Effectively Assessing and Preparing Inmates for Community Substance Abuse Treatment: The Portland Target Cities Project In-Jail Intervention

Michael W. Finigan, Nancy Barron, and
Shannon Carey

A hallmark of the Target Cities Program, with its emphasis on system change, was the importance placed on the development of linkages between the substance abuse treatment system and the legal system. CSAT allowed limited Target Cities funds to support treatment and pretreatment enhancements for individuals in correctional settings. In some cities, these funds were used to expand centralized intake to include sites in the criminal justice system, with the provision of standardized, comprehensive assessments and referrals best suited to inmates (Jaffe & Scheckel, 1993). The Portland Target Cities Project (PTCP) recognized the opportunity to use treatment enhancement funds to develop an innovative pretreatment program that included a centralized intake unit located in the jail, called the In-Jail Intervention Program (IJIP). Evaluators in Portland were interested in assessing its effectiveness as measured by reduced criminal recidivism. A brief description of the implementation of this central intake model provides the background for the study.

Prior Programs for Criminally Involved Substance Abusers

The previous experience of correctional facilities in the implementation of these program models and the evaluations of such programming influenced the development of IJIP. Prior attempts to establish substance abuse programs within local jails were often unsuccessful due to short stays and unpredictable release schedules of inmates, sometimes based simply on jail capacity relative to demand. Additionally, since jails are not designed with the delivery of substance abuse treatment in mind, they often fail to provide a conducive environment for these programs. These and other barriers have impeded the development of effective jail-based programs that address substance abuse problems among offenders (Peters, Kearns, Murrin, Dolente, & May, 1993; Tunis, 1994; Tunis, Austin, Morris, Hardyman, & Bolyard, 1996; Swartz, Lurigio, & Slomka, 1996).

Beginning in 1987, the federal Bureau of Justice Assistance (BJA) funded preliminary jail-based drug treatment demonstration programs in three metropolitan jails (Bush, Hecht, LaBarbera, & Peters, 1991; Peters, 1993). All three programs served both sentenced and nonsentenced inmates, were voluntary, and included linkages to community-based treatment facilities (Bush et al., 1991). Lengths of stay in the three demonstration programs ranged from 30 days to 6 months. However, the linkages were not integral to the programs, and, in at least two cases, simply involved referrals to community agencies (Bush et al., 1991; Peters et al., 1993). In spite of these limitations,

an evaluation of one of the programs concluded that, compared to untreated inmates, those who participated in treatment were less likely to be rearrested, remained in the community for longer periods of time before rearrest, and spent less time in jail during later arrests (Peters et al., 1993). Evaluations of other programs found that in-jail treatment that facilitated a continuum of service from jail into community-based treatment resulted in a reduction in recidivism (Swartz et al., 1996; Tunis et al., 1996).

More recently, Wald, Pringle, Balavage, and Edmondston (1998) described a program in Allegheny County, Pennsylvania, that offered inmates an opportunity to participate in community-based residential substance abuse treatment in lieu of incarceration. In addition to long-term residential substance abuse treatment, this program provided vocational and educational training, job placement, life skills training, family counseling, short-term community aftercare, and gender-specific treatment. This gender-specific treatment enabled women to address personal issues in separate women's groups. Women, older participants, and those who remained in the program longer were more apt to be successfully discharged than males, younger participants, and those who stayed only a short time. Participant outcomes, particularly recidivism, were significantly improved, but the differences between those who participated in the program and those who did not diminished over time (Wald et al., 1998).

The PTCP In-Jail Intervention Program

The 1992 Drug Use Forecasting data ranked Portland fifth of 13 participating cities in drug use among male arrestees, and second (81%) in drug use of female arrestees (Office of Alcohol and Drug Abuse Programs, State of Oregon, 1993). In response to this finding, and under the auspices of the Portland Target Cities Project, a strategic planning committee along with the IJIP program director developed the Portland In-Jail Intervention Program (IJIP). The goal of IJIP was to identify substance-abusing individuals incarcerated within the jail and to provide them a pretreatment program designed to prepare them to enter, and successfully complete, community-based substance abuse treatment upon their release. Separate housing for men and women in the jail provided the opportunity for gender-specific approaches within the IJIP program.

Program Collaborators

Funding from both the Multnomah County Sheriff's Office and the Target Cities Program (via a cooperative agreement with the State of Oregon and the Multnomah County Department of Community and Family Services) provided the financial support for the IJIP. A strategic planning process facilitated by the Sheriff's Office also involved the Departments of Community Corrections and Health (primarily Corrections Health) in developing the IJIP program model. Within the IJIP the following components were implemented:

SCREENING AND ASSESSMENT PROCEDURES: Inmates received two levels of screening. Jail staff, as part of their normal screening routines, screened all inmates to determine if they met the administrative eligibility requirements for the program. Those requirements were a suspected substance abuse problem, an anticipated incarceration time of 14 days or more, and a high probability of being released to the community.

2

Individuals who met these administrative eligibility criteria were then assessed to determine their clinical appropriateness for the program using the Multnomah Clinical Assessment. The assessment and referral process provided through IJIP parallel those at other CIU sites in Portland.

A PRE-RELEASE PROGRAM: The pre-release program was designed to prepare the individual for substance abuse treatment in the community. The program was designed to take 14 days; its length was established based on a study conducted by Multnomah County Sheriff's Office (MCSO) staff. In this study, the MCSO staff reviewed the records of all persons booked and calculated the average time spent in jail. The study revealed that the typical inmate spent approximately 14 days in the county jail. Depending on the availability of space, inmates were allowed to be moved to dedicated 32-bed male or 15-bed female modules in the county's maximum-security jail facility.

The male component of the project combined the 12-step program of Alcoholics Anonymous, psycho-education, acupuncture, relapse assessment, and relapse therapy. IJIP inmates participated in psycho-educational groups to assist them in understanding the negative consequences of their substance use, reduce criminal thinking, orient them toward community treatment, and train them in life skills. Annually, a celebration was held in which staff and former IJIP participants gathered to acknowledge their efforts toward sobriety in IJIP and in community treatment.

A RELEASE FROM THE JAIL DIRECTLY TO COMMUNITY TREATMENT: IJIP policy recommended that counselors accompany participants directly from the jail to the community treatment provider at the time of release. Coordination of this was often difficult for the counselors, since release frequently occurred outside of the regular workday. During much of the project period, the jail facilities were under federal court order to maintain occupancy below certain established levels. Therefore, it was often necessary to release the least dangerous inmates when new offenders were brought in, even in the middle of the night, when counselors, as well as treatment provider staff, were unavailable. Since IJIP participants were habitually among the least dangerous offenders occupying space in the high security facility, classification officers frequently found it necessary to release them outside of business hours. Despite this challenge to critical policy, Windell (1999a, 1999b) reported IJIP's success in increasing access to community substance abuse treatment for inmates.

Methods

Participants

This study focused on samples of IJIP inmates jailed between 1995 and 1996. Separate sample groups were drawn for males and females. The female program group included all women who met the eligibility criteria and completed the program and were released into the community. The male program group consisted of a random sample of all men who completed the program and had been released into the community.

There were two types of comparison groups for both males and females. The first type (the eligible group) included a randomly selected sample from the pool of inmates

from the 1995-96 time period who applied to, and were eligible for, the program but who were released from jail before entering IJIP or who entered IJIP but did not stay the minimum 14 days to receive the basic program. Thus, some inmates in the eligible group may have received some of the program but did not experience the all-important transition into the community. The second type (the matched system comparison group) consisted of a sample selected from the pool of all booked arrestees drawn from 1994-95 (the year prior to IJIP) system booking records and matched to the program group on prior arrests, age, and race. This was aggregate matching with pools developed for those system participants with prior arrest categories, age categories, and race categories that matched those in the program groups; samples were then selected randomly from within those categories. This ensured that the system group samples did not differ in the aggregate from the program groups on these three variables.

For this analysis, the groups were restricted to only those individuals for whom data could be obtained that covered a period of 15 months subsequent to their criterion arrest date. There were 98 females in the IJIP group, 84 females in the eligible (minimal treatment) comparison group, and 98 in the matched system comparison group. There were 95 males in the male program group, 74 males in the eligible comparison group, and 95 males in the matched system comparison group.

Data Sources

Data for this study were extracted from the following sources:

- the Oregon Law Enforcement Database System (LEDS), which records all statewide arrests;

- the Offender Profile System, which records information about prison incarceration as well as other criminal history data;

- the CPMS Multnomah County booking records, which contain booking information on arrestees booked through the Multnomah County Justice Center jail; and

- the Participant Process Monitoring System (PPMS) State of Oregon Substance Abuse Treatment records system, in which all publicly funded substance abuse treatment providers must report on their participants.

Analysis Strategy

Two measures were selected as indicators of the effectiveness of the program. One was the number of subsequent arrests during the 15-month follow-up period. The second was the number of months of incarceration during the same 15-month period. Both are viewed as representing impacts on, and costs incurred by, the criminal justice system rather than as measures of reduction in, or control over, substance abuse.

For count data, such as the number of subsequent arrests, the Poisson regression model is typically recommended (e.g., Long, 1997), because ordinary least squares regression model (OLS) or logistic regression models may result in incorrect standard errors and significance tests. Therefore, in analyzing the outcome variable, number of subsequent arrests, Poisson regression was used.

Because the distribution of the number of months of incarceration was right skewed, with approximately 44% of males and 43% of females having no incarceration, researchers were concerned about distributional assumptions (nonconstancy of error variance and the distribution of errors). To avoid these potential difficulties, months of incarceration were grouped into three ordinal categories: 0, less than or equal to 6 months of incarceration, and greater than 6 months of incarceration. An ordinal logistic regression to predict these three categories of incarceration time was used. SAS Version 8.1 was used for both sets of analyses (PROC GENMOD for the Poisson regression and PROC LOGISTIC for ordinal regression models).

Males and females were analyzed separately for both outcome variables. Two dummy variables were created to examine differences between the program, system, and eligible groups. The first dummy variable represents the comparison of the program group to the system group, whereas the second dummy variable represents the comparison of the eligible and the system groups. In addition to the program comparisons, the number of prior arrests, age, race, and whether or not the individual entered treatment by 6 months were entered as predictors.

Finally, it should be noted that because the system group was matched with the program group, using race and prior arrests as matching criteria, it is unlikely that these factors will help differentiate the system group from the program group. However, no matching was applied to the eligible group, so it still makes sense to include race and prior arrests in a model that includes both comparison groups.

Results

Table 10-1 presents results from the Poisson regression models predicting subsequent arrests for males and females separately. Here the program group is compared to the system group and the eligible group to the system group. The program group was significantly less likely to be subsequently arrested than the system group for both males and females. This suggests that compared to a matched group of arrestees booked through the system and not receiving the program, program participants have fewer subsequent arrests. There was no significant independent effect for access to community treatment for males or females.

To determine whether there was a significant difference between the program and eligible groups, a supplementary Poisson regression was conducted using an alternative dummy coding of the group variable to compare the program and system groups to the eligible group. The same set of covariates was used for this analysis. Results indicated that the program group had significantly fewer arrests than the eligible group for both females ($b=-.41$, $X^2=10.15$, $p<.001$) and males ($b=-.51$, $X^2=12.05$, $p<.001$).

Table 10-1
Poisson Regression Models of the Number of Subsequent Arrests: Program vs. System and Eligible vs. System

Female	Coefficient	SE	p-value
Unstandardized			
Intercept	1.3274	0.2118	(.0001
Program vs. system	- 0.6254	0.1248	(.0001
Eligible vs. system	-0.2153	0.1006	0.0323
Prior arrests	0.0236	0.0073	0.0012
Age	-0.0214	.0068	0.0016
Race	0.3177	0.0904	0.0004
Community treatment	- 0.0759	0.1226	0.5357
Male	*Coefficient*	*SE*	*p-value*
Intercept	0.5779	0.2469	0.0192
Program vs. system	-0.3117	0.1446	0.0311
Eligible vs. system	0.1976	0.1228	0.1075
Prior arrests	0.0321	0.0096	0.0009
Age	-0.0134	0.0072	0.0613
Race	-0.2305	0.1132	0.0418
Community treatment	0.2390	0.1653	0.1481

Table 10-2
Poisson Regression Models of the Number of Subsequent Arrests: Program vs. Eligible and System vs. Eligible

Unstandardized			
Female	*Coefficient*	*SE*	*p-value*
Intercept	1.1120	0.2101	<.0001
Program vs. eligible	-0.4100	0.1287	.0014
System vs. eligible	0.2153	0.1006	0.0323
Prior arrests	0.0236	0.0073	0.0012
Age	-0.0214	.0068	0.0016
Race	0.3177	0.0904	0.0004
Community treatment	- 0.0759	0.1226	0.5357
Male	*Coefficient*	*SE*	*p-value*
Intercept	0.7755	0.2518	0.0021
Program vs. eligible	-0.5093	0.1467	0.0005
System vs. eligible	0.1976	0.1228	0.1075
Prior arrests	0.0321	0.0096	0.0009
Age	-0.0134	0.0072	0.0613
Race	-0.2305	0.1132	0.0418
Community treatment	0.2390	0.1653	0.1481

The results of the ordered logit model predicting months of incarceration for males and females separately are shown in Tables 10-3 and 10-4. The female program group spent marginally fewer months incarcerated compared to females in the system group ($p=.07$), but the difference was not significant for males. There was no significant difference between the eligible and the system group among both females and males.

Table 10-3
Predicting 3 Categories of Days Incarcerated (0, 0-6 months, >6 months):
Program vs. System Dummy and
Eligible vs. System Dummy

Females

The LOGISTIC Procedure
Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Error	Chi-Square	Pr> ChiSq	Standardized Estimate
Intercept	1	-0.3200	0.5811	0.3032	0.5819	
Intercept2	1	1.6234	0.5873	7.6413	0.0057	
Program dummy	1	-0.5746	0.3194	3.2364	0.0720	-0.1513
Eligible dummy	1	0.2755	0.2838	0.9428	0.3316	0.0701
Prior arrests	1	0.0718	0.0210	11.6946	0.0006	0.2384
Age	1	-0.0533	0.0181	8.6868	0.0032	-0.2061
Percent non-white	1	0.2226	0.2541	0.7676	0.3810	0.0568
Community Treatment	1	-0.0694	0.3031	0.0524	0.8190	-0.0173

Odds Ratio Estimates

Effect	Point Estimate	95% Wald ConfidenceLimits	
Program dummy	0.563	0.301	1.053
Eligible dummy	1.317	0.755	2.297
Prior arrests	1.074	1.031	1.120
Age	0.948	0.915	0.982
Percent non-white	1.249	0.759	2.056
Community treatment	0.933	0.515	1.690

Table 10-4
Predicting Three Categories of Days Incarcerated (0, 0-6 months, >6 months):
Program vs. System Dummy and
Eligible vs. System Dummy

Males

The LOGISTIC Procedure
Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Error	Chi-Square	Pr> ChiSq	Standardized Estimate
Intercept	1	-1.8362	0.5644	10.5858	0.0011	
Intercept2	1	-0.3507	0.5514	0.4045	0.5248	
Program dummy	1	0.2025	0.3099	0.4272	0.5134	0.0537
Eligible dummy	1	0.7880	0.2983	6.9789	0.0082	0.1954
Prior arrests	1	0.1081	0.0236	20.9560	<.0001	0.3117
Age	1	-0.0182	0.0157	1.3402	0.2470	-0.0777
Percent non-white	1	0.00170	0.2482	0.0000	0.9945	0.000446
Community Treatment	1	0.0902	0.3639	0.0614	0.8043	0.0183

Odds Ratio Estimates

Effect	Point Estimate	95% Wald ConfidenceLimits	
Program dummy	1.224	0.667	2.248
Eligible dummy	2.199	1.226	3.945
Prior arrests	1.114	1.064	1.167
Age	0.982	0.952	1.013
Percent non-white	1.002	0.616	1.629
Community treatment	1.094	0.536	2.233

As before, an alternative dummy coding was used to test for differences between the program and eligible groups using the same set of predictors. Tables 10-5 and 10-6 show these results. Results indicated the length of incarceration was significantly less for females in the program group (b=-.85, x^2=7.06, p<.01) and marginally less in the program group for males (b=-.59, X^2=3.27, p=.07).

Table 10-5
Predicting Three Categories of Days Incarcerated (0,0-6 months, >6 months): Program vs. Eligible Dummy and
System vs. Eligible Dummy

Females

The LOGISTIC Procedure
Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Error	Chi-Square	Pr> ChiSq	Standardized Estimate
Intercept	1	-0.0445	0.5709	0.0061	0.9379	
Intercept2	1	1.8990	0.5814	10.6686	0.0011	
Program vs. eligible	1	-0.8502	0.3199	7.0623	0.0079	-0.2238
System vs. eligible	1	-0.2755	0.2838	0.9428	0.3316	-0.0724
Prior arrests	1	0.0718	0.0210	11.6946	0.0006	0.2384
Age	1	-0.0533	0.0181	8.6868	0.0032	-0.2061
Percent non-white	1	0.2226	0.2541	0.7676	0.3810	0.0568
Community Treatment	1	-0.0694	0.3031	0.0524	0.8190	-0.0173

Odds Ratio Estimates

Effect	Point Estimate	95% Wald ConfidenceLimits	
Program vs. eligible	0.427	0.228	0.800
System vs. eligible	0.759	0.435	1.324
Prior arrests	1.074	1.031	1.120
Age	0.948	0.915	0.982
Percent non-white	1.249	0.759	2.056
Community treatment	0.933	0.515	1.690

Table 10-6
Predicting Three Categories of Days Incarcerated (0, 0-6 months, >6 months):
Program vs. Eligible Dummy and
System vs. Eligible Dummy

Males

The LOGISTIC Procedure
Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Error	Chi-Square	Pr> ChiSq	Standardized Estimate
Intercept	1	-1.0482	0.5694	3.3891	0.0656	
Intercept2	1	0.4373	0.5651	0.5988	0.4391	
Program vs. eligible	1	-0.5855	0.3240	3.2648	0.0708	-0.1552
System vs. eligible	1	-0.7880	0.2983	6.9789	0.0082	-0.2090
Prior arrests	1	0.1081	0.0236	20.9560	<.0001	0.3117
Age	1	-0.0182	0.0157	1.3402	0.2470	-0.0777
Percent non-white	1	0.00170	0.2482	0.0000	0.9945	0.000446
Community Treatment	1	0.0902	0.3639	0.0614	0.8043	0.0183

Odds Ratio Estimates

Effect	Point Estimate	95% Wald ConfidenceLimits	
Program vs. eligible	0.557	0.295	1.051
System vs. eligible	0.455	0.253	0.816
Prior arrests	1.114	1.064	1.167
Age	0.982	0.952	1.013
Percent non-white	1.002	0.616	1.629
Community treatment	1.094	0.536	2.233

Discussion

Building on previous research, the Portland Target Cities Project developed the IJIP as a viable alternative to providing treatment services in jail. IJIP took into consideration frequently short and unpredictable periods of incarceration and an inmate's need for support in transitioning into the community. It combined central intake functions with pretreatment programming. Separate wards for men and women allowed for gender-specific experiences within the same general program. Functioning as a central intake, IJIP staff assessed an inmate's need for substance abuse treatment and the appropriate treatment level, as well as requirements for other ancillary services such as employment, mental health, social and familial assistance, and assistance with legal issues. Emphasis was placed on educating inmates about the effects of long-term alcohol and drug abuse on physical and mental health and social functioning. Rather than seeking to treat the participants, however, IJIP focused on preparing individuals for treatment and for the transition to beds in a community-based residential alcohol and drug treatment program.

Through this program of comprehensive assessment, treatment readiness activities, and, whenever possible, accompanied transfer to community treatment, IJIP reduced the number of arrests and the number of individuals incarcerated, particularly among the female population. Reduced arrests and incarcerations were evident even when the former inmates failed to enter or complete community treatment, demonstrating a significant program effect independent of, and in addition to, the significant effect of community treatment. Program success was primarily defined by the frequency of rearrest, rather than producing participants who had no rearrests.

These conclusions are clearest and strongest for the female program. The results for the male program showed some similar trends, but these results sometimes did not achieve statistical significance. Interviews with key staff suggested that the female offenders may have been more frequently escorted into treatment settings after release than the men. This possible distinction may have accounted for the differences in outcomes between the two programs.

Unfortunately, this is a single-site analysis. Data available for the evaluation of IJIP were not available in the varied criminal justice programs of other Target Cities projects. The Portland Target Cities Project was unique in its broad access to system data. IJIP was also the single instance among the Target Cities projects of a criminal justice pretreatment intervention.

It should also be noted that this is a quasi-experimental design. Random assignment to research conditions was not possible. This necessitated the use of two comparison groups in order to demonstrate that a program effect had occurred. Nonetheless, it is possible that some unknown (and perhaps unmeasurable) preexisting difference between the groups accounts for these results. It is also important to note that in a separate study, the effect of the program on recidivism diminished over time (Wald et al., 1998). A longer-term study would be necessary to test this in the case of IJIP.

In conclusion, IJIP exemplified programming that can be developed through linkages among substance abuse, health, and criminal justice. IJIP leveraged Target Cities treatment enhancement dollars through integrating system change efforts with the Department of Community and Family Services and the Sheriff's Office. IJIP included a pretreatment intervention based on the assessment and referral model, the development of standardized assessment, and the management information infrastructure of the PTCP. Early PTCP evaluation of IJIP helped secure its continuing funding. The system change focus of the Target Cities Program provided a context in which innovative programming could be developed. The PTCP IJIP project demonstrated that a pretreatment central intake program integrating multiple service system components might reduce rearrests for sub-stance-involved female inmates.

Such results bolster one of the original premises of the Target Cities Program: that the case management of criminal justice participants is a valid tool in improving outcomes for this special population of substance abusers.