THE SUCCESS OF DRUG TESTING AND DRUG TREATMENT WITH PROBATIONERS

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INTRODUCTION

The Drug Testing Technology/Focused Offender Disposition Program -- referred to as DTT/FOD, or simply as the FOD program -- was designed to examine two questions regarding probationers with a history of recent drug use. One is the utility of need assessment instruments in determining the level of treatment and/or supervision needed by probationers who recently used drugs. The second question focuses attention on the use of urinalysis monitoring as a deterrent to subsequent drug use, asking whether urinalysis monitoring alone is as successful as when urinalysis monitoring is combined with some standard treatment modality.

To address these questions, the National Association of State Alcohol and Drug Abuse Directors (NASADAD), funded by the Bureau of Justice Assistance, established the DTT/FOD program in Birmingham, Alabama and Phoenix, Arizona in December, 1988. These two programs operated until August, 1990, during which nearly 900 clients were assessed and accepted into the FOD program at each site. An NIJ-funded evaluation of the FOD program at these two sites has been completed.

A similar program was begun in Chicago, Illinois in October,

1990 and 802 probationers were assessed for treatment before the program terminated in March, 1992. Due to the delayed start of the Chicago FOD program, its evaluation began later than those in Birmingham and Phoenix. The evaluation design and analysis strategy used to evaluate the FOD program in Chicago is similar to that used in Phoenix and Birmingham. However, comparisons among the three sites are unwarranted due to important differences which occurred in both the implementation of the FOD program and the characteristics of the probationers who participated in the FOD program.

RESEARCH DESIGN

The FOD program at each site was designed to provide an experimental design for evaluative analysis. Probationers with a history of recent drug use were to be assessed by TASC with one of two different treatment instruments. Half of all clients were to be assessed with NASADAD's totally objective instrument, the Offender Profile Index. The other half were to be assessed with the instrument then in use by TASC at the local site: in Chicago, TASC used a highly subjective clinical protocol. Regardless of which instrument was used in making the assessment, the client's level of assessed need was grouped into one of four categories: (1) urinalysis only; (2) outpatient care with urinalysis; (3) short-term residential care with urinalysis; and (4) long-term residential care with urinalysis.

Following assessment, offenders were to be assigned to one of two groups. Half of all offenders assessed by the local TASC

instrument and half of all offenders assessed by the Offender Profile Index (OPI) were to be assigned to the control group. Control group clients were to receive only a program of random urinalysis monitoring, regardless of the drug intervention strategy prescribed by the assessment instrument. The other half of all clients assessed by the local instrument and by the OPI were to be assigned to the treatment group. These clients were to receive the drug intervention treatment consistent with their assessed need for treatment.

This evaluation takes advantage of this quasi-experimental program design to ask Do offenders who receive urinalysis monitoring only differ in outcome from offenders who receive treatment-based intervention? The null hypothesis is that there will be no significant difference in outcome between those persons assessed to need treatment who receive urinalysis and those persons assessed to need treatment who receive the treatment prescribed.

The evaluation also examines NASADAD'S effort to develop the Offender Profile Index as an effective instrument to identify offenders in need of specific treatment intervention strategies. Broadly stated, the research question is: Does the Offender Profile Index provide a more accurate assessment of the treatment needs of drug-using probationers than the assessment obtained by another, locally used, instrument? The null hypothesis is that there will be no significant difference in outcome between those persons assessed by the Offender Profile Index and those persons assessed by another instrument. A related issue examines the

relative contribution of each of the components of the Offender Profile Index to predicting success on our outcome measures.

"Success" is measured in terms of success while on probation. Failure is measured by the occurrence of two events. One is that a petition to revoke probation is filed by the probation officer. These petitions can be for either a criminal violation or a technical violation. The second measure of probation failure occurs when the case is closed unsatisfactorily, due to either a revocation of probation or with a new conviction. For each of these two outcome measures, success or failure is examined for that period of time following initial referral to the FOD program.

The evaluation relies on bivariate and multivariate analyses to measure the impact of treatment vs urinalysis and the utility of the Offender Profile Index as a needs assessment instrument for drug-using probationers. In each case, the analysis begins with a basic bivariate examination of hypothesized differences in probation outcomes between comparison groups, and then it proceeds to a more complex, multivariate analysis of probation outcomes which enables a more rigorous test of relationships while controlling for the effects of other variables.

CASE ATTRITION AND CLIENT CHARACTERISTICS AT INTAKE

As initially designed, the FOD clients would be limited to those persons who were mandated to the program by the Cook County Court as a condition of their probation. Due to the large number of cases routinely processed through these courts, it was assumed

by both NASADAD and TASC that they would reach their goal of 800 clients in only a few months. When, after the first six months, the number of cases entering FOD remained low, NASADAD and TASC supplemented the referral process by encouraging probation officers to make referrals from their caseloads. This had the consequence of bringing into the FOD program a different type of client -- clients who for whatever reason were not mandated by the courts to the program. Referrals from active caseloads also result in a group of clients who have already demonstrated some degree of success on probation for some period of time, and who therefore are likely to continue to succeed on probation while in the FOD program.

This referral process produced three groups: (1) those who were mandated by the court to enter FOD, and who did enter FOD; (2) those who were mandated by the court to enter FOD, but who failed to enter FOD; and (3) those who were not mandated by the court, but who did enter FOD. Comparisons of select offender and offense characteristics among the three groups are presented in Table 1. Males comprise approximately 82 percent of each group, and there is no difference between groups in the percent male. There are important differences in ethnicity, age, education and offense type, however. Compared to the FOD clients with no court mandate, those who entered FOD with a court mandate are much more likely to be African American than white, to be somewhat younger, to be somewhat less well educated, and to be significantly more likely to have been convicted of a drug offense rather than a

TABLE 1

OFFENDER CHARACTERISTICS BY COURT MANDATE TO FOCUSED OFFENDER DISPOSITION PROGRAM

	FOD MANDATE, ENTER FOD (N=419)		FOD MANDATE, NOT ENTER FOD (N=521)		NO MANDATE, ENTER FOD (N=373)	
Gender	N	%	N	%	N	%
Male	345	82.3	425	81.6	308	82.6
Female	74	17.7	94	18.0	65	17.4
Unknown	0	0.0	2	0.4	0	0.0
Ethnicity						
White	49	11.7	48	9.2	73	19.6
African American	329	78.5	439	84.3	263	70.5
Other	41	9.8	32	6.1	37	9.9
Unknown	0	0.0	2	0.4	0	0.0
Age						
$\bar{X}$	27.11		25.67		28.57	
St. Dev.	8.33		7.71		7.97	
Education						
Less than H.S./Tech Grad.	249	59.4	268	51.4	201	53.9
High School/Tech Grad.	169	40.4	220	42.2	171	45.8
Unknown	1	0.2	33	6.3	1	0.3
Offense Type						
Person	23	5.5	16	3.1	48	12.9
Property	63	15.0	36	6.9	106	28.4
Drug	311	74.2	458	87.9	192	51.5
Other	22	5.3	11	2.1	27	7.2
Prior Arrests						
$\bar{X}$	3.45		Not Available		3.90	
St. Dev.	2.90				3.06	

crime against either person or property. Given these differences, we will have to be cognizant of the referral status of the FOD clients in our analyses of the probationers' success on probation.

At Chicago, in addition, the criteria for acceptance into the FOD program differed substantially between the OPI assessment and the local TASC assessment. Persons assessed by the OPI were accepted into the program solely on the grounds that they evidenced a recent history of drug use, whereas TASC continued its policy of accepting only those persons who both (1) were addicted and (2) acknowledged a willingness to be treated. Clearly, this difference in eligibility criteria is likely to result in a qualitative difference between the OPI-assessed offenders and TASC-assessed offenders. This possibility will be examined in Table 2.

The difference in eligibility criteria also produced a quantitative difference between the two groups. NASADAD's contract with TASC called for 800 probationers to be assessed for placement in the FOD program; but it did not require that 800 probationers actually be admitted into the FOD program. Of the 393 persons assessed with the TASC criteria, 64 probationers were declared ineligible because they were not addicted, another 181 probationers were declared unacceptable because they were not ready for treatment or did not recognize their substance abuse problem, and three more probationers were declared unacceptable for other reasons. Of the 393 probationers assessed with the TASC

TABLE 2

OFFENDER CHARACTERISTICS AT INTAKE, BY ASSESSMENT TYPE

	ASSESSMENT TYPE					
	TASC ASSESSMENT (N=145)		OPI ASSESSMENT (N=387)		TOTAL (N=532)	
	N	%	N	%	N	%
Gender						
Male	110	75.9	327	84.5	437	82.1
Female	35	24.1	60	15.5	95	17.9
Ethnicity						
White	19	13.1	60	15.5	79	14.8
African American	117	80.7	293	75.7	410	77.1
Other	9	6.2	34	8.8	43	8.1
Age						
$\bar{X}$	28.78		27.87		28.12	
St.Dev	7.64		8.18		8.04	
Education						
Some College	18	12.4	57	14.7	75	14.1
High School/Tech Grad.	36	24.8	92	23.8	128	24.1
Some High School/Tech	78	53.8	218	56.3	296	55.6
Elementary Grades Only	13	9.0	20	5.2	33	6.2
Offense Type						
Person	14	9.7	39	10.1	53	10.0
Property	42	29.0	71	18.3	113	21.2
Drug	76	52.4	247	63.8	323	60.7
Other	11	7.6	22	5.7	33	6.2
Unknown	2	1.4	8	2.1	10	1.9
Prior Arrests						
$\bar{X}$	5.21		3.05		3.64	
St.Dev	3.26		2.42		2.84	
Court Mandate to FOD						
Yes	69	47.6	196	50.6	265	49.8
No	74	51.0	182	47.0	256	48.1
Missing	2	1.4	9	2.3	11	2.1

instrument and TASC criteria, only 145 were declared to be both eligible and acceptable and placed in the FOD program. In contrast, none of the OPI-assessed probationers were denied admission to the FOD program.

The evaluation is based on the probation outcomes of 532 probationers who entered the FOD program and on whom (nearly) complete data are available. Of these cases, 387 were assessed by the Offender Profile Index and 145 were assessed by the TASC protocol. The data reported in Table 2 indicate that nearly 82 percent of the offenders who entered the FOD program were male, 77 percent were African American and 15 percent were white, about 62 percent had less than a high school education, and the average age at intake was approximately 28 years. The majority (60.7 percent) of the offenders were placed on probation for a drug offense, with property and person crimes representing 21.2 and 10.0 percent, respectively. Only five of the 532 offenders in the FOD program had no prior record of arrests, and 36.8 percent had four or more arrests prior to this offense.

Interestingly, there are few differences between the OPI-assessed offenders and the TASC-assessed offenders. It is important to note, however, that TASC-assessed offenders were more likely than OPI-assessed offenders to have been convicted of a property offense and less likely to have been convicted of a drug offense; they also were twice as likely as the OPI-assessed offenders to have four or more prior arrests (60.7 vs 27.9 percent, respectively).

For each assessment grouping, random assignment to the treatment and control groups appears to have created similar groups of nearly equal size (see Table 3). No significant differences between treatment and control group are noted among either the OPI-assessed or the TASC-assessed offenders on the intake characteristics of gender, ethnicity, education, age, prior record, or offense type. Also, the results reported in Table 4 indicate that, of the many scales which comprise the Offender Profile Index, the only significant difference between the treatment and control group clients is the somewhat higher level of prior treatment among treatment group clients. Importantly, no difference is observed between those in the OPI-assessed treatment group and the OPI-assessed control group in terms of either the OPI's Drug Use Severity Score or the OPI's Total Stakes in Conformity Score.

In summary, the analysis of select offender and offense characteristics at intake finds too few differences between treatment and control groups to challenge the assumption of "no difference" between these groups. Observed differences between the OPI-assessed offenders and the TASC-assessed offenders suggest that direct comparisons of success in FOD by type of assessment are unwarranted. Due to the relevance of these offender and offense characteristics to the outcome measures, client characteristics are controlled in the analysis of the main effects of instrumentation and treatment on the outcome measures.

TABLE 3

OFFENDER CHARACTERISTICS AT INTAKE, BY ASSESSMENT TYPE AND ASSIGNED GROUP

	ASSESSMENT TYPE					
	TASC ASSESSMENT		OPI ASSESSMENT		TOTAL	
	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group
	(N=70)	(N=75)	(N=197)	(N=190)	(N=267)	(N=265)
Gender	N %	N %	N %	N %	N %	N %
Male	56 80.0	54 72.0	163 82.7	164 86.3	219 82.0	218 82.3
Female	14 20.0	21 28.0	34 17.3	26 13.7	48 18.0	47 17.3
Ethnicity						
White	8 11.4	11 14.7	31 15.7	29 15.3	39 14.6	40 61.9
African American	56 80.0	61 81.3	150 76.2	143 75.3	206 77.2	204 24.0
Other	6 8.6	3 4.0	16 8.1	18 9.5	22 8.2	21 14.1
Age						
$\bar{X}$	29.73	27.89	27.72	28.02	28.25	27.98
St. Dev.	7.77	7.45	7.86	8.52	7.87	8.22
Education						
Some College	7 10.0	11 14.7	32 16.2	25 13.2	39 14.6	36 13.6
High School/Tech. Grad	19 27.1	17 22.7	45 22.8	47 24.7	64 24.0	64 24.2
Some High School/Tech.	37 52.9	41 54.7	109 55.3	109 57.4	146 54.7	150 56.6
Elementary Grades Only	7 10.0	6 8.0	11 5.6	9 4.7	18 0.7	15 0.6
Offense Type						
Person	9 12.9	5 6.7	19 10.0	20 10.2	28 10.8	25 9.2
Property	23 32.9	19 25.3	39 20.5	32 16.2	62 23.8	51 18.8
Drug	32 45.7	44 58.7	118 62.1	129 65.5	150 57.7	173 63.3
Other	6 8.6	5 6.7	9 4.7	13 6.6	15 5.7	18 6.6
Unknown	0 0.0	2 2.7	5 2.6	3 1.5	5 1.1	5 1.8
Prior Arrests						
$\bar{X}$	4.71	5.68	3.20	2.90	3.60	3.69
St. Dev.	3.03	3.42	2.45	2.39	2.70	2.99
Court Mandate to FOD						
Yes	34 48.6	35 46.7	104 52.8	92 48.4	138 51.7	127 47.9
No	36 51.4	38 50.7	89 45.2	93 48.9	125 46.8	131 49.4
Missing	0 0.0	2 2.6	4 2.0	5 2.6	4 1.5	7 2.6

TABLE 4

OFFENDER PROFILE INDEX SCALE SCORES AT INTAKE, BY ASSIGNED GROUP

	ASSIGNED GROUP				
	Control Group (N=197)		Treatment Group (N=190)		t-test
	$\bar{X}$	St. Dev.	$\bar{X}$	St. Dev.	
OFFENDER PROFILE INDEX SCALES					
Family Stakes	1.83	.43	1.86	.37	.75
Education Stakes	1.41	.62	1.40	.58	-.10
School Stakes	0.14	.48	0.18	.55	.80
Work Stakes	1.10	.67	1.13	.67	.44
Home Stakes	0.94	.70	0.95	.71	.19
Criminal Justice	1.43	.62	1.46	.66	.45
Psychological Stakes	1.86	.40	1.91	.30	1.32
Treatment Stakes	0.02	.20	0.12	.47	2.59[b]
Total Stakes in Conformity Score	8.74	1.71	9.02	1.79	1.60
Drug Use Severity Score	3.78	1.76	3.91	1.77	.75

[a] significant at $.01 < P \leq .05$
[b] significant at $.001 < P \leq .01$
[c] significant at $P \leq .001$

PROGRAM IMPACT ON PROBATION OUTCOMES

Bivariate Analyses: Preliminary Findings

The analysis of outcome data begins with a series of t-tests designed to test the difference between urinalysis monitoring and treatment. Nominal and ordinal data are converted to binary interval measures to enable the computation of mean scores. If urinalysis and treatment are not equally effective, the t-tests will reveal a significant difference in the mean values of the outcome measures observed. Table 5 reports the outcome data for the OPI-assessed clients; Table 6 reports the results for TASC-assessed clients.

First, Table 5 indicates that there is no difference among OPI-assessed clients between the treatment and control group in any of the three reported measures of conformity to the FOD program. Overall, OPI clients kept nearly 60 percent of their appointments, with no difference noted between those in the treatment group and those in the control group. Similarly, OPI clients provided urines about two-thirds of the appointed times, and produced a positive urine about 40 percent of the time they provided a urine sample. Importantly, there is no difference here between those who received treatment as assessed and those who were placed in urinalysis monitoring only.

It is interesting to note that very similar findings are reported in Table 6 for TASC-assessed clients. About 60 percent of the appointments were kept, nearly 60 percent of the urines scheduled were provided, and somewhat over 40 percent of the

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SELECTED MEASURES OF PROGRAM OUTCOME AMONG OPI-ASSESSED PARTICIPANTS, BY ASSIGNED GROUP

	ASSIGNED GROUP		
	Control Group (N=197)	Treatment Group (N=190)	t-test
FOD PROGRAM			
Appointments Kept			
$\bar{X}$	.60	.55	
St. Dev.	.39	.37	-.75
Urines Provided			
$\bar{X}$	.64	.69	
St. Dev.	.40	.37	.59
Positive Urines			
$\bar{X}$	.33	.43	
St. Dev.	.39	.43	1.29
PROBATION*			
Revocation Petition, % yes	59.3	57.3	-1.38
Revocation Petition for Technical Violation, %	50.0	48.1	-.37
Revocation Petition for Criminal Violation, %	9.3	9.2	-.03
Time to Petition, $\bar{X}$ days, (St. Dev.)	237.57 (147.15)	234.76 (149.16)	-.12
Case Closed Unsatisfactory, % yes	27.5	28.3	.17
Time to Case Closed Unsatisfactory, $\bar{X}$ days, (St. Dev.)	346.16 (163.55)	347.83 (183.53)	.05

* For those variables measured as percent agree, the t-test reflects a measure of the difference in proportions.

[a] significant at $.01 < P \leq .05$

[b] significant at $.001 < P \leq .01$

[c] significant at $P \leq .001$

urines provided were positive for illegal drugs. Also, there are no observed differences in these three variables between those clients who received treatment and those who received urinalysis monitoring only.

Turning to the outcome measures, Table 5 suggests that outcomes do not differ significantly between treatment group clients and control group clients assessed with the Offender Profile Index. A petition to revoke probation was filed for nearly 60 percent of all OPI-assessed clients, and most of these were for technical violations. The likelihood of a petition to revoke, the reason for the petition, and the number of days to the petition do not differ between the treatment and control group, however. Among the OPI-assessed cases, a petition to revoke probation was filed against 59.3 percent of the control group and 57.3 percent of the treatment group, and the petitions were far more likely to be for technical violations (50.0 percent and 48.1 percent, respectively) than for new criminal violations (9.3 percent and 9.2 percent, respectively). In addition, there is no apparent treatment effect on the likelihood that an unsatisfactory probation outcome will occur (27.5 percent of the control group versus 27.4 percent of the treatment group). Also, there is no difference between treatment and control groups in the mean length of time before a petition to revoke is filed (234.8 days versus 237.6 days, respectively) or an unsatisfactory outcome closes the case (347.8 days versus 346.2 days, respectively).

Table 6 reveals that there is no observed difference in

TABLE 6

SELECT MEASURES OF PROGRAM OUTCOME AMONG TASC-ASSESSED PARTICIPANTS, BY ASSIGNED GROUP

	ASSIGNED GROUP		
	Control Group (N=70)	Treatment Group (N=75)	t-test
FOD PROGRAM			
Appointments Kept			
$\bar{X}$	.61	.57	
St. Dev.	.36	.37	-.50
Urines Provided			
$\bar{X}$	.56	.62	
St. Dev.	.41	.37	.69
Positive Urines			
$\bar{X}$	.46	.39	
St. Dev.	.46	.46	-.55
PROBATION*			
Revocation Petition, % yes	70.0	63.0	-.79
Revocation Petition for Technical Violation, %	61.4	56.2	-.64
Revocation Petition for Criminal Violation, %	8.6	6.8	-.38
Time to Petition, $\bar{X}$ days, (St. Dev.)	216.00 (168.12)	195.77 (96.55)	-.59
Case Closed Unsatisfactory, % yes	37.7	38.4	.08
Time to Case Closed Unsatisfactory, $\bar{X}$ days, (St. Dev.)	328.27 (157.54)	336.92 (169.27)	.18

* For those variables mearured as percent agree, the t-test reflects a measure of the difference in proportions.

[a] significant at $.01 < P \leq .05$

[b] significant at $.001 < P \leq .01$

[c] significant at $P \leq .001$

probation outcome between TASC-assessed treatment and control groups. Neither the likelihood that a revocation petition was filed, nor the type of petition filed, varied significantly between those clients who received only urine monitoring and those clients who were treated as assessed. Among the TASC-assessed offenders, a petition to revoke probation was filed against 70 percent of the control group and 63 percent of the treatment group, with technical violations (61.4 percent and 56.2 percent, respectively) outnumbering criminal violations (8.6 percent and 6.8 percent, respectively). Further, the likelihood of an unsatisfactory case resolution did not differ between groups: 37.7 percent of the control group and 38.4 percent of the treatment group were closed as unsatisfactory. Finally, the treatment and control group do not differ significantly in the mean length of time to either the first petition for revocation (195.8 days versus 216.0 days, respectively) or the closing of the case with a disposition of unsatisfactory (336.9 days versus 328.3 days, respectively).

Direct comparisons between OPI-assessed clients and TASC-assessed clients are unwarranted without controls for those characteristics which are made salient by the differing criteria used in case selection, but it is interesting to note in Tables 5 and 6 that these selection criteria appear to be related to probation outcomes. That is, the level of probation "failure" is substantially greater among TASC-assessed cases than among OPI-assessed cases. Specifically, TASC-assessed cases are more likely

than OPI-assessed cases (1) to receive a petition to revoke and (2) to have the case closed with an unsatisfactory disposition. There also is a somewhat shorter length of time to the petition to revoke and to the case closing among TASC-assessed cases than among OPI-assessed cases.

In summary, the preliminary analyses reported in Tables 5 and 6 suggest two major conclusions. First, OPI-assessed offenders were more likely to succeed on probation than offenders assessed by the TASC instrument. This finding is attributed, at least in part, to the more stringent eligibility criteria employed by the TASC assessment and to the observed differences in criminal history at intake. Second, there is no apparent difference in probation success between those offenders who receive urinalysis monitoring alone and those offenders who receive urinalysis monitoring together with some type of treatment.

Multivariate Analyses

To further explore the effectiveness of the FOD program in Chicago, the analysis which follows focuses on two measures of offender success/failure on probation: (1) a petition to revoke probation, and (2) an unsatisfactory closing. For each outcome measure, the analysis estimates a logistic regression model of the log of the odds of failure for two fixed time periods, the first year on probation and the first two years on probation. For our purposes we estimate the net effect of exposure to treatment, controlling for offender's gender, age, ethnicity, record of prior arrests, education level and the type of instant offense.

Since these variables have been found to be related to failure on probation (Visher et al. 1991; Hepburn and Albonetti, 1993), we include each variable in our models of failure.

Before presenting our findings from the regression, we note that our multivariate analysis of failure on probation in Chicago differs from the survival analysis procedures employed in our analysis of probation outcomes in Phoenix and Birmingham. In those analyses, we defined the dependent variables in terms of the time to a failure. In the present study of outcomes in Chicago, we treat the dependent variable as a binary outcome and estimate the logistic regression models of failure for two fixed periods of observation. Two considerations influenced our decision to estimate logistic regression models of failure rather than the previously used survival models of time to failure. First, we noted that 16 percent of offenders received a satisfactory closing, a situation that in the literature on survival models poses a special case of a dependent competing outcome analysis with right censoring. To date, estimation of such a statistical situation is beyond the capabilities of accessible statistical software packages.

Second, we noted Rhodes' (1986) finding that the coefficient estimates generated using a competing outcome model, compared to estimates from a probit model, produced similar findings about the variables affecting failure on probation. Given his results, we pursue an analysis of failure on probation using a binary coding of failure and estimate logistic regression models of

failure for two fixed time periods.

Table 7 indicates that thirty-six percent of the 521 offenders on probation had a petition to revoke probation filed during the first year on probation. When the period of observation is extended to include the first two years on probation, the percent of offenders experiencing a petition to revoke probation increases to forty-four percent. Using an unsatisfactory closing as a measure of failure, Table 7 indicates that fifteen percent of the 521 offenders failed during the first year on probation and twenty-six percent of all offenders failed by the end of the second year on probation.

Table 7 further indicates that the largest percent of offenders on probation in Chicago are male, nonwhite, with less than a high school education. The mean age for the offenders is about 28 years, with a standard deviation of nearly 8 years. The mean number of prior arrests is 3.64, with a standard deviation of 2.84. As a group, these offenders are older and have had more contact with the criminal justice system than the offender group from the FOD programs in either Phoenix or Birmingham.

The offenders are nearly evenly split between control group (urinalysis monitoring only) and treatment group (treatment as assessed and urinalysis monitoring). Also, there is a nearly equal distribution of offenders mandated to FOD and offenders who entered FOD without a court mandate. Most of the offenders entered the criminal justice system charged with an instant offense involving drugs.

TABLE 7

DESCRIPTIVE STATISTICS FOR VARIABLES INCLUDED IN THE ANALYSIS OF AN UNSATISFACTORY CLOSING WHILE ON PROBATION

VARIABLES:	CODING	FREQUENCIES OR $\bar{X}$, ST.DEV.	PERCENT
A: OFFENDER CHARACTERISTICS			
Gender			
	0 = Female	93	18
	1 = Male	428	82
Ethnicity			
	0 = White	77	15
	1 = Non-white	444	85
Age		$\bar{X}$ = 28.12	
		St. Dev. = 8.04	
Age Young	0 = other	389	75
	1 = 17-21 yrs. old	132	25
Age Middle	0 = other	316	61
	1 = 22-30 yrs. old	205	39
Education Level			
	0 = Less than HS Grad	299	57
	1 = HS Grad or Greater	222	43
Prior Arrests		$\bar{X}$ = 3.64	
		St. Dev. = 2.84	
B: FOD RELATED INFORMATION			
Intervention Type			
	0 = Control Group	263	51
	1 = Treatment Group	258	49
Court Mandate to FOD			
	0 = No Mandate	256	49
	1 = Court Mandate	265	51
Assessment Instrument			
	0 = TASC	143	27
	1 = OPI	378	73

TABLE 4 (Cont.)

DESCRIPTIVE STATISTICS FOR VARIABLES INCLUDED IN THE ANALYSIS OF AN UNSATISFACTORY CLOSING WHILE ON PROBATION

VARIABLES:	CODING	FREQUENCIES OR $\bar{X}$, ST.DEV.	PERCENT
C: OFFENSE CHARACTERISTICS			
Drug Offense	0 = No	199	38
	1 = Yes	322	62
Property Offense	0 = No	408	78
	1 = Yes	113	22
D: DEPENDENT VARIABLE			
Unsatisfactory Closing First-Year-Period			
	0 = No	444	85
	1 = Yes	77	15
Unsatisfactory Closing Two-Year-Period			
	0 = No	386	74
	1 = Yes	135	26
Petition to Revoke Probation First-Year-Period			
	0 = No	334	64
	1 = Yes	187	36
Petition to Revoke Probation Two-Year-Period			
	0 = No	294	56
	1 = Yes	227	44

a. The Regression Models of Failure: The Revocation Petition

Table 8 provides the logistic regression coefficients, standard errors, and odds of a petition to revoke probation for the two fixed time periods. Findings indicate that exposure to treatment, compared to only drug monitoring, failed to produce a significant decrease in the log of the odds of a petition to revoke probation for either of the time periods. Also, the type of instrument used to assess the offender's treatment needs, whether OPI or TASC, failed to produce a significant effect on the outcome variable. However, for both time periods, the effect of a court mandate to enter FOD is related to a significant increase in the likelihood of a petition to revoke probation. For the first year of probation, the effect (b=.62, p=.002) translates to a 1.86 to 1.00 odds of a petition to revoke probation. For the two-year period, the effect for court mandate (b=.60, p=.002) translates to a 1.82 to 1.00 odds of a failure. That is, a revocation petition was significantly more likely to be filed against offenders who were mandated by the court to the FOD program than against offenders who entered the program without a court mandate.

During the first year on probation, two offender characteristics were significantly related to failure. Nonwhite offenders experienced a significant increase (b=.65, p=.02) in the log of the odds of a petition to revoke probation during the first year on probation. This increase translates to a 1.92 to 1.00 odds of failure for nonwhite offenders, compared to white offenders. When

TABLE 8

LOGISTIC REGRESSION COEFFICIENTS, STANDARD ERROR, AND ODDS FOR

VARIABLES IN THE PETITION TO REVOKE PROBATION EQUATIONS FOR TWO FIXED PERIODS.

VARIABLES	FIRST-YEAR-PERIOD COEFFICIENTS	S.E.	ODDS*	TWO-YEAR-PERIOD COEFFICIENTS	S.E.	ODDS*
OFFENDER CHARACTERISTICS:						
Gender	-.18	.25		-.23	.24	
Ethnicity	.65[a]	.29	1.92	.38	.27	
Age - Young	-.25	.25		-.36	.24	
Age - Middle	-.11	.22		-.22	.21	
Education Level	-.47[a]	.19	.63	-.56[b]	.19	.57
Prior Arrest	.02	.03		.01	.04	
FOD RELATED INFORMATION:						
Treatment	-.09	.19		-.17	.18	
Mandate	.62[b]	.19	1.86	.60[b]	.19	1.82
Instrument	-.15	.22		.04	.22	
OFFENSE CHARACTERISTICS:						
Drug Offense	.13	.28		.27	.26	
Property Offense	.42	.32		.35	.31	
Intercept	-1.13[a]	.49		-.54	.47	
- 2 Log Likelihood	652.35			684.38		
X^2	27.86	df = 11 (p=.003)		29.24	df = 11 (p=.002)	

* Provided for estimates significant at $P \leq .05$.

[a] Significant at $.01 \leq .05$

[b] Significant at $.001 \leq .01$

observation time is extended to include the first two years on probation, however, offender's ethnic status is found to be unrelated to the likelihood of failure.

Table 8 also indicates that offenders with at least a high school education experienced a significantly lower likelihood of a petition to revoke probation during both time periods. During the first year on probation, offenders with at least a high school education had a lower (b= -.47, p=.02) likelihood of failure. The coefficient estimate translates to a .63 to 1.00 odds of a petition to revoke probation. During the first two years on probation, offenders with at least a high school education continued to experience a significantly lower (b= -.56, p=.002) level of failure. This finding translates to a .57 to 1.00 odds of a petition to revoke probation.

Regardless of time period, Table 8 shows that offender's gender, age, prior arrest record and type of instant offense are unrelated to failure when operationally defined as a petition to revoke probation. Comparing the chi-square statistic for each model reveals that the model estimated for the first year on probation produces a slightly better fit to the data than the model estimated for the two-year period on probation.

b. The Regression Model of Failure: Unsatisfactory Closing

Turning attention to the regression models of the variables affecting the likelihood of an unsatisfactory closing, Table 9 indicates that exposure to treatment, compared to drug monitoring only, failed to produce a significant effect on the log odds of

TABLE 9

LOGISTIC REGRESSION COEFFICIENTS, STANDARD ERROR, AND ODDS FOR

VARIABLES IN THE UNSATISFACTORY CLOSING EQUATION FOR TWO FIXED PERIODS.

VARIABLES	FIRST-YEAR-PERIOD COEFFICIENTS	S.E.	ODDS*	TWO-YEAR-PERIOD COEFFICIENTS	S.E.	ODDS*
OFFENDER CHARACTERISTICS:						
Gender	.79	.43		.53	.31	
Ethnicity	1.53[b]	.54	4.62	.98[b]	.36	2.66
Age - Young	1.13[b]	.37	3.09	.44	.28	
Age - Middle	.95[b]	.34	2.59	-.46	.25	
Education Level	.15	.27		-.22	.22	
Prior Arrest	.06	.05		.08[a]	.03	1.08
FOD RELATED INFORMATION:						
Treatment	.03	.26		.04	.21	
Mandate	.01	.27		.33	.22	
Instrument	-.31	.29		-.28	.24	
OFFENSE CHARACTERISTICS:						
Drug Offense	-.75[a]	.34	.47	-.33	.29	
Property Offense	-.44	.39		.11	.33	
Intercept	-4.12[b]	.80		-2.71[b]	.57	
- 2 Log Likelihood	401.49			563.29		
X^2	34.97	df = 11 (p=.0003)		32.86	df = 11 (p=.0006)	

* Provided for estimates significant at $P \leq .05$.

[a] Significant at $.01 \leq .05$

[b] Significant at $.001 \leq .01$

an unsatisfactory closing for either of the time periods. In other words, the treatment group did no better or worse than the control group in terms of failure on probation. In addition, an unsatisfactory closing on probation was unrelated to either the type of assessment instrument or the presence of a court mandate for the two periods.

Table 9 indicates that nonwhite offenders, compared to white offenders, experienced a significant increase in the likelihood of an unsatisfactory closing (b= 1.53, p=.005) during the first year on probation. The coefficient estimate translates to a 4.62 to 1.00 odds of an unsatisfactory closing. During the first two years on probation, nonwhites experienced a significant increase (b=.98, p=.006) in the likelihood of failure. The obtained estimate translates to a 2.66 to 1.00 odds of receiving an unsatisfactory closing.

During the first year on probation, offenders in the 17-21 age group, compared to offenders over 30 years of age, had a significantly higher likelihood of an unsatisfactory closing (b= 1.13, p=.002). This estimate translates to a 3.09 to 1.00 odds of failure. Further, offenders in the 22-30 age group, compared to the offenders over 30 years old, also experienced a significant increase in the log of the odds of an unsatisfactory closing (b= .95, p=.006) during the first year on probation. The obtained coefficient estimate translates to a 2.59 to 1.00 odds of receiving an unsatisfactory closing. Yet, it is interesting to note that younger offenders (whether the 17-21 group or the 22-30

group) fared no better or worse than older offenders during the extended two-year period of observation.

Further, Table 9 indicates that increases in the number of prior arrests significantly increases (b=.08, p=.04) the likelihood of an unsatisfactory closing for the two-year period, but is unrelated to the outcome variable during the first year on probation. The coefficient estimate translates to only a 1.08 to 1.00 odds of failure.

Offenders charged with a drug related offense experience a significantly lower (b= -.75, p=.03) likelihood of receiving an unsatisfactory closing during the first year on probation. This effect translates into a .47 to 1.00 odds of failure. Being charged with a drug related offense is unrelated to failure during the extended two-year period on probation.

Finally, Table 9 indicates that neither offender's gender nor offender's education level produced a significant effect on the likelihood of an unsatisfactory closing for either of the two time periods on probation. Comparing the chi-square statistic (Table 9) for each of the regression models indicates that the model estimated for the extended two-year time period produced a somewhat better fit to the data.

SUMMARY AND CONCLUSION

Is urinalysis monitoring alone as effective as urinalysis monitoring combined with treatment? Our results suggest that it is, at least for the type of offenders and treatments in the FOD program in Chicago. Offenders who receive urinalysis monitoring

are no more or less likely to fail during the first year, or during the first two years, on probation than those offenders who receive both urinalysis monitoring and treatment. It may be argued that the treatment group is more likely than the control group to fail simply because the former endure an greater level of program constraints and surveillance. This argument of increased risk among the treatment group would be supported if the treatment group had a substantially greater level of technical violations than the control group. These data, however, reveal no differences between the treatment and control group in the proportion of petitions to revoke which are due to technical violations.

Also of note, there is no difference in outcome by assessment instrument. That is, persons assessed by the totally subjective clinical protocol used by TASC fared no better or worse on probation than those offenders whose need for treatment was assessed by the totally objective Offender Profile Index.

What does make a difference in probation outcomes? The likelihood of a petition to revoke probation is found to be greater among those who were mandated by the court to the FOD program than among those who were referred by their probation officer. This finding may reflect the fact that court-mandated offenders are qualitatively different from those without the mandate, or it may arise because probation officers respond differently to probationers mandated to the program. Whatever the reason for the difference in likelihood of a petition to revoke

probation, it is interesting that the presence or absence of a court mandate to the FOD program does not affect the likelihood that the case will be closed with an unsatisfactory outcome.

Petitions for revocation of probation also are affected by offender's education level and ethnicity. Petitions are less likely to be filed for offenders who are high school graduates than for offenders with less education, and petitions are more likely to be filed, during the first year on probation, for nonwhite offenders than for white offenders.

The likelihood of an unsatisfactory probation outcome is found to be related to offense type, prior arrest record, age, and ethnicity. Offenders convicted of a drug offense are less likely than offenders convicted of other offenses to have their cases closed unsatisfactorily during the first year on probation; there is no difference by offense type over the first two years on probation. To some extent, this finding is counterintuitive. More consistent with expectations is the finding that unsatisfactory case closings during the first two years of probation are affected by prior arrest record.

Finally, probation outcomes are found to be related to the age and ethnicity of the offenders. Younger and middle-age offenders are more likely to have an unsatisfactory closing during the first year than are older offenders; there is no age effect on probation outcomes for the two-year period. Unsatisfactory case closings are more likely among nonwhites than whites, an effect observed for both the first year of probation and the

first two years of probation.

In summation, our analysis reveals that probation outcomes are unaffected by the FOD program variables. Instead, probation "failure" as measured by the filing of a petition to revoke probation is found to be significantly greater for probationers who were court mandated to FOD, who are nonwhite, and who had less than a high school education. When probation "failure" is defined in terms of an unsatisfactory closing of the case due to either a revocation or a new conviction, failure is significantly greater for probationers who are minorities, who are younger in age, and who are convicted of a non-drug offense.

These findings uniformly support the null hypothesis that urinalysis monitoring without treatment achieves the same results as when urinalysis monitoring is combined with a treatment. Of course, we urge caution in making generalizations beyond these data due to the limitations of the data as discussed earlier. Clearly, the FOD program in Chicago operated quite differently than did the FOD program in either Birmingham or Phoenix. In addition, there is a substantial difference among the three sites in the socioeconomic status, criminal history, and drug use history of the offenders who participated in the FOD program. Finally, our analysis of the data from Chicago differed from the strategy used in the other two sites. Nonetheless, it is worth noting that the same results occur in each site: there is no difference in probation outcome between probationers who receive urinalysis monitoring alone and probationers who receive urinaly-

sis monitoring combined with prescribed treatment. Similarly, there is no difference in probation outcome between those probationers whose needs were assessed by the local TASC instrument and those probationers whose needs were assessed by NASADAD's Offender Profile Index. Instead, the findings from the three sites indicate that the most significant effects on probation failure are ethnicity, age, prior record, and other factors unrelated to the treatment intervention.