Interventions to Promote Successful Re-Entry Among Drug-Abusing Parolees

Ithough evaluations have found prison treatment programs to be generally effective, most studies report that paroled graduates of these programs are much more likely to remain drug-free if they receive continuing treatment in the community. This article reviews research findings on principles of effective correctional treatment and the interventions that have been shown to be effective with drug-abusing parolees or that have been tested with general drug-abusing populations and show promise for use with parolees. The article concludes with a discussion of several issues that clinicians need to consider in adopting and implementing these interventions.

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David Geffen School of Medicine, University of California Los Angeles, California state and Federal prisons in the United States currently house nearly 1.6 million inmates, the majority of whom have drug problems. Treating drug-involved inmates is a potentially powerful strategy for reducing addiction's impact on public safety and public health. Evaluations of prison treatment programs, which have focused mainly on therapeutic community programs, have found them to be effective. Nevertheless, many inmates never have the opportunity to participate. In 2004, only 15 percent of drug-dependent inmates received treatment, while another 35 percent participated in less intensive self-help, peer counseling, or education programs (Mumola and Karberg, 2006).

Each year, more than 600,000 people leave prison and re-enter the Nation's communities. Within 3 years of their release, more than two-thirds of these individuals are rearrested, and one-fourth return to prison with a new sentence (Mumola and Karberg, 2006). Resumption of drug abuse precipitates or contributes to much of this recidivism. In addition to high relapse rates among parolees who never received treatment in prison, studies have found that more than 50 percent of graduates of many prison treatment programs relapse within 12 months (e.g., Martin et al., 1999). This statistic improves by 10 to 20 percent, however, when such graduates attend further treatment in the community (Knight, Simpson, and Hiller, 1999; Martin et al., 1999; Wexler et al., 1999).

Drug abusers who are on parole or probation require interventions that conform to principles of effective correctional treatment. The reasons are twofold. First, the patterns of thinking and behavior and life challenges that correctional treatment addresses to prevent recidivism also condition these patients' potential



response to drug abuse treatment. Second, criminal activity that leads to a return to prison will interrupt and perhaps cancel the patient's progress toward recovery.

This article summarizes principles of correctional treatment and reviews evidence-based drug abuse interventions for adult parolees and probationers. It then focuses on interventions that promote recovery in general drug-abusing populations and appear promising for use with criminal justice-involved patients. The current understanding of these issues benefits from systematic reviews and multiple-study meta-analyses that, over the past two decades, have identified key features contributing to the effectiveness of some interventions and provided quantitative estimates of effect sizes (Table 1).

PRINCIPLES OF EFFECTIVE CORRECTIONAL TREATMENT

Dr. Donald Andrews and colleagues have been developing a body of research aimed at generating principles of effective correctional treatment—that is, treatment that can reduce rearrests and reincarcerations and can help offenders reintegrate into society (Andrews, 1995; Andrews et al., 1990). Andrews and colleagues argue that correctional programs that follow three principles related to *risk, criminogenic needs*, and *responsivity* produce the best outcomes. Numerous studies and metanalyses support the importance of these principles (Andrews et al., 1990; Knight, Simpson, and Hiller,

1999; Lowenkamp, Latessa, and Holsinger, 2006). Developed for correctional populations, the principles apply to the large portion of the drug-abusing population that is involved in the criminal justice system.

The *risk principle* consists of two elements: (i) clients who are assessed as being at higher risk for reoffending are more likely to benefit from treatment than lower risk clients; and (ii) higher risk clients should receive more intensive services than lower risk clients. In the work of Andrews and colleagues, "risk" refers to the likelihood of future criminal behavior, but it is reasonable to assume that the principle also holds for drug abuse—that is, offenders with more severe drug problems should receive higher intensity treatment, while those at lower risk of relapse should be referred to less intensive programs, such as drug education, monitoring through drug testing, or self-help. Apart from ensuring optimal outcomes, matching problem severity to treatment approach makes for efficient use of scarce treatment resources. What constitutes high and low risk depends on whether the patient is a probationer or parolee and what treatment resources are available. The guidelines for designating clients as at high risk will be tighter in systems where intensive services are in short supply than in systems where they are more available.

According to the criminogenic needs principle, offenders have many needs, and correctional treatment should focus on those related to recidivism. Andrews and colleagues (1990) have identified the following targets as the most promising for correctional treatment: procriminal attitudes, procriminal associates, impulsivity, risk taking, limited self-control, poor problem-solving skills, poor educational and employment skills, and drug and alcohol dependence. These problems are all associated with drug abuse as well as recidivism. Offenders also have other needs that may require attention for various reasons, but are not associated with criminal behavior and have little or no impact on recidivism. These include enhancing self-esteem, improving living conditions, and addressing vaguely defined personal or emotional problems. Although correctional treatment should not focus on these needs, addiction treatment might benefit from such focus. Determining risk levels and needs requires assessment instruments suitable for identifying crime factors and drug use factors.

Andrews and colleagues (1990) describe the *responsivity principle* as concerned with "the selection of styles and modes of service that are (a) capable of influencing the specific types of intermediate targets that are set

The following targets are promising for correctional treatment: procriminal attitudes, procriminal associates, impulsivity, risk taking, limited self-control, poor problemsolving skills, poor educational and employment skills, and drug and alcohol dependence.

TABLE 1. Effect Sizes From Meta-Analyses of Treatment Interventions for Drug-Abusing and Offender Populations

INTERVENTION	CITATION	SETTING	OUTCOME	NO. OF STUDIES (NO. OF SUBJECTS)	EFFECT SIZE (r)	SIGNIFICANCE
General Drug Abuser Treatme	ent Samples					
Case management	Hesse et al., 2007	Community	Drug use	8 (2,391)	.06	NS
Case management	Hesse et al., 2007	Community	Linkage with services	11 (3,132)	.21	S
Cognitive-behavioral therapy	Dutra et al., 2008	Community	Drug use	13 (NR)	.14	S
Community drug treatment	Prendergast et al., 2002	Community	Drug use	78 (NR)	.15	S
Contingency management	Dutra et al., 2008	Community	Drug use	14 (NR)	.28	S
Contingency management	Griffith et al., 2000	Community (Methadone tx)	Drug use	30 (NR)	.25	S
Contingency management	Lussier et al., 2006	Community	Drug use	30 (2,390)	.32	S
Contingency management	Prendergast et al., 2006	Community	Drug use	47 (NR)	.21	S
Motivational interviewing	Burke et al., 2003	Community	Drug use	5 (717)	.27	S
Relapse prevention	Dutra et al., 2008	Community	Drug use	5 (NR)	.16	S
General Offender Treatment	Samples					
Behavioral reinforcement/ incentives	Pearson et al., 2002*	Institution/community	Recidivism	23 (1,935)	.07	NS
Cognitive-behavioral therapy	Landenberger & Lipsey, 2005*	Institution/community	Recidivism	58 (NR)	.11	S
Cognitive-behavioral therapy	Lipsey & Landenberger, 2006*	Institution/community	Arrest	9 (NR)	.14	S
Cognitive-behavioral therapy	Aos et al., 2006	Institution/community	Recidivism	25 (6,546)	.07	S
Cognitive-behavioral therapy	Pearson et al., 2002*	Institution/community	Recidivism	44 (8,345)	.14	S
Relapse prevention	Dowden et al., 2003	Institution/community	Reconviction	31 (NR)	.13	NR
Drug-Abusing Offender Treat	tment Samples					
Case management	Aos et al., 2006	Community	Recidivism	12 (2,572)	.03	NS
Cognitive-behavioral therapy	Lipton et al., 2002*	Institution/community	Substance use	10 (1,633)	.08	S
Community drug treatment	Aos et al., 2006	Community	Recidivism	5 (54,334)	.07	S

The table includes meta-analyses published in 2000 or later. All of the effect sizes are positive, indicating that the treatment group had a better outcome than the comparison group. Effect sizes from studies that use the standardized mean difference (d) have been converted to the correlation coefficient (r; Lipsey and Wilson, 2001). Conventionally, an effect size of r = .10 is small; r = .30 is medium; and r = .50 is large (Cohen, 1988). Another way to interpret r is as the percentage difference in the outcome between the treatment group and the comparison group; thus, an effect size of r = .15 for arrests can be interpreted as a 15 percentage point difference in arrests in favor of the treatment group.

S, significant; NS, not significant; NR, not reported.

^{*}These studies include both juvenile and adult offenders.

with offenders and (b) appropriately matched to the learning styles of offenders." This principle speaks both to the types of treatment that are most appropriate for offenders and to the characteristics of staff who deliver the treatment. The Andrews group (1990) argues that the approaches most appropriate to the learning styles of offenders include behavioral and social learning techniques such as "modeling, graduated practice, role playing, reinforcement, resource provision, and detailed verbal guidance and explanations (making suggestions, giving reasons, cognitive restructuring)." As for treatment staff, the responsivity principle recommends that they relate to their clients with warmth, flexibility, and enthusiasm, but with clear messages about the unacceptability of procriminal attitudes, behaviors, and associations.

Andrews and colleagues developed the risk/needs/ responsivity principles from research on treatments for the general population of criminal offenders. In more recent work, the responsivity principle has been extended to apply to the distinctive needs of women, racial/ethnic groups, and clients of different ages (Kennedy, 2003-2004). With specific reference to drug-abusing offenders, NIDA recently published research-based principles of treatment for this population (National Institute on Drug Abuse, 2006; see NIDA's Principles of Drug Abuse Treatment for Criminal Justice Populations). The NIDA principles are consistent with the Andrews principles; together, they provide a framework for establishing programs and other interventions that have a high likelihood of reducing drug abuse and its consequences, including associated crime and further involvement in the criminal justice system.

RE-ENTRY INTERVENTIONS FOR DRUG-ABUSING PAROLEES

Multiple meta-analytical studies indicate that cognitive-behavioral therapy (CBT) and relapse prevention interventions reduce parolees' risks for recidivism (Table 1). One meta-analysis found that drug treatment as variously delivered by community providers significantly lowers recidivism among drug-abusing offenders. In addition, individual studies have suggested that pharmacological treatments for heroin abuse and genderspecific programs for women can both reduce drug abuse and crime, and improve psychological functioning in offender populations.

Two considerations strongly support a supposition that CBT and relapse prevention achieve their benefi-

cial effects on recidivism partly by lowering the risk of drug relapse. First, relapse contributes to a high percentage of recidivism; second, other meta-analyses have demonstrated that CBT and relapse prevention curtail drug use among general community samples of drug abusers, significant portions of which typically consist of clients under criminal justice supervision. For these same reasons, case management and contingency management approaches, which also reduce drug use in general community samples, probably can reduce recidivism as well. The fact that a meta-analytical review of studies of case management for drug-abusing offenders did not demonstrate a significant impact on recidivism suggests that programs may need to adapt this approach to make it effective for this population.

Cognitive-Behavioral Therapy

CBT programs for offenders are designed to change the distorted thinking processes and patterns (often called "criminal thinking") that foster criminal behavior. As part of that agenda, CBT programs often incorporate relapse prevention techniques, which help drug-involved offenders to identify high-risk situations for drug use and crime, to develop and practice coping skills to deal with these situations, to create or strengthen social support systems, and to promote feelings of self-efficacy (Dowden, Antonowicz, and Andrews, 2003). Although community drug abuse treatment programs commonly administer CBT to promote recovery, only those that specialize in treating offenders are likely also to address criminogenic needs or criminal thinking. Without such attention, treatment may be insufficient, because those problems also contribute to drug relapse and reversion to criminal behavior.

A number of meta-analyses have found CBT programs to be effective in reducing recidivism and, less often, relapse to drug use among offenders (e.g., Landenberger and Lipsey, 2005; Pearson et al., 2002; see Table 1). As the curriculum of CBT programs tends to be of relatively low intensity (usually one or two sessions a week for fewer than 20 weeks; Landenberger and Lipsey, 2005), such programs may not be appropriate for those at highest risk for recidivism and relapse.

Several manualized "brand name" CBT programs are available for adult offenders, including the Cognitive Interventions Program (National Institute of Corrections, 1996), Moral Reconation Therapy (www.moral-reconation-therapy.com), Reasoning and Rehabilitation (Ross, Fabiano, and Ewles, 1988), and Thinking for a

Relapse contributes to a high percentage of recidivism. Change (nicic.org/Library/016672). These programs are designed for use in criminal justice settings, but there is no reason that they cannot also be delivered, with proper training of staff, in community facilities that serve drugabusing offenders.

Case Management

Parolees enter the community with multiple needs that must be addressed to increase their chances of success. In addition to substance abuse disorders, parolees may need assistance with housing, education, employment, transportation, family issues, medical and mental health problems, and documentation (e.g., Social Security card, driver's license). Parole officers can provide some assistance through referrals or service vouchers, but their case loads are large and their primary duty is supervision. Case managers identify and prioritize clients' needs, coordinate clients' drug treatment with services from other agencies, and follow up on client progress, subject to release-of-information agreements. Case management for drug-abusing offenders can be provided within probation or parole agencies, in treatment programs, or through an independent agency such as Treatment Accountability for Safer Communities (TASC).

Established in the early 1970s, TASC is the most prominent case management service for criminal justice-involved individuals. Under TASC, drug-abusing offenders (originally probationers, but more recently parolees as well) are offered the opportunity to enter community-based treatment. TASC identifies clients in need of drug treatment, assesses their individual needs, and refers them to community treatment as an alternative or as a supplement to criminal justice sanctions. Once clients are in treatment, TASC case managers monitor client progress and compliance with conditions of release. Case managers also assist clients in making appointments, intervene with service agencies to address problems, and follow up on client progress with treatment providers. TASC programs throughout the United States are guided by 13 critical elements, which provide structure and consistency to services for their clients (www.nationaltasc.org/components-of-ntasc-programs/ critical-elements).

A rigorous evaluation of five TASC programs conducted in the early 1990s reported mixed, but overall favorable, outcomes for reducing drug use and crime (Anglin, Longshore, and Turner, 1999). The failure to find consistently positive outcomes across the five pro-

grams suggests that treatment effects depend at least partly on the design and quality of specific TASC programs—an observation that applies to any treatment model. Other case management models for drug abusers generally are effective in linking clients with needed services but appear to have limited effect on post-treatment drug use and other psychosocial outcomes (Hesse et al., 2007).

Contingency Management

An extensive body of laboratory and field research supports the effectiveness of contingency management, or the use of positive reinforcement, to promote abstinence and other desirable behaviors among clients in drug abuse treatment (Higgins and Silverman, 1999). Two meta-analyses of studies with general (i.e., not specifically parolee) drug-abusing samples (Lussier et al., 2006; Prendergast et al., 2006; see Table 1) found that clients who received contingency management obtained 20 to 30 percent better drug use outcomes than did comparison clients who were given standard treatment. In general, the positive effects of contingency management tend to diminish in the months after treatment.

Within criminal justice settings, it may be assumed—albeit on theoretical rather than empirical grounds—that contingency management may be particularly useful with offenders who enter treatment under legal pressure. Reinforcement for abstinence or other treatment-related behavior is potentially more effective with this population than coercion and the threat of punishment, which do not necessarily motivate clients to engage in treatment and may provoke active resistance. Although contingency management is a promising approach for drug-abusing parolees, research is needed to examine how best to use it, given that the criminal justice setting traditionally tends to rely on sticks rather than carrots to change behavior.

Residential Treatment

Residential treatment in the community usually follows the therapeutic community (TC) model (DeLeon, 2000). TCs are highly structured residential programs in which clients participate for 6 to 12 months. TCs focus on resocializing the client to a drug-free, crime-free lifestyle, with the "community" of staff and residents and their interactions supplying the primary therapeutic input. Many TCs also provide a variety of support services to facilitate resocialization.

The TC is the most intensive and expensive treat-

Parolees may need assistance with housing, education, employment, transportation, family issues, medical and mental health problems, and documentation.

ment for those with drug dependence. Per the risk principle, it should be reserved for offenders who are at high risk and those who have severe drug dependence. As noted earlier, the criteria for identifying offenders as at high risk and their drug problems as of high severity depend on the nature of the offender population within a given system and the relative availability of TC treatment and other forms of less expensive treatment. In many jurisdictions, TC treatment is one of the community treatment options for parolees who have participated in prison-based TCs and ensures a continuum of care from one criminal justice setting to another.

TCs have a long history of treating clients involved in the criminal justice system, and the TC focus on treating the whole person (as opposed to drug problems exclusively) is particularly appropriate for this population. A considerable body of research supports the effectiveness of TC treatment for offenders, particularly in a continuum of care that involves prison treatment followed by community treatment (Knight, Simpson, and Hiller, 1999; Martin et al., 1999; Prendergast et al., 2004; Wexler et al., 1999). As has been noted, a key finding of most of these studies is that offenders who participate in prison-based TC programs generally have outcomes similar to those who do not receive treatment, unless they also attend some type of community treatment.

Pharmacotherapy

A number of medications have been found to be effective in treating opiate addiction, including methadone, buprenorphine, and naltrexone (Center for Substance Abuse Treatment, 2005 a). The handful of research studies that have evaluated the use of medication with opiate-dependent offenders has documented positive outcomes with the use of naltrexone with Federal probationers (i.e., parolees; Cornish et al., 1997) and with the use of methadone in jail (Magura et al., 1993) and in prison (Kinlock et al., 2007). The main barrier to greater use of pharmacotherapy with opiate-dependent offenders is not the small research base, but rather resistance by many criminal justice agencies and treatment providers.

Programs for Women

Clinicians and researchers have recognized for some time that drug-abusing women have needs that are distinct from those of men. They are more likely to have coexisting psychiatric disorders, lower self-esteem, more

NIDA'S PRINCIPLES OF DRUG ABUSE TREATMENT FOR CRIMINAL JUSTICE POPULATIONS (2006)

- 1. Drug addiction is a brain disease that affects behavior.
- 2. Recovery from drug addiction requires effective treatment, followed by management of the problem over time.
- 3. Treatment must last long enough to produce stable behavioral change.
- 4. Assessment is the first step in treatment.
- 5. Tailoring services to fit the needs of the individual is an important part of effective drug abuse treatment for criminal justice populations.
- 6. Drug use during treatment should be carefully monitored.
- 7. Treatment should target factors that are associated with criminal behavior.
- 8. Criminal justice supervision should incorporate treatment planning for drug-abusing offenders, and treatment providers should be aware of correctional supervision requirements.
- 9. Continuity of care is essential for drug abusers re-entering the community.
- 10. A balance of rewards and sanctions encourages prosocial behavior and treatment participation.
- 11. Offenders with co-occurring drug abuse and mental health problems often require an integrated treatment approach.
- 12. Medications are an important part of treatment for many drugabusing offenders.
- 13. Treatment planning for drug-abusing offenders who are living in or reentering the community should include strategies to prevent and treat serious, chronic medical conditions, such as HIV/AIDS, hepatitis B and C. and tuberculosis.

severe drug abuse histories, and extensive histories of sexual and physical abuse (Grella and Joshi, 1999; Langan and Pelissier, 2001). Drug-abusing women offenders also are at high risk of acquiring sexually transmitted diseases, including infection with HIV, because of their participation in prostitution for money or drugs (Maruschak, 1999).

Compared with programs for men or those that treat both men and women, treatment programs that are designed to be responsive to the needs of women feature different philosophies, treatment approaches, types of services, and staffing patterns. Such programs place a greater emphasis on social model, peer-based treatment approaches than do more general programs (Grella et



Programs increasingly include trauma-informed elements within their curricula.

al., 1999). In response to broader societal gender differences, such as women's lower economic status and primary responsibility for child-rearing, these programs are more likely to dispense a wider array of services, including services for children. Because of the high prevalence of past and current sexual and physical abuse among women offenders, re-entry programs increasingly include trauma-informed elements within their curricula (Covington, 1999; Najavits, 2002). A number of studies indicate that women drug abusers do better in treatment programs that are tailored to their particular needs, rather than generic in approach (for a meta-analysis of women's treatment programs, see Orwin, Francisco, and Bernichon, 2001).

Continuing Care

Regardless of the choice of intervention, positive outcomes from prison-based drug treatment programs are most likely to persist when offenders participate in post-release community treatment. The success of a continuing care model, which involves prison treatment followed by community treatment, is contingent on the parolee's appearing for admission to the community treatment program and continuing to attend. Many parolees do not do so, even in States where treatment is a condition of release for parolees with identified drug problems.

Clear guidance from research as to how to increase parolee enrollment in treatment is lacking, but criminal justice agencies and treatment programs can try a variety of potentially effective techniques. They may, for example, use the same provider in prison and in the community, give incentives for enrollment in community treatment, utilize case management to coordinate services, provide transportation from prison to the program, or enlist the parole officer and family members to apply pressure and encouragement to enter treatment.

Three months is generally considered to be the minimum period that a drug abuser must stay in formal treatment to achieve favorable outcomes. Some individuals may need more time, depending on the severity of their drug problems, the presence of other needs, and the intensity of the treatment (Simpson, Brown, and Joe, 1997). Dropout prior to 3 months is common, however (e.g., Brecht, Greenwell, and Anglin, 2005). Surprisingly, some evidence suggests that drug-abusing parolees who leave community treatment after a few weeks have poorer outcomes than those who do not attend community treatment at all (Wexler, Burdon, and Prendergast, 2005). Treatment programs that serve offenders can use a number of evidence-based techniques to promote participation in treatment, including motivational interviewing (Miller and Rollnick, 1991), cognitive enhancement interventions (Czuchry and Dansereau, 2005), and contingency management (Higgins and Silverman, 1999). Client engagement in treatment, as well as maintenance of recovery, is also enhanced by participation in formal and informal social support networks, including Twelve-Step and other self-help groups.

CLINICAL ISSUES IN PROVIDING TREATMENT TO PAROLEES

Several issues are important to the effective provision of evidence-based practices to parolees. Positive outcomes are less likely without proper assessment and well-implemented interventions. Clinicians must help mandated clients make the transition from legal compliance with parole conditions to willing participation in treatment.

Assessment

It is essential that treatment providers screen and assess prospective clients with appropriate validated instruments. The initial screening and assessment results can help clinicians determine whether a client needs treatment (as opposed to education or self-help), which level of treatment intensity is appropriate, and which needs should be addressed and with what priority. After a client has participated in treatment for several months, reassessment may inform a decision to raise or lower the level of care or to address emerging needs.

Screening and assessment instruments that have been

validated and that take into account criminal history and risk for recidivism are available for use with drugabusing offenders, many of them at no cost (see Center for Substance Abuse Treatment, 2005 b, Chapter 2 and Appendix C; download.ncadi.samhsa.gov/Prevline/pdfs/bkd526.pdf). Program staff members will require training in proper administration, scoring, and interpretation. Online information about assessment instruments for drug-abusing offenders is available at www.ibr.tcu.edu/pubs/datacoll/datacoll.html, lib.adai. washington.edu/instruments/, and www.nicic.org/Library/011716.

Implementation

All the interventions discussed in this article can be considered "evidence-based," as each has produced positive outcomes in multiple studies with rigorous research designs. Nevertheless, not all community programs that adopt evidence-based practices have similar success with their clients. Much depends on how practices are implemented. Successful implementation requires qualified staff, solid plans for training and staff development, fidelity to the main features of the model, and organizational characteristics that promote the successful adoption of new practices (Fixsen et al., 2005; Friedmann, Taxman, and Henderson, 2007). As treatment for drugabusing parolees usually involves personnel from both criminal justice and treatment agencies, forging collaborative and cooperative relationships is also critical (Taxman, 1998).

Mandated Treatment

Many drug-abusing parolees are mandated to treatment or at least are under pressure from their parole officers to enter treatment after a relapse. Such clients do as well as or even better than clients who enter voluntarily (Farabee, Prendergast, and Anglin, 1998), probably because they remain in treatment longer than voluntary clients. Still, as Leukefeld and Tims (1988) note, "A stable recovery cannot be maintained by external (legal) pressures only; motivation and commitment must come from internal pressure." Legal pressure may compel offenders to comply with treatment requirements and place them in a situation where the tools and supports for change are available. Progress only occurs, however, when external pressure is transformed into an internal desire for change and a willingness to take steps toward it.

Although the motivation of drug-abusing parolees to engage in treatment may be low initially, motivation

can increase as a result of peer pressure, clinical techniques, and insight developed over the course of treatment. Because motivation is a dynamic process, programs can actively intervene to shift the balance in favor of change. Whatever level of initial motivation clients bring to treatment, clinicians may use a variety of tools, many discussed earlier, to promote treatment engagement with a consequent increase in the chance of positive outcomes.

CONCLUSION

A variety of effective approaches are available for the treatment of drug-abusing parolees. Whether they, in fact, produce expected reductions in drug use and crime and improvements in psychosocial functioning depends on the ability of criminal justice agencies and public health agencies and programs to develop collaborative systems of care that integrate the supervision and monitoring functions of criminal justice with the treatment and service delivery functions of public health (Marlowe, 2003; Taxman, 1998). Ideally, a treatment system for drug-abusing offenders would extend horizontally and vertically. Horizontally, it would link criminal justice agencies with treatment agencies and other community resources to provide referrals and services for this population. Vertically, the system would incorporate a wide range of alternative strategies answering to the needs, characteristics, and life status of its clients, including extended care throughout the required period of time. Re-entry programs that follow the principles of effective treatment of offenders, use tested treatment approaches and techniques, and maintain collaborative relationships with criminal justice agencies and social service systems provide the best opportunity for parolees to reduce their drug use and crime and to successfully reintegrate into society.

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REFERENCES

Andrews, D.A., 1995. The psychology of criminal conduct and effective treatment. In: J. Maguire (Ed.), What Works: Reducing Reoffending—Guidelines From Research and Practice. New York: John Wiley, pp. 35-62.

Andrews, D.A., et al., 1990. Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. Criminology 28(3):369-404.

Anglin, M.D.; Longshore, D.; and Turner, S., 1999. Treatment alternatives to street crime: An evaluation of five programs. Criminal Justice and Behavior 26(2):168-195.

Aos, S.; Miller, M.; and Drake, E., 2006. Evidence-Based Adult Corrections Programs: What Works and What Does Not. Olympia, WA: Washington State Institute for Public Policy.

Brecht, M.L.; Greenwell, L.; and Anglin, M.D., 2005. Methamphetamine treatment: Trends and predictors of retention and completion in a large state treatment system (1992-2002). Journal of Substance Abuse Treatment 29(4):295-306.

Burke, B.L.; Arkowitz, H.; and Menchola, H., 2003. The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of Consulting and Clinical Psychology* 71(5):843-861.

Center for Substance Abuse Treatment, 2005a. Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs. A Treatment Improvement Protocol (TIP): 43. DHHS Publication No. (SMA) 05-4048. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Center for Substance Abuse Treatment, 2005b. Substance Abuse Treatment for Adults in the Criminal Justice System. A Treatment Improvement Protocol (TIP): 44. DHHS Publication No. (SMA) 05-4056. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Cohen, J., 1988. Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cornish, J.W., et al., 1997. Naltrexone pharmacotherapy for opioid dependent federal probationers. Journal of Substance Abuse Treatment 14(6):529-534.

Covington, S., 1999. Helping Women Recover: A Program for Treating Substance Abuse. San Francisco: Jossey-Bass.

Czuchry, M., and Dansereau, D.F., 2005. Using motivational activities to facilitate treatment involvement and reduce risk. Journal of Psychoactive Drugs 37(1):7-13.

DeLeon, G., 2000. The Therapeutic Community: Theory, Model, and Method. New York: Springer.

Dowden, C.; Antonowicz, D.; and Andrews, D.A., 2003. The effectiveness of relapse prevention with offenders: A meta-analysis. International Journal of Offender Therapy and Comparative Criminology 47(5):516-528.

Dutra, L., et al., 2008. A meta-analytic review of psychosocial interventions for substance use disorders. American Journal of Psychiatry 165(2):179-187.

Farabee, D.; Prendergast, M.L.; and Anglin, M.D., 1998. The effectiveness of coerced treatment for drug-abusing offenders. Federal Probation 62(1):3-10.

Fixsen, D.L., et al., 2005. Implementation Research: A Synthesis of the Literature. Tampa, FL: Louis de la Parte Florida Mental Health Institute, University of South Florida.

Friedmann, P.D.; Taxman, F.S.; and Henderson, C.E., 2007. Evidence-based treatment practices for drug-involved adults in the criminal justice system. Journal of Substance Abuse Treatment 32(3):267-277.

Grella, C.E., et al., 1999. Characteristics of women-only and mixed-gender drug abuse treatment programs. Journal of Substance Abuse Treatment, 17(1-2):37-44.

Grella, C., and Joshi, V., 1999. Gender differences in drug treatment careers among clients in the National Drug Abuse Treatment Outcome Study. American Journal of Drug and Alcohol Abuse 25(3):385-406.

Griffith, J.D., et al., 2000. Contingency management in outpatient methadone treatment: A meta-analysis. Drug and Alcohol Dependence 58(1-2):55-66.

Hesse, M., et al., 2007. Case management for persons with substance use disorders. Cochrane Database of Systematic Reviews 4(CD006265).

Higgins, S.T., and Silverman, K. (Eds.), 1999. Motivating Behavior Change Among Illicit-Drug Abusers: Research on Contingency Management Interventions. Washington, DC: American Psychological Association.

Kennedy, S.M., 2003-2004. A practitioner's guide to responsivity: Maximizing treatment effectiveness. Journal of Community Corrections 13(2):7-10, 22-26.

Kinlock, T.W., et al., 2007. A randomized clinical trial of methadone maintenance for prisoners: Results at 1-month post-release. Drug and Alcohol Dependence 91 (2-3):220-227.

Knight, K.; Simpson, D.D.; and Hiller, M.L., 1999. Three-year reincarceration outcomes for in-prison therapeutic community treatment in Texas. Prison Journal 79(3):337-351.

Landenberger, N.A., and Lipsey, M.W., 2005. The positive effects of cognitive-behavioral programs for offenders: A meta-analysis of factors associated with effective treatment. *Journal of Experimental Criminology* 1(4):451-476.

Langan, N.P., and Pelissier, B.M., 2001. Gender differences among prisoners in drug treatment. Journal of Substance Abuse 13(3):291-301.

Leukefeld, C.G., and Tims, F.M., 1988. Compulsory treatment: A review of findings. In: C.G. Leukefeld and F.M. Tims (Eds.), Compulsory Treatment of Drug Abuse: Research and Clinical Practice. NIDA Research Monograph 86. Washington, DC: National Institute on Drug Abuse, pp. 236-249.

Lipsey, M.W., and Landenberger, N.A., 2006. Cognitive-behavioral interventions. In: B.C. Welsh and D.P. Farrington (Eds.), Preventing Crime: What Works for Children, Offenders, Victims, and Places. Berlin: Springer, pp. 57-71.

Lipsey, M.W., and Wilson, D.B., 2001. The way in which intervention studies have "personality" and why it is important to meta-analysis. Evaluation of the Health Professions 24(3):236-254.

Lipton, D.S., et al., 2002. The effectiveness of cognitive-behavioural treatment methods on offender recidivism: Meta-analytic outcomes from the CDATE project. In: J. McGuire (Ed.), Offender Rehabilitation and Treatment: Effective Programmes and Policies to Reduce Re-offending. London: John Wiley & Sons, pp. 79-112.

Lowenkamp, C.T.; Latessa, E.J.; and Holsinger, A.M., 2006. The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? Crime & Delinquency 52(1):77-93.

Lussier, J.P., et al., 2006. A meta-analysis of voucher-based reinforcement therapy for substance use disorders. Addiction 101(2):192-203.

Magura, S., et al., 1993. The effectiveness of in-jail methadone maintenance. *Journal of Drug Issues* 23:75-99.

Marlowe, D.B., 2003. Integrating substance abuse treatment and criminal justice supervision. Science & Practice Perspectives 2(1):4-14.

Martin, S.S., et al., 1999. Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: From prison to work release to aftercare. *Prison Journal* 79(3):294-320.

Maruschak, L.M., 1999. HIV in Prisons 1997. Washington, DC: Bureau of Justice Statistics.

Miller, W.R., and Rollnick, S., 1991. Motivational Interviewing: Preparing People to Change Addictive Behavior. New York: Guilford.

Mumola, C.J., and Karberg, J.C., 2006. Drug use and dependence, State and Federal prisoners, 2004. Bureau of Justice Statistics Special Report. NCJ Publication No. 213530. Washington, DC: Department of Justice.

Najavits, L.M., 2002. Seeking Safety: A Treatment Manual for PTSD and Substance Abuse. New York: Guilford.

National Institute of Corrections, 1996. Cognitive Interventions Program: Think. Washington, DC: National Institute of Corrections.

National Institute on Drug Abuse (NIDA), 2006. Principles of Drug Abuse Treatment for Criminal Justice Populations: A Research-Based Guide. NIH Publication No. 06-5316. Rockville, MD: National Institute on Drug Abuse.

Orwin, R.; Francisco, L.; and Bernichon, T., 2001. Effectiveness of Women's Substance Abuse Treatment Programs: A Meta-Analysis. Report Prepared Under Contract No. 270-97-7016. Rockville, MD: Center for Substance Abuse Treatment.

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Pearson, F.S., et al., 2002. The effects of behavioral/cognitive-behavioral programs on recidivism. Crime & Delinquency 48(3):476-496.

Prendergast, M.L., et al., 2002. The effectiveness of drug abuse treatment: A meta-analysis of comparison group studies. Drug and Alcohol Dependence 67(1):53-72.

Prendergast, M.L., et al., 2004. Amity prison-based therapeutic community: 5-year outcomes. Prison Journal 84(1):36-60.

Prendergast, M.L., et al., 2006. Contingency management for treatment of substance use disorders: A meta-analysis. Addiction 101(11):1546-1560.

Ross, R.R.; Fabiano, E.A.; and Ewles, C.D., 1988. Reasoning and rehabilitation. International Journal of Offender Therapy and Comparative Criminology 32(1):29-35.

Simpson, D.D.; Brown, B.S.; and Joe, G.W., 1997. Treatment retention and follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors* 11(4):294-307.

Taxman, F.S., 1998. Reducing recidivism through a seamless system of care: Components of effective treatment, supervision, and transition services in the community. Paper prepared for the Office of National Drug Control Policy Treatment and Criminal Justice System Conference, Washington, DC.

Wexler, H.K., et al., 1999. The Amity prison TC evaluation: Reincarceration outcomes. Criminal Justice and Behavior 26(2):147-167.

Wexler, H.K.; Burdon, W.M.; and Prendergast, M.L., 2005. Maximum security prison therapeutic community and aftercare: First outcomes. Offender Substance Abuse Report 5(6):81-82, 91-94.