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Estimates of Drug Use in Intensive Supervision Probationers: Results from a Pilot Study

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Introduction

Background

This article presents the findings from a pilot study designed to estimate the prevalence of illicit drug use in probationers assigned to the New York City Intensive Supervision Probation Program (ISP) in Brooklyn. Our prior research on persons processed in Manhattan Central Booking has documented a high level of recent drug use in arrestees (Wish et al. 1986). Over 55 percent of male and 60 percent of female arrestees (in 1984-85) were found to have urinalysis test positive for one or more drugs [opiates (heroin), cocaine, PCP, or methadone]. And arrestees positive for these drugs had more rearrests and poorer pretrial behavior than arrestees who had clean urines. In fact, arrestees detected to be drug users *at arrest* and later assigned to probation had more postsentence arrests than nonusers assigned to probation. It seemed probable that a urine specimen obtained after the person had been assigned to probation would serve as an even better indicator of drug use and criminal behavior while on probation.

At about the time that we were completing our study of arrestees, the project director of the ISP program in New York City notified us of his interest in pursuing some form of urine testing of ISP probationers. His staff members suspected that many of their probationers were abusing illicit drugs and believed that on-site urine testing could be useful for identifying drug-involved probationers. The urine test results were seen as a way to "break the ice" with resistant probationers about their drug abuse so that the probation officer could initiate discussions regarding treatment and rehabilitation. Probationers who failed treatment repeatedly and continued to abuse drugs might be referred back to the court for further action. Urine testing seemed especially feasible for adoption in the ISP program because the caseloads are kept small enough to enable the probation officer to closely monitor each probationer's progress. Based upon our mutual interest in this topic, and with the support of Thomas L. Jacobs, the Commissioner of Probation, the researchers and the ISP staff agreed to cooperate in conducting the pilot study. It was agreed that the information obtained would be retained by the researchers and that no individually identifiable results would be reported to the department.

Objectives

The pilot study had several objectives. First, it would permit us to estimate the level and type of drug use that one would expect to find if an on-site testing program were subsequently established. The information from the pilot study could be used to plan for the number of staff members and resources required to institute a program. The study would also enable us to learn whether urine testing of probationers would result in the identification of more

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drug-involved probationers than were already known to the probation officers through their usual sources of information. Finally, all of the information obtained from the study could be used by the Department of Probation to document the need for urine testing and to garner the support of the appropriate funding agencies.

Second, the pilot study would enable us to examine whether the recent increase in cocaine use reported in New York City was reflected in the offender population. In the 2 years since we had obtained urine specimens from almost 5,000 arrestees processed in Manhattan Central Booking in 1984, a new form of processed cocaine, called crack, became widely available in New York City. Crack can be smoked to obtain a short-acting intense high. It is considered to be highly dependence-producing. Even before crack became available in New York, cocaine was the most prevalent drug detected in the arrestees tested in 1984 (found in 42 percent). The pilot study could provide us with estimates of how much more prevalent cocaine may have become in the offender population. We included questions in the pilot study that focused upon the probationer's use of crack.

A third objective of the pilot study was to determine whether it was feasible to administer a computerized interview with probationers. We thought that if it worked well, computerized interviews might eventually be used by the criminal justice system to increase efficiency and reduce the cost of information collection and storage. During the past few years telephone surveys have been increasingly likely to be conducted using a computerized interview. The interviewer reads the interview questions from a computer terminal and enters the respondent's answers directly into the computer. There are several advantages to this technology. The computer automatically follows the programmed logic to select questions in the specified order. If a subsequent question depends on the response to a prior question, the computer proceeds automatically to the correct question. This prevents a common source of interviewer error. The computer can also be programmed to reject answers that are out of a specified range and to stop the interview if a required response is missing. Finally, because the interviewer is entering the information directly into the computer, there are no additional data preparation or data entry costs. Computerized interviews also save time because the information can be analyzed immediately to provide preliminary trend information. Of particular interest to us was the possibility that computerized interviews may increase the interest of respondents in the interview. As part of this pilot study, a generalizable computerized interview program was purchased (Ci2), along with a portable microcomputer. The next section describes the procedures used in the pilot study.

Procedure

Brooklyn ISP Program

Although there are ISP programs in all five boroughs of New York, we chose to conduct our study in Brooklyn because it has the largest program, with almost 250 probationers. Regardless of where in New York a person is arrested, persons sentenced to probation are assigned to the probation office in the borough where they live. Thus ISP probationers in the Brooklyn program would not be limited to persons arrested in Brooklyn. We left open the possibility of collecting data from another borough, based upon the results from Brooklyn. (The findings from Brooklyn were so unequivocal that we decided not to enter another borough.)

In 1978, the New York State Legislature funded the ISP program for New York City and 25 counties (The Intensive Supervision Program: A Process Evaluation 1982). The New York State Division of Probation and Alternative Services continues to administer the ISP programs. The New York City Department of Probation operates the program in accordance with state guidelines on a contractual basis. Its purpose is to use a planned intervention strategy in order to ensure that those most likely to fail on probation successfully complete their sentences. With few exceptions, persons convicted of a misdemeanor or a felony offense are investigated by the Investigation Branch of the Department of Probation. A presentence investigation report (PSI), containing background information that may be pertinent to the judge in passing sentence and a sentence recommendation, is prepared for the court. ISP staff members review all recommendations to make a determination if the person is eligible for ISP. The level of supervision is assigned based on an eight-item risk scale, specified below:

Item	Points
Incarcerated while on prior probation or on parole	24
Prior conviction/adjudication for robbery	20
An attitude that rationalizes behavior, not motivated to change, or is dependent or unwilling to accept responsibility	19
19-years-old or less at time of first conviction or adjudication	12
Currently living in situation judged to be unfavorable	8
Prior arrest within 5 years of current offense	6
One or more address changes in year prior to current offense	6
Neither currently employed or in school full time	4
TOTAL POSSIBLE POINTS:	99

Persons with a total score above 51 are eligible for intensive supervision. ISP accepts into the program persons who have been sentenced to felony probation and who are above the cut-off on the point scale,

although the program can reject a qualifying person if the caseload is too heavy. In addition, up to 25 percent of the ISP probationers are ASP cases (alternative to state prison). These are persons the judge has ordered into the ISP program in lieu of a prison sentence. (Plans are currently under way to expand the ISP program to include a greater number of ASP cases.)

Data Collection

Interviewers. Narcotic and Drug Research, Inc. (NDRI) research staff members were assigned to conduct the interviews. Almost all interviews were administered by a graduate of a forensic sciences program with prior computer and social science training. This person was at ease talking with probationers and received special training in administering the interview and the informed consent procedures. Several interviews with female probationers were conducted by NDRI female research staff members with extensive experience interviewing arrestees and obtaining urine specimens.

Orientation of ISP staff. Several days before beginning data collection, the researchers conducted a meeting with the Brooklyn ISP staff. The purposes of the research were reviewed as well as the general procedures. The probation officers were asked to bring each probationer to the research assistant at the end of his or her scheduled appointment. The probation officer was asked not to discuss with the probationer the nature of the research or whether the probationer participated. Most of the ISP staff members were enthusiastic about the research because many of them remembered how useful urine testing had been when it was more available to them in the 1970's. At the end of the meeting the researchers handed out a rating form to be completed by each probation officer and turned in before the study began. This form asked the probation officer to indicate for each of his or her assigned probationers whether the person had a history of drug or alcohol use. They were instructed not to guess, but to indicate use only if they had some source of information regarding drug involvement. This information would be compared later with the urine test results to ascertain whether the testing would identify more drug users than were already known to the probation officers from the usual sources.

Administration of interview. The NDRI research assistant was stationed on-site over a 5-week period between May and July. Hours were flexible and were varied to reflect probationers' appointments. At the end of the probationer's regular weekly meeting with his or her probation officer, the probation officer escorted the probationer to the private research area assigned to the research assistant. The probation officer was instructed to tell the probationer that the ISP program was cooperating with an independent research organization to conduct a study and that he or she was escorting the probationer to a room to meet the research assistant. No additional information regarding the nature of the research was to be discussed by the probation officer. After the probation officer introduced the probationer to the research assistant, the research assistant administered the informed consent procedures. The research assistant informed each probationer of the following:

> NDRI is an independent nonprofit research firm that is conducting a research project to assess the number of probationers who are using drugs. He or she is being asked to participate in a short interview about prior drug use and treatment. The interview is confidential and only an ID number, not the person's name, will appear on the interview form. The results will be combined with those from other probationers to prepare an overall report of the findings. The researchers may compare the information provided to other information in the person's probation or criminal records. All information collected by the researchers is protected from subpoena and use in civil or criminal court proceedings by a Federal Certificate of Confidentiality. Participation is voluntary and a refusal to participate or answer certain questions will not be reported to the probation officer and will not affect his or her case.

If the probationer agreed to the interview, the research assistant asked him or her to sign the consent form indicating consent to the interview and proceeded to administer the interview. The research assistant administered the computerized interview using a portable microcomputer. If the probationer chose not to participate, the research assistant terminated the meeting and left the office.

Obtaining a urine specimen. After the interview was completed, the research assistant explained the need for a urine specimen that would be sent to a laboratory for analysis. The probationer was told that providing the urine specimen was voluntary, that the specimen would not be labeled with the probationer's name, and that the probation officer and the Department of Probation would not receive the person's test results. The research assistant also indicated that the results of the test or the probationer's refusal to provide a specimen would in no way affect his or her status on probation. If the probationer agreed to provide a specimen, the research assistant escorted the probationer to the restroom to collect a urine specimen. The containers holding the urine were labeled only with an ID number. After obtaining the specimen, the research assistant recorded that a specimen had been obtained and terminated the meeting with the probationer. If the probationer refused or could not provide a specimen, the research session was terminated.

Completed consent forms as well as diskettes containing the completed interviews were returned to NDRI research offices for safe storage and processing. The urine specimens were picked up weekly and delivered to the New York State Testing Laboratory

in Brooklyn. All specimens were tested for opiates, cocaine, PCP, methadone, and marijuana using the Emit system. A thin layer chromatography (TLC) general screen for approximately 15 substances was also conducted, although our prior research has shown lesser sensitivity of the TLC screen for detecting recent use of street quality illicit drugs (Wish et al. 1985).

Findings

The findings are organized into several sections, by topic. First, we shall describe the percentage of all ISP probationers in Brooklyn who were interviewed and who provided a urine specimen, in order to provide an indication of to whom our findings apply. We will then compare interviewed persons who provided a specimen with those who did not, with respect to a variety of background characteristics, conviction charge, and self-reports of drug use. If persons who provided a specimen differ systematically from those who did not, our estimates of drug use from the urinalyses may be applicable primarily to the types of persons who provided specimens. The next section will present the estimates of drug use based upon the urinalyses, compared with the estimates based upon the same person's self-reports. In the following section we will compare the estimates of drug use based upon three sources: probationers' self-reports, the urinalyses, and their probation officers' ratings. Next, in order to gain an indication of whether drug use patterns changed in the 2 years since we last studied arrestees, we will compare the estimates of drug use obtained from young arrestees (age 16 to 20) in 1984 who were eventually sentenced to probation with the estimates obtained from similarly aged probationers in the pilot study. We will conclude with a discussion of the use of the computerized interview.

1. Sample characteristics and response rates

At the beginning of the study, we obtained a list of the probationers assigned to each of the 11 probation officers. As the study progressed, this list was updated to reflect changes in the caseload. There were 160 probationers active in the Brooklyn ISP program while we were there. This does not include 121 persons assigned to the program who were not available, however, because of abscondence, return to jail, pending violation, transfer, or hospitalization. Table 1 shows how many of the 160 active probationers participated in the study. The research assistant met with 117 or 72 percent of the 160 active cases. The research assistant was available at all of the primary reporting times and was stationed in a location where it was possible to verify that probation officers were bringing their cases to him after their appointments. By the end of the study, it became clear that all of the regular reporters had been approached by the research assistant. The 43 persons on the active caseload who were not approached during the study were primarily persons who repeatedly missed their appointments, many of whom presumably would be reclassified as absconders.

TABLE 1. PARTICIPATION OF ISP PROBATIONERS IN THE PILOT STUDY

Active caseload	160	
Of the 160 active, total approached for interview	117	72%
Of 117 persons approached, completed interview	106*	91%
Of 106 persons interviewed, provided specimen	75	71%

*Excludes 2 persons erroneously terminated by interviewer.

The research assistant completed an interview with 106 persons, 91 percent of all of the 117 probationers brought to him. (The percentage of persons agreeing to an interview would be 92 percent had the interviewer not erroneously terminated the interviews with two persons whom he believed were too young for the study.) Of these 106, 71 percent provided a urine specimen for analysis. The interview compliance rates are close to those found in our earlier study of arrestees (95 percent of the arrestees agreed to be interviewed). However, the percentage of interviewees who provided a urine specimen is lower than the 84 percent obtained with the arrestees. One likely reason for the lower compliance rates may be the probationers' perceived risk of being violated if they were detected to be using illicit drugs, in spite of our statements assuring each person of the confidentiality of the research information. **Probation officers have the right to order urine specimens from probationers. These results suggest that if an operational urine testing program were to be set up by the Department of Probation, it should not rely on voluntary submission of urine specimens.**

Although we successfully interviewed most of the persons that the research assistant met with, we noted above that 121 persons were not active and available. Our sample therefore represents the group of probationers who remained active in the program and who regularly kept their appointments with their probation officer. Since we know that drug abusers are unstable and more likely to recidivate and to abscond from court, we can assume that many of the persons not in our sample were drug abusers. Furthermore, some of the inactive persons were currently

enrolled in inpatient drug abuse programs. For these reasons, our estimates of drug use are conservative and probably underestimate the true level of drug use in all probationers assigned to the ISP program. The next section describes the characteristics of the persons whom we interviewed.

2. Do persons who provided a specimen differ from those who did not?

Background characteristics

In conducting research where the provision of a urine specimen is voluntary, there are always some persons who refuse outright and others who make unsuccessful (often repeated) attempts to comply. It is difficult in these situations to distinguish the "couldn't provide" persons who really wanted to cooperate from those who were only feigning a willingness to comply. In our analyses we have therefore combined persons who refused with those who could not provide. Table 2 compares the background characteristics of the 75 interviewed probationers who provided a urine specimen with the 31 who did not. Because most of the persons in the ISP program are males, we concentrated on obtaining male probationers and stationed female research assistants in the program for only a short time. Almost all (96 percent) of the persons we interviewed were males. The majority of the sample members were black (65 percent) or Hispanic (25 percent). Ethnicity was not related to whether a person provided a specimen.

TABLE 2. BACKGROUND CHARACTERISTICS OF SAMPLE MEMBERS, BY INFORMATION OBTAINED

	Interviewed, No Urine (N = 31)	Interviewed and a Urine Obtained (N = 75)	Total (N = 106)
Males	97%	96%	96%
Ethnicity			
Black	58	68	65
Hispanic	29	23	25
White/Other	13	9	10
	100%	100%	100%
Age*			
16-18	19	37	32
19-21	39	33	35
22 +	42	30	33
	100%	100%	100%
Highest Education Completed			
9th Grade or Less	19	32	28
10th-11th	61	61	61
12th or More	20	7	11
	100%	100%	100%
Single	74%	80%	78%
Employment			
Unemployed	45	36	39
Employed Full-time	32	29	30
Employed Part-time/Odd Jobs	16	17	17
In School	3	13	10
Other	4	5	4
	100%	100%	100%

*Includes two 15-year-olds adjudicated as adults under Juvenile Offender Act.

The probationers in the sample were young; 67 percent were below age 22. Persons who provided a specimen were somewhat different from those who did not, however. Forty-two percent of those who did not provide a specimen were 22 or older, compared with 29 percent of those who did. We also found that 82 percent of the persons age 15-18 provided a specimen, compared with 65 percent of those 19 or older (the age difference was not statistically significant at the .05 level, primarily because of the small number of cases and reduced power of the statistical test). Persons who did not provide a specimen had more years of education than the providers. Some of this difference may have been accounted for by the fact that those who provided were younger, and 13 percent were still in school. Between 36 percent and 45 percent of the probationers in each group were unemployed at the time of the interview and most (78 percent) had never been married.

The fact that the older probationers were less likely to give a specimen has some possible implications for the estimates of hard drug use derived from our sample. While cocaine and PCP tend to be found in arrestees age 21 or younger, little opiate or methadone use is found in this age group (Wish et al. 1986). Thus, the older probationers who were more likely to be using heroin may have escaped detection by refusing to provide a specimen. Furthermore, we know from our prior research that arrestees who did not provide a urine specimen had rearrest histories that were as extensive as those of persons who provided a urine and who were positive for multiple drugs. These findings provide an additional indication that our sample of probationers who provided a urine will yield low estimates of drug use. We return to this issue below.

Self-reported conviction charge

Table 3 shows the charge for which each probationer said he or she had been convicted and placed on probation. It is clear that ISP probationers have

been convicted of serious offenses. Robbery was the most frequent conviction charge for the sample, reported by 42 percent. (Normally, persons convicted of robbery are ineligible for probation. However, the ISP probationers are young and have received Youthful Offender status and sentences of probation, in accordance with state law.) The next most frequent offense was the sale of drugs (15 percent), followed by burglary (12 percent). Weapons offenses and assault were the remaining two offenses, each found in 7 percent. The "other" category in table 3 is composed of a variety of offenses, none of which was reported by more than 3 percent of the probationers. All of the offenses in table 3, with the exception of assault, tend to be associated with drug use in arrestees and suggest that there are many drug users in the ISP population. There were no statistically significant differences in the charges for persons who provided a urine and those who did not. However, the finding that drug offenses were somewhat more prevalent among the persons who did not provide a urine is consistent with our inference, noted above, that hard drug-involved probationers were less likely to provide a urine specimen.

TABLE 3. SELF-REPORTED CONVICTION CHARGES FOR PROBATIONERS WHO DID OR DID NOT PROVIDE A SPECIMEN

	Interviewed, No Urine (N = 31)	Interviewed and a Urine Obtained (N = 75)	Total (N = 106)
Charge			
Robbery	35	45	42
Drug Sale	23	12	15
Burglary	10	13	12
Weapons	0	9	7
Assault	10	5	7
Other	22	16	17
	100%	100%	100%

Self-reported drug use

Table 4 presents the level of lifetime and recent drug use reported by the probationers. It is clear that ISP probationers have extensive histories of drug use. Almost all (90 percent) indicated having used marijuana and about one-half (52 percent) admitted to cocaine use. Approximately one-fifth had used heroin or PCP, and a small minority had some experience using illicit (11 percent) or licit (9 percent) methadone. About one-fourth volunteered that they had used other drugs, including mescaline, amphetamines, and methaqualone. Furthermore, their drug use began early. More than one-half of the marijuana users first used it by age 15. Onset of cocaine use was later, with one-half of the users trying the drug by age 17. Approximately 10 percent reported having been dependent on alcohol, heroin, cocaine, or marijuana. Two percent or fewer of the probationers indicated any dependence on methadone or PCP. Twenty percent indicated a past history of drug or alcohol treatment, and 10 percent indicated a current need for treatment.

In addition to demonstrating considerable exposure to illicit drugs among ISP probationers, the

TABLE 4. SELF-REPORTED DRUG USE OF PROBATIONERS WHO DID OR DID NOT PROVIDE A URINE SPECIMEN

	Interviewed, No Urine (N = 31)	Interviewed Urine Obtained (N = 75)	Total (N = 106)
Ever Used			
Alcohol	94%	95%	94%
Marijuana	97%	87%	90%
Cocaine	61%	48%	52%
Heroin	36%*	12%*	19%
PCP	26%	17%	20%
Illicit Methadone	23%*	7%*	11%
Prescribed Methadone	16%*	1%*	6%
Other Drugs	32%	23%	26%
Ever Dependent On			
Heroin	26%**	5%**	11%
Alcohol	13%	11%	11%
Marijuana	10%	9%	9%
Cocaine	7%	9%	9%
Has Injected Drugs	26%**	5%**	11%
Ever Received Drug/Alcohol Treatment	29%	13%	18%
Needs Treatment Now	19%	7%	10%
Used in Last 24-48 Hours			
Alcohol	48%	43%	44%
Marijuana	19%	24%	23%
Cocaine	3%	4%	4%
Heroin	7%	4%	5%
PCP	3%	0	1%
Pr. Methadone	7%	1%	3%

*p. < .05
**p. < .01

findings in table 4 provide further evidence that the most drug-involved probationers did not provide a urine specimen. Lifetime use of cocaine and heroin, and admission to drug abuse treatment, were all greater in the probationers who did not provide a urine specimen. The probationers who did not provide a urine were five times more likely to report injection of drugs or dependence on heroin and twice as likely to have had or currently need treatment than probationers who did provide a specimen.

Their reports of drug use in the 24-48 hours prior to interview were much more similar, however. Few probationers admitted to using any drug other than alcohol (44 percent) or marijuana (23 percent) in the 24-48 hours prior to interview. In our prior research with offenders, we have found that apprehended persons are reticent to admit recent use of drugs, although they may discuss prior use. This is probably because these persons feel that they could be held accountable by the court for their current drug use.

Table 5 shows the extent of cocaine and crack use in the two groups of probationers. Although one-half of the probationers indicated some use of cocaine in their lifetime, only 38 percent of the probationers indicated that they had used crack. It is clear, however, that among persons who had used cocaine at least once, almost one-half (47 percent) took processed (purified) cocaine by smoking or freebasing. Injection of cocaine was rare (14 percent) and found mostly among the probationers who did not provide a urine specimen. The rarity of injection in the ISP probationers, most of whom are young, is consistent with our findings from arrestees indicating that injection occurs in older offenders.

TABLE 5. SELF-REPORTED COCAINE AND CRACK USE IN PROBATIONERS

	Interviewed, No Urine (N = 31)	Interviewed Urine Obtained (N = 75)	Total (N = 106)
Ever Used Cocaine	61%	48%	52%
Ever Used Crack	39%	37%	38%
Among Cocaine Users usually takes cocaine by (N)	(19)	(36)	(55)
Smoking	32%	42%	38%
Snorting	32%	36%	35%
Injecting with heroin	32%	5%	14%
Injecting cocaine only	4%	3%	4%
Freebasing	0	14%	9%
	100%	100%	100%

Comment

The findings presented in this section confirm the probation officers' suspicions that drug abuse was a common problem in their probationers. They also confirm our suspicions that the probationers who did not provide a urine specimen were more likely to be seriously involved with drugs. Persons who provided specimens were younger and reported less extensive abuse of drugs. Our estimates of drug use based on the urine tests must therefore be considered to be minimum estimates of the extent of drug use in the ISP population. In the next section, we examine whether the probationers had used drugs in the 24-48 hours prior to interview as infrequently as their self-reports would indicate.

3. Urinalysis-based estimates of recent drug use

Table 6 compares the probationers' self-reports of recent drug use with their urine test results for the 75 persons for whom both types of information were obtained. It is clear that one would greatly underestimate the prevalence of drug use in the probationers had one relied solely upon the probationers' self-disclosures. More than one-half of the tested probationers were positive for marijuana, while only 24 percent had indicated using the drug within the past 2 days. Some of this discrepancy may be caused by the fact that marijuana may be found in the urine weeks after the drug was last taken. However, this is not the case for cocaine. Only 4 percent of the probationers reported using cocaine 24-48 hours prior to interview, while 53 percent were positive by urinalysis. The fact that opiates or methadone were rarely

TABLE 6. ESTIMATES OF RECENT DRUG USE FROM INTERVIEWS AND URINES
(N = 75 probationers with both an interview and a urine specimen)

Drug	Reported Using Drug in Last 24-48 Hours	Found Positive by Urine Test*
Marijuana	24%	56%
Cocaine	4%	53%
Opiates (Heroin)	4%	3%
PCP	0	1%
Methadone	1%	0
Any of above, including Marijuana	25%	68%
Any of above, excluding Marijuana	7%	55%

*Based on Emit tests.

detected in the urines probably reflects our finding that the users of these drugs were unlikely to have provided a urine specimen. Given that one-third (36 percent) of the *probationers who did not provide a specimen* indicated having used heroin, it would be a mistake to conclude from the urine tests that ISP probationers do not use heroin. The inaccuracy of the probationers' self-reports is underscored by our finding that 25 percent admitted to the recent use of any of the five drugs, while 68 percent were positive by urinalysis for at least one. Even when we excluded marijuana from the comparison, we found that the estimate of drug use from the urine tests was almost eight times higher than that from the self-reports (55 percent vs. 7 percent). **If probationers deny their recent drug use in an independent, confidential research interview, we would suspect that they would be even less likely to tell their probation officers, given the possible consequences.** The next section sheds some light on this issue by comparing the estimates of recent drug use derived from our interviews and urine tests with the officers' estimates of drug use by their probationers.

4. Do urine tests identify more drug users than are known to probation officers?

Before we began interviewing probationers, we asked each probation officer to indicate on a rating sheet their opinion of whether their probationers used drugs. They were told that they could go back to client records or the presentence investigation if they wished. They were asked not to guess, but to indicate use if they had reasonable information that this was true. They also indicated for each probationer the type of information on which they based their judgment. The probation officers rated 92 of the 106 persons interviewed; 14 persons entered the ISP program after the officers had rated their caseloads. Seventy-one of the 92 persons were rated by the probation officers as having used alcohol or a drug at sometime in their lives. The sources used by the probation officers to indicate drug use for these 71 persons are presented below:

SOURCE OF INFORMATION ABOUT PROBATIONER'S DRUG OR ALCOHOL USE

(N = 71 probationers rated to be users of any drug or alcohol)

Source of Drug Information	%
Probationer told probation officer	62%
Presentence investigation (PSI)	52%
Probationer's relatives, friends	23%
Probationer entered treatment	13%
From way probationer looked	11%
From needle marks	1%
From a requested urine specimen	1%

The percentages in the table add to more than 100 percent because some officers had evidence of drug use from more than one source. It is clear that if a probation officer knew that the probationer was using drugs, he or she most likely learned this from the probationer's own admission or from the PSI report. It is also noteworthy that the ISP probation officers gained information from the probationer's relatives or friends. The ISP probation officer has access to these persons primarily because of the collateral contacts required by the ISP program. A few probationers were identified as drug users by physical signs. The relative importance of this source should not be underestimated, however, given that only a few persons in this sample injected drugs. One person was identified as a drug user by a urinalysis. As noted earlier, the probation officer has the authority to obtain a urine specimen if he or she thinks it is appropriate.

How accurate were the probation officers' ratings? Table 7 compares the estimates of lifetime drug use based on the probationers' self-reports with the probation officers' ratings, for the 92 persons who had both sources of information. (These analyses also include persons who did not provide a urine specimen.) While 91 percent of the probationers indicated prior use of marijuana, cocaine, heroin, PCP, or illicit methadone at sometime in their lives, the probation officers indicated that only 68 percent of these persons had used any of these drugs. Marijuana and heroin were the drugs that probation officers were most likely to know that their probationers had used. However, the probation officers' estimates of their probationers' involvement with cocaine, PCP, and illegal methadone were all one-half or less than the probationers' self-reports. It is not surprising that probation officers lacked information on whether

TABLE 7. ESTIMATES OF LIFETIME DRUG USE FROM PROBATIONER SELF-REPORTS AND PROBATION OFFICERS' RATINGS
(N = 92 persons interviewed and rated)

Drug	Percent of Probationers Who Admitted to Ever Using Drug	Percent of Probationers Who Probation Officers Indicated Had Ever Used Drug
Marijuana	89%	62%
Cocaine	49%	25%
Heroin	15%	11%
PCP	20%	3%
Illegal Methadone	9%	2%
Any	91%	68%

their probationers had *ever* used illicit drugs. Some of the probationers who indicated lifetime use of a drug could have used it only once or twice. It would be unrealistic to expect that the probation officers would know about such use that may have occurred years before the probation officer met the person. Were the probation officers more aware of recent drug use by their probationers?

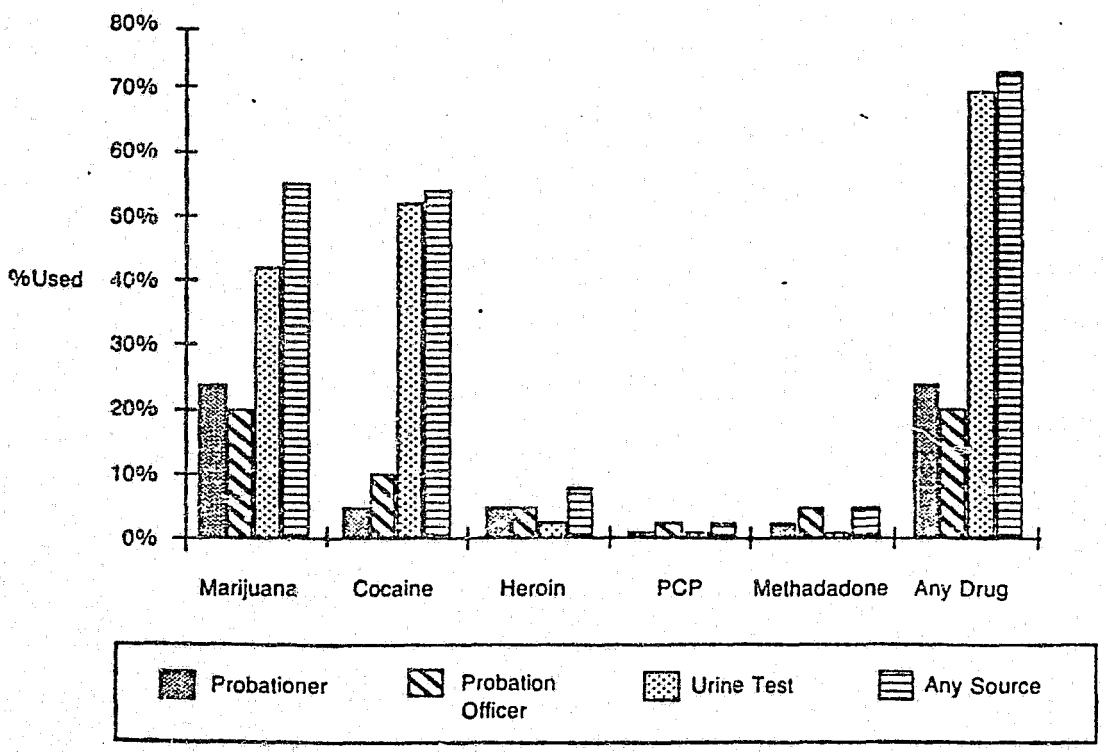
Table 8 compares the estimates of recent drug use obtained from three sources: the probationers' self-reports, the urinalyses, and the probation officers' ratings. Findings are presented for the 66 persons who had all three types of information. It is clear that probation officers were unlikely to report drug use by their probationers in the past month. While probation officers had indicated (above) that 68 percent of the probationers had ever used one of the five drugs in their lifetime, they thought that only 23 percent had used these drugs in the past month. The probation officers' estimates of drug use appeared to agree with what the probationers had told the research assistant they had used in the prior 24-48 hours. However, we found that although the total percentages were similar (23 percent vs. 24 percent), the probation officers rated as recent users only 31 percent of the probationers who had reported any recent drug use.

TABLE 8. ESTIMATES OF RECENT DRUG USE IN PROBATIONERS, FROM SELF-REPORTS, URINE TESTS, AND PROBATION OFFICER RATINGS
(N = 66 interviewed probationers with urine test and rating)

Drug	Probationer Reported Using in 24-48 Hours Before Interview	Percent of Probationers Rated by Probation Officer as Using Drug in Past month	Urine Test at Interview	Use Indicated by at Least One of the Three Sources
Marijuana	24%	21%	42%	55%
Cocaine	3%	9%	52%	53%
Heroin	3%	3%	2%	6%
PCP	0%	0%	2%	2%
Methadone	2%	3%	0%	3%
Any of above	24%	23%	68%	71%

As was the case for the probationer self-reports, the probation officers' estimates of recent drug use were extremely low, compared with the urinalysis results. Sixty-eight percent of these probationers

FIGURE 1. ESTIMATES OF RECENT DRUG USE IN PROBATIONERS, FROM SELF-REPORTS, URINE TESTS, AND PROBATION OFFICER RATINGS
(N = 66 interviewed probationers with urine test and rating)



were positive for one of these drugs, almost three times the proportion that the probation officers indicated had used a drug *in the past month!* The drug that the probation officers were least likely to know about was cocaine. Almost six times as many probationers were positive for cocaine than were reported to be users by the probation officers (52 percent vs. 9 percent).

We combined the estimates of the recent use of these drugs from the three sources. A person was counted if he or she was indicated to be a user by any of these sources. When we did this, we found that 71 percent of the 75 probationers had used at least one of these five drugs. When we excluded marijuana, we found that 55 percent had used a drug. These estimates are quite close to the estimates that the urinalysis results alone would indicate (68 percent and 55 percent, respectively). Thus, as shown in figure 1, probationer self-reports and probation officer ratings do little to increase the estimates obtained from urinalysis tests alone. (The only drug for which the estimate of recent use changed significantly from that based on the urinalysis alone was marijuana, which increased from 42 percent to 55 percent.)

5. Has drug use changed among offenders during the past 2 years?

Since we studied arrestees processed in Manhattan Central Booking in 1984, there has been a rise in cocaine use in New York City. Given the scarcity of objective information about the level of drug use in detained offenders, we thought it important to examine this question using the information that we obtained in the pilot study. We decided to compare the self-reports of drug use and the urine test results for the 135 arrestees age 16 to 20 in our prior study in 1984 who had been assigned to probation subsequent to their index arrest, with the similarly aged probationers studied in 1986. We selected the younger probationers because they constitute the largest segment of the ISP sample and because the majority of them provided a urine specimen. Furthermore, we were most interested in seeing if cocaine use had increased in the younger persons, who have not yet progressed to heroin use. Both samples contain persons who were primarily charged with felony offenses. Table 9 presents these findings.

Although we find some increase in the lifetime use of marijuana (92 percent vs. 70 percent), it is clear that the largest difference in use occurs for cocaine. Forty-six percent of the probationers reported having ever used cocaine, compared with 30 percent of the arrestees interviewed 2 years earlier. The urine test results confirm this trend. Forty-five percent of the 16- to 20-year-old probationers were positive for cocaine, compared with 20 percent of the arrestees of the same ages. Thus, it does appear that an increase in cocaine use has occurred in 16- to 20-year-old offenders in the 2 years since we conducted our study of arrestees.

Table 9 containes some additional information about the probationers that was not obtained from arrestees. Forty-one percent of the probationers age 16 to 20 indicated having used crack. Furthermore, the age of onset of marijuana and cocaine use was quite young. More than one-half of the users of marijuana first used it by age 16. Cocaine use occurred somewhat later. Before reaching age 18, 75 percent of the cocaine users had tried the drug. Drug abuse prevention programs should probably be initiated with persons before age 16.

TABLE 9. COMPARISON OF DRUG USE PROBATIONERS AGE 16 TO 20* IN 1984 AND 1986[a]

	Arrestees Sentenced to Probation from 1984 Study	Probationers from 1986 Pilot Study
	(135) %	(61) %
Ever Used		
Marijuana	70%**	92%**
PCP	16%	16%
Cocaine	30%*	46%*
Heroin	4%	8%
Ever in Drug/Alcohol Treatment	4%	5%
Ever Smoked Cocaine or Used Crack	NA	41%
Positive by Urinalysis for Cocaine (n)	(112) 20%**	(47) 45%**
Percentage of Marijuana Users Who First Tried it *before*		
age 16	NA	(56) 55%
age 18	NA	95%
Percentage of Cocaine Who First Tried it *before*		
age 16	NA	(28) 18%
age 18	NA	75%

NA - Not asked in this study.

[a] Arrestees are all persons age 16-20 who were interviewed in a sample of 6,406 male arrestees processed in Manhattan Central Booking in 1984 and who were subsequently sentenced to probation. Probationers are all persons age 16-20 who were interviewed as part of a pilot study of the Intensive Supervision Probation (ISP) in Brooklyn.

* $p = .05$

** $p < .01$

6. Use of the computerized interview

The computerized interview worked well in this research. Using the automated Ci2 program (Sawtooth Software), an interview was generated and run on a small microcomputer (Sharp PC 7000). The interviewer read the questions from the screen and entered the probationer's answers directly into the computer. Although several probationers asked whether the information was somehow being relayed directly to the Federal government, most persons were comfortable with the machine. The research assistant claimed that the computer made administering the interview less tedious for him and more interesting to the probationers. Some probationers read the questions from the screen along with the research assistant. Prior uses of this software have involved self-administration of the interview, and it is possible that that could be an effective method with respondents who have the necessary verbal and computer skills.

The expected advantages of the computerized interview in managing the data were fully realized. Diskettes with completed interviews were ready for analysis immediately upon receipt and transfer to our larger microcomputer. We were able to monitor the responses and detect problems with the questions. The data from all of the completed interviews were ready for analysis within hours of the last interview. All data were clean and consistent, given that the program eliminates most common sources of interviewer errors.

There were some limitations of the procedure, however. If a respondent changed an answer to a prior question, the research assistant could return to the earlier question, but all subsequent questions would have to be asked again and re-entered. This is because the question that was changed could affect the subsequent branching of the interview. To reduce such problems we kept hard copies of the interview and an interviewer log available so that the research assistant could switch to manual interviewing in the event of any problem. Another difficulty with the computerized interview was that adding or deleting questions after administration of the first interviews was problematic. This is because the output format for the revised interviews would differ from that of the interviews already completed. For example, after conducting about 15 interviews, we decided to add some new questions. To have one consistent data base, we printed out the answers from the first 15 completed interviews and re-entered the data using the revised interview program. To avoid these problems, the interview should be fully pretested before beginning the actual data collection.

An unexpected result of using the computerized interview was the anxiety produced in the researchers at the absence of hard copies of the completed interviews. In manually administered interviews, one always has the completed interview along with comments that the interviewer may write down during the interview. These hard copies are comforting to social scientists who may want to return to the raw data to check an interview. This option is lost with computerized interviews but may not be a serious impediment for use in the criminal justice system where volumes of hard copies would have to be stored and accessed.

Implications

Our study has confirmed the suspicions of the ISP staff that many probationers were using drugs. More than two-thirds of the ISP population is currently using illicit drugs. If one excludes marijuana, the estimate drops to 55 percent. We have repeatedly warned the reader, however, that the estimates from our sample are surely too low. This is because we have found that persons most involved with drugs, probationers who were violated, absconded, or were not reporting regularly, never made it into our sample. In addition, persons who told us in the interview that they had had prior treatment for drug abuse or prior experience with heroin or injection of drugs were likely to refuse to give us a urine specimen and therefore are not reflected in our estimates. Given our findings are from the youngest and less drug-involved ISP probationers, we think it is likely that the level of opiate use in probationers would have been at least as high as we found in arrestees (20 percent) had we been able to test all ISP probationers.

The urinalyses yielded the highest estimates of drug use. Even in a confidential research interview, the probationers grossly underreported their use of drugs in the prior 24-48 hours, as compared with the urinalyses. Although the probation officers were better at estimating whether their probationers had *ever* used drugs, their estimates of *recent* drug use were as low as the probationers' self-reports. This is not surprising, given that the probation officer's most common source of information about the probationer's drug use was the probationer's own admission. It is probable that probationers would be even less likely to tell their probation officers about their recent drug use than they were to tell our interviewer, given the potential consequences.

The level of drug use was so high and our findings so unequivocal that we decided that it was not necessary to test ISP probationers in other boroughs in order to study the need for urine testing of probationers. It is clear that the probation staff expressed a valid need for objective tests to encourage proba-

tioners to discuss their drug use. In the absence of urine tests, the probation officer is left to rely upon the probationer's voluntary admission of drug use, the PSI, or the probationer's relatives. None of these sources alone or combined were as good as the urine tests for identifying drug users.

There is an extensive body of information now available that documents that offenders who are identified by urinalysis to be hard drug users are likely to be among the most active criminals (Wish 1986; Wish and Johnson 1986). Such persons tend to have multiple rearrests for both drug and nondrug offenses. To ensure community safety and to reduce abscondence and rearrest rates, probation officers must have current information on their probationers' drug use. And our data show that urine tests provide the best indication of current drug use in probationers. Even the current increase in cocaine use in New York City was detected by the tests; probationers were twice as likely to test positive for cocaine in 1986 than they were in 1984.

The provision of a urine specimen must be made mandatory. Even in our independent, confidential research study, persons who were most involved with heroin use and injection of drugs were unlikely to provide a specimen. One would expect even less voluntary compliance if the test results were to be reported to the probation officer. Mandatory urine testing of probationers should not meet with the many ethical objections that urine testing of arrestees does, because these are convicted persons whose conditions of probation prohibit illicit drug use.

We do not suggest that urine testing should be used in all probation programs, however. The ISP staff members have small caseloads that enable them to interact closely with the probationer and his or her family when a test result is positive. And a positive urine test is only the first and simplest step to be taken in intervening in the person's substance abuse. Discussions between the probation officer and the probationer, and confirmation of the test results by repeated testing and urine monitoring, are necessary in order to design a comprehensive and effective treatment plan for these persons. The introduction of large-scale urine testing into a regular probation program with huge client/staff ratios where the probation officers cannot devote sufficient attention and followup to the test results would be counterproductive and would not serve the probationer or society.

This pilot study has taken the first step. The next step is to introduce systematic urine testing of all probationers in one or more ISP programs gradually and in a controlled manner. Research needs to be conducted to ascertain which of the available interventions (urine monitoring, residential therapeutic community, outpatient treatment, detoxification, methadone, and incapacitation, to name a few) are best suited for specific offenders. For example, the young offender who uses crack and does not inject drugs or use heroin may need a different approach than the person who is dependent on heroin. We also need to learn how best to incorporate the urine test results into the probation process. Some probation officers claim that on-site urine testing coupled with immediate feedback to the probationer will be more effective than sending the specimens to a laboratory and obtaining the results days later. We also need to study the introduction of microcomputers into the criminal justice system to speed up the retrieval and management of test results. The increased efficiency in data entry and analysis that we obtained using a computerized interview will be vital to the probation officer's ability to quickly monitor the probationer's drug use and compliance.

The potential economic and social benefits of intensive community-based surveillance programs for serious offenders have already been suggested (Petersilia et al. 1985). ISP programs, if effective, can reduce prison overcrowding, the need to construct costly prisons, and the huge costs of imprisonment. We believe that the public and the courts rightfully assume that a probationer's drug abuse problem is being addressed during probation. To the extent that probation programs do not directly confront the problem, more persons will fail probation and be returned to prison. And the costs of treating the drug abuser on probation are far less than the costs of long-term incarceration.

We believe that the ISP program, with its small caseloads and emphasis on individual attention to each probationer's problems, is especially well-suited for adopting systematic urine testing. Prior research has demonstrated the efficacy of intensive supervision and enforced treatment for reducing drug abusers' drug use and associated crime (reviewed in Wish and Johnson 1986). The ISP program offers a unique opportunity to curb drug abuse because the probationer can be held accountable by the courts for remaining in treatment and drug-free. A reasoned introduction of urine testing in ISP programs, together with an experimental approach to learn how best to utilize the test results to plan suitable interventions, may provide one of the best opportunities available for reducing offenders' drug abuse and crime.

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