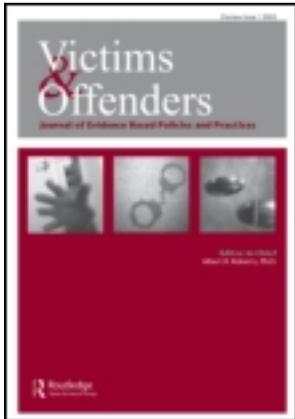


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The Plight of Providing Appropriate Substance Abuse Treatment Services to Offenders: Modeling the Gaps in Service Delivery

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The Plight of Providing Appropriate Substance Abuse Treatment Services to Offenders: Modeling the Gaps in Service Delivery

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Abstract: Using data from the National Criminal Justice Treatment Practices (NCJTP) Survey, estimates of offenders participating in drug treatment services were generated. Existing drug treatment programs have a capacity to serve around 10% of offenders. The majority of available services are alcohol and drug education and group counseling, which are suited for people with low-threshold substance use disorders. Yet a third of the offenders are reported to have a severe disorder (dependency) requiring

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more intensive structured services. Offenders in prison and jail are more likely to have access to treatment services compared to offenders in the community. Regardless of the correctional setting, only a small portion of the offender population receives the appropriate level of treatment. The current delivery system is inadequate to reduce the risk of recidivism. Using the risk, need, and responsivity framework to address the adequacy of dealing with drug-involved offenders, the current service delivery does not embrace this model. An effective correctional system should not only expand treatment capacity but also provide appropriate services given the needs of offenders. The composition of the current system demands attention to providing more intensive services to effectively use resources and to focus on risk reduction strategies.

Keywords: criminal justice, substance abuse, drug treatment services for adult offenders, participation rates, treatment needs

INTRODUCTION

The U.S. correctional system is a de facto health service provider given that nearly 8 million offenders are under its control (around 7 million adults and nearly 650,000 youth), and many of these offenders are in need of physical, mental health, and substance abuse services (Glaze & Bonczar, 2006, 2008; Taxman, Young, Wiersema, Rhodes, & Mitchell, 2007). This represents nearly 5% of the adult population in the United States (ages 18–65) and nearly 4% of youths (ages 13–18). The prevalence of substance use disorders in this population is reported to be nearly 70% (Glaze & Bonczar, 2006; Karberg & James, 2005; Mumola & Bonczar, 1998) but this represents all severities of disorders; offenders are four times more likely to have substance abuse disorders than the general population (Substance Abuse and Mental Health Services Administration, 2006a). The 70% rate of substance use disorders includes all disorder severities ranging from use to dependence. This highly cited statistic is used to represent the pressing need of a concentrated population of substance abuse disorders within the justice setting; unpacking this number to determine the appropriate level and type of care is part of the purpose of this article. By attending to this issue we can assess the capacity of the criminal justice system to provide substance abuse treatment, which has been noted as an effective strategy to reduce drug use and increase public safety (Chandler, Fletcher, & Volkow, 2009).

Findings from the National Criminal Justice Treatment Practices (NCJTP) Survey illustrate that a wide array of services are provided across the spectrum of correctional setting, (Taxman, Perdoni, & Harrison, 2007) but the capacity for providing services is relatively low. Overall, the system provides drug treatment services at some level to approximately 10% of the total offender population (Taxman, Perdoni, & Harrison, 2007). Furthermore, individual-level data shows that less than 20% of offenders have been in treatment services during their period of incarceration (Beck, 2000) and even fewer while under probation or parole supervision (Mumola & Bonczar, 1998).

Existing studies examine offender participation in treatment on a daily basis, often referred to as “stock.” However, this measure provides a limited perspective because access is affected by the flow through treatment programs and services each year, not just their daily populations. In this paper we measure the capacity of the system to provide treatment services annually, and examine offender access to different levels of treatment based on estimates of the rate of substance abuse disorders. The field has moved toward the need for an offender management framework that incorporates a risk needs responsiveness (RNR) model (Andrews & Bonta, 1998; Taxman & Marlowe, 2006). This paper begins the discussion of what type of programming and capacity is needed to meet the overall needs of offenders to reduce recidivism.

Substance Abuse and Health Problems among the Adult Offender Population

Research shows that the majority of adult offenders have a diagnosable substance abuse disorder (SUD) at rates much higher than that of the general adult population. Although less than 10% of the general population of adults are characterized as dependent or abusers (Substance Abuse and Mental Health Services Administration, 2006b), the offender population is reported to have a 70% SUD rate. These numbers vary by population as well as measurement technique. For example, Mumola and Karberg (2006) report that 53% of prison inmates meet the abuse and dependence criteria. Over 80% report prior drug use, and almost 60% use in the month leading up to arrest (Mumola & Karberg, 2006). Nearly 70% of jail inmates can be classified as either drug dependent or abusers, and over half (55%) use in the month prior to arrest (Karberg & James, 2005). Half of the community-based offender population uses drugs regularly, and over 30% use in the month leading up to their offense (Mumola & Bonczar, 1998).

Substance abuse not only plays a role in the day-to-day lives of offenders, it is often a factor in their offending behavior. One-third of prison inmates were under the influence when committing their offense (Mumola & Karberg, 2006) as were approximately 30% of jail inmates (Karberg & James, 2005) and 14% of probationers (Mumola & Bonczar, 1998). Data from the Arrestee Drug Use Monitoring program shows that approximately 70% of males and females tested positive for one or more illicit substances upon arrest, and that this rate remained relatively consistent over the study's two decades of data collection (Arrestee Drug Abuse Monitoring, 2000). Taylor and colleagues (Taylor, Fitzgerald, Hunt, Reardon, & Brownstein, 2001) found that nearly one-quarter of male (23%) and female (24%) arrestees tested positive for two or more drugs. Roughly 20% of prison and jail inmates report that they committed their immediate crime in order to purchase drugs (Karberg & James, 2005; Mumola & Karberg, 2006). James reports that one-quarter of jail inmates are confined for a

drug offense (James, 2004) as are 20% of prisoners (Sabol, Couture, & Harrison, 2007) and nearly 30% of probationers (Glaze & Bonczar, 2007).

Besides substance use, the offender population also has higher rates of health disorders. These problems are further complicated, and sometimes driven, by their substance use. Due in part to the exposure to substance abuse and violence in the communities to which they return, offenders released after periods of incarceration have higher-than-average fatality rates; an adjusted risk of death among former inmates was 3.5 times more than nonoffender state residents in Washington state (Binswanger, Stern, Deyo, Heagerty, Cheadle & Elmore et al., 2007). The adult offender population is two to three times more likely than the general public to be infected with HIV/AIDS (Maruschak, 2004; Weinbaum, Sabin, & Santibanez, 2005) and other health problems (Hammett, 2001)—including higher odds of other medical disorders (with some variation based on the correctional setting) than the general population (Binswanger, Krueger, & Steiner, 2009). Over 30% of the confined offender population has hepatitis C (Beck & Maruschak, 2004) as compared to less than 2% of the general public (Centers for Disease Control and Prevention, 2008). Approximately 60% of prison and jail inmates suffer from mental health problems (James & Glaze, 2006), and it has been estimated that roughly 20% of prisoners, jail inmates, and offenders under community supervision could classify as mentally ill (Ditton, 1999). Often, these mental health problems are accompanied by substance abuse disorders (Abram, Teplin, McClelland, & Dulcan, 2003).

Treatment Services in the Criminal Justice System

The nexus between substance abuse and criminal involvement provides evidence of the importance of addressing offenders' risk behaviors while they are involved with the justice system. Glaze and Bonczar (2007) estimate that out of every ten parolees exiting supervision, four have been terminated; of every five exiting probationers, one is terminated from supervision. Estimates have also shown that roughly 70% of prisoners recidivate within three years after release (Langan & Levin, 2002). Common to all of these figures is that reincarceration or violation of supervision is often the result of positive drug tests or failure to comply with treatment plans.

Few studies estimate the availability of and access to treatment for individuals involved in the justice system. The one study that has provided some estimates is the Criminal Justice Drug Abuse Treatment Studies research collaborative (Taxman, Perdoni, & Harrison, 2007), which demonstrates how substance abuse treatment services are sparse—and when they are provided, they tend to be inadequate for dealing with the severity of the problems presented. Three-quarters of prisons offer drug and alcohol education, as do 53% of community agencies and 61% of jails. Just over half (55%) of prisons provide under four hours of group counseling per week, as do 47% of community

agencies and 60% of jails. This distribution of services is inconsistent with the severity of the substance abuse disorders reported by offenders (Belenko & Peugh, 2005).

Less than half of prisons offer five hours or more of group counseling per week, compared with 30% of community agencies and roughly one-quarter of jails (Taxman, Perdoni, & Harrison, 2007). For prisons, 20% provide therapeutic communities, as do 26% of jails and 3% of community correctional agencies. Furthermore, the capacity to provide services is relatively low, and only a small number of offenders can participate in them (Chandler, Fletcher, & Volkow, 2009). Intensive treatment services, such as intensive outpatient (five or more hours a week), therapeutic community, and drug treatment courts would be more appropriate for individuals with a higher severity of SUD.

Research studies on substance abuse treatment programming for offenders routinely find positive outcomes, particularly for behavioral therapy and medication-assisted treatments. The Cochrane Collaboration recently conducted a “review of reviews” in the area of substance abuse treatment; this review was for any treatment studies and primarily consisted of studies that addressed substance abusers not involved in the justice system. A total of 52 reviews were conducted that covered nearly 694 primary studies, of which the majority were randomized controlled studies. The interventions generally had positive outcomes but varied in terms of the primary choice of substance abuse—42% for opioids, 37% for alcohol, 14% for psychostimulants, and 7% for polydrugs (Amato et al., 2011). The interventions that were found to be effective are medication-assisted treatments (i.e., methadone, buprenorphine, naltrexone), contingency management, and cognitive behavioral therapies (CBT) (with some variation across the studies).

Within the subfield of substance abuse treatment for drug-involved offenders, there have been a number of meta-analyses and systematic reviews, as shown in Table 1, that support the efficacy of treatment for offenders. Table 1 illustrates the available meta-analyses that have explored substance abuse treatment and its impact on recidivism (defined as rearrest generally, but some studies use reincarceration). In fact, treatment is considered to be more effective than social control strategies of drug testing, incarceration, and standard probation (MacKenzie, 2006; Prendergast, Podus, Chang, & Urada, 2002). Some studies are emerging about the importance of providing medication-assisted treatment for offenders in transition from prisons or jail to the community. In a randomized trial, Gordon, Kinlock, Couvillion, Schwartz, and O’Grady (2012) found that providing methadone prior to release into the community from prison had significant impact on engaging offenders in treatment and ultimately reducing recidivism.

This paper focuses on understanding the capacity of the justice system to provide services and the likelihood of being able to participate in treatment services under correctional control. Therefore, the method provides an understanding of the best way to treat offenders based on trying to match their

Table 1: Percent reductions in recidivism by intervention for substance using offenders from extant meta-analyses.

Intervention	Control Group	% Reduction	K^d	N of offenders
<i>Interventions for Substance Using Offenders</i>				
General drug treatment (Bennett, Holloway, & Farrington, 2008) (Prendergast, Podus, Chang, & Urada, 2002)	NT NT, TAU, placebo tx, or tx that was not intended to produce change	12% ^a 22% ^a	22 25	--- ---
Therapeutic community (Lipton, Pearson, Cleland, & Yee, 2008) (Mitchell, Wilson, & Mackenzie, 2007)	TAU or unrelated tx TAU, eligible but not referred, historical, other jurisdiction/facility	16% ^a 27%	35 30	10,881 ---
Therapeutic community (hard drugs) (Holloway, Bennett, & Farrington, 2006) Counseling (General) (Mitchell, Wilson, & Mackenzie, 2007)	NT TAU, eligible but not referred, historical, other jurisdiction/facility	45% 20%	7 25	--- ---
Narcotic maintenance (Mitchell, Wilson, & Mackenzie, 2007)	TAU, eligible but not referred, historical, other jurisdiction/facility	9% INCREASE	5	---
Narcotic maintenance (hard drugs) (Holloway, Bennett, & Farrington, 2006) Boot camp (Mitchell, Wilson, & Mackenzie, 2007)	NT TAU, eligible but not referred, historical, other jurisdiction/facility	27% ^a 5%	4 2	--- ---
Intensive supervision program (Perry et al., 2009) Postrelease supervision (Dowden, Antonowicz, & Andrews, 2003) Postrelease supervision (hard drugs) (Holloway, Bennett, & Farrington, 2006)	Randomly assigned: minimal, different, or NT --- NT	33% ^a 26% ^c 33% ^a	24 24 3	8,936 --- ---

^a Calculation assumed 0.50 control recidivism base rate.

^b Standardized mean difference was converted to odds ratio. Phi coefficient was converted to an odds ratio with an assumed 0.50 control recidivism. Success/failure rates for treatment and control groups were used to calculate odds ratio.

^c Treatment and control group recidivism rates were converted to percent reduction.

^d K reflects number of studies included.

needs with the different types of services. We conclude by describing a service delivery framework of the variety necessary to reduce offender recidivism and maximize public safety that is measured in terms of the number needed to treat (NNT) to reduce recidivism. This study reflects estimates in the United States but the methodology could be used in other countries to assess the nature and type of services provided and the capacity to meet the need of the offender population.

METHODS

The NCJTP Survey Sampling Technique

Data for the NCJTP Survey was gathered from a representative sample of prisons, jails, and community correctional agencies (Taxman, Young, Wiersema, Rhodes, & Mitchell, 2007). We began with facilities listed in the Bureau of Justice Statistics' (BJS) 2000 census of prisons (2004) to generate the prison portion of the sampling frame (Stephan & Karberg, 2003). Federal prisons, prisons devoted to medical or mental health treatment, and community corrections facilities were not included in the study. From the remaining facilities, prisons specializing in drug and alcohol treatment were sampled with certainty ($n = 58$). The remainder of the sample was generated by selecting prisons from this frame using the methodology employed by the BJS for their national surveys of prisons. In the first step of this method, the United States was broken into regions representing the south, west, midwest, and northeast; the four states with the largest correctional populations were classified separately, resulting in eight regions. Within these eight strata, facilities were chosen randomly, with the probability of selection proportionate to the size of the facility's daily population; 92 additional prisons were selected using this technique.

There is not a complete listing of community corrections agencies. Therefore, we generated a sampling frame using a two-stage stratified cluster technique. The first stage was the selection of counties from within the 3,141 U.S. counties or county equivalents. We used the same technique that was used for the selection of the prison sample, here by stratifying the eight national regions by the size of the county's population. County population was broken into three categories: small (less than 250,000), medium, (250,000–750,000), and large (more than 750,000). From the resulting 24 strata, we selected counties with populations over 3 million with certainty, and again utilized the probability proportional to size technique to generate a sample of 72 counties. The second stage was the selection of correctional programs and services within the 72 counties, resulting in a sample of 644 facilities.

Survey instruments were mailed to wardens, chief probation and parole officers, and other facility administrators. The survey contained questions on daily facility operations; gathered demographic information on the administrator and the facility; and collected data on funding, treatment practices, attitudes and philosophies on treatment and service delivery, screening and assessment practices, integration with outside agencies, management techniques, and other questions on facility and offender management. A response rate of 70% was attained for the prison sample, and a response rate of 71% attained for the community sample.

Sampling weights were also developed for the data. For the prison sample, we assumed that nonrespondents were missing at random. We developed weights based on the probability of selection, adjusted the sampling weights for nonresponses (Elliot, 1991), and trimmed excess values (Potter, 1988, 1990). A similar process was followed for the community sample, though values were not adjusted for nonresponse (Taxman, Young, Wiersema, Rhodes, & Mitchell, 2007).

Average Daily Populations

The NCJTP Survey polled administrators on the types of treatment services available in their facilities, as well as the number of offenders in these various programs on any given day. We applied the sampling weights to the survey data to estimate the average daily population (ADP) of offenders in the various treatment services in all U.S. correctional agencies. These estimates are represented in the column titled Average Daily Population in Services in Tables 3–5, and mirror national statistics.

Estimating Need for Different Levels of Treatment Services

We reviewed the literature on severity of substance use disorders among the correctional population to generate estimates on the number of offenders with substance abuse disorders in need of clinical treatment services. As noted in the earlier section, there is considerable variation in the percentage of offenders that are reported to have a substance use disorder (from 70% in general to a recent BJS prison survey that found 53% [Mumola & Bonczar, 1998]). This range is due to varying definitions of substance use disorders used in various studies. The most thorough assessment that distinguishes between abusers and dependency is from Belenko and Peugh (2005), who estimate that 31.5% of male prisoners are substance dependent, 18.7% have a serious abuse disorder, 20.2% are abusers, and 29.6% have no substance abuse problem. Female prisoners have a higher rate of dependence, with 52.3% falling within this classification, while 16.2% have a serious abuse disorder, 8.3% are classified as abusers, and 23.2% have no substance abuse problem requiring treatment. These figures mirror those reported in other studies for jail inmates and community-based offender populations (Bureau

of Justice Statistics, 2004; Taylor, Fitzgerald, Hunt, Reardon, & Brownstein, 2001). We used these estimates to determine levels of service need for the population.

Given that there are gender differences in the severity of the problem, the next step was to account for gender breakdowns across all settings. According to Harrison and Beck (2006), 93% of prisoners are male and 7% are female, and 87% of jail inmates are male and 13% female. Glaze and Bonczar (2006) report that 77% of probationers are male and 23% female, and that 88% of the parolees are male and 12% are female.

We then generated estimates of the number of offenders with some type of SUD in the criminal justice system on any given day. First, sampling weights were applied to the data, and estimates of the average daily population in each setting were generated. These estimates were then split by the gender breakdowns listed above. Finally, the prevalence of substance abuse disorders reported by Belenko and Peugh were applied. This figure is represented in the column titled Daily Population in Need of Treatment in Tables 3–5.

Matching Offender Need to Treatment Services

The next step was to categorize treatment services by their levels of intensity. The responsivity model suggests that offenders should be assigned to services based on the seriousness of their risk of recidivism and the severity of their problem behavior (such as substance abuse, mental health disorders, sexual deviance, histories of violence, etc.; Taxman & Marlowe, 2006). This model resembles the Patient Placement Criteria (PPC) recommended by the American Society of Addiction Medicine (ASAM) for substance abuse (Graham, Schultz, Mayo-Smith, & Ries, 2003). The responsivity and PPC models are built on the premise that the severity of the problem disorder should control the duration, design, content, and type of service delivered. Individuals with dependent disorders should participate in more intensive services than those with threshold disorders. The classification of programming is as follows:

1. For those with dependent disorders, intensive services involve more frequent interaction with counselors and a therapeutic community setting.
2. Intensive outpatient counseling services (offered for five or more hours per week), considered medium intensity, are more appropriate for individuals who do not use substances daily and whose use does not interfere with daily functioning.
3. Low intensity outpatient counseling services, including those providing infrequent counseling and some type of pharmacological medications (like methadone maintenance), are suited for individuals with low threshold disorders.

In Tables 3–5, the estimates for treatment capacity as well as need are based on the assumption that 71% of the male offenders and 77% of the female offenders need some type of substance abuse treatment; that is, the model does not assume that all offenders need treatment. Estimates of the capacity of treatment services were generated by multiplying the number of times per year that the service can be offered by the number of offenders in the program, and then reducing this estimate by the retention rate assumptions. The calculation was completed for each group of services (high, medium, and low intensity classifications) using the criteria described above. The sampling weights were applied to the data to generate national estimates of the flow of offenders through the services. The model also generates estimates adjusted for the population participating in phased treatment structures.

Flow of Offenders through Treatment Services

In this study, we develop two models for measuring the annual flow of offenders through treatment services. These models are based on the number of times per year a facility offers a particular treatment program and the retention rates in these programs. The number of times a program can be offered in a year is determined using the duration of the reported program. As shown in Table 2, Model 1 (a more conservative model) assumes that treatment programs are offered less frequently (fewer times per year), while Model 2 (the more liberal model) assumes that programs are offered frequently, assuming a rolling program (more times per year than assumed in Model 1). We do not assume that these programs are offered in “closed group” formats, where all offenders enter and leave on specific and common days. The following assumptions were made based on the research literature: retention rates in residential programs are approximately 65% (Joe, Simpson, & Broome, 1999; Martin, Butzin, Saum, & Inciardi, 1999) and other services are approximately 55% (Joe, Simpson, & Broome, 1999).

Table 2: Assumptions underlying for the models.

	Model 1 (Conservative)	Model 2 (Liberal)
Duration Assumption (Number of Times Per Year Service Is Offered)		
Under 30 days	10	12
31–90 days	5	6.2
91–120 days	3	3.5
121–180 days	2	2.4
181–365 days	1.2	1.3
Over 365 days	0.8	1
Retention Rate Assumption		
Low/Medium intensity programming		55%
High intensity programming		65%

The models also adjust estimates for the number of offenders participating in various services as a *part* of a total treatment program. In these “phased treatment structures,” offenders participate in more than one service at a time. Drug and alcohol education is often the first phase of a layered treatment program. Thus, if the agency administrator reported that the number of offenders in drug and alcohol education is equal to the number of participants in other services, then we assume it is a phased treatment structure. Furthermore, if the facility offered three or more services with the same enrollment, we assume each is part of a phased structure. We adjusted the annual population estimates by counting the enrollment in the individual services making up the phased treatment structure only once. Overall, 13% of facilities offer services through a phased structure.

Estimates of the annual flow through treatment services were generated by multiplying the number of times per year that the service can be offered by the number of offenders in the program, and then reducing this estimate by the retention rate assumptions. The calculation was completed for each group of services (high, medium, and low intensity classifications) using the criteria described above. The sampling weights were applied to the data to generate national estimates of the flow of offenders through the services. The model also generates estimates adjusted for the population participating in phased treatment structures.

RESULTS

The following tables report the capacity of the correctional system to provide services through their facilities or in conjunction with outside agencies.

Prisons

As shown in Table 3, 874,170 of the 1.2 million offenders in prisons likely need some form of clinical substance abuse treatment, but the actual number receiving appropriate care on the average day is under 145,000. Between 163,997 (Conservative Model [1]) and 196,431 (Liberal Model [2]) prisoners complete treatment programs annually. After adjusting for phased treatment structures, the flow estimate ranges between 150,948 and 180,826 offenders, respectively. This means that annually 13.3–15.9% of the offenders can participate in some type of substance abuse treatment services.

Overall, most prisoners have access to less intensive services geared for those with low-threshold disorders. Although a higher proportion of prisoners complete low (under five hours of group counseling and methadone) and high (therapeutic communities) intensity programs each year than other settings, these estimates still represent only a small percentage of the population in need of substance abuse treatment services.

Table 3: Estimate of offender treatment needs and annual flow through treatment services in prisons.

Average Daily Population of Adults in Prisons: 1,233,867					
Service	Average Daily Population in Services	Daily Population in Need of Treatment	Est. Population Receiving Services Conservative Model (1) (% Population Receiving Appropriate Treatment)	Est. Population Receiving Services Liberal Model (2) (% Population Receiving Appropriate Treatment)	Est. % Population Flowing through Services Annually (Range)
Alcohol and drug Education	75,543	N/A	83,683 (N/A)	100,591 (N/A)	6.8–8.2%
Low intensity	34,618	238,963	58,245 (24.4%)	70,377 (29.5%)	4.7–5.7%
Medium intensity	64,475	228,574	47,919 (21.0%)	56,102 (24.5%)	3.9–4.5%
High intensity	45,487	406,633	57,833 (14.2%)	69,953 (17.2%)	4.7–5.7%
Total in clinical services (excludes drug and alcohol education)	144,580	874,170	163,997 (18.8%)	196,431 (22.5%)	13.3–15.9%
Total Adjusted for Phased Treatment Structures			150,948 (17.3%)	180,826 (20.7%)	12.2–14.7%

Jails

Table 4 provides flow estimates for jails. Over 531,000 of the 745,765 inmates in U.S. jails are in need of some level of treatment services on any given day (this assumes that 30% of the offenders do not need any substance abuse treatment). However, the daily capacity for providing services is low, as only 71,586 (14%) of jail inmates have access to treatment daily. The annual participation rate ranges from 131,482 (Conservative Model [1]) to 160,496 (Liberal Model [2]) jail inmates. This means that annually 9.9–12.1% of offenders can participate in some type of substance abuse treatment services.

The annual flow estimates for jails drop considerably after the models are adjusted for phased programming. It is estimated that over 40% of the population of jail inmates completing particular services each year participate as a part of a phased treatment structure. Furthermore, the postadjustment estimate of annual completions in the Conservative Model (1) is roughly equal to the estimate of jail inmates in clinical treatment programs on any given day.

Community Corrections

Table 5 shows the estimated treatment need and annual completions in community correctional settings. Of offenders under community supervision, 70% have some type of substance use disorder, meaning that about 4.2 million need clinical treatment services. On any given day, only 213,577 receive such care (5%). The annual flow through community-based programs ranges from 301,425 to 361,748 offenders. After adjusting for phased treatment structures the estimates drop to 281,693 under the Conservative Model (1) and 338,834 under the Liberal Model (2). About 4.8–5.8% of annual completions in community corrections participate in phased treatment structures.

Annual completion estimates are lowest for high intensity services. Under the Conservative Model (1), an estimated 25,286 offenders complete high intensity services annually, as opposed to 237,949 for low intensity services and 310,277 for drug and alcohol education. Under the Liberal Model (2), an estimated 361,748 offenders complete clinical services each year, of which 288,000 complete low intensity programming. Thus, high intensity service completions account for roughly 8% of the total annual completions in community-based settings, while low intensity services account for nearly 80%.

Correctional Programming

Correctional programs, such as intensive supervision, work release, and day reporting, are designed to be graduated sanctions that intensify the

Table 4: Estimate of offender treatment needs and annual flow through treatment services in jails.

Average Daily Population of Adults in Jails: 745,765					
Service	Average Daily Population in Services	Daily Population in Need of Treatment	Est. Population Receiving Services Conservative Model (1) (% Population Receiving Appropriate Treatment)	Est. Population Receiving Services Liberal Model (2) (% Population Receiving Appropriate Treatment)	Est. % Population Flowing through Services Annually (Range)
Drug and alcohol education	46,071	N/A	130,217 (N/A)	157,874 (N/A)	17.5–21.2%
Low intensity	43,334	139,374	102,241 (73.4%)	125,484 (90.0%)	13.7–16.8%
Medium intensity	16,674	137,090	14,891 (10.9%)	18,178 (13.3%)	2.0–2.4%
High intensity	11,578	254,616	14,350 (5.6%)	16,833 (6.6%)	1.9–2.3%
Total in clinical services (excludes drug and alcohol education)	71,586	531,080	131,482 (24.8%)	160,495 (30.2%)	17.6–21.5%
Total Adjusted for Phased Treatment Structures			73,670 (13.9%)	90,046 (17.0%)	9.9–12.1%

Table 5: Estimate of offender treatment needs and annual flow through treatment services in community correctional facilities.

Average Daily Population of Adults in Community Corrections: 5,864,152					
Service	Average Daily Population in Services	Daily Population in Need of Treatment	Est. Population Receiving Services Conservative Model (1) (% Population Receiving Appropriate Treatment)	Est. Population Receiving Services Liberal Model (2) (% Population Receiving Appropriate Treatment)	Est. % Population Flowing through Services Annually (Range)
Drug and alcohol education	192,072	N/A	310,277 (N/A)	373,974 (N/A)	5.3–6.4%
Low intensity	145,070	1,035,572	237,949 (23.0%)	288,351 (27.8%)	4.1–4.9%
Medium intensity	40,520	1,065,295	38,189 (3.6%)	44,431 (4.2%)	0.7–0.8%
High intensity	27,987	2,107,622	25,286 (1.2%)	28,966 (1.3%)	0.4–0.5%
Total in clinical services (excludes drug and alcohol education)	213,577	4,208,489	301,425 (7.2%)	361,748 (8.6%)	5.1–6.2%
Total Adjusted for Phased Treatment Structures			281,693 (6.7%)	338,834 (8.1%)	4.8–5.8%

supervision of offenders in the community. Often these programs are designed to address offenders that have a high-risk profile, and it is possible to include treatment services (discussed above) as part of these existing services. Treatment services are a frequent component of these programs, although most of the provided treatment services fall within the range of educational and/or infrequent counseling.

As shown in Table 6, half of the agencies providing intensive supervision (53%) and transitional housing (50%) programs include substance abuse treatment services as a part of their program structure. Much less common is the inclusion of substance abuse treatment services in other correctional programs, such as education (17%), day reporting (19%), and vocational training (30%). Almost all facilities including substance abuse treatment within correctional programming provide drug and alcohol education (over 90% across all such programs), but rates drop drastically when the focus shifts to more intensive treatment services. Typically, as the intensity level increases, the less likely it is a service modality is incorporated into a program—much like the trends observed for substance abuse treatment services in general discussed in the previous sections. While 81% of the intensive supervision programs indicate that they provide substance abuse treatment, the treatment tends to fall into the low intensity service category; 55% incorporate medium intensity services, and only 12% include high intensity services. Although 76% of the transitional housing programs provide low intensity services, 66% include medium intensity services, and 24% include high intensity services. Overall, the availability of high intensity services within correctional programs is low, ranging from 12% (intensive supervision) to 63% (work release) (see Taxman, Perdoni, and Harrison [2007] for a discussion of these estimates).

THE POTENTIAL IMPACT OF EXPANDING TREATMENT

Austin (2009) raised the concern that expanding treatment will not generate the reductions in recidivism that rehabilitation advocates contend. The number needed to treat (NNT) method (Cook & Sackett, 1995) is used to identify the number of individuals who need to be treated with an intervention to prevent one negative event (i.e., one recidivist). As shown in the models in this paper, less than 10% of the offender population is involved in treatment (and frequently inappropriate treatment), but by expanding treatment to a greater proportion of the population along with a better match between client needs and treatment services, the NNT to prevent one recidivism event in this population is 8. This suggests that for every eight offenders who receive treatment, one will be prevented from further offending. This NNT of 8 is lower than many medical interventions used in preventing death from cardiovascular disease and stroke (e.g., Chamnan, Simmons, Khaw, Wareham, & Griffin, 2010; Heller & Dobson, 2000; Heller, Edwards, & McElduff, 2003), and is even an

Table 6: Prevalence of treatment services within correctional programs.

Program	% Agencies	% with Programs That Include SA Treatment Services	% with Services That Include Drug and Alcohol Education	% with Services That Include Counseling Services	% with Services That Include Medium Intensity Services	% with Services That Include High Intensity Services
Day reporting	10.8	19.2	93.2	54.4	56.4	54.1
Intensive supervision program	41.1	52.6	92.3	81.0	55.2	11.8
Work release	22.2	39.0	90.1	82.1	21.2	62.9
Transitional housing	15.0	49.5	92.5	75.8	65.7	23.6
Vocational training	28.4	29.7	97.4	70.9	86.4	17.3
Education	48.5	17.0	94.7	51.9	41.7	32.0

improvement over the NNT of 33 needed for punishment sanctions to prevent one recidivism event (Caudy, Taxman, Tang, & Watson, in press).

DISCUSSION: BRINGING THE SYSTEM CLOSER TO BEST PRACTICES

Effective public health and public safety strategies emphasize the importance of risk reduction as a primary goal. For public health, the desired reductions are focused on physical and psychological health, including reduced substance abuse. Public safety is concerned with reducing the odds of being involved in criminal behavior, particularly personal and violent crimes. The importance of providing quality drug treatment services to offenders and assigning offenders to treatment programs that are appropriate for the individual cannot be understated since all evidence points to ineffective programs having little to no impact on offender outcomes (Cullen, Myer, & Latessa, 2009; Taxman & Belenko, 2011).

This study puts a face on concerns about the dearth of substance abuse treatment services available. The study measures the current capacity of the correctional and public health systems to provide substance abuse treatment services—both in terms of overall capacity but more importantly in terms of the capacity to provide the appropriate level of care. First, using a clinically based definition of substance abuse problem severity, the study found that nearly half of the offenders do not have a substance use disorder that requires any intervention or services. While some offenders might have low-threshold substance use behaviors, these behaviors do not indicate a need for substance abuse treatment services. (The individual may need other treatments for mental health, criminal behavior, and so on). For the other half of offenders that are in need of substance abuse treatment services, the existing system is inadequate. The typical treatment programs available are geared toward those with low-threshold disorders.

The study also reports that for the total offender population anywhere between 7.6–9.2% of offenders, on an average day, can participate in some type of programming and/or treatment program. This low capacity illustrates that service delivery is not a priority, either as determined by correctional administrators or funding agencies. Low capacity for providing access to services affects both the ability to deter or rehabilitate criminal behavior and, more importantly, it negatively impacts the ability of the correctional culture to embrace programs and services as part of its core operations. Low capacity means that the services operate at the margin of the mission of correctional agencies, leading to continued competition between effective treatment services and the mission of punishment.

The estimation methods used in this study provide a road map for addressing service gaps in the difficult policy arena of providing treatment services for drug-involved offenders. Morris and Tonry (1990) and Byrne, Lurigio,

and Petersilia (1992) recommended a set of intermediate sanctions (e.g., day reporting centers, work release, intensive supervision, etc.) to provide better oversight and management of the offender population in the community. This occurred concurrently with the development and implementation of drug treatment courts, which served to provide a novel approach for increasing access to treatment services for offenders, followed by the design and implementation of Residential Substance Abuse Treatment services in prisons (and jails) with continued care in the community. In 2001, the Serious and Violent Offender Initiative (SVORI) was built on the premise that more services and programs are needed to reduce the risk of recidivism. As shown in this study and its companion studies, substance abuse treatment programs for the most part continue to exist at the margins, and even correctional programs such as intensive supervision and work release are provided to a relatively small percentage of the population that could benefit from these services (see Taxman, Perdoni, and Harrison [2007] for a discussion).

The underlying model used in this study should apply to other critical areas where there is a need to better understand how the available programs match the criminal risk of offenders or other psychosocial needs (i.e., mental health, sexual deviancy, education deficits). As far as we know, there has been no systemic analysis of criminal risk levels (propensity to commit criminal behavior) and the type of appropriate programming that will serve to reduce the risk of recidivism. The evidence-based practices literature contains the theme that diagnostics should drive programming (Andrews & Bonta, 2010; Taxman, 2006) and that failure to do so illustrates that “quackery,” instead of professionalism, guides action (Cullen, Myer, & Latessa, 2009; Latessa, Cullen, & Gendreau, 2002). While meta-analyses exist that demonstrate the efficacy and value of different programs, such as drug treatment courts (Mitchell, Wilson, Eggers, & MacKenzie, 2012), in-prison treatment and aftercare (Mitchell, Wilson, & MacKenzie, 2007), work release and education programs (Bouffard, MacKenzie, & Hickman, 2000), and intensive RNR supervision (Drake, 2011; MacKenzie, 2006;), the literature has not completed sufficient moderator analyses to answer the question of “what works for whom.” Unlike the ASAM criteria that deal with patient placement for substance abuse disorders, no such industry standards exist regarding the appropriate level of supervision or programming (care) for offenders presenting different risk portfolios. For programs that are designed to safely manage the offender in the community, more research is needed to define the types of programs that are needed for different risk portfolios of offenders, and standards are needed for the programs.

Recidivism reduction is an important policy initiative that is focused on reducing the risk of higher risk offenders. Coupled with this is the notion that such higher risk individuals need to be in more structured and targeted programming to achieve reductions in risk for reoffending. For example, consider

the following illustration shown in Table 7 of a RNR approach that links criminal justice risk to substance abuse severity. The level of programming would be associated with risk factors, and the available services would be used to address the severity of the problem disorder (substance abuse) given the criminal justice risk factors. Low-risk offenders would be offered less intensive services—unless they have a dependent disorder, and then the focus is on the disorder. Low-risk offenders with no disorder would not be required to participate in treatment; instead the emphasis would be on other punishments (e.g., fines) and prosocial behaviors such as employment. This model serves to comingle the provision of adequate care into the equation of reducing the risk of recidivism.

Gladwell’s (2000) concept of a “tipping point” suggests that change efforts take hold in an environment only after moving beyond a critical point. Findings from this study show that few offenders can access appropriate services, and with so few services available in the system, the system remains focused on security, enforcement, and punishment. The integration of treatment, including a therapeutic environment that promotes offender change, is barely present. Existing research shows the problems associated with implementing treatment in correctional settings (Farabee, Prendergast, Cartier, Wexler, Knight, & Anglin, 1999; Taxman & Belenko, 2011; Taxman & Bouffard, 2000, 2002), and many of these issues are due to the correctional culture that does not recognize its role as a service provider. Treatment programs are considered secondary to the primary mission of the agency, and therefore implementation problems arise from the misalignment of correctional goals.

Table 7: Conceptual RNR programming model.

Substance Abuse Dependency	High Risk	Medium Risk	Low Risk
Dependent	Residential treatment program with aftercare	Intensive outpatient with social skills	Intensive outpatient treatment with employment
Abuser	Criminal values therapy as part of substance abuse intensive outpatient	Outpatient therapy with employment	Outpatient counseling with employment
None	Criminal value therapy, employment	Employment	Employment or community services

Note: Criminal values therapy is not typically included in substance abuse treatment programming. Residential treatment refers to an inpatient therapeutic community. Intensive outpatient is similar to a day reporting program where services are provided several times a week for up to twenty hours. Outpatient programming refers to group therapy for under four hours a week. Supervised monitoring is assumed in all levels of care.

NOTES

1. For a discussion on juvenile justice settings, see Young, Dembo, & Henderson (2007).
2. When respondents indicated multiple durations for a single program, we used the response indicating the shorter duration.
3. The count of services in each case was also factored into this process. If a facility reported that they provide four or more services, the threshold value was set at three. However, when the facility reported three services, the criteria for determining phased programming was set at a minimum of two identical values; when the facility reported two services, the criteria was at least one identical value.

REFERENCES

- Abram, K. M., Teplin, L. A., McClelland, G. M., & Dulcan, M. K. (2003). Comorbid psychiatric disorders in youth in juvenile detention. *Archives of General Psychology, 60*, 1097–1108.
- Amato, L., Davoli, M., Vecchi, S., Ali, R., Farrell, M., Faggiano, F., Foxcroft, D., Ling, W., Minozzi, S., & Chengzheng, Z. (2011). Cochrane systematic reviews in the field of addiction: what's there and what should be. *Drug Alcohol Dependence, 113*(2–3), 96–103.
- Andrews, D. A., & Bonta, J. (1998). *The psychology of criminal conduct*. Cincinnati, OH: Anderson Publishing.
- Arrestee Drug Abuse Monitoring. (2000). *Arrestee drug abuse monitoring annual report, 1999*. Washington, DC: Office of Justice Programs, National Institute of Justice.
- Austin, J. (2009). The limits of prison based treatment. *Victims and Offenders, 4*, 311–320.
- Beck, A. J. (2000). *State and federal prison population tops one million*. Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Beck, A. J., & Maruschak, L. M. (2004). *Hepatitis testing and treatment in state prisons (NCJ-199173C)*. Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Belenko, S., & Peugh, J. (2005). Estimating drug treatment needs among state prison inmates. *Drug and Alcohol Dependence, 77*, 269–281.
- Bennett, T. H., Holloway, K., & Farrington, D. P. (2008). The statistical association between drug misuse and crime: A meta-analysis. *Aggression and Violent Behavior, 13*(2), 107–118.
- Binswanger, I. A., Krueger, P. M., & Steiner, J. F. (2009). Prevalence of chronic medical conditions among jail and prison inmates in the United States compared with the general population. *Journal of Epidemiology of Community of Health*. Retrieved October 2012. doi:10.1136/jech.2009.090662
- Binswanger, I. A., Stern, M. A., Deyo, R. A., Heagerty, P. J., Cheadle, A., Elmore, J. A., et al. (2007). Release from prison: A high risk of death for former inmates. *New England Journal of Medicine, 356*, 157–165.
- Bouffard, J. A., MacKenzie, D. L., & Hickman, L. A. (2000). Effectiveness of vocational education and employment programs for adult offenders: A methodology-based analysis of the literature. *Journal of Offender Rehabilitation, 31*, 1–41.

- Byrne, J. M., Lurigio, A., & Petersilia, J. (Eds.). (1992). *Smart sentencing: The emergence of intermediate sanctions*. Newbury Park, CA: Sage.
- Caudy, M. S., Taxman, F. S., Tang, L., & Watson, C. (in press). Using systematic reviews and meta-analyses to advance knowledge translation and dissemination. In D. Weisburd & D. F. Farrington (Eds.), *Systematic reviews in criminology: What have we learned?* New York: Springer.
- Centers for Disease Control and Prevention. (2008). *Viral hepatitis statistics and surveillance*. Retrieved February 23, 2009, from <http://www.cdc.gov/hepatitis/statistics.htm>
- Chamnan, P., Simmons, R. J., Khaw, K. T., Wareham, N. J., & Griffin, S. J. (2010). Estimating the population impact of screening strategies for identifying and treating people at high risk of cardiovascular disease: Modelling study. *British Medical Journal*, *340*, 1–11.
- Chandler, R. K., Fletcher, B. F., & Volkow, N. D. (2009). Treating drug abuse and addiction in the criminal justice system: Improving public health and safety. *Journal of the American Medical Association*, *301*, 183–190.
- Cook, R. J., & Sackett, D. L. (1995). The number needed to treat: A clinically useful measure of treatment effect. *British Medical Journal*, *310*, 452–454.
- Cullen, F. T., Myer, A. J., & Latessa, E. J. (2009). Eight lessons from *Moneyball*: The high cost of ignoring evidence-based corrections. *Victims and Offenders*, *4*, 197–213.
- Ditton, P. M. (1999). *Mental health and treatment of inmates and probationers* (NCJ-174463). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Drake, E. (2011). "What works" in community supervision: Interim report (Document No. 11-12-1201). Olympia, WA: Washington State Institute for Public Policy. doi:11/2012:<http://www.wsipp.wa.gov/pub.asp>
- Elliot, D. (1991). *Weighting for non-response: A survey researcher's guide*. London: Social Survey Division, Office of Population Census and Surveys.
- Farabee, D., Prendergast, M. L., Cartier, J., Wexler, H., Knight, K., & Anglin, D. A. (1999). Barriers to implementing effective correctional treatment programs. *Prison Journal*, *79*, 150–162.
- Gladwell, M. (2000). *The tipping point: How little things can make a big difference*. New York: Little, Brown and Company.
- Glaze, L. E., & Bonczar, T. P. (2006). *Probation and parole in the United States, 2005* (NCJ-215091). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Glaze, L. E., & Bonczar, T. P. (2007). *Probation and parole in the United States, 2006* (NCJ-220218). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Glaze, L. E., & Bonczar, T. P. (2008). *Probation and parole in the United States, 2007* (NCJ-224707). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Gordon, M. S., Kinlock, T. W., Couvillion, K., Schwartz, R. P., & O'Grady, K. (2012). A randomized clinical trial of methadone maintenance for prisoners: Prediction of treatment entry and completion in prison. *Journal of Offender Rehabilitation*, *51*(40), 222–238.

- Graham, A. W., Schultz, T. K., Mayo-Smith, M. F., & Ries, R. K. (2003). *Principles of addiction medicine* (3rd ed.). Washington, DC: American Society of Addiction Medicine.
- Hammett, T. M. (2001). Making the case for health interventions in correctional facilities. *Journal of Urban Health*, 78, 236–240.
- Harrison, P. M., & Beck, A. J. (2006). *Prison and jail inmates at midyear, 2005* (NCJ-213133). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Heller, R. F., & Dobson, A. J. (2000). Disease impact number and population impact number: Population perspective to measures of risk and benefit. *British Medical Journal*, 321, 950–953.
- James, D. J. (2004). *Profile of jail inmates, 2002* (NCJ-201932). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- James, D. J., & Glaze, L. E. (2006). *Mental health problems of prison and jail inmates* (NCJ-213600). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Joe, G. W., Simpson, D. D., & Broome, K. M. (1999). Retention and patient engagement models for different treatment modalities in DATOS. *Drug and Alcohol Dependence*, 57, 113–125.
- Karberg, J. C., & James, D. J. (2005). *Substance dependence, abuse, and treatment of jail inmates, 2002* (NCJ-209588). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Langan, P. A., & Levin, D. J. (2002). *Recidivism of prisoners released in 1994* (NCJ-193427). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Latessa, E. J., Cullen, F., & Gendreau, P. (2002). Beyond correctional quackery: Professionalism and the possibility of effective treatment. *Federal Probation*, 66(2), 43–49.
- MacKenzie, D. L. (2006). *What works in corrections: Reducing the criminal activities of offenders and delinquents*. New York: Cambridge University Press.
- Martin, S. S., Butzin, C. A., Saum, C. A., & Inciardi, J. A. (1999). Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: From prison to work release to aftercare. *Prison Journal*, 79, 294–320.
- Maruschak, L. M. (2004). *HIV in prisons and jails*. Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Mitchell, O., Wilson, D. B., & MacKenzie, D. L. (2007). Does incarceration-based drug treatment reduce recidivism? A meta-analytic synthesis of the research. *Journal of Experimental Criminology*, 3(4), 353–375.
- Mitchell, O. J., Wilson, D. B., Eggers, A., & MacKenzie, D. L. (2012). Assessing the Effectiveness of Drug Courts on Recidivism: A Meta-Analytic Review of Traditional and Non-Traditional Drug Courts. *Journal of Criminal Justice*, 40(1), 60–71.
- Morris, N., & Tonry, M. (1990). *Between Prison and Probation*. New York: Oxford University Press.
- Mumola, C. J., & Bonczar, T. B. (1998). *Substance abuse and treatment of adults on probation, 1995*. Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Mumola, C. J., & Karberg, J. C. (2006). *Drug use and dependence, state and federal prisoners, 2004* (NCJ-213530). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.

- Potter, F. J. (1988). Personal communication on *Survey of procedures to control extreme sampling weights*. Alexandria, VA: Proceedings of the Section on Survey Research Methods.
- Potter, F. J. (1990). Personal communication on *A study of procedures to identify and trim extreme sampling weights*. Alexandria, VA: Proceedings of the Section on Survey Research Methods.
- Prendergast, M. L., Podus, D., Chang, E., & Urada, D. (2002). The effectiveness of drug abuse treatment: A meta-analysis of comparison group studies. *Drug and Alcohol Dependence*, 67(1), 53–72.
- Sabol, W. J., Couture, H., & Harrison, P. M. (2007). *Prisoners in 2006* (NCJ-219416). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Stephan, J. J., & Karberg, J. C. (2003). *Census of state and federal correctional facilities, 2000* (NCJ-198272). Washington, DC: Office of Justice Programs, Bureau of Justice Statistics.
- Substance Abuse and Mental Health Services Administration. (2006a). *Substance abuse treatment in adult and juvenile correctional facilities*. Rockville, MD: Office of Applied Studies.
- Substance Abuse and Mental Health Services Administration. (2006b). *Results from the 2004 national survey on drug use and health: National findings* (SMA 05-4062). Rockville, MD: Office of Applied Studies.
- Taxman, F. S. (2006). What should we expect from parole (and probation) under a behavioral management approach? *Perspectives*, 30(2), 38–45.
- Taxman, F. S., & Belenko, S. (2011). *Implementation of Evidence-Based Community Corrections and Addiction Treatment*. New York: Springer.
- Taxman, F. S., & Bouffard, J. (2000). The importance of systems in improving offender outcomes: New frontiers in treatment integrity. *Justice Research and Policy*, 2, 37–58.
- Taxman, F. S., & Bouffard, J. (2002). Assessing therapeutic integrity in modified therapeutic communities for drug-involved offenders. *Prison Journal*, 82, 189–212.
- Taxman, F. S., & Marlowe, D. M. (2006). Risk, needs, responsivity: In action or inaction. *Crime and Delinquency*, 52, 3–7.
- Taxman, F. S., Perdoni, M. L., & Harrison, L. D. (2007). Drug treatment services for adult offenders: The state of the state. *Journal of Substance Abuse Treatment*, 32(3), 239–254.
- Taxman, F. S., Young, D. W., Wiersema, B., Rhodes, A., & Mitchell, S. (2007). National Criminal Justice Treatment Practices Survey: Methods and procedures. *Journal of Substance Abuse Treatment*, 32, 225–238.
- Taylor, B., Fitzgerald, N., Hunt, D., Reardon, J. A., & Brownstein, H. (2001). *ADAM preliminary 2000 findings on drug use and drug markets: Adult male arrestees*. Washington, DC: Office of National Drug Control Policy.
- Weinbaum, C. M., Sabin, K. M., & Santibanez, S. S. (2005). Hepatitis B, hepatitis C, and HIV in correctional populations: A review of epidemiology and prevention. *AIDS*, 19, S41–S46.
- Young, D. W., Dembo, R., & Henderson, C. E. (2007). A national survey of substance abuse treatment for juvenile offenders. *Journal of Substance Abuse Treatment*, 32, 255–266.