

Employment Services Utilization and Outcomes among Substance Abusing Offenders Participating in California's Proposition 36 Drug Treatment Initiative

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Abstract

California drug treatment programs may use funds to address barriers to work faced by Proposition 36 offenders, most of whom are not working at treatment entry, but employment services utilization and related behavioral outcomes have never been studied. This study examined primary data collected on 1,453 offenders by 30 programs during 2004 to explore the characteristics, employment services utilization, and outcomes of those who did and did not receive employment services while in drug treatment. One-year outcomes were mostly similar across groups, however, increases in the proportion of offenders employed, receiving income from employment and family or friends, and being paid for work were significantly greater among the received-employment-services group, and a greater proportion of this group also completed drug treatment. Employment services utilization was less likely for persons recruited from outpatient settings and more likely with greater severity of family/social problems and desire for services. Odds of employment one-year post-treatment entry were higher for those of Hispanic race/ethnicity (vs. White) and for those with treatment completion/longer retention but lower for those who were older, lived in specific counties, had greater employment problem severity at intake, and received

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Introduction

Representing a significant change in criminal justice policy and a major source of drug treatment funding in the state, California's voter-initiated Proposition 36 (Prop 36) annually routes approximately 50,000 drug offenders to community-based substance abuse treatment in lieu of routine criminal justice processing. About two thirds of Prop 36 clients are not working at treatment entry.¹ Specified in the law, Prop 36 funds may be used specifically to provide employment and vocational training as part of drug-abuse treatment. Additionally, Prop 36 offenders who successfully complete treatment can petition the court to have their Prop 36 criminal record expunged, thereby removing a significant barrier (i.e., a felony conviction) to future employment. Few studies to date have addressed the issues of employment services utilization and outcomes among Prop 36 offenders.

Ample research shows strong associations between employment and substance-abuse treatment outcomes,^{2,3} and employment has been shown to be a turning point for making significant changes in criminal and substance-abuse trajectories.⁴⁻⁶ Receipt of vocational services as a part of drug treatment has been associated with higher earnings after treatment.⁷ Additionally, some studies suggest that criminal-justice-involved populations may be more highly motivated to gain employment and experience better employment outcomes than other treatment clients due to external pressures such as meeting requirements set by probation or parole or to avoid potential incarceration.⁸

Yet, employment has been one of the most difficult outcomes to improve in the drug treatment field, and substance-abusing offenders face many barriers to work. The prevalence of job placement and vocational counseling within jails and by community correctional agencies has been shown to be quite low.⁹ Few substance-abuse treatment programs offer vocational training options,¹⁰ and employment typically is viewed as a byproduct of successful treatment rather than a strong component of the treatment itself. Pretreatment employment experiences have been found to vary by drug type, with fewer methamphetamine users having any employment experience prior to entering care.¹¹ Individuals without a job at treatment entry may have greater needs for services to address medical or mental health problems.^{12,13} Drug abusers who reenter the community directly from prison or who live in the community with a criminal record or history of public assistance, homelessness, or mental illness face added personal and system barriers to gaining or maintaining employment,¹⁴⁻¹⁸ which further compromise their ability to successfully integrate into society. In addition, substance abusers may be less willing than others to take advantage of the employee-assistance programs that are available.¹⁹ Finally, in some areas, especially small or rural communities, there are few job prospects, and the jobs that are available receive many applicants, making getting a job a real challenge for which most Prop 36 clients are ill-prepared to undertake.

Statewide Prop 36 data show improvements in employment status one year post-initial assessment, particularly among treatment completers.¹ Other research has shown that employment is one of the few factors associated with success in analyses of short-term²⁰ and longer-term Prop 36 treatment outcomes,²¹ two findings that echo similar results from studies of other substance-abuse treatment populations.²²⁻²⁴ Prior analysis conducted by the authors revealed that few services besides alcohol- and drug-treatment services were provided during Prop 36 treatment and that none of the factors examined were significantly related to receipt of employment services.²⁵ Aside from this work, the employment needs, services utilization, and related outcomes of Prop 36 offenders have received relatively little attention.

State and local stakeholders have expressed concerns regarding their ability to adequately address the multiple needs of offenders entering drug treatment under Prop 36.^{26,27} The amount and effectiveness of services provided is of particular concern, especially to legislators charged with deciding funding allocations needed for continuing the program and making improvements to it. More information on employment outcomes can inform decisions designed to enhance Prop 36 policy and practice.

To better understand the use of employment services and outcomes among substance abusing offenders in Prop 36 drug treatment, the following research questions will be examined: (1) Who receives employment services? (2) How intense is the level of employment services that are received, and what types of other income-related services are received? (3) Are there differences between offenders who do and do not receive employment services in employment-related outcomes, in other types of outcomes (i.e., arrest, drug use, treatment retention and completion), or in the degree of change in employment-related behaviors from intake to follow-up? (4) Is receipt of employment services associated with offender characteristics? (5) What factors predict being employed 12 months after assessment for treatment? It was hypothesized that individuals who received employment services would exhibit more severe employment problems at intake assessment, the amount of employment services received would be low, 12-month outcomes would be better among offenders who received employment services, and receipt of employment services would be associated with being employed 12 months after intake.

Methods

Data source

Data analyzed in this study were derived from "Treatment System Impact and Outcomes of Proposition 36," a NIDA-funded multi-site prospective treatment outcome study designed to assess the impact of Prop 36 on California's drug treatment delivery system and evaluate the effectiveness of services delivered. Thirty treatment assessment sites in five counties were selected for participation based on geographic location, population size, and diversity of Proposition 36 implementation strategy (see Hser et al. 2003²⁸ and 2007²⁹ for additional information). Collectively, these five counties account for about 20% of all Prop 36 offenders that enter treatment each year. County assessment center or treatment program staff collected data from all Prop 36 participants assessed for treatment needs in the selected counties during 2004. A sample of participants who had completed the intake assessment was randomly selected for follow-up by telephone with UCLA-trained interviewers at 3 and 12 months post-assessment. This group of offenders represented a relatively small proportion, about 5%, of the larger statewide Prop 36 population in drug treatment during 2004. For each interview, participants were paid \$10 and \$15, respectively. The Institutional Review Boards at UCLA and at the California Health and Human Services Agency approved all study procedures.

Subjects and recruitment

Of all participants assessed for treatment, 1,588 were randomly targeted for follow-up, and of these, 1,465 completed the 3-month follow-up interview (48 were incarcerated, three were deceased) and 1,290 completed the 12-month follow-up interview (73 were incarcerated, 12 were deceased). Excluding the deceased and incarcerated from the interview pool, the interview completion rates were 95% and 86%, respectively. Comparisons between those who completed the interview and those who did not complete the interview revealed no statistically significant differences in all variables examined (county, treatment modality, age, race/ethnicity, marital status, education, employment, lifetime arrest, and primary drug problem) except for gender. More

females (30% vs. 23%) were in the follow-up completion group than in the non-completion group. Of the total sample, mean age was 36.8 years, 29.1% were women, 50.6% were White, 24.8% were Hispanic, 18.1% were African-American, 6.3% were other race/ethnic group, mean years of education was 11.7, 51.4% reported methamphetamine as their primary drug, and more than one-third was employed full- or part-time (38.6%), one-third was not in the labor force (32.5%), and more than one-quarter (28.7%) was unemployed (i.e., looking for work). For the most part, the sample was equally distributed across counties and programs.

At the 3-month follow-up interview, participants were asked about the number of times they had seen someone (e.g., employment specialist, counselor, or social worker) regarding employment opportunities, training, or education in the 3 months following the Prop 36 assessment for treatment, and those who answered one or more times (n=192) were categorized as having received employment services and those who answered with zero times (n=1,261) were categorized as not having received employment services (another 12 individuals did not answer this question and were excluded from analyses). Individuals who reported only seeing someone regarding unemployment compensation, welfare, social security, housing, or other income were coded as not having received employment services.

For several reasons, the “not in the labor force” at intake group was included in all analyses. Analysis of the “not in the labor force” group compared to the employed and unemployed groups showed that more people in the “not in the labor force” group were women (39% vs. 21% and 27%, respectively), mean age was 38 which was slightly older than the mean age of those in the other two groups (aged 35–37), the *Addiction Severity Index* (ASI) composite scores indicated that their medical and psychiatric problems were more severe at intake, and they had more prior arrests (11 vs. 7–8). However, very few in the “not in the labor force” group indicated that their usual occupation was student/homemaker/disabled, and instead most had held skilled or unskilled jobs just prior to intake. Furthermore, at intake, about half were being supported by others, primarily by family or friends or by Supplemental Security Income (SSI)/pensions/other benefits. Finally, about 30% of those who did receive employment services while in treatment were “not in the labor force” individuals. These data suggest that while some individuals who were categorized as “not in the labor force” did not “need” or “want” to work or had to contend with physical or mental illnesses that would have made joining the workforce especially challenging, many other people in this group had worked in the past and received employment services while in Prop 36 drug treatment but were dependent on others for support despite being in their prime income-earning years.

Instruments and measures

The baseline and 12-month outcome assessment included the *ASI*, a structured interview that captures demographic information and also assesses problem severity in seven areas: alcohol and drug use, employment, family and social relationships, legal, psychological, and medical status.^{30,31} A composite score can be computed for each scale to indicate severity in that area; scores range from 0 to 1 with higher scores indicating greater severity.

Intensity of employment and other services was calculated by summing the number of times a client received services across respective ASI domains (either in the program or through referrals) during the first 3 months of treatment. Data were collected with the Treatment Services Review (TSR),³² an instrument used to record services received by clients during treatment. Information includes the number of professional services received for each of the ASI domains. Administered at the 3-month follow-up, the TSR was expanded to capture receipt of public assistance services and benefits (e.g., general relief, food stamps, Employment Development Department services) and survival support services such as assistance with housing, transportation, and other basic needs (e.g., food) over the entire 3-month follow-up timeframe.

Employment outcome was indicated as working full-time or part-time at the 12-month follow-up interview, as indicated on the ASI.

Statistical analyses

Differences between individuals who did and did not receive employment services in characteristics and history of substance abuse, treatment, and employment at intake as well as intensity of services received and differences in the degree of change over time were compared by using Pearson's chi-square test (or Fisher's exact test for small cell sizes) for categorical measures and the two-sample Student's *t* test (or Satterthwaite's *t* test when the homogeneity of variance was rejected) for continuous measures.

Controlling for county (as a set of dummy variables), logistic regression models were applied to examine predictors of receipt of employment services and employment status 12 months after intake, respectively. Selection of variables for inclusion in the logistic regression models was informed by the descriptive analysis of characteristics. When indicators of similar behaviors were highly correlated, only one indicator was chosen for inclusion. Before the logistic regression modeling was implemented, diagnostic analysis with variance inflation factor was also conducted to check that no potential multicollinearity biases existed among the selected predictors. Predictors examined in the logistic regression models included age, gender, ethnicity, educational attainment, primary drug type, county of residence, ASI employment and family/social severity scores, paid for work in the 30 days prior to treatment entry, desire for employment services, receipt of employment and other related services, treatment modality, and treatment completion/retention. Sensitivity analyses were conducted on the subset of individuals who were unemployed or not in the labor force at treatment entry (i.e., those who were employed at intake were omitted) and results indicated no differences in the reported patterns of outcomes, predictors of employment services utilization, and predictors of employment at follow-up. Unless otherwise stated, the significance level for all statistical tests was set at $p < 0.05$.

Results

Characteristics of Proposition 36 offenders who received employment services

Very few Prop 36 clients reported receiving employment services (13%). On most indicators, the characteristics of clients who received employment services were very similar to the characteristics of those who did not receive employment services (Table 1). As indicated by the ASI composite scores, clients who received employment services did have more severe employment (0.76 vs. 0.70) and family/social (0.19 vs. 0.15) problems, and more of them were treated in a residential as opposed to an outpatient setting (27.0% vs. 17.5%). None of the other ASI composite scores indicated significant differences between the two groups in severity of problems related to alcohol and drug use, or medical, psychiatric, and legal issues (data not shown).

More differences were revealed by analysis of employment-related variables. Compared to clients who did not receive employment services, fewer clients who did receive services were employed at intake (29.2% vs. 40.1%) and more were unemployed (40.9% vs. 26.9%), a smaller percentage had been paid for working in the prior 30 days (24.3% vs. 37.8%) and had slightly fewer days of paid work over the same time period (3.5 vs. 5.7). More of the clients who received employment services also received income from welfare (15.8% vs. 8.7%), and fewer received income from a pension or SSI (6.8% vs. 13.2%) or employment (26.4% vs. 39.0%). Furthermore, fewer of the clients who received employment services reported having another person dependent on them for support (22.3% vs. 29.7%), and more of them indicated at intake that they wanted employment services (59.4% vs. 45.0%).

Intensity of employment and other income-related services

Of the Prop 36 clients who did receive services for employment problems, it was reported that services were received a mean of 4.8 times over the 3 months following assessment for treatment

Table 1

Characteristics of Proposition 36 offenders at baseline treatment assessment by service status

	Received employment services?	
	Yes (<i>n</i> =192; 13%)	No (<i>n</i> =1,261; 87%)
Age, Mean (SD)	37.6 (9.7)	36.7 (9.7)
Race, %		
White	45.3	51.4
Hispanic	25.0	24.8
Black	19.2	18.0
Other	10.4	5.7
Women, %	34.3	28.3
Education, Mean (SD)	11.7 (1.6)	11.7 (1.0)
Married, %	13.3	15.1
Arrested in past 30 days, %	20.8	23.9
County, %		
County 1	22.9	26.0
County 2	20.8	22.2
County 3	23.9	24.2
County 4	9.9	11.1
County 5	22.4	16.3
ASI employment severity score, Mean (SD)**	0.76 (0.25)	0.70 (0.29)
ASI family/social severity score, Mean (SD)**	0.19 (0.21)	0.15 (0.19)
Drug use and treatment		
Primary drug, %		
Methamphetamine	47.8	51.9
Cocaine	14.8	11.5
Marijuana	12.7	12.1
Alcohol	6.3	7.9
Heroin	11.7	8.4
Other	3.1	2.7
Used primary drug in past 30 days, %	52.0	49.2
Modality, %**		
Narcotic replacement therapy	6.4	4.1
Outpatient	66.4	78.3
Residential	27.0	17.5
Number of prior treatments, Mean (SD)	2.9 (5.1)	2.2 (3.8)
Employment status		
Current employment status, %**		
Employed	29.2	40.1
Unemployed	40.9	26.9
Not in labor force	29.7	32.8
Paid for work in past 30 days,%**	24.3	37.8
Days paid for working in past 30 days, Mean (SD)**	3.5 (7.4)	5.7 (9.0)
Had employment problems in past 30 days, %	45.1	38.0
Wants employment services, %**	59.4	45.0

Table 1
(continued)

	Received employment services?	
	Yes (n=192; 13%)	No (n=1,261; 87%)
Indicators of recent (past 30 days) income		
Income amount, \$, Mean (SD)	466 (1,588.6)	590 (943.4)
Income source, %		
Employment**	26.4	39.0
Unemployment	2.6	2.4
Welfare**	15.8	8.7
Pensions, SSI**	6.8	13.2
Family, friends	28.5	27.9
Someone contributed to support,%	50.5	46.4
Others depended on person for support, %*	22.3	29.7
Received psychiatric pension, %	4.4	5.9

* $p < 0.05$; ** $p < 0.01$

(Table 2). Compared to their counterparts, more clients who received employment services also saw a professional regarding unemployment benefits (30.2% vs. 5.9%), more had individual or group sessions to discuss employment and support problems (59.3% vs. 9.8%), and more had been in school or received vocational training (7.8% vs. 3.9%).

There were also some differences in the type of additional employment/support-related services received. Individuals who obtained employment services also received more services related to General Relief (11.4% vs. 6.0%), food stamps (15.1% vs. 8.2%), public assistance (7.8% vs. 2.7%), EDD services (5.2% vs. 1.9%), transportation (17.4% vs. 6.5%), and other basic needs (10.5% vs. 5.1%). However, fewer of the clients who received employment services got SSI services (4.1% vs. 10.0%).

Outcomes 12 months after treatment assessment

Next, differences were examined in outcomes between those who received employment services and those who did not (Table 3). At the 12-month follow-up, the two groups demonstrated similar improvements in most areas examined. About half of offenders in both groups were employed and had been paid for work in the prior month (although slightly more of those who received services were unemployed and fewer were not in the labor force), 10% or less had been arrested, and approximately 15% had used their primary drug during the past 30 days. There was no significant difference in the employment ASI severity score at follow-up between the two groups.

The only difference in sources of income was that more of those who received employment services reported receiving support from family and friends (55.1% vs. 41.3%). About half of both groups received income from employment, very few reported receipt of unemployment benefits, and similar percentages received income from welfare or a pension/SSI. Interestingly, the ASI score measuring severity of family and social problems remained more severe at follow-up among those who received employment services (0.07 vs. 0.06).

Table 2

Receipt of employment and other income-related services over 3 months following Proposition 36 treatment assessment

	Received employment services?	
	Yes	No
	(<i>n</i> =192)	(<i>n</i> =1,261)
Employment and unemployment services		
Number of times received employment services, Mean (SD)**	4.8 (9.4)	—
Saw specialist, counselor, social worker regarding unemployment compensation, welfare, social security, housing or other income %**	30.2	5.9
Had individual/group session about employment/support problem, %**	59.3	9.8
Other income-related services, %		
Been in school or training, %**	7.8	3.9
Medi-Cal	16.1	13.9
General relief**	11.4	6.0
Food stamps**	15.1	8.2
Public assistance**	7.8	2.7
Employment Development Dept (EDD)**	5.2	1.9
Supplemental Security Income (SSI)**	4.1	10.0
Women, Infants, and Children (WIC)	2.9	1.3
Child Protective Services (CPS)	1.1	1.1
Other services	2.0	1.7
Additional assistance, %		
Housing	7.3	4.7
Transportation**	17.4	6.5
Other basic needs**	10.5	5.1

* $p < 0.05$; ** $p < 0.01$

Examination of the degree of change from assessment to one year later indicates that offenders who received employment services experienced greater improvements in some areas. For example, more offenders who received employment services had become employed at follow-up compared to baseline (28.0% increase) than those who did not receive employment services (16.0% increase). Similarly, greater change occurred from baseline to follow-up among people who received employment services, compared to people who did not receive employment services, when examining the change in percentages of people paid for work (an increase of 33.1% vs. 17.0%) and receiving income from employment (an increase of 30.5% vs. 15.6%) and from family/friends (26.6% vs. 13.4%). The magnitude of the changes in these indicators—employment ($p=0.02$), being paid for work ($p<0.001$), income from employment ($p=0.002$), and income from family/friends ($p<0.001$)—was statistically significant between groups. Also, for both groups, there was a decrease over time in the ASI employment severity score, an increase in the number of days paid for work, an increase in income from pension/SSI, and an increase in employment income amounts; however, differences in the magnitude of these changes were not statistically significant.

Table 3

Offender status 12 months after Proposition 36 treatment assessment

	Received employment services?	
	Yes (n=192)	No (n=1,261)
Employment outcomes		
Employment status, % ^{b,c}		
Employed (full/part-time)	57.2	56.1
Unemployed	11.5	8.8
Not in labor force	31.2	35.0
Indicators of recent (past 30 days) income		
Paid for work, % ^d	57.4	54.8
Days paid for work, Mean (SD)	8.3 (8.5)	9.3 (9.6)
Income amount, \$, Mean (SD)	922.1 (889.0)	1,065.0 (1,003.8)
Income source, %		
Employment ^d	56.9	54.6
Unemployment	<1.0	1.7
Welfare	13.7	9.3
Pension, SSI	13.2	13.8
Family, friends ^{b,d}	55.1	41.3
ASI employment severity score, Mean (SD)	0.59 (0.31)	0.58 (0.33)
ASI family/social severity score, Mean (SD) ^a	0.07 (0.11)	0.06 (0.11)
Other outcome indicators		
Arrested in past 30 days, %	6.9	10.3
Used primary drug in past 30 days, %	16.0	14.6
Days in treatment, Mean (SD)	154.2 (123.9)	134.4 (116.2)
Treatment retention ≥90 days, %	60.5	55.0
Completed drug treatment, % ^b	51.3	38.5
Completed Proposition 36 program	42.7	37.1

Results remained unchanged when offenders who were employed at intake were omitted from analysis

^{a,b} Differences between groups at follow-up were significant at ^a $p < 0.05$ or ^b $p < 0.01$

^{c,d} Differences between groups in the degree of change from intake to follow-up were significant at ^c $p < 0.05$ or ^d $p < 0.01$

Most notably, compared to their counterparts, significantly more of the offenders who received employment services also completed drug treatment (51.3% vs. 38.5%). Although not statistically significant, fewer of these offenders were arrested (6.9% vs. 10.3%), more stayed in treatment for at least 90 days (60.5% vs. 55.0%), they spent more days in treatment (154 vs. 134 days), and more completed the Prop 36 program (42.7% vs. 37.1%).

Factors predicting receipt of employment services

Further analysis of data revealed few significant factors associated with receipt of employment services (Table 4). Offenders who had more severe family/social problems at intake (O.R. 2.28, $p < 0.05$), as indicated by the ASI severity score, and offenders who reported wanting employment

Table 4

Logistic regression models for predicting receipt of employment services over 3 months after intake and employment 12 months after intake

	Receipt of employment services over 3 months after intake (<i>n</i> =1,350)	Employment 12 months after intake (<i>n</i> =980)
	Odds ratio (95% confidence interval)	Odds ratio (95% confidence interval)
Age	1.01 (0.99–1.03)	0.98* (0.97–1.00)
Education	0.96 (0.88–1.06)	0.99 (0.91–1.07)
African–American (vs. White)	0.79 (0.45–1.37)	0.89 (0.57–1.39)
Hispanic (vs. White)	1.26 (0.82–1.93)	1.64** (1.14–2.36)
Other (vs. White)	1.81 (0.98–3.31)	0.87 (0.51–1.48)
County 1 (vs. County 5)	1.12 (0.64–1.94)	0.45** (0.29–0.67)
County 2 (vs. County 5)	1.40 (0.83–2.34)	0.80 (0.53–1.20)
County 3 (vs. County 5)	1.21 (0.61–2.37)	0.67 (0.37–1.21)
County 4 (vs. County 5)	1.73 (0.95–3.16)	0.75 (0.44–1.28)
Female (vs. male)	1.28 (0.89–1.83)	0.84 (0.62–1.14)
Outpatient (vs. residential) treatment setting	0.64* (0.42–0.97)	0.91 (0.62–1.32)
ASI employment severity score at intake	1.04 (0.48–2.26)	0.47** (0.28–0.80)
ASI family/social severity score at intake	2.28* (1.05–4.98)	0.62 (0.31–1.25)
Wants employment services at intake	1.57*(1.11–2.21)	1.16 (0.87–1.53)
Paid for work in 30 days prior to intake	0.68 (0.43–1.09)	–
Primary drug type at intake		
Alcohol (vs. methamphetamine)	0.72 (0.35–1.48)	1.33 (0.77–2.29)
Cocaine (vs. methamphetamine)	1.21 (0.66–2.22)	0.76 (0.46–1.26)
Heroin (vs. methamphetamine)	1.07 (0.59–1.97)	0.84 (0.48–1.46)
Marijuana (vs. methamphetamine)	1.16 (0.67–2.01)	1.11 (0.72–1.71)
Other drugs (vs. methamphetamine)	0.75 (0.35–1.59)	1.25 (0.67–2.34)
Received employment services	–	1.07 (0.71–1.62)
Received other income-related services	–	0.56** (0.41–0.76)
Completed treatment or retention ≥ 90 days	–	1.87** (1.38–2.52)

Cases missing values on any predictor variable were omitted from analysis, thus decreasing the total sample size that was utilized to the sample sizes that are shown. Results remained unchanged when offenders who were employed at intake were omitted from analysis.

* $p < 0.05$, ** $p < 0.01$

services at intake (O.R. 1.57, $p < 0.05$) were more likely to receive employment services. Offenders assigned to outpatient as opposed to residential treatment were less likely to receive employment services (O.R. 0.64, $p < 0.05$).

Predictors of being employed 12 months after treatment assessment

Analysis of factors associated with being employed 12 months after treatment assessment showed several significant effects (see Table 4). Specifically, the likelihood of being employed one

year after Prop 36 treatment assessment was increased by treatment completion or a retention of ≥ 90 days (O.R. 1.87, $p < 0.01$) and Hispanic race/ethnicity (O.R. 1.64, $p < 0.01$), and the likelihood of being employed was decreased by older age (O.R. 0.98, $p < 0.05$), residing in County 1 (vs. County 5; O.R. 0.45, $p < 0.01$), a higher ASI employment score indicating greater severity (O.R. 0.47, $p < 0.01$), and receipt of other income-related services (i.e., Medi-Cal, general relief, food stamps, etc., or assistance with housing, transportation, and other basic needs; O.R. 0.56, $p < 0.01$). Receipt of employment services was not significantly associated with later employment.

There were no significant interaction effects on outcomes between receipt of employment services and wanting employment services at intake or between receipt of employment services and the intake ASI employment severity score.

Discussion

Summary of findings

In summary, few Prop 36 offenders reported receiving employment services (13%) in the 3 months following treatment assessment and the amount of services that were received was low (4.8 times among those who received services). Compared to their counterparts, individuals who received employment services had more severe employment and family/social problems and more were assigned to a residential treatment setting. More differences were revealed in the examination of employment and income-related variables. At assessment, more of those who received employment services were unemployed, fewer had been paid for work in the prior 30 days, more reported income from welfare and fewer had income from employment or a pension/SSI benefits, fewer had others depending on them for support, and more had a desire for employment services. Contrary to expectations, receipt of services was not predicted by employment severity when other covariates were controlled, but instead, likelihood of receipt of services was increased with greater severity of family/social problems and a desire for services and decreased by assignment to an outpatient treatment setting.

The two groups were similar on many employment-related outcome indicators. However, those in the received-employment-services group showed greater improvements over time in indicators of employment, being paid for work, and receipt of income from employment. Moreover, significantly more of the Prop 36 offenders who received employment services also completed drug treatment. Also notable, at 12-month follow-up, more of those in the received-employment-services group relied on family or friends for income support and family problems continued to be slightly more severe among this group. Finally, the likelihood of being employed one year after Prop 36 treatment assessment was increased by treatment completion or treatment retention of ≥ 90 days and Hispanic race/ethnicity and was decreased by an older age, residing in a particular county, greater employment problem severity at intake, and receipt of other income-related services (e.g., public assistance).

Implications for Behavioral Health

Findings pose several important implications for future Proposition 36 program planning and research. First, it appears that offenders may be targeted for employment services based on several factors including current employment status, income sources, recent work history, severity of family/social problems, and desire for such services; yet, processes for matching services to need are little understood. People who did not receive employment services mostly got services for Medi-Cal and SSI benefits. Yet, employment services may be of benefit to individuals who do not express an explicit desire for help getting or keeping a job. Employed users have been shown to make further employment gains after substance abuse treatment.³³ For many, being employed is

not just about generating a source of income (wages improved after Prop 36 treatment among both groups, but still remained generally low) but is more importantly instrumental in perceived quality of life³⁴ and in cultivating positive social support systems and mechanisms for improving self-esteem.^{5,35} Offenders who enter the Prop 36 program and are not in the labor force or are already employed (and perhaps underemployed) may benefit from efforts targeting employability and education/skills training as it may be possible to capitalize on the Prop 36 experience as a “teachable moment” to encourage these offenders to obtain work or improve their work situation. More information is needed to better understand how decisions are made regarding who receives employment services and whether better matching of services to need improves outcomes.

Second, two thirds of Prop 36 offenders are not working at intake, but about an equal proportion of offenders are assigned to outpatient care, a treatment setting in which, as the data in this paper shows, offenders are less likely to receive employment services. “Reserving” ancillary services or specialized care, like employment services, for more severe offenders who are in greater need makes immediate fiscal sense but the long-term impacts must also be considered. Provision of vocational services within addiction treatment has been associated with an increased probability of abstinence that can have cost-effective implications.³⁶ Prop 36 offenders are in their prime income earning years, and more of them need to be encouraged to work and reconnected to the labor market. However, health services research indicates that drug treatment providers continue to struggle to link clients to ancillary services at a level that is commensurate with client needs.^{37,38} Incentive programs intended to move individuals from welfare to greater self-sufficiency through work³⁹ and programs intended to enhance the employability of individuals with chronic and severe substance use disorders⁴⁰ present some interesting lessons learned and stimulate conjectures whether similar models might be effective with the Prop 36 population.

Third, the greater likelihood of positive employment outcomes among Hispanic groups may be explained, in part, due to better access and motivation for work because of cultural and family obligations, and Hispanics may also exhibit a greater willingness than other racial/ethnic groups to perform unskilled work. A recent large study of substance abuse treatment outcomes in California found that although Hispanics reported more employment difficulties than Whites at treatment intake, receipt of employment services and outcomes were similar for the two groups.⁴¹ Additionally, analysis showed that family/social problems were more severe at intake among the group that received employment services, that severity of family/social problems was related to receipt of employment services, and that family/social problems remained more severe among this group at follow-up. More research is needed to understand the roles culture, family, and social relationships play in impacting Prop 36 services utilization and outcomes. Similarly, county context must also be considered. It was found that county of residence was related to the likelihood of later employment and county-level variation in unemployment rates among the general population may, to some extent, help to explain this finding. In 2006, county unemployment rates in California ranged from 3.4% to 15.3%, with 22 counties having an unemployment rate below the statewide rate of 4.9%, and the remaining 36 counties reporting an unemployment rate above the statewide rate.⁴² Another study found that high unemployment rates were one of several contextual factors that increased the likelihood that recovering ex-offenders would recidivate during their first year in the community.⁴³ Additional information is needed to better understand contextual factors like these that affect employment.

Fourth, conflicts offenders face when trying to get or keep a job and also meet the criteria of Prop 36 may make it especially difficult to do both well. Since the inception of Prop 36 in 2001, a consistent percentage of offenders, about 30%, actually complete treatment every year under the program.⁴⁴ Added to this, many appear to enter treatment with a job and leave treatment on welfare or other types of public assistance.⁴⁵ These data are especially troubling given that a study of a similar population of persons utilizing publicly funded mental health services reported that

employment rates declined after the receipt of public support.⁴⁶ While it is understandable that treatment for drug use remains the focus of substance abuse treatment, employment has been associated with improved functioning after treatment in multiple domains. Anecdotally, some Prop 36 county stakeholders have expressed interest in making employment a part of the criteria for completing treatment and/or the Prop 36 program while other stakeholders have considered making employment outcomes an element of results-based funding criteria,⁴⁵ a strategy that has been tried with some success with persons with severe mental illness.⁴⁷ These and other strategies that may positively impact both treatment completion rates as well as employment outcomes deserve further exploration.

Finally, vocational and employment training can positively impact client outcomes,^{48,49} particularly when services are well-matched to need⁵⁰ or are a key component of a case management approach.^{51,52} However, there is no generally accepted vocational rehabilitation or employment assistance model for use with criminal offenders,^{8,53,54} particularly for those who are also substance abusers whose use histories present significant employer concerns. Also, being unemployed can stand for a host of other deficits, many of which cannot be adequately addressed by the minimal amount of vocational assistance that is typically provided in community substance abuse treatment programs. Yet, clearly, one area for improvement in Prop 36 programming is that of record expungement. While in some counties, approximately 80% of eligible offenders reportedly have their Prop 36 felony conviction expunged, in other areas less than half actually do so,⁵⁵⁻⁵⁸ an oversight that can have lasting consequences for offenders and their ability to generate legitimate sources of income in the future. Considering policy options to assist more eligible Prop 36 offenders to have their conviction expunged would have a real impact on future employability (see Raphael 2007⁵⁹ for related discussion) and may be of most benefit to individuals without a prior criminal record or those who express explicit desires to remain or become employed.

Limitations

The present study has several limitations. This study captured a relatively small proportion of the larger statewide population of Proposition 36 offenders, and findings may vary with analysis of a wider spectrum of this group. The “received employment services” grouping is self-reported at 3 months post-assessment and may have been affected by misrepresentation or recall errors. Also, services that may have been received immediately after the 3-month follow-up interview were not documented, and so the potential influence of subsequent or additional treatment on outcomes could not be analyzed. Furthermore, whether clients received services from a trained vocational rehabilitation counselor was not assessed, and validated measures of motivation for work or work readiness were not employed in this study. Instead, motivation for employment services was measured by an individual item (“wants employment services”) and although this measure was associated with receipt of services as expected, stronger measures may have revealed undetected components of motivation or readiness that could impact associations between receipt of services and outcomes. Finally, county variation in Proposition 36 program practices regarding provision of services remains unexamined. Despite these limitations, some useful findings have resulted from the unique design of this study. The study instruments are based on standardized instruments that have been widely used in previous studies among similar populations, and new aspects of the Proposition 36 program were documented.

Conclusion

In conclusion, while many Prop 36 offenders could benefit from employment services, few received such care in the three months following assessment for treatment. Key factors determining receipt of employment services were treatment setting, severity of family/social problems, and

desire for such services. Receipt of employment services was associated with greater improvements in employment-related behaviors and also with treatment completion, which in turn predicted later employment. To enhance overall Prop 36 program performance, practitioners and policymakers may wish to consider developing strategies to improve employment services utilization and outcomes.

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References

1. Longshore D, Urada D, Evans E. *Evaluation of the Substance Abuse and Crime Prevention Act: 2004 Report*. Los Angeles: UCLA Integrated Substance Abuse Programs; 2005.
2. Buck ML. Employment programs for ex-offenders. 2000. Available at: http://www.ppv.org/ppv/publications/assets/94_publication.pdf. Accessed January 17, 2008.
3. SAMHSA. *Treatment Improvement Protocol (TIP) 38: Integrating Substance Abuse Treatment and Vocational Services*. 2000. Available at: <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.68228>. Accessed January 17, 2008.
4. Apel R, Bushway S, Brame R. Unpacking the relationship between adolescent employment and antisocial behavior: A matched samples comparison. *Criminology*. 2007;45:67–97.
5. Sampson RJ, Laub JH. A life-course view of the development of crime. *The Annals of the American Academy of Political and Social Science*. 2005;602:12–45.
6. Uggen C. Work as a turning point in the life course of criminals: A duration model of age, employment, and recidivism. *American Sociological Review*. 2000;67:529–546.
7. Luchansky B, Brown M, Longhi D. Chemical dependency treatment and employment outcomes: Results from the 'ADATSA' program in Washington state. *Drug and Alcohol Dependence*. 2000;60:151–159.
8. Magura S, Staines GL, Blankertz L. The effectiveness of vocational services for substance users in treatment. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2165–2213.
9. Taxman FS, Perdoni ML, Harrison LD. Drug treatment services for adult offenders: The state of the state. *Journal of Substance Abuse Treatment*. 2007;32:239–254.
10. Kemp K, Savitz B, Thompson WH. Employment services for criminal justice clients. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2637–2638.
11. Luchansky B, Krupski A, Stark K. Treatment response by primary drug of abuse: Does methamphetamine make a difference? *Journal of Substance Abuse Treatment*. 2007;32:89–96.
12. Hagedorn H, Willenbring M. Psychiatric illness among drug court probationers. *The American Journal of Drug and Alcohol Abuse*. 2003;29:775–788.
13. Leukefeld C, McDonald HS, Staton M. Employment, employment-related problems, and drug use at drug court entry. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2559–2579.
14. Kertesz SG, Mullins AN, Schumacher JE. Long-term housing and work outcomes among treated cocaine-dependent homeless persons. *The Journal of Behavioral Health Services & Research*. 2007;34:17–33.
15. Leukefeld CG, Hiller ML, Webster JM. A prospective examination of high-cost health services utilization among drug using prisoners re-entering the community. *The Journal of Behavioral Health Services & Research*. 2006;33:73–85.
16. Montoya ID, Bell DC, Atkinson JS. Mental health, drug use and the transition from welfare to work. *The Journal of Behavioral Health Services & Research*. 2002;29:144–156.
17. Morgenstern J, Hogue A, Dasaro C. Characteristics of individuals screening positive for substance use in a welfare setting: Implications for welfare and substance-use disorders treatment systems. *Journal of Studies on Alcohol and Drugs*. 2008;69(4):561–570.
18. Zabkewicz D, Schmidt LA. Behavioral health problems as barriers to work: Results from a 6-year panel study of welfare recipients. *The Journal of Behavioral Health Services & Research*. 2007;34:168–185.
19. Reynolds G, Lehman WEK. Levels of substance use and willingness to use the employee assistance program. *The Journal of Behavioral Health Services & Research*. 2003;30:238–248.
20. Hser YI, Evans E, Teruya C. Predictors of short-term treatment outcomes among California's Proposition 36 participants. *Evaluation and Program Planning*. 2007;30:187–196.

21. Cosden M, Basch JE, Campos E. Effects of motivation and problem severity on court-based drug treatment. *Crime and Delinquency*. 2006;52:599–618.
22. Butzin CA, Saum CA, Scarpitti FR. Factors associated with completion of a drug treatment court diversion program. *Substance Use & Misuse: Special Issue on Drug Treatment Courts*. 2002;37:1615–1633.
23. Metsch LR, Pereyra M, Miles CC. Welfare and work outcomes after substance abuse treatment. *Social Service Review*. 2003;77:237–254.
24. The TOPPS-II Interstate Cooperative Study. Drug treatment completion and post-discharge employment in the TOPPS-II interstate cooperative study. *Journal of Substance Abuse Treatment*. 2003;25:9–18.
25. Fosados R, Evans E, Hser YI. Ethnic differences in utilization of drug treatment services and outcomes among Proposition 36 offenders in California. *Journal of Substance Abuse Treatment*. 2007;33:391–339.
26. Hardy M, Teruya C, Longshore D. Initial implementation of California's Substance Abuse and Crime Prevention Act: Findings from focus groups in ten counties. *Evaluation and Program Planning*. 2005;28(2):221–232.
27. Klein D, Miller RE, Noble A. Incorporating a public health approach in drug law: Lessons from local expansion of treatment capacity and access under California's Proposition 36. *Milbank Quarterly*. 2004;82:723–757.
28. Hser YI, Teruya C, Evans E. Treating drug-abusing offenders: Initial findings from a five-county study on the impact of California's Proposition 36 on the treatment system and patient outcomes. *Evaluation Review*. 2003;27:479–505.
29. Hser YI, Teruya C, Brown AH. Impact of California's Proposition 36 on the drug treatment system: Treatment capacity and displacement. *American Journal of Public Health*. 2007;97:104–109.
30. McLellan AT, Luborsky L, Woody GE. An improved diagnostic evaluation instrument for substance abuse patients: The Addiction Severity Index. *The Journal of Nervous and Mental Disease*. 1980;168:26–33.
31. McLellan AT, Kushner H, Metzger D. The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*. 1992;9:199–213.
32. McLellan AT, Alterman AI, Cacciola J. A new measure of substance abuse treatment: Initial studies of the treatment services review. *The Journal of Nervous and Mental Disease*. 1992;180:101–110.
33. Slaymaker VJ, Owen PL. Employed men and women substance abusers: Job troubles and treatment outcomes. *Journal of Substance Abuse Treatment*. 2006;31:347–354.
34. Nordt C, Muller B, Rossler W. Predictors and course of vocational status, income, and quality of life in people with severe mental illness: A naturalistic study. *Social Science & Medicine*. 2007;65:1420–1429.
35. Mares AS, Rosenheck RA. Attitudes towards employment and employment outcomes among homeless veterans with substance abuse and/or psychiatric problems. *American Journal of Psychiatric Rehabilitation*. 2006;9(3):145–166.
36. Shepard DS, Reif S. The value of vocational rehabilitation in substance user treatment: A cost-effectiveness framework. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2581–2609.
37. Asche SE, Harrison PA. The relationship between problem severity and ancillary treatment services: Is substance abuse treatment responsive to client need? *The Journal of Behavioral Health Services & Research*. 2002;29:345–356.
38. Ducharme LJ, Mello HL, Roman PM. Service delivery in substance abuse treatment: Reexamining “comprehensive” care. *The Journal of Behavioral Health Services & Research*. 2007;34:121–136.
39. Berlin GL. *Encouraging Work Reducing Poverty: The Impact of Work Incentive Programs*. New York: Manpower Demonstration Research Corporation; 2000.
40. Gold PB, Meisler N, DuRoss D. Employment outcomes for hard-to-reach persons with chronic and severe substance use disorders receiving assertive community treatment. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2425–2489.
41. Niv N, Hser YI. Drug treatment service utilization and outcomes for Hispanic and white methamphetamine abusers. *Health Services Research*. 2006;41:1242–1257.
42. U.S. Bureau of Labor Statistics. State and Local Unemployment Rates. Available at: www.bls.gov. Accessed January 16, 2008.
43. Sung H, Richter L. Contextual barriers to successful reentry of recovering drug offenders. *Journal of Substance Abuse Treatment*. 2006;31:365–374.
44. UCLA Integrated Substance Abuse Programs. *Evaluation of the Substance Abuse and Crime Prevention Act, 2005 Report*. Los Angeles: UCLA Integrated Substance Abuse Programs; 2006.
45. Urada D, Hawken A, Conner BT. *Proposition 36: The Substance Abuse and Crime Prevention Act of 2000, 2007 Final Report*. Los Angeles: UCLA Integrated Substance Abuse Programs; 2007.
46. Hannah G, Hall J. Employment and mental health service utilization in Washington state. *The Journal of Behavioral Health Services & Research*. 2006;33:287–303.
47. McGrew JH, Johannesen JK, Griss ME. Performance-based funding of supported employment for persons with severe mental illness: Vocational rehabilitation and employment staff perspectives. *The Journal of Behavioral Health Services & Research*. 2007;34:1094–3412.
48. Kemp K, Savitz B, Thompson W. Developing employment services for criminal justice clients enrolled in drug user treatment programs. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2491–2511.
49. Kerrigan AJ, Kaough JE, Wilson BL. Vocational rehabilitation outcomes of veterans with substance use disorders in a partial hospitalization program. *Psychiatric Services*. 2000;51:1570–1572.
50. Reif S, Horgan CM, Ritter GA. The impact of employment counseling on substance user treatment participation and outcomes. *Substance Use & Misuse: Special Issue: Contemporary Vocational Rehabilitation for Substance Users*. 2004;39:2391–2424.
51. Siegal HA, Fisher JH, Rapp RC. Enhancing substance abuse treatment with case management: Its impact on employment. *Journal of Substance Abuse Treatment*. 1996;13:93–98.
52. Thanner MH, Taxman FS. Responsivity: The value of providing intensive services to high-risk offenders. *Journal of Substance Abuse Treatment*. 2003;24:137–147.
53. Bloom D. *Employment-Focused Programs for Ex-Prisoners: What Have We Learned, What Are We Learning, and Where Should We Go From Here?* New York: Manpower Demonstration Research Corporation; 2006.

54. Visher CA, Winterfield L, Coggeshall MB. Ex-offender employment programs and recidivism: A meta-analysis. *Journal of Experimental Criminology*. 2005;1:295–315.
55. Alameda County Behavioral Health Care. *Substance Abuse and Crime Prevention Act: Annual Report*. 2005. Available at: <http://www.prop36.org/pdf/AlamedaYear3.pdf>. Accessed January 17, 2008.
56. Fresno County. *Board of Supervisors Briefing Report: Proposition 36 Status Report*. 2007. Available at: <http://www.co.fresno.ca.us/portal/BBRs/Prop%2036%20Status%20Report.pdf>. Accessed January 17, 2008.
57. Kawahara & Associates. *Sonoma County Substance Abuse and Crime Prevention Act: Three-Year Status Report 2001-2004*. 2005. Available at: http://www.sonoma-county.org/health/aods/pdf/sacpa_status_report_01through04.pdf. Accessed January 17, 2008.
58. Los Angeles County Alcohol and Drug Program Administration. *Substance Abuse and Crime Prevention Act of 2000: Annual Report 2004-2005*. 2006. Available at: <http://www.prop36.org/pdf/LACountyYear4.pdf>. Accessed January 17, 2008.
59. Raphael S. The impact of incarceration on the employment outcomes of former inmates: Policy options for fostering self-sufficiency and an assessment of the cost-effectiveness of current corrections policy. Presented at: Institute for Research on Poverty, Working Conference on Pathways to Self Sufficiency: Getting Ahead in an Era Beyond Welfare Reform; September 6 and 7, 2007; Madison, WI.