

# Therapeutic Community in a California Prison

## Treatment Outcomes After 5 Years

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Therapeutic communities have become increasingly popular among correctional agencies with drug-involved offenders. This quasi-experimental study followed a group of inmates who participated in a prison-based therapeutic community in a California state prison, with a comparison group of matched offenders, for more than 5 years after their initial prison release. Contrary to successes reported elsewhere, this study found no difference in new arrests and returns to prison between therapeutic community participants and the comparison participants after 5 years. Overall, more than 60% of both groups were returned to prison within 2 years following their initial release. After 5 years, the return-to-prison rate reached about 73% for both groups. The average time spent in prison following initial release was about the same for both groups. Rearrest offenses were also similar in both groups. Policy implications are discussed.

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Correctional research has revealed consistent patterns in the relationships among illicit drug use, criminal activity, and involvement in the

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criminal justice system: First, drug-involved offenders make up a large proportion of the U.S. prison population (Anglin & Perrochet, 1998; National Institute of Justice, 2003; Prendergast, Hall, Wexler, Melnick, & Yan, 2004); second, drug-involved offenders are prone to commit crimes to fund their drug use, often while under the influence of drugs and/or alcohol (McMurrin, 2007; Mumola & Karberg, 2006); and, third, drug-involved offenders are among the most challenging to reintegrate into the community after release from prisons or jails (Visser, La Vigne, & Travis, 2004; Visser & Travis, 2003). In-prison substance abuse treatment has long been seen as a potentially effective tool to address these issues, yet it is rarely applied nationwide (Petersilia, 2003).

Where in-prison substance abuse treatment has been implemented, a broad range of treatment modalities have been attempted over the past few decades. These include individual counseling, group therapy, methadone maintenance, shock incarceration (or boot camp), substance abuse education, 12-step programs, and cognitive-behavioral therapy for drug-abusing offenders. One of the most widely applied treatment models is the therapeutic community (TC). TCs emerged in the United States more than a half-century ago (Lees, Manning, & Rawlings, 2004). These communities are typically drug-free residential settings that rely heavily on peer influence and group processes to promote abstinence and pro-social behavior. Treatment activities follow a progressive and hierarchical model whereby staff members (or mentors) help residents develop pro-social values, such as honesty, a work ethic, and a sense of personal accountability and responsibility (National Institute on Drug Abuse, 2002; Pearson & Lipton, 1999).

The core of TCs is the maintenance of an environment in which drug-abusing offenders can feel safe to seek support from individuals with similar problems. Pan, Scarpitti, Inciardi, and Lockwood (1993) summarized several common themes among many in-prison TCs: a positive concept of inmates who are living in the same treatment community; treatment activities designed to promote and foster positive social relationships, positive role models, and support from treatment staff and counselors, some of whom are recovering addicts themselves; and planned aftercare services to ensure smooth transition from the prison environment to the community.

Research findings on TCs in prison have been mostly positive, even for inmates with co-occurring mental illness and chemical abuse disorders (McKendrick, Sullivan, Banks, & Sacks, 2006). Studies have shown that TCs with aftercare (postrelease) components are effective and cost-effective in reducing drug use and recidivism (McCollister et al., 2003; Taxman & Bouffard, 2002). In a recent review article, McMurrin (2007) found that

research has shown strongest evidence of effectiveness for TCs and cognitive-behavioral therapies. However, pure behavioral therapies, such as boot camps (or shock incarceration) and group counseling, are ineffective in reducing drug use and criminal recidivism.

Pearson and Lipton (1999), in their meta-analysis of correctional drug treatment programs spanning 1968 to 1996, found the same results indicating that TCs were effective in reducing recidivism for drug-involved offenders but that other treatment modalities were not, such as boot camps and drug-focused group counseling. A more recent meta-analysis also supported the overall effectiveness of TCs (Lees et al., 2004). Thanks to many positive empirical studies, which have contributed to the tremendous growth of TCs in the past few decades in the United States, TCs have now become a mainstream treatment strategy for drug-involved offenders in the community (i.e., postrelease treatment) and in prisons (De Leon, 1994; De Leon, Melnick, Thomas, Kressel, & Wexler, 2000; Wexler, 1997).

Most studies of TCs have been based on short-term outcomes, typically 1 to 2 years following release (Prendergast et al., 2004). Some studies followed TC participants for an even shorter period. For instance, Van Stelle and Moberg (2004) followed inmates who were dually diagnosed with a substance abuse problem and a mental health disorder and who participated in TCs in prison settings. The researchers found that in the 3 months following release, the treatment participants were significantly less likely than the comparison group to be arrested or to return to prison. TC participants were also more likely to comply with medication. Whereas findings from such short-term studies are encouraging, they need to be interpreted with caution: Given the fact that TC participants are more likely to enter residential aftercare upon release, these positive outcomes may have been an artifact of their restricted exposure to risk (i.e., less street time).

A few other studies revealed that the key to the success of the TC model lies in postrelease aftercare. A 3-year study of a TC in a Texas prison found that treatment and comparison participants were returned to prison at about the same rate; however, those who completed the aftercare program failed at a much lower rate than that of all others (Knight, Simpson, & Hiller, 1999). Another 3-year study (conducted by the Federal Bureau of Prisons) found that inmates who completed residential treatment programs after release were less likely than the comparison group to be rearrested and to relapse into drug use (Pelissier et al., 2000). But this study also revealed that such treatment effects were less salient for female participants.

Results from studies with longer observation periods are somewhat equivocal about the efficacy of TCs. For example, Wexler, Melnick, Lowe,

and Peters (1999) followed 478 prison inmates who were randomly assigned to treatment and control groups for 36 months following release. Inmates who completed the TC treatment and entered into aftercare showed the most positive outcomes at 12- and 24-month intervals. However, the positive effect in reincarceration rates between the treatment and control participants disappeared at 36 months. In other words, the recidivism patterns of both groups converged over time.

A more recent study by Prendergast and colleagues at the University of California–Los Angeles (UCLA) revealed that positive TC treatment effects dwindled over time (Prendergast et al., 2004). In their study, 715 prisoners were randomly assigned to TC and no-treatment groups. At 5 years following the initial prison release, no significant treatment effect was detected for any of the three outcome measures (i.e., reincarceration, heavy drug use, and employment) after other significant predictors were controlled (such as age and length of postrelease treatment).

By contrast, a 5-year study by Inciardi, Martin, and Butzin (2004) indicated sustained positive effects. The researchers followed 690 Delaware inmates for 5 years following their release and found those who received in-prison TC treatment were significantly more likely than the comparison group to remain drug- and arrest-free. Even treatment dropouts were significantly more likely than the comparison to be drug-free.

In summary, the existing literature appears to support the positive effects of TCs in primarily short-term observation periods. Long-term studies—particularly, those involving randomized assignment of participants—seem to question the TC’s efficacy over time. The present study essentially replicates the 5-year Delaware study by Inciardi et al. (2004) but with a sample of TC participants from California prisons. In this study, we followed a group of prison inmates who participated in a prison-based TC, as well as a case-matched group of comparison inmates from another state prison in California. We should note that because treatment practices tend to vary from one TC to another, this study examines the TC program as it was implemented in the California state prison settings. Therefore, the findings presented here pertain mostly to the California correctional context.

## **The California’s Substance Abuse Treatment Facility**

TCs in the California prison system are typically set up in yards segregated from the rest of the prison population. TC programs in California also

follow a hierarchical model, with progressive treatment stages designed to increase and reward participants' levels of personal and social responsibility. The TC community relies heavily on peer influence and group dynamics to encourage addicts to develop pro-social attitudes and behaviors.

California's Substance Abuse Treatment Facility (SATF) opened in 1997 on 280 acres in Corcoran, California. The SATF established a TC program as a response to positive findings of similar programs in prison settings, such as the Stay'n Out program in New York, the Key-CREST program in Delaware, and the Amity Program in Southern California (Anglin, Prendergast, Farabee, & Cartier, 2002; Burdon, Farabee, Prendergast, Messina, & Cartier, 2002). The prison currently houses 7,628 convicted felons, more than twice the designed capacity. The TC, named the Substance Abuse Program, involves about 2,000 of these inmates, and it is housed within two self-contained prison yards. Inmates in the treatment yards are completely separated from the general prison population. The California Department of Corrections and Rehabilitation is responsible for the custodial and physical operations of the facility, whereas the treatment services are provided by two California-based contractors: Walden House and Phoenix House.

Participation in substance abuse treatment is mandatory in all California prisons for inmates who have a documented history of substance use or abuse (i.e., per a review of inmate files) and who do not meet the exclusionary criteria (such as documented in-prison gang affiliations, assaultive behaviors, and Immigration and Naturalization Service holds; Burdon et al., 2002). The two treatment service providers at SATF follow the same basic TC philosophy and structure described above: Each provider operates inside one yard, consisting of three housing units. The treatment lasts as long as 18 months in prison, and it involves three phases: orientation, primary treatment, and prerelease transitioning. Programs are highly structured, and they include a minimum of 20 hr per week of substance abuse treatment activities, as well as 10 hr or more of structured optional activities. Continued participation in community treatment services (i.e., aftercare) is strongly encouraged but not mandated, and it funded for as many as 150 days for 50% of program graduates. A host of community-based organizations licensed by the California Department of Alcohol and Drug Programs provide aftercare services across the state. To encourage participation in aftercare, treatment counselors at SATF work with parole agents and community-based service providers to ensure that aftercare services are available and accessible.

## Method

As part of the original evaluation of the SATF-based TC, a group of researchers from UCLA employed a quasi-experimental design to follow a group of participants ( $n = 395$ ) and a group of untreated comparison inmates ( $n = 403$ ).<sup>1</sup> Participants were recruited between June 1999 and June 2000. From the onset of the original study, randomized assignment of prospective participants to treatment/nontreatment conditions was not possible. To ensure that the comparison group was indeed comparable to the treatment participants, the UCLA researchers used an elaborate one-to-one matching procedure to screen and select a group of inmates from a nearby state prison who had substance abuse histories (Anglin et al., 2002).<sup>2</sup>

Treatment and comparison participants were interviewed at baseline, thereby yielding data on each participant's demographic background, educational and employment histories, criminal and substance abuse histories, psychological functioning, relationships with family and friends, health status, and health service utilization during the 6 months before the baseline and follow-up interviews.

The present study extends the observation period to 4 additional years, utilizing supplementary data from the state prison system and the state justice department, which maintains arrest records. With no further contacts with the original study participants, this current study thus focuses on evaluating long-term criminal justice outcomes of the TC treatment approach (i.e., postrelease return to prison and new arrest histories of the two groups).

There are two primary data sources for this analysis: the arrest records maintained by the California Department of Justice (i.e., the so-called CII records, or rap sheets) and the prison inmate data maintained by the California Department of Corrections and Rehabilitation (i.e., the Offender-Based Information System and the Statewide Parole Database). These files provide information on the histories of study participants' arrests as well as their movements into and out of prison following their initial release. We use this information to construct measures along the two main dimensions—rearrests and reincarceration. For the measure of rearrests, we track whether a study participant had any new arrests since the initial release, by type of offense. This study collapses all offenses into five categories: property, violent, drug, sex, and *other*. For reincarceration, we track returns to prison and the number of days spent in prison.

Long-term justice agency records were available for 395 members of the original treatment group and for 403 members of the comparison group. To assess the return-to-prison patterns of the study participants, we obtained

their complete prison movement data from the California Department of Corrections and Rehabilitation, covering the first wave of postprogram release until October 1, 2005 (the most current data at the close of data collection). The average length of time between the study participants' initial posttreatment release and the end of data gathering was more than 5 years. Arrests and offenses were tracked over the same period.

Furthermore, because the original study revealed that enrollment in post-release aftercare was related to positive outcomes (for details of the study, see Anglin et al., 2002), we decided to highlight these detected effects in the statistical tables by dividing the treatment participants into two subsets—those who entered aftercare ( $n = 101$ ) and those who did not ( $n = 294$ ). In an analysis of billing records, the UCLA researchers found that 25% of the treatment participants were enrolled in some form of aftercare sponsored by the California Department of Corrections and Rehabilitation, after their release from the prison (Anglin et al., 2002).<sup>3</sup>

TC participants were offered one of three treatment modalities in aftercare: residential, sober living coupled with mandatory drug-free outpatient services, and drug-free outpatient services only. Of those who received aftercare services, 63.7% entered a residential program, 58.2% entered a sober living environment, and 30.8% entered an outpatient program. These percentages are not mutually exclusive; that is, study participants could enter more than one treatment modality following release. Although the treatment participants were eligible for 6 months of aftercare, the mean length of stay was approximately 2.5 months in a residential program and 3.1 months in a sober living environment. As for outpatient treatment, those who enrolled received an average of 42 units of services. The UCLA researchers found that levels of participation in aftercare services varied considerably.

## **Analysis and Findings**

The primary analysis strategy was to compare reincarceration and rearrest rates across these two groups of participants. Although the study participants were closely matched on a number of variables, including age, race/ethnicity, education, and employment, we used multivariate statistical controls in our analyses to maximally correct for any differences between the two groups that might have accounted for differences in the outcome measures. For example, from our previous studies with the California correctional populations, we found that prior incarceration histories and recidivism patterns

were associated with certain types of crimes and that the region to which inmates were paroled affected the likelihood of subsequent reincarceration.

Because the reincarceration rate within a fixed period is partly a function of the observation period (i.e., shorter for some participants and longer for others), we applied estimation procedures to account for the “right censoring” effects. To adjust for the effects of right censoring on the observed outcome distribution, life table analysis procedures were used to estimate the effects of treatment on reincarceration.

Two methods were used in this study to estimate recidivism outcomes. The first involved calculating the raw values, without any correction for observed differences in the comparison and treatment groups. The second approach involved estimating outcome values, after statistically adjusting for observed differences between groups. Because the between-group differences were minimized by the elaborate case-matching selection procedure, this second method produced results consistent with the raw values. Therefore, we present here the unadjusted outcome values for easy interpretation.

The case-matching procedure employed by the UCLA researchers yielded similar treatment and comparison groups, as shown in Table 1 (Anglin et al., 2002). The treatment participants and comparison participants were virtually identical to each other with regard to race/ethnicity and marital status. The Avenal participants were slightly more likely than the SATF participants to have graduated from high school, although this difference was not statistically significant. The only significant background difference that the researchers found regarded employment status, with comparison participants being more likely than the treatment participants to have held full-time employment during the 6 months before incarceration.

The present study added additional descriptive information about inmate characteristics, including age at the initial parole release, the type of principal crime for which the inmate had been sentenced, a 36-point recidivism risk score,<sup>4</sup> and the number of prior prison stays experienced. The comparison and treatment groups were also quite similar with respect to these added characteristics. The only statistically significant difference was that the comparison participants were slightly younger than their treatment counterparts at the time of their parole release.

## **Return-to-Prison Patterns**

We examined the rate of return to prison among these participants in two follow-up periods: the first year following release from prison and the period between the inmate’s release and the end of data collection (October

**Table 1**  
**Demographic Profile of Study Sample**

Demographic	Treatment ( <i>n</i> = 395)	Comparison ( <i>n</i> = 403)
Race/ethnicity		
African American	40.5	41.2
Latino	9.9	10.2
Mexican	9.1	10.2
Pacific Asian	0.5	0.0
White	38.7	37.0
Other	1.3	1.5
Education		
Years completed ( <i>SD</i> )	11.1 (1.9)	11.4 (1.9)
High school graduate or GED	36.5	42.1
Never married	45.6	46.5
Employment status 6 months before incarceration		
None (not in labor force)	19.6	16.8
None (could not find job)	18.4	22.3
Odd jobs	14.6	5.5
Part-time (<35 hr/week)	6.7	7.4
Full-time (35+ hr/week)	40.7	48.0*
Age at parole ( <i>SD</i> )	37.3 (9.6)	36.7* (8.6)
Principal commitment offense		
Violent	24.6	24.6
Property	24.0	27.3
Drugs	40.8	40.2
Other	10.6	7.9
Recidivism risk score ( <i>SD</i> )	18.0 (8.4)	18.7 (9.1)
Number of prior prison incarcerations ( <i>SD</i> )	2.9 (2.6)	2.7 (2.5)

Note: In percentages unless noted otherwise. Standard deviation in parentheses for continuous variables.

\* $p < .05$ .

1, 2005). The average length of time between the initial release to parole and the end of data collection for both groups was statistically equivalent, averaging just less than 5 years and 4 months.

Table 2 contains reincarceration rates for the two groups across the two follow-up periods (i.e., first 365 days and 5 years after release). More than half of all study participants (52.7%) were returned to prison within 12 months of release. Treatment participants who received aftercare upon release were roughly 10% less likely (47.5%) to be reincarcerated during the first year than those who did not (57.1%). The difference was substantial

**Table 2**  
**Return to Prison Rates for Treatment and Comparison Groups Over Two Observation Periods**

	Treatment Group		Comparison Group ( <i>n</i> = 403)
	No Aftercare ( <i>n</i> = 294)	Received Aftercare ( <i>n</i> = 101)	
Returned to Prison . . .			
Within 365 days following release	57.1	47.5	51.9
Any time in 5 years following release	73.6	68.9	72.5

but not statistically significant. As a group, the treatment participants were returned to prison at a rate similar (54.7%) to their comparison's (51.9%) within 1 year of release.

More than 72% of both groups were reincarcerated at least once by the end of the 5-year observation period. Although those who entered aftercare were still less likely to be returned to prison (68.9%) than those who did not (73.6%), the difference was far less pronounced. As a group, the TC participants (72.4%) and the comparison participants (72.5%) had almost identical reincarceration rates.

Another way to examine recidivism following the initial release is to measure the length of these reincarceration periods. The length of stay provides a proxy for the severity of the new offenses and violations. Table 3 presents whether the treatment and comparison groups differed in the amount of time spent in prison after initial release to parole. If TC participants spent fewer days in prison, on average, than their counterparts in the comparison group, the resulting difference in incarceration costs would still constitute a benefit to the TC (as well as savings to the criminal justice system).

As shown in the table, TC participants who entered aftercare spent on average 57.7 days in prison during the first year after release, compared to 85.9 days among those who did not. The difference was statistically significant. Over the 5-year period, participants who received aftercare spent 424.2 days in prison, compared to 460.8 days among treatment participants who did not enter aftercare. The difference was still substantial but not statistically significant.

As a group, TC participants spent similar lengths of time in prison (79.1 days on average in the first year and 450.4 days over the 5-year period) as did members of the comparison group (77.4 days in the first year and 412.7

**Table 3**  
**Number of Days Spent in Prison Over Two Follow-Up Periods**

	Treatment Group		Comparison Group ( <i>n</i> = 403)
	No Aftercare ( <i>n</i> = 294)	Received Aftercare ( <i>n</i> = 101)	
Days Spent in Prison in . . .			
First 365 days following release	85.9	57.7*	77.4
Five years following release	460.8	424.2	412.7

\**p* < .05.

days in the 5-year period). Both groups spent more than 20% of their total post-release time in prison over the 5-year observation period. None of the observed differences between the treatment and comparison groups reached statistical significance.

### New Arrests and Types of Offenses

Although the California Department of Corrections and Rehabilitation, which runs the state prison system, is most concerned about reincarceration, there are other recidivism events that may not lead to a return to prison. To explore recidivism patterns more carefully, we examined the arrest patterns and types of new criminal offenses between the two groups. Arrest records were obtained from the California Department of Justice on the study participants for the postrelease period. Table 4 presents the rearrest rates of the two groups 1 year following their release and over the entire 5-year observation period. Overall, the arrest rates for both groups were consistent with their prison reincarceration rates. About half the participants were rearrested within 1 year following their release (54.0% of the treatment group and 47.6% of the comparison group). At the end of the 5-year follow-up period, about 80.4% of the treatment group and 78.2% of the comparison had new arrests. We found it interesting that treatment participants were rearrested at a somewhat higher rate over both follow-up periods. Again, over both follow-up periods, treatment participants who received aftercare were rearrested at a rate lower than that of those who did not. However, none of the observed differences in either observation period reached statistical significance.

Table 5 presents the type of offense for which the study participants were arrested in the two observation periods. The findings indicate that TC

**Table 4**  
**Arrest Rates Over Two Follow-Up Periods by Type of Offense**

Follow-Up Period	Treatment Group		Comparison Group ( <i>n</i> = 317)
	No Aftercare ( <i>n</i> = 244)	Received Aftercare ( <i>n</i> = 82)	
One year following release			
Misdemeanor only	2.0	1.2	1.6
Felony only	21.7	25.6	18.9
Misdemeanor and felony	30.7	25.6	27.1
Total	54.5	52.4	47.6
Five years following release			
Misdemeanor only	6.1	6.1	6.0
Felony only	33.6	39.0	33.1
Misdemeanor and felony	41.4	32.9	39.1
Total	81.1	78.0	78.2

Note: Sample sizes reflect only those participants whose identification was matched in the statewide criminal record system.

participants were arrested at slightly higher, though not statistically significant, rates for drug offenses (16.6%) and parole violations (26.4%) during the first year of release when compared to those of the comparison group (12.6% and 22.7%). Again, those who entered aftercare were slightly better than those who did not, although none of the observed differences were statistically significant. At the 5-year follow-up, the treatment and comparison groups had substantively identical drug-related rearrests. However, the treatment group had higher rearrest rates for robbery, property offenses, and probation/parole violations than the comparison group did (though not statistically significant). Whether or not treatment participants entered aftercare made few differences after 5 years with regard to type of offense.

## Discussion

With 5 years of outcome data, albeit from official sources only, findings in this study fail to support the efficacy of the TC as implemented in the California prison. This study found no evidence to suggest that the segregated housing yards and their TCs reduced reincarceration and rearrest over time. Both TC inmates and the matched untreated inmates were returned to

**Table 5**  
**Arrests Over Two Follow-Up Periods by**  
**Type of Offense (in Percentages)**

Follow-Up Period	Treatment Group		Comparison Group ( <i>n</i> = 403)
	No Aftercare ( <i>n</i> = 294)	Received Aftercare ( <i>n</i> = 101)	
One year following release			
Murder/manslaughter	0.0	0.0	0.0
Rape/sexual battery	0.0	0.0	0.0
Robbery	1.2	1.2	0.3
Assault	6.5	4.8	5.4
Property	8.6	11.0	8.2
Drug	17.2	14.6	12.6
Probation or parole violation	27.0	24.4	23.0
Other	6.2	4.9	9.2
Five years following release			
Murder/manslaughter	0.6	0.0	0.6
Rape/sexual battery	0.4	1.2	0.0
Robbery	4.9	4.9	1.6
Assault	17.2	17.1	17.0
Property	28.7	34.2	25.2
Drug	44.3	41.5	43.5
Probation or parole violation	48.0	47.6	42.6
Other	33.6	23.2	31.5

Note: Arrest rates for all types of offenses do not sum to total arrest rate for follow-up periods, because some participants were arrested for more than one type of offense during an observation period.

prison at about the same rate and for a similar amount of time when tracked for 5 years following their initial release from prison. Members of both groups were also arrested at about the same rate and for similar offenses following their release.

This study was, however, able to replicate the earlier findings by Anglin et al. (2002) on the short-term positive outcomes associated with TC participants who entered aftercare. It appears that treatment participants who entered into aftercare services upon release fared better as a group than those who did not, at least in the first year. However, over the long run, TC participants returned to prison at the same rate as the untreated comparison

participants. Treatment conditions and aftercare entries make no difference in long-term outcomes. This finding is consistent with another 5-year evaluation of the Amity TC (Prendergast et al., 2004), which indicated that when covariates (such as age and postrelease treatment) were controlled for, the initial treatment effect disappeared over time.

These results contradict the findings of many studies that revealed in-prison TC programs to be effective in reducing drug relapse and criminal recidivism (e.g., Lees et al., 2004; Pearson & Lipton, 1999). One possible explanation relates to the programmatic integrity of the TC as implemented at the SATF in California. This study was unable to examine the implementation of the program, for treatment integrity and fidelity purposes. Although the essential features and structural characteristics of a TC are well understood and publicized, the degree to which the TC adheres to the therapeutic principles has remained largely unexamined in most evaluation studies. Another possible explanation relates to the quality of aftercare services. Some positive effects were detected in the 1-year observation period despite the relatively low participation rate by the treatment participants, at 25%. Two factors could improve the outcomes—greater participation in aftercare and improved aftercare services. Without measures of the quality of the in-prison TC and the aftercare program, we cannot determine whether the lack of positive outcomes was due to the nature of the treatment or some other factors (such as community reentry difficulties).

Many logistical obstacles often prevent researchers from documenting and assessing programmatic fidelity across disparate treatment settings (e.g., limited funding, short observation periods). It is no secret that correctional researchers in California face significant financial and logistical obstacles in obtaining prisoner reentry data. The California agency in charge of the massive state prison system is most interested in outcomes such as rearrests and reincarceration because they relate directly to agency budgetary concerns and operations. However, although the state agency spends millions each year in various reentry programs to reduce recidivism, it has not incorporated into its management culture the impetus to promote and gauge other outcomes, such as holding a job, paying child support, and attending trade schools. It is a systemic problem in current correctional research in California, one about which researchers have long complained but for which few have the financial wherewithal or ability to secure sufficient agency and community support to make a meaningful change.

One indicator that the California TC program failed to optimize its treatment lays in its low enrollment in the aftercare phase. As reported in the original evaluation, only 11.2% of the treatment participants entered a residential

aftercare program for 3 months or longer or received an equivalent amount of outpatient services (Anglin et al., 2002). The threshold of 3 months in treatment is typically required to produce meaningful changes in behavior (Simpson, Joe, & Broome, 1997). Many studies have found that the highest rates of successful outcomes accrued to those who completed postrelease aftercare programs. These studies have provided consistent evidence that treatment effects in prison are best reinforced through aftercare services that follow TC participants into the community (De Leon et al., 2000; Inciardi et al., 2004; Knight et al., 1999; Prendergast et al., 2004; Wexler et al., 1999).

Because most aftercare programs are voluntary, it appears that inmates' innate motivational factors play an important role in postrelease treatment participation and successful reintegration into the community. Because motivation is often a product of complex personal and social interactions (e.g., personal determination, family support, and community network), to account for differences in motivational factors would require a more rigorous evaluation design (i.e., a randomized clinical trial), which is often not feasible in criminal justice settings.

Long-term treatment effects are also mitigated by many other factors that parolees encounter in their reentry efforts. Reentry challenges and difficulties are often overlooked in correctional evaluation studies, but they can prominently factor in a parolee's life. One's informal and formal support network, parole supervision programs, access to treatment services, and quality of aftercare providers can erase or overwhelm any short-term treatment effects. For instance, by the mere fact of being paroled to different regions of the state, parolees face significantly different odds of being returned to prison, with all other factors being held equal (Zhang, Roberts, & Callanan, 2006).

Researchers have long called for systematic assessment to adequately measure the programmatic integrity of these TCs (Taxman & Bouffard, 2002). The implementation of a TC is an evolving process, particularly in agencies that manage multiple program sites. For instance, the number of prison-based TC programs has grown significantly over the years in California, from 3 programs totaling 500 beds in 1996 to the current 39 programs totaling 9,358 beds (Zhang, Roberts, & McCollister, 2006). With multiple program sites comes the challenge of maintaining treatment fidelity and program integrity. This is particularly the case when contractors implement so-called modified TC programs with additional service components or phases. Some of these modified components extend into the aftercare phase, including sobriety living, employment, and support groups. The 5-year study by Inciardi et al. (2004) of the TC program in Delaware was

such an example. As is commonly accepted in the TC community, the recovery process requires long-term abstinence support and guidance (Jason, Davis, & Ferrari, 2007). Therefore, significant resources are needed in order to track and assess these programs over time.

Another limitation in this study is its design weaknesses. Although the case-matching method is among the strongest designs short of a randomized clinical trial, a quasi-experimental design is no substitute for a true experimental design. The case-matching method and multivariate statistical procedures (including propensity scoring techniques) can control only for observed variables. Covariates that could have had a profound confounding impact on program outcomes could not be accounted for in this study (e.g., the variant levels of motivation, parole supervision, reentry difficulties, formal and informal social support).

Selection bias is not salient for the in-prison portion of the treatment, because program participation is mandatory for inmates who have documented substance abuse histories and who do not meet the exclusionary criteria. But participation in the aftercare has thus far remained voluntary in California. Because aftercare is important in reinforcing treatment effects, as purported in many studies of TCs, confounding actors need to be addressed, such as reentry difficulties and motivations. In other words, those who are encouraged and supported by close families and friends and who are committed to changing their lives are more likely to take advantage of the aftercare services and succeed.

The importance of a randomized control trial is difficult to exaggerate in assessing any intervention programs. Because of the high frequencies of psychosocial, mental, and addiction problems among prison populations, it is often logistically impossible to screen common demographic variables for matching purposes. For instance, researchers from UCLA conducted an extensive intake profile analysis of 8,500 drug-involved inmates who participated in a prison TC. They found that those with dual diagnoses of mental health problems were substantially more likely to be reincarcerated 1 year after release than were those without psychiatric disorders (Messina, Burdon, Hagopian, & Prendergast, 2004). Detailed intake screening on such covariates as psychiatric disorders is not typically available for case-matching purposes.

Unfortunately, much of the current research on TCs as a treatment approach for drug-abusing offenders has been plagued with methodological problems. With a few exceptions (see Burdon et al., 2002; McKendrick et al., 2006), most evaluation studies of TCs have thus far been carried out without a rigorous randomized clinical trial design. All three 5-year follow-up studies—the Delaware study by Inciardi et al. (2004), the California

Amity study by Prendergast et al. (2004), and the present study—employed various forms of quasi-experimental design. Evaluation studies in correctional research generally produce mixed results, with the weakest studies providing the strongest support (Farabee, 2008).

On a separate note, most current studies focus on the efficacy of single-treatment episodes, expecting that drug-involved offenders will somehow become clean and sober after completing one program. It is no secret that the majority of substance abusers relapse and repeatedly enroll in treatment programs of different modalities. The single-modality and single-episode evaluation approach, though clean and straightforward for analytical purposes, is inadequate to examine the large number of drug-involved offenders in California who frequently oscillate between prisons and community-based programs. A far more ambitious evaluation approach (involving longitudinal designs and nonjustice agency outcome measures) would be ideal if policy makers are ever serious about increasing in-prison or community-based rehabilitation programs.

California has been searching for ways to manage its ever-increasing population of prison inmates (currently at more than 170,000) and high return rates among parolees (currently at more than 40% within 12 months postrelease; Hill, 2007). Significant resources have been invested in establishing substance abuse treatment programs in the extensive California prison system. Continued systematic studies with rigorous designs are vital for policy makers and for more informed resource allocation decisions. Because few programs are available in prison settings and because the demand for effective programming for inmates remains high, there remain tremendous opportunities for correctional researchers and policy makers alike to explore and test various treatment strategies.

## Notes

1. The original evaluation study was based on a sample of treatment participants ( $n = 404$ ) and a case-matched untreated comparison group ( $n = 404$ ) drawn from a nearby state prison. Because this study followed a longer observation period, the original samples were slightly reduced, with 395 participants in the treatment group and 403 in the comparison.

2. For each treatment inmate who agreed to participate in the study, a list of matched nontreatment inmates from a nearby comparison prison (the Avenal State Prison) was generated (see Anglin, Prendergast, Farabee, & Cartier, 2002). This list was based on the California Department of Corrections and Rehabilitation's inmate database. Matching criteria consisted of age, race/ethnicity, commitment offense, custody level, and prior history of sex offenses. Furthermore, prospective comparison participants had to fall within a release time frame comparable to that of the treatment participants. Once the list was generated, the researchers reviewed each comparison participant's prison file to determine that there was evidence of

prior substance abuse. This was the same process used by prison counselors to identify and refer inmates to institutional treatment programs. Of those who had evidence of substance abuse histories, three were randomly selected as possible comparison participants. The research staff then met with small groups of these potential participants to seek their consent to participate in the study. The participation rate for the comparison group was 76%.

3. The researchers were unable to obtain treatment data directly from the service providers. Therefore, no measures of treatment quality or activities were available for analysis.

4. A recidivism risk score was derived from the parolee's principal commitment offenses. The scaling technique was developed by California Department of Corrections and Rehabilitation's Office of Research, and it was based on a set of 36 categories of offenses and their associated likelihood of one's return to custody.

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