of Heroin Addicts in Baltimore: A Study in the Continuity of Offense Rates," Drug and Alcohol Dependence, Volume 12 (1983), pp. 119-142.

[10]John Kaplan is among those who have argued that "coerced treatment" may be the best policy to pursue with regard to heroin addicts who are involved with the criminal justice system: "As compared with imprisonment, treatment is both economical and effective--not so much because our treatments are so enormously successful and cheap but rather because, as applied to heroin addicts, the usual processes of the criminal law seem to be singularly costly and ineffective. . . . If the addict commits six times as many property crimes when he is using heroin daily as when he is not, any means of preventing daily (or more accurately, compulsive) heroin use would reduce his criminality by five-sixths. Any treatment that costs less than five-sixths of the amount we pay for imprisonment might be, in terms of crime prevented, a better buy." John Kaplan, The Hardest Drug (Chicago, IL: University of Chicago Press, 1983), p. 225.

[11]William H. McGlothlin, et al., An Evaluation of the California Civil Addict Program (Rockville, MD: National Institute on Drug Abuse, 1977), p. 2.

> programs, those who were monitored by a Treatment Alternatives to Street Crime (TASC) program stayed in treatment longer. This led to the conclusion that "legal pressure is most effective when accompanied by monitoring or surveillance of clients' behavior."[12]

The widely documented relationship between drug use and crime has spawned a variety of proposals and programs designed to combat crime by reducing drug abuse in order to stop the "revolving door" of drug abuse and criminal justice involvement. An early effort in this regard consisted of TASC programs, which were established in many cities in the early 1970s.[13] Some of those programs exist to this day, and many other efforts to break the drugs/crime nexus have also been initiated in the intervening years. For example, the Anti-Drug Abuse Act of 1986 provided additional federal funding for state efforts (through block grants) and for federal demonstration programs (through discretionary grants) to combat drugs and crime.

More recently, the Office of National Drug Control Policy has issued both an initial and a revised national strategy for drug control.[14] Both of these documents stress the importance

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[12]James J. Collins and Margret Allison, "Legal Coercion and Retention in Drug Abuse Treatment," Hospital and Community Psychiatry, Volume 14 (1983), pp. 1145-1149, as quoted in Wish and Johnson, op. cit. For more information on TASC programs, see Mary A. Toborg, et al., Treatment Alternatives to Street Crime (TASC) Projects, National Evaluation Program Phase I Summary Report (Washington, DC: National Institute of Law Enforcement and Criminal Justice, US Department of Justice, February 1976). Also see the series of articles in Carl G. Leukefeld and Frank M. Tims, eds., Compulsory Treatment of Drug Abuse: Research and Clinical Practice (Rockville, MD: National Institute on Drug Abuse, 1988). For related information about diversion of heroin addicts in the District of Columbia from the criminal justice system to treatment programs, see John P. Bellassai and Phyllis N. Segal, "Addict Diversion: An Alternative Approach for the Criminal Justice System," 60 Georgetown Law Journal 667 (1970); and John P. Bellassai and Michael J. English, The Case for the Pretrial Diversion of Heroin Addicts in the District of Columbia (Washington, DC: American Bar Association Special Committee on Crime Prevention and Control, 1972).

[13]For more information, see Mary A. Toborg, et al., Treatment Alternative to Street Crime (TASC) Projects, op. cit.; and John P. Bellassai and Phyllis N. Segal, op. cit.

[14]The White House, Office of National Drug Control Policy, National Drug Control Strategy (Washington, DC: US Government Printing Office, September 1989); and The White House, Office of

of criminal justice initiatives in reducing drug use and the harmful effects of drug use. Clearly, interest in ways of interrupting the drug-and-crime cycle has not diminished over time--indeed, if anything, it has increased in recent years.

C. Drug Use and Criminality in the District of Columbia

In addition to the studies discussed so far, several analyses have focused specifically on drug-crime relationships in the District of Columbia. In general, findings from these studies parallel those reported previously, in particular, that drug users are disproportionately involved in criminality and that drug use is a good predictor of rearrest. Key findings from these studies include the following:

- Drug use is a good predictor of rearrest. For example, a longitudinal study by Williams of 4,703 persons arrested during a four-month period in 1972-73 and tracked through August 1975 concluded that drug use--as measured by police identification of an arrestee as a drug user--was a good indicator of both the frequency and the seriousness of subsequent rearrests.[15] Similarly, a longitudinal study by Wish, et al., of 7,087 persons, randomly selected from the August 1974--April 1975 time period, and tracked through December 1978 found that drug users--as identified by urinalysis tests at the time of arrest--were more likely than non-users to be rearrested: 65 percent of the drug users were rearrested during the follow-up period, as compared with 50 percent of the non-users.[16]

National Drug Control Policy, National Drug Control Strategy (Washington, DC: US Government Printing Office, January 1990).

[15]Kristen M. Williams, The Scope and Prediction of Recidivism (Washington, DC: Institute for Law and Social Research (INSLAW), July 1979), pp. 16-21. This study was based on data maintained by the Prosecutor's Management Information System (PROMIS) in the District of Columbia.

[16]Eric D. Wish, et al., An Analysis of Drugs and Crime Among Arrestees in the District of Columbia (Washington, DC: National Institute of Justice, December 1981), p. 17. This study was based on data from the Prosecutor's Management Information System (PROMIS) and from the records of the city-wide drug abuse treatment agency, which conducted urine-testing of arrestees during the time period studied as well as provided treatment to drug users who were referred by the court or who otherwise sought treatment. Because urinalysis results were available only for 56 percent of the total sample, this analysis was limited to 3,982 persons; of those, 17

- Drug use is also a good predictor of multiple rearrests. For example, the study by Wish, et al., cited above, found that 30 percent of the drug-positive arrestees--as compared with 18 percent of the drug-negative arrestees--had three or more subsequent arrests during the follow-up period.[17] Moreover, drug users had more multiple rearrests than non-users even after controlling for both age and prior arrest record.[18]

- Drug users commit income-producing crimes, such as larceny and burglary, at much higher rates than non-users. For example, when Wish, et al., analyzed the arrest rates per 100 arrestees over the six-year period from 1973 through 1978, they found that drug users had an arrest rate for larceny of 112.6, as compared with a rate of 42.1 for non-users--almost a threefold difference. Similarly, drug users' arrest rates for burglary were almost double those for non-users (66.1 versus 36.4), and their rates for robbery were also substantially higher (57.1 for drug users versus 34.4 for non-users).[19]

- Drug users commit violent crimes at about the same rate as non-users. For example, the study cited above by Wish, et al., of the 1973-78 period found arrest rates for assault of 35.6 (per 100 arrestees) for drug users and 38.2 for non-users. Similarly, the arrest rates for sexual assault were 5.6 for drug users and 6.1 for non-users; and for homicide, 4.5 for drug users and 4.6 for non-users.[20]

Besides these analyses of the relationship between drug use and rearrest in general, several studies of the District of Columbia have assessed the relationship between drug use and pretrial criminality. Key findings from these studies include the following:

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percent were identified by urinalysis as drug users.

[17]Ibid., pp. 17-18.

[18]Brian Forst and Eric Wish, "Drug Use and Crime: Providing a Missing Link," in Kenneth R. Feinberg, ed., Violent Crime in America (Washington, DC: National Policy Exchange, 1983), p. 91.

[19]Wish, et al., op. cit., p. A-5. This analysis defined a drug user as any arrestee who had a positive urinalysis test result at any arrest during the six-year period studied.

[20]Ibid.

- Drug users are more likely than non-users to be rearrested before trial. For example, a study by Toborg and Kirby of persons arrested over the 1979-81 period found a 42 percent pretrial rearrest rate for drug users--identified by arrestees' self-reports--as compared to 18 percent for non-users.[21] This confirmed the findings of an earlier study by Roth and Wice, using 1974 data, that drug users were more likely to be rearrested before trial than non-users, after controlling for a variety of other factors that might affect pretrial rearrest (e.g., defendants' criminal histories, charge at arrest, age, employment, etc.).[22]

- Drug users are more likely than non-users to have multiple pretrial rearrests. For example, the study by Toborg and Kirby, cited earlier, found that 16 percent of the drug users released to await trial during the 1979-81 period were rearrested more than once before trial; the comparable rate for non-users was five percent.[23]

- Drug use is a good predictor of pretrial rearrest. A study by Toborg, Yezer, et al., of persons arrested during the 1979-81 period found that self-reported drug use was a good predictor of pretrial rearrest for any charge as well as of pretrial rearrest for a "dangerous or violent" charge, as defined by DC law; this study used multivariate analysis to control for a variety of other factors that might influence pretrial rearrest, such as arrest charge, prior criminal record, other involvement with the criminal justice system when

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[21]Mary A. Toborg and Michael P. Kirby, Drug Use and Pretrial Crime in the District of Columbia (Washington, DC: National Institute of Justice Research in Brief, October 1984), p. 3. This study also found that failure-to-appear rates were higher for drug users than non-users (31 percent versus 21 percent).

[22]Jeffrey A. Roth and Paul B. Wice, Pretrial Release and Misconduct in the District of Columbia (Washington, DC: Institute for Law and Social Research (INSLAW), April 1980), p. 58. this study, based on data maintained by the Prosecutor's Management Information System (PROMIS) for the District of Columbia, also found that drug users were more likely than non-users to fail-to-appear for court (see p. 57).

[23]Toborg and Kirby, op. cit., p. 3. See also the full-length Final Report with the same title, submitted to the National Institute of Justice in March 1984, especially Table 23 of the Appendix.

arrested, age, and so on.[24] These findings confirm those of an earlier multivariate analysis, based on 1974 arrests, by Roth and Wice that showed that drug use was a good predictor of pretrial rearrest.[25]

More recent findings from the research on the pretrial urine-testing program in the District of Columbia also provide insight about the relationship between drug use and pretrial misconduct. These findings will be presented after a brief description of the urine-testing program itself.

D. Urine-Testing of Arrestees in the District of Columbia

The DC Pretrial Services Agency (PSA), which has been designated an Exemplary Project by the National Institute of Justice (NIJ),[26] is the DC Government agency charged by law with the responsibility for (1) interviewing all arrestees to determine their eligibility for pretrial release; (2) making recommendations to the bail-setting judge as to appropriate terms and conditions for release in all criminal cases; and (3) monitoring compliance with release conditions for all defendants, except those released on surety bond. As a routine part of its operations, PSA now tests most defendants arrested in the District of Columbia, except persons charged with relatively minor offenses or Federal crimes, for the presence of selected drugs in their urine.[27]

PSA's Drug Detection Center operates a stationary laboratory in the DC Courthouse. Once provided by arrestees (shortly after arrest), urine samples are taken by PSA staff directly from the cellblock to the laboratory, located in the same building, for analysis.

Using the Enzyme Multiplied Immunoassay Technique (EMIT) system, PSA analyses each urine sample for the presence of five

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[24]Mary A. Toborg, Anthony M.J. Yezer, et al., Pretrial Release Assessment of Danger and Flight: Method Makes a Difference, report submitted to the DC Pretrial Services Agency, June 1984, pp. 83-84.

[25]Roth and Wice, op. cit., p. 58.

[26]Giannina P. Rikoski and Debra Whitcomb, An Exemplary Project: The D.C. Pretrial Services Agency, Washington, DC (Washington, DC: National Institute of Justice, May 1982).

[27]Some defendants refuse the urine-test, and others are brought to the courthouse for bail hearings too late in the day for the tests to be performed. However, most defendants undergo the urine-tests.

drugs: opiates, cocaine, phencyclidine (PCP), amphetamines and methadone. PSA's Drug Detection Center staff are well-trained, and rigorous chain-of-custody procedures are maintained from the time the urine sample is collected through the time the results are reported at the bail hearing.[28]

Test results are made available that same day to PSA's in-court representatives, who are present at the bail-setting hearing to make pretrial release recommendations to the court. Under DC law, judges may release defendants on their own recognizance (ROR); on nonfinancial conditional release (i.e., subject to certain restrictions on travel, association, behavior, etc.); on financial conditions (i.e., cash, deposit, or surety bond); in the custody of a third party; or may preventively detain certain classes of "dangerous" defendants for whom no condition or combination of conditions will protect against flight or danger to the community. Based on their confidence in the accuracy of PSA's urine-testing, judges report that they frequently release drug-using defendants, conditioned on reporting to PSA for periodic urinalysis and/or enrolling in a drug abuse treatment program.[29]

By having accurate and timely urine-test results at the bail-setting hearing, judges are able to set appropriate release conditions for drug-using defendants, secure in the knowledge that PSA will (1) closely monitor them for continued drug use during the pretrial release period; and (2) report any continuing illegal drug use to the court. Typically, drug-using defendants are ordered as conditions of their pretrial release (1) to refrain from illegal drug use; and (2) to report as scheduled before trial for continued urine surveillance (usually once a week) or for placement in treatment.

With the quick and accurate reporting by PSA of continued drug use in violation of court-ordered release conditions, judges are better able to enforce their orders. The court's contempt powers may be invoked by judges in response to reported violations of drug-related conditions of release, and a variety of sanctions--including detention--may be imposed. Thus, in the District of Columbia, defendants know that continued pretrial

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[28]For more information on these procedures, see DC Pretrial Services Agency Drug Detection Center, Procedural Manual (no date).

[29]See Mary A. Toborg and John P. Bellassai, The Views of Judicial Officers, monograph submitted to the National Institute of Justice, Washington, DC, March 1988; and Mary A. Toborg and John P. Bellassai, The Perspectives of Judicial Officers in 1989, monograph submitted to the National Institute of Justice, Washington, DC, September 1989.

drug use, in violation of court-ordered release conditions, will be detected and can result in punishment.[30]

PSA's pretrial urine-testing program was initially funded by a grant from the National Institute of Justice (NIJ). It is now supported by DC Government revenues and is an on-going and highly regarded component of the local criminal justice system.

Based on the results of the DC urine-testing program, the Bureau of Justice Assistance (BJA) has funded replication programs in other communities as part of its mandate under the Anti-Drug Abuse Act of 1986. To date, BJA has funded pretrial urine-testing programs in six jurisdictions: Pima County (Tucson), AZ; Multnomah County (Portland), OR; New Castle County (Wilmington), DE; Prince George's County, MD; Maricopa County (Phoenix), AZ; and Milwaukee County, WI. These programs also have evaluation components, and as results become available, these studies may shed more light on the ways in which programs of arrestee urine-testing assist local criminal justice systems in identifying and managing drug-using arrestees.

Another result of the DC urine-testing program for adult arrestees is that a pre-adjudication urine-testing program for juveniles has now been implemented by PSA. This program grew out of the finding of surprisingly high rates of drug use among young people being processed by the adult criminal justice system, i.e., persons 18-to-21 years of age. As one judge said, "We may be losing the battle at the juvenile level. The adult courts see drug users at age 18, but you know they didn't just start using drugs then."[31] As a result of these widely expressed concerns about juvenile drug use, NIJ funded a demonstration project in the District of Columbia to conduct urine-testing of juvenile respondents and probationers. This program, also run by PSA, began operation in October 1986; it tests juveniles for cocaine, PCP, marijuana and opiates. As is the case with the adult urine-testing program, the juvenile program is now entirely funded by the DC Government.[32]

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[30]Ibid.

[31]Mary A. Toborg and John P. Bellassai, The Views of Judicial Officers, op. cit., pp. 14-15.

[32]The juvenile urine-testing program is being evaluated by Toborg Associates, Inc.; a report on the results will be available in the near future.

E. Key Findings from Assessment of DC's Pretrial Urine-Testing Program

The assessment of DC's pretrial urine-testing program focused mainly on adult criminal defendants arrested and tested by PSA during the eight-month period from June 1984 through January 1985. Approximately 9,000 defendants were tested during this period. PSA's extensive data base was used by Toborg Associates to evaluate, under an NIJ grant, the impact of the pretrial urine-testing program for adult defendants.

Urine-test results of arrestees were analyzed to assess broad drug abuser profiles, drug abuse trends and patterns, and particular drug-crime relationships. Drug use at the time of arrest was analyzed in terms of its important as a predictor of pretrial rearrest and/or failure-to-appear for court. Also, the utility of periodic urine-testing during the pretrial period was assessed in terms of whether showing up for such testing served as a "signaling device" by which one could separate good risks for continued pretrial release from bad risks.[33]

These analyses were designed to overcome the limitations of past studies of drug-crime relationships. This was accomplished by incorporating the following features into the study:

- including in the sample virtually the entire universe of DC criminal cases for the period of study;
- looking at five drugs of abuse, including cocaine and PCP, rather than concentrating only on heroin;
- including female as well as male arrestees;
- relying on objective technology to measure drug usage, rather than on self-reports only;

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[33]A summary of the findings appears in Mary A. Toborg, John P. Bellassai, Anthony M.J. Yezer, and Robert P. Trost, op. cit. See also the five individual monographs prepared as part of the research project: Mary A. Toborg and John P. Bellassai, Background and Description of the Urine-Testing Program, March 1988; Mary A. Toborg and John P. Bellassai, The Views of Judicial Officers, March 1988; Mary A. Toborg, Anthony M.J. Yezer, and John P. Bellassai, Analysis of Drug Use Among Arrestees, March 1988; Anthony M.J. Yezer, Robert P. Trost, and Mary A. Toborg, The Efficacy of Using Urine-Test Results in Risk Classification of Arrestees, March 1988; and Anthony M.J. Yezer, Robert P. Trost, Mary A. Toborg, John P. Bellassai, and Carmela Quintos, Periodic Urine Testing As A Signaling Device for Pretrial Release Risk, May 1988.

- using the EMIT system for urine-testing, rather than less reliable thin layer chromatography (TLC); and

- relying on the District of Columbia criminal justice system's unique personal identifiers (the "PDID number") to track and follow individual defendants throughout the life of the study; in this way, the analyses could be person-based, rather than case-based.

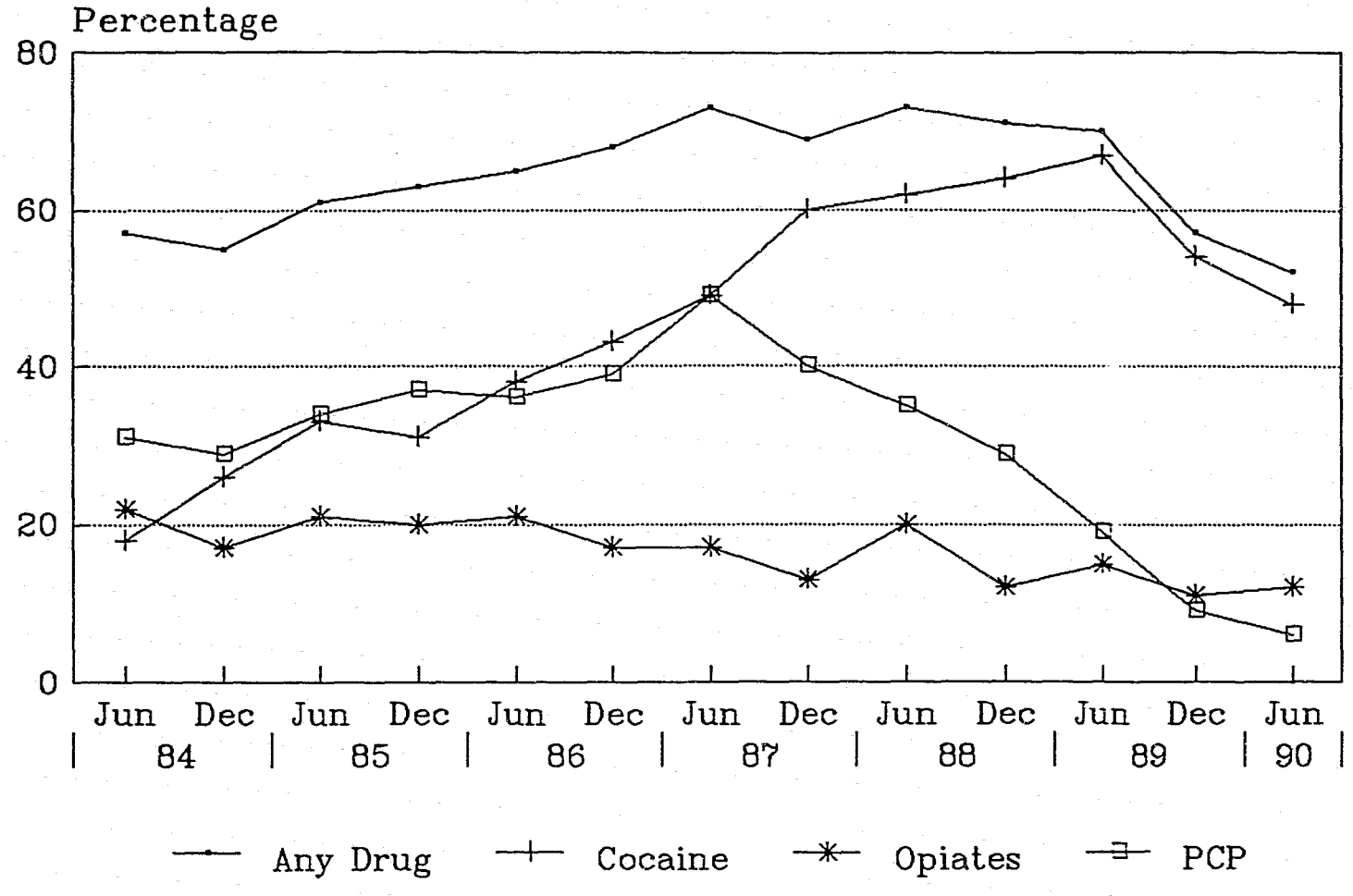
Salient findings from that study regarding drug use among arrestees in the District of Columbia include the following:

- Since the urine-testing program began, more than half the tested arrestees have been positive for one or more drugs. Rates of overall drug use peaked at 75 percent in September 1988. In recent months, rates of drug use have declined, as shown in Exhibit 1. Indeed, in June 1990, only 52 percent of the arrestees tested were positive for drugs. This was the lowest rate of overall drug use among arrestees in more than five years (since November 1984).

- When the urine-testing program began, PCP was the drug most commonly used by arrestees, with 31 percent of arrestees positive for PCP (see Exhibit 1). In the early months of the urine-testing program, use of both PCP and cocaine increased, with cocaine use rising at a sharper rate than PCP use. Indeed, by the middle of 1986, rates of cocaine use consistently exceeded rates of PCP use--a situation which continues as of the date of this report (August 1990). Starting in the last half of 1987, rates of use of PCP began to decline steadily and by June 1990 PCP use was relatively rare in the jurisdiction (when only 6 percent of tested arrestees were positive for PCP). As rates of PCP use declined, rates of cocaine use at first increased and subsequently declined. By May 1988, fully 67 percent of tested arrestees were positive for cocaine. By June 1990, this percentage had declined to 48 percent.

- Opiate (mainly heroin) use has been detected for a significant minority of arrestees since the urine-testing program began. In the early years of the urine-testing program, rates of heroin use were relatively static (in contrast to the sharp trends observed in the use of cocaine and PCP). Between March 1984, when the urine-testing program began, and March 1987, the percentage of tested arrestees who used heroin usually ranged between 17 and 22 percent. Starting in mid-1987, rates of opiate use began to decline; as of June 1990, only 12 percent of tested arrestees were positive for opiates.

Exhibit 1
Drug Test Results for Selected Drugs



Source: PSA's Monthly Drug Test Reports

- Rates of use of amphetamines and methadone have been consistently low (less than 5 percent).

- Many drug-using arrestees test positive for more than one drug. During the first year of the urine-testing program, for example, approximately one-third of the arrestees with positive drug test results had used more than one drug. Common drug use combinations are (1) opiates and cocaine; and (2) PCP and cocaine.

- Different patterns of drug abuse were found for male than for female arrestees. Women used multiple drugs more often than men. Also, young women used less PCP, but more cocaine and opiates, than did young men. For example, during the eight-month period (March 1984 through January 1985) that was the primary focus of the analysis, 24 percent of the female arrestees tested used more than one drug, as compared with 18 percent of the tested male arrestees. For tested arrestees who were 18-21 years old, 32 percent of the women used PCP; 19 percent used cocaine; and 10 percent used opiates. Comparable percentages for male arrestees were 55 percent, PCP; 12 percent, cocaine; and 4 percent, opiates.[34]

The analyses of the DC pretrial urine-testing program demonstrated that urine-test results are a good predictor of pretrial rearrest and of failure-to-appear for court. That is, urine-test results made a consistent, significant, incremental contribution to pretrial risk classification--for both pretrial rearrest risk and failure-to-appear risk--for arrestees in the District of Columbia.[35] Analyses by type of drug found that particular drugs and combinations of drugs related in different ways to the risk of pretrial rearrest, failure-to-appear, or

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[34]These findings for arrestees in the District of Columbia are very similar to findings for arrestees in Manhattan, where urine-tests were conducted shortly after arrest as part of a confidential research project. The Manhattan study, performed at approximately the same time as the DC study, found that more than half the arrestees tested were positive for drugs; many arrestees used multiple drugs; and female arrestees had more serious drug abuse problems than male arrestees. Eric D. Wish, Elizabeth Brady, and Mary Cuadrado, "Drug Use in Arrestees: Findings from Manhattan," paper presented at the NIJ Conference, Drugs and Crime: Detecting Use and Reducing Risk, Washington, DC, June 5, 1986.

[35]Findings for arrestees tested in New York City were similar. Douglas A. Smith, Eric D. Wish, and G. Roger Jarjoura, "Drug Use and Pretrial Misconduct in New York City," Journal of Quantitative Criminology, Vol. 5, No. 2, 1989, pp. 101-126.

pretrial misconduct (a composite measure, consisting of failure-to-appear, pretrial rearrest, or both). The use of PCP by itself or the use of three or more drugs had a positive, significant association with pretrial rearrest. The use of cocaine by itself, opiates alone, or the combination of opiates and cocaine had a positive, significant association with failure-to-appear, while the use of PCP by itself had a negative, significant association with that outcome. For overall pretrial misconduct, the use of cocaine by itself or opiates alone showed positive, significant associations.[36]

Additionally, the program of periodic urine-testing during the pretrial period was found to operate as an effective "signaling mechanism" for separating defendants who are good risks for continued release from those who are poor risks. Drug-using defendants who were released before trial, conditioned on reporting periodically for urinalysis, soon sorted themselves into two groups: (1) those who complied with the release conditions by appearing for urine-testing; and (2) those who did not comply, either by failing to appear for testing or by dropping out after only a few tests. Analyses showed that those defendants who did comply with the urine-testing program had sharply lower rates of pretrial rearrest, failure-to-appear, and overall pretrial misconduct than those who did not comply. Participation in the urine-testing program thus served as a "signal" that the defendant posed a relatively low release risk.[37]

F. Identification of Hidden Drug Abusers

A large number of "hidden" drug abusers were identified by the urine-testing program. During the period from June 1984 through January 1985, a total of 55 percent of the tested defendants were positive for one or more drugs. However, only 50 percent of the drug-positive defendants admitted using drugs. This is shown in Exhibit 2, which also illustrates the extent of under-reporting by type of drug. As indicated, PCP users were especially unlikely to report drug use--only about one-third did so. For cocaine users, about one-half reported drug use. Heroin users were the most likely to report drug use, perhaps because the signs of intravenous heroin use are frequently difficult to disguise; even so, more than one-third of the heroin users

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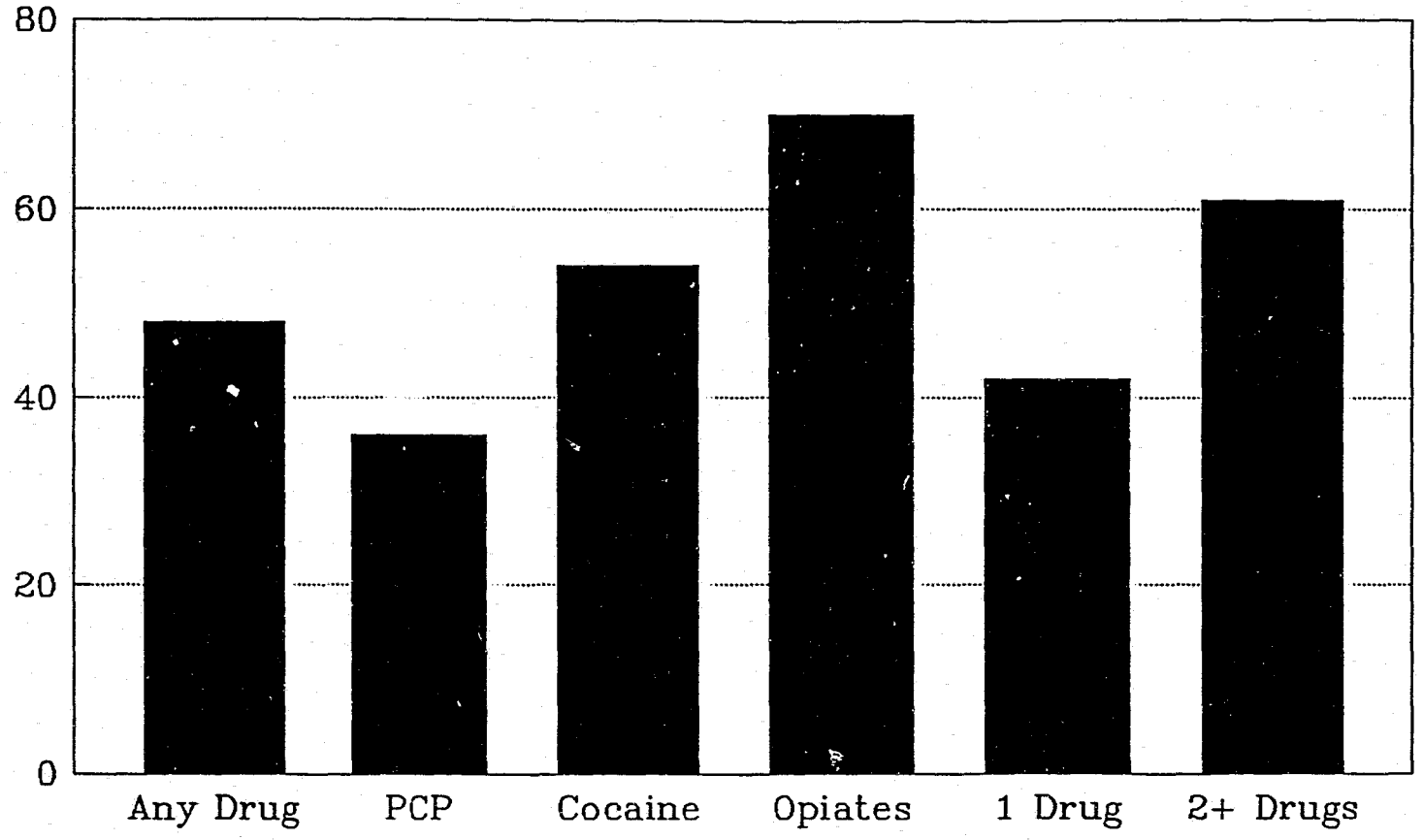
[36]Mary A. Toborg, John P. Bellassai, Anthony M.J. Yezer, and Robert P. Trost, Assessment of Pretrial Urine-Testing in the District of Columbia, op. cit., p.10.

[37]Ibid., p. 15.

Exhibit 2

Percentage of Drug-Positive Defendants Who Self-Reported Drug Use



Data from 6/84 through 1/85

identified by the urine-tests did not report any drug use.[38] Hence, if self-reports of drug use had been used to identify drug users, fully one-half of all drug users--and two-thirds of all PCP users--would have been missed.

A similar finding applies when charges are considered. If only the charges of drug possession and sale had been screened, 54 percent of all drug users would have been missed. And even if the charges of burglary, robbery, theft, fraud and forgery had also been screened, one-third of the drug users would still have been missed.[39]

Clearly, PSA's urine testing program is a far more effective mechanism for identifying drug abusers than reliance on defendants' self-reports or an analysis of charges. But how important is it to identify these "hidden" drug abusers? The answer to this question depends upon a number of factors, including the nature of the criminal careers for these hidden drug abusers, as compared to other drug abusers and to non-drug-abusing defendants, as well as the possibilities for successfully intervening to reduce both the drug abuse and the criminality of hidden drug abusers. These issues are considered in subsequent chapters of this report.

One difficulty with attempts to interrupt the cycle of drugs-and-crime is that drug users must be identified before interventions--for either crime control or treatment purposes--can be offered to them or imposed upon them.[40] Traditionally,

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[38]A research project in New York City had similar findings: 50 percent of the drug users identified there by urine-tests had reported in a confidential research interview that they used drugs; 67 percent of the opiate users, 48 percent of the cocaine users, and 25 percent of the PCP users reported their use of these drugs. Eric D. Wish, Elizabeth Brady, and Mary Cuadrado, op. cit. The findings from New York City and the District of Columbia confirm those of an earlier study of six cities, which concluded that there was low correspondence between interview data and urinalysis results for all drugs except heroin. William C. Eckerman, et al., "Insights into the Relationship between Drug Usage and Crime Derived from a Study of Arrestees," paper in the National Institute on Drug Abuse and Research Triangle Institute, Appendix to Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior, September 1976.

[39]Findings from New York City are similar. See Eric D. Wish, Elizabeth Brady, and Mary Cuadrado, op. cit.

[40]See Eric D. Wish, Mary A. Toborg, and John P. Bellassai, Identifying Drug Users and Monitoring Them During Conditional Release (Washington, DC: National Institute of Justice Issues and

the ways in which the criminal justice system has identified drug abusers consist of (1) self-reports by the drug abusers themselves; or (2) an assessment of charges to isolate those offenses that are often committed by drug abusers (e.g., drug possession or sale charges, drug-related property offenses, etc.). However, findings (cited above) from urine-testing programs in the District of Columbia, New York City, and elsewhere show that both of these approaches will miss large numbers of drug abusers.

With the advent of AIDS--and the fact that intravenous (IV) drug users are a high-risk group for both contracting and spreading AIDS--interest in identifying drug users, particularly IV drug users, has increased. The criminal justice system provides such a potential identification mechanism. Indeed, a recent paper refers to drug abusers in the criminal justice system as a "lost opportunity to combat AIDS."[41] The authors note the large number of IV drug users coming through the criminal justice system and recommend that increased AIDS education and outreach efforts be focused on these individuals. Although urine-testing cannot, of course, determine <u>how</u> drugs were taken (i.e., IV or otherwise), it can provide a starting point for such a determination by identifying those individuals who have used drugs recently. Thus, the identification of hidden drug abusers could have public health ramifications that extend beyond concerns about drug abuse alone.

G. Scope of Project

As discussed in the grant application originally submitted, this study of hidden drug abusers was designed to address the following questions:

- How large is the "hidden population" of drug abusers that can be identified from urine-testing of arrestees but not from other information (such as defendants' self-reports of drug usage or charge data) available to the criminal justice system in Washington, DC?

- What are the characteristics of this hidden population of drug abusers? How do these individuals compare with

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<u>Practices</u> Series, February 1988) for a discussion of ways to identify drug users.

[41]Eric D. Wish, Joyce O'Neil, and Virginia Baldau, "Lost Opportunity To Combat AIDS: Drug Abusers in the Criminal Justice System," paper presented at the National Institute on Drug Abuse Technical Review Session on AIDS and Intravenous Drug Use, July 1988.

other drug-using arrestees and with non-users of drugs?

- To what extent are the drug users who, but for the urine-test results, are hidden from the criminal justice system in Washington, DC also hidden from drug abuse treatment programs and other components of the local public health system?

- To what extent were hidden drug abusers, identified from urine tests of arrestees over the June 1984--January 1985 period, rearrested during the subsequent 24 months? How many of the hidden drug abusers continued their criminal careers, and how many did not (i.e., are "apparent desisters")?

- When a sample of the "apparent desisters" and a sample of other hidden drug abusers are interviewed, what do they report about their patterns of drug abuse and criminality over time? For those who provide a urine sample at the time of interview, how many are using illicit drugs, and how does their current drug use compare with earlier urine test results?

- For those hidden users who are "true desisters" (that is, they were not rearrested during the 24-month follow-up period and they report no criminal activity during that time), what seems to explain this outcome? To what extent could the factors that influenced this group to give up criminality be replicated for other criminally involved drug abusers?

- When the study findings are discussed with key criminal justice, drug abuse treatment, and public health practitioners in Washington, DC, what are their views about appropriate policy responses to the problems posed by hidden drug abusers? To what extent do they think that new intervention strategies could be developed to facilitate reductions in both drug abuse and criminality for this group? To what extent would such interventions differ from those that might be most appropriate for other ("non-hidden") drug abusers?

During the review of the grant application, two major modifications of the project were suggested. First, the reviewers recommended that the interview phase of the project not be limited to hidden drug abusers. As a result, this component of the project was expanded to included "non-hidden" drug abusers as well. Second, the reviewers recommended that the study also attempt to develop estimates of the size and characteristics of the total population of drug abusers (both hidden and known) as well as those drug abusers who comprise the criminal sub-

population. In response, such a statistical estimation task was added to the project.

The project, as funded, included seven tasks, as follows:

- Task 1: Analyze the characteristics of the hidden drug abuser population identified from urine-testing of arrestees in Washington, DC;
- Task 2: Assess whether the hidden drug abusers identified in Task 1, above, were also hidden from the drug abuse treatment system;
- Task 3: Analyze rearrest histories of hidden drug abusers over a 24-month followup period;
- Task 4: Conduct followup interviews with selected hidden drug abusers;
- Task 5: Interview selected criminal justice and public health officials;
- Task 6: Develop statistical estimates of the total population of drug abusers involved in criminal activity (i.e., all such drug abusers, not merely those who are arrested) and, if feasible, estimates of the total population of drug abusers (i.e., those who are not involved in criminal activity as well as those who are); and
- Task 7: Prepare Final Report.

Results of the implementation of these various tasks are presented in the following chapters of this report.

H. Organization of This Report

The subsequent chapters of this Final Report are organized as follows. Chapter II, "Hidden Drug Abusers," discusses the size and characteristics of the hidden drug abuser population (i.e., those drug users who would have been hidden from the criminal justice system in the absence of the arrestee urine-testing program); compares hidden drug abusers with non-users of drugs and with known ("non-hidden") drug abusers; and assesses rearrest rates for hidden drug abusers, known drug abusers and non-users of drugs. Thus, Chapter II presents the results of Tasks 1, 2, and 3, discussed above.

Chapter III, "Interviews with Drug Abusers," presents the results of followup interviews with samples of hidden and known drug abusers (Task 4). These interviews were designed to assess

the self-reported drug/crime careers of hidden versus known drug abusers and, in particular, to determine whether hidden drug abusers do indeed appear to be at earlier stages of those careers.

Chapter IV, "Statistical Estimation of the Number of Criminally Involved Drug Users," presents the results of statistical analyses designed to estimate the total population of drug users who are involved in criminality in the District of Columbia--including those drug users who are not arrested as well as those who are (Task 6). Several statistical techniques were employed to develop these estimates for two years, 1985 and 1986. Additionally, estimates were prepared by residence (DC, Maryland or Virginia), major crime type, and type of drug used.

Finally, Chapter V, "Summary and Conclusions," highlights key findings from the project. It also discusses the implications for public policy--both in the District of Columbia and elsewhere.

No separate chapter is provided for the results of the interviews with selected criminal justice and public health officials (Task 5). However, salient findings from these interviews appear, as relevant, throughout the Final Report (Task 7).

II. HIDDEN DRUG ABUSERS

A. Size and Characteristics of the Hidden Drug Abuser Population

Hidden drug abusers are those persons who would not have been identified as drug abusers but for the urine-tests conducted shortly after arrest. That is, hidden drug abusers tested positive for drug use but did not self-report any drug use, nor were they charged with drug possession or sale.[42] During the first six months of Calendar Year 1985, the urine-testing program for arrestees in the District of Columbia identified 868 drug abusers who would otherwise have been hidden. As shown in Exhibit 3, these drug abusers comprised 17 percent of all tested arrestees and 24 percent of all drug abusers identified during that period.

The characteristics of these hidden drug abusers are shown in Exhibits 4 through 8. (The data upon which all exhibits in this chapter are based appear in Appendix A.) As indicated, hidden drug abusers are young: approximately one-third are 22 years of age or younger, and almost 70 percent are 28 years of age or younger. Twenty percent are aged 29-35; only 10 percent are 36 years of age or older. By ethnicity, 91 percent of the hidden drug abusers are black; 8 percent, white; and 1 percent, other. By gender, 81 percent of hidden drug abusers are male; and 19 percent, female.

Seventy-eight percent of the hidden drug abusers are residents of the District of Columbia. Thirteen percent live in Maryland; 50 percent, Virginia; and 4 percent, other places. Slightly more than half (53 percent) of the hidden drug abusers are employed.

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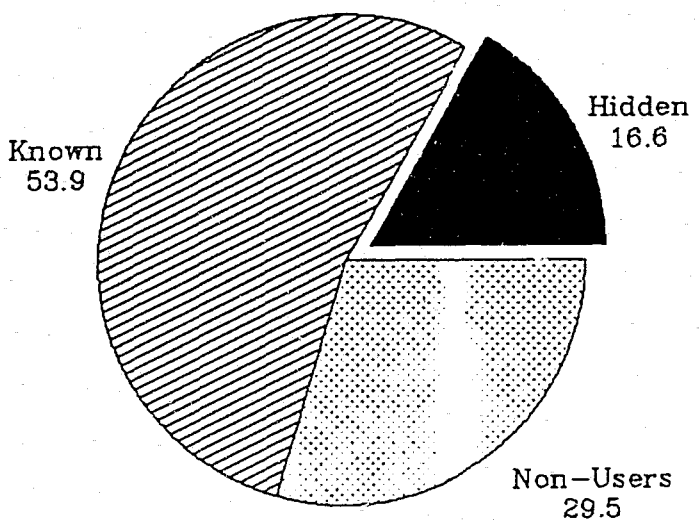
[42]Self-reports of drug use and drug charges are the most common ways that drug abusers are identified in jurisdictions that do not conduct urine-testing of arrestees--the vast majority of jurisdictions. For the District of Columbia, we also considered whether self-reports of treatment experiences--another indicator sometimes used to identify drug abusers--would identify substantial numbers of additional drug users. However, only a few drug abusers were located in this way who had not been identified through self-reports of drug use or drug charges. Some jurisdictions also use prior (not current) drug charges as a possible indicator of current drug use. Unfortunately, the data base available for this study did not include complete prior record information on all arrestees; rather, it showed only the total number of prior convictions. Hence, we could not determine the percentage of the hidden drug abusers who may have had prior drug charges. It is, of course, problematic as to whether prior drug charges--particularly if they were in the distant, rather than recent, past--serve as a good indicator of current drug use.

Exhibit 3

Hidden Drug Abusers Compared to Other Arrestees

(Percentages)



Hidden Compared with Known Drug Abusers

(Percentages)

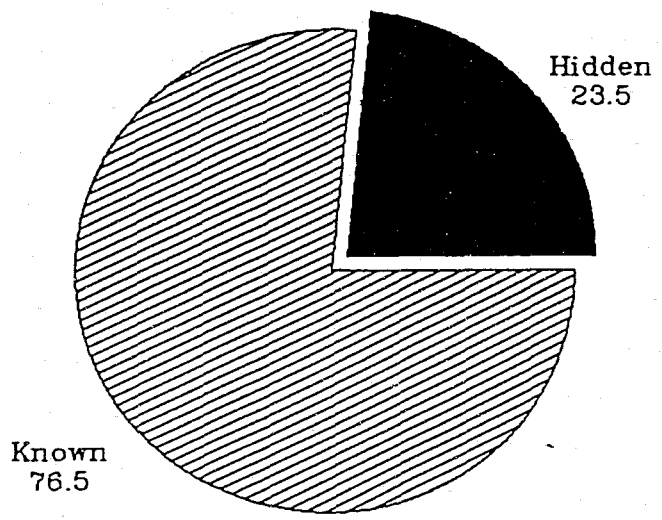
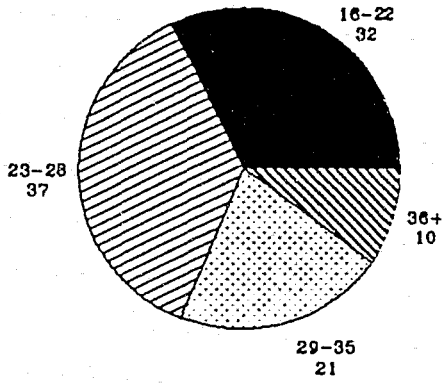
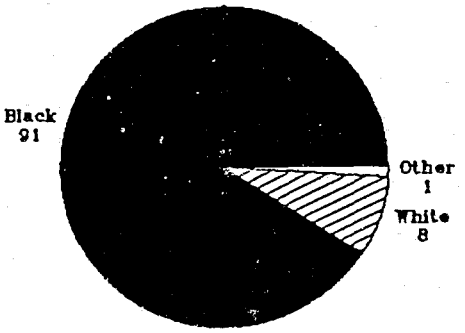


Exhibit 4
Characteristics of Hidden Drug Abusers
(Percentages)

Age



Ethnicity



Gender

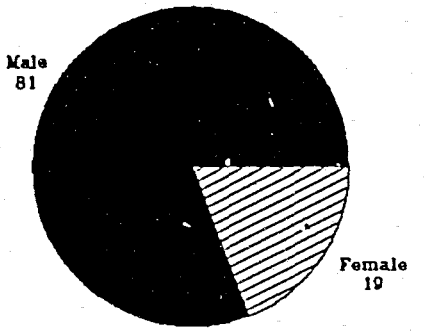
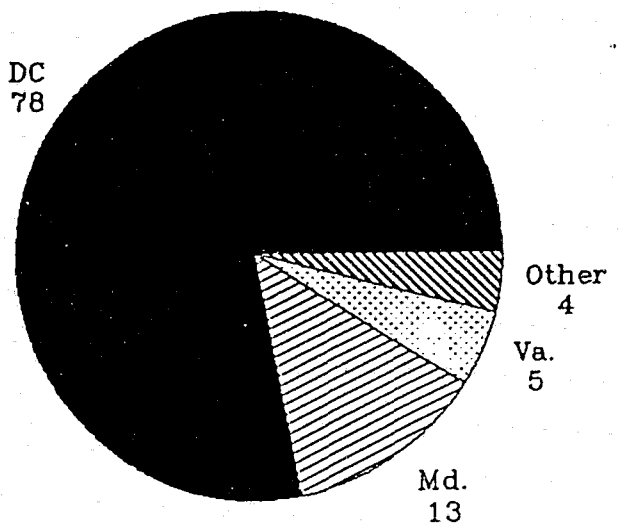


Exhibit 5
Characteristics of Hidden Drug Abusers
(Continued)

Residence



Employment

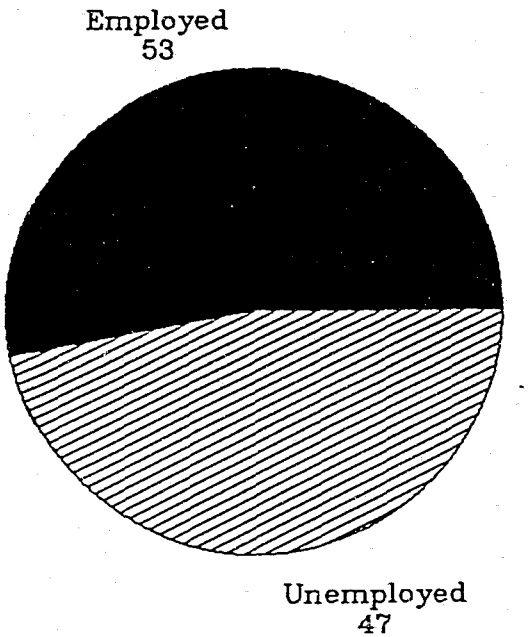
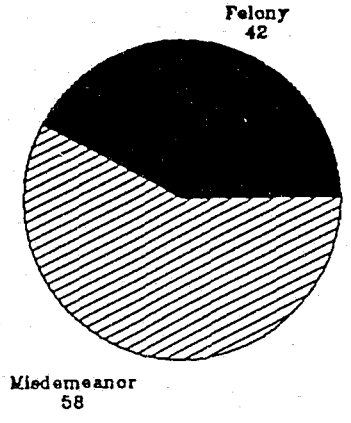
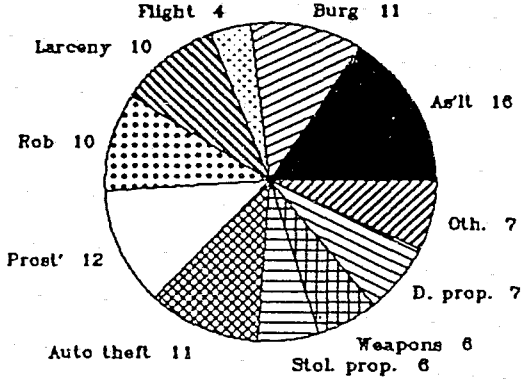


Exhibit 6
Characteristics of Hidden Drug Abusers
(Continued)

Charge Severity



Charge Type



Charge Group

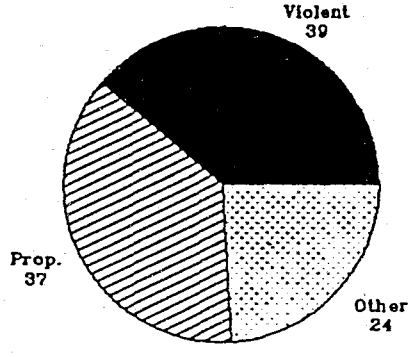
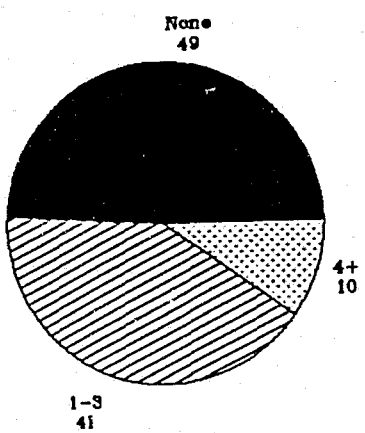
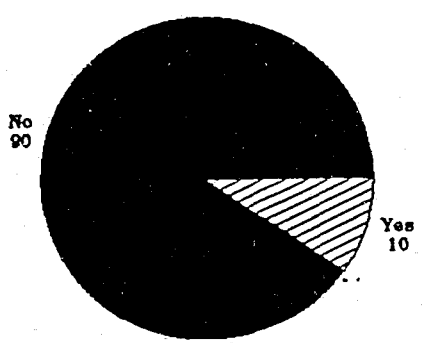


Exhibit 7
Characteristics of Hidden Drug Abusers
(Continued)

Prior Convictions



On Probation When Arrested?



On Parole When Arrested?

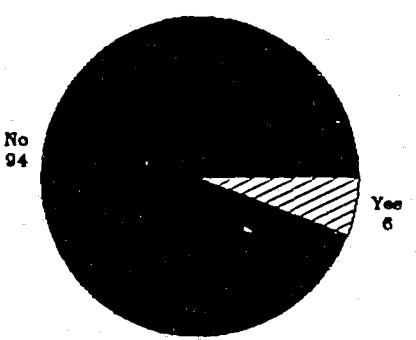
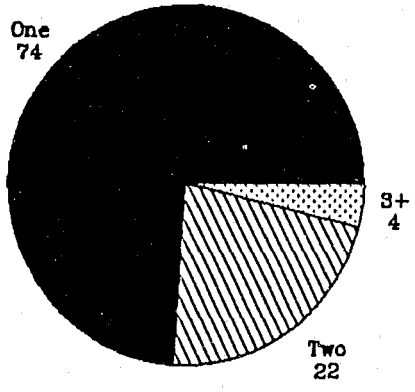
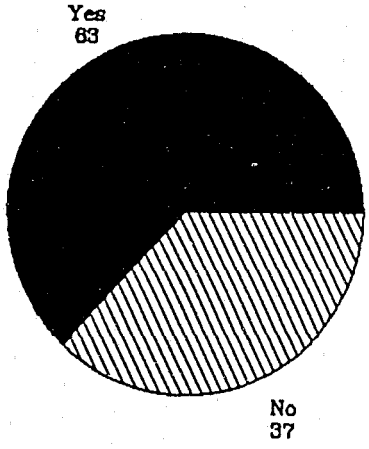


Exhibit 8
Characteristics of Hidden Drug Abusers
(Continued)

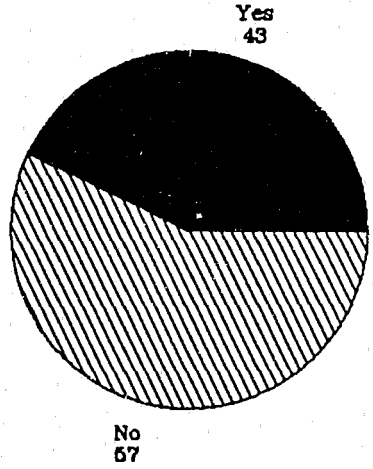
Number of Drugs Used



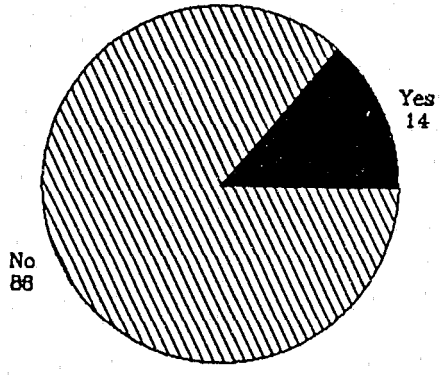
Used PCP?



Used Cocaine?



Used Opiates?



Forty-two percent of the hidden drug abusers are charged with felonies; and 58 percent, with misdemeanors. By offense, the most common charge is assault (16 percent), followed by prostitution (12 percent), burglary (11 percent), auto theft (11 percent), larceny (10 percent), and robbery (10 percent). Thirty-nine percent of hidden drug abusers are charged with violent offenses (defined as assault, robbery, weapons charges, or destruction of property), while 37 percent are charged with property crimes (defined as burglary, larceny, auto theft or stolen property) and 24 percent are charged with other offenses (i.e., flight/escape, prostitution, or miscellaneous other offenses).

Almost half (49 percent) of the hidden drug abusers have no prior convictions when arrested, and 41 percent have one to three convictions. Ten percent of all hidden drug abusers have been convicted four or more times. Also, at the time of arrest, 10 percent of the hidden drug abusers were already on probation, and 6 percent were on parole.

When tested for drugs, 74 percent of the hidden drug abusers were found positive for only one drug, while 22 percent had used two drugs, and 4 percent had used three or more drugs. The drug of choice was most often PCP, with 63 percent of the hidden drug abusers testing positive for it. Forty-three percent of the hidden drug abusers tested positive for cocaine, and 14 percent tested positive for opiates. In addition to these three major drugs, there was some use of amphetamines and methadone by hidden drug abusers: nine percent of hidden drug abusers tested positive for amphetamines and one percent for methadone.[43]

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[43]We attempted to determine whether the hidden drug abusers identified from PSA's urine-test results were also hidden from the drug abuse treatment system. We received permission from the DC Department of Human Services Protection of Human Subjects Panel to use treatment admissions data maintained by the Alcohol and Drug Abuse Services Administration (ADASA)--the city-wide treatment agency--for this purpose. We had planned to compare the list of hidden drug abusers with treatment admissions data to determine the extent to which hidden drug abusers had been admitted to treatment before they were identified as hidden drug abusers through PSA's urine-testing program. Unfortunately, gaps in the data obtained from ADASA precluded its use for this purpose.

We also explored the possibility of obtaining information from the Drug Abuse Warning Network (DAWN) system that would be useful for the project. Unfortunately, confidentiality protections regarding DAWN extend even to the identity of the specific agencies that report to it. We had hoped to use DAWN to identify the major institutions in the District of Columbia that account for most of the reported cases and then to contact those institutions to try to

B. Comparison of Hidden Drug Abusers with Non-Users of Drugs

In the absence of the urine-tests, the hidden drug abusers would have been classified as non-users of drugs. A comparison of the characteristics of hidden drug abusers with those of true non-users[44] reveals important differences in the two groups, however. These differences are shown in Exhibits 9 and 10.

Hidden drug abusers are younger than non-users: 32 percent of hidden drug abusers are 22 years of age or younger, but only 27 percent of non-users are that young. Moreover, 69 percent of hidden drug abusers are 28 years of age or younger, as compared with only 53 percent of non-users. Hidden drug abusers are somewhat more likely to be black than are non-users: 91 percent of hidden drug abusers are black, as compared with 86 percent of non-users. The gender mix is about the same for both groups: 81 percent of the hidden drug abusers and 82 percent of the non-users are male. Employment rates are also about the same for the two groups, with 53 percent of the hidden drug abusers and 52 percent of the non-users employed. Hidden drug abusers are somewhat more likely than non-users to be residents of the District of Columbia: 78 percent of hidden drug abusers live in DC, as compared with 73 percent of non-users.

When charge severity is considered, hidden drug abusers are more likely than non-users to be charged with felonies (42 percent versus 37 percent). By type of offense, they are more likely to be charged with auto theft (11 percent versus 7 percent) and less likely to be charged with assault (16 percent versus 24 percent). They are also somewhat more likely to be charged with larceny (10 percent versus 8 percent), robbery (10 percent versus 8 percent), prostitution (12 percent versus 10 percent), and stolen property (6 percent versus 4 percent).

Hidden drug abusers are more likely to have a record of prior convictions than are non-users: 51 percent of hidden drug abusers had prior convictions, as compared with 43 percent of non-users. Hidden drug abusers are also somewhat more likely to be on probation or parole for other offenses at the time of arrest. Ten percent of hidden drug abusers versus 7 percent of non-users were already on probation when arrested. For parole, the percentages are lower and less disparate: 6 percent of

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obtain data from them for our study. However, this was not possible, due to DAWN's confidentiality constraints.

[44]It is, of course, possible that some defendants who are classified as "true non-users" do in fact use drugs but their last drug use did not occur sufficiently recently to be detected by the urine-tests.

Exhibit 9
Comparison of Hidden Drug Abusers and Non-Users

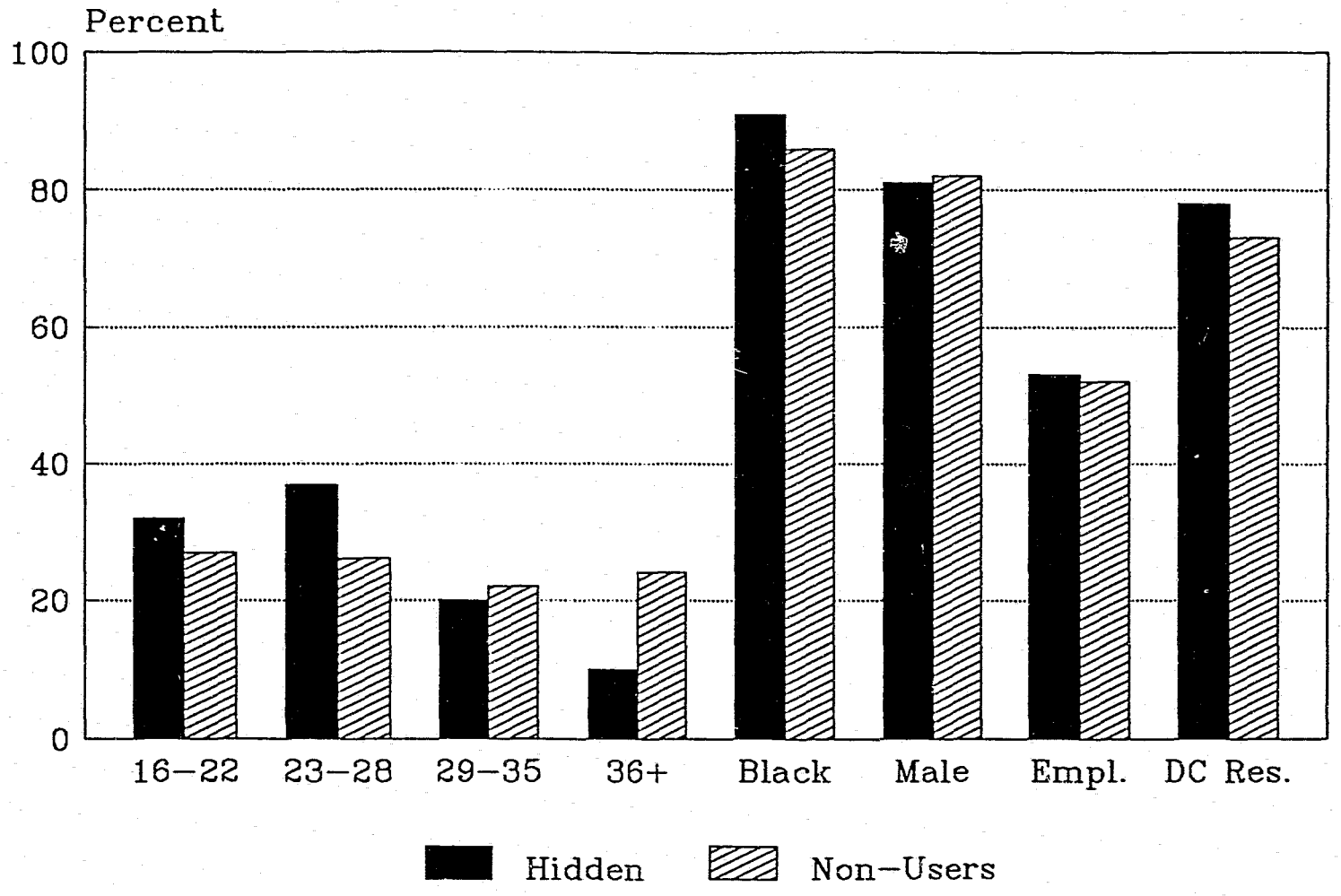
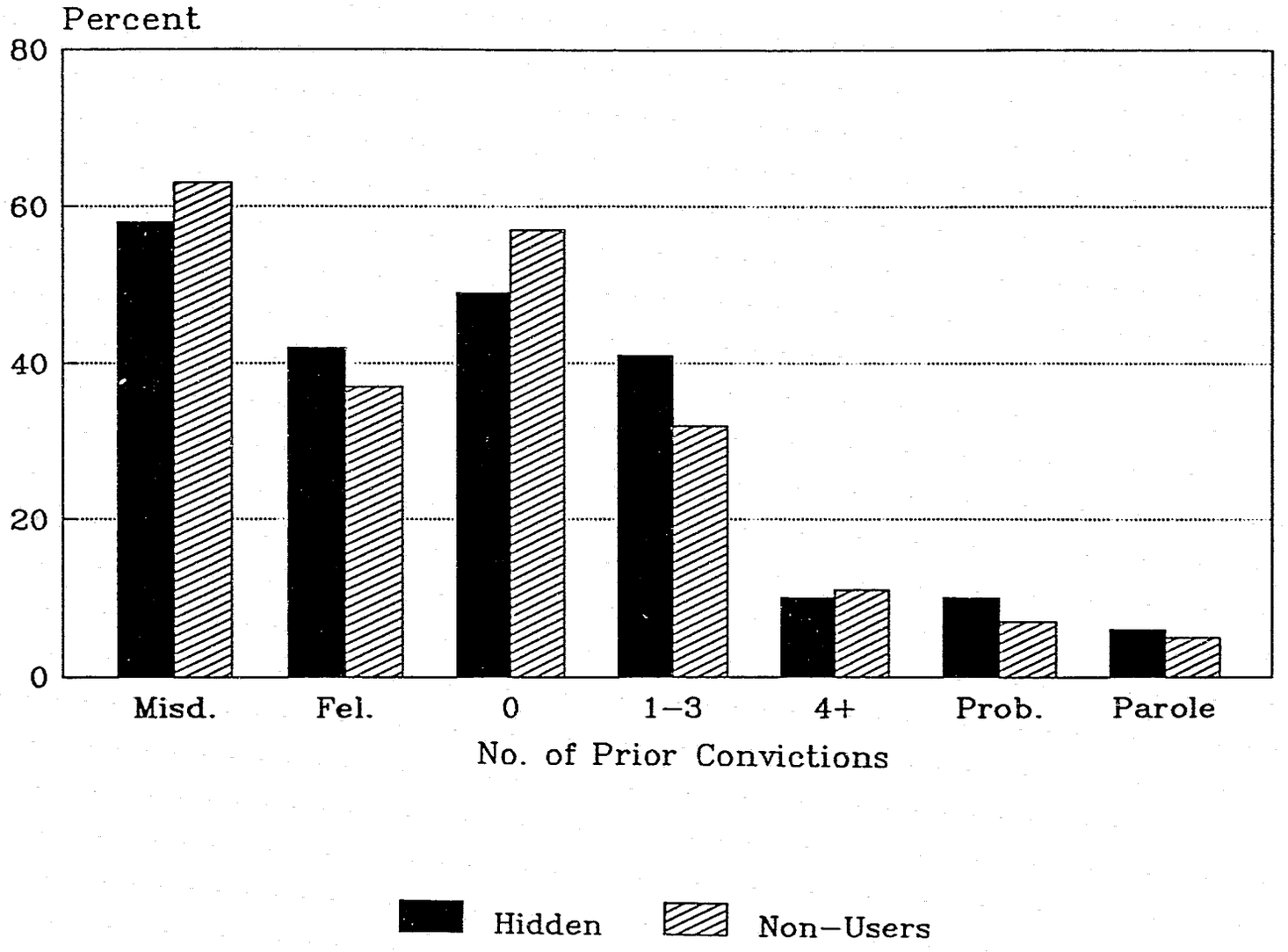


Exhibit 10
Comparison of Hidden Drug Abusers and Non-Users (Cont.)



hidden drug abusers and 5 percent of non-users were on parole when arrested.

In summary, in comparison to non-users of drugs, hidden drug abusers are younger, more likely to be black, and more likely to reside in the District of Columbia. They are also more likely to be charged with a felony, more likely to be charged with auto theft and less likely to be charged with assault. Additionally, they are more likely to have a prior record of convictions and to be on probation for other offenses when arrested. Thus, as a group, hidden drug abusers are somewhat more involved in criminality than non-users of drugs.

C. Comparison of Hidden Versus Known Drug Abusers

It is instructive to compare hidden with known (or "non-hidden") drug abusers, as shown in Exhibits 11, 12 and 13. Known drug abusers are those arrestees who either self-reported drug use or were charged with a drug offense (their urine-test results may have been either positive or negative).

Hidden drug abusers are younger than known drug abusers: 32 percent of hidden drug abusers are 22 years of age or younger, as compared with 26 percent of known drug abusers. Moreover, 69 percent of hidden drug abusers are 28 years of age or younger, while only 59 percent of known drug abusers are that young. Hidden drug abusers are somewhat less likely than known drug abusers to be black (91 percent versus 94 percent), male (81 percent versus 85 percent), or residents of the District of Columbia (78 percent versus 80 percent). They are more likely to be employed: 53 percent of hidden, and 45 percent of known, drug abusers are employed.

Hidden drug abusers face somewhat less serious charges than known drug abusers: 42 percent of hidden drug abusers are charged with felonies, as compared with 44 percent of known drug abusers. Differences in types of charges faced are not very great, although hidden drug abusers are somewhat more likely than known drug abusers to be charged with assault (16 percent versus 13 percent), weapons (6 percent versus 4 percent) or destruction of property (7 percent versus 5 percent) and somewhat less likely to be charged with flight/escape (4 percent versus 6 percent) or larceny (10 percent versus 13 percent).

When previous criminality is considered, hidden drug abusers have less extensive prior records than known drug abusers: 49 percent of hidden drug abusers have no prior convictions, as compared with 38 percent of known drug abusers. Moreover, only 10 percent of hidden drug abusers have four or more convictions, as compared with 17 percent of known drug abusers. Hidden drug abusers are also less likely than known drug abusers to be on

Exhibit 11
Comparison of Hidden and Known Drug Abusers

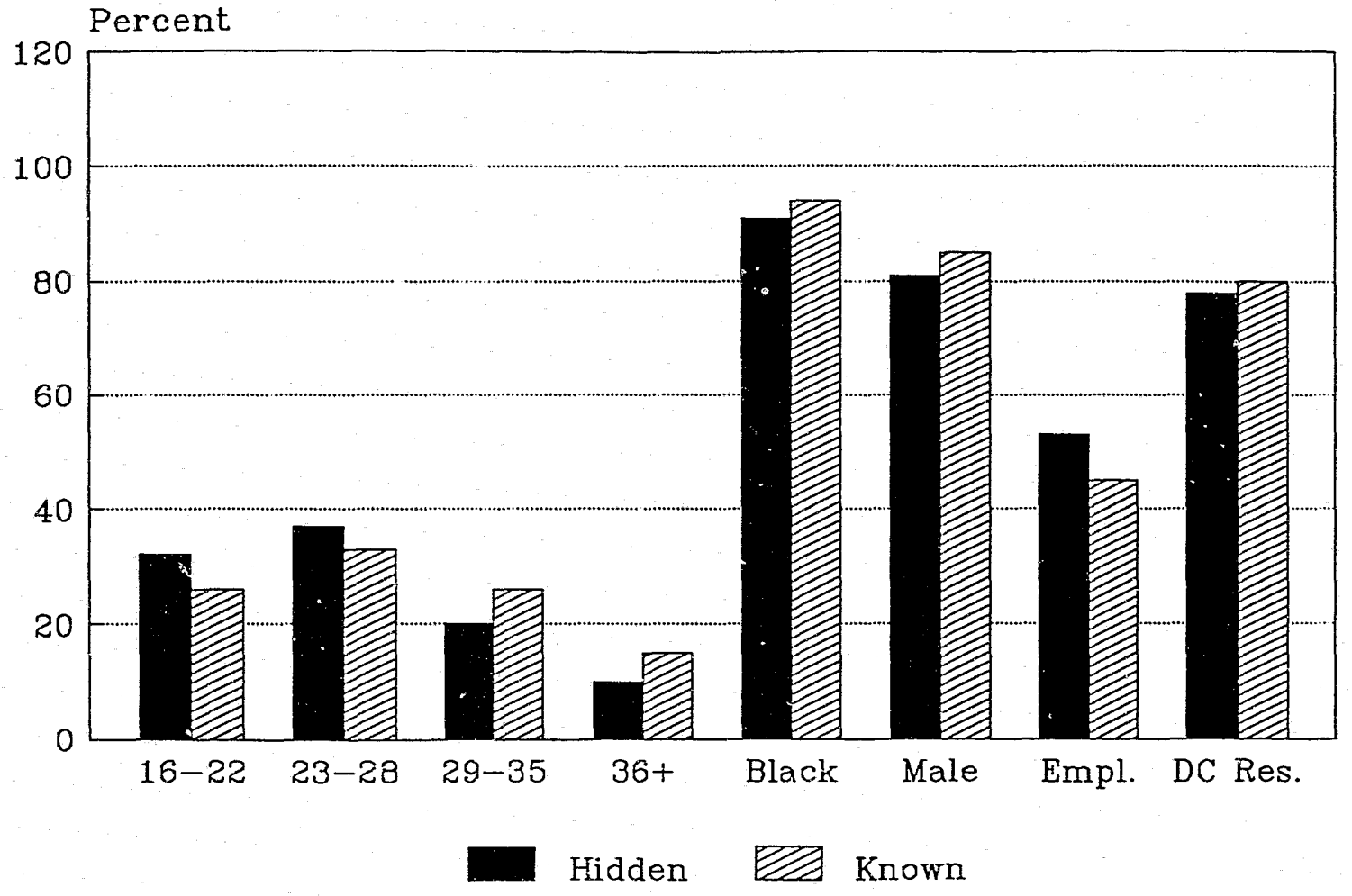


Exhibit 12
Comparison of Hidden and Known Drug Abusers (Cont.)

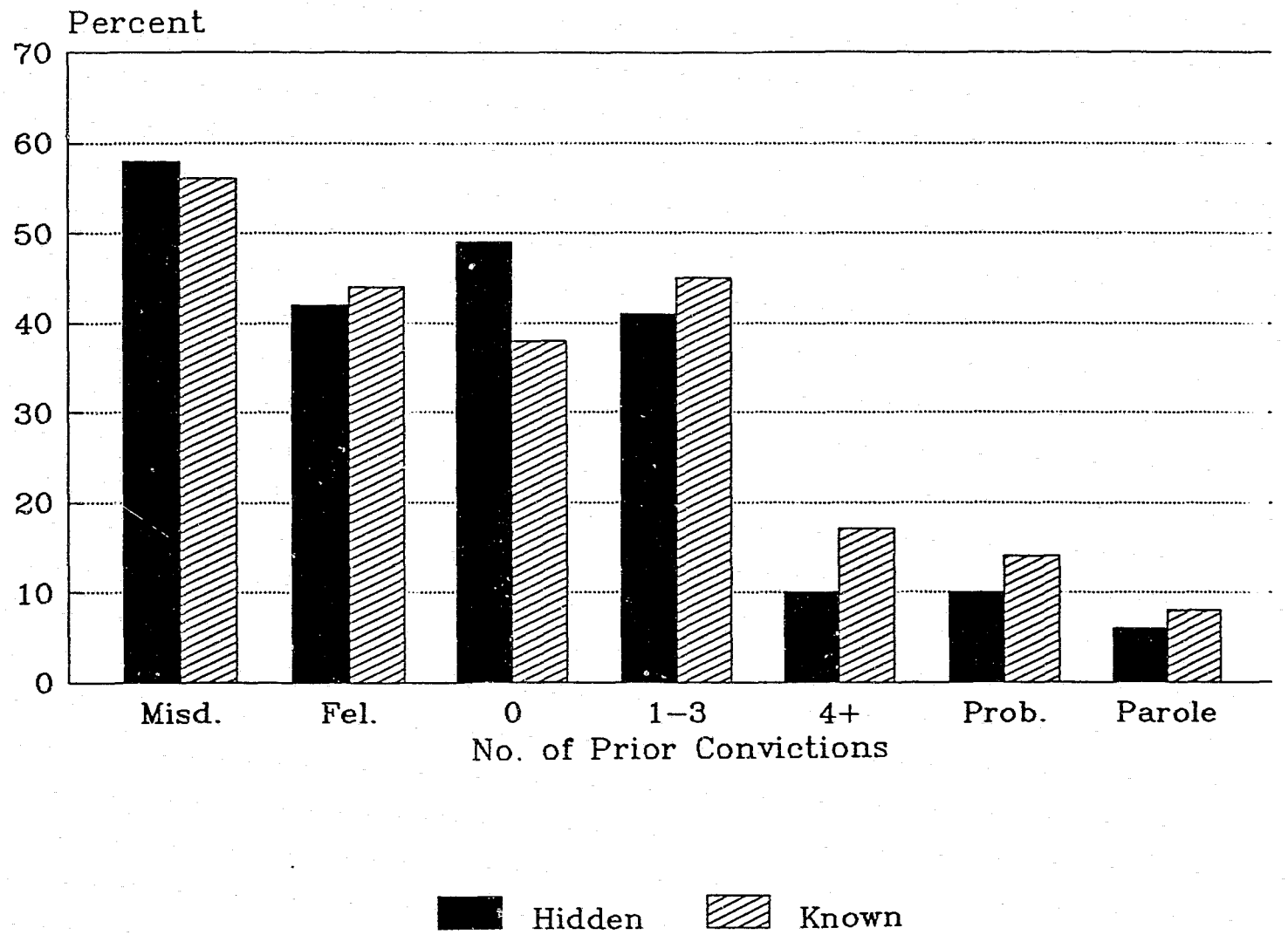
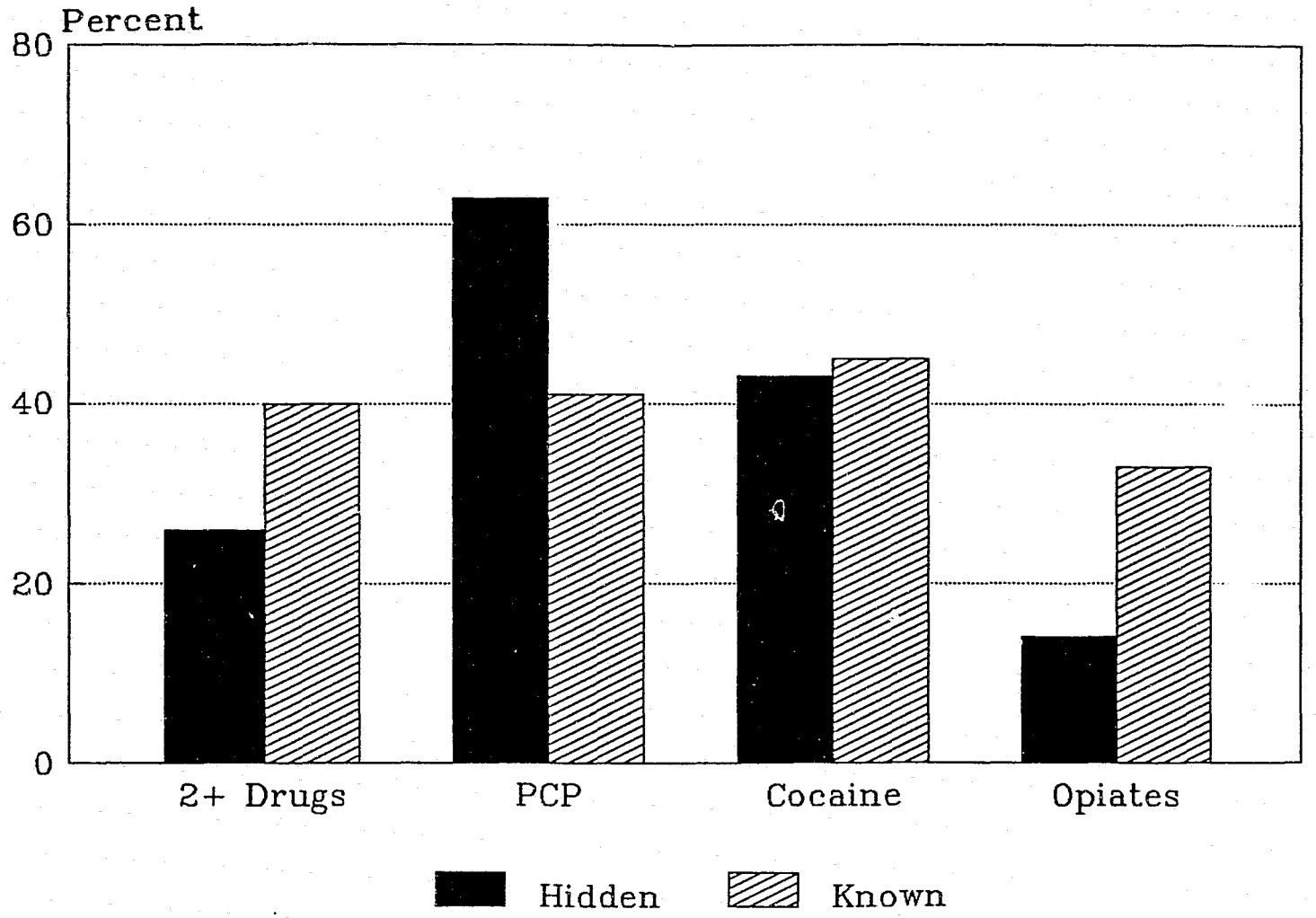


Exhibit 13
Comparison of Hidden and Known Drug Abusers (Cont.)



probation or parole for other offenses when arrested. Ten percent of hidden drug abusers were on probation when arrested, as compared with 14 percent of known drug abusers. Six percent of hidden, and 8 percent of known, drug abusers were on parole when arrested.

A comparison of drug use for hidden versus known drug abusers is complicated by the fact that 20 percent of the known drug abusers tested negative for drug use. When urine-test results are compared only for those persons who tested positive for drugs, hidden drug abusers are found to be less involved in drug use than known drug abusers: 74 percent of the hidden drug abusers were positive for only one drug, as compared to 50 percent of known drug abusers. Stated differently, only 26 percent of hidden drug abusers used two or more drugs, while 50 percent of known drug abusers did so.

By type of drug, hidden drug abusers were more likely than known drug abusers to use PCP and less likely to use opiates. Sixty-three percent of hidden drug abusers used PCP, as compared to 41 percent of known drug abusers. Only 14 percent of hidden drug abusers tested positive for opiates, while 33 percent of known drug abusers did so. Rates of cocaine use were about the same for the two groups: 43 percent for hidden drug abusers and 45 percent for known drug abusers.[45]

In summary, when compared with known drug abusers, hidden drug abusers are younger, somewhat less likely to be black or male, more likely to be employed, more likely to be free of prior convictions, and less likely to be on probation or parole for other offenses when arrested. They are also more likely to use only one drug, rather than multiple drugs. By type of drug, they are more likely to use PCP and less likely to use opiates. These data suggest that hidden drug abusers have less serious drug problems than known drug abusers. This, combined with the relative youth of hidden drug abusers, suggests that it may be possible to develop successful intervention strategies, designed to reduce both the criminality and the drug abuse of these individuals.

D. Comparison of Rearrests for Hidden Drug Abusers, Known Drug Abusers and Non-Users of Drugs

Arrestees from the first half of Calendar Year 1985 were followed, via PSA's automated data base, through the end of

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[45]Amphetamines were used by nine percent of the hidden drug abusers and six percent of the known drug abusers. For methadone, rates of use were one percent for hidden drug abusers and four percent for known drug abusers.

Calendar Year 1986 to determine whether they had been rearrested over that time period. Exhibit 14 provides the rearrest data for hidden drug abusers, known drug abusers and non-users of drugs. As indicated, hidden drug abusers were the most likely group to be rearrested: 51 percent of hidden drug abusers were rearrested, as compared to 48 percent of known drug abusers and 35 percent of non-users.[46]

This finding confirms the importance of identifying hidden drug abusers and developing effective interventions for them. At present, most hidden drug abusers are rearrested within 18 months--many of them repeatedly. Fourteen percent of the hidden drug abusers were rearrested twice, and 12 percent were rearrested three or more times during the followup period. For known drug abusers, 13 percent were rearrested twice, and 9 percent were rearrested three or more times. For non-users, 9 percent were rearrested twice; and 7 percent, three or more times. Counting the initial arrest, hidden drug abusers had a total of 2.0 arrests over the 1985-86 period, as compared with 1.9 arrests for known drug abusers and 1.6 arrests for non-users of drugs.

Note that with regard to rearrests--as with background characteristics when first arrested--hidden drug abusers resemble known drug abusers much more than they resemble non-users of drugs. In the absence of the urine-testing program, however, all hidden drug abusers would have been classified as non-users of drugs.

E. Comparison of Hidden Drug Abusers Who Are Rearrested with Those Who Are Not Rearrested

As indicated previously, about one-half of all hidden drug abusers identified in the first half of 1985 had been rearrested by the end of 1986. Analysis of the rearrest outcomes of hidden drug abusers permitted identification of those defendant background characteristics that were disproportionately associated with rearrests and with multiple rearrests.

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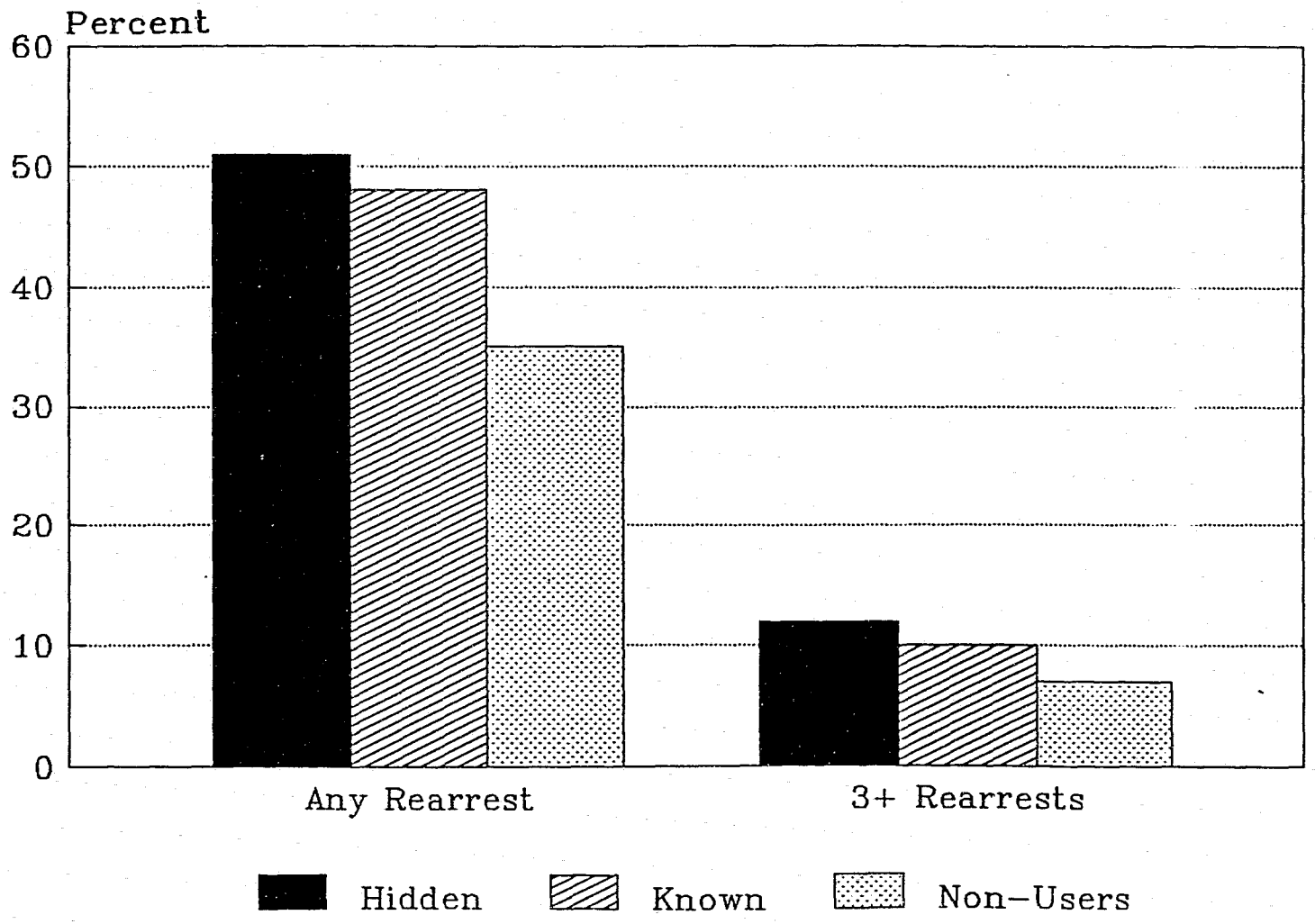
[46]Some of the differences in rearrest rates, particularly between hidden and known drug abusers, may be due to fact that the data base did not permit us to control for time at risk. Because known drug abusers faced somewhat more serious charges, had longer prior records, and were more likely to be on probation or parole when initially arrested, they may have been incarcerated for more of the followup period than were hidden drug abusers. If so, their rates of rearrest, when controlled for time at risk, might well be greater than those of hidden drug abusers.

Exhibit 14
Rearrest Rates



This analysis showed that the hidden drug abusers who are most likely to be rearrested are those who are 22 years of age or younger and those who have prior convictions. Of the 674 hidden drug abusers studied, 98 of them were 22 years of age or younger and had at least one prior conviction. This group--approximately 15 percent of the total population of hidden drug abusers--would seem to be an especially important group upon which to target intervention efforts. These defendants are highly rearrest prone. Moreover, their age presents the possibility, if not the likelihood, that they will commit many more crimes over their lifetimes--unless successful interventions can be developed to preclude this outcome.

III. INTERVIEWS WITH DRUG ABUSERS

A. Background

As discussed in the previous chapter, hidden drug abusers appear to have less serious drug abuse problems than known drug abusers: the lockup urine-test results showed that hidden drug abusers, in comparison to known drug abusers, were more likely to use only one drug, rather than two or more. Also, they were more likely to use PCP and less likely to use opiates or cocaine. These drug use patterns, combined with the facts that hidden drug abusers are (1) considerably younger and (2) have less serious criminal records than known drug abusers, suggest that hidden drug abusers may be at the early stages of their drug/crime careers and, thus, may comprise an important group for intervention.

The rearrest data for hidden versus known drug abusers show the importance of trying to develop such interventions. More than half the hidden drug abusers arrested in the first six months of 1985 had been rearrested at least once by the end of 1986. Thus, it is clear that, under current conditions, hidden drug abusers are continuing their criminal careers.

Although the official data suggest that hidden drug abusers are in the early stages of their drug/crime careers, it is possible that they have been just as deeply involved in drug abuse and criminality as known drug abusers but have simply been more successful in avoiding apprehension for their illicit activities. To address this issue, we structured a series of interviews with random samples of hidden and known drug abusers. These interviews were designed to assess whether hidden drug abusers self-report that they are at earlier stages of their drug/crime careers than known drug abusers. Although such interviews can overcome the problems of underreporting of criminal activity and drug use that exist in official criminal justice records, they face a variety of problems associated with self-reported information. As discussed in Chapter I, drug abusers significantly underreported their drug use when interviewed by PSA staff; urine-test results found approximately twice the level of drug use that arrestees had self-reported. Thus, interview information should be considered as having potential biases of its own and should be viewed as a supplement to the data available from official records, which were discussed in previous chapters.

B. Selection of Sample for Interviews

As subjects for the interviews, we selected 100 hidden drug abusers and 100 known drug abusers. These individuals were randomly chosen from male defendants arrested during the first

half of Calendar Year 1985 who were DC residents at that time. The sample was restricted to males to limit variation, due to the relatively small number of interviews planned. Only DC residents were selected so as to increase the likelihood that the interviewees were in the DC area and could be located for interviews. This was necessary because the budget did not include funds for out-of-town travel for interviewers.

We had originally proposed to conduct followup interviews with 200 arrestees selected solely from the hidden drug abuser population. However, as discussed in Chapter I, the reviewers of our grant application suggested that a broader range of defendants be interviewed, so that comparative analyses could be conducted of self-reported drug/crime experiences across groups. In response, we revised our interview plan to include 100 interviews with known drug abusers and decreased the number of interviews with hidden drug abusers to 100.

After selection of the samples, we prepared a two-page Data Sheet on each person in the sample. This data sheet summarized background and locator information that was available about the person in the District's automated criminal justice information systems. This information included last known address and telephone number, prior criminal record data, incarceration information, age, ethnicity, drug test results, and so on (see copy in Appendix B). The Data Sheet on each person in the sample was given to the appropriate interviewer to facilitate the process of locating and interviewing the individual.

C. Design of Interview Instrument

The interview instrument was designed so that as many questions as possible would be comparable to those from similar studies. In this way, a comparison of responses from this project with those of related efforts would be facilitated. The questionnaire went through several iterations and a pretest before the final version emerged. As implemented, the interview instrument has 46 questions, covering four broad topics. These topics are as follows (see Appendix B for the interview instrument):

- Background Information: includes such items as education, living arrangement, employment and income.
- Drug Use Experiences: asks whether each drug in a list of 12 was ever used; if so, age at first use, days used during last 30 days, whether drug was ever used on a daily basis for at least 30 days and age when that occurred, and age when last used. Also, because of the prevalence of crack and PCP use in the District of Columbia, several additional questions about use of

those were included. There are also several AIDS-related questions concerning injection of drugs and needle-sharing.

- Treatment/Health: covers current health status and treatment experiences for both alcohol and drug use.

- Criminality: asks whether each activity in a list of 18 was ever done; if so, the age at first commission, whether an arrest ever occurred for that crime, whether the person was ever high when committing that crime, whether the crime was ever committed to get money to buy drugs, and whether a crime of that type was committed during the last 12 months.

The interview was expected to take between 45 minutes and one hour to complete.

In addition to the interview, each respondent was asked to provide a urine specimen. In this way, current drug use could be objectively determined.

D. Selection and Training of Interviewers

Interviewers were recruited from individuals who had worked with similar populations in the past--e.g., as employees of drug abuse treatment programs, probation officers, etc. Applications were screened to select likely candidates, who were then personally interviewed by senior project staff to assess their qualifications for the job. A total of 10 interviewers were selected, who committed themselves to work at least 10 hours per week on this project. In several instances, part-time interviewers were hired to work after hours from full-time jobs elsewhere.

A one-day training session was held for all interviewers. Topics covered during the training were as follows:

- overview of the project;

- review of job requirements for field interviewers;

- administrative and housekeeping matters (e.g., procedures for payment, time sheet requirements, etc.);

- item-by-item review of the questionnaire;

- likely questions interviewees will ask and suggested responses;

- step-by-step review of policies and procedures regarding how to conduct the interviews and complete the interview forms;
- role-playing and critiquing by group of mock interviews;
- procedures for handling urine specimens; and
- confidentiality issues and concerns.

The training was facilitated by development of an Interviewer Policies and Procedures Manual, which was provided to each interviewer prior to the training session. This Manual, approximately 50 pages in length, covers the following topics:

- Background: purpose of the project, study design, study auspices, and respondent protections;
- Overview of the Field Work Procedures: advance letters, assignments, contacting the respondent, conducting the interview, obtaining the urine specimen, field work coordination, and completing the assignment;
- Getting the Completed Interview: guidelines for conducting the interview, completion rate, answering respondents' questions, and common sense tactics for self-protection;
- Reducing Nonresponse: procedures for initial contacts, making the first face-to-face contact, what to do when no one is home or the interviewee is not at home, how to handle refusals and partial interviews, and what to do when interviewee does not keep an appointment;
- Conducting the Interview: materials for the interview, starting the interview, marking up the questionnaire, interviewing techniques, procedures for obtaining and handling the urine specimen, interviewee payments, and how to end the interview; and
- Interviewer Compensation: requirements and procedures for payment.

The Manual also contains copies of all the forms and letters that would be needed during the project, as well as a copy of the interview instrument and a detailed, question-by-question guide to asking and recording the answers to each item in the interview.

E. Brief Review of Field Procedures

Interviews were conducted in two phases. In Phase I, all interviewees--except those we knew were incarcerated--were mailed a letter explaining the project and asking them to call our offices to set up a date and time to be interviewed. These interviews took place at three pre-selected churches located around the city that had agreed to host our staff for this purpose. In Phase II, interviewers went into the community to locate and interview those individuals in the study sample who did not respond to our letter.

A standard letter was mailed to all interviewees, informing them that they have been selected for a study of drug use patterns, public health issues, and attitudes about the legal system in the District of Columbia. The letter assured them that their identities and answers would be private and confidential, offered them $10 for participating, and urged their cooperation. Interviewees were asked to call our office to set up a time and place for the interview.

As interviewees called, we told them a specific time and place where the interview would be conducted. We then assigned the interview to an interviewer who would be available at that time.

All interviews were voluntary, and an interviewee could withdraw from the interview at any time. The interviews were private and confidential. Federal guidelines governing the Confidentiality of Drug Abuse Patient Records (42 CFR Part 2) applied to this study. The interview procedures were designed to protect the interviewees' interests and privacy. Interviewers were to assure the interviewees that no information on individual identities or responses would be provided to anyone else or to any agency; only aggregate statistics would be included in our reports. Interviewers were expected to keep any information they received completely private and were required to sign a Confidentiality Assurance Form stating this. The Form included a statement that the interviewer was aware that violation of the confidentiality provisions of 42 CFR Part 2 or the Privacy Act of 1974 is a misdemeanor that could subject the violator to a fine of up to $5,000 for each offense.

Interviewers were instructed to make every effort to complete the interviews assigned to them, both the interviews scheduled through our office during Phase I and the interviews that required the interviewer to locate the respondent in the field during Phase II. Interviewers were provided with business cards, photo identification cards, identification letters, and copies of the introductory letters mailed to all respondents for use in the field work.

At the beginning of each interview, after the introduction was read but before the questions started, the interviewer was instructed to tell the respondent that he would be asked to provide a urine specimen at the end of the interview and would be paid an additional $10 for doing so. Provision of the urine specimen, like the interview itself, was voluntary on the part of the respondent. He could refuse to provide the specimen but still be interviewed. Under such conditions, however, he would receive only $10 for the completed interview, rather than the $20 payment for both interview and urine specimen.

Interviewers were not expected to observe the voiding of the specimen. The specimen cup was provided to the respondent by the interviewer. Once obtained, the urine specimen was delivered to PSA for testing.

Special problems arose with regard to interviewing respondents who were incarcerated. Because of budget constraints, we decided not to attempt to interview those individuals who were locked up outside the immediate area (e.g., in Federal prisons or institutions managed by jurisdictions other than the District of Columbia). Because of overcrowding at the Lorton facilities, where DC inmates are housed, the DC Department of Corrections (DCDC) has sent a substantial number of persons to other jurisdictions. Altogether, 25 persons were removed as interview candidates because they are incarcerated in other jurisdictions--some as far away as Texas.

Arrangements were made with each of the correctional facilities within the Lorton complex and with the DC Jail to interview inmates in their custody who were in our sample. Several changes were made in the standard interview protocol to accommodate the fact that these individuals were incarcerated. For example, no questions about current drug use were asked, and no urine specimen was requested. Additionally, instead of a cash payment of $10 for the completion of the interview, we gave each inmate--at the suggestion of DCDC staff--a carton of cigarettes.

One problem that was experienced in interviewing incarcerated inmates concerns the turnover and movement among facilities for this population. Many of the individuals in our sample enter, leave and are transferred between correctional facilities--Lorton, the DC Jail, halfway houses, etc.--fairly often. As a result, we sometimes went to one facility to interview an inmate only to find that he had been transferred to another one, or in some instances released, within the previous day or so. When an individual was moved to a different facility, we interviewed the person at the new facility.

No major logistical problems were experienced in conducting the interviews with inmates, once the appropriate clearances with

DCDC officials had been achieved. Additionally, as expected, refusal rates were quite low with this population.

Completed interview forms were delivered to our offices, where they were reviewed for consistency and completeness. In some instances interviewers were contacted to clarify the way information was recorded on the form. Interviewers were paid $25 for each accepted interview.

After review of the interview forms, the data on them were entered into an automated data base, maintained on a personal computer. At this point all individual identifiers were stripped from the data; only unique study numbers--assigned by our office --were included with the interview responses.

F. Problems Encountered in Locating Respondents

Locating respondents proved much more difficult than we had anticipated. We had expected that a very high percentage of respondents would be not only located but also successfully interviewed. We based these expectations on two major factors. First, although Washington, DC, is a major urban area, it has a number of "small town" characteristics. In particular, arrestees in the District of Columbia are generally not considered as transient as arrestees in many other urban areas of similar size. Second, the interviewers selected were "street-wise." They were long-term residents of the Washington, DC, area and were familiar with the neighborhoods where the interviewees live.

An initial problem arose with regard to the response to the letters sent to all interviewees, explaining the study and asking them to call our office to schedule an interview. Only a handful of interviewees called. One possible explanation for this is that in recent years two major "sting" operations in Washington, DC, have been triggered by responses to letters in which the respondents showed up at a place where the police arrested them. Although we made every effort to assure respondents that we wished to interview them in connection with a confidential research project, it is nevertheless possible that many individuals did not believe our assurances--or at least decided not to take any chances. To the extent that this peculiarity of local history affected our response rates, it suggests that similar interview efforts in other jurisdictions, lacking such history, might be more successful.

Efforts to locate respondents in the field were hindered by a number of factors. First, despite our selection of "street-wise" interviewers, some of them were nevertheless reluctant to visit certain neighborhoods. This reluctance had some basis in fact, given that Washington, DC, was known as the "murder capital" of the country during the time that the interviews were

in progress (late 1989 and early 1990). There were a number of widely publicized instances in which bystanders were shot--and some were killed--by stray or mis-directed bullets from gun fights in the streets. Again, were similar interviews done in a less violent community--or, indeed, done in Washington, DC, at an earlier (or later) time, when there was less violence on the streets--interviewers might have been more willing to persist in location efforts, and a higher response rate might have been achieved.

Location efforts were also hindered by budget constraints. Because this was an exploratory effort, and only one component of a larger study, rather than a full-fledged followup study, the budget for the interviews was quite small. It provided for payments to interviewers when they completed interviews ($25 for each one), but it did not permit payment for time spent trying to locate respondents. Thus, if an interviewer spent a considerable amount of time trying to locate someone and was ultimately unsuccessful in doing so, there was no remuneration for the effort. This constraint was explained to interviewers at the start of the project. Nevertheless, when the field location phase began, several interviewers expressed reluctance to expend large amounts of time looking for respondents without a guarantee of payment. This problem was exacerbated, of course, by the fact that so few interviewees had responded to our initial letter; and, hence, a very large number of interviewees had to be located in the community.

Another factor that may have hindered our ability to locate respondents--particularly in comparison to previous followup studies--is that the drug problem in the District of Columbia at the time of our interviews was largely a crack problem. When previous followup studies were done in Washington, DC, the drug problem had been largely a heroin problem. Given the behaviors that are characteristic of crack versus heroin users, it is reasonable to assume that crack users are far more difficult to locate.

Finally, the interviews comprised a four-to-five-year followup, since they were being conducted in 1989-90, based on cases selected from early 1985. Although we had assumed that, because of the relative stability of the arrestee population in Washington, DC, this would not be a major problem, the length of time involved in the followup--coupled with the fact that we were in all likelihood looking primarily for crack users--probably lowered response rates. In retrospect, rather than tying the interview component of the study to the analyses of 1985-86 data that were used in other components of the study (see Chapter II and Chapter IV), it would have been preferable simply to select the interview sample from a more recent time period. Although the other difficulties we faced would still have existed (e.g., the fact that respondents were likely to be crack users, some

interviewers were reluctant to enter certain neighborhoods because of the threat of violence, etc.), it would probably have been somewhat easier to track respondents from a more recent time period and thus to obtain more completed interviews.

G. Interview Findings

Because of the various difficulties experienced in locating respondents, fewer than half of the 200 individuals targeted for interviews were accounted for--a total of 67 persons in all. Of these, 25 were incarcerated out of the area, five were in escape status, three were deceased, three called to set up an interview and then did not appear for it, and one person (an incarcerated individual) refused to be interviewed when contacted by our interviewer at the facility.

A total of 30 interviews were completed. Because this is such a small number of interviews, we could not reliably conduct the analysis originally planned, i.e., to compare the interview responses of hidden versus known drug abusers. However, some of the responses are insightful and suggest avenues for future research. For this reason, we present the results of the 30 interviews as a whole in this section. Also, for the record, Appendix C provides the tabulated results of the completed interviews, with separate tallies for hidden and for known drug abusers. Again, we caution readers to view these data as suggestive only; because of the small numbers of interviews involved, the responses should not in any way be viewed as representative of the broader groups of drug abusers initially selected for study. Additionally, because many of the completed interviews were of incarcerated persons, the results presented likely reflect those for persons having the most serious drug and crime problems of all the persons selected for the original sample.

Based on data from PSA, at the time of initial arrest in 1985, 12 respondents had tested positive for cocaine, eight for opiates, and 18 for PCP. Fifteen had been charged with felonies. Only nine had no prior convictions. Ten had one or two prior convictions, and 11 had three or more. By charge, 10 were charged with drug offenses, four with assault, three with robbery, three with destruction of property, three with auto theft, two with weapons offenses and one each with burglary, escape, and larceny (charge information was missing on two respondents).

Based on the interview responses, about half the persons interviewed (16 out of 30) completed the twelfth grade and two-thirds (20 out of 30) had either graduated from high school or gotten a GED. All but one of the interviewees had completed at

least the eighth grade. More than two-thirds (22 out of 30) were single and had never been married.

With regard to particular substances ever tried, when read a list including various illicit drugs and alcohol, respondents had most often tried marijuana (27 out of 30), followed by alcohol (26 out of 30), PCP (24 out of 30), and cocaine (21 out of 30). Slightly less than half had used crack (13 out of 30), and one-third had used heroin (10 out of 30). A few individuals also reported use of other drugs, including opiates other than heroin, amphetamines, hallucinogens, barbiturates and tranquilizers, quaaludes, and inhalants.

Concerning age at first use, as expected, alcohol and marijuana were the drugs tried at the earliest ages. Four respondents had tried alcohol by the age of 12, and 13 had tried it by the age of 15. For marijuana, three interviewees had tried it by age 12 and 10 by age 15. For PCP, the earliest age of use reported was 14; for cocaine, 16; and for crack, 20.

For daily use, marijuana was again used by the greatest number of respondents (18 out of the 27 who had ever used it), followed by cocaine (12 out of 21), alcohol (11 out of 26), PCP (nine out of 24), and crack (nine out of 13). Daily use of marijuana and cocaine occurred at the earliest ages. One respondent reported daily use of marijuana by age 12 and six by age 15. For alcohol, there were no reports of daily use until age 15, when three interviewees began using alcohol daily. Daily use of PCP began for one person at age 16; for cocaine, for one person at age 18; for crack, for one person at age 20; and for heroin, for one person at age 14.

Among the users of PCP, many of them have used it a large number of times. Seven of the 24 persons who reported using PCP at all said they had used it over 100 times in their lifetimes; four persons had used PCP between 51 and 100 times; and six persons, between 21 and 50 times. More than half the PCP users (15 out of 24) had had a bad reaction to PCP at some time in their lives--some more than once. Indeed, one person reported five bad reactions; and another, four. One-third of the PCP users (8 out of 24) had been arrested when high on PCP. PCP was almost always (for 20 of the 24 PCP users) taken with friends, rather than alone. The preferred method of taking PCP was with marijuana (for 18 out of 24 PCP users).

Crack users are even more likely than PCP users to have used it a large number of times. Six of the 13 persons who had ever used crack said they had used it more than 100 times. One additional person reported using crack between 51 and 100 times; and three people, between 21 and 50 times. Only three of the 13 crack users reporting having had a bad reaction to crack, and each of these individuals had had more than one bad reaction

("three," "four," and "many" were the responses to the question about the number of bad reactions). Four out of the 13 crack users had been arrested while high on crack. As with PCP, crack was usually taken with friends, rather than alone (10 out of 13 crack users reported they usually took crack with friends). A few individuals reported taking other drugs--marijuana, PCP or heroin--and/or alcohol with crack.

Only seven of the 30 respondents reported that they had ever injected drugs. Of these, all seven had injected heroin. Six respondents had also injected cocaine; and three, amphetamines. Those who had injected drugs reported that they had shared a needle or works with someone "0 to 50 times" (the response category that provided for the least number of instances of needle-sharing). Almost all the persons who had injected drugs were concerned that they may have been exposed to AIDS: four said they were "very much concerned"; one, "much concerned"; and one, "moderately concerned." Only one of the seven said he was "not concerned."

When asked how many intravenous drug users they know personally who have or had AIDS, most respondents (22 out of 30) said none. Only four respondents knew as many as two people with AIDS.

When asked which drug "you like the most," the most common answer was cocaine (9 out of 30), followed by marijuana (five respondents), none (also five respondents), PCP (four respondents), and heroin (also four respondents).

Most respondents reported that they were in excellent (17 respondents) or good (nine respondents) health. Only four persons reported their health as fair, and none considered their health poor. All respondents reported that they were concerned about their health, with the vast majority (25 out of 30) reporting that they were very much concerned. Respondents also typically rated their emotional state as excellent (17 respondents) or good (nine respondents), with only four persons rating it fair, and none rating it poor.

Two-thirds of the respondents (20 out of 30) said that at some point they had felt they needed treatment for drug use. The drug for which respondents most often felt that treatment was needed was cocaine (12 respondents), followed by PCP (six respondents), heroin (five respondents), and marijuana (three respondents). Of the 20 respondents reporting that they felt they had needed treatment, six of them reported needing treatment for more than one drug.

All 20 of the respondents who felt they needed treatment had tried to get treatment, and seven of those 20 persons had tried to get treatment on more than one occasion. Indeed, one person

reported trying to get treatment seven different times; and another person, six times.

All 20 of the respondents who tried to get treatment had in fact been admitted to treatment programs, and six persons had been admitted to treatment more than once. The most common drug for which they were treated was PCP (nine respondents), followed by heroin (eight respondents), cocaine (seven respondents), and marijuana (two respondents). Five of the 20 treated respondents were treated for more than one drug. Seventeen of the 30 respondents had been placed in a treatment program by the court as a condition of probation or parole at some point in their lives.

When asked if the last treatment received was helpful in controlling drug use, 17 respondents said "yes"; and seven said, "no." When asked how the last treatment helped him control his drug use, interviewees cited a range of ways that this occurred. These included the following:

- "I could identify with the counselors."
- "The information and education helped."
- "Treatment slowed me down."
- "It helped to talk about the problem."
- "I learned I could feel good without drugs."
- "The monitoring and guidance was important."
- "It shook me up not being in the street."

When asked why treatment did <u>not</u> help in controlling drug use, respondents with those views said such things as the following:

- "It did not meet my emotional needs."
- "It focused on the past too much."
- "I was in denial that I had a problem."
- "It wasn't long enough."
- "Things are different when you get back home."

When asked how they would improve the quality of the treatment received, the most common responses were "treatment is OK as it is" (five responses) and "there should be more education" (also five responses). Three persons thought there

should be more groups, and two respondents thought treatment should be longer. Other responses included "have more self-help activities," "take daily urines," "stay in contact after treatment," and "make it interesting."

Respondents were asked a series of questions about activities they may have done in the past that could have gotten them in trouble. These 18 activities are as follows:

- ran away from home and stayed away for at least seven days;
- been expelled or suspended from school;
- shoplifted or took something that belonged to someone else;
- taken a car or motor vehicle without the owner's permission;
- driven a car or motor vehicle while under the influence of alcohol or drugs;
- broken into or entered a home, apartment or building when you were not supposed to be there, but stole nothing;
- broken into a place or a car and taken something from it;
- destroyed, damaged, or marked up any property, other than your own family's;
- bought, received or sold anything that you knew was stolen;
- sold drugs to another person, not including liquor, wine or beer;
- used force or the threat of force to take something from another person, for example, money, drugs or something belonging to this person;
- assaulted someone sexually;
- pulled a weapon to show you meant business or threatened someone with a weapon;
- shot or stabbed someone;
- been part of a group that physically attacked or threatened another person;

- carried a concealed weapon such as a gun or knife;
- by yourself, fought, beaten-up, or physically attacked another person so that the person probably needed a doctor; and
- tried to cash a check that belonged to someone else, without the consent of that person.

The most common activity that respondents reported they had ever done was selling drugs (23 respondents); followed by carrying a concealed weapon (21 respondents); been expelled or suspended from school (20 respondents); driven a car while under the influence of alcohol or drugs (19 respondents); bought, received or sold anything stolen (also 19 respondents); and used force to take something from another person (16 respondents). The least commonly reported activities were assaulted someone sexually (one respondent), taken a car without the owner's permission (five respondents), tried to cash a check that belonged to someone else (six respondents), broken into someplace but stole nothing (seven respondents), broken into someplace and stole something (also seven respondents), been part of a group that physically attacked or threatened another person (eight respondents), ran away from home for at least seven days (also eight respondents), shot or stabbed someone (nine respondents), destroyed property (10 respondents), physically attacked someone (11 respondents), pulled a weapon or threatened someone with a weapon (12 respondents), and shoplifted (13 respondents).

With regard to the age at which these activities were first done, only a few of these activities were reported as conducted before the age of 12. As one might expect, the most common activities reported before the age of 12 were being expelled or suspended from school (five respondents), running away from home (four respondents), and selling drugs (three respondents). By age 15, a much greater range of criminal activity was reported. Moreover, by age 15, fully one-half (15 out of 30) of the respondents had been expelled or suspended from school. By age 18, two-thirds (20 out of 30) of the respondents had been expelled or suspended from school. Other common activities by age 15 were running away from home (eight respondents), shoplifting (seven respondents), and selling drugs (five respondents). Additional criminal activities reported by age 15 were taking a car without the owner's permission (two respondents), been part of a group that physically attacked or threatened someone (two respondents), and carried a concealed weapon (two respondents). There were also isolated reports (one respondent each) of driving while under the influence of alcohol or drugs, breaking and entering, burglary, destruction of property, robbery, shooting or stabbing someone, and physically attacking someone before age 15.

By age 18, as expected, more respondents reported that they were involved in more types of criminal activities. By that age, one-third (10 of 30) of the respondents had done each of the following: shoplifted, driven under the influence of alcohol or drugs, sold drugs and carried a concealed weapon. Other criminal activities reported by age 18 included robbery (six respondents); been part of a group that physically attacked or threatened another person (five respondents); taken a car without the owner's permission (four respondents); burglary (four respondents); bought, received or sold something stolen (four respondents); destroyed property (four respondents); physically attacked another person (four respondents); breaking and entering (three respondents); shot or stabbed someone (three respondents); and pulled a weapon or threatened someone with a weapon (two respondents). The only criminal activities not reported to have been done by any of the respondents before age 18 were sexual assault and trying to cash a check that belonged to someone else without that person's consent.

The types and numbers of crimes reported committed before age 18 suggest the importance of early intervention for this population. By age 18, when these individuals leave the juvenile justice system in the District of Columbia and are treated as adults, many of them have already engaged in many types of criminal activities. Interventions at earlier ages would seem particularly appropriate for this population. Moreover, the extent to which these individuals reported being expelled or suspended from school is striking. Fully two-thirds of the 30 interviewees had been expelled or suspended, with the earliest such incident reported as occurring at age 10. This, too, suggests that these individuals start to get into trouble at very early ages and that interventions may need to be targeted at young ages.

With regard to arrest histories, as compared with the commission of offenses for which the respondents may or may not have been arrested, selling drugs was the offense for which the respondents had been arrested most often. More than two-thirds (21 out of 30) of the respondents had been arrested for drug sales, and more than 90 percent of the respondents who reported that they had ever sold drugs reported having been arrested for selling drugs (21 out of 23 respondents). Other crimes for which arrests were commonly reported (i.e., more than half the time) by respondents who committed those offenses were shoplifting (arrests reported by seven of the 13 respondents who had reported ever committing this offense), taking a car without the owner's permission (four out of five), breaking and entering (four out of seven), burglary (five out of seven), destruction of property (seven out of 10), and shot or stabbed someone (five out of nine). In contrast, arrests were relatively infrequent for individuals who reported committing the offenses of driving while under the influence of alcohol or drugs (three out of 19);

buying, receiving or selling something stolen (two out of 19); being part of a group that physically attacked or threatened another person (two out of eight); and trying to cash a check that belonged to someone else (one out of six).

Crimes for which the respondents often reported that they had ever been high at the time the crimes were committed were (besides DWI) shoplifting (five out of 13), taking a car without the owner's permission (three out of five), breaking and entering (five out of seven), destruction of property (six out of 10), selling drugs (16 out of 23), robbery (nine out of 16), pulling a weapon (six out of 12), being part of a group that physically attacked or threatened another person (four out of eight), and carrying a concealed weapon (nine out of 21).

When asked if they had ever committed specific offenses to get money to buy drugs, the offenses for which this was most often reported were selling drugs (18 respondents), robbery (11 respondents), shoplifting (six respondents), and burglary (five respondents).

Interviewers were asked to rate the interviewees' responses. On the whole, interviewers thought that interviewees were "somewhat honest," "somewhat interested" and "cooperative." Interviewers thought that 22 of the 30 respondents had answered questions about drug use honestly but that only half (15 out of 30) had answered questions about criminal activity honestly.

H. Concluding Remarks

Although the results of these interviews must be assessed with caution, because of the small number of interviews actually conducted, there are nevertheless several striking findings from them. One is the extent to which interviewees reported that they began using illicit drugs--and to an even greater extent, alcohol--at very early ages. For more than one-third of the persons interviewed, use of alcohol and marijuana began in (or before) the early teenage years.

Criminal activity likewise began at early ages. By age 15, the interviewees had collectively engaged in a wide variety of criminal activities, with shoplifting and selling drugs the most commonly reported ones.

Moreover, most respondents had experienced difficulties in school--by age 15, fully one-half of them had been expelled or suspended. Also by age 15, one-fourth of the persons interviewed had run away from home and stayed away for at least seven days.

Thus, less than halfway through their teenage years, this population was already presenting problems--at home, at school, and for society as a whole, as reflected in drug use and criminality. This suggests the importance of early intervention efforts--perhaps targeted at pre-teens and young teenagers--if the cycle of drugs-and-crime is to be interrupted before it becomes an entrenched behavior pattern for this population.

Additionally, different intervention strategies may need to be developed for this population than have traditionally been used. This seems particularly true with regard to drug abuse treatment approaches. Most (two-thirds) of the persons interviewed had been in treatment before, some more than once. Nevertheless, all were using drugs at the time of arrest.

Despite their drug use--which would ostensibly show disregard for health concerns--all respondents in fact reported that they were concerned about their health. Indeed, the vast majority (five-sixths) of the persons interviewed reported that they were "very much concerned" about their health. This suggests that an increased emphasis on overall health issues as they relate to drug use might offer an effective "treatment hook" for this population.

IV. STATISTICAL ESTIMATION OF THE NUMBER OF CRIMINALLY INVOLVED DRUG USERS

The preceding two chapters of this report considered one type of "hidden," criminally involved drug abuser, specifically, those arrested individuals who would not have been identified as drug abusers but for the fact that they tested positive for drugs at the time of arrest. This chapter deals with another type of "hidden," criminally involved drug abuser, namely, drug abusers who are engaged in criminal activity but have not been arrested for those criminal acts.

Statistical techniques are applied to the arrestee urine-testing data to develop estimates of the size of the hidden population of drug abusers who commit criminal offenses but are not arrested for those offenses. Before discussing these estimates, however, we present background information regarding the use of statistical techniques to develop reliable estimates of drug and crime problems and to monitor changes in those problems over time.

A. Background

Ideally, the development of policy and strategies aimed at controlling and reducing social problems should be based on information which reasonably measures and monitors the extent of the problem. Too often, however, information which accurately describes the broad dimensions of a problem is simply not available or cannot be obtained in ways that are typically used in the field in question. When this is the situation, policy-makers are usually forced to use existing information which is only indicative of the extent of the problem. In circumstances when the problem is largely hidden from the view of public agencies, the lack of accurate information is, of course, much more pronounced. Such seems to be the situation with some aspects of criminal behavior, of drug use, and of the relation-ship between the two.

In varying degrees, relative to certain underlying facets, both drug abuse and criminal behavior are hidden problems. This does not mean that they are entirely hidden from view. Certain-ly, one can note the number of drug-using individuals who come to treatment, the number of drug arrests, and the number of individuals arrested and convicted for various crimes. But these measures, it can be argued, are only a partial picture of the underlying problems. A large number of drug users are never identified; some criminals are not apprehended; and certain types of crime are underreported or are hardly reported at all. Described in this way, the visible numbers mentioned above are some fraction of the problem, with the remaining complement hidden. Thus, the measures taken from administrative data such as drug abuse treatment admissions, arrests, or drug test results

on arrestees are actually indicators of the problems rather than direct measures.

As indicators, then, the question that remains is: Do these indicators give a relatively accurate and consistent picture of the problems, especially when taken across time? For example, if, in consecutive years, the number of drug abuse treatment admissions increases (or decreases) by a certain percentage or the number of positive drug tests among arrestees rises (or falls), does this accurately reflect the same changes in the hidden portion of respective problems? Experience has shown that indicators often do not accurately capture the changes occurring in the underlying problem.

With regard to crime, drug abuse and the relationship between the two, the reliability of indicators seems to differ. Indicator reliability appears to be better relative to crime in general, especially where certain types of victimization are involved. Reliability of indicators is somewhat diminished regarding the incidence and prevalence of drug use and is worst when measuring the relationship between drug use and criminal behavior. The degree of reliability is associated, of course, with the distance between the indicator measures and the actual problem.

It was stated that the use of indicators taken from administrative data to measure criminal activity is probably the best in the situations mentioned. This is the case relative to crimes involving certain types of victimization, namely, those where the crime is typically reported; then, resulting administrative data rather accurately reflect the degree of the problem. For all crime types, some percentage of crime involving victims is not reported. Periodic victimization surveys provide valuable data describing the degree to which crime is under- reported. If these rates of under-reporting remain stable across time, then measures of reported crime are good indicators of criminal activity. If, however, the degree of underreporting is substantial and variable, then the use of crime reports as an indicator has less reliability.

While reported crime may be a good indicator of criminal activity for certain types of crime, it is less indicative of the total number of active criminals, due to the fact that multiple crimes may be committed by a single offender. To measure the size of the active criminal population, one must resort to the use of arrest data. There, measurement through indication tends to have a reduced reliability. Arrests can increase or decrease in volume for reasons other than an increase or decrease in criminal activity. Admittedly, there is an assumed association between the two, but a rise in arrests could be due to increased police activity or a decrease could be due to a lack of manpower. Variability in these latter factors could easily vitiate the

relationship between arrests and criminal activity and obfuscate an assumed rate of offending in the active criminal population. This would attenuate the use of arrests as an indicator of the size of the active criminal population. In any event, convictions and individual criminal histories are possibly a better indicator in arrest data than the total volume of arrests. Obtaining an indication of the number of active criminals could be better arrived at by restructuring arrest data in more precise ways.

Deriving an indication of the size of the illegal drug-using population is often thought of as mainly important for health planning purposes. However, the size of this population is increasingly being recognized as an important factor in interpreting criminal activity related to drugs. At a human level, it becomes part of the picture of crime through drug dealing. Moreover, there is increasing concern about the number of drug users who are involved in criminal activity. And, from the standpoint of criminal activity, this population represents much of the economic basis, or demand portion, of the supply-demand equation in the trafficking and distribution of drugs. Knowing the size of this population could provide valuable information concerning the backdrop behind the involvement of drugs in criminal behavior.

To measure the extent of drug-using populations, authorities have resorted to using a variety of indicators. These indicators have been measures of drugs and drug-using behaviors as they encountered the scrutiny of public agencies. Such measures as the following have been used as indicators:

- drug-related overdose deaths;
- drug-related emergency room episodes;
- drug-related arrests;
- drug price and purity;
- drug-related accidents;
- admissions to drug abuse treatment; and
- calls to hotlines about drug-related matters.

The relationships between these indicators and the size of the underlying drug-using population have not as yet been clearly understood. With the possible exception of the number of admissions to treatment, the across-time variability of these indicators has not always been clearly consistent with what is believed to be the size of drug use problem. When the problem has grown to be extensive, as in the case of cocaine, increases

in cocaine overdose deaths were presented as palpable evidence that levels of use had reached an alarming degree. This evidence was available somewhat after the fact, and its manifestation was due to the massiveness of the problem as opposed to the sensitivity of the indicator. In fact, many of these indicators have shown great variability across time during periods when the actual size of the problem was apparently somewhat stable. This, of course, casts doubt on the viability of most of these indicators reliable measures of the extent of the underlying problem.

The best of the indicators in relation to the size of the drug-abusing population is the number of admissions to drug abuse treatment programs. While this measure is often consonant with changes in the size of the drug use problem, it suffers from some of the sample problems that the number of arrests do in relation to the size of the active criminal population. In the first place, the number of admissions to treatment does not give a direct measure of the size of the drug-using population. It also can experience some of the same administrative constraints as those imposed on arrests. If limited resources curtail the number of treatment slots, then the problem may increase but the number of admissions could remain relatively constant. Moreover, looking at the total volume of admissions as an indicator of the size of the problem involves a lagged picture. Most drug users who come to treatment do not do so until three-to-five years after they have begun use. Nevertheless, drug abuse treatment volumes and admission records are the best administrative data available. Individuals who enter treatment seem to report rather accurately the types of drugs they use and when they began to use them. If these data are structured correctly, they can produce estimates of the total number of individuals using particular types of drugs.

The least desirable measurement situation involving drugs and crimes existed until recently in relation to the connection between these two problems. This connection is manifested in basically two ways: (1) the number of drug users who commit certain types of crimes; and (2) the number of individuals who actually participate in the marketing and sale of drugs. Until relatively recently, information indicative of the first situation obtained only through self-reports on drug abuse treatment admission forms or at the time of arrest. Given the lack of communication between treatment and law enforcement agencies, there was no way to verify the accuracy of these reports. Recent studies have shown that substantial underreporting exists. This conclusion is based upon drug test results obtained at the time of arrest. The introduction of this relatively accurate measurement provides an excellent beginning in the attempt to gain an indication of the degree to which criminals are involved in drug use.

When obtained from an arrestee population, however, drug test results give only the rate of use in that particular group. Therefore, it may be unrealistic to extrapolate the arrestee rate of drug use to the entire population of active criminals (i.e., to those who are not apprehended as well as those who are). This would be especially the case if drug-using arrestees experience more, or fewer, arrests than non-drug-using arrestees. A difference of this sort would suggest that drug users have a different probability of being arrested, leading one to the conclusion that they are disproportionately represented in the arrestee population. As a result, further analysis of arrest data is required, if reasonable estimates of the rate of drug use among active criminals are to be obtained.

The measurement problem associated with the second drug-crime connection, drug trafficking, stems from the hidden nature of the crime. Unlike many other crimes, the frequency of drug sales is not reported; therefore, a clear indicator of the extent of the problem does not exist in data on reported crime. The only indicator available in this case is the number of drug-related arrests. As a single indicator, this measure suffers from the same problems as admissions to drug abuse treatment relative to the prevalence of drug use. If total drug arrests increase, or decrease, this does not clearly indicate a rise, or fall, in the extent of the problem. Given that other factors may explain changes in drug arrests, the reliability of the indicator is questionable. In consequence, with these type of data not only is the total number of drug-dealing criminals unknown, but the extent of the crime problem is also unknown. To obtain a better picture of the problem, one would need to restructure and analyze the only comprehensive data available--drug-related arrests.

It is argued here that the use of indicator date to measure the extent of drug and crime problems is seriously attenuated by a lack of reliability of the indicators. This weakness is exacerbated by the fact that indicator data often seem to provide good measurements for certain periods of time. The point when this type of measurement usually becomes weakened is at those times when the underlying problem is experiencing a dramatic change--an increase or a decrease. The reason this frequently happens involves the essential connection between the underlying drug/crime problem and its visibility in administrative records maintained by cognitive agencies. There is usually a time lag between the emergence of a hidden problem in its real-world environment and its appearance through the contact of relevant individuals (drug users and criminals) with the pertinent parts of the government.

Not only is there a lag in contact, but it is also recognized that only a fraction of individuals who are involved in the problem are involved in the contact (e.g., are arrested). This

fraction may be large or small, but it nonetheless represents the imperfect measurement of the problem through such indicators as arrests and drug treatment admissions. And, since this fraction may change over time for any given problem (e.g., individuals who are involved in property crime and use drugs) and the extent of this change is essentially unknown to the cognizant agencies, the imperfection in measurement is largely one of inconsistency, or lack of reliability.

There are numerous instances of the failure of indicators to identify the scope of change in hidden problems. In 1979, for example, there was some reason to think that the drug problem in Washington, D.C. was changing. The supply of heroin, it was reported, had been curtailed for several years; and admissions to heroin treatment had declined in previous years and showed no immediate change. Admissions for drugs of substitution for heroin (e.g., Dilaudid) had been up but were diminishing in 1979. Although a change in drug use trends was suspected, no comprehensive evidence supported the belief. An in-depth analysis of the 1979 data showed that the rapid increase in heroin use that occurred in 1980 and 1981 could have been predicted from internal changes in the treatment admissions data for heroin and the rapid decrease in the use of drugs of substitution.

A somewhat similar set of circumstances occurred in the State of Maryland. A statewide drug abuse prevalence study conducted in 1977 showed that approximately 60,000 individuals were using drugs. In 1981, the State Health Department was concerned that the drug abuse problem might be expanding, because admissions to treatment had been increasing to some degree. In 1982, to address the concern, the State commissioned another study. This study, using a less costly methodology than the previous study, concluded that the problem had grown rapidly after 1977, to a point where it was over 50% larger. If the methodology had been applied on a year-by- year basis, the rapid increase could have been detected much sooner.

Another study in Maryland using this methodology was commissioned in 1985. The results showed that the problem had accelerated in the intervening years and that the prevalence level had more than doubled since 1977. Again, if the same methodology had been applied to administrative data (i.e., treatment admissions) in the intervening years, the rapid rise in prevalence could have been detected earlier, and resources could have been targeted accordingly.

Allied with the overall problem in Maryland was the delayed rise in the use of cocaine and PCP in Prince George's County. The periodic analyses of treatment data for the state, while showing some evidence of the use of cocaine in that county, yielded patterns showing a lesser degree of use than in other parts of the state. However, subsequent anecdotal evidence and

intelligence seemed to indicate elevated use of both cocaine and PCP after the last comprehensive study. In 1987, a private in-depth study was conducted that revealed some growth in the use of those drugs between 1981 and 1984. At the end of that period, analysis of the data showed a sharp increase in the use of both drugs--and use was still increasing in 1987. A year-by-year analysis would have identified the change in trend at an earlier stage.

A final example will show how the analysis of administrative data could have helped presage the eruption of an epidemic of violence in Washington, D.C. in 1988 and 1989. This violence, as is stated by numerous sources, is related to the conflicts surrounding the distribution and sale of drugs. Ostensibly, the conflicts and attendant killings are mainly the result of competition for ascendancy in the drug markets in the area. If this premise is true, and it appears to be widely accepted, then a sharp increase of the number of individuals who deal drugs should be a relatively clear predictor of the ensuing conflict. Therefore, an analytic examination of drug arrests on a yearly basis to generate estimates of the total number of individuals active in the sale of drugs would provide monitoring data to determine the potential for conflict and violence.

As will be seen later in this chapter, these estimates were developed for 1985 and 1986 and showed a quantum increase in the number of individuals involved in the sale of drugs in the District of Columbia. This was the case not only for District of Columbia residents but also for individuals from Maryland and Virginia who entered the District to participate in the sale of drugs. This rather clearly suggests that distribution and sales networks were proliferating in Washington, DC at that time.

More information related to the potential for violence could be obtained by examining the demand side of the problem. In this case, if good treatment data were available, estimates could be made of the total prevalence of drug use. Using methods similar to those employed with arrest data, one could estimate the number of users of specific drugs who are not in treatment. This, combined with the number of users who come to treatment, would provide estimates of the total number of individuals using various types of drugs for, say, a given year.

If the ratio of the estimated number of drug <u>users</u> to the estimated number of drug <u>dealers</u> rapidly becomes smaller, then one would expect the competition for market share to become quite intense. Violence, it could then be hypothesized, would be the most overt consequence of that intensified competition. Obtaining estimates of the total number of individuals using drugs (i.e., prevalence) in a defined jurisdiction across time would therefore provide an added dimension of information to assess the

changes in the supply/demand balance and in the strategic planning to combat the problem.

The remainder of this chapter provides some insight into the type of methods that can be used to estimate the total number of active criminals and the percentage of them who use drugs. It also provides some results for Washington, DC in 1985 and 1986 using arrest data. These results portray the total number of criminals active in the District of Columbia relative to several types of crime. They also show estimated totals for those who are residents of the District and those who come into the District from Maryland and Virginia to be involved in criminal activity. In addition, results are given for some crime types which reveal the percentage of criminals who are also drug users. No results are given for the estimated total number of drug users who are residents of the District, because the treatment admissions data needed for such estimation were not available.[47]

B. Methodology

The methods used to estimate the total number of active criminals are a set of established techniques developed to estimate hidden populations in a variety of subject areas. They have been used to estimate the number of unidentified children in Massachusetts possessing a specific congenital abnormality, the unknown number of free-roving dogs in Baltimore, the hidden number of drug users in various states and cities, the number of undetected particles in physics scanning experiments, and the total number of rabbits at Rose Lake Wildlife Research Station in Michigan. The underlying approach in techniques of this nature is to employ the patterns in which portions of the target population appear and reappear in administrative data. These patterns are then analyzed in the appropriate model to estimate the number who never appear. The models employed in this analysis were applied to data describing individuals arrested in Washington, DC in 1985 and 1986. The patterns in which individuals are arrested and rearrested in a given area are analyzed by these models to estimate active criminals who are <u>not</u> arrested in that year.

Three types of techniques (models) were used to analyze the arrest data. One, which represents the typical capture-recapture approach, examines the arrest-rearrest patterns in great detail. The other two methods employ the arrest-rearrest data in a more combined form.

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[47]See footnote 2 in Chapter II, above, regarding our attempts to obtain such data on treatment admissions.

Three approaches are used for two reasons. In the first place, multiple approaches are used so that results can be verified. Estimating the hidden portion of a population using the observable portion of the same population is a form of extrapolation in which the results could be called into question if multiple techniques did not converge to the same values. The second reason has to do with the form of the available data. Often the configuration of the available data is not quite appropriate for one type of method. Therefore, it is prudent to have alternative methods available to cover these circumstances. The approach which uses detailed arrest-rearrest data is appropriate in all circumstances but requires complete data. The other two can be used to cover the different possible data configurations and act with the first method to verify results.

The typical capture-recapture approach, which uses detailed data, is a very robust method in that it is not dependent upon how the data are distributed. The technique merely requires that the data be complete. This approach employs a combination of linear effects to determine whether or not the appearance and reappearance of individuals is independent from time period to time period. After the correct relationship is determined, an appropriate formula is designated to estimate the hidden portion of the target population. There is, in effect, an appropriate estimation formula for each possible appearance-reappearance relationship in the data.

As was stated, the approach was applied to arrest/rearrest data in Washington, DC in 1985 and 1986. An example of the manner in which the data are arranged to perform this type of analysis is given in Exhibit 15. In this arrangement, the calendar year was divided into three equal segments, and the arrest record for each individual was categorized as to how arrests occurred relative to the three periods. For example, the pattern 010 indicated that an individual was arrested in the second segment but not in the first or third. There are seven possible patterns in this framework. The number of arrestees who were arrested/rearrested in 1986 in each pattern is given in the right-hand column in Exhibit 15 for felony crimes of violence and drug dealing. The pattern 000 is not shown because this represents the unknown number of active criminals who were <u>not</u> arrested in the given year (1986). The numbers in the patterns are used in the capture-recapture model to estimate the size of the 000 pattern.[48]

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[48]See Y.M.M. Bishop, <u>et al.</u>, <u>Discrete Multivariate Analysis: Theory and Practice</u> (Cambridge, MA: MIT Press, 1975) for a thorough description of this technique.

EXHIBIT 15

VIOLENT FELONS' ARREST/REARREST PATTERNS (1986)

Pattern	Number of Arrestees
(001)	158
(010)	169
(100)	143
(011)	18
(101)	20
(110)	31
(111)	4

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DRUG FELONS' ARREST/REARREST PATTERNS (1986)

Pattern	Number of Arrestees
(001)	675
(010)	875
(100)	1,471
(011)	95
(101)	100
(110)	202
(111)	22

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The second approach employs a probability model to estimate the hidden portion of the population of active criminals. For arrest data, the most appropriate model is a Negative Binomial probability distribution which describes the number of individuals relative to the total number of arrests they have in the year period. An example of this type of data configuration is given in Exhibit 16. These data represent the distribution of number of arrests per individual for drug violations in 1986. It will be noted that the zero class is undefined. This class represents the number of individuals who committed drug violations in 1986 but were not arrested in that year. The mathematical techniques associated with the Negative Binomial model are used to estimate the number of individuals in the zero class (i.e., those not arrested).[49]

The third technique is taken from the field of particle physics and was developed to estimate the number of undetected particles read from photographic film. It requires a data configuration similar to that used in the first capture-recapture model but in a combined form. That is, instead of showing all of the seven patterns of arrest-rearrest, it uses the number of individuals arrested once, twice and three times.[50]

C. Estimation Results

Estimates were made for the total number of active criminals (including those who were not arrested as well as those who were) in Washington, DC in 1985 and 1986.[51] These estimates were generated for five types of crime (violent, property, robbery, drug violations, and commercial sex). For each year a defendant was defined as a "criminal" if at least one case during that year

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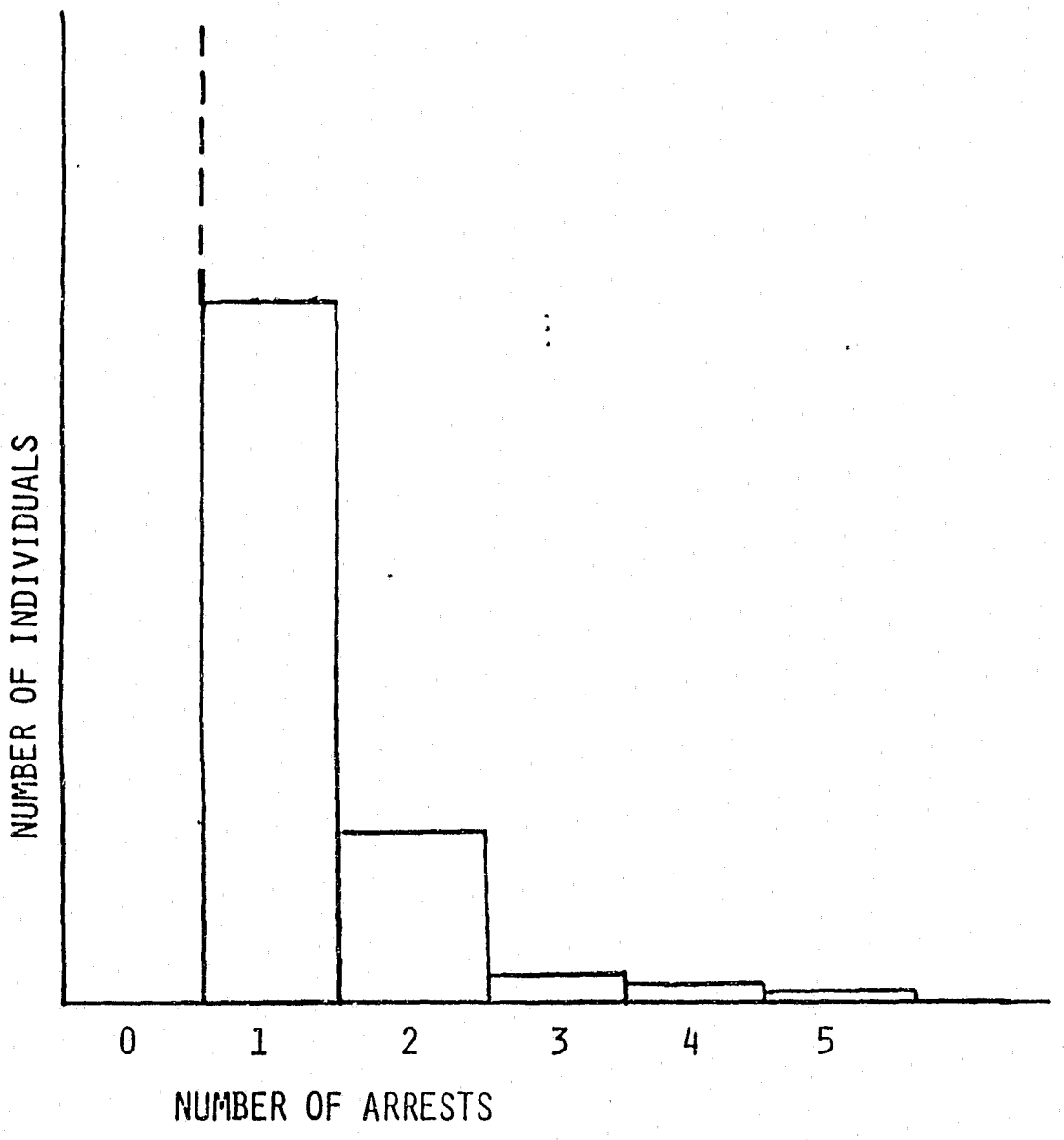
[49]See W. Brass, "Simplified Methods of Fitting the Truncated Negative Binomial Distribution," Biometrika, Volume 45 (1958), pp. 59-68, for a discussion of these techniques.

[50]See L. Sanathanan, "A Comparison of Some Models in Visual Scanning Experiments," Technometrics, Volume 15 (1973), pp. 67-78; and L. Sanathanan, "Models and Estimation Methods in Visual Scanning Experiments," Technometrics, Volume 14 (1973), pp. 813-829, for a discussion of these techniques.

[51]Although we had initially proposed to focus the analysis only on arrests during the June 1984--January 1985 period (which was the study period for our evaluation of PSA's urine-testing program), it was clear that a longer time period of arrest data would provide better estimates. Hence, we explored the possibility of obtaining such data from PSA, and the information was indeed provided to us. Because those data were case-based, we restructured them into person-based data for analysis.

EXHIBIT 16

DISCRETE PROBABILITY MODEL OF THE NUMBER OF ARRESTS PER INDIVIDUAL (DRUGS - 1986)



resulted in a finding of guilt. Similarly, a defendant was defined as a "violent felon" if there was at least one case that resulted in a finding of guilt and at least one charge that was a violent felony. Separated estimated were developed for persons active in the District who have their residences in the District, Maryland, and Virginia. These results are given in Exhibit 17.

The most notable finding is the rapid rise from 1985 to 1986 in the total number of individuals active in selling drugs. For those with residence in Washington, DC that number rose from 8,827 in 1985 to 13,369 in 1986. Relative to those who came to the District to sell drugs, 1,088 came from Maryland in 1985 with 1,337 doing the same in 1986. For those living in Virginia, that number rose from 191 in 1985 to 514 in 1986.

The results also showed an overall increase in those involved in commercial sex. Residents of the District who were involved in this activity increased in number from 1,075 in 1985 to 1,286 in 1986. The most striking increase was among Virginia residents, with 326 individuals active in 1985 and 899 active in 1986. For Maryland residents, there was a decline from 750 in 1985 to 703 in 1986 in the number of active criminals committing commercial sex crimes in the District of Columbia.

For those active in robbery, there was generally a decrease from 1985 to 1986. Relative to those residing in the District, that number dropped from 2,577 to 1,528. Virginia residents who came to Washington, DC to commit robbery also declined--from 181 to 132--while there was an increase in Maryland residents who were involved in DC robberies from 282 in 1985 to 370 in 1986.

The results also showed overall decreases in the number of active criminals engaged in violent crimes and property crimes in the District of Columbia. However, as shown in Exhibit 17, these overall declines masked differences by residence. For violent crimes, Maryland residents showed an increase in the number of active criminals committing those crimes in the District of Columbia, while residents of the District and Virginia showed decreases. For property crimes, DC residents showed an increase, while decreases were shown for Maryland and Virginia residents.

Overall, the results by residence show that a significant number of the crimes committed in the District of Columbia were perpetrated by residents of Maryland and, to a lesser extent, Virginia. This indicates the metropolitan-area-wide nature of the drug/crime problem. For example, for Calendar Year 1985, a total of 27 percent of the estimated total number of property crimes committed in the District of Columbia were estimated to have been committed by Maryland residents and 18 percent by Virginia residents. Comparable percentages for Calendar Year 1986 were somewhat lower: 17 percent for Maryland residents and eight percent for Virginia residents.

EXHIBIT 17

ACTIVE CRIMINALS IN WASHINGTON, DC
BY TYPE OF CRIME AND RESIDENCE OF OFFENDER

(1985)

Crime Type	DC	MD	VA
Violent	2,736	164	67
Property	2,190	1,079	703
Robbery	2,577	282	181
Drugs	8,827	1,088	191
Commercial Sex	1,075	750	326

(1986)

Violent	2,662	233	39
Property	2,712	620	274
Robbery	1,528	370	132
Drugs	13,369	1,337	514
Commercial Sex	1,286	703	899

Estimates were also made for the relative number of active criminals involved in drug use who were Washington, DC residents. These estimates are derived from the results of drug tests given to arrestees as they are processed through the criminal justice system. If an individual tested positive in the urinalysis for specific drugs, then that individual was included in the set which formed the basis for generating the estimates. As with the definition of criminal, a defendant was classified as a user of, say, cocaine during a given year if any arrest in that year was accompanied by a positive drug test result for cocaine. The same type of data configurations (i.e., arrest and rearrest) and the same techniques were applied to these data to obtain estimates.

The presentation of results is given for felony drug violations in Exhibit 18 and is somewhat different than those given for total active criminals. This difference stems from the fact that all arrestees are not tested for drug use when they are processed. As a consequence, only those tested are used to form a basis to obtain the degree of drug use among active criminals. To obtain the percent using drugs, estimates are made using those tested to give a comparative base. A second estimate is then made for those who tested positive and the two estimates are compared to obtain the percent of active criminals who use drugs.

In Exhibit 18 (individuals active in committing drug felonies), the results are given for the use of any drug, cocaine, PCP, and opiates for 1985 and 1986. Under each drug heading, the number of arrestees tested is given, with the number of those who tested positive and the percent of arrestees who tested positive. Following this is an estimate made from the number tested to provide a base for the total active criminals. Next, an estimate is given for those who tested positive followed by the inferred percent of active criminals who use various drugs.

Exhibit 18 shows that 86.7% of those arrested for drug felonies and tested in 1985 were found to be positive for any drug. The estimated base (from those tested) was 7,066, and the estimate for those who used any drug was 6,044 (from those who tested positive). These estimates give an inferred rate of use of any drug among those active in drug felonies in 1985 of 85.5%. This suggests that the rate of use of any drug among active criminals of this type is about the same as those who were arrested and tested in 1985.

This conclusion does not hold for the use of the individual drugs of cocaine, PCP, or opiates. For example, 56.6% of 1985 drug felony arrestees tested positive for cocaine, while it was estimated that 36.5% of all active drug felony criminals were using cocaine. This suggests that cocaine users in this crime category have a greater propensity to be arrested. This is also the case for PCP (48.9% vs. 36.1%) and opiates (37.8% vs. 25.6%).

EXHIBIT 18

DRUG USE AMONG ARRESTED AND ACTIVE CRIMINALS IN WASHINGTON, DC

-- DRUG FELONIES --

(1985)

	Any Drug	Cocaine	PCP	Opiates
Arrestees Tested	1,796	1,796	1,796	1,796
Positive Tests	1,557	1,016	878	679
Percent Positive	86.7%	56.6%	48.9%	37.8%
Active Criminal Test Base	7,066	7,066	7,066	7,066
Estimated Use	6,044	2,582	2,551	1,811
Percentage	85.5%	36.5%	36.1%	25.6%

(1986)

Arrestees Tested	2,744	2,744	2,744	2,744
Positive Tests	2,407	1,642	1,516	865
Percent Positive	87.7%	59.8%	55.2%	31.5%
Active Criminal Test Base	9,345	9,345	9,345	9,345
Estimated Use	7,951	3,699	3,456	1,947
Percentage	85.1%	39.6%	37.0%	20.8%

These results show that cocaine and PCP use among those active in drug felonies rose slightly between 1985 and 1986 (36.5% in 1985 to 39.6% in 1986 for cocaine; 36.1% in 1985 to 37.0% in 1986 for PCP). The use of any drug stayed about the same (85.5% to 85.1%), and drug use decreased for opiates (25.6% to 20.8%).

Drug use results based on those arrested for property crimes are given in Exhibit 19 (for 1985 and 1986). As in Exhibit 18, the projected rate of drug use among active criminals is based upon those who were actually tested when arrested. The most salient finding among these results is the increased involvement in drugs from 1985 to 1986 for this type of criminal, with the exception of the use of opiates. Positive test results among tested arrestees rose from 62.8% for any drug, 33.8% for cocaine and 40.5% for PCP in 1985 to 70.1% for any drug, 39.2% for cocaine, and 49.2% for PCP in 1986. For opiates, however, the rate of positive results among arrestees was virtually the same in the two years (16.9% in 1985 and 16.5% in 1986). The projected results showed basically the same pattern for active criminals. Between the two years the use of any drug rose from 53.8% to 61.1%. The use of cocaine also increased (from 26.8% to 35.2%), as did the use of PCP (from 31.9% to 37.1%). Conversely, the use of opiates in this active criminal group decreased in this period from 18.9% in 1985 to 12.7% in 1986. A general view of the results would lead one to the conclusion that criminals engaged in property crimes who use drugs have a greater propensity to be arrested, given the higher rate of use among arrestees than in the active criminal base.

D. Conclusion

The application of mathematical models to administrative data rather clearly appears to provide valuable additional information and insight into the extent of social problems. In the case of the results given here, estimates can be generated which reveal the size of the active criminal population and the patterns with which they move across jurisdictional boundaries to commit crimes. The process also allows monitoring of problems across time, so that policymakers and planners can obtain a clearer picture of changes in the extent of problems. It also permits estimates to be made of the degree to which additional problems (e.g., drug use) are intermeshed with a target problem (e.g., crime).

Moreover, techniques such as those described in this chapter are capable of providing deeper insight into the composition of the overall problem by, for example, showing the demographic structure of the criminal population that is active in any jurisdiction. In fact, techniques such as these can exploit a range of information that may be collected in an administrative data base (e.g., arrest data or drug treatment data). And, to

EXHIBIT 19

DRUG USE AMONG ARRESTED AND ACTIVE CRIMINALS IN WASHINGTON, DC

-- PROPERTY CRIMES --

(1985)

	Any Drug	Cocaine	PCP	Opiates
Arrestees Tested	444	444	444	444
Positive Tests	279	150	180	75
Percent Positive	62.8%	33.8%	40.5%	16.9%
Active Criminal Test Base	1,010	1,010	1,010	1,010
Estimated Use	543	271	322	191
Percentage	53.8%	26.8%	31.9%	18.9%

(1986)

Arrestees Tested	498	498	498	498
Positive Tests	349	195	245	82
Percent Positive	70.1%	39.2%	49.2%	16.5%
Active Criminal Test Base	1,132	1,132	1,132	1,132
Estimated Use	692	399	420	144
Percentage	61.1%	35.2%	37.1%	12.7%

lend credence to the approach, there are a variety of methods available to fit the many possible data configurations found in administrative data bases.

V. SUMMARY AND CONCLUSIONS

A. Scope of Study

This study of hidden drug abusers was based on the pretrial urine-testing program in the District of Columbia. Operated by the DC Pretrial Services Agency (PSA) since March 1984, the program attempts to test all adult arrestees for the presence of any of five drugs in their urine: cocaine, phencyclidine (PCP), opiates, methadone or amphetamines.

Based on the urine-test results, a group of drug users was identified who, but for the urine-testing program, would be "hidden" from the criminal justice system--that is, these arrestees tested positive for drug use but did not admit drug use to the PSA interviewer, had not been arrested for a drug charge, and did not report that they were currently in treatment for drug use. To increase the current state of knowledge about this population was the primary goal of this exploratory study.

To date, hidden drug abusers identified through pretrial urine-testing programs have received little attention, despite the emphasis of national drug policy on expanding such programs. Because hidden drug abusers are the only drug abusers identified by urine-testing who are not identified by other means as well, analysis of this population would seem a particularly important aspect of the overall assessment of the efficacy of pretrial urine-testing. Thus, this study undertook a variety of analyses designed to increase the state of knowledge about these hidden drug abusers.

Besides the hidden drug abusers identified through urine-testing, there is, of course, another population of hidden drug abusers who are criminally active--namely, drug abusers who commit crimes but are not arrested for them. Statistical estimates of this population were developed as part of this project, by using the pretrial urine-testing data on arrested drug abusers. In this way, estimates were made of the size of the total population of drug abusers who are involved in criminality--including those who are not arrested as well as those who are.

B. Size and Characteristics of the Hidden Drug Abuser Population

During the first six months of Calendar Year 1985, the urine-testing program for arrestees in the District of Columbia identified 868 hidden drug abusers (i.e., drug abusers who would not have been identified through other means). Hidden drug abusers comprised 17 percent of all tested arrestees and 24 percent of all drug abusers identified during that period.

In the absence of the urine-tests, the hidden drug abusers would have been classified as non-users of drugs. When compared with the "true" non-users of drugs, as determined by the urine-tests, the hidden drug abusers were found to be markedly different: they were younger, more likely to be black, and more likely to reside in the District of Columbia. They were also more likely to have been charged with a felony, more likely to have been charged with auto theft and less likely to have been charged with assault. Additionally, they were more likely to have had a prior record of convictions and to have been on probation or parole for other offenses when arrested. Thus, in comparison to true non-users of drugs, hidden drug abusers were more enmeshed in the criminal justice system, as shown by their probation/parole status when arrested as well as by the extent of their prior convictions.

In comparison with known (or "non-hidden") drug abusers, hidden drug abusers were younger, somewhat less likely to be black or male, more likely to be employed, more likely to be free of prior convictions, and less likely to have been on probation or parole for other offenses when arrested. They were also more likely to use only one drug, rather than multiple drugs. By type of drug, they are more likely to use PCP and less likely to use opiates or cocaine. These data suggest that hidden drug abusers have less serious drug problems than known drug abusers. This, combined with the relative youth of hidden drug abusers, further suggests that it may be possible to develop successful intervention strategies, designed to reduce both the criminality and the drug abuse of these individuals.

The rearrest data for hidden versus known drug abusers show the importance of trying to develop such interventions. Approximately half the hidden drug abusers arrested in the first six months of 1985 had been rearrested at least once by the end of 1986. Thus, it is clear that, under current conditions, hidden drug abusers are continuing their criminal careers.

The hidden drug abusers who were most likely to be rearrested were those who were 22 years of age or younger and those who had prior convictions. Approximately 15 percent of the total population of hidden drug abusers consisted of persons who were 22 years of age or younger and had at least one prior conviction. This group would seem to be an especially important group upon which to target intervention efforts. These defendants are highly rearrest prone. Moreover, their age presents the possibility, if not the likelihood, that they will commit many more crimes over their lifetimes--unless successful interventions can be developed to preclude this outcome.

With regard to rearrests--as with background characteristics when first arrested--hidden drug abusers resembled known drug abusers much more than they resembled non-users of drugs.

However, in the absence of the urine-testing program, all hidden drug abusers would have been classified as non-users of drugs.

C. Interviews with Drug Abusers

Although the official data suggest that hidden drug abusers are in the early stages of their drug/crime careers, it is possible that they have been just as deeply involved in drug abuse and criminality as known drug abusers but have simply been more successful in avoiding apprehension for their illicit activities. To address this issue, we structured a series of interviews with random samples of hidden and known drug abusers. These interviews were designed to assess whether hidden drug abusers self-reported that they were at earlier stages of their drug/crime careers than known drug abusers.

Unfortunately, locating respondents proved much more difficult than we had anticipated, for a variety of reasons. Consequently, only a small number of interviews were actually completed, and we could not reliably conduct the analysis originally planned (i.e., to compare the interview responses of hidden versus known drug abusers). However, some of the responses were insightful and suggest avenues for future research.

Although the results of these interviews must be assessed with caution, because of the small number of interviews conducted, there were nevertheless several striking findings from them. One is the extent to which interviewees reported that they began using illicit drugs--and to an even greater extent, alcohol--at very early ages. For more than one-third of the persons interviewed, use of alcohol and marijuana began in (or before) the early teenage years.

Criminal activity likewise began at early ages. By age 15, the interviewees had collectively engaged in a wide variety of criminal activities, with shoplifting and selling drugs the most commonly reported ones.

Moreover, most respondents had experienced difficulties in school--by age 15, fully one-half of them had been expelled or suspended. Also by age 15, one-fourth of the persons interviewed had run away from home and stayed away for at least seven days.

Thus, less than halfway through their teenage years, this population was already presenting problems--at home, at school, and for society as a whole, as reflected in drug use and criminality. This suggests the importance of early intervention efforts--perhaps targeted at pre-teens and young teenagers--if the cycle of drugs-and-crime is to be interrupted before it becomes an entrenched behavior pattern for this population.

Additionally, different intervention strategies may need to be developed for this population than have traditionally been used. This seems particularly true with regard to drug abuse treatment approaches. Most (two-thirds) of the persons interviewed had been in treatment before, some more than once. Nevertheless, all were using drugs at the time of arrest.

Despite their drug use--which would ostensibly show disregard for health concerns--all respondents in fact reported that they were concerned about their health. Indeed, the vast majority (five-sixths) of the persons interviewed reported that they were "very much concerned" about their health. This suggests that an increased emphasis on overall health issues as they relate to drug use might offer an effective "treatment hook" for this population.

D. Statistical Estimation of the Number of Criminally Involved Drug Users

In addition to analyses of persons who would not have been identified as drug abusers but for the fact that they tested positive for drugs at the time of arrest, we also considered another type of "hidden," criminally involved drug abuser--namely, those drug abusers who were engaged in criminal activity but had not been arrested for those criminal acts. Statistical techniques were applied to the arrestee urine-testing data to develop estimates of the size of this hidden population of criminally involved drug abusers.

The methods used to estimate the total number of active criminals consisted of established techniques developed to estimate hidden populations in a variety of subject areas. Three types of models were used: a "discrete distribution" model, a "capture-recapture" model, and a "scanning model." In many instances the results from each model were quite close to each other, which increased confidence that a relatively narrow range had been successfully identified within which the "true" number fell.

Estimates were made for the total number of active criminals (including those who were not arrested as well as those who were) in Washington, DC in 1985 and 1986. These estimates were generated for five types of crime (violent, property, robbery, drug violations, and commercial sex).

Also, separate estimates were developed for residents of the District of Columbia who engage in these crimes, as compared with residents of Maryland and Virginia. This permitted an assessment of the extent to which various crimes that were committed in the District of Columbia were committed by residents versus non-residents. The results showed that a significant number of the crimes committed in the District of Columbia were perpetrated by

residents of Maryland and, to a lesser extent, Virginia. This indicates the metropolitan-area-wide nature of the drug/crime problem. For example, for calendar year 1985, 27 percent of the estimated total number of property crimes committed in the District of Columbia were estimated to have been committed by Maryland residents and 18 percent by Virginia residents. Comparable percentages for calendar year 1986 were somewhat lower: 17 percent for Maryland residents and eight percent for Virginia residents.

By type of drug, estimates were made for use of (1) any drug, (2) cocaine, (3) PCP, and (4) opiates. As expected, relatively high rates of drug use were estimated for the population of persons committing property crimes in both 1985 and 1986 (54 percent in 1985 and 61 percent in 1986, when use of any drug was considered). Additionally, however, substantial rates of drug use were also estimated for persons committing violent crimes: 56 percent in 1985 and 43 percent in 1986. This suggests, as have other studies, that drug users are involved in a wide variety of crimes, violent as well as non-violent, and that efforts to reduce drug use might have a strong impact on all types of crime, not just on income-generating crimes.

The application of mathematical models to administrative data of the type available from PSA's data base rather clearly appeared to provide valuable additional information and insight into the extent of drug/crime problems. Estimates were generated that revealed the size of the active criminal population and the patterns with which they moved across jurisdictional boundaries to commit crimes. If performed on a continuing basis, the process would allow monitoring of problems across time, so that policymakers and planners could obtain a clearer picture of changes in the extent of problems.

E. Concluding Remarks

This exploratory study has demonstrated the importance of analyzing the population of hidden drug abusers and of increasing our efforts to develop successful intervention strategies to interrupt the cycle of drugs-and-crime for this group. With regard to hidden drug abusers identified through urine-testing of arrestees, it would be useful to conduct studies similar to this one in other jurisdictions (e.g., the replication sites funded by the Bureau of Justice Assistance). It would also be useful to conduct a similar study for the District of Columbia for a later time period, to assess whether the size or composition of the hidden population of drug abusers changed as the nature of the drug abuse problems in the community changed.

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APPENDIX A

DATA ON HIDDEN DRUG ABUSERS, OTHER DRUG ABUSERS, AND NON-USERS OF DRUGS

TABLE 1. CHARACTERISTICS OF HIDDEN DRUG ABUSERS, AS COMPARED TO OTHER DRUG ABUSERS AND NON-USERS OF DRUGS (Based on Arrests During January 1, 1985 and June 30, 1985)

Note: This table covers defendants for whom we have complete information regarding drug test results, arrest charge, and self-reports of drug use. Because of missing information for certain of these categories for some defendants, the table covers fewer defendants than the total number who were tested for drugs. "Hidden" drug abusers are those with positive urine-tests but no other indication of drug use. "Other" drug abusers are tested defendants who self-reported drug use and/or were arrested on a drug charge. "Non-users" are those with negative urine-tests who did not self-report drug use and who were not arrested on a drug charge.

Characteristic	Hidden Drug Abusers	Other Drug Abusers	Non-Users
Age			
16-22	32%	26%	27%
23-28	37	33	26
29-35	20	26	22
36 or older	10	15	24
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Ethnicity			
Black	91%	94%	86%
White	8	6	10
Other	1	1	4
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Gender			
Male	81%	85%	82%
Female	19	15	18
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Employed?			
Yes	53%	45%	52%
No	47	55	48
TOTAL	100%	100%	100%
No. of Persons	806	2685	1449
Seriousness of Charge			
Misdemeanor	58%	56%	63%
Felony	42	44	37
TOTAL	100%	100%	100%
No. of Persons	765	2676	1363

--continued--

Characteristic	Hidden Drug Abusers	Other Drug Abusers	Non-Users
Charge (Excluding Drug Possession or Sale)			
Assault	16%	13%	24%
Burglary	11	10	12
Flight/escape	4	6	4
Larceny	10	13	8
Robbery	10	11	8
Prostitution	12	11	10
Auto theft	11	11	7
Stolen property	6	5	4
Weapons	6	4	6
Destruction of Property	7	5	6
Other	7	11	11
TOTAL	100%	100%	100%
No. of Persons	772	582	1373
Prior Convictions			
None	49%	38%	57%
1-3	41	45	32
4-6	7	11	8
7 or more	3	6	3
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
On Probation When Arrested?			
Yes	10%	14%	7%
No	90	86	93
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
On Parole When Arrested?			
Yes	6%	8%	5%
No	94	92	95
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544

--continued--

Characteristic	Hidden Drug Abusers	Other Drug Abusers	Non-Users
No. of Drugs for Which Tested Positive			
None	0%	20%	100%
One	74	40	0
Two	23	31	0
Three	3	8	0
Four or five	1	1	0
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Positive for Opiates?			
Yes	14%	33%	0%
No	86	67	100
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Positive for Cocaine?			
Yes	43%	45%	0%
No	57	55	100
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544
Positive for PCP?			
Yes	63%	41%	0%
No	37	59	100
TOTAL	100%	100%	100%
No. of Persons	868	2822	1544

Note: percentages may not add to 100% due to rounding.

TABLE 2. NUMBER OF REARRESTS OF HIDDEN DRUG ABUSERS, AS COMPARED TO OTHER DRUG ABUSERS AND NON-USERS OF DRUGS

Note: This table shows the number of rearrests during the period January 1, 1985, and December 31, 1986, for defendants who were arrested during January 1, 1985, and June 30, 1985.

Number of Rearrests	Hidden Drug Abusers		Other Drug Abusers		Non-Users	
	Number	Percent	Number	Percent	Number	Percent
None	422	49%	1468	52%	1002	65%
One	216	25	699	25	299	19
Two	125	14	376	13	138	9
Three	53	6	153	5	57	4
Four to six	45	5	121	5	45	3
Seven or more	7	1	5	0	3	0
TOTAL	868	100%	2822	100%	1544	100%

APPENDIX B

DATA SHEET AND INTERVIEW INSTRUMENT

Note:	Incarcerated persons were not asked Questions 4, 6-12, 29-30, and 46 on the Interview Instrument. Nor were they asked Item 3 of Question 13.

FOLLOWUP STUDY OF "HIDDEN" AND "NON-HIDDEN" DRUG ABUSERS IN THE DISTRICT OF COLUMBIA
--DATA SHEET, PART I--

PDID_____ Study Arrest Date_____

Ethnicity_____ Age at Study Arrest_____

Drugs For Which Tested Positive at Study Arrest:

___Amph. ___Cocaine ___Meth. ___Opiates ___PCP

Self-reported Drug Use at Study Arrest? ___Yes ___No

Study Arrest Charge:_____

___Felony ___Misdemeanor

Number of Convictions before Study Arrest_____

Total Number of Arrests During CY 1985-86:_____

Total Number of Felony Arrests During CY 1985-86:_____

Zip Code at Study Arrest:_____

FOLLOWUP STUDY OF "HIDDEN" AND "NON-HIDDEN" DRUG ABUSERS IN THE DISTRICT OF COLUMBIA
--DATA SHEET, PART II--

PDID_____ Name:_____

For Last Arrest:

Date:_____

Charge:_____

Disposition/Sentence:_____

_____

Date of Disposition:_____

Drugs for Which Positive When Arrested:

___Amph. ___Coc. ___Meth. ___Opiates ___PCP

Address:_____

_____

Telephone:_____

Is Person Incarcerated Now? ___Yes ___No ___Don't Know

If so, where?_____

Prior Record As of July 1989:

Number of Prior Arrests:_____

Number of Prior Arrests for Drug Charges:_____

Number of Prior Arrests for Felonies:_____

Number of Prior Convictions:_____

Number of Prior Convictions for Drug Charges:_____

Number of Prior Convictions for Felonies:_____

Other Information That May Assist in Locating Person:_____

_____

_____

_____

Toborg Associates, Inc.
8401 Corporate Dr. Suite 420
Landover, MD
(301) 306-0900

Study Number_____

Interviewer_____

	DATE
Interview completed	___/___/___
Time started_____	
Time finished_____	
Interviewer edit 1	___/___/___
Office edit 1	___/___/___
Interviewer edit 2	___/___/___
Office edit 2	___/___/___
Data entered	___/___/___

Reason interview not completed_____

_____

****

READ TO THE RESPONDENT:

You have been selected to participate in the Social Science Research Project. The Project is concerned with issues about drug use, treatment programs, and the legal system. You were selected along with 200 others who had a court case in the District in 1985. Your participation is voluntary, and all your answers are strictly private and confidential. The information obtained from this interview is combined with the information from the interviews of other participants for statistical analysis.

The interview will take about 45 minutes. If there is a question you would rather not answer, tell the interviewer and he will skip over it. Upon completing the interview you will be paid $10 cash.

Study No.: _____

ASK RESPONDENT QA,
IF RESPONDENT'S ANSWER MATCHES QA CIRCLE YES AND START INTERVIEW.
IF RESPONDENT'S ANSWER DOES NOT MATCH QA ASK QB AND CHECK QC.
IF RESPONDENT'S ANSWER MATCHES QB AND QC IS RIGHT START INTERVIEW.
IF QB AND QC DO NOT MATCH STOP THE INTERVIEW.

A. Respondent's birthday_____ Yes No

B. Respondent's social security number_____ Yes No

C. Physical Description_____ Yes No

Study No.: _____

1. What is the highest grade you completed in school? (0-12) _____ _____

2. Did you graduate from high school or get a GED certificate? (CIRCLE ONE)
   - Neither 1
   - High school graduate 2
   - Currently in high school 3
   - GED 4

3. Since high school, how many years of education have you had? _____ _____

4. With whom are you currently living? (CIRCLE ALL THAT APPLY)
   - Alone 0
   - Wife 1
   - Girlfriend/boyfriend 2
   - Children 3
   - Parents 4
   - Other relatives 5
   - Friends 6
   - Brothers or sisters 7
   - Others ..... 8 (SPECIFY)_____

5. What is your current marital status? (READ CHOICES, CIRCLE ONE)
   - Single, never married 1
   - Married 2
   - Separated, divorced 3
   - Living with a boyfriend/girlfriend .. 4
   - Widowed 5

6. What is the total number of people you live with? _____ _____ (INCLUDE R)

7. What type of residence are you living in now?
   - An apartment you rent 1
   - Parents' residence 2
   - Brother's or sister's residence 3
   - Other relatives' residence 4
   - Friend's residence 5
   - A house or condo you own 6
   - A house you rent 7
   - Hotel/Rooming or boarding house .. 8
   - Hospital/Therapeutic community ... 9
   - Jail/Prison 10
   - Halfway house 11
   - Dormitory 12
   - No regular place 13
   - Other ..... 14 (SPECIFY)_____

8. How long have you lived here? _____ _____ (RECORD NUMBER OF MONTHS)

Study No.: _____

9. How many of the last four weeks have you worked for wages or a salary? _____Weeks
(IF 0 GO TO Q11)

A. What is your job? _____
(e.g., SALESPERSON, STOCK CLERK, FOOD SERVICE)

B. About how many hours per week did you work at that job? _____Hours

C. What was your weekly take-home pay? $_____/Wk

10. IF R IS WORKING, ASK:
Do you have any other sources of income? (READ CHOICES IN Q11, CIRCLE ALL THAT APPLY)

11. IF R IS NOT WORKING, ASK:
In the last four weeks how did you support yourself? (READ CHOICES, CIRCLE ALL THAT APPLY)

None 0
Welfare 1
Unemployment 2
Disability 3
Borrowing 4
Parents 5
Other relatives 6
Social institution 7
Dealing drugs 8
Savings 9
Prostitution/Pimping 10
Stealing 11
Miscellaneous legal 12
Miscellaneous illegal 13
Social security 14
Other ..... 15 (SPECIFY)_____

12. What is the total monthly income from these sources, not including any income from a job? $_____/Month

Study No.: _____

13. Now I would like to ask you some questions about your drug use experiences. At the end of the interview I will ask you for a urine specimen which I can pay you an additional $10 to provide. Your answers to these questions and the specimen are completely confidential.

1) Have you ever tried (DRUG NAME)?
2) How old were you when you first tried (DRUG NAME)?
3) During the last 30 days, how many days did you use (DRUG NAME)?
4) Have you ever used (DRUG NAME) nearly every day for at least 30 days?
5) How old were you when you first used (DRUG NAME) nearly everyday for at least 30 days?
6) How old were you the last time you used (DRUG NAME)?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code age DK as 99)

DRUG	1 EVER TRIED	2 AGE FIRST TRIED	3 USED LAST 30 DAYS	4 EVER USED EVERYDAY	5 AGE FIRST EVERYDAY	6 AGE LAST USE
a. Alcohol	_____	_____	_____	_____	_____	____
b. Marijuana	_____	_____	_____	_____	_____	____
c. PCP	_____	_____	_____	_____	_____	____
d. Crack	_____	_____	_____	_____	_____	____
e. Cocaine	_____	_____	_____	_____	_____	____
f. Heroin	_____	_____	_____	_____	_____	____
g. Opiates other than heroin	_____	_____	_____	_____	_____	____
h. Amphetamine	_____	_____	_____	_____	_____	____
i. Hallucinogens	_____	_____	_____	_____	_____	____
j. Barbiturates and tranquilizers	_____	_____	_____	_____	_____	____
k. Quaaludes	_____	_____	_____	_____	_____	____
l. Inhalants	_____	_____	_____	_____	_____	____
m. Any other drugs to get high	_____	_____	_____	_____	_____	____

(SPECIFY)_____

Study No.: _____

14A. IF R HAS NOT TRIED PCP GO TO Q19A.

B. IF R HAS "EVER TRIED" PCP ASK:

In your lifetime, how many different times have you used PCP? (CIRCLE ONE)

0 to 09	1
10 to 20	2
21 to 50	3
51 to 100	4
Over 100	5
DON'T KNOW	9
REFUSED	8

15. Have you ever had a bad reaction to PCP?

Yes	1	IF YES. ASK: How many times? _____
No	2	
DON'T KNOW	9	
REFUSED	8	

16. Have you ever been arrested or busted, for any reason, when you were high on PCP?

Yes	1
No	2
DON'T KNOW	9
REFUSED	8

17. Do you (or did you) usually do PCP with friends or by yourself?

With friends	1
By myself	2
DON'T KNOW	9
REFUSED	8

18. What is your preferred method for using PCP? (READ CHOICES, CIRCLE ONE)

With a cigarette	1	
With marijuana	2	
With crack or rock cocaine	3	
Swallow it	4	
Other	5	(SPECIFY)_____
DON'T KNOW	9	
REFUSED	8	

19A. IF R HAS NEVER USED CRACK GO TO Q24.

B. IF R HAS "EVER TRIED" CRACK ASK:

In your lifetime, how many different occasions have you used crack? (CIRCLE ONE)

0 to 09	1
10 to 20	2
21 to 50	3
51 to 100	4
Over 100	5
DON'T KNOW	9
REFUSED	8

Study No.: _____

20. Have you ever had a bad reaction to crack?
    - Yes ..... 1 IF YES, ASK: How many times? _____
    - No 2
    - DON'T KNOW 9
    - REFUSED 8

21. Have you ever been arrested or busted, for any reason, when you were high on crack?
    - Yes 1
    - No 2
    - DON'T KNOW 9
    - REFUSED 8

22. Do you (or did you) usually do crack with friends or by yourself?
    - With friends 1
    - By myself 2
    - DON'T KNOW 9
    - REFUSED 8

23. What drugs have you ever taken together with crack?

    _____

24. Have you ever injected drugs?
    - Yes 1
    - No ..... 2 (GO TO Q28)
    - REFUSED 8

25. Which of the following drugs have you injected?
    (READ CHOICES, CIRCLE ALL THAT APPLY)
    - Heroin 1
    - Cocaine 2
    - Amphetamine/speed 3
    - Other ..... 4 (SPECIFY)_____
    - DON'T KNOW 9
    - REFUSED 8

26. How many times have you shared a needle or works with someone?
    (READ CHOICES, CIRCLE ONE)
    - 0 to 50 times 1
    - 51 to 200 2
    - 201 to 1000 3
    - Over 1000 4
    - Too many to count 5
    - DON'T KNOW 9
    - REFUSED 8

27. How concerned are you that you might have been exposed to AIDS?
    (READ CHOICES, CIRCLE ONE)
    - Not concerned 1
    - Slightly concerned 2
    - Moderately concerned 3
    - Much concerned 4
    - Very much concerned 5
    - REFUSED 8

28. How many intravenous drug users do you know personally who have or had AIDS?_____

29. In the last 30 days did you take two or more drugs at the same time, including alcohol?
Yes ..... 1 IF YES, ASK:
What drugs?_____
No ..... 2 (GO TO Q31)
Not applicable 9
REFUSED 8

30. How many different times did you use 2 or more drugs together in the last 30 days, including alcohol? (READ CHOICES, CIRCLE ONE)
Once 1
2-3 times 2
4-5 times 3
6-9 times 4
10-19 times 5
20 or more 6
Not applicable 9
REFUSED 8

31. Of all the drugs you have tried which drug do you like the most?_____

Now I am going to ask you some questions about your health and treatment services.
32. In general, how is your current physical health? (READ CHOICES, CIRCLE ONE)
Poor 1
Fair 2
Good 3
Excellent 4

33. How concerned are you about your physical health? (READ CHOICES, CIRCLE ONE)
Not concerned 1
Slightly concerned 2
Moderately concerned 3
Much concerned 4
Very much concerned 5

34. In general, would you say your emotional state is: (READ CHOICES, CIRCLE ONE)
Poor 1
Fair 2
Good 3
Excellent 4

35. Have you ever felt you needed treatment for your drug use?
Yes ..... 1 IF YES ASK:
For what drug(s)?_____
No 2
REFUSED 8

Study No.: _____

36. Have you ever tried to get treatment for your drug use?

Yes ..... 1 IF YES ASK:
For what drug(s)?_____
How many times?_____

No ..... 2 IF R SAID YES TO Q35, ASK:
Why have you not tried to get treatment?

_____

REFUSED 8

37. Have you ever been in treatment for your drug use?

Yes ..... 1 IF YES ASK:
For what drug(s)?_____

How many times?_____

No ..... 2 IF R SAID NO TO Q35 GO TO Q44
IF R SAID YES TO Q35 ASK:
Why have you not been in treatment?

_____(GO TO Q44)

REFUSED ..... 8 (GO TO Q44)

38. What are the starting and ending dates of the last time you were in treatment?

A. Start date _____/_____ End date_____/_____
MO YR MO YR

B. For what drug(s)_____

39. Have you ever been placed in a treatment program by the court or as a condition of probation or parole?

Yes ..... 1 IF YES, ASK:
How many times _____
No 2
REFUSED 8

40. Was the last treatment you received helpful to you in controlling your drug use?

Yes ..... 1 IF YES, ASK Q41
No ..... 2 IF NO, GO TO Q42
DON'T KNOW ..... 9 (GO TO Q43)
REFUSED ..... 8 (GO TO Q43)

41. How did the last treatment you received help you control your drug use?

_____ (GO TO Q43)

42. Why did the last treatment you received not help you control your drug use?

_____ (GO TO Q43)

43. How would you improve the quality of the treatment you have received?

_____

Study No.: _____

44. Now I would like to ask you some confidential questions about activities that you may have done in the past that could have gotten you into trouble.

1. Have you ever (READ ITEM)?
2. How old were you the first time you (READ ITEM)?
3. Have you ever been arrested or busted because you (READ ITEM)?
4. Were you ever high when you (READ ITEM)?
5. Have you ever (READ ITEM) to get drugs or to get money to buy drugs?
6. Have you (READ ITEM) in the last 12 months?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code for age DK is 99)

	1 EVER	2 AGE	3 ARREST	4 HIGH	5 DRUGS	6 MONTH
a. Ran away from home and stayed away for at least 7 days?	____	____	____	____	____	____
b. Been expelled or suspended from school?	____	____	____	____	____	____
c. Shoplifted or took something that belonged to someone else?	____	____	____	____	____	____
d. Taken a car or motor vehicle without the owner's permission?	____	____	____	____	____	____
e. Driven a car or motor vehicle while under the influence of alcohol or drugs?	____	____	____	____	____	____
f. Broken into or entered a home, apartment or building when you were not supposed to be there, but stole nothing?	____	____	____	____	____	____
g. Broken into a place or a car and taken something from it?	____	____	____	____	____	____
h. Destroyed, damaged, or marked up any property, other than your own family's?	____	____	____	____	____	____
i. Bought, received or sold anything that you knew was stolen?	____	____	____	____	____	____
j. Sold drugs to another person, not including liquor, wine, or beer?	____	____	____	____	____	____
k. Used force or the threat of force to take something from another person, for example, money, drugs or something belonging to this person?	____	____	____	____	____	____

Study No.: _____

1. Have you ever (READ ITEM)?
2. How old were you the first time you (READ ITEM)?
3. Have you ever been arrested or busted because you (READ ITEM)?
4. Were you ever high when you (READ ITEM)?
5. Have you ever (READ ITEM) to get drugs or to get money to buy drugs?
6. Have you (READ ITEM) in the last 12 months?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code for age 99)

	1 EVER	2 AGE	3 ARREST	4 HIGH	5 DRUGS	6 MONTH
l. Assaulted someone sexually?	____	____	____	____	____	____
m. Pulled a weapon to show you meant business or threatened someone with a weapon?	____	____	____	____	____	____
n. Shot, or stabbed someone?	____	____	____	____	____	____
o. Been part of a group that physically attacked or threatened another person?	____	____	____	____	____	____
p. Carried a concealed weapon such as a gun or knife?	____	____	____	____	____	____
q. By yourself, fought, beaten-up, or physically attacked another person so that the person probably needed a doctor?	____	____	____	____	____	____
r. Tried to cash a check that belonged to someone else, without the consent of that person?	____	____	____	____	____	____

45. What is your current legal status?

No legal supervision or case pending	1
On probation	2
On parole	3
Case is pending	4
Incarcerated	5

46. As I mentioned earlier, the last thing I need to ask of you is for a urine specimen. It is completely confidential and I can pay $10 cash in addition to the $10 for the interview.

That is the end of the interview. Thank you for taking the time to answer these questions, hopefully you found the survey interesting. Finally, someone from Toburg Associates may be in touch to ask how well you thought I conducted this interview.

Study No.: _____

INTERVIEWER RATINGS

1. Did it appear that R was under the influence of drugs or alcohol?
   - Yes, strongly 1
   - Yes, moderately 2
   - Yes, slightly 3
   - No 4

2. How honest do you feel R's answers were?
   - Extremely honest 1
   - Honest 2
   - Somewhat honest 3
   - Not very honest 4
   - Difficult to tell 5

3. Interest of R during the interview?
   - Very interested 1
   - Somewhat interested 2
   - Uninterested 3

4. How cooperative would you say R was?
   - Extremely cooperative 1
   - Cooperative 2
   - Somewhat cooperative 3
   - Not very cooperative 4

5. Did R have trouble <u>understanding</u> any particular questions?
   - Yes 1
   - No . . . . . 2 (GO TO Q7)

6. Which questions did R have trouble understanding?

   _____

7. Did R have trouble answering any questions?
   - Yes 1
   - No . . . . . 2 (GO TO Q9)

8. Which questions did R have trouble answering?

   _____

9. Did R seem convinced by your assurances of the confidentiality of his replies?
   - Yes 1
   - No 2

10. Specifically, do you think R answered questions about drug use honestly?
    - Yes 1
    - No 2

11. Specifically, do you think R answered questions about criminal activity honestly?
    - Yes 1
    - No 2

12. Was a urine sample provided?
    - Yes 1
    - No 2
    - Yes, but it looks suspicious 3

APPENDIX C

DATA FROM COMPLETED INTERVIEWS

NOTE: "H" refers to hidden drug abusers, and "K" refers to known drug abusers (i.e., to those who are "non-hidden").

Study No.: _____

1. What is the highest grade you completed in school? (0-12) Median: 12(H) 12(K)

2. Did you graduate from high school or get a GED certificate? (CIRCLE ONE)

Neither	1	7(H)	2(K)
High school graduate	2	8(H)	6(K)
Currently in high school	3	0(H)	1(K)
GED	4	2(H)	4(K)

3. Since high school, how many years of education have you had? Median: 0(H) 0(K)

4. With whom are you currently living? (CIRCLE ALL THAT APPLY) N/A

Alone	0
Wife	1
Girlfriend/boyfriend	2
Children	3
Parents	4
Other relatives	5
Friends	6
Brothers or sisters	7
Others	8 (SPECIFY)_____

5. What is your current marital status? (READ CHOICES, CIRCLE ONE)

Single, never married	1	11(H)	11(K)
Married	2	2(H)	1(K)
Separated, divorced	3	2(H)	0(K)
Living with a boyfriend/girlfriend	4	1(H)	0(K)
Widowed	5	0(H)	0(K)
	9	1(H)	1(K)

6. What is the total number of people you live with? _____ _____ (INCLUDE R) N/A

7. What type of residence are you living in now? N/A

An apartment you rent	1
Parents' residence	2
Brother's or sister's residence	3
Other relatives' residence	4
Friend's residence	5
A house or condo you own	6
A house you rent	7
Hotel/Rooming or boarding house	8
Hospital/Therapeutic community	9
Jail/Prison	10
Halfway house	11
Dormitory	12
No regular place	13
Other	14 (SPECIFY)_____

8. How long have you lived here? _____ _____ (RECORD NUMBER OF MONTHS) N/A

Study No.: _____

9. How many of the last four weeks have you worked for wages or a salary? _____Weeks (IF 0 GO TO Q11) N/A

A. What is your job? _____
(e.g., SALESPERSON, STOCK CLERK, FOOD SERVICE)

B. About how many hours per week did you work at that job? _____Hours

C. What was your weekly take-home pay? $_____/Wk

10. IF R IS WORKING, ASK: N/A
Do you have any other sources of income? (READ CHOICES IN Q11, CIRCLE ALL THAT APPLY)

11. IF R IS NOT WORKING, ASK:
In the last four weeks how did you support yourself? (READ CHOICES, CIRCLE ALL THAT APPLY) N/A

None 0
Welfare 1
Unemployment 2
Disability 3
Borrowing 4
Parents 5
Other relatives 6
Social institution 7
Dealing drugs 8
Savings 9
Prostitution/Pimping 10
Stealing 11
Miscellaneous legal 12
Miscellaneous illegal 13
Social security 14
Other . . . . . 15 (SPECIFY)_____

12. What is the total monthly income from these sources, not including any income from a job? $_____/Month N/A

Study No.: _____

13. Now I would like to ask you some questions about your drug use experiences. At the end of the interview I will ask you for a urine specimen which I can pay you an additional $10 to provide. Your answers to these questions and the specimen are completely confidential.

1) Have you ever tried (DRUG NAME)?
2) How old were you when you first tried (DRUG NAME)?
3) During the last 30 days, how many days did you use (DRUG NAME)?
4) Have you ever used (DRUG NAME) nearly every day for at least 30 days?
5) How old were you when you first used (DRUG NAME) nearly everyday for at least 30 days?
6) How old were you the last time you used (DRUG NAME)?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code age DK as 99)

DRUG	1 EVER TRIED H	1 EVER TRIED K	2 AGE FIRST TRIED*	3 USED LAST 30 DAYS	4 EVER USED EVERYDAY H	4 EVER USED EVERYDAY K	5 AGE FIRST EVERYDAY*	6 AGE LAST USE*
a. Alcohol	15	11		N/A	7	4		
b. Marijuana	15	12			10	8		
c. PCP	14	10			3	6		
d. Crack	6	7			4	5		
e. Cocaine	11	10			6	6		
f. Heroin	3	7			1	5		
g. Opiates other than heroin	1	4			0	3		
h. Amphetamine	2	4			0	1		
i. Hallucinogens	1	2			0	1		
j. Barbiturates and tranquilizers	1	3			0	2		
k. Quaaludes	1	3			0	0		
l. Inhalants	1	1			0	0		
m. Any other drugs to get high	0	1			0	0		

(SPECIFY)_____

*Available from authors.

Study No.: _____

14A. IF R HAS NOT TRIED PCP GO TO Q19A.

B. IF R HAS "EVER TRIED" PCP ASK:

In your lifetime, how many different times have you used PCP? (CIRCLE ONE)

0 to 09	1	1(H)	3(K)
10 to 20	2	1(H)	1(K)
21 to 50	3	5(H)	1(K)
51 to 100	4	2(H)	2(K)
Over 100	5	4(H)	3(K)
DON'T KNOW	9	1(H)	0(K)
REFUSED	8	0(H)	0(K)

15. Have you ever had a bad reaction to PCP?

Yes	1	IF YES. ASK: How many times? Yes: 9(H) and 6(K) Median: 1(H); 1(K)
No	2	
DON'T KNOW	9	
REFUSED	8	

16. Have you ever been arrested or busted, for any reason, when you were high on PCP?

Yes	1	-- 5(H) and 3(K)
No	2	
DON'T KNOW	9	
REFUSED	8	

17. Do you (or did you) usually do PCP with friends or by yourself?

With friends	1	12(H)	8(K)
By myself	2	2(H)	2(K)
DON'T KNOW	9	0(H)	0(K)
REFUSED	8	0(H)	0(K)

18. What is your preferred method for using PCP? (READ CHOICES, CIRCLE ONE)

With a cigarette	1	1(H)	2(K)
With marijuana	2	10(H)	8(K)
With crack or rock cocaine	3	0(H)	0(K)
Swallow it	4	3(H)	0(K)
Other	5	(SPECIFY)_____ 0(H)	0(K)
DON'T KNOW	9	0(H)	0(K)
REFUSED	8	0(H)	0(K)

19A. IF R HAS NEVER USED CRACK GO TO Q24.

B. IF R HAS "EVER TRIED" CRACK ASK:

In your lifetime, how many different occasions have you used crack? (CIRCLE ONE)

0 to 09	1	0(H)	2(K)
10 to 20	2	0(H)	1(K)
21 to 50	3	2(H)	1(K)
51 to 100	4	1(H)	0(K)
Over 100	5	3(H)	3(K)
DON'T KNOW	9	0(H)	0(K)
REFUSED	8	0(H)	0(K)

Study No.: _____

20. Have you ever had a bad reaction to crack?
    Yes ..... 1 IF YES, ASK: How many times? Yes: 1(H) and 2(K) H: 4 times K: 3 times; "many"
    No 2
    DON'T KNOW 9
    REFUSED 8

21. Have you ever been arrested or busted, for any reason, when you were high on crack?
    Yes ..... 1 -- 2(H) 2(K)
    No ..... 2 -- 4(H) 5(K)
    DON'T KNOW 9
    REFUSED 8

22. Do you (or did you) usually do crack with friends or by yourself?
    With friends ..... 1 -- 5(H) 5(K)
    By myself ..... 2 -- 1(H) 2(K)
    DON'T KNOW 9
    REFUSED 8

23. What drugs have you ever taken together with crack?
    Miscellaneous combinations of alcohol, marijuana, PCP and heroin.

24. Have you ever injected drugs?
    Yes ..... 1 -- 2(H) and 5(K)
    No ..... 2 (GO TO Q28)
    REFUSED 8

25. Which of the following drugs have you injected?
    (READ CHOICES, CIRCLE ALL THAT APPLY)
    Heroin ..... 1 -- 2(H) 5(K)
    Cocaine ..... 2 -- 2(H) 4(K)
    Amphetamine/speed ..... 3 -- 1(H) 2(K)
    Other ..... 4 (SPECIFY)_____
    DON'T KNOW 9
    REFUSED 8

26. How many times have you shared a needle or works with someone?
    (READ CHOICES, CIRCLE ONE)
    0 to 50 times ..... 1 -- 2(H) 5(K)
    51 to 200 2
    201 to 1000 3
    Over 1000 4
    Too many to count 5
    DON'T KNOW 9
    REFUSED 8

27. How concerned are you that you might have been exposed to AIDS?
    (READ CHOICES, CIRCLE ONE)
    Not concerned ..... 1 -- 0(H) 1(K)
    Slightly concerned ..... 2 -- 0(H) 0(K)
    Moderately concerned ..... 3 -- 0(H) 1(K)
    Much concerned ..... 4 -- 0(H) 1(K)
    Very much concerned ..... 5 -- 2(H) 2(K)
    REFUSED ..... 8 -- 0(H) 0(K)

28. How many intravenous drug users do you know personally who have or had AIDS?_____
    Median: 0(H) and 0(K)

Study No.: _____

29. In the last 30 days did you take two or more drugs at the same time, including alcohol? N/A

Yes ..... 1 IF YES, ASK:
What drugs?_____
No ..... 2 (GO TO Q31)
Not applicable 9
REFUSED 8

30. How many different times did you use 2 or more drugs together in the last 30 days, including alcohol? (READ CHOICES, CIRCLE ONE) N/A

Once 1
2-3 times 2
4-5 times 3
6-9 times 4
10-19 times 5
20 or more 6
Not applicable 9
REFUSED 8

31. Of all the drugs you have tried which drug do you like the most? Most common response: cocaine (H); cocaine (K)

Now I am going to ask you some questions about your health and treatment services.

32. In general, how is your current physical health? (READ CHOICES, CIRCLE ONE)

Poor	1	0(H)	0(K)
Fair	2	2(H)	2(K)
Good	3	6(H)	3(K)
Excellent	4	9(H)	8(K)

33. How concerned are you about your physical health? (READ CHOICES, CIRCLE ONE)

Not concerned	1	0(H)	0(K)
Slightly concerned	2	1(H)	0(K)
Moderately concerned	3	1(H)	2(K)
Much concerned	4	0(H)	1(K)
Very much concerned	5	15(H)	10(K)

34. In general, would you say your emotional state is: (READ CHOICES, CIRCLE ONE)

Poor	1	0(H)	0(K)
Fair	2	2(H)	2(K)
Good	3	5(H)	4(K)
Excellent	4	10(H)	7(K)

35. Have you ever felt you needed treatment for your drug use?

Yes ..... 1 IF YES ASK: Yes: 11(H) and 9(K)
For what drug(s)? Most common response:
cocaine (H); heroin (K)
No 2
REFUSED 8

Study No.: _____

36. Have you ever tried to get treatment for your drug use?

Yes ..... 1 IF YES ASK: Yes: 9 (H) and 11(K)
For what drug(s)?_____
How many times?_____

No ..... 2 IF R SAID YES TO Q35, ASK:
Why have you not tried to get treatment?

_____

REFUSED 8

37. Have you ever been in treatment for your drug use?

Yes ..... 1 IF YES ASK: Yes: 9(H) and 11(K)
For what drug(s)?_____

How many times?_____

No ..... 2 IF R SAID NO TO Q35 GO TO Q44
IF R SAID YES TO Q35 ASK:
Why have you not been in treatment?

_____(GO TO Q44)

REFUSED ..... 8 (GO TO Q44)

38. What are the starting and ending dates of the last time you were in treatment?

A. Start date _____/_____ End date_____/_____
MO YR MO YR

B. For what drug(s)_____

39. Have you ever been placed in a treatment program by the court or as a condition of probation or parole?

Yes ..... 1 IF YES, ASK: Yes: 8(H) and 9(K)
How many times _____

No 2
REFUSED 8

40. Was the last treatment you received helpful to you in controlling your drug use?

Yes	1	IF YES, ASK Q41--	6(H)	6(K)
No	2	IF NO, GO TO Q42--	3(H)	4(K)
DON'T KNOW	9	(GO TO Q43) --	0(H)	1(K)
REFUSED	8	(GO TO Q43) --	0(H)	0(K)

41. How did the last treatment you received help you control your drug use?

_____ (GO TO Q43)

42. Why did the last treatment you received not help you control your drug use?

_____ (GO TO Q43)

43. How would you improve the quality of the treatment you have received?

_____

Study No.: _____

44. Now I would like to ask you some confidential questions about activities that you may have done in the past that could have gotten you into trouble.

1. Have you ever (READ ITEM)?
2. How old were you the first time you (READ ITEM)?
3. Have you ever been arrested or busted because you (READ ITEM)?
4. Were you ever high when you (READ ITEM)?
5. Have you ever (READ ITEM) to get drugs or to get money to buy drugs?
6. Have you (READ ITEM) in the last 12 months?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code for age DK is 99)

	1 EVER H	1 EVER K	2 AGE*	3 ARREST H	3 ARREST K	4 HIGH H	4 HIGH K	5 DRUGS H	5 DRUGS K	6 MONTH H	6 MONTH K
				(Number of "yes" answers-------)							
a. Ran away from home and stayed away for at least 7 days?	5	3	____	0	0	0	1	1	1	0	0
b. Been expelled or suspended from school?	10	10	____	2	0	3	2	1	2	0	0
c. Shoplifted or took something that belonged to someone else?	5	8	____	2	5	1	4	2	4	0	2
d. Taken a car or motor vehicle without the owner's permission?	4	1	____	3	1	3	0	3	0	0	0
e. Driven a car or motor vehicle while under the influence of alcohol or drugs?	10	9	____	2	1	10	9	6	7	0	1
f. Broken into or entered a home, apartment or building when you were not supposed to be there, but stole nothing?	3	4	____	2	2	2	1	2	2	0	1
g. Broken into a place or a car and taken something from it?	3	4	____	2	3	2	3	2	3	0	0
h. Destroyed, damaged, or marked up any property, other than your own family's?	6	4	____	5	2	3	3	0	3	0	0
i. Bought, received or sold anything that you knew was stolen?	9	10	____	1	1	3	3	2	2	0	2
j. Sold drugs to another person, not including liquor, wine, or beer?	12	11	____	11	10	8	8	11	7	0	5
k. Used force or the threat of force to take something from another person, for example, money, drugs or something belonging to this person?	7	9	____	4	2	4	5	5	6	0	1

*Available from authors.

Study No.: _____

1. Have you ever (READ ITEM)?
2. How old were you the first time you (READ ITEM)?
3. Have you ever been arrested or busted because you (READ ITEM)?
4. Were you ever high when you (READ ITEM)?
5. Have you ever (READ ITEM) to get drugs or to get money to buy drugs?
6. Have you (READ ITEM) in the last 12 months?

CODES
1--Yes
2--No
8--Refused (Code for age refusal is 98)
9--Not Applicable (Code for age 99)

	1 EVER	2 AGE*	3 ARREST	4 HIGH	5 DRUGS	6 MONTH
			(Number of "yes" answers-------)			
	H K		H K	H K	H K	H K
l. Assaulted someone sexually?	1 0	_____	1 0	1 0	0 0	0 0
m. Pulled a weapon to show you meant business or threatened someone with a weapon?	6 6	_____	3 2	4 2	4 0	0 0
n. Shot, or stabbed someone?	5 4	_____	2 3	2 1	0 0	0 0
o. Been part of a group that physically attacked or threatened another person?	4 4	_____	1 1	3 1	1 1	0 0
p. Carried a concealed weapon such as a gun or knife?	11 10	_____	3 3	5 4	5 3	0 1
q. By yourself, fought, beaten-up, or physically attacked another person so that the person probably needed a doctor?	7 4	_____	3 2	2 2	1 1	0 1
r. Tried to cash a check that belonged to someone else, without the consent of that person?	2 4	_____	1 0	0 2	0 2	1 0

*Available from authors.

45. What is your current legal status?

No legal supervision or case pending	1	-- 1(H) 1(K)
On probation	2	-- 1(H) 0(K)
On parole	3	-- 0(H) 0(K)
Case is pending	4	-- 0(H) 0(K)
Incarcerated	5	- 15(H) 12(K)

46. As I mentioned earlier, the last thing I need to ask of you is for a urine specimen. It is completely confidential and I can pay $10 cash in addition to the $10 for the interview.

That is the end of the interview. Thank you for taking the time to answer these questions, hopefully you found the survey interesting. Finally, someone from Toburg Associates may be in touch to ask how well you thought I conducted this interview.

Study No.: _____

INTERVIEWER RATINGS

1. Did it appear that R was under the influence of drugs or alcohol?

Yes, strongly	1 --	0(H)	0(K)
Yes, moderately	2 --	0(H)	2(K)
Yes, slightly	3 --	1(H)	0(K)
No	4 --	16(H)	11(K)

2. How honest do you feel R's answers were?

Extremely honest	1 --	2(H)	1(K)
Honest	2 --	1(H)	3(K)
Somewhat honest	3 --	10(H)	8(K)
Not very honest	4 --	3(H)	0(K)
Difficult to tell	5 --	1(H)	1(K)

3. Interest of R during the interview?

Very interested	1 --	5(H)	3(K)
Somewhat interested	2 --	11(H)	10(K)
Uninterested	3 --	0(H)	0(K)
	9 --	1(H)	0(K)

4. How cooperative would you say R was?

Extremely cooperative	1 --	4(H)	4(K)
Cooperative	2 --	10(H)	8(K)
Somewhat cooperative	3 --	3(H)	1(K)
Not very cooperative	4 --	0(H)	0(K)

5. Did R have trouble <u>understanding</u> any particular questions? No.
   - Yes 1
   - No ..... 2 (GO TO Q7)

6. Which questions did R have trouble understanding? N/A

_____

7. Did R have trouble answering any questions? No.
   - Yes 1
   - No ..... 2 (GO TO Q9)

8. Which questions did R have trouble answering? N/A

_____

9. Did R seem convinced by your assurances of the confidentiality of his replies?

Yes	1 --	15(H)	10(K)
No	2 --	2(H)	3(K)

10. Specifically, do you think R answered questions about drug use honestly?

Yes	1 --	12(H)	10(K)
No	2 --	5(H)	3(K)

11. Specifically, do you think R answered questions about criminal activity honestly?

Yes	1 --	10(H)	5(K)
No	2 --	7(H)	8(K)

12. Was a urine sample provided? N/A
    - Yes 1
    - No 2
    - Yes, but it looks suspicious 3