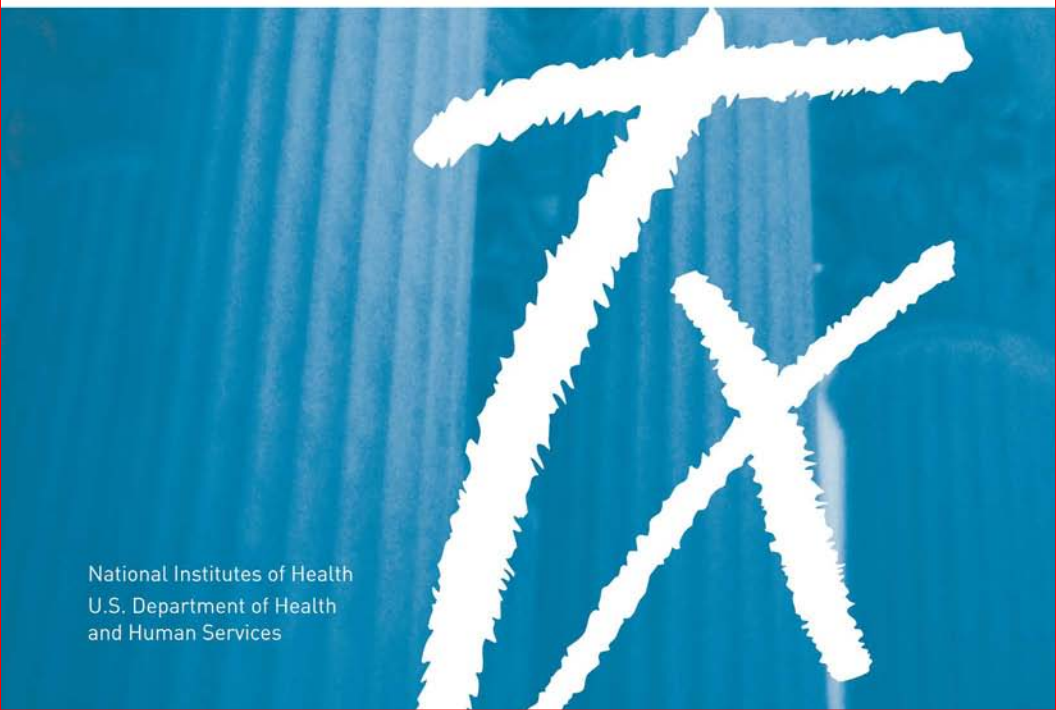
National Institute on Drug Abuse

Principles of Drug Abuse Treatment for Criminal Justice Populations | A Research-Based Guide



National Institutes of Health
U.S. Department of Health and Human Services

PRINCIPLES OF DRUG ABUSE TREATMENT FOR CRIMINAL JUSTICE POPULATIONS

1. Drug addiction is a brain disease that affects behavior. Drug addiction has well-recognized cognitive, behavioral, and physiological characteristics that contribute to continued use of drugs despite the harmful consequences. Scientists have also found that chronic drug abuse alters the brain's anatomy and chemistry and that these changes can last for months or years after the individual has stopped using drugs. This transformation may help explain why addicted persons are at a high risk of relapse to drug abuse even after long periods of abstinence and why they persist in seeking drugs despite the consequences.

2. Recovery from drug addiction requires effective treatment, followed by management of the problem over time. Drug addiction is a serious problem that can be treated and managed throughout its course. Effective drug abuse treatment engages participants in a therapeutic process, retains them in treatment for an appropriate length of time, and helps them learn to maintain abstinence. Multiple episodes of treatment may be required. Outcomes for drug abusing offenders in the community can be improved by monitoring drug use and by encouraging continued participation in treatment.

3. Treatment must last long enough to produce stable behavioral changes. In treatment, the drug abuser is taught to break old patterns of thinking and behaving and to learn new skills for avoiding drug use and criminal behavior. Individuals with severe drug problems and co-occurring disorders typically need longer treatment (e.g., a minimum of 3 months) and more

comprehensive services. Early in treatment, the drug abuser begins a therapeutic process of change. In later stages, he or she addresses other problems related to drug abuse and learns how to manage them as well.

4. Assessment is the first step in treatment.

A history of drug or alcohol use may suggest the need to conduct a comprehensive assessment to determine the nature and extent of an individual's drug problems, establish whether problems exist in other areas that may affect recovery, and enable the formulation of an appropriate treatment plan. Personality disorders and other mental health problems are prevalent in offender populations; therefore, comprehensive assessments should include mental health evaluations with treatment planning for these problems.

5. Tailoring services to fit the needs of the individual is an important part of effective drug abuse treatment for criminal justice populations.

Individuals differ in terms of age, gender, ethnicity and culture, problem severity, recovery stage, and level of supervision needed. Individuals also respond differently to different treatment approaches and treatment providers. In general, drug treatment should address issues of motivation, problemsolving, and skill-building for resisting drug use and criminal behavior. Lessons aimed at supplanting drug use and criminal activities with constructive activities and at understanding the consequences of one's behavior are also important to include. Tailored treatment interventions can facilitate the development of healthy interpersonal relationships and improve the participant's ability to interact with family, peers, and others in the community.

6. Drug use during treatment should be carefully monitored.

Individuals trying to recover from drug addiction may experience a relapse, or return to drug use. Triggers for drug relapse are varied; common ones include mental stress and associations with peers and social situations linked to drug use. An undetected relapse

can progress to serious drug abuse, but detected use can present opportunities for therapeutic intervention. Monitoring drug use through urinalysis or other objective methods, as part of treatment or criminal justice supervision, provides a basis for assessing and providing feedback on the participant's treatment progress. It also provides opportunities to intervene to change unconstructive behavior—determining rewards and sanctions to facilitate change, and modifying treatment plans according to progress.

7. Treatment should target factors that are associated with criminal behavior. "Criminal thinking" is a combination of attitudes and beliefs that support a criminal lifestyle and criminal behavior, such as feeling entitled to have things one's own way, feeling that one's criminal behavior is justified, failing to accept responsibility for one's actions, and consistently failing to anticipate or appreciate the consequences of one's behavior. This pattern of thinking often contributes to drug use and criminal behavior. Treatment that provides specific cognitive skills training to help individuals recognize errors in judgment that lead to drug abuse and criminal behavior may improve outcomes.

8. Criminal justice supervision should incorporate treatment planning for drug abusing offenders, and treatment providers should be aware of correctional supervision requirements. The coordination of drug abuse treatment with correctional planning can encourage participation in drug abuse treatment and can help treatment providers incorporate correctional requirements as treatment goals. Treatment providers should collaborate with criminal justice staff to evaluate each individual's treatment plan and ensure that it meets correctional supervision requirements, as well as that person's changing needs, which may include housing and child care; medical, psychiatric, and social support services; and vocational and employment assistance. For offenders with drug abuse problems, planning should incorporate the transition to community-based treatment and links to appropriate post-release services to improve the success of drug treatment and re-entry. Abstinence requirements

may necessitate a rapid clinical response, such as more counseling, targeted intervention, or increased medication, to prevent relapse. Ongoing coordination between treatment providers and courts or parole and probation officers is important in addressing the complex needs of these re-entering individuals.

9. Continuity of care is essential for drug abusers re-entering the community. Offenders who complete prison-based treatment and continue with treatment in the community have the best outcomes. Continuing drug abuse treatment helps the recently released offender deal with problems that become relevant after release, such as learning to handle situations that could lead to relapse, learning how to live drug-free in the community, and developing a drug-free peer support network. Treatment in prison or jail can begin a process of therapeutic change, resulting in reduced drug use and criminal behavior post-incarceration. Continuing drug treatment in the community is essential to sustaining these gains.

10. A balance of rewards and sanctions encourages pro-social behavior and treatment participation. When providing correctional supervision of individuals participating in drug abuse treatment, it is important to reinforce positive behavior. Nonmonetary "social reinforcers," such as recognition for progress or sincere effort, can be effective, as can graduated sanctions that are consistent, predictable, and clear responses to noncompliant behavior. Generally, less punitive responses are used for early and less serious noncompliance, with increasingly severe sanctions issuing from continued problem behavior. Rewards and sanctions are most likely to have the desired effect when they are perceived as fair and when they swiftly follow the targeted behavior.

11. Offenders with co-occurring drug abuse and mental health problems often require an integrated treatment approach. High rates of mental health problems are found both in offender populations and in those with substance abuse problems. Drug abuse treatment can sometimes

address depression, anxiety, and other mental health problems. Personality, cognitive, and other serious mental disorders can be difficult to treat and may disrupt drug treatment. The presence of co-occurring disorders may require an integrated approach that combines drug abuse treatment with psychiatric treatment, including the use of medication. Individuals with either a substance abuse or mental health problem should be assessed for the presence of the other.

12. Medications are an important part of treatment for many drug abusing offenders.

Medicines such as methadone, buprenorphine, and extended-release naltrexone have been shown to reduce heroin use and should be made available to individuals who could benefit from them. Effective use of medications can also be instrumental in enabling people with co-occurring mental health problems to function successfully in society. Behavioral strategies can increase adherence to medication regimens.

13. Treatment planning for drug abusing offenders who are living in or re-entering the community should include strategies to prevent and treat serious, chronic medical conditions, such as HIV/AIDS, hepatitis B and C, and tuberculosis.

The rates of infectious diseases, such as hepatitis, tuberculosis, and HIV/AIDS, are higher in drug abusers, incarcerated offenders, and offenders under community supervision than in the general population. Infectious diseases affect not just the offender, but also the criminal justice system and the wider community. Consistent with Federal and State laws, drug-involved offenders should be offered testing for infectious diseases and receive counseling on their health status and on ways to modify risk behaviors. Probation and parole officers who monitor offenders with serious medical conditions should link them with appropriate health care services, encourage compliance with medical treatment, and re-establish their eligibility for public health services (e.g., Medicaid, county health departments) before release from prison or jail.

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PREFACE

From the time it was established in 1974, the National Institute on Drug Abuse (NIDA) has supported research on drug abuse treatment for people involved with the criminal justice system.

Findings show unequivocally that providing comprehensive drug abuse treatment to criminal offenders works, reducing both drug abuse and criminal recidivism. The substantial prison population in the United States is attributable in large part to drug-related offenses and is accompanied by high rates of recidivism. As such, it is a matter of public health and safety to make drug abuse treatment a key component of the criminal justice system. Indeed, addressing the treatment needs of substance abusing offenders is critical to reducing overall crime and other drug-related societal burdens, such as lost job productivity and family disintegration.

Scientific research shows that drug abuse treatment can work even when an individual enters it under legal mandate. However, only a small percentage of those who need treatment actually

receive it, and often the treatment provided is inadequate. To be effective, treatment must begin in prison and be sustained after release through participation in community treatment programs. By engaging in a continuing therapeutic process, individuals can learn how to avoid relapse and withdraw from a life of crime.

As reflected in our collaborative Criminal Justice–Drug Abuse Treatment Studies (CJ–DATS) Initiative, NIDA is committed to working across organizational boundaries to improve substance abuse treatment services. Multiple studies from different scientific disciplines have helped us understand the basic neurobiology of addiction, along with what constitutes effective treatment. Now we are at the point where the *implementation* of evidence-based treatment principles is called for within the criminal justice system to improve public health and public safety by reducing both drug use and crime.

This booklet—a complement to NIDA's *Principles of Drug Addiction Treatment: A Research-Based Guide*—is intended to describe the treatment principles and research findings that have particular relevance to the criminal justice community and to treatment professionals working with drug abusing offenders. It is divided into three main sections: (1) research findings on addicted offenders distilled into 13 essential principles (see pages 1–5), (2) a series of frequently asked questions (FAQs) about drug abuse treatment for those involved with the criminal justice system, and (3) a resource section that provides Web sites for additional information. This booklet and other resources on drug abuse and the criminal justice system are available on NIDA's Web site at *http://www.drugabuse.gov/related-topics/criminal-justice-drug-abuse.*

With the release of this landmark publication's revised edition, we are optimistic that correctional agencies have begun to understand how drug treatment programs are helping achieve public health and safety goals for the Nation.

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INTRODUCTION

The connection between drug abuse and crime is well known.

Drug abuse is implicated in at least three types of drug-related offenses: (1) offenses defined by drug possession or sales, (2) offenses directly related to drug abuse (e.g., stealing to get money for drugs), and (3) offenses related to a lifestyle that predisposes the drug abuser to engage in illegal activity, for example, through association with other offenders or with illicit markets. Individuals who use illicit drugs are more likely to commit crimes, and it is common for many offenses, including violent crimes, to be committed by individuals who had used drugs or alcohol prior to committing the crime, or who were using at the time of the offense.

According to 2008 statistics from the Department of Justice's (DOJ's) Bureau of Justice Statistics (BJS), the total correctional population is estimated to be 7.3 million, with more than 5 million individuals on probation or under parole supervision, and drug law violations accounting for the most common type of criminal offense (Glaze and Bonczar 2009). In a survey of State and Federal prisoners, BJS estimated that about half of the prisoners met *Diagnostic and Statistical Manual for Mental Disorders* (DSM) criteria for drug abuse or dependence, and yet fewer than 20 percent who needed treatment received it (Chandler et al. 2009; Karberg and Mumola 2006). Of those surveyed, 14.8 percent of State and 17.4 percent of Federal prisoners reported having received drug treatment since admission (Karberg and Mumola 2006).

Juvenile justice systems also report high levels of drug abuse.

In 2008, approximately 10 percent of the estimated 2.1 million juvenile arrests were for drug abuse or underage drinking violations (Puzzanchera 2009). As many as two-thirds of detained juveniles may have a substance use disorder (SUD); female juveniles who enter the system generally have higher SUD rates than males (McClelland et al. 2004a).

Although the past several decades have witnessed an increased interest in providing substance abuse treatment services for criminal justice offenders, only a small percentage of offenders has access to adequate services, especially in jails and community correctional facilities (Taxman et al. 2007; Sabol et al. 2010). Not only is there a gap in the availability of these services for offenders, but often there are few choices in the types of services provided. Treatment that is of insufficient quality and intensity or that is not well suited to the needs of offenders may not yield meaningful reductions in drug use and recidivism. Untreated substance abusing offenders are more likely than treated offenders to relapse to drug abuse and return to criminal behavior. This can lead to re-arrest and re-incarceration, jeopardizing public health and public safety and taxing criminal justice system resources. Treatment is the most effective course for interrupting the drug abuse/criminal justice cycle for offenders with drug abuse problems.

Treatment offers the best alternative for interrupting the drug abuse/criminal justice cycle.

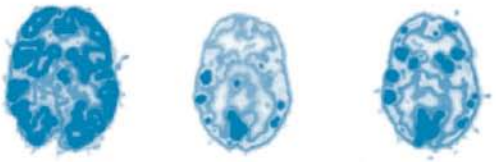
Drug abuse treatment can be incorporated into criminal justice settings in a variety of ways. Examples include treatment in prison followed by community-based treatment after release; drug courts that blend judicial monitoring and sanctions with treatment by imposing treatment as a condition of probation; and treatment under parole or probation supervision. Drug abuse treatment can benefit from the cross-agency coordination and collaboration of criminal justice professionals, substance abuse treatment providers, and other social service agencies. By working together, the criminal justice and treatment systems can optimize resources to benefit the health, safety, and well-being of the individuals and communities they serve.

FREQUENTLY ASKED QUESTIONS (FAQs)

1. Why do people involved in the criminal justice system continue abusing drugs?

The answer to this perplexing question spans basic neurobiological, psychological, social, and environmental factors. The repeated use of addictive drugs eventually changes how the brain functions. Resulting brain changes, which accompany the transition from voluntary to compulsive drug use, affect the brain's natural inhibition and reward centers, causing the addicted person to use drugs in spite of the adverse health, social, and legal consequences (Baler and Volkow 2006; Volkow et al. 2010; and Chandler et al. 2009). Craving for drugs may be triggered by contact with the people, places, and things associated with prior drug use, as well as by stress. Forced abstinence (when it occurs) is not treatment, and it does not cure addiction. Abstinent individuals must still learn how to avoid relapse, including those who may have been abstinent for a long period of time while incarcerated.

Addictive drugs cause long-lasting changes in the brain



Source: Volkow et al., 1992, 1993.

PET scans showing glucose metabolism in healthy (normal) and cocaine-addicted brains. Even after 100 days of abstinence, glucose metabolism has not returned to normal levels.

Potential risk factors for released offenders include pressures from peers and family members to return to drug use and a criminal lifestyle. Tensions of daily life—violent associates, few opportunities for legitimate employment, lack of safe housing, and even the need to comply with correctional supervision conditions—can also create stressful situations that can precipitate a relapse to drug use.

Research on how the brain is affected by drug abuse promises to teach us much more about the mechanics of drug-induced brain changes and their relationship to addiction. Research also reveals that with effective drug abuse treatment, individuals can overcome persistent drug effects and lead healthy, productive lives.

2. Why should drug abuse treatment be provided to offenders?

The case for treating drug abusing offenders is compelling. Drug abuse treatment improves outcomes for drug abusing offenders and has beneficial effects for public health and safety. Effective treatment decreases future drug use and drug-related criminal behavior, can improve the individual's relationships with his or her family, and may improve prospects for employment. In addition, it can save lives: A retrospective study of more than 30,000 Washington State inmates found that during the first 2 weeks after release, the risk of death among former inmates was more than 12 times that among other residents, with drug overdose being the leading cause (Binswanger et al. 2007).

Outcomes for substance abusing individuals can be improved when criminal justice personnel work in tandem with treatment providers on drug abuse treatment needs and supervision requirements. Treatment needs that can be assessed after arrest include substance abuse severity, mental health problems, and physical health. Defense attorneys, prosecutors, and judges need to work together during the prosecution and sentencing phases of the criminal justice process to determine suitable treatment programs that meet the offender's needs. Through drug courts, diversion programs, pretrial release programs that are conditional on treatment, and conditional probation with sanctions, the offender can participate in community-based drug abuse treatment while under criminal justice supervision. In some

instances, the judge may recommend that the offender participate in treatment while serving jail or prison time or require it as part of continuing correctional supervision post-release.

3. How effective is drug abuse treatment for criminal justice-involved individuals?

Treatment is an effective intervention for drug abusers, including those who are involved with the criminal justice system. However, the effectiveness of drug treatment depends on both the individual and the program, and on whether interventions and treatment services are available and appropriate for the individual's needs. To alter attitudes, beliefs, and behaviors that support drug use, the drug abuser must engage in a therapeutic change process, which may include medications to help prevent relapse. Longitudinal outcome studies find that those who participate in community-based drug abuse treatment programs commit fewer crimes than those who do not participate (Prendergast et al. 2002; Butzin et al. 2006; and Kinlock et al. 2009).

Outcomes can be improved when criminal justice personnel work in tandem with treatment providers.

4. Are all drug abusers in the criminal justice system good candidates for treatment?

A history of drug use does not in itself indicate the need for drug abuse treatment. Offenders who meet drug dependence criteria should be given higher priority for treatment than those who do not. Less intensive interventions, such as drug abuse education or self-help group participation, may be appropriate for those not meeting criteria for drug dependence. Services such as family-based interventions for juveniles, psychiatric treatment, or cognitive-behavioral interventions for changing "criminal thinking" may be a higher priority for some offenders, and individuals with mental health problems may require specialized services (see FAQ Nos. 6 and 12).

Low motivation to participate in treatment or to end drug abuse should not preclude access to treatment if other criteria are met. Motivational enhancement interventions may be useful in these cases. Examples include motivational interviewing and contingency management techniques, which often provide tangible rewards in exchange for meeting program goals. Legal pressure that encourages abstinence and treatment participation may also help these individuals by improving retention and prompting longer treatment stays.

Drug abuse treatment is also effective for offenders who have a history of serious and violent crime, particularly if they receive intensive, targeted services. The economic benefits in avoided crime costs and those of crime victims (e.g., medical costs, lost earnings, and loss in quality of life) may be substantial for these high-risk offenders. Treating them requires a high degree of coordination between drug abuse treatment providers and criminal justice personnel to ensure that the prisoners receive needed treatment and other services that will help prevent criminal recidivism.

5. Is legally mandated treatment effective?

Often, the criminal justice system can apply legal pressure to encourage offenders to participate in drug abuse treatment; or treatment can be mandated through a drug court or as a condition of pretrial release, probation, or parole. A large percentage of those admitted to drug abuse treatment cite legal pressure as an important reason for seeking treatment. Most studies suggest that outcomes for those who are legally pressured to enter treatment are as good as or better than outcomes for those who entered treatment without legal pressure. Individuals under legal pressure also tend to have higher attendance rates and remain in treatment for longer periods, which can also have a positive impact on treatment outcomes.

Legal pressure can increase treatment attendance and improve retention.

6. Are relapse risk factors different in offender populations? How should drug abuse treatment deal with these risk factors?

Often, drug abusing offenders have problems in other areas. Examples include family difficulties, limited social skills, educational and employment problems, mental health disorders, infectious diseases, and other medical issues. Treatment should take these problems into account, because they can increase the risk of drug relapse and criminal recidivism if left unaddressed.

Stress is often a contributing factor to relapse, and offenders who are re-entering society face many challenges and stressors, including reuniting with family members, securing housing, and complying with criminal justice supervision requirements. Even the many daily decisions that most people face can be stressful for those recently released from a highly controlled prison environment.

Returning to environments associated with drug use may trigger cravings and cause a relapse.

Other threats to recovery include a loss of support from family or friends, which incarcerated people may experience. Drug abusers returning to the community may also encounter people from their lives who are still involved in drugs or crime and be enticed to resume a criminal and drug using lifestyle. Returning to environments or activities associated with prior drug use may trigger strong cravings and cause a relapse. A coordinated approach by treatment and criminal justice staff provides the best way to detect and intervene with these and other threats to recovery. In any case, treatment is needed to provide the skills necessary to avoid or cope with situations that could lead to relapse.

Treatment staff should identify the offender's unique relapse risk factors and periodically re-assess and modify the treatment plan as needed. Generally, continuing or re-emerging drug use during treatment requires a clinical response—either increasing the amount or level of treatment, or changing the treatment intervention.

7. What treatment and other health services should be provided to drug abusers involved with the criminal justice system?

One of the goals of treatment planning is to match evidence-based interventions to individual needs at each stage of drug treatment. Over time, various combinations of treatment services may be required. Evidence-based interventions include cognitive-behavioral therapy to help participants learn positive social and coping skills, contingency management approaches to reinforce positive behavioral change, and motivational enhancement to increase treatment engagement and retention. In those addicted to opioid drugs, agonist/partial agonist medications can also help normalize brain function, and antagonist medications can facilitate abstinence. For juvenile offenders, treatments that involve the family and other aspects of the drug abuser's environment have established efficacy.

Drug abuse treatment plans for incarcerated offenders can facilitate successful re-entry into the community by incorporating relevant transition plans and services. Drug abusers often have mental and physical health, family counseling, parenting, educational, and vocational needs, so medical, psychological, and social services are often crucial components of successful treatment. Case management approaches can be used to provide assistance in obtaining and integrating drug abuse treatment with community services.

8. How long should drug abuse treatment last for individuals involved in the criminal justice system?

While individuals progress through drug abuse treatment at different rates, one of the most reliable findings in treatment research is that lasting reductions in criminal activity and drug abuse are related to length of treatment. Generally, better outcomes are associated with treatment that lasts longer than 90 days, with treatment completers achieving the greatest reductions in drug abuse and criminal behavior. Again, legal pressure can improve retention rates.

A longer continuum of treatment may be indicated for individuals with severe or multiple problems. Research has shown that treatment provided in prison and continued in the community after release can reduce the risk of recidivism to criminal behavior as well as relapse to drug use.

Early phases of treatment help the participant stop using drugs and begin a therapeutic process of change. Later stages address other problems related to drug abuse and, importantly, help the individual learn how to self-manage the drug problem.

Because addiction is a chronic disease, drug relapse and return to treatment are common features of recovery. Thus, treatment may need to extend over a long period across multiple episodes of care.

9. How can rewards and sanctions be used effectively with drug-involved offenders in treatment?

The systematic application of behavioral management principles underlying reward and punishment can help individuals reduce their drug use and criminal behavior. Rewards and sanctions are most likely to change behavior when they are certain to follow the targeted behavior, when they follow swiftly, and when they are perceived as fair. It is important to recognize and reinforce progress toward responsible, abstinent behavior. Rewarding positive behavior is more effective in producing long-term positive change than punishing negative behavior. Indeed, punishment alone is an ineffective public health and safety intervention for offenders whose crime is directly related to drug use (Leukefeld et al. 2002). Nonmonetary rewards such as social recognition can be as effective as monetary ones. A graduated range of rewards given for meeting predetermined goals can be an effective strategy.

Contingency management strategies, proven effective in community settings, use voucher-based incentives or rewards, such as bus tokens, to reinforce abstinence (measured by negative drug tests) or to shape progress toward other treatment goals, such as program session attendance or compliance with medication regimens. Contingency management is most effective when the contingent reward closely follows the behavior being monitored. An intervention

tested by CJ-DATS researchers, called "Step'n Out," used a contingency management approach whereby criminal justice staff monitored specific behaviors (e.g., abstinence, employment searches, and counseling attendance) and rewarded individuals who met agreed-upon goals with social acknowledgement (e.g., congratulatory letter from parole supervisor) and small material incentives (e.g., partial payment for clothes for job interviews). This approach improved parolees' attendance at integrated community parole and addiction treatment sessions, as well as increased use of treatment and individual counseling services (Friedmann et al. 2009).

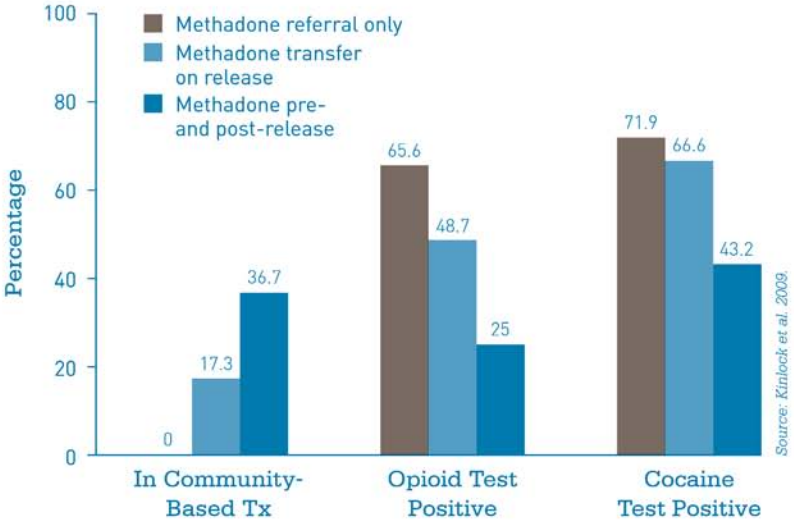
Graduated sanctions, which invoke less punitive responses for early and less serious noncompliance and increasingly severe sanctions for more serious or continuing problems, can be an effective tool in conjunction with drug testing. The effective use of graduated sanctions involves consistent, predictable, and clear responses to noncompliant behavior.

Drug testing can determine when an individual is having difficulties with recovery. The first response to drug use detected through urinalysis should be a clinical one—for example, increasing treatment intensity or switching to an alternative treatment. This often requires coordination between the criminal justice staff and the treatment provider. (Note that more intensive treatment should not be considered a sanction, but rather a routine progression in health care practice when a treatment appears less effective than expected.)

It is important to recognize and reinforce progress toward responsible, abstinent behavior.

Behavioral contracting can employ both rewards and sanctions. A behavioral contract is an explicit agreement between the participant and the treatment provider or criminal justice monitor (or among all three) that specifies proscribed behaviors and associated sanctions, as well as positive goals and rewards for success. Behavioral contracting can instill a sense of procedural justice because both the necessary steps toward progress and the sanctions for violating the contract are specified and understood in advance.

Methadone treatment before and after release from prison increases treatment retention and reduces drug use



At 12 months post-release, offenders who had received methadone treatment in prison and continued it in the community were significantly more likely to enter and stay in treatment and less likely to test positive for opioid and cocaine use than participants who received counseling and referral *to methadone, or those who received counseling with transfer to methadone maintenance upon release.*

10. What is the role of medications in treating substance abusing offenders?

Medications can be an important component of effective drug abuse treatment for offenders. By allowing the brain to function more normally, they enable the addicted person to leave behind a life of crime and drug abuse. Although some jurisdictions have found ways to successfully implement medication therapy, addiction medications are underused in the treatment of drug abusers within the criminal justice system, despite evidence of their effectiveness.

FREQUENTLY ASKED QUESTIONS

Effective medications have been developed for treating addiction to opiates/heroin and alcohol:

- **Opiates/Heroin**. Long-term opiate abuse results in a desensitization of the brain's opiate receptors to endorphins, the body's natural opioids. Opioid agonist/partial agonist medications, which act at the same receptors as heroin, morphine, and endorphins, tend to be well tolerated and can help an individual remain in treatment. For example, methadone, an opiate agonist, reduces the craving that otherwise results in compulsive use of heroin or other illicit opiates. Methadone treatment has been shown to be effective in decreasing opiate use, drug-related criminal behavior, and HIV risk behavior. Buprenorphine is a partial agonist and acts on the same receptors as morphine (a full agonist), but without producing the same level of dependence or withdrawal symptoms. Suboxone is a unique formulation of buprenorphine that contains naloxone, an opioid antagonist that limits diversion by causing severe withdrawal symptoms in addicted users who inject it to get "high." It has no adverse effects when taken orally, as prescribed.

Medications can be an important component of effective drug abuse treatment for offenders.

An alternative approach, in previously detoxified opiate users, is to use an antagonist medication that blocks the effects of opiates. Naltrexone has been available for more than 2 decades, but poor compliance in the face of severe cravings and addiction has undermined its benefits. An extended-release injectable formulation of naltrexone (Vivitrol) was recently approved by the U.S. Food and Drug Administration (FDA) for treating opioid addiction. Vivitrol requires dosing every few months rather than daily, which stands to improve treatment adherence.

- **Alcohol**. Disulfiram (also known as Antabuse) is an aversion therapy that induces nausea if alcohol is consumed. Acamprosate, a medication that helps reduce alcohol craving, works by restoring normal balance to the brain's glutamate neurotransmitter system.

Naltrexone (and now Vivitrol), which blocks some of alcohol's pleasurable effects and alcohol craving, is also approved by the FDA for treatment of alcohol abuse.

11. How can the criminal justice and drug abuse treatment systems reduce the spread of HIV/AIDS, hepatitis, and other infectious diseases among drug abusing offenders?

Individuals involved in the criminal justice system have disproportionately high rates of substance use disorders and infectious diseases, including HIV/AIDS. In fact, 14 percent of HIV-infected individuals in this country pass through the criminal justice system each year (Spaulding et al. 2009). Other infectious diseases, such as hepatitis B, hepatitis C, and tuberculosis, also are pervasive in the criminal justice system.

This overrepresentation also provides an opportunity to integrate treatment and improve outcomes for both substance use disorders and infectious diseases. Research shows that treatment for drug abuse can lessen the spread of infectious diseases by reducing high-risk behaviors like needle-sharing and unprotected sex (Metzger et al. 2010). Identifying those who are HIV+ and starting them on HAART treatment could not only improve their health outcomes but also decrease HIV spread (Montaner et al. 2010).

The prevalence of AIDS is approximately five times higher among incarcerated offenders than in the general population.

It is imperative that offenders with infectious diseases be linked with community-based medical care prior to release. Offenders often have difficulty negotiating access to health services and adhering to complex treatment protocols following release from prison and jail. One study found that simply helping HIV-infected inmates complete the paperwork required to get their prescriptions filled upon release significantly diminished treatment interruption, although improvement was still needed, since fewer than half had filled their prescriptions within 2 months of release (Baillargeon et al. 2009).

Community health, drug treatment, and criminal justice agencies should work together to offer education, screening, counseling, prevention, and treatment programs for HIV/AIDS, hepatitis, and other infectious diseases to offenders returning to the community.

12. What works for offenders with co-occurring substance abuse and mental disorders?

It is important to adequately assess mental disorders and to address them as part of effective drug abuse treatment. Many types of co-occurring mental health problems can be successfully addressed in standard drug abuse treatment programs. However, individuals with serious mental disorders may require an integrated treatment approach designed for treating patients with co-occurring mental and substance use disorders.

Much progress has been made in developing effective medications for treating mental disorders, including a number of antidepressants, antianxiety agents, mood stabilizers, and antipsychotics. These medications may be critical for treatment success with offenders who have co-occurring mental disorders such as depression, anxiety disorders, bipolar disorder, or schizophrenia. Cognitive-behavioral therapy can be effective for treating some mental health problems, particularly when combined with medications. Contingency management can improve adherence to medications, and intensive case management may be useful for linking severely mentally ill individuals with drug abuse treatment, mental health care, and community services. A specialized type of treatment—Modified Therapeutic Communities (MTCs)—incorporates features of traditional Therapeutic Communities with a special focus on addressing co-occurring mental health conditions.

13. Is providing drug abuse treatment to offenders worth the financial investment?

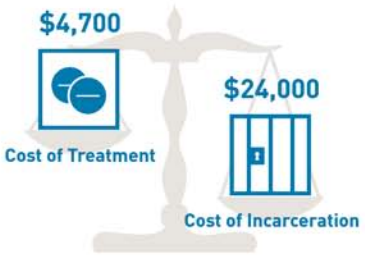
In 2007, it was estimated that the cost to society of drug abuse was $193 billion (National Drug Intelligence Center [NDIC], 2011), a substantial portion of which—$113 billion—is associated with drug-

related crime, including criminal justice system costs and costs borne by victims of crime. The cost of treating drug abuse (including health costs, hospitalizations, and government specialty treatment) was estimated to be $14.6 billion, a fraction of these overall societal costs (NDIC, 2011). Drug abuse treatment is cost effective in reducing drug use and bringing about related savings in health care. Treatment also consistently has been shown to reduce the costs associated with lost productivity, crime, and incarceration across various settings and populations. The largest economic benefit of treatment is seen in avoided costs of crime (incarceration and victimization costs). Providing methadone treatment to opioid-addicted prisoners prior to their release, for example, not only helps to reduce drug use but also avoids the much higher imprisonment costs for drug-related crime (see figure).

The largest economic benefit of treatment is seen in avoided costs of crime.

Even greater economic benefits result from treating offenders with co-occurring mental health problems and substance use disorders. Residential prison treatment is more cost effective if offenders attend treatment post-release, according to research (Martin et al. 1999; Butzin et al. 2006). Drug courts also convey positive economic benefits,

Treating addiction in the criminal justice system is cost-effective



The cost of methadone treatment averages around $5,000 a year, compared to approximately $24,000 for State and Federal prisons to keep people confined. Reducing the number of people incarcerated for drug use can net huge savings in economic and social costs.

Sources: Zarkin et al. 2008 and Warren et al. 2008.

including participant-earned wages and avoided incarceration and future crime costs.

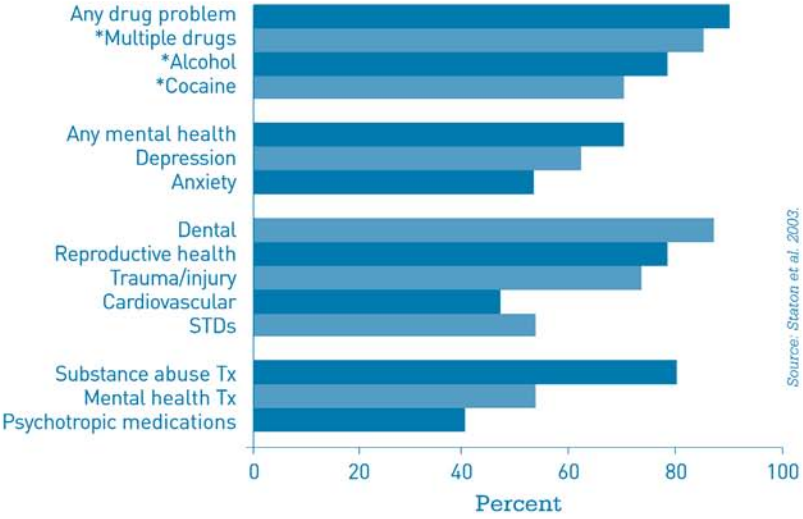
14. What are the unique treatment needs of women in the criminal justice system?

Although women are incarcerated at far lower rates than men, the number and percentage of incarcerated women have grown substantially in recent years. Between 2000 and 2008, the number of men in prisons and jails grew by only 5 percent, while the number of incarcerated women grew by about 15 percent (Sabol et al. 2010). Women in prison are likely to have a different set of problems and needs than men, presenting particular treatment challenges that may call for tailored approaches (Greenfield et al. 2007) (see figure next page).

Incarcerated women in treatment are significantly more likely than incarcerated men to have severe substance abuse histories, co-occurring mental disorders, and high rates of past treatment for both; they also tend to have more physical health problems (Staton et al. 2003; Messina et al. 2006). Approximately 50 percent of female offenders are likely to have histories of physical or sexual abuse, and women are more likely than men to be victims of domestic violence. Past or current victimization can contribute to drug or alcohol abuse, depression, post-traumatic stress disorder, and criminal activity.

Treatment programs serving both men and women can provide effective treatment for their female patients. However, gender-specific programs may be more effective for female offenders, particularly those with histories of trauma and abuse (Pelissier et al. 2003). Female offenders are more likely to need medical and mental health services, child care services, and assistance in finding housing and employment. Following a comprehensive assessment, women with mental health disorders should receive appropriate treatment and case management, including victim services as needed. For female offenders with children, parental responsibilities can conflict with their ability to participate in drug treatment. Regaining or retaining custody of their children can also motivate mothers to participate in treatment. Treatment programs may improve retention by offering child care services and parenting classes.

Incarcerated women have high rates of substance abuse, mental disorders, and other health problems



*Note: Graph shows lifetime percentages except for multiple drugs, alcohol, and cocaine, which are the percentage reporting use in the 30 days prior to incarceration. (N=60)

15. What are the unique treatment needs of juveniles in the criminal justice system?

The U.S. Department of Justice's Office of Justice Programs reports a high rate of drug use among juvenile detainees. One study, for example, found that 77 percent of criminal justice-involved youth reported substance use (mainly marijuana) in the past 6 months, and nearly half of male and female juvenile detainees had a substance use disorder (McClelland et al. 2004a; McClelland et al. 2004b).

Arrest rates for drug-related crimes also remain high among juveniles. A recent report showed that of the estimated 2.1 million juvenile arrests in 2008, approximately 10 percent were for drug abuse or underage drinking violations (Puzzanchera 2009).

Juveniles entering the criminal justice system can bring a number of serious problems with them—substance abuse, academic failure,

emotional disturbances, physical health issues, family problems, and a history of physical or sexual abuse. Girls make up nearly one-third of juvenile arrests, a high percentage of whom report some form of emotional, physical, or sexual abuse. Effectively addressing these problems requires their gaining access to comprehensive assessment, treatment, case management, and support services appropriate for their age and developmental stage. Assessment is particularly important, because not all adolescents who have used drugs need treatment. For those who do, there are several points in the juvenile justice continuum where treatment has been integrated, including juvenile drug courts, community-based supervision, juvenile detention, and community re-entry.

Effective treatment of juvenile substance abusers often requires a family-based treatment model.

Families play an important role in the recovery of substance abusing juveniles, but this influence can be either positive or negative. Parental substance abuse or criminal involvement, physical or sexual abuse by family members, and lack of parental involvement or supervision are all risk factors for adolescent substance abuse and delinquent behavior. Thus, the effective treatment of juvenile substance abusers often requires a family-based treatment model that targets family functioning and the increased involvement of family members. Effective adolescent treatment approaches include multisystemic therapy, multidimensional family therapy, and functional family therapy. These interventions show promise in strengthening families and decreasing juvenile substance abuse and delinquent behavior.

Juvenile offenders

Virtually every juvenile offender should be screened for drug abuse and mental disorders, and receive an intervention:

- Treatment for those who are dependent on alcohol or drugs, or mentally ill.
- Drug abuse prevention for those who are not.
- HIV prevention or treatment as needed.

RESOURCES Tx

Many resources are available on the Internet. The following are useful links:

General Information

NIDA Web site: www.drugabuse.gov

General Inquiries: NIDA Public Information Office 301–443–1124

Federal Resources

Bureau of Justice Assistance (BJA) Substance Abuse Programs	www.ojp.usdoj.gov/bja/programs/substance_abu.html
Bureau of Justice Statistics (BJS) Statistics on Drugs and Crime	http://bjs.ojp.usdoj.gov/content/dcf/contents.cfm
Center for Substance Abuse Treatment (CSAT) Substance Abuse and Mental Health Services Administration (SAMHSA)	http://www.samhsa.gov/about/csat.aspx

Federal Resources (continued)

Federal Bureau of Prisons (BOP) Substance Abuse Treatment	www.bop.gov/inmate_programs/substance.jsp
National Criminal Justice Reference Service (NCJRS)	www.ncjrs.gov
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	www.niaaa.nih.gov
National Institute of Corrections (NIC)	www.nicic.org
National Institute of Justice (NIJ)	www.ojp.usdoj.gov/nij
National Institute of Mental Health (NIMH)	www.nimh.nih.gov
Office of Applied Studies (OAS) Substance Abuse and Mental Health Services Administration (SAMHSA)	www.samhsa.gov/data
Office of Justice Programs (OJP)	www.ojp.usdoj.gov
Office of Juvenile Justice and Delinquency Prevention (OJJDP)	www.ojjdp.gov

REFERENCES

Baler, R.D., and Volkow, N.D. Drug addiction: The neurobiology of disrupted self-control. *Trends Mol Med* 12(12):559–566, 2006.

Baillargeon, J.; Giordano, T.P.; Rich, J.D.; Wu, Z.H.; Wells, K.; Pollock, B.H.; and Paar, D.P. Accessing antiretroviral therapy following release from prison. *JAMA* 301(8):848–857, 2009.

Binswanger, I.A.; Stern, M.F.; Deyo, R.A.; Heagerty, P.J.; Cheadle, A.; Elmore, J.G.; and Koepsell, T.D. Release from prison—a high risk of death for former inmates. *New Engl J Med* 356(2):157–165, 2007.

Butzin, C.A., O'Connell, D.J., Martin, S.S., and Inciardi, J.A. Effect of drug treatment during work release on new arrests and incarcerations. *J Crim Justice* 34(5):557–565, 2006.

Chandler, R.K; Fletcher; B.W.; and Volkow, N.D. Treating drug abuse and addiction in the criminal justice system: Improving public health and safety. *JAMA* 301(2):183–190, 2009.

Cooper, M.; Sabol, W.J; and West, H.C. *Prisoners in 2008.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2010. Accessed at http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=1763, September 2011.

Friedmann, P.D.; Rhodes, A.G.; and Taxman, F.S.; for the Step'n Out Research Group of CJ-DATS. Collaborative behavioral management: integration and intensification of parole and outpatient addiction treatment services in the Step'n Out study. *J Exp Criminol* 5(3):227–243, 2009.

Glaze, L.E., and Bonczar, T.P. *Probation and Parole in the United States, 2008.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2009.

Greenfield, S.F., Brooks, A.J., Gordon, S.M., Green, C.A., Kropp, F., McHugh, R.K., Lincoln, M., Hien, D., and Miele, G.M. Substance abuse treatment entry, retention, and outcome in women: a review of the literature. *Drug Alcohol Depend* 86:1–21, 2007.

Karberg, J.C., and Mumola, C.J. *Drug Use and Dependence, State and Federal Prisoners, 2004.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2006.

Kinlock, T.W., Gordon, M.S., Schwartz, R.P., Fitzgerald, T.T., and O'Grady, K.E. A randomized clinical trial of methadone maintenance for prisoners: Results at 12 months post-release. *J Subst Abuse Treat* 37(3):277–285, 2009.

Leukefeld, C.G.; Tims, F.; and Farabee, D., Eds. *Treatment of Drug Offenders: Policies and Issues.* NY, NY: Springer, 2002.

Martin, S.S.; Butzin, C.A.; Saum, C.A; and Inciardi, J.A. Three-year outcomes of therapeutic community treatment for drug-involved offenders in Delaware: From prison to work release to aftercare. *The Prison Journal* 79(3):294–320, 1999.

McClelland, G.M., Elkington, K.S., Teplin, L.A., and Abram, K.M. Multiple substance use disorders in juvenile detainees. *J Am Acad Child Adolesc Psychiatry* 43(10):1215–1224, 2004a.

McClelland, G.M.; Teplin, L.A.; and Abram, K.M. *Detection and prevalence of substance use among juvenile detainees.* Juvenile Justice Bulletin. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, 2004b.

Messina, N.; Burdon, W.; Hagopian, G.; and Prendergast, M. Predictors of prison-based treatment outcomes: A comparison of men and women participants. *Am J Drug Alcohol Abuse* 32:7–28, 2006.

Metzger, D.S.; Woody, G.E.; and O'Brien, C.P. Drug treatment as HIV prevention: A research update. *J Acquir Immune Defic Syndr* 55(suppl. 1):S32–S36, 2010.

Montaner, J.S.; Wood, E.; Kerr, T.; Lima, V.; Barrios, R.; Shannon, K.; Harrigan, R.; and Hogg, R. Expanded highly active antiretroviral therapy coverage among HIV-positive drug users to improve individual and public health outcomes. *J Acquir Immune Defic Syndr* 55(suppl. 1):S5–S9, 2010.

National Drug Intelligence Center. *The Economic Impact of Illicit Drug Use on American Society.* Washington, DC: United States Department of Justice, 2011.

Pelissier, B.M., Camp, S.D., Gaes, G.G., Saylor, W.G., and Rhodes, W. Gender differences in outcomes from prison-based residential treatment. *J Subst Abuse Treat* 24(2), 149–160, 2003.

Prendergast, M.L., Podus, D., Change, E., and Urada, D. The effectiveness of drug abuse treatment: A meta-analysis of comparison group studies. *Drug Alcohol Depend* 67(1):53–72, 2002.

Puzzanchera, C. *Juvenile Arrests 2008.* Juvenile Justice Bulletin. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, 2009.

Sabol, W.J., West, H.C., and Cooper, M. *Prisoners in 2008.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2010.

Spaulding, A.C., Seals, R.M., Page, M.J., Brzozowski, A.K., Rhodes, W., and Hammett, T.M. HIV/AIDS among inmates of and releases from U.S. correctional facilities, 2006: Declining share of epidemic but persistent public health opportunity. *PLoS One* 4(11):e7558, 2009.

Staton, M.; Leukefeld, C.; and Webster, J.M. Substance use, health, and mental health: Problems and service utilization among incarcerated women. *Int J Offender Ther Comp Criminol* 47(2):224–239, 2003.

Taxman, F.S.; Perdoni, M.L.; and Harrison, L.D. Drug treatment services for adult offenders: The state of the state. *J Subst Abuse Treat* 32(3):239–254, 2007.

Volkow, N.D., Wang, G.J., Fowler, J.S., Tomasi, D., Telang, F., and Baler, R. Addiction: decreased reward sensitivity and increased expectation sensitivity conspire to overwhelm the brain's control circuit. *Bioessays* 32(9):748–755, 2010.

Warren, J.; Gelb, A; Horowitz, J; and Riordan, J. *One in 100: Behind Bars in America 2008.* Washington, DC: The Pew Center on the States, The Pew Charitable Trusts, 2008.

Zarkin, G.A.; Dunlap, L.J.; Wedehase, B.; and Cowell, A.J. The effect of alternative staff time data collection methods on drug treatment service cost estimates. *Evaluation and Program Planning* 31:427–435, 2008.

For More Information

For more information about other research-based publications on drug abuse and addiction, visit NIDA's Web site at **www.drugabuse.gov**, or contact the *DrugPubs* Research Dissemination Center at 877–NIDA-NIH (877-643-2644; TTY/TDD: 240–645–0228).

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