

# **Correctional and Sentencing Reform for Drug Offenders**

## **Research Findings on Selected Key Issues**

**September 2009**

**Roger Przybylski**  
RKC Group  
Lakewood, Colorado



# **Correctional and Sentencing Reform for Drug Offenders**

## **Research Findings on Selected Key Issues**

**September 2009**

---

Roger Przybylski  
RKC Group  
Lakewood, Colorado

---

This project was funded by the Colorado Criminal Justice Reform Coalition which sought independent research on selected issues related to drug policy. The research findings, points of view and statements presented in this document are solely those of the author.



## About the Author

Roger Przybylski is a consultant and the founder of RKC Group, a private consulting company that provides applied research, program evaluation, and performance measurement services to organizations in the public and private sectors. Prior to forming RKC Group, Mr. Przybylski served as associate director for the Illinois Criminal Justice Information Authority, where he directed the authority's research division. He also served as coordinator of research for the Chicago Police Department, the nation's second-largest local police agency. Mr. Przybylski is a past president of the Justice Research and Statistics Association and current chairman of the American Evaluation Association's crime and justice topical interest group. He was an adjunct faculty member at Loyola University and the University of Illinois at Chicago and an associate editor for the *Justice Research and Policy Journal* and the *Journal of Offender Rehabilitation*. Mr. Przybylski also served as staff to the Illinois Legislative Committee on Juvenile Justice, the Governor's Commission on Gangs in Illinois, and the Illinois Task Force on Crime and Corrections. His recent consulting work includes projects for the Alaska Department of Corrections, the Administrative Office of the Illinois Courts, the Colorado Lawyers Committee Sentencing Reform Task Force, the Erie County (New York) Probation Department, the Montana Board of Crime Control, the Institute for Intergovernmental Research, and the Rutherford County (Tennessee) Drug Court. Mr. Przybylski recently authored the publication *What Works: Effective Recidivism Reduction and Risk-Focused Prevention Programs, A Compendium of Evidence-Based Options for Preventing New and Persistent Criminal Behavior*. His other publications, articles and reports include: *Stranger Murders and Assault: A Study of a Neglected Form of Stranger Violence*; *The Impact of Prior Criminal History on Recidivism in Illinois*; *Street Gangs and Crime: A Special Report to the Governor's Commission on Gangs in Illinois*; *Repeat Offenders: A Costly Undertaking*; *Assessing the Effectiveness of Criminal Justice Programs*; *Trends and Issues in Criminal and Juvenile Justice*; and *Sentencing Options, Baseline Information for Policymakers: A Briefing Paper Prepared for the National Institute of Justice and National Governors Association Conference on Criminal Justice Options and Consequences*.



## Table of Contents

Executive Summary .....	1
Section 1. Introduction .....	7
Section 2. What does research tell us about the return on investment associated with the incarceration of drug offenders? .....	10
Section 3. Does the threat of incarceration have a deterrent effect on drug use? .....	13
Section 4. Does the incarceration of drug offenders have an impact on drug distribution?.....	17
Section 5. What does research tell us about the effectiveness of substance abuse treatment, including treatment for methamphetamine abuse, and the return on investment associated with substance abuse treatment? .....	20
Section 6. How do drug offender imprisonment and substance abuse treatment compare in terms of return on investment? .....	29
Section 7. What are the primary factors associated with desistance from criminal behavior? .	33
Section 8. What does research tell us about the impact of a criminal conviction on subsequent employment and earning capacity? .....	36
Section 9. What types of sanctions other than imprisonment are states using to respond to technical violations of probation and parole? .....	41
Section 10. What are some of the most significant state-level drug policy reforms enacted in recent years? .....	47
Bibliography .....	61
Appendix A. Cost-benefit analysis .....	73





## Executive Summary

---

In Colorado and across the nation, offenders convicted of a drug crime make up a sizeable proportion of the prison population. A far larger number of imprisoned offenders are drug-involved or addicted to alcohol or illicit substances. Given the impact that substance abuse and addiction have on prison populations and government spending overall, it is reasonable to explore whether there are safe and cost-effective ways of dealing with drug offenders other than imprisonment. Research has clearly shown, for example, that substance abuse treatment is both effective and cost-beneficial, while incarcerating drug offenders is not a cost-effective use of taxpayer dollars.

According to the Vera Institute of Justice, there is an emerging consensus in some states that sentences for drug offenses, particularly those involving simple possession, should be reassessed and that community-based treatment may be a more cost-effective sanction than incarceration for drug offenders. Indeed, the Illinois Consortium on Drug Policy at Roosevelt University's Institute for Metropolitan Studies recently reported that at least 22 states enacted sentencing reform for drug offenders between 2004 and 2006 alone.

This report was developed by RKC Group to support informed discourse on criminal justice policy regarding drug-involved offenders. The report addresses nine specific questions or issues. Findings presented on each are based on a comprehensive review of the criminology and criminal justice literature. Information was obtained by reviewing research, evaluation and other reports with a focus on providing policy makers with objective, accurate, and up-to-date information that can be used to develop safe and more cost-effective approaches for dealing with drug law violators and other substance abusing offenders. Key findings are presented below.

### 1. What does research tell us about the return on investment associated with the incarceration of drug offenders?

**Studies that have examined the monetary costs and benefits of incarcerating drug offenders have produced clear and consistent evidence that the imprisonment of drug offenders is not**

**a cost-effective use of public resources.** In study after study, the costs associated with imprisonment by far outweighed the public safety benefits produced. In Washington, for example, the Washington State Institute for Public Policy (2003) estimated that in 2001 the state received only \$0.37 in public safety benefits for every \$1 invested in the incarceration of drug offenders. Likewise, Lengyel (2006) estimated that New York state received only about \$0.29 in benefits for every \$1 of cost associated with the incarceration of drug offenders released in 2005.

***Studies that have examined the monetary costs and benefits of incarcerating drug offenders have produced consistent evidence that the imprisonment of drug offenders is not a cost-effective use of public resources.***

From a policy making perspective, it is important to recognize that these cost-benefit studies of imprisonment do not take into account many of the collateral costs of incarceration, such as the impact of incarceration on the social fabric of certain communities. Research has shown that high rates of incarceration tend to be concentrated in poor communities. Over time, these communities can be weakened rather than strengthened by high rates of incarceration. As a result, crime increases. Liedka, Piehl and Useem (2006) found that **there is a point beyond which increases in the incarceration rate are actually associated with higher crime rates.** Using state-level prison and crime data from 1972 through 2000, the researchers found that higher crime rates begin to occur when a state's incarceration rate reaches between 3.25 and 4.92 inmates per 1,000 persons in the general population. Colorado's incarceration rate reached 4.57 per 1,000 persons in 2008.

### **The return on investment of incarceration varies considerably across offender types.**

Overall, the return on investment associated with incarceration is far greater for those convicted of a violent crime than for those convicted of property or drug offenses. The public safety benefits achieved when serious violent offenders are imprisoned also tend to be positive – that is,

greater than the costs associated with their incarceration. This is because victimization costs associated with violent crime are significantly higher than they are for other crimes.

**Even though the return on investment of incarceration varies across different offender types, the benefits of imprisonment are subject to diminishing returns for all offender types.**

The Washington State Institute for Public Policy (2003), for example, estimated that the return on investment associated with the incarceration of violent offenders in Washington fell 58% between 1990 and 2001, from \$6.60 to \$2.74 in public safety benefits for every \$1 of cost.

## **2. Does the threat of incarceration have a deterrent effect on drug use?**

**A large body of scientific evidence indicates that the incarceration of drug offenders does not have a significant deterrent effect on drug use.** In fact, some research has found that states with higher rates of drug offender incarceration actually have *higher* rates of drug use in the community.

***A large body of scientific evidence indicates that the incarceration of drug offenders does not have a significant deterrent effect on drug use.***

In a study of the impact of California's Three Strikes law, for example, Ramirez and Crano (2003) found that the law had neither an incapacitation nor deterrent effect on drug offenses. And in a study that examined the relationship between the use of incarceration and rates of drug use in 23 states, Schiraldi and Ziedenberg (2003) found that states that increased the incarceration of drug offenders did not necessarily experience a corresponding decline in drug use. In New Jersey, for example, where drug offenders accounted for the largest proportion of the state prison population in the nation at the time, drug offender prison admissions increased 29% in the 1990s, but the percentage of state residents 12 years of age and older reporting drug use *increased* – from 5.4% to 7.2%.

***In a study of the impact of California's Three Strikes law, Ramirez and Crano (2003) found that the law had neither an incapacitation nor deterrent effect on drug offenses.***

**Our enhanced understanding of the science of addiction helps explain why the threat or experience of incarceration has so little impact on chronic abusers.** The repeated use of addictive drugs eventually changes how the brain functions. These brain changes affect natural inhibition and reward centers, causing the addict to use drugs in spite of the adverse health, social, and legal consequences. An addict's ability to exert self control and make sound decisions is often seriously impaired because the brain has become impaired.

## **3. Does the incarceration of drug offenders have an impact on drug distribution?**

**Numerous scholars of drug policy assert that the incarceration of drug offenders, including those sentenced for non-possession offenses, has little or no impact on drug distribution.**

One of the primary reasons for this is the existence of a drug market dynamic that is commonly referred to as the "replacement effect." Simply put, the market responds to the demand for drugs by replacing drug sellers sent to prison with either new recruits or by the increased drug selling of dealers already in the market. As a result, the incapacitation effect found for some other offenses is largely nullified in the case of drug dealing.

In fact, there is indirect evidence that the incarceration of drug dealers has actually contributed to an increase in crime. Spelman (2000) has argued that the number of offenders and the number of non-drug offenses committed will tend to increase as long as enough incarcerated drug dealers are replaced by new

***There is indirect evidence that the incarceration of drug dealers has actually contributed to an increase in crime.***

recruits. His research suggests that the percentage of incarcerated dealers who are replaced by new recruits almost certainly exceeds the threshold necessary for there to be a net increase in offenders and crime. Blumstein's research also suggests that the incarceration of drug dealers was responsible for an increase in violence in the 1980s and 1990s. As more and more drug dealers were incarcerated, they were replaced by sellers who tended to be younger and far more violent than their predecessors.

***"[T]he incapacitation of drug dealers is not only ineffective, it may be counterproductive."***

***William Spelman (2000)***

***"It is somewhat ironic that the growth in violence with handguns was at least partly a consequence of the drug war's incarceration of many of the older drug sellers."***

***Alfred Blumstein (2000)***

#### **4. What does research tell us about the effectiveness of substance abuse treatment, including treatment for methamphetamine abuse, and the return on investment associated with substance abuse treatment?**

**Research has produced clear and convincing evidence that substance abuse treatment works. Treatment reduces alcohol and drug use and crime.** Numerous studies have found therapeutic communities to be particularly effective, and treatment appears to work equally well for those who are coerced into treatment and those who volunteer. Staying in or completing treatment increases the likelihood of positive outcomes. Substance abuse treatment also produces a significant return on taxpayer investment. Economic studies across settings, populations, methods, and time periods consistently find positive net economic benefits associated with substance abuse treatment.

There is sound evidence indicating that methamphetamine dependence can be effectively treated. The most effective treatments for

***Research has produced clear and convincing evidence that substance abuse treatment works. Treatment reduces alcohol and drug use and crime. It also provides taxpayers with a significant return on investment.***

methamphetamine addiction currently are behavioral therapies. Two specific approaches that have been rigorously studied and found to be effective are the Matrix Model and Contingency Management.

The Matrix Model is a multi-element package of therapeutic strategies that serve as an outpatient "protocol" for the treatment of methamphetamine and cocaine users. It incorporates a variety of evidence-based treatment elements, including cognitive behavioral therapies, relapse prevention techniques, positive reinforcement, and motivational interviewing.

Contingency Management (CM) is the systematic application of positive reinforcement principles within a treatment protocol. A large body of research has demonstrated that CM techniques are effective at reducing illicit drug use. The efficacy of the community-reinforcement-plus-vouchers approach is supported by several randomized clinical trials. This treatment model integrates a community reinforcement approach - where treatment addresses lifestyle changes in multiple domains, such as family relationships, social networks and work - with an incentive program in which treatment clients can earn vouchers exchangeable for retail items by remaining abstinent. The voucher component is designed to reward progress in treatment and facilitate treatment retention.

***There is sound evidence indicating that methamphetamine dependence can be effectively treated. Two approaches that have been rigorously studied and found to be effective are the Matrix Model and Contingency Management.***

## 5. How do drug offender imprisonment and substance abuse treatment compare in terms of return on investment?

### **Several studies demonstrate that substance abuse treatment provides a greater return on taxpayer investment than incarceration.**

Caulkins and his colleagues (1997), for example, estimated that for every million dollars spent, substance abuse treatment would reduce serious crimes about 15 times more effectively than incarceration. And in a 2003 analysis conducted for the New York state legislature, the Legal Action Center reported that New York would save about \$60,000 for every individual charged with a second felony drug offense diverted from prison into community-based treatment.

**Several studies demonstrate that substance abuse treatment provides a greater return on taxpayer investment than incarceration.**

Perhaps the most direct way to compare incarceration and substance abuse treatment in terms of their respective returns on investment is to compare the benefit-cost ratios found in economic evaluations of each. Two consistent findings emerge from this type of cross-study comparison. First, the incarceration of drug offenders does not produce a positive return on investment whereas substance abuse treatment does. Second, the benefit-cost ratios derived from substance abuse treatment are consistently and significantly higher than those derived from the incarceration of drug offenders, indicating that substance abuse treatment has a far greater return on taxpayer investment than drug offender imprisonment.

As mentioned above, a cost-benefit study conducted by the Washington State Institute for Public Policy (2003) reported that Washington received only \$0.37 in benefits for every \$1 dollar of cost associated with the incarceration of drug offenders in Washington in 2001. Likewise, Lengyel (2006) estimated that New York state received only \$0.29 in benefits for every \$1 dollar of cost associated with the incarceration of drug offenders released from state prison in 2005. Conversely, in a study of addiction treatment in

Chicago, Salome and her colleagues (2003) found that treatment provided \$4.26 in benefits per \$1 of cost. Likewise, Ettner et al. (2005) found that treatment provided more than \$7 in benefits for every \$1 of cost in a cost-benefit study of treatment programs in 13 California counties.

**The Washington State Institute for Public Policy (2003) estimated that Washington received only \$0.37 in benefits for every \$1 dollar of cost associated with the incarceration of drug offenders in Washington in 2001. Conversely, in a study of substance abuse treatment programs in 13 California counties, Ettner and her colleagues found that treatment provided \$7 in benefits for every \$1 of cost.**

## 6. What are the primary factors associated with desistance from criminal behavior?

**Family and work have been identified as being particularly important in the transition from criminal to noncriminal conduct.** Marriage, especially strong marital attachment, is a significant factor in desistance, particularly for men. Strong ties to work and stable employment also can lead to desistance. Other factors such as education and reduced consumption of drugs promote desistance, too. Perhaps the most obvious and simplest pathway to desistance from crime is aging: offending declines with age across all offense types.

**Research has also demonstrated that incarceration and community supervision have little positive impact on desistance from crime on their own.** In fact, there is strong evidence that imprisonment and harsher sanctions in general are associated with higher rates of subsequent offending. Incarceration is

**Family and work have been identified as being particularly important in the transition from criminal to noncriminal conduct.**



associated with an increase in recidivism when compared with community-based sanctions, and longer time periods in prison (compared with shorter sentences) are associated with higher recidivism rates, too.

### **7. What does research tell us about the impact of a criminal conviction on subsequent employment and earning capacity?**

Several studies have examined the effect of arrest, conviction or incarceration on future employment and earnings. The findings from these studies indicate that **both a criminal conviction and time spent behind bars have a significant negative impact on subsequent employment and income.** A first-time conviction alone can reduce employment probabilities by 4 percentage points and income by an average of 6% to 8%. Incarceration has been linked with even larger reductions in employment and earnings. These negative effects have also been shown to persist for many years after a conviction or prison spell occurs.

***Both a criminal conviction and time spent behind bars have a significant negative impact on subsequent employment and income.***

The findings that both a criminal conviction and time spent behind bars have a negative impact on subsequent employment and income have clear public safety consequences. Research has shown that a strong tie to work is one of the most important factors in desistance from criminal behavior. Therefore, public policies and practices that block employment and other opportunities for ex-offenders to resume a regular life in the community are likely to serve as a barrier to desistance, eventually leading to higher rates of reentry failure and reduced public safety.

Research also has found that people with criminal records face an array of counterproductive and unreasonable roadblocks in almost every important aspect of life. Colorado has been ranked among the worst states in the nation in terms of barriers for ex-offenders.

***Given the scientific evidence that a strong tie to work is one of the most important factors in the criminal desistance process, public policies and practices that block employment and other opportunities for ex-offenders to resume a regular life in the community are likely to serve as a barrier to desistance, eventually leading to higher rates of reentry failure and reduced public safety.***

### **8. What types of sanctions other than imprisonment are states using to respond to technical violations of probation and parole?**

Several states have developed sanctioning grids that promote community-based alternatives to incarceration. In general, these grids structure the response to violations by weighing the seriousness of the violation behavior, the risk level of the offender (risk of reoffense), and the frequency of violation behaviors. The range of sanctions can include minimal responses, such as a reprimand, home visit, reduction in privileges, or an increase in face-to-face contacts with the supervising officer, to more serious consequences that impose greater structure and restrictions on the offender, such as curfews, urinalysis testing, assignment to new programming such as outpatient counseling, electronic monitoring, and community service. Residential treatment and very short periods of incarceration are sometimes options in the sanctioning grids.

Flash or shock incarceration – a brief period of incarceration, often a brief jail term – appears to be increasingly used as a sanction in some

***Several states have developed sanctioning grids that promote community-based alternatives to incarceration for probation and parole technical violators.***

situations. This approach lacks a sound body of empirical evidence demonstrating effectiveness.

Day reporting – where offenders are required to report to a specified location, usually on a daily basis, both for supervision and services - also is increasingly being used. A limited body of evidence suggests that day reporting centers have a positive impact on criminal justice outcomes.

### **9. What are some of the most significant state-level drug policy reforms enacted in recent years?**

Several states have enacted sentencing or correctional reforms related to drug offenders. Common themes include reducing criminal penalties for some drug law violations, the use of community-based substance abuse treatment instead of incarceration, and the creation of dedicated funding streams to support offender treatment. Examples of several of the most significant state-level drug policy reforms include:

- Washington and New York significantly reduced criminal penalties for drug law violations.
- Arizona, California and Kansas made treatment instead of incarceration mandatory for many offenders convicted of drug possession or use crimes.
- New York and Maryland provided a treatment diversion option for a broad group of non-violent offenders in need of treatment, including some offenders charged with drug selling or property offenses.
- California prohibited the use of incarceration for diversion eligible offenders unless there are repeated failures in treatment, repeated violations of community supervision for drug possession or use, or non-drug related violations of community supervision.
- Several states that have enabled diversion into treatment have allowed the underlying arrest and conviction record to be expunged or sealed if treatment is successfully completed.

Assessments of the impact of reforms have consistently been positive. States that have enacted drug policy reform have realized significant savings or cost offsets due to a reduction in the use of incarceration.

***Assessments of the impact of drug policy reforms have consistently been positive. States that have enacted reforms have realized significant savings or cost offsets due to a reduction in the use of incarceration.***

## Section 1

### Introduction

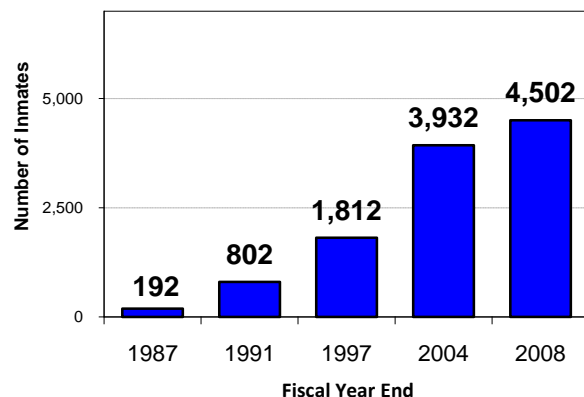
In Colorado and across the nation, offenders convicted of a drug crime make up a sizeable proportion of the prison population. Drug offenders account for about 20% of the inmate population in Colorado, and more people are serving prison time for a drug offense than for any other type of crime. At mid-year 1987, there were 192 drug offenders in prison in Colorado. Today there are more than 4,000 (Figure 1). At mid-year 2008, drug offenders accounted for more than one-third of the inmate population serving time for a non-violent crime.<sup>1</sup>

There is little question that drug offenders are one of the driving factors behind prison population growth. In fiscal year (FY) 1987, there were fewer than 200 new court commitments to Colorado prisons for drug crimes. In FY 2008, there were 1,849.<sup>2</sup> Many drug offenses are statutorily labeled as “extraordinary risk” crimes, a designation that automatically increases the presumptive sentencing range that applies to these offenders.

### Offenders with substance abuse problems

Statistics on offenders convicted of drug crimes, however, present only a small part of the

**Figure 1**  
**Number of Colorado Inmates Incarcerated for a Drug Offense**



Source: CO Dept. of Corrections Statistical reports.

1 Colorado Department of Corrections Annual Statistical reports.

2 Ibid.

substance abuse picture. A far larger number of offenders are involved with drugs or alcohol, and a significant number are clinically addicted. Roughly 8 out of every 10 Colorado Department of Corrections (CDOC) inmates, for example, are in need of substance abuse treatment.<sup>3</sup>

The links between substance abuse and crime are well documented. Drug abusers often engage in crime to support their drug habits, and research has shown that rates of criminal behavior increase during periods of drug addiction.<sup>4</sup> Studies of prisoners and probationers by the U.S. Department of Justice, Bureau of Justice Statistics also indicate that about half were under the influence of alcohol or drugs when they committed their current offense.<sup>5</sup> About one in five state prisoners reported in a national survey that they committed their current offense to get money for drugs.<sup>6</sup> Left untreated, alcohol and drug abuse are associated with elevated rates of failure on probation and parole, repeated contacts with the justice system, and higher rates of recidivism overall.

Substance abuse and addiction also impose tremendous costs on state budgets. According to the National Center on Addiction and Substance Abuse (CASA) at Columbia University, states spent a total of \$135.8 billion, or nearly 16% of all state spending, either directly or indirectly on substance abuse and addiction in 2005.<sup>7</sup> Only about 2% of this spending was devoted to prevention, treatment or research. About 4% was spent on taxation and regulation and, remarkably, 94% (\$127.5 billion) was spent to address the burden of our failure to prevent or treat substance

3 Colorado Department of Corrections *Statistical Report: Fiscal Year 2008*.

4 Nurco, D.N., Hanlon, T.E., Kinlock, T.W. and Duszynski, K.R. (1988). Differential criminal patterns of narcotic addicts over an addiction career. *Criminology*, 26, 407-424.

5 Mumola, C. and Bonczar, T. (1996). *Substance Abuse Treatment of Adults on Probation, 1995*. Bureau of Justice Statistics, U.S. Department of Justice, Washington, DC. (NCJ 166661); Mumola, C.J. (1999). *Substance Abuse and Treatment, State and Federal Prisoners, 1997*. Bureau of Justice Statistics, U.S. Department of Justice, Washington, DC. (NCJ 172871)

6 Ibid.

7 National Center on Addiction and Substance Abuse at Columbia University. (2009). *Shoveling Up II: The Impact of Substance Abuse on Federal, State and Local Budgets*. National Center on Addiction and Substance Abuse at Columbia University. New York, New York. Page 16. Substance abuse generally includes alcohol, tobacco and drug use.

abuse and addiction.<sup>8</sup> CASA defines burden spending as expenditures attributed directly to substance abuse and addiction – such as emergency room expenditures for treating drug overdoses or probation department spending on offender drug testing - as well as those where the link is not necessarily causal but where addressing substance abuse and addiction is essential to reducing government costs.<sup>9</sup> Examples of the latter are public health expenditures on illnesses related to substance abuse and criminal justice system spending on the incarceration and community supervision of substance abusing offenders.

While statistics like those reported by CASA clearly demonstrate the financial impact of substance abuse, they also show how government spending is overwhelmingly skewed toward addressing the burden of the problem rather than treatment and prevention.<sup>10</sup> As stated by CASA in its 2009 report:

*Despite a significant and growing body of knowledge documenting that addiction is a preventable and treatable disease, and despite a growing array of prevention, treatment and policy interventions of proven efficacy, our nation still looks the other way while substance abuse and addiction cause illness, injury, death and crime, savage our children, overwhelm social service systems, impede education, and slap a heavy growing tax on our citizens. ... In the current fiscal climate of growing economic hardship, we can no longer afford costly and ineffective policies that sap on average \$1,486 annually from ever man, women and child in America -- \$5,944 each year for a family of four.<sup>11</sup>*

Given the staggering costs of substance abuse and addiction and the fact that drug and alcohol-involved offenders account for such a sizeable

---

<sup>8</sup> Ibid. Page 27.

<sup>9</sup> Ibid. Pages 73-77. Therefore, burden spending includes government spending on programs 100% attributable to substance abuse, such as drug testing or a drug court, as well as estimates of the share of spending for each government program for which there was credible documentation of attributed or associated substance-related costs. An example of the latter is the share of probation department spending that can be linked to the supervision of substance abusing offenders.

<sup>10</sup> Ibid. Page 2.

<sup>11</sup> Ibid. Page 2.

portion of Colorado's prison population, it is reasonable to ask whether there are safe and cost-effective ways of dealing with drug offenders other than imprisonment. Research has clearly shown, for example, that substance abuse treatment is both effective and cost-beneficial, while incarcerating drug offenders is not a cost-effective use of taxpayer dollars.

According to the Vera Institute of Justice, there is an emerging consensus in some states that sentences for drug offenses, particularly those involving simple possession, should be reassessed and that community-based treatment may be a more cost-effective sanction than incarceration for drug offenders.<sup>12</sup> Indeed, the Illinois Consortium on Drug Policy at Roosevelt University's Institute for Metropolitan Studies recently reported that at least 22 states enacted sentencing reform for drug offenders between 2004 and 2006 alone, including diversion from prison to treatment and expanded probation and parole reforms.<sup>13</sup>

To support informed discourse on criminal justice policy concerning drug-involved offenders in Colorado, this report addresses the following issues:

1. The return on investment associated with imprisoning drug offenders
2. The deterrent effect of incarceration on drug use
3. The impact of drug offender imprisonment on the drug trade
4. The effectiveness and return on investment of substance abuse treatment, including what is known about the efficacy of treatment for methamphetamine abuse
5. How drug offender imprisonment and substance abuse treatment compare in terms of return on investment
6. The primary factors associated with desistance from crime
7. The impact of a criminal conviction on employment and earning capacity

---

<sup>12</sup> Wool, J., and Stemen, D. (2004). *Changing Fortunes or Changing Attitudes? Sentencing and Corrections Reforms in 2003*. Vera Institute of Justice, New York, NY.

<sup>13</sup> Kane-Willis, K., Janicheck, J., Cooley, T., Grimmer, A., Enoch, K. and Schmitz, S. (n.d.). *Through A Different Lens: Shifting the Focus on Illinois Drug Policy*. The Illinois Consortium on Drug Policy. Institute for Metropolitan Affairs, Roosevelt University, Chicago, Illinois.



8. Examples of alternative to incarceration sanctions for drug offenders who are noncompliant with probation or parole conditions
9. Examples of state-level drug policy reform

Findings on each of the issues outlined above are based on a comprehensive and systematic review of the criminology and criminal justice literature. Information was obtained by reviewing research, evaluation and other reports with a focus on providing policy makers with objective, accurate, and current information that can be used to support discourse and the development of cost-effective policy recommendations.

Source materials were identified using several methods. National Criminal Justice Reference Service and Internet World Wide Web searches were undertaken, and abstracts were reviewed from recent American Society of Criminology, American Evaluation Association and Academy of Criminal Justice Sciences conference programs. To identify additional information sources, representatives from several national and state organizations were contacted. These efforts were supplemented with outreach to professionals in the criminal justice, research, and evaluation communities. Reference pages from a variety of on-line and print documents also were reviewed. This process produced a number of published and unpublished documents relevant for addressing the topics outlined above.

### **Organization of the report**

This report has 10 sections. Section 2 focuses on research examining the costs and benefits of drug offender imprisonment. Section 3 examines whether the threat of incarceration has a deterrent effect on drug use. Section 4 examines the impact that drug offender imprisonment has on the drug trade. Section 5 reviews the scientific evidence on the effectiveness of substance abuse treatment, including what is known about the efficacy of treatment for methamphetamine abuse. This section also presents findings from cost-benefit analyses of substance abuse treatment. Section 6 compares the return on investment of drug offender incarceration and substance abuse treatment. Section 7 discusses the factors that lead to desistance from crime. Section 8 reviews the impact of a criminal conviction on employment, earning capacity and the successful reintegration

of offenders into society. Section 9 presents examples of intermediate sanctions for drug offenders who are noncompliant with probation or parole conditions. Finally, section 10 presents examples of drug policy reforms enacted in states other than Colorado. Source materials used in the development of this report are listed in the bibliography. In addition, a brief summary of key cost-benefit analysis methodological issues is presented in Appendix A.

## Section 2

---

### What does research tell us about the return on investment associated with the incarceration of drug offenders?

While cost-benefit analysis (CBA) has been routinely used in some disciplines for several decades, applying CBA to crime control policy is relatively new.<sup>14</sup> Nevertheless, some of the first CBA applications in the criminal justice community focused on the costs and benefits of incarceration and several rigorous cost-benefit studies have been undertaken on this topic in recent years. While not all of these studies have examined the costs and benefits for different types of offenders, a clear and consistent set of findings has emerged from those studies that did disaggregate drug offenders from other types of prisoners.

#### Piehl, Useem and Dilulio's three-state study

One of the most referenced cost-benefit studies of incarceration was conducted by Piehl, Useem and Dilulio (1999) and published by the Manhattan Institute. In this study of offenders entering state prison in New York, New Mexico and Arizona in 1997, Piehl and her colleagues compared the costs of an additional year in prison to the value of reduced crimes. The researchers also examined the costs and public safety benefits of incarceration for different categories of offenders.

Piehl and her colleagues found that all three states imprisoned a large number of drug offenders. The results of their cost-benefit analysis showed that while prison was cost-beneficial for most offenders, it was *not* cost-beneficial for drug offenders. Simply put, the cost of incarcerating drug offenders exceeded the public safety benefits associated with their imprisonment. This was also the case for low-frequency property offenders. These findings led Piehl and her colleagues to conclude that "at least some prison beds currently occupied by drug offenders would be better reserved for high-rate property and violent offenders" and that policy makers in "these and other states need to revisit mandatory-minimum

---

<sup>14</sup> For example, cost-benefit analysis has a long history of use in environmental studies.

#### COST-BENEFIT ANALYSIS (CBA)

A cost-benefit study examines and places monetary value on both the costs and effects of an intervention. The result is usually a single summary statistic – expressed as the benefit-cost ratio (BCR) or net present value (NPV) – that indicates whether and to what extent the benefits of an intervention exceed its costs. The BCR is calculated as the value of benefits divided by costs. A BCR greater than 1.0 indicates a positive return on investment. The NPV is calculated as the value of benefits minus costs.

Rather than using a statistical format, many cost-benefit studies simply report the BCR statistic as the savings or benefits produced per every dollar of cost. Likewise, studies often present the NPV as the dollar amount of net benefits or savings produced, or the dollar amount of costs avoided.

Cost-benefit analysis is a complex process, and it is important to exercise caution when interpreting cost-benefit results. When cost-benefit summary statistics are derived in markedly different ways, comparisons can lead to inaccurate or biased conclusions. Therefore, when comparing the cost-benefit statistics derived from different studies, it is generally better to focus on the magnitude of BCR or NPV differences instead of making direct dollar to dollar comparisons. For more information on cost-benefit analysis, see Appendix A.

drug laws that are increasing prison populations without demonstrably and cost-effectively increasing public safety" (Piehl, Useem and Dilulio, 1999:3).

Two additional points about the study are worth noting. First, the benefit/cost calculations made in the study did not take into account the harm that

**“At least some prison beds currently occupied by drug offenders would be better reserved for high-rate property and violent offenders.”**

**Piehl, Useem and Dilulio (1999)**

high incarceration rates can have on communities. Research on the impact of incarceration at the community level is relatively new, but it is beginning to shed light on the unintended consequences of imprisonment. High rates of incarceration tend to be concentrated in poor communities. Over time, these communities can be weakened rather than strengthened by high rates of incarceration. When a relatively high percentage of parent-aged males are absent due to incarceration, family structures are weakened and social resources are strained. As a result, crime increases.<sup>15</sup>

For example, Liedka, Piehl and Useem (2006) found that there is a point beyond which increases in the incarceration rate are actually associated with higher crime rates.<sup>16</sup> Using state-level prison and crime data from 1972 through 2000, they found that higher crime rates begin to occur when a state’s incarceration rate reaches between 3.25 and 4.92 inmates per 1,000 persons in the general population. Colorado’s incarceration rate reached 4.57 per 1,000 persons in 2008.<sup>17</sup>

In the three-state study, Piehl and her colleagues (1999:13) commented that a striking finding was the “extent to which the incoming inmates appeared to be contributing members of their communities.” They found that most of the inmates in their study, including drug offenders, had legitimate employment histories. Forty to 60% of the inmates were working during the month they were arrested, and 85% reported

<sup>15</sup> Clear, T., Waring, E. and Scully, K. (2005). Communities and reentry: concentrated reentry cycling. In *Prisoner Reentry and Public Safety in America*, Travis, J. and C. Visher (eds.). Cambridge University Press, New York, NY.

<sup>16</sup> Liedka, R., Piehl, A. and Useem, B. (2006). The crime-control effect of incarceration: Does scale matter? *Criminology and Public Policy*, 5, 245-276; Kovandzic, T.V. and Vieraitis, L. (2006). The effect of county-level prison population growth on crime rates. *Criminology and Public Policy*, 5, 213-244.

<sup>17</sup> *Colorado Department of Corrections Statistical Report: Fiscal Year 2008*. Page 3.

holding a job for more than three months in the past. The researchers stated that these findings “further highlight the costs to the community of imprisonment” because there are a large number of people who are incarcerated who would otherwise be working and paying taxes. They also noted that community costs associated with incarceration would increase as the incarceration rate increases and that these costs need to be considered by policy makers given the dramatic increases in the proportion of the population under correctional supervision in recent years.

### **The Washington State Institute for Public Policy cost-benefit analysis of imprisonment**

Similar findings regarding the incarceration of drug offenders have been reported by the Washington State Institute for Public Policy (WSIPP). Specifically, Aos (2003) examined the costs and benefits associated with incarcerating different categories of offenders in Washington state. The analysis demonstrated that it is much more cost-beneficial to incarcerate violent offenders than drug offenders (Table 1). But perhaps more importantly, Aos found that incarcerating drug offenders was *not* cost-beneficial. In 2001, for example, public safety benefits totaled \$2.74 for every \$1 the state invested in the incarceration of violent offenders. Conversely, the 2001 return on investment for incarcerating drug offenders was only \$0.37 for every \$1 the state invested in their incarceration – a negative return on investment.

**Table 1**  
**Benefit-Cost Ratios Achieved by Incarcerating Violent Offenders and Drug Offenders in Washington State 1990 and 2001**

Year	Type of Offender	
	Violent	Drug
1990	\$6.60	\$0.98
2001	\$2.74	\$0.37

**Source:** Adapted from Washington State Institute for Public Policy (2003).

Another finding worth noting from the Washington study is that the return on investment of incarcerating even violent offenders is subject to diminishing returns (Table 1). The benefit-cost ratio associated with the incarceration of violent offenders in Washington state declined appreciably between 1990 and 2001, from \$6.60 in benefits to \$2.74 in benefits per every \$1 of cost. A similar pattern occurred around the incarceration of drug offenders, where a return on investment of \$0.98 for every \$1 of cost in 1990 fell to only \$0.37 in benefits for every \$1 of cost in 2001.

### **Cost-benefit analyses of drug offender imprisonment in Hawaii and New York**

Recent research conducted by Lengyel (2006) and Lengyel and Brown (2009) also found that incarcerating drug offenders was not cost-beneficial. In two separate analyses using data on drug offenders imprisoned in Hawaii and New York, the costs associated with imprisonment outweighed by far the public safety benefits produced.

In the Hawaii study, Lengyel and Brown (2009) estimated the costs and benefits associated with the incarceration of drug offenders that were released from Hawaii state prisons in FY 2006. The researchers reported that the total monetary crime reduction benefit derived from the incapacitation of these 197 drug offenders over the life of their sentence was \$16.8 million, while the total costs associated with their incarceration was estimated to be \$32.5 million. That meant that the state of Hawaii lost approximately \$15.6 million on the incarceration of the 197 drug felons who were released from state prisons in FY 2006.

In the New York study, Lengyel (2006) conducted a similar analysis using a cohort of 6,584 felony drug offenders released from prison during 2005. Again, his analysis found that the incarceration of drug offenders did not produce a positive return on investment. New York state received only about \$0.29 in benefits for every \$1 of cost associated with the incarceration of drug offenders released in 2005. Overall, Lengyel estimated that New York conservatively lost nearly \$1.5 billion on the incarceration of the 6,584 drug offenders released in 2005. If the analysis includes costs to the offenders and their families - such as a decline in wages and lost

***Lengyel (2006) found that the state of New York received only about \$0.29 in benefits for every \$1 of cost associated with the incarceration of drug offenders released in 2005.***

household productivity - the loss jumps to more than \$3.3 billion.

Lengyel's work is particularly important because it attempts to more fully account for the full range of social costs that can be attributed to imprisonment. These social costs include lost earnings, lost tax revenue, and the impact of incarcerating a parent on the children of prisoners. In fact, his research suggests that a significant percentage of the social costs of incarceration fall on the offender's family. This finding is important because a significant proportion of prison inmates are parents with minor children. Mumola (2000) estimated that about 56% of state prisoners nationally have minor children. Bosley et al. (2002) estimated that at least 2,500 children in Colorado have a mother in prison and 13,000 children in Colorado have a father in prison.<sup>18</sup> In total, a minimum of 15,500 children currently have a parent in the Colorado prison system. A much larger number of children have experienced the incarceration of a parent at some point in their lives. Many more have had parents in jail.

A sizeable number of children have parents who are incarcerated, generating considerable collateral costs. These are precisely the types of costs that Piehl and her colleagues (1999) argued need to be considered by policy makers if incarceration is to be used in a cost-effective manner.

---

<sup>18</sup> Bosley, B., Donner, C., McLean, C., and Toomey-Hale, E. (2002). *Parenting From Prison - A Resource Guide for Parents Incarcerated in Colorado*. Parenting from Prison Guide Committee, Denver, CO.

## Section 3

---

### Does the threat of incarceration have a deterrent effect on drug use?

Among court commitments to Colorado prisons in FY 2004, a drug offense was the most serious conviction for 1,585 offenders. Nearly two-thirds of these offenders were convicted of a drug possession or use offense.<sup>19</sup> An even larger number of incarcerated offenders are drug users. Roughly 8 out of every 10 CDOC inmates, for example, are in need of substance abuse treatment.

Given the large number of offenders imprisoned in Colorado and across the nation who abuse illicit drugs, it is important to ask whether the threat of incarceration is an effective deterrent to drug use. A large body of scientific evidence can help answer the question, and the evidence does not support a significant general deterrent effect.

One of the first studies to shed light on this issue was published by the Rand Corporation in 1997 (Caulkins et al. 1997). As part of that research, Caulkins and his colleagues estimated how successful mandatory minimum sentences are, relative to other crime control strategies, at reducing drug consumption and drug-related crime. They focused their analysis on cocaine, which was the most problematic illicit drug at the time of their study.

To assess the impact of mandatory minimum sentences on drug use and drug-related crime, the researchers mathematically modeled the market for cocaine using two different approaches. Their methodology allowed them to estimate changes in total cocaine consumption over 15 years when an investment of \$1 million additional dollars was made in each of three different strategies: mandatory minimum sentences, increased law

enforcement efforts, and increased drug treatment. They also examined the crime reduction benefits associated with these various drug control alternatives. In each instance, Caulkins and his colleagues (1997:1) arrived at the same basic conclusion: mandatory minimum sentences were not justifiable on the basis of cost-effectiveness at reducing cocaine consumption or drug-related crime.

Specifically, the Rand research found that mandatory minimums reduced cocaine consumption *less* per million taxpayer dollars spent than either increased law enforcement or treatment. Mandatory minimums were also less cost-effective than either alternative at reducing cocaine-related crime. The primary reason is the high cost of incarceration.

**Research conducted by the Rand Corporation (1997) found that mandatory minimum prison sentences reduced cocaine consumption and cocaine-related crime less per million taxpayer dollars spent than either increased law enforcement or substance abuse treatment.**

More recently, researchers at the Justice Policy Institute (JPI) conducted a series of analyses that produced the same basic finding: incarceration was not an effective deterrent to drug use. In one of the studies, Schiraldi and his colleagues (2000) examined the relationship between the use of incarceration and rates of drug use in 23 states. The researchers compared 1991-1993 data on the percent of people 12 years of age and older in each state who reported using drugs in the previous month, with prison admission data from each state for the same time period. They found a significant relationship between higher rates of incarceration and drug use, but not in the direction conventional wisdom might predict. States with higher rates of drug offender incarceration actually had *higher* rates of drug use in the community. The researchers also checked for a lag effect to assess whether higher rates of drug offender incarceration were associated with lower drug use in later years. But again, they found a significant positive correlation, meaning

---

<sup>19</sup> It is important to note that offenders incarcerated for the use or possession of drugs may also have a significant criminal history or may have failed an initial placement on probation supervision. A recent analysis by the Colorado Department of Corrections, for example, suggests that drug offenders incarcerated in Colorado prisons for possession or use are not first offenders. For more information, see *Colorado Department of Corrections Trend Analysis of Felony Drug Convictions Resulting in Prison Sentences and Prison Impact Analysis of S.B. 03-318*, March, 2006.



that states with higher rates of drug incarceration experienced higher, not lower, rates of drug use.

Likewise, Schiraldi and Ziedenberg (2003) conducted a similar analysis for the Drug Policy Alliance. The researchers compared state-level drug use data with drug prison admissions in 22 states. Again, they found that states that increased the incarceration of drug offenders did not necessarily experience a corresponding decline in drug use. In New Jersey, for example, where drug offenders accounted for the largest proportion of the state prison population in the nation at the time, drug offender prison admissions increased 29% in the 1990s, but the percentage of state residents 12 years of age and older reporting drug use *increased* – from 5.4% to 7.2%. Conversely, drug offender prison admissions *decreased* nearly 5% in North Carolina and the percentage of state residents reporting drug use *fell* from 5.9% to 5.8%. Similar patterns occurred in Virginia, Texas and Oklahoma. These findings led the researchers to conclude that there is no statistically significant basis for believing that increasing prison admissions for drug offenses deters drug use.<sup>20</sup>

**“...the results show there is no statistically significant basis for believing that increasing prison admissions for drug offenses deters drug use.”**

**Schiraldi and Ziedenberg (2003)**

Ramirez and Crano (2003) evaluated the impact of California’s Three Strikes law on instrumental, violent, minor, and drug-related crimes over the first five years of the law’s implementation.<sup>21</sup> The researchers carried out several analyses employing highly sophisticated analytical techniques. One analysis compared pre- and post-intervention crime data to estimate the immediate

<sup>20</sup> Schiraldi, V. and Ziedenberg, J. (2003). *Costs and Benefits? The Impact of Drug Imprisonment in New Jersey*. Justice Policy Institute. Washington, D.C. Page 27.

<sup>21</sup> California’s Three Strikes law actually takes effect on the second strike, because when an offender is convicted of a second strike judges are required to impose a sentence that is twice as long as the nominal sentence for that crime. While the first two strikes under California law only apply for serious and violent offenses, the third strike, which results in a life sentence, can be imposed upon conviction for any felony.

effect of the Three Strikes law. The researchers found no evidence that Three Strikes had an immediate deterrent effect. In other words, criminals did not stop committing crimes because of the law’s implementation.<sup>22</sup>

Their second analysis examined whether Three Strikes might have a delayed and gradual effect on crime. Their results showed instrumental crime (robbery, burglary and auto theft) was positively affected in this manner, but not any other type of offense. In fact, the researchers estimated that there were 22% fewer instrumental crimes per month in 1998 than there were in 1994, when the law was introduced.

A third analysis tested the possibility that Three Strikes had an incapacitation effect, meaning that crime rates might be affected once a large enough number of criminals had been taken off the streets. While several crime types were affected in this manner by Three Strikes, drug offenses were not.

**“Drug-related crimes appear impervious to the Three Strikes law under any analytic model, suggesting the unresponsiveness of such crimes to increasingly severe legal sanctions.”**

**Ramirez and Crano (2003)**

Similar findings were reported by Gabor and Crutcher (2002:18) in a review of the research on the effectiveness of mandatory minimum sentences. In discussing their findings, they concluded:

*Severe [mandatory minimum sentences] (MMS) seem to be least effective in relation to drug offences. Studies using a variety of methodologies seriously question the value of the “drug war” approach. ... Drug consumption and drug-related crime seem to be unaffected, in any measurable way, by severe MMS. Both mathematical modeling*

<sup>22</sup> Ramirez, J. and Crano, W. (2003). Deterrence and incapacitation: An interrupted time series analysis of California’s Three Strikes law. *Journal of Applied Social Psychology*. 33, 110-144.

*techniques and field work arrive at the conclusion that treatment-oriented approaches are more cost effective than harsh prison terms.*

### **Understanding the science of addiction**

While the empirical research highlighted above provides compelling evidence against a deterrent effect, our enhanced understanding of the science of addiction may provide the best explanation as to why the threat or experience of incarceration has so little impact on chronic abusers.

Over the past 30 years, a significant body of scientific knowledge has been developed on substance abuse and addiction. This knowledge has revolutionized our understanding of addiction and the way it should be viewed and treated.

First and foremost, addiction is a chronic, often relapsing brain disease that causes compulsive drug seeking and use despite harmful consequences both to the individual who is addicted and to those around the addict.<sup>23</sup> While the initial decision to take drugs is usually voluntary, the repeated use of addictive drugs eventually changes how the brain functions. These brain changes affect natural inhibition and reward centers, causing the addict to use drugs in spite of the adverse health, social, and legal consequences. It is critical for policy makers to understand that drug cravings may be triggered by contact with the people, places, and things associated with prior drug use, as well as by stress. Further, the addict's ability to exert self control and make sound decisions is seriously impaired because the brain has become impaired.

***Addiction is a chronic, often relapsing brain disease that causes compulsive drug seeking and use despite harmful consequences both to the individual who is addicted and to those around the addict.***

<sup>23</sup> National Institute on Drug Abuse (2007). *Drugs, Brains and Behavior, The Science of Addiction*. National Institute of Health, Publication Number 07-5605. Page 5.

***It is critical for policy makers to understand that drug cravings may be triggered by contact with the people, places, and things associated with prior drug use, as well as by stress. Further, the addict's ability to exert self control and make sound decisions is seriously impaired because the brain has become impaired.***

Brain imaging studies from drug-addicted individuals show physical changes in areas of the brain that are critical to judgment, learning, memory and behavior control.<sup>24</sup> Scientists believe that these changes alter cognitive functioning and the way the brain works. Changes in the brain help explain the compulsive and destructive behaviors of addiction. Drug addiction erodes a person's self control and ability to make sound decisions, while sending intense impulses to take drugs in order to restore certain brain chemicals (neurotransmitters) to their normal levels. It is precisely because the brain chemistry changes that it is so challenging for an addict to stop using drugs. Drug addiction research demonstrates that the behavior of addicts is not an indication that an individual is morally flawed, and therefore stopping drug abuse is not simply a matter of willpower.<sup>25</sup>

Research on how the brain is affected by drug abuse promises to reveal more about the

***Drug addiction erodes a person's self control and ability to make sound decisions, while sending intense impulses to take drugs in order to restore certain brain chemicals to their normal levels. It is precisely because the brain chemistry changes that it is so challenging for an addict to stop using drugs.***

<sup>24</sup> Ibid.

<sup>25</sup> Ibid. Pages 1, 7, 17-20.

mechanics of drug-induced brain changes and the relationship between the biochemistry of the brain and addiction. Research also reveals that with effective drug abuse treatment, individuals can overcome persistent drug effects and lead healthy, productive lives.

Forced abstinence without treatment, however, does not cure addiction. Abstinent individuals must still learn how to avoid relapse. This includes those who have been abstinent for a long period of time during incarceration. Potential risk factors for released offenders include pressures from peers and even family members to return to drug use. Tensions of daily life – financial pressure, lack of reliable transportation, criminal associates, few opportunities for legitimate employment, lack of safe housing, even the need to comply with correctional supervision conditions – can create stressful situations that can precipitate a relapse to drug use. Common stressors coupled with environmental cues that can trigger uncontrollable cravings even without the drug itself being available, can create tremendous obstacles for any addict, even after many years of abstinence.

Similar to other chronic relapsing diseases such as diabetes, asthma, or heart disease, drug addiction can be managed successfully. And, as with other chronic diseases, it is common for individuals to relapse and begin abusing drugs again. Relapse, however, does not signal failure - rather, it indicates that treatment should be reinstated and adjusted, and in some cases that alternate treatment is needed to help the individual recover.<sup>26</sup>

---

<sup>26</sup> National Institute on Drug Abuse (2007). *Understanding Drug Abuse and Addiction*. National Institute of Health. Pages 2-3.



## Section 4

---

### Does the incarceration of drug offenders have an impact on drug distribution?

Numerous scholars of drug policy assert that the incarceration of drug offenders, including those sentenced for non-possession offenses, has little or no impact on drug *distribution*. The reason for this is the existence of a drug market dynamic that is commonly referred to as the “replacement effect.” The market responds to the demand for drugs by replacing drug sellers sent to prison with either new recruits or by the increased drug selling of dealers already in the market. Regardless of how replacement occurs, the end result is the same: the incapacitation effect - crimes averted in the community - found for some other offenses is largely nullified.<sup>27</sup>

***The market responds to the demand for drugs by replacing drug sellers sent to prison with either new recruits or by the increased drug selling of dealers already in the market. Regardless of how replacement occurs, the end result is the same: the incapacitation effect found for some other offenses is largely nullified.***

In discussing the findings from their three-state study of incarceration, Piehl and her colleagues (1999:13) (see Section 2 above) stated that the main effect of imprisoning drug sellers “is merely to open the market for another seller.” Kleiman (2004) has argued and produced indirect evidence that replacement occurs even when high-level drug dealers or so called “kingpins” are incarcerated.<sup>28</sup> And Blumstein (2000) has argued that the net result of incarcerating drug sellers has

---

<sup>27</sup> MacCoun, R., Kilmer, B., and Reuter, P. (2003). *Research on Drugs-Crime Linkages: The Next Generation, NIJ Special Report*. U.S. Department of Justice, National Institute of Justice. Washington, DC.

<sup>28</sup> Kleiman, M. (2004). Toward (more nearly) optimal sentencing for drug offenders. *Criminology and Public Policy*, Vol. 3, No. 3, July, 2004.

***“The main effect of imprisoning drug sellers is merely to open the market for another seller.”***

***Piehl et al. (1999)***

been an increase in violence.<sup>29</sup> That is, the people who replaced incarcerated drug dealers tended to be younger and more violent than their predecessors.

#### Evidence for the replacement effect

While the replacement effect hypothesis is based on sound economic theory,<sup>30</sup> a rigorous body of research supporting or refuting the hypothesis has yet to emerge. One reason for the lack of direct evidence is that the replacement effect is difficult to isolate.<sup>31</sup>

Several indirect measures, however, suggest the existence of the replacement effect. First, if drug supplies were actually reduced through the increased incarceration of dealers, one would expect drug prices to escalate. But street prices for drugs such as cocaine, heroin and even methamphetamine have dropped substantially over the years despite unprecedented growth in the incarceration of drug dealers.<sup>32</sup>

Additional support for the replacement effect comes from research conducted by Saner et al. (1995). In Washington D.C., between 1985 and 1991, nearly one-third of all African-American male residents from the 1964 – 1967 birth cohorts were charged with drug selling. This

---

<sup>29</sup> Blumstein, A., and Wallman, J. (2000). The recent rise and fall of American violence. In Blumstein, A., and Wallman, J. (eds.). *The Crime Drop in America*. Cambridge University Press, New York, NY.

<sup>30</sup> See for example Grogger, J. (2000). An economic model of recent trends in violence. In Blumstein, A., and Wallman, J. (eds.). *The Crime Drop in America*. Cambridge University Press, New York, NY. Also see Cook (1986) and Freeman (1996).

<sup>31</sup> MacCoun, R., Kilmer, B., and Reuter, P. (2003). *Research on Drugs-Crime Linkages: The Next Generation, NIJ Special Report*. U.S. Department of Justice, National Institute of Justice. Washington, DC.

<sup>32</sup> See for example: Office of National Drug Control Policy (2004). *The Price and Purity of Illicit Drugs: 1981 through the Second Quarter of 2003*. Executive Office of the President, Office of National Drug Control Policy. Washington, D.C. and Institute for Defense Analysis (2008). *Technical Report for the Price and Purity of Illicit Drugs: 1981-2007*, IDA Paper P-4333. Institute for Defense Analysis. Alexandria, Virginia.

demonstrates that at least in some communities a significant percentage of the young male population was dealing drugs despite the escalating number of drug sellers being incarcerated.<sup>33</sup>

Finally, both homicide and drug arrest rate patterns also provide indirect support for the replacement effect. In the late 1980s and early 1990s, the United States experienced a homicide epidemic, with both homicide rates and absolute numbers reaching unprecedented levels. The increase in homicide that occurred during that period, however, was due entirely to homicides perpetrated by males in their early twenties or younger. Between 1985 and 1993, there also was a significant increase – 128% -- in the number of homicides committed with a handgun by youth. In fact, handgun homicides perpetrated by juveniles quadrupled between 1985 and 1993. During the same general time period non-gun homicides actually declined about 50% (Blumstein, 2000).<sup>34</sup>

In addition, adult arrest rates for drug offenses increased significantly in the late 1980s, especially for non-whites. Juvenile drug arrest patterns, however, changed in an even more remarkable way. While the drug arrest rate for non-white juveniles had for many years been below that of whites, by the late 1980s and early 1990s non-white juveniles were being arrested for drug law violations at a rate four times *higher* than that of whites (Blumstein, 2000).<sup>35</sup>

Blumstein (2000) and Grogger (2001) have argued that these patterns can be explained at least in part by the role of drug markets. Blumstein (2000:4-5) states:

*It is somewhat ironic that the growth in violence with handguns was at least partly a consequence of the drug war's incarceration of many of the older drug sellers – the incarceration rate for drug offenses increased by a factor of 10 between 1980 and 1996. As older sellers were taken off the street, the drug market turned to younger*

*individuals, particularly inner-city African-Americans, partly to replace their incarcerated predecessors and partly just to meet the growing demand for crack. The reduction in age of workers in the crack trade entailed a predictable increase in violence, as the inclination to deliberate before acting is simply less developed in the young.*

Research conducted by Cork (1999) supports Blumstein's hypothesis on the drug market and violence connection outlined above. Using data from different cities, Cork demonstrated that there was a consistent one to three year lag between the time when juvenile drug arrests started to increase and the time when juvenile homicide arrests increased.<sup>36</sup> His findings are consistent with the notion that the rise in juvenile homicides was attributable to the diffusion of guns spurred by young people recruited into drug markets.<sup>37</sup>

The story is far from complete, however, without examining what transpired over the more recent past. Indeed, homicide rates declined precipitously in the late 1990s, and the drug arrest disparity between non-whites and whites declined somewhat in more recent years, too. Some will argue that the decline in homicides is directly attributable to the increased use of incarceration that has occurred over the past 25 years. But that conclusion is not entirely supported by the empirical evidence. In fact, incarceration rates increased significantly in the late 1980s and early 1990s, and the homicide epidemic still occurred. Rosenfeld (2000) concluded that, at most, incarceration explains 15% to 20% of the decline in adult homicide since 1980.<sup>38</sup> Drug market disputes that often resulted in violence began to wane as territories became established, providing another explanation for the decline in homicides.

<sup>33</sup> MacCoun, R., Kilmer, B., and Reuter, P. (2003). *Research on Drugs-Crime Linkages: The Next Generation, NIJ Special Report*. U.S. Department of Justice, National Institute of Justice. Washington, DC.

<sup>34</sup> Blumstein, A. (2000). Disaggregating the violence trends. In Blumstein, A., and Wallman, J. (eds.). *The Crime Drop in America*. Cambridge University Press, New York, NY.

<sup>35</sup> Ibid.

<sup>36</sup> Cork, D. (1999). Examining space-time interaction in city-level homicide data: Crack markets and the diffusion of guns among youth. *Journal of Quantitative Criminology* 5 (4): 379–406.

<sup>37</sup> Blumstein, A. (2000). Disaggregating the violence trends. In Blumstein, A., and Wallman, J. (eds.). *The Crime Drop in America*. Cambridge University Press, New York, NY. Page 39.

<sup>38</sup> Rosenfeld, R. (2000). Patterns in adult homicide: 1980-1995. In A. Blumstein and J. Wallman (eds.), *The Crime Drop In America*. Cambridge University Press, New York, NY.

Additionally, by the mid 1990s, crack cocaine was beginning to fall from favor among drug users, particularly new users in low-income urban areas. As a result, the demand for crack cocaine declined, and with it crack street markets and their associated violence fell, too. A decline in the recruitment of juvenile drug sellers helps explain why the drug arrest disparity between non-whites and whites also has declined in recent years.

In sum, the empirical evidence does suggest that 1) drug market dynamics are real and primarily a response to the demand for illicit drugs; and 2) these dynamics are highly resilient in the face of government efforts aimed at curbing supply, including the incarceration of drug dealers.

### **The unintended consequences of drug dealer incarceration**

While the rationale for incarcerating drug dealers may be based at least in part on punishment and retribution, it is important for policy makers to recognize that the incapacitation of drug sellers is not only ineffective at reducing the availability and sale of illicit drugs, it may be responsible for increasing crime.<sup>39</sup> Blumstein (2000) and Grogger (2000) provide sound evidence that drug market dynamics, particularly the initiation of young males into drug dealing, were responsible for an increase in *violent* crime in the 1980s and 1990s. Spelman (2000), however, has suggested that the incapacitation of drug dealers may have had the unintended consequence of increasing crime overall.<sup>40</sup>

Research has shown that both drug users and drug dealers commit serious crimes at higher rates than others. Thus, newly recruited dealers are likely to increase their offense rates for crimes other than drug dealing as they move deeper into the criminal subculture (Spelman, 2000:116). In

***“Incapacitation of drug dealers is not only ineffective, it may be counterproductive.”***

***William Spelman (2000)***

addition, it is unlikely that newly recruited dealers will stop dealing drugs and return to a more law-abiding lifestyle when the dealers they replaced return from prison. Nor is it likely that the drug sellers who return from prison will stop committing crimes because their old drug dealing job is filled. Therefore, Spelman (2000) argues, the number of offenders and the number of non-drug offenses committed will tend to increase as long as enough incarcerated dealers are replaced.

Simulations conducted by Spelman (1994) suggest that the percentage of incarcerated dealers who are replaced by new recruits almost certainly exceeds the threshold necessary for there to be a net increase in offenders and crime. These findings led Spelman (2000:116) to conclude that the incapacitation of drug dealers is not only ineffective, it may be counterproductive. In discussing his findings and the replacement effect, Spelman (2000:117) concluded:

*...the War on Drugs may have had the unintended side effect of increasing, not reducing, the crime rate. Certainly there is no argument for it having reduced the number of criminals or crimes through incapacitation.*

***“...the War on Drugs may have had the unintended side effect of increasing, not reducing, the crime rate. Certainly there is no argument for it having reduced the number of criminals or crimes through incapacitation.”***

***William Spelman (2000)***

<sup>39</sup> Spelman, W. (2000). The limited importance of prison expansion. In A. Blumstein and J. Wallman (eds.), *The Crime Drop In America*. Cambridge University Press, New York, NY.

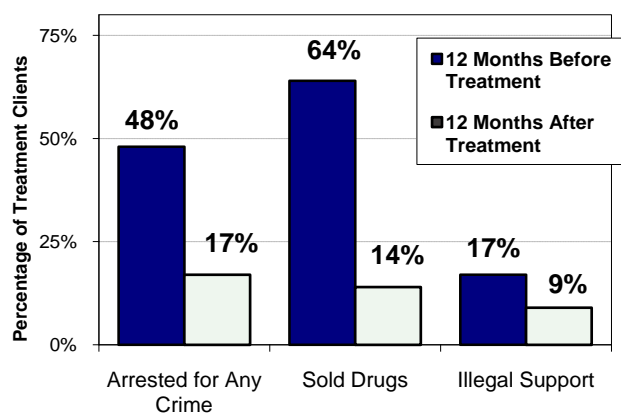
<sup>40</sup> Ibid. Pages 116-117.

## Section 5

### What does research tell us about 1) the effectiveness of substance abuse treatment, including treatment for methamphetamine abuse, and 2) the return on investment associated with substance abuse treatment?

Research has produced clear and convincing evidence that substance abuse treatment works. This information had been known for more than a decade: treatment reduces alcohol and drug use and crime. It also produces a significant return on taxpayer investment.<sup>41</sup> Numerous studies have found therapeutic communities to be particularly effective, and treatment appears to work equally well for those who are coerced into treatment and those who volunteer. Staying in or completing treatment increases the likelihood of positive outcomes.

**Figure 2**  
**Changes in Criminal Activity**  
**Before vs. After Treatment**



**Source:** National Treatment Improvement Evaluation Study, Gerstein et al. (1997).

<sup>41</sup> See for example, Harwood, H.J., Malhotra, D., Villarivera, C., Liu, C., Chong, U., and Gilani, J. (2002). *Cost Effectiveness and Cost-Benefit Analysis of Substance Abuse Treatment: A Literature Review*. Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment, U.S. Department of Health and Human Services, Rockville, MD. Also see Belenko, S., Patapis, N. and French, M.T. (2005). *Economic Benefits of Drug Treatment: A Critical Review of the Evidence for Policy Makers*. Treatment Research Institute at the University of Pennsylvania, Philadelphia, PA.

One of the most comprehensive studies on treatment effectiveness was the National Treatment Improvement Evaluation Study (NTIES).<sup>42</sup> This Congressionally mandated five-year study of more than 4,400 subjects found that treatment decreased substance abuse as well as criminal activity. One year pre- and post-treatment comparisons found that the use of illicit substances by treatment participants in the study fell by about 50% in the year after treatment, while the number arrested fell by 64% (Figure 2). Drug selling decreased 78%, and the percentage of treatment clients supporting themselves largely through illegal activity was nearly cut in half.<sup>43</sup>

### Significant cost benefit

The NTIES confirmed the positive treatment effects found in the often cited California Drug and Alcohol Treatment Assessment (CALDATA) research (Gerstein et al. 1994). The CALDATA study found that treatment reduced criminality by two-thirds and that there were more than \$7 in savings for every \$1 spent on treatment. Whereas the CALDATA study was one of the first to quantify treatment's return on investment, NTIES was the first study of its kind to include correctional clients.

### Coerced treatment works

Several systematic reviews of treatment success have been undertaken, and their findings have consistently been positive. Sherman et al. (1997) systematically reviewed evaluations that examined the effectiveness of drug treatment programs in prison and in the community, and concluded that drug treatment is effective in reducing the recidivism of offenders. One of the review's other key findings was that offenders coerced into treatment by the criminal justice system do as well as those who enter treatment voluntarily.<sup>44</sup>

<sup>42</sup> Gerstein, D. R., Datta, R.A., Ingels, J.S., Johnson, R.A., Rasinski, K.A., Schildhaus, S. and Talley, K. (1997). *Final Report: National Treatment Improvement Evaluation Study*. National Opinion Research Center, Chicago, IL.

<sup>43</sup> Ibid.

<sup>44</sup> Sherman, L. W., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P., and Bushway, S. (1997). *Preventing Crime: What Works, What Doesn't, What's Promising*. A Report To The United States Congress. Prepared for the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC.

## SYSTEMATIC REVIEWS and META-ANALYSIS

Systematic reviews of program evaluations are one of the primary vehicles researchers use to identify what works. A systematic review locates, appraises and synthesizes information from all relevant scientific studies on a particular topic. Systematic reviews are fundamentally different from other traditional ways of summarizing research because they adhere to a pre-established protocol regarding the selection and assessment of research studies. This reduces bias, ensures comprehensiveness, and maximizes the validity and reliability, that is, the trustworthiness, of the findings. Properly executed, a systematic review produces a comprehensive summary of the scientific evidence on a particular topic, such as whether or not an intervention is effective.

In recent years, more and more reviews are incorporating a specific statistical procedure called meta-analysis. This has made systematic reviews even more objective and scientifically rigorous. In practice, meta-analysis combines the results of many evaluations into one large study with many subjects (the total number of subjects from the individual studies). This is important because single studies based on a small number of subjects can produce distorted findings about an intervention's effectiveness. By pooling the original studies, meta-analysis counteracts a common methodological problem in evaluation research – small sample size – thereby helping the analyst draw more accurate and generalizable conclusions about an intervention's effects.

Meta-analysis is especially useful when synthesizing the results of studies that use different types of measures. Whereas some studies may define and measure recidivism as rearrest, for example, others may define it as a return to prison. Follow-up periods may also vary across studies. Making sense of these variations can be quite difficult in a traditional review, but meta-analysis provides a way to combine studies and reach valid conclusions, despite such variations in the original studies.

Meta-analysis also reports its findings in terms of an average effect size, that is, the effect of the program on the desired outcome. This also helps the evaluator more accurately gauge both the strength and consistency of an intervention's effect.

Pearson and Lipton (1999) reviewed 1,606 evaluations of drug treatment programs implemented in incarceration settings. Meta-analysis (see sidebar above) was used to examine the effectiveness of the programs in reducing recidivism. The researchers found that therapeutic communities were effective, and that methadone maintenance, 12-step programs, and cognitive-behavioral therapy programs were promising. Marsch (1998) conducted a meta-analysis of 43 studies that examined the effectiveness of methadone maintenance specifically. A statistically significant relationship was found between methadone maintenance

treatment and the reduction of illicit opiate use, HIV risk behaviors and drug and property crime. A meta-analysis conducted by Prendergast and his colleagues (2002) reached similar conclusions. Treatment resulted in less drug use and fewer crimes. Mitchell et al. (2005) meta-analyzed 66 rigorous evaluations of prison and jail-based treatment programs and found a modest reduction in post-treatment offending. On average, treatment clients recidivated at a rate of 28% compared to 35% for the non-treatment comparison group. Therapeutic communities, however, produced a slightly larger reduction in recidivism.



## Treatment works for offenders in prison, jail and the community

MacKenzie (2006) examined the effectiveness of incarceration and community-based treatment separately. She found that outpatient drug treatment programs delivered to offenders in the community were effective at reducing future criminal behavior.<sup>45</sup> Treatment programs delivered in correctional facilities also worked, but the majority of the effective programs were therapeutic communities, and effectiveness required community-based aftercare.<sup>46</sup>

**MacKenzie (2006) found that outpatient drug treatment programs delivered to offenders in the community were effective at reducing future criminal behavior. Treatment programs delivered in correctional facilities also worked, but the majority of the effective programs were therapeutic communities, and effectiveness required community-based aftercare.**

Holloway, Bennett and Farrington (2008) conducted a meta-analysis of 37 studies that examined the effectiveness of substance abuse treatment programs that were either voluntary or delivered in a criminal justice setting. They found that treatment was associated with a 26% reduction in criminal behavior. They concluded that drug treatment programs (especially psycho-social programs and therapeutic communities) are effective in reducing criminal behavior. However, their analysis also showed that there were significant differences among program types, underscoring the importance of program content and delivery.

Aos and his colleagues (2006) conducted a meta-analysis of 35 rigorous evaluations of substance abuse treatment programs as part of a larger systematic review of adult corrections programs. Statistically significant reductions in recidivism were found for every category of substance abuse

treatment examined: prison-based programs, jail-based programs, and treatment programs delivered in the community. Savings to taxpayers due to reductions in crime ranged from nearly \$5,000 per program participant for community-based treatment to about \$2,700 per program participant for prison-based treatment.<sup>47</sup>

## Cost-benefit studies

Substance abuse treatment has been the focus of numerous economic evaluations. As part of the CALDATA study highlighted above, Gerstein et al. (1994) found that treatment provided \$7 in benefits for every \$1 of cost. In a subsequent analysis focused on parents and welfare recipients, Gerstein and his colleagues (1997) found that treatment provided \$7.43 in benefits per \$1 of cost. The researchers reported that major treatment benefits resulted from reductions in crime. Finigan's (1996) cost-benefit analysis of substance abuse treatment programs in Oregon found that for every \$1 invested in treatment, the state of Oregon saved \$5.60 in associated cost.

Flynn et al. (1999) examined residential and outpatient treatment programs in terms of their crime reduction benefits alone. The researchers found a positive return on investment for both treatment modalities. Residential programs produced from \$1.68 to \$2.73 in crime reduction benefits per \$1 of cost, while outpatient programs produced \$1.33 to \$3.26 in crime reduction benefits for every \$1 of cost.<sup>48</sup> Studies by French and his colleagues have found positive returns for specialized treatment programs, such as a residential program for pregnant and parenting women in Arkansas (French et al., 2002a) and a modified therapeutic community for individuals with co-occurring disorders in New York (French et al., 2002b).

More recently, in a study of addiction treatment in Chicago, Salome et al. (2003) reported that treatment provided \$4.26 in benefits per \$1 of cost. Ettner et al. (2005) examined the costs and

<sup>45</sup> MacKenzie (2006). Page 251.

<sup>46</sup> Ibid. Pages 264-265.

<sup>47</sup> Aos, S., Miller, M. and Drake, E. (2006). *Evidence-based Adult Corrections Programs: What Works and What Does Not*. Washington State Institute for Public Policy. Olympia, WA.

<sup>48</sup> Flynn et al. (1999) reported a series of benefit-cost ratios based on different methodologies. The benefit-cost ratios reported here are the lowest and highest benefit-cost ratios reported by Flynn et al. for each modality. All benefit-cost ratios reported in the study demonstrated that treatment had a positive return on investment.

monetary benefits associated with substance abuse treatment programs in 13 California counties. The researchers found that treatment provided \$7.26 in benefits for every \$1 of cost. A significant portion of the benefits were due to increased employment earnings and reductions in crime. Zarkin and his colleagues (2005) examined the costs and benefits of the Drug Treatment Alternative to Prison (DTAP) program in Brooklyn, New York. Over a six-year follow-up period, the researchers found that DTAP provided \$2.17 in crime reduction benefits per \$1 of program cost, with benefits increasing each year. Zarkin and his colleagues also reported that DTAP provided \$7.1 million in criminal justice system savings over the six-year follow-up period based solely on the 149 program participants who were studied.

Reviews conducted by Cartwright (2000), Harwood et al. (2002), and McCollister and French (2003) have all reached similar conclusions. Substance abuse treatment pays for itself and generates net economic benefits for taxpayers.

One of the most comprehensive reviews of treatment economic research was recently conducted by researchers at the Addictions Research Institute (ARI) at the University of Pennsylvania. Based on their findings, Belenko and his colleagues (2005: ii) at ARI concluded the following:

*Economic studies across settings, populations, methods, and time periods consistently find positive net economic benefits of alcohol and other drug treatment that are relatively robust. The primary economic benefits occur from reduced crime (including incarceration and victimization costs) and post-treatment reduction in health care costs.*

**“Economic studies across settings, populations, methods, and time periods consistently find positive net economic benefits of alcohol and other drug treatment that are relatively robust.”**

**Belenko et al. (2005)**

## Treatment for methamphetamine abuse

During the past decade the problem of methamphetamine abuse has grown significantly both in Colorado and across the nation. Methamphetamine is a major drug of choice in Colorado, and its abuse has risen to alarming levels.<sup>49</sup> Methamphetamine was the primary drug of abuse for about 30% of all treatment admissions to publicly funded facilities in Colorado in 2007, compared to about 17% in 2001.<sup>50</sup> The National Drug Intelligence Center reports that methamphetamine is readily available in most population centers in the state.<sup>51</sup>

According to the UCLA Integrated Substance Abuse Programs (ISAP), methamphetamine abuse can be a difficult disorder to treat.<sup>52</sup> Withdrawal from methamphetamine dependence is characterized by severe cravings for the drug and a profound inability to experience pleasure for prolonged periods of time – often 4-6 months or longer after abstinence begins. During the early months of recovery, clinical symptoms of brain injury (see the discussion in Section 3 on addiction and the brain) may worsen. As a result, methamphetamine addicts in recovery exhibit memory problems, extreme emotional and mood swings, and difficulty controlling impulses and making sound judgments.

The devastating impact of methamphetamine dependency coupled with the amount of media and other attention methamphetamine has received has led to a number of myths about the drug and its use. Chief among them is the notion that methamphetamine dependence is not treatable. While methamphetamine dependence does provide unique treatment challenges and there is much to learn about treating the disease

<sup>49</sup> See for example National Drug Intelligence Center, *Colorado Drug Threat Assessment, May 2003*, page iii; and Colorado Attorney General Suthers' statements about methamphetamine abuse in Colorado when announcing the creation of the Colorado Methamphetamine Task Force, pursuant to HB 06-1145. Press release dated July 25, 2006.

<sup>50</sup> Mendelson, B. (2008). *Patterns and Trends in Drug Abuse in Denver and Colorado: January–December 2007*. Proceedings of the Community Epidemiology Work Group. Vol. II, June, 2008.

<sup>51</sup> National Drug Intelligence Center (2003). *Colorado Drug Threat Assessment*.

<sup>52</sup> The UCLA Integrated Substance Abuse Programs (ISAP) coordinates substance abuse research and treatment within the Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine at UCLA. ISAP is one of the largest substance abuse research groups in the United States.

and its consequences, there is evidence indicating that methamphetamine dependence can be effectively treated.

The most effective treatments for methamphetamine addiction currently are behavioral therapies.<sup>53</sup> Two specific approaches that have been rigorously studied and found to be effective in treating methamphetamine abuse are the Matrix Model and Contingency Management (discussed below). In addition, there is evidence that methamphetamine and cocaine users have similar outcomes when exposed to the same treatments.<sup>54</sup>

**Methamphetamine dependence can be effectively treated.**

## Matrix Model

The Matrix Model consists of multiple therapeutic strategies that serve as an outpatient “protocol” for the treatment of methamphetamine and cocaine users.<sup>55</sup> It was developed by the Matrix Institute on Addictions group in southern California with support from the National Institute on Drug Abuse (NIDA). The Model has evolved over time to incorporate a variety of evidence-based treatment elements, including cognitive behavioral therapies, relapse prevention techniques, positive reinforcement, motivational interviewing, family involvement, 12-step facilitation efforts, and drug testing. The Matrix Model is delivered over a 16-week period followed by a 36-week continuing care support group.

An evaluation of the Matrix Model for the treatment of methamphetamine users was funded by the Center for Substance Abuse Treatment (CSAT) in 1999. The research was coordinated by UCLA and it involved about 1,000 individuals who

<sup>53</sup> UCLA Integrated Substance Abuse Programs. <http://www.methamphetamine.org/html/treatment.html>. Accessed August 12, 2009.

<sup>54</sup> Ibid.

<sup>55</sup> Rawson, R. and McCann, M. (n.d.). *The Matrix Model of Intensive Outpatient Treatment, A Guideline Developed for the Behavioral Health Recovery Management Project*. [The Behavioral Health Recovery Management Project, Fayette Companies, Peoria, IL; Chestnut Health Systems, Bloomington, IL; and the University of Chicago Center for Psychiatric Rehabilitation.]

were addicted to methamphetamine.<sup>56</sup> The evaluators found that methamphetamine addicts assigned to treatment in the Matrix Model received more treatment services, stayed in treatment longer, and completed treatment at a higher rate than their control group counterparts (Rawson et al., 2004). They also had better drug test results. While post-treatment outcomes were similar for the treatment and comparison groups, significant reductions in methamphetamine use, significant improvements in psychosocial functioning, and substantial reductions in psychological symptoms were found for Matrix clients. Over the 6-month post-treatment follow-up period, over 60% of both treatment groups reported no methamphetamine use and gave urine samples that tested negative for methamphetamine. Matrix Model manuals have been published by the Substance Abuse and Mental Health Services Administration (SAMHSA).

## Contingency Management

Research has demonstrated that positive reinforcement plays an important role in increasing desired behaviors. Contingency Management (CM) is simply the systematic application of positive reinforcement principles within a treatment protocol. Positive reinforcement may take many forms, from verbal praise to other practices that reward behavior change and progress in treatment. In one approach, clients earn vouchers that are exchangeable for retail items if they have drug-free urinalysis results.

A large body of research assembled over the past 30 years has demonstrated that CM techniques are effective at reducing illicit drug use. CSAT reports that the efficacy of the community-reinforcement-plus-vouchers approach, delivered as a comprehensive, stand-alone treatment, is supported by several randomized clinical trials.<sup>57</sup> This treatment model integrates a community reinforcement approach (CRA) originally developed as an effective treatment for alcohol dependence, with an incentive program that

<sup>56</sup> UCLA Integrated Substance Abuse Programs. <http://www.methamphetamine.org/html/treatment.html>. Accessed August 12, 2009.

<sup>57</sup> SAMHSA/CSAT *Treatment Improvement Protocols. TIP 33: Treatment for Stimulant Use Disorders*. Available at: <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.section.57641>.



rewards treatment clients for remaining abstinent. As in CRA, treatment specifically addresses prosocial, drug-free lifestyle changes in multiple domains, including family relationships, social networks, recreational practices and work. The incentive program is designed to reward abstinence and facilitate retention in treatment. Typically, treatment clients earn vouchers that are exchangeable for retail items every time their urinalysis results indicate they have remained drug-free. Retail items are usually purchased on behalf of the client by program staff and approved in advance by treatment counselors. Items purchased for abstinent clients under the voucher program may be quite diverse – including, for example, educational materials or gift certificates to local restaurants or movie theatres – but they always are in concert with treatment goals and a drug-free, prosocial lifestyle.<sup>58</sup>

Researchers from UCLA and NIDA have applied CM techniques and studied their effectiveness in the treatment of methamphetamine users. Longer treatment retention, lower rates of methamphetamine use, and longer periods of abstinence have been found for those methamphetamine users treated with CM techniques in comparison to their control group counterparts. According to UCLA's Integrated Treatment Programs, these results provide powerful support for the efficacy of CM strategies as treatment for methamphetamine abuse.<sup>59</sup>

Motivational Incentives for Enhancing Drug Abuse Recovery (MIEDAR) is a behavioral treatment program that uses an incentive-based approach to help cocaine and methamphetamine abusers with abstinence. MIEDAR was recently evaluated through NIDA's Clinical Trials Network. The evaluation found that MIEDAR program participants were twice as likely to achieve eight weeks of abstinence as participants receiving treatment as usual. MIEDAR is currently being developed for dissemination to community treatment providers through NIDA and SAMHSA.<sup>60</sup>

<sup>58</sup> Ibid.

<sup>59</sup> UCLA Integrated Substance Abuse Programs. <http://www.methamphetamine.org/html/treatment.html>. Accessed August 12, 2009.

<sup>60</sup> *Availability and Effectiveness of Programs to Treat Methamphetamine Abuse*: Testimony before the Subcommittee on Criminal Justice, Drug Policy, and Human Resources. Committee on Government Reform - United States House of

## **A few cautionary points concerning substance abuse treatment**

While the evidence is unmistakably clear that substance abuse treatment works, several factors can influence treatment effectiveness. These include: time in treatment, aftercare, and program integrity.

• **Time in treatment.** Research has consistently shown that time in treatment matters. Program completion and longer retention times are associated with better substance abuse and recidivism outcomes. The Drug Abuse Treatment Outcome Study (Hubbard et al., 1997), for example, collected 1-year follow-up data for nearly 3,000 clients in a variety of treatment modalities, including methadone maintenance, long-term residential, outpatient and short-term inpatient programs. A key finding of the study was that clients who stayed in treatment longer had significantly better outcomes. More recently, Lang and Belenko (2000) found that offenders in a diversionary treatment program who completed treatment had fewer drug convictions, less income from drug dealing and higher levels of social conformity than offenders who did not complete treatment.<sup>61</sup>

***Research has consistently shown that time in treatment matters. Program completion and longer retention times are associated with better substance abuse and recidivism outcomes.***

• **Aftercare.** Treatment programs delivered to offenders under correctional supervision are unlikely to produce long-term results if offenders return to an environment where relapse is likely. Aftercare services help prevent relapse and sustain the positive treatment effects that are initiated when the offender is under correctional supervision. Studies have shown that while aftercare is expensive, prison-based treatment is

Representatives. Nora D. Volkow, M.D. Director, National Institute on Drug Abuse. National Institutes of Health, Department of Health and Human Services. June 28, 2006.

<sup>61</sup> Lang, M.A., and Belenko, S. (2000). Predicting retention in a residential drug treatment alternative to prison program. *Journal of Substance Abuse Treatment*, 19:145-160.

most effective and cost-beneficial when aftercare is also provided.<sup>62</sup> Wexler (1996), for example, found that drug-involved offenders who participated in treatment both in prison and then in the community after release had substantially lower recidivism rates than those offenders who participated in prison-based treatment alone. In an evaluation of the CREST work release treatment program in Delaware, McCollister and her colleagues (2003) reported that CREST reduced reincarceration by 29% compared to standard work release, but that an additional investment in aftercare of \$935 per client led to 43% less reincarceration. And one of the key findings reported by Belenko and his colleagues (2005:ii) in their review of the economic benefits of treatment programs was that “residential prison treatment is cost effective but only in conjunction with post-release aftercare services.”

***Treatment programs delivered to offenders under correctional supervision are unlikely to produce long-term results if offenders return to an environment where relapse is likely. Aftercare services help prevent relapse and sustain the positive treatment effects that are initiated when the offender is under correctional supervision.***

Research conducted in Colorado also demonstrates the importance of aftercare. Klebe and O’Keefe (2004) examined the effectiveness of two therapeutic communities (TCs) for offenders in Colorado. One is a prison-based program and the other is community-based. The prison program is the Crossroads to Freedom House TC at the Arrowhead Correctional Center (ACC); the community based program is Peer I located in Denver. Together these two programs provide a

continuum of care for high risk substance abusing felons.<sup>63</sup>

The outcome study was based on 778 subjects who were retrospectively placed in one of five groups for the analysis. Group 1 consisted of those inmates who successfully completed TC treatment in prison who then went on to receive treatment at the community-based Peer I TC. Group 2 received treatment at the Peer I TC only.<sup>64</sup> Group 3 received and successfully completed treatment at the ACC TC only. These inmates did not subsequently attend Peer I or any other community-based TC treatment. Group 4 received treatment at the ACC TC only, but these inmates did not successfully complete the program.<sup>65</sup> Group 5 was comprised of inmates identified as needing residential treatment who did not participate in a TC either in prison or the community.<sup>66</sup> These five groups were compared on several recidivism outcomes.

Results found that offenders with the lowest rate of community supervision failures were those who completed the prison-based ACC TC and continued on to Peer I treatment in the community. For example, the two-year supervision failure rate was 41% for Group 1, those inmates who successfully completed TC treatment in prison who then went on to receive treatment at the community-based TC. By comparison, the two-year supervision failure rate was 69% for Group 2, 63% for Group 3, 70% for Group 4, and 72% for Group 5.<sup>67</sup> Only 33% of the inmates who received TC treatment both in prison and the community returned to prison during the two-year follow-up period. That compares with

<sup>62</sup> See for example McCollister, K.E., French, M.T., Prendergast, M., Wexler, H., Sacks, S., and Hall, E. (2003). Is in-prison treatment enough? A cost-effectiveness analysis of prison-based treatment and aftercare services for substance abusing offenders. *Law and Policy*, 25, 62-83, or Griffith, J., Hiller, M., Knight, K., and Simpson, D. (1999). A cost-effectiveness analysis of in-prison therapeutic community treatment and risk classification. *The Prison Journal* 79, 352-368.

<sup>63</sup> Klebe, K. and O’Keefe, M. (2004). *Outcome Evaluation of the Crossroads to Freedom House and Peer I Therapeutic Communities*. National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC. Also, O’Keefe, M., Klebe, K., Roebken, K. and Fisher, E. (2004). *Effectiveness of Arrowhead and Peer 1 Therapeutic Communities*. Colorado Department of Corrections and the University of Colorado at Colorado Springs, Colorado Springs, CO.

<sup>64</sup> They did not receive treatment at any prison-based TC, but may have been involved in a less intensive treatment program.

<sup>65</sup> Participants who left for medical reasons or who were transferred to another program were excluded from the sample.

<sup>66</sup> Only participants who discharged from the program at the time of this study (February 2000) were included in the group.

<sup>67</sup> Supervision failure is defined as return to prison, misdemeanor arrest, or felony arrest. Klebe, K. and O’Keefe, M. (2004). Page 9.

54% of Group 2, 49% of Group 3, 67% of Group 4, and 58% of Group 5.

• **Program integrity is critical.** Even when offenders do receive treatment, it is essential that those services be properly designed, delivered with integrity, and be appropriate for the needs of the recipient. A recent report by the California Office of the Inspector General (2007) on *in-prison* substance abuse programs managed by the California Department of Corrections and Rehabilitation concluded that over a billion dollars of taxpayer funds had been “wasted” in the poor delivery of in-prison substance abuse services.<sup>68</sup>

In a policy paper for the Robert Wood Johnson Foundation’s Substance Abuse Policy Research Program, McCollister (2008) pointed out that, in general, there is not a clearly defined process for linking offenders with appropriate aftercare services. Aftercare is often defined by whatever services are available when the offender is released from incarceration.<sup>69</sup> While some offenders receive the services they need, a significant number are funneled into the existing network of drug abuse services in their communities, regardless of suitability for that particular offender. This underscores the need to deliver services that are tailored to individual need and consistent with the evidence-based principles for effective correctional intervention.

***Treatment programs that are well designed and delivered with integrity are likely to achieve positive results. Conversely, programs that are poorly designed or delivered improperly can increase recidivism rates among participants.***

Continual monitoring of program delivery to ensure fidelity to design also is essential. Treatment programs that are well designed and delivered with integrity are likely to achieve positive results. Conversely, programs that are poorly designed or delivered improperly can increase recidivism rates among participants.<sup>70</sup>

### **Few receive services**

Despite the evidence that treatment programs are effective and cost-beneficial, many offenders are not receiving the treatment they need. Between 70% and 85% of state prison inmates need some level of substance abuse treatment nationwide, yet only a fraction of these offenders receive services. A 2004 national study of prison inmates found that only about 15% of the inmate population received treatment since admission.<sup>71</sup> And since that time, services in prisons across the country have been reduced due to fiscal constraints. Therefore, expanding access to treatment is likely an essential step in reducing recidivism and ultimately correctional costs.

<sup>68</sup> Office of the Inspector General. (Feb. 2007). *Special Review Into In-Prison Substance Abuse Programs Managed by the California Department of Corrections and Rehabilitation*. State of California, Sacramento, CA.

<sup>69</sup> McCollister, K. (2008). *Cost Effectiveness of Substance Abuse Treatment in Criminal Justice Settings*. Knowledge Asset. Web site created by the Robert Wood Johnson Foundation’s Substance Abuse Policy Research Program. Available at: [http://sapr.org/knowledgeassets/knowledge\\_detail.cfm?KAI D=10](http://sapr.org/knowledgeassets/knowledge_detail.cfm?KAI D=10). Accessed August 21, 2009.

<sup>70</sup> See for example Wilson, J.A. (2007). *Habilitation or Harm: Project Greenlight and the Potential Consequences of Correctional Programming*. National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC.

<sup>71</sup> Mumola, C.J. and Karberg, J.C. (2007 revised). *Drug Use and Dependence, State and Federal Prisoners, 2004*. Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, Washington DC. (NCJ 213530)

## **NIDA's Principles of Drug Abuse Treatment for Criminal Justice Populations**

It is critically important that treatment programs be designed and delivered based on scientific evidence. To facilitate this, NIDA published *Principles of Drug Abuse Treatment for Criminal Justice Populations* in 2006. This publication is based on a review of the scientific literature on drug abuse treatment and criminal behavior, and it discusses 13 principles proven through research to help criminal justice organizations tailor treatment programs to better serve their populations. In brief, these principles are:

- Drug addiction is a brain disease that affects behavior.
- Recovery from drug addiction requires effective treatment, followed by management of the problem over time.
- Treatment must last long enough to produce stable behavioral change.
- Assessment is the first step in treatment.
- Tailoring services to fit the needs of the individual is an important part of effective drug abuse treatment for criminal justice populations.
- Drug use during treatment should be carefully monitored.
- Treatment should target factors that are associated with criminal behavior.
- Criminal justice supervision should incorporate treatment planning for drug abusing offenders, and treatment providers should be aware of correctional supervision requirements.
- Continuity of care is essential for drug abusers re-entering the community.
- A balance of rewards and sanctions encourages prosocial behavior and treatment participation.
- Offenders with co-occurring drug abuse and mental health problems often require an integrated treatment approach.
- Medications are an important part of treatment for many drug abusing offenders.
- 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.

## Section 6

---

### How do drug offender imprisonment and substance abuse treatment compare in terms of return on investment?

One of the first studies that compared the return on investment of incarceration and substance abuse treatment was conducted by the Rand Corporation (Caulkins et al., 1997). The analysis was part of a larger study examining the impact of mandatory minimum sentences on cocaine consumption and drug-related crime. Caulkins and his colleagues estimated the crime reduction benefits of mandatory minimum sentences and various other drug control alternatives, including increased funding for law enforcement and increased funding for substance abuse treatment. They found that treatment would reduce serious crimes – both violent and property – far more than the incarceration and enforcement alternatives examined. For every million dollars spent, it was estimated that substance abuse treatment would reduce serious crimes about 15 times more effectively than incarceration. In discussing the implications of their findings for policy, Caulkins and his colleagues stated (1997:3):

*Why is treatment so much better? Most drug-related crime is economically motivated - undertaken, for example, to procure money to support a habit or to settle scores between rival dealers. The level of economically motivated crime is related to the amount of money flowing through the cocaine market. When a treated dealer stays off drugs, that means less money flowing into the market - therefore, less crime. ... Long sentences for serious crimes have intuitive appeal. They respond to deeply held beliefs about punishment for evil actions, and in many cases they ensure that, by removing a criminal from the streets, further crimes that would have been committed will not be. But in the case of black-market crimes like drug dealing, a jailed supplier is often replaced by another supplier.*

Similar insights are provided in a study conducted by Justice Strategies (Greene and Pranis, 2006) for policy makers in Wisconsin. Using a variety of data sources, Greene and Pranis estimated how many

**For every million dollars spent, Caulkins et al. (1997) estimated that substance abuse treatment would reduce serious crimes about 15 times more effectively than incarceration.**

prison-bound defendants could be redirected to community-based treatment and supervision without compromising public safety. The researchers concluded that the state could reduce annual prison expenditures by \$30 million to \$40 million if an additional \$10 million annually was spent on community-based substance abuse treatment for offenders who otherwise would have been incarcerated. That equates to a savings of \$3 to \$4 for every additional \$1 invested in treatment.

Justice Strategies (Pranis, 2006) also conducted an analysis for Maryland policy makers that compared crime rate trends for different jurisdictions. The analysis found that jurisdictions that relied on treating drug offenders more so than incarcerating them were more likely to achieve significant crime rate reductions. Pranis reported that in 8 of the 12 jurisdictions examined that made greater use of treatment, crime rates fell by 10% or more since 2000. By comparison, just 2 of 12 jurisdictions that made greater use of imprisonment experienced similar crime rate declines. In discussing his findings, Pranis stated that “[w]hile many factors affect crime rates, these results are in keeping with national research showing that treatment does more than imprisonment to reduce both crime and drug use” (2006:1).

As part of his analysis of the costs and benefits of incarcerating drug offenders in New York, Lengyel (2006) estimated the potential savings that would

**“While many factors affect crime rates, these results are in keeping with national research showing that treatment does more than imprisonment to reduce both crime and drug use.”**

**Kevin Pranis (2006)**



be associated with treating rather than incarcerating a cohort of drug offenders. He incorporated treatment cost-benefit data from an evaluation of the Drug Treatment Alternative to Prison (DTAP) program in Brooklyn, New York, conducted by Zarkin et al. (2005). The DTAP program diverted non-violent felony drug offenders from prison to community-based residential therapeutic communities for 15 to 24 months. Zarkin and his colleagues estimated the costs of operating the residential treatment program, the initial criminal justice processing costs for program participants, and the costs of subsequent arrests and sanctions for those who either failed DTAP or recidivated after completing the program.

Lengyel reasoned that half of the cohort of 6,584 drug offenders released from prison in New York in 2005 would be suitable candidates for treatment because even among those incarcerated for drug distribution, a significant number were likely selling drugs to support their abuse or addiction. Lengyel reported that the likely savings from treating rather than incarcerating half of the drug offenders from this cohort, 3,292 offenders, were significant. He estimated that for every drug offender that received residential drug treatment in the community rather than a prison sentence the state would realize nearly \$250,000 in savings. By treating rather than incarcerating one-half of the drug offenders released from state prison in 2005, the state would have realized about \$800 million in savings.

***Lengyel (2006) found that by treating rather than incarcerating one-half of the drug offenders released from state prison in 2005, the state of New York would have realized about \$800 million in savings.***

Lengyel and Brown (2009) conducted a similar analysis based on the estimated costs and benefits of treating rather than incarcerating drug offenders in Hawaii. The analysis was based on treatment costs derived from a residential treatment program certified for criminal justice clients. As in the New York analysis, the researchers assumed that 50% of the cohort of

197 drug offenders released from state prison in Hawaii in 2006 would be appropriate candidates for substance abuse treatment. First year savings for the state from the diversion into treatment of half of the 2006 cohort of released drug offenders was estimated to be a little more than \$4.1 million. Savings over the average length of stay in prison were much larger - \$14.4 million.

In 2003, the New York state legislature requested the Legal Action Center (LAC) to conduct an analysis of the potential savings that might accrue to the state if certain drug law reform was enacted. LAC reported that New York state would save about \$60,000 for every individual charged with a second felony drug offense diverted from prison into community-based treatment. Building on that work, the LAC updated the analysis in a report released in 2009. The LAC's new analysis also examined the cost savings associated with diverting individuals charged with second felony drug offenses from prison into treatment. The LAC estimated that if New York would have diverted 60% of the 2,359 incarcerated offenders convicted of second felony drug crimes without any prior violent felonies in 2007, the state would have saved more than \$88.4 million.

Findings from research conducted on the costs and benefits of Proposition 36 in California also demonstrate that taxpayers receive a significant return when investing in treatment rather than incarceration. Proposition 36 (Prop 36) was passed by voters in California in November 2000 and enacted into law as the Substance Abuse and Crime Prevention Act (SACPA) of 2000. Prop 36 significantly changed the way many drug offenders in California are sanctioned. Under the new law, adults convicted of drug possession or use offenses who met eligibility criteria could be sentenced to probation with substance abuse treatment instead of either probation without treatment or a term of incarceration. Offenders on probation or parole who commit non-violent drug offenses or who violate drug related conditions of their release may also receive treatment.

Prop 36 mandated that the effects of the new law be independently evaluated. The California Department of Alcohol and Drug Programs contracted with the University of California, Los Angeles Integrated Substance Abuse Programs (referred to as UCLA) to carry out the evaluation. UCLA has completed a series of studies as part of

the overall assessment effort, including several analyses that examined the cost implications and benefit-cost ratios of Prop 36 (Hawken et al. 2008). Each showed that Prop 36 yielded cost savings to state and local governments.

One of the analyses conducted by UCLA compared costs and benefits for all first-year Prop 36-eligible offenders with those of a pre-Prop 36-era comparison group. Over a 42-month period, the researchers found a net savings of \$1,977 per offender under Prop 36, and a benefit-cost ratio of nearly 2 to 1. In other words, nearly \$2 was saved for every \$1 allocated to Prop 36.<sup>72</sup>

**Research conducted on the costs and benefits of Prop 36 in California demonstrated that taxpayers received a significant savings when investing in treatment rather than incarceration. Over a 42-month period, nearly \$2 was saved for every \$1 invested in the diversion of offenders into treatment under Prop 36.**

A second analysis examined the costs and benefits of first year Prop 36 participants who went on to successfully complete treatment. This analysis found that offenders completing treatment under Prop 36 had a benefit-cost ratio of about 4 to 1; meaning that about \$4 were saved over a 42-month period for every \$1 invested in treatment.

In discussing their findings, the UCLA researchers concluded that Prop 36 substantially reduced incarceration costs and that continued funding of Prop 36 was justified. The researchers also pointed out that an offender's prior criminal history was a strong predictor of recidivism for Prop 36 offenders. Specifically, those offenders

<sup>72</sup> Savings are based on the difference-in-differences (DID) between the treatment and comparison groups, calculated as the difference between (1) the Prop 36-era group's pre-conviction and post-conviction difference in costs and (2) the pre-Prop 36-era group's pre-conviction and post-conviction difference in costs. This yields a DID average cost per offender in each cost area. The benefit-cost ratio reported is the total savings net of programmatic costs derived from Prop 36, divided by the \$120 million allocation for Prop 36 treatment services.

with five or more convictions in the 30-month period prior to their Prop 36-eligible conviction tended to have lower treatment completion rates and higher rates of reoffending after their Prop 36 sentence. These findings led Hawken and her colleagues (2008:228-229) to recommend that Prop 36 criteria be modified so that offenders with high rates of prior non-drug convictions (e.g., five or more convictions during the prior three years) would be placed into more controlled settings, including, but not limited to, residential treatment or prison- or jail-based treatment programs. The researchers also recommended that incentives be considered for providers who demonstrate more success in drug treatment engagement, retention, and completion for Prop 36 clients.

### Cross-study comparisons

Perhaps the most direct way to compare incarceration and substance abuse treatment in terms of their respective returns on investment is to examine the benefit-cost ratios found in economic evaluations of each. Data from several cost-benefit studies discussed in sections 2 and 5 of this report provide statistics that can be used for such cross-study comparisons.

Table 2 presents a comparison of the benefit-cost ratios derived from economic evaluations of incarceration and substance abuse treatment, respectively. The benefit-cost ratios for incarceration are from two sources: the Washington State Institute for Public Policy's (2003) cost-benefit analysis of incarceration for different types of offenders in Washington state and Lengyel's (2006) cost-benefit analysis focusing on the incarceration of drug offenders in New York state. The data reported in the table from the Washington State Institute for Public Policy study reflect the benefit-cost ratios reported for the incarceration of drug offenders in Washington state in 1990 and 2001, respectively. The data reported from Lengyel's study reflects the benefit-cost ratio found for the incarceration of drug offenders released from prison in New York state in 2005.

The benefit-cost ratios reported in Table 2 for substance abuse treatment are derived from three sources: Flynn et al. (1999), Salome et al. (2003) and Ettner et al. (2005). These three studies span a significant time range in terms of when clients

were in treatment. Findings from these studies also reflect a range of substance abuse treatment benefit-cost ratio results.

A comparison of the benefit-cost ratios reported in Table 2 demonstrates that substance abuse treatment provides a far greater return on investment than drug offender imprisonment. Both the Washington State Institute for Public Policy and the Lengyel studies found that the incarceration of drug offenders does not provide a positive return on investment. Each benefit-cost ratio derived from the incarceration of drug offenders is less than 1.0. In Washington, for example, the imprisonment of drug offenders in 2001 provided only \$0.37 in benefits for every \$1 of cost. In New York, Lengyel estimated that the imprisonment of drug offenders released in 2005 produced only \$0.29 in benefits for every \$1 of cost. Conversely, each of the three cost-benefit studies of substance abuse treatment reported benefit-cost ratios greater than 1.0, indicating that treatment provided a positive return on investment. Flynn et al. (1999), for example, reported benefit-cost ratios ranging from a low of \$1.33 to a high of \$3.26 in benefits per \$1 of cost. Salome et al. (2003) reported that treatment provided \$4.26 in benefits for each \$1 of cost. And Ettner et al. (2005) reported \$7.26 in benefits per \$1 of cost.

**COST-BENEFIT ANALYSIS  
CROSS-STUDY COMPARISONS**

Comparing different programs or policy options in terms of their return on investment can be a valuable decision making tool. But when cost-benefit summary statistics are derived in markedly different ways, cross-study comparisons can lead to inaccurate or biased conclusions. Therefore, when comparing the benefit-cost ratios of one or more interventions derived from different studies, more confident conclusions can be reached by avoiding direct dollar to dollar comparisons and focusing instead on the magnitude of benefit-cost ratio differences and the consistency of findings across studies.

**Table 2  
Cross-Study Comparison of Benefit-Cost Ratios  
Drug Offender Imprisonment and Substance Abuse Treatment**

Benefit-Cost Ratios Derived from the Incarceration of Drug Offenders			Benefit-Cost Ratios Derived from Substance Abuse Treatment		
Washington State Institute for Public Policy (2003)		Lengyel (2006)	Flynn et al. (1999)	Salome et al. (2003)	Ettner et al. (2005)
Drug offenders incarcerated in Washington state in 1990	Drug offenders incarcerated in Washington state in 2001	Drug offenders released from prison in New York state in 2005	Treatment clients in the national Drug Abuse Treatment Outcome Studies (DATOS) 1991-1993	Treatment clients in the Chicago Target Cities Project 1995-1999	Treatment clients in 13 California counties 2000-2001
0.98	0.37	0.29	1.33 – 3.26*	4.26	7.26
<p>* Flynn et al. (1999) reported a series of benefit-cost ratios based on different methodologies. The benefit-cost ratios reported here are the lowest and highest reported in the study. It is important to note that all benefit-cost ratios reported by Flynn et al. (1999) demonstrated that treatment had a positive return on investment. The benefit-cost ratios for residential treatment ranged from \$1.68 to \$2.73 in benefits per \$1 of cost. The benefit-cost ratios for outpatient treatment ranged from \$1.33 to \$3.26 in benefits per \$1 of cost.</p>					



## Section 7

---

### What are the primary factors associated with desistance from criminal behavior?

Studies have examined the process of desistance from crime. Desistance refers to the transition from criminal to noncriminal conduct. Although most researchers agree that desistance should be viewed as a process rather than an event, there is less agreement about how desistance should be measured (National Research Council, 2008). Some argue that the permanent absence of offending is the best measure of desistance, but abstinence can be difficult to capture.<sup>73</sup> Others argue that reduced levels of offending – as measured by reduced frequency or seriousness of offenses – is a better metric because it is part of the desistance process for many offenders and more apt to be measured accurately. While both abstinence and reduced offending have been used as measures in desistance research, there is a growing consensus that desistance should be thought of as the sustained absence of offending along with positive social reintegration (National Research Council, 2008:1-21). While different measures of desistance can lead to different research findings, the scientific evidence is remarkably consistent that people who desist from crime are those who are better integrated into prosocial roles in the family, workplace and community (National Research Council, 2008).<sup>74</sup>

### Employment, marriage, and aging are linked to desistance

Desistance from crime was a major focus of a recent study conducted by a committee of researchers for National Research Council (NRC, 2008). In the report *Parole, Desistance from Crime, and Community Integration*, Petersilia and her colleagues on the committee identified family and work as being particularly important in the

***In the report *Parole, Desistance from Crime, and Community Integration*, Petersilia and her colleagues identified family and work as being particularly important in the desistance process.***

desistance process. Marriage, especially strong marital attachment, is a significant factor in desistance, particularly for men. Strong ties to work and stable employment also can lead to desistance. Other factors such as education and reduced consumption of drugs promote desistance, too. Perhaps the most obvious pathway to desistance from crime is aging.

Age-specific arrest rates show that arrests for serious crime are highest in young age groups. Moreover, arrest rates for both property and violent crime peak by age 20 and begin steadily declining by the early 20s. This demonstrates that except for a minority of offenders, the intensity of criminal activity drops after the teens and continues to decline with age. Rigorous longitudinal research conducted by Gottfredson and Hirschi (1990) and Sampson and Laub (1993), for example, has demonstrated that offending declines with age for all offenses.

As stated above, strong ties to work appear to be particularly important in the desistance process. In a comprehensive review of the literature, Przybylski (2008) reported that education and vocational training programs increase the rate of employment for ex-offenders while also reducing recidivism.<sup>75</sup>

The research evidence is also quite clear that reduced consumption of illegal drugs plays a role in desistance (see section 5). A large body of evidence demonstrates that substance abuse treatment is effective not only in reducing drug use, but also in reducing crime. The National

---

<sup>73</sup> The National Research Council (2008:20) report points out “that care must be taken not to erroneously attribute the absence of further crime events near the end of an observation period or at the end of a specific age to (career) desistance rather than to the random time between events. Improved measures of the permanent absence of offending, which remains the clearest definition of desistance from crime, are needed.”

<sup>74</sup> Also see Uggen et al. (2005), Petersilia (2003), and Sampson and Laub (1993).

---

<sup>75</sup> Research conducted by the Urban Institute (2002), however, has pointed out that to be effective, employment programs should focus on skills applicable to the job market; be delivered close to an offender’s release so that skills and work habits are internalized by the offender; be integrated with other programs; and be followed by aftercare services in the community.

Treatment Improvement Evaluation Study, for example, demonstrated that substance abuse treatment can reduce drug selling and other illegal activity. Hser and her colleagues (2006) have shown that cocaine abusers who become abstinent are less likely to be involved in crime than those who continue using the drug.

Incarceration and community supervision alone have little positive impact on recidivism rates and desistance from crime (Solomon et al. 2005; Maruna and Toch, 2005). In a review of the research on the impact of imprisonment on the desistance process, Maruna and Toch (2005:140) concluded that the experience of imprisonment alone “is largely irrelevant to the subsequent offending patterns of individuals.”<sup>76</sup> They did suggest, however, that the prison experience may deter some individuals from subsequent offending, specifically those who have prosocial bonds to family and the community. Indeed, recent studies conducted by the Washington State Institute for Public Policy (Aos et al. 2006) indicate that treatment-oriented supervision programs, for example, reduced recidivism and provided taxpayers with a sound return on investment. Conversely, surveillance-oriented programs failed to reduce recidivism and their costs exceeded their benefits.

***Incarceration and community supervision alone have little positive impact on recidivism rates and desistance from crime.***

Several studies have also specifically examined the impact of prison sentences on recidivism. Two meta-analyses conducted by Gendreau and his colleagues have actually found that imprisonment is associated with negative reoffending outcomes. In 1999, Gendreau and his colleagues conducted a meta-analysis of 50 studies involving more than 300,000 prisoners and found no evidence that prison sentences reduced recidivism. In fact, the more rigorous studies in that analysis found a strong connection between longer prison stays

<sup>76</sup> Maruna, S. and Toch, H. (2005). The impact of imprisonment on the desistance process. In *Prisoner Reentry and Crime in America*, Travis, J. and Visher, C. (eds.). Cambridge University Press, New York, NY. Page 140.

and increased recidivism.<sup>77</sup> In a separate meta-analysis conducted a few years later, Gendreau and his colleagues (Smith et al. 2002) found that incarceration was associated with an increase in recidivism when compared with community-based sanctions, and that longer time periods in prison (compared with shorter sentences) were associated with higher recidivism rates.

A systematic review published by Lipsey and Cullen (2007) reached similar conclusions. In summarizing the evidence on deterrence-oriented corrections programs and the effects of longer prison terms, Lipsey and Cullen (2007:8) concluded the following:

*In sum, research does not show that the aversive experience of receiving correctional sanctions greatly inhibits subsequent criminal behavior. Moreover, a significant portion of the evidence points in the opposite direction – some such actions may increase the likelihood of recidivism. The theory of specific deterrence inherent in the politically popular and intuitively appealing view that harsher treatment of offenders will dissuade them from further criminal behavior is thus not consistent with the preponderance of available evidence.*

***“In sum, research does not show that the aversive experience of receiving correctional sanctions greatly inhibits subsequent criminal behavior. Moreover, a significant portion of the evidence points in the opposite direction – some such actions may increase the likelihood of recidivism.”***

***Lipsey and Cullen (2007)***

<sup>77</sup> Gendreau, P., Goggin, C. and Cullen, F. (1999). *The Effects of Prison Sentences on Recidivism*. A Report to the Corrections Research and Development and Aboriginal Policy Branch, Solicitor General of Canada. Ottawa, Canada. Also, Smith, P., Goggin, C., Gendreau, P. (2002). *The Effects of Prisons Sanctions on Recidivism: General Effects and Individual Differences*. Public Works and Government Services Canada. Available at [www.sgc.ca](http://www.sgc.ca).

Fundamental findings from the National Research Council and other desistance research have important implications for corrections and public safety policy. Public policies that block employment and other opportunities for ex-offenders to resume a regular life in the community are likely to serve as a barrier to desistance, eventually leading to higher rates of reentry failure. Conversely, programs and policies that reduce criminogenic risk factors and promote successful reentry are likely to lead to higher rates of desistance and greater public safety. The evidence that reoffending declines over time and is most likely to occur soon after release suggests that supervision and transition service strategies are likely to be most cost-effective when they focus on immediate needs in the first weeks and months after release. Overall, the National Research Council report, as well as other research, underscores the need for evidence-based recidivism reduction programs, such as meaningful educational and vocational programs as well as substance abuse treatment.

## Section 8

---

### **What does research tell us about the impact of a criminal conviction on subsequent employment and earning capacity?**

Several studies have examined the effect of arrest, conviction or incarceration on future employment and earnings. Waldfogel (1994) examined the effects of a criminal conviction on employment and income. He found that a first-time conviction reduced employment by about 4 percentage points and income by 6%. These negative effects were found to persist over a considerable length of time, particularly for employment. Grogger (1995) found short-term negative effects on earnings for arrests and convictions. Bushway (1996) examined how an arrest affected labor market outcomes for young out-of-school white men and found that arrests for men aged 27 and under were associated with a 17% decrease in job stability and a 26% decrease in weekly earnings. Nagin and Waldfogel (1998) found that a first conviction reduced income on average by about 8%, but the effect on income varied by age.<sup>78</sup> The researchers also found that a first-time conviction increased job instability no matter when it was experienced in the work career. Joseph (2001) found that having been arrested is associated with a decrease of 18% to 26% in annual earnings. Western (2006) found significantly lower wage levels and wage growth among individuals with criminal records. Raphael (2007) also found lower wages and levels of employment for offenders compared to non-offenders.

In a study focused on juveniles, Allgood et al. (2003) found that a juvenile court adjudication of a criminal charge reduced subsequent earnings by at least 9%, while having the charge decided in adult court lowered earnings by 14%. The researchers also reported that the negative effect persisted over time.

---

<sup>78</sup> For example, the researchers found that earnings increased after a first-time conviction for offenders under age 25. The reason for this, they hypothesized, is that younger offenders were more likely to take a spot-market job after a first conviction. For offenders 25 years of age or older, earnings were reduced by a first-time conviction. A second conviction reduced earnings for all offenders, regardless of age.

Pager (2003) and Holzer et al. (2004) both found strong employer aversion to hiring men with criminal records, with Holzer (2007:16) concluding that “the two sets of studies leave little doubt that men with criminal records – and in particular black men - face much weaker demand for their labor than do comparable men without these records.” Holzer (2007:10) has also reported a discrimination effect where some employers tend to avoid hiring someone from broader demographic groups (like black men), simply to avoid hiring ex-offenders inadvertently.

Several studies have examined the impact of *incarceration* on subsequent earnings and employment. Freeman (1991) found that incarceration was associated with a reduction in subsequent employment of between 25% and 30%. In fact, when compared with individuals who had never been involved with the criminal justice system, offenders who had been incarcerated were found to have a lower chance of being employed even eight years after their imprisonment. Grogger (1995) found that a prison sentence had pronounced and lasting negative effects on earnings. Geller and her colleagues (2006:1) reported that the employment rates of formerly incarcerated men are about 6 percentage points lower than for similar men who have not been incarcerated and that incarceration is associated with a 14% to 26% decline in hourly wages. Petit and Lyons (2007) found lower earnings subsequent to incarceration, but reported that the negative effects were temporary. Kling (2006), however, examined the effect of *incarceration length* on subsequent employment and earnings and did not find an effect.

In a recent review of the research concerning the impact of a prison term on subsequent earnings and employment, Holzer (2007:3) concluded the following:

*...the preponderance of [the evidence] points to negative effects of incarceration on the subsequent employment and earnings of offenders. By reducing their employment prospects, these effects likely raise recidivism rates of released offenders, which impose further costs on society (in the form of both crime and incarceration expenditures). Policies designed to reduce these collateral costs, either through direct reductions in incarceration rates or in their negative*

***“...the preponderance of [the evidence] points to negative effects of incarceration on the subsequent employment and earnings of offenders. By reducing their employment prospects, these effects likely raise recidivism rates of released offenders, which impose further costs on society (in the form of both crime and incarceration expenditures).”***

**Harry Holzer (2007)**

*effects on subsequent earnings, might therefore generate positive benefits to the individuals in question and to society more broadly.*

The findings that both a criminal conviction and time spent behind bars have a negative impact on subsequent employment and income have clear public safety consequences. Research has shown that a strong tie to work is one of the most important factors in desistance from criminal behavior. Therefore, as stated in Section 7 of this report, public policies and practices that block employment and other opportunities for ex-offenders to resume a regular life in the community are likely to serve as a barrier to desistance, eventually leading to higher rates of reentry failure and reduced public safety.

### **Collateral consequences of a criminal record**

According to the Uniform Law Commission (ULC),<sup>79</sup> more and more states are imposing penalties on those convicted of particular crimes beyond those imposed at sentencing.<sup>80</sup> These consequences range from restrictions on voting,

---

<sup>79</sup> The Uniform Law Commission, now in its 118th year, comprises more than 300 practicing lawyers, governmental lawyers, judges, law professors, and lawyer-legislators from every state as well as the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Uniform Law Commissioners are appointed by their states to draft and promote enactment of uniform laws that are designed to solve problems common to all the states.

<sup>80</sup> Uniform Law Commission, Uniform Collateral Consequences of Conviction Act Press Release, July 15, 2009. Available at: <http://www.nccusl.org/Update/DesktopModules/NewsDisplay.aspx?ItemID=217>. Accessed August 25, 2009.

occupational licensing, and receiving public benefits, to registration with law enforcement authorities. Research conducted by the Legal Action Center (2004:7) found that people with criminal records seeking reentry face an array of counterproductive and unreasonable roadblocks in almost every important aspect of life.

### **Measures to reduce the negative effects of a criminal record**

Given the fact that states hold more than 71 million criminal records on individuals and that an estimated 80% of U.S. employers perform background checks, public policies must ensure public safety while not unfairly marginalizing those with a criminal record.<sup>81</sup> Indeed, numerous states and municipalities have taken steps to reduce discrimination against ex-offenders and people who have been arrested but never convicted of a crime. According to the Legal Action Center (2004:10, 15):

- 17 states allow some conviction records to be expunged or sealed, such as first-time offenses.
- 40 states allow people to seal or expunge records of some or all arrests that did not lead to conviction.
- 10 states prohibit all employers and occupational licensing agencies from considering arrests if the arrest did not lead to conviction, and 3 states prohibit some employers and occupational licensing agencies from doing so.
- 6 states - Arizona, California, Illinois, Nevada, New Jersey and New York - offer certificates of rehabilitation which allow an ex-offender to be employed in a job they otherwise could not hold because of their conviction.

### **Ban the Box initiatives**

Several jurisdictions across the country have enacted laws that require public employers to remove any questions about an applicant's criminal record from employment applications.

---

<sup>81</sup> See Ramker, G. (2006). *Improving Criminal History Records for Background Checks, 2005*. U.S. Department of Justice, Bureau of Justice Statistics. Washington, DC, and Burke, M., (2006). *2004 Reference and Background Checking Survey Report: A Study by the Society for Human Resource Management*. Society for Human Resource Management. Alexandria, VA.



Commonly known as “ban the box” initiatives, the intent is to undo or at least reduce discrimination against individuals with a criminal record. Cities that have enacted “ban the box” measures include Chicago, Newark, Los Angeles, San Francisco, Philadelphia, Minneapolis, and Boston. In 2009, Minnesota became the first state to “ban the box.”

Most laws that ban the box contain a provision that requires public employers to wait until a job applicant has been selected for an interview before asking about criminal records or conducting a criminal record check.<sup>82</sup> Some jurisdictions have policies, however, that go even further. San Francisco’s “ban the box” policy, for example, prohibits a criminal background check until after a tentative employment offer is made, except in those cases where state or local law prohibits individuals with certain types of convictions from holding that particular job.<sup>83</sup> If a legal prohibition is not a preemptive factor, a criminal record can only be taken into account if it poses an unacceptable risk given the specific requirements of the job.

Perhaps the most far-reaching policy has been enacted in Boston, where criminal background checks are required only for police department positions and jobs in which there is interaction with youth, the elderly and the disabled.<sup>84</sup> These background checks are not conducted until *after* the applicant is a finalist for the job. Perhaps what is most unique about the Boston initiative is that its ban the box policies are being applied to all contractors doing business with the city.

### Where does Colorado rank in terms of barriers for ex-offenders?

#### The Legal Action Center Report Card

In 2004, the Legal Action Center (LAC) completed a study on the legal obstacles that people with criminal records face when they attempt to reenter society and become productive, law-abiding citizens. The results of that research were published in the report titled *After Prison: Roadblocks to Reentry, A Report on State Legal Barriers Facing People with Criminal Records*.

<sup>82</sup> Except for positions that already require a background check.

<sup>83</sup> Henry, J. and Jacobs, J. (2007). Ban the box to promote ex-offender employment. *Criminology and Public Policy*, 6, 4.

<sup>84</sup> Ibid.

Within that report, every state was graded on the extent to which its laws and policies created barriers for ex-offenders in the following areas: employment, public assistance, voting, public housing, adoptive and foster parenting, drivers’ licenses and access to criminal records.

The state report card developed by the LAC distinguishes between policies that serve legitimate ends and those that unfairly prevent those who do not pose a threat to public safety from successfully reentering society. The criteria for grading the states was developed by the LAC in collaboration with a diverse panel of experts, including attorneys, criminal justice policy makers, victim advocates, people with criminal records, and housing officials.

Table 3 presents Colorado’s most recent score in each of the seven categories examined by the LAC, as well as Colorado’s cumulative score and its ranking relative to other states and the District of Columbia.<sup>85</sup> Colorado’s cumulative score of 37 ranked it among the worst states – 41<sup>st</sup> out of 51 – in terms of barriers for ex-offenders.

**Table 3**  
**Legal Action Center**  
**State Report Card for Colorado**

Category							
	Employment	Public Assistance	Access to Criminal Records	Voting	Public Housing	Parenting	Driver’s Licenses
Score	7	5	7	4	5	0	9
Range of possible scores in each category is 0 to 10 (0 is best, 10 is worst)							
Colorado cumulative score = 37 National rank based on cumulative score: 41 (1 is best, 51 is worst)							

**Source:** Adapted from Legal Action Center, *After Prison: Roadblocks to Reentry, A Report on State Legal Barriers Facing People with Criminal Record*, State Report Cards. Available at: <http://www.lac.org/roadblocks-to-reentry/main.php?view=state>.

<sup>85</sup> Legal Action Center website: *After Prison: Roadblocks to Reentry, A Report on State Legal Barriers Facing People with Criminal Record*, State Report Cards at <http://www.lac.org/roadblocks-to-reentry/main.php?view=state>. Accessed August 25, 2009.

There is widespread recognition today that the successful reentry of prisoners is a critical public safety issue. Successful reentry reduces recidivism and victimization. It enhances public safety. It also saves public resources. Given the links between reentry and public safety, organizations like the International Association of Chiefs of Police, the National District Attorneys Association, the National Institute of Corrections, and the Council of State Governments are supporting reentry services as a way to reduce victimization and cut recidivism.<sup>86</sup>

The importance of successful reentry and recidivism reduction overall has focused attention on the collateral consequences that ex-offenders have to confront. One of these is the negative effects of having a criminal record. Research has clearly shown that people with a criminal record suffer a host of negative consequences. And unlike the direct but typically time-limited consequences of a probation or prison sentence, the negative impact of having a criminal record can last a lifetime. While it would be ill-advised to dismiss public concern about reoffending behavior, particularly in light of what is known about the prevalence of recidivism, there is sound empirical evidence to suggest that a rational balance between the needs of the public and those of law-abiding ex-offenders is in society's best interest.

Research has demonstrated that after a certain point in time, the risk of being arrested is no greater for a person who has previously been arrested than it is for anyone else. Specifically, Blumstein and Nakamura (2009) examined the criminal history records of 88,000 individuals who were arrested for the first time in New York state in 1980 to determine if they had had ever

---

<sup>86</sup> For example, in 2006, the International Association of Chiefs of Police (IACP), in collaboration with the federal Community Oriented Policing Services Office (COPS), brought together over 100 law enforcement, correctional, and community leaders for a two day summit to address the issue of offender re-entry and in particular, the role of local law enforcement in re-entry programs. The results of that summit are contained in the final report: *Offender Re-Entry: Exploring the Leadership Opportunity for Law Enforcement Executives and Their Agencies*. The report provides 50 recommendations to help police leaders determine how they can reduce recidivism rates by supporting offender re-entry initiatives. In 2005, the National District Attorneys Association adopted Policy Positions on Prisoner Reentry Issues in the belief that prisoner reentry has become a crucial issue and that prosecutors should, where practicable, be participants in addressing this issue in an effort to reduce recidivism and ensure the safety of victims and the community.

***While it would be ill-advised to dismiss public concern about reoffending behavior, there is sound empirical evidence to suggest that a rational balance between the needs of the public and those of law-abiding ex-offenders is in society's best interest.***

been arrested again during the ensuing 25 years. The research goal was to determine at what point the risk of a new arrest dropped to levels found for same-aged people in the general population.

Blumstein and Nakamura found that for a person who has been arrested in the past, the probability of being arrested again declined the longer the person stayed crime-free. Individuals arrested for burglary at age 18, for example, were no more likely to have a new arrest by the time they were 21.8 years of age – 3.8 crime-free years after their initial arrest – than anyone else in the general population of the same age. For people who had been arrested for robbery at age 18, the probability of rearrest declined to the same arrest rate for the general population of same aged individuals after 7.7 years, or at age 25.7. After that point, the probability that individuals would commit another crime was actually less than the probability of other 26-year-olds in the general population (Blumstein and Nakamura, 2009:12).

***Research has demonstrated that after a certain crime-free period of time, the risk of being arrested is no greater for a person who has previously been arrested than it is for anyone else.***

While Blumstein and Nakamura's findings need to be replicated with other populations of offenders and in other geographic locations, they demonstrate that the perceived risk assigned to an ex-offender may well be unwarranted once the ex-offender stays crime-free for several years.

Research conducted in Florida also has shown that among similar people, those that are labeled with

a criminal conviction are significantly more likely to commit another crime than those that are not. Florida law provides a unique opportunity to study the labeling effect of a felony conviction because judges have the discretion to withhold adjudication for convicted felons sentenced to probation. In a study of more than 95,000 men and women in Florida who had been found guilty of a felony and were sentenced to probation, Chiricos (2007) and his colleagues found that, even when prior record and other characteristics often linked with criminal behavior were held constant, individuals who were formally “labeled” with a criminal conviction were significantly more likely to recidivate during the two year follow-up period than those who were not. Chiricos and his colleagues concluded (2007:571):

*The withholding of adjudication for those who have been found guilty of a felony is a policy that these data suggest is directly related to lower levels of recidivism than are found among those who are formally labeled as a convicted felon. In this case, minimizing harm at the individual level has consequences for reducing harm in the broader community.*



## Section 9

---

### **What types of sanctions other than imprisonment are states using to respond to technical violations of probation and parole?**

In every state, technical violations that result in returns to prison contribute significantly to the size of the prison population. In Colorado, approximately 3,300 parolees were returned to state prison for technical violations in FY 2008 (O’Keefe and Barr, 2009), representing 30% of all admissions that year.

Many of the technical violations are drug related. While data on the frequency of drug use violations on parolees returning to prison is unavailable, an analysis by the Division of Criminal Justice of technical violations leading to termination in community corrections found that 36% were drug related (Hetz-Burrell and English, 2006).

This trend has led many jurisdictions to reconsider traditional approaches to offenders who violate the conditions of probation and parole supervision. Several states have developed sanctioning grids that promote community-based alternatives to incarceration. In general, these grids structure the response to violations by weighing the seriousness of the violation behavior, the risk level of the offender (risk of reoffense), and the frequency of violation behaviors. The range of sanctions can include minimal responses, such as a reprimand, home visit, reduction in privileges, or an increase in face-to-face contacts with the supervising officer, to more serious consequences that impose greater structure and restrictions on the offender, such as curfews, urinalysis testing, assignment to new programming such as outpatient counseling, electronic monitoring, and community service. Residential treatment and very short periods of incarceration are sometimes options in the sanctioning grids. Return to longer-term incarceration is often the response for the most serious violations by the highest risk offenders.

This systematic approach to technical violations offers important advantages beyond emphasizing non-incarceration alternatives to noncompliant behavior. When combined with risk and needs

***Several states have developed sanctioning grids that promote community-based alternatives to incarceration for parole and probation technical violations.***

assessment and other evidence-based approaches to correctional practice, officers are empowered to individualize sanctions with recidivism reduction as a goal. Violation behavior can be assessed as part of the offender’s entire situation including work and family issues, problems with children, financial pressure and, most importantly for those addicted to substances, relapse.

Examples of some of these new approaches to responding to technical violations are provided below.

#### **Problem solving rather than zero-tolerance**

A variety of measures have been employed by states as an alternative to revocation when an offender on probation or parole commits a technical violation of the conditions of supervision. One of the more common but informal approaches is for parole and probation departments to shift away from a zero tolerance policy - where a missed meeting or failed drug test by an offender might result in a violation and possible revocation - towards a more comprehensive, problem-solving approach. Instead of waiting for the offender to make a mistake or sanctioning every noncompliant act, supervision officers dig deeper into the circumstances behind a violation and then work with the offender to resolve the underlying problem. Frequently, substance abuse, mental health, employment, transportation and similar issues are either the cause or a contributing factor

***Many parole and probation departments are shifting away from a zero tolerance policy - where a missed meeting or failed drug test by an offender might result in a violation and possible revocation - towards a more comprehensive, problem-solving approach.***

in noncompliant behavior. When the supervising officer takes the time and makes the effort to identify these types of underlying problems and resolve them by helping the offender obtain needed services or assistance, the likelihood of future violations or unlawful behavior by the offender is reduced. Overall, the new philosophy seeks to enhance public safety by helping offenders successfully reenter society.

### **Enhanced supervision with services**

Another common approach is to impose more stringent reporting and supervision requirements on the offender while also taking steps to further address the offender's criminogenic needs. A prime example is requiring the offender to report to a day reporting center on a regular basis.

Day reporting has been used in community supervision for many years, but its use in responding to technical violations is a relatively new approach. Offenders are required to report to a specified location, usually on a daily basis, both for supervision and services. A day reporting center typically provides a single, centralized location where a large number of offenders go not only to report to supervision officers, but also to access a variety of services tailored to their individual needs. Services commonly available at a day reporting center include substance abuse treatment, mental health counseling, employment assistance, educational classes and life skills training.

A limited body of evidence suggests that day reporting centers have a positive impact on criminal justice outcomes. Craddock (2004), for example, found that offenders who completed a day reporting center program had lower rearrest rates than similar probationers who were not assigned to day reporting. And Martin et al. (2000)

***Day reporting is increasingly being used in response to technical violations. A day reporting center typically provides a single, centralized location where a large number of offenders go not only to report to supervision officers, but also to access a variety of services tailored to their individual needs.***

found that offenders who spent longer time periods in day reporting (at least 70 days) had significantly lower post-program rearrest and reincarceration rates than offenders who spent fewer than 10 days in day reporting.

### **Kansas' use of day reporting**

Kansas has been able to reduce parole and probation revocations significantly in recent years. In FY 2002, for example, 203 parolees on average were returned to prison each month. By year-end 2008, that number had declined to an average of 99 per month. While a number of factors – such as the use of risk assessment and a shift from an emphasis on revocation to successful offender reentry - had much to do with the decline in revocations, the use of day reporting centers was also a key ingredient in the reduction of parole returns to prison.

Kansas operates two day reporting center programs run under contract by Colorado-based BI, Inc. The centers supervise up to 140 low-risk offenders at a time. Parolees who otherwise would have had their community supervision revoked for a violation such as drug possession are required to report to the day reporting center three to six days a week for six to nine months. Offenders may also be required to abide by curfews, participate in community service, take random drug tests or have their movements tracked using electronic GPS monitoring. Services that help the offender address substance abuse, mental health, employment and other problems are also staples in these centers.

### **Flash incarceration**

A sanction that appears to be becoming more popular for use with technical violators is “flash” or shock incarceration. Flash incarceration is the use of a brief period of incarceration – usually a brief jail term – as a sanction for a technical violation. The period of incarceration may be as little as a few days, as the focus is on the swiftness and certainty of the sanction, rather than its duration. Flash incarceration is intended to hold noncompliant offenders accountable for their actions and, hopefully, deter them from future violations or criminal acts. In some states, such as Hawaii and Oregon (see below), flash incarceration can be imposed without the delay and formality associated with a revocation

***"Flash" incarceration, a brief period of incarceration – usually a brief jail term – is a sanction that appears to be becoming more popular for use with technical violators. The period of incarceration may be as little as a few days, as the focus is on the swiftness and certainty of the sanction, rather than its duration.***

hearing. The period of incarceration can lengthen for subsequent technical violations.

While flash incarceration is a relatively new way to sanction probation and parole violators, the concept of immediate and short-term confinement has been used with noncompliant drug court clients for years. Still, the approach lacks a sound body of empirical evidence demonstrating or refuting its effectiveness. However, the results from a study of a program in Hawaii that employs flash incarceration, described below, have been generally positive.

### **Hawaii's Opportunity Probation with Enforcement (HOPE) program**

Hawaii's Opportunity Probation with Enforcement (HOPE) program provides supervision and services to probationers in Honolulu, Hawaii. Started as a pilot program with 34 chronic probation violators in 2004, HOPE has both general and specialized probation units serving more than 1,000 probationers altogether today. The program employs a number of practices, including:

- A clear warning to probationers that if they violate the rules, they will go to jail
- Treatment services for those who need them
- Random drug testing at least once per week for the first 2 months of the program; a positive or missed test results in arrest
- Flash incarceration involving as little as two days in jail, with the incarceration period gradually increasing to a few weeks for successive violations
- Court-ordered residential treatment for substance abusing repeat violators

In the HOPE program, the flash incarceration sanction can be imposed almost immediately after a technical violation is identified. This immediate response is possible because flash incarceration is identified as a modification to probation which curtails the revocation hearing process. Hearings, when necessary, are typically held within two days of a violation.

An assessment of the program conducted by Hawken and Kleiman (2008) suggests that HOPE has been effective. Probationers assigned to HOPE were found to have significantly less drug use and fewer new arrests and probation revocations than their comparison group counterparts. Arrest rates for the comparison group were three times higher than they were for HOPE program participants in the specialized probation unit. Likewise, the revocation rate was 31% for the comparison group but only 9% for HOPE program participants. In addition, a comparison of six-month follow up data with three-month baseline data revealed that HOPE participants had a 91% reduction in positive urine screens.

Since the HOPE program employed a number of interventions (i.e., drug testing, treatment and flash incarceration), it is difficult to attribute the program's positive outcomes to flash incarceration alone. Nevertheless, flash incarceration was a prominent feature of the program, and Hawken and Kleiman's findings suggest that the effectiveness of this approach be studied in a more in depth manner and in other jurisdictions.

### **Structured sanctions**

Structured and graduated sanctions, including the use of a sanction grid, are another approach being used to respond to technical violations in several states. Structured sanctions typically involve a graduated continuum of responses to technical violations that increase in severity with the violation behavior. Sanctions at the lower end of the continuum might involve increased face to face contact, curfews, community service, treatment program assignment, urinalysis, home visits, outpatient counseling or stricter supervision requirements. Those sanctions at the higher end, for the most serious infractions by the most risky offenders might involve periods of incarceration. According to the Vera Institute of

Justice, nine states have established formal graduated response grids since 2007 alone.<sup>87</sup>

The structured sanction systems in place in various states across the country range from loosely structured guidelines or menus of options to highly structured decision making matrices. While significant variation exists, structured sanction systems across the country also tend to share common characteristics. These include an immediate and certain response to violations of supervision conditions and the use of graduated sanctions that are proportional to the violation and the reoffending risk presented by the offender. Community-based responses to probation and parole violations are typically preferred where appropriate to avoid revocation and imprisonment. Structured sanctions may also include guidelines for reducing supervision levels or otherwise providing incentives and positive reinforcement for appropriate and law abiding behavior. Advocates also point out that the use of structured systems, particularly sanction grids, helps reduce disparity in the way offenders are managed, thereby enhancing fairness and transparency in the decision making process.

**Structured sanctions typically involve a graduated continuum of responses to technical violations that increase in severity with the violation behavior.**

### Oregon's Administrative Sanctions Initiative

The state of Oregon has used structured sanctions in community corrections for more than 15 years. According to the Oregon Department of Corrections, probation and parole officers have the authority to apply immediate consequences to offenders when they violate conditions of supervision. A sanctioning grid is used to structure decision making and direct the appropriate response to a particular offender for a particular violation. The grid helps ensure that responses to violations are consistently applied.

<sup>87</sup> Scott-Hayward, S. (2009). *The Fiscal Crisis in Corrections: Rethinking Policies and Practices*. Vera Institute of Justice. New York, NY.

The goals of Oregon's structured or "administrative" sanctions program are:

- To make community supervision more effective in protecting the public by responding to supervision violations swiftly and with certainty
- To reduce the number of violators who require revocation by responding to violating behavior before it reaches a level of seriousness requiring incarceration and by making sure all appropriate intermediate community alternatives are used before revocation
- To ensure that similar violators who commit similar violations are similarly punished
- To reduce the cost to the public associated with judicially conducted probation violation hearings and effect future cost reductions in judicial/court time, indigent defense, district attorney time, probation/parole officer time
- To set priorities for the use of criminal justice resources and provide more consistent use of intermediate punishments<sup>88</sup>

If an offender fails to follow a condition of supervision (i.e., missing appointments, failing to enroll in treatment, or using drugs), the supervising officer has the authority to impose a sanction without going to court or to the parole board. The sanction is determined by a grid that takes into account the risk level of the offender, his or her crime of conviction, and the seriousness of the violation. Sanctions include jail time but can also include a range of intermediate sanctions such as residential treatment, work release, house arrest, and community service.

An assessment of Oregon's structured sanctions program was conducted by the National Council on Crime and Delinquency (Baird et al. 1995).<sup>89</sup> The study found that probationers subject to structured sanctions were less likely to be convicted and sentenced for new offenses than their comparison group counterparts. An analysis of the intermediate sanctions program in two counties found a 56% reduction in drug use using

<sup>88</sup> Oregon Department of Corrections website at: <http://www.doc.state.or.us/DOC/TRANS/CC/whatiscc.shtml>. Accessed August, 19, 2009.

<sup>89</sup> Baird, S.C., Wagner, D. and DeComo, R. (1995). *Evaluation of the Impact of Oregon's Structured Sanctions Program*. National Council on Crime and Delinquency.

repeated short jail stays following positive urine screens.

### **South Dakota**

South Dakota is another example of a state using a graduated response grid. The state's Policy Driven Responses to Technical Parole Violations (PDR) initiative involves the use of a matrix called the "Violation Severity Level Scale." The matrix lists supervision conditions, possible violations of those conditions, and a range of possible sanctions for each violation. Supervising officers consult the matrix to identify and select an appropriate sanction when a supervision violation is detected. This clarity helps the offender understand the supervision expectations and consequences for not meeting those expectations. The list of sanctions allows the officer to individualize the consequences by considering the circumstances of each offender.

It is important to recognize that South Dakota's matrix is part of a comprehensive offender management system. PDR's are used in determining a "response to supervision" score on each offender's risk assessment. The risk assessment (or the supervision level it assigns to each offender) then determines, in part, the level at which the offender will be sanctioned for future violations of supervision. Thus, the two instruments/processes (risk assessment and PDRs) work in tandem to ensure public safety, to allow for frequent reclassification of offenders based on recent changes in behavior and circumstance, and to guide parole agent decision making.<sup>90</sup>

### **The Ohio Graduated Sanction Grid**

The Ohio Adult Parole Authority (APA) has also developed a sanction grid. The grid is embedded within broader Department of Correction's policy governing parole violations. It serves as a structured decision making tool that provides guidance in imposing sanctions based on offender risk and violation severity (Martin and Van Dine, 2008: vii). Ohio's grid and overall approach reflects the Department's effort to shift from punitive control toward a balanced, community-level response.

Violent crimes, weapons violations, sexual misconduct, and leaving the state without permission require a violation hearing and sometimes a new criminal charge, but other violations of the terms of supervision are classified as high- or low-severity violations and addressed through the use of the grid. Examples of high-level violations are absconding, violations of protective orders, victim contact, and program terminations, while low-level violations include reporting violations, substance abuse, and curfew violations.

While the sanction grid used in Ohio is similar to violation response matrices used in other states, it does not govern revocation decisions or provide menus of the sanctions to be imposed for specific violations. Rather, it refers to levels of organizational response where specific sanctions are then imposed pursuant to statute. Specifically, Ohio's sanction grid is based on four graduated levels of response. Unit-level sanctions are imposed by *local* supervising units. These sanctions include more restrictive conditions or supervision levels, drug testing, referral to a specialized treatment program or services in the community, and halfway house and/or non-residential program placement. The three other sanction types are a parole board summons (which typically involves a new sanction and parole board involvement in the offender's supervision); an out-of-custody hearing, used for non-violent violations; and an in-custody hearing, typically used for offenders who have committed a serious violation or have exhausted all possible community resources. Sanction history is incorporated into the decision making process at all levels of organizational response.

Ohio's grid allows multiple sanction episodes to take place within the unit-level response, but the number of local sanctions allowed decreases with offender risk and violation severity. Likewise, one or more parole board summonses are typically used before an offender is required to have a hearing. According to Martin and Van Dine (2008:8), the break between local and hearing-level responses to parole violations constitutes the main progressive element of the Ohio system. While it is less structured and incremental than other graduated sanction systems, it preserves discretion and provides opportunities for more tailored responses to parole violations.

---

<sup>90</sup> Personal correspondence with Doug Clark, Parole Services Director, South Dakota Department of Corrections. August 27, 2009.

Martin and Van Dine (2008: vii) evaluated the effectiveness of Ohio's graduated sanctions guidelines and found a significant decrease in the number of revocation hearings, revocation sanctions, and the use of local jail detention. Further, combining treatment services with restrictive sanctioning also significantly reduced recidivism for high-risk offenders.



## Section 10

---

### **What are some of the most significant state-level drug policy reforms enacted in recent years?**

Several states have enacted sentencing or correctional reforms related to drug offenders. These reforms range from minor sentencing changes that apply only to offenders convicted of certain drug law violations to major policy shifts aimed at treating substance abuse as a public health problem. Some states have taken steps to reduce harsh sentences for a broad range of drug offenders as well. Examples of several of the most significant state-level drug policy reforms undertaken in recent years are provided below.

***Several states have enacted sentencing or correctional reforms related to drug offenders. These reforms range from minor sentencing changes that apply only to offenders convicted of certain drug law violations to major policy shifts aimed at treating substance abuse as a public health problem.***

#### **Arizona**

Arizona became one of the first states to enact major drug policy reform when voters passed Proposition 200, the Drug Medicalization, Prevention, and Control Act, in 1996. The centerpiece of the Act is the diversion of certain non-violent drug offenders from prison. The Act requires a court to sentence first and second time non-violent offenders who are convicted of personal possession or use of a controlled substance to probation and drug treatment.<sup>91</sup> Prior to the passage of Proposition 200, a person convicted of possession or use of a controlled

substance could receive a prison sentence. Incarceration is no longer a sentencing option for these offenders under the new law. In 2002, however, the Arizona legislature amended the Act by enabling judges to impose a term of incarceration in cases where first or second time possession offenders refuse treatment or reject probation at the time of sentencing.<sup>92</sup>

***Arizona's Drug Medicalization, Prevention, and Control Act requires a court to sentence first and second time non-violent offenders who are convicted of possession or use of a controlled substance to probation and drug treatment.***

Proposition 200 also granted potential relief to offenders currently incarcerated on a drug possession conviction. Anyone sentenced to prison for drug possession or use prior to the law's enactment could petition the court and be released on parole provided they would have been eligible for probation under the new statute.

The Act also increased funding for drug treatment by creating the Drug Treatment and Education Fund (DTEF). The DTEF is supported with revenue from taxes imposed on alcohol. According to the Administrative Office of the Courts in Arizona (2006:5), 50% of the money deposited into the DTEF is distributed to probation departments throughout the state to cover the costs of drug education and treatment services provided to offenders sentenced under the new law. Once the costs of services for these offenders are paid, probation departments are allowed to use the remaining funds to pay for treatment services for other probationers. The remaining

***Arizona also increased funding for drug treatment by creating the Drug Treatment and Education Fund (DTEF). The DTEF is supported with revenue from taxes imposed on alcohol.***

---

<sup>91</sup> Arizona Supreme Court, Administrative Office of the Courts. (2006). *Drug Treatment and Education Fund, Report Detailing Fiscal Year 2005*. Arizona Supreme Court, Administrative Office of the Courts, Adult Probation Services Division. Phoenix, Arizona. Page 4.

---

<sup>92</sup> Ibid.



50% of the DTEF funds are provided to the Arizona Parents Commission on Drug Education and Prevention for education and prevention programs involving parents.

Proposition 200 also required the Administrative Office of the Courts (AOC) in Arizona to report on the cost savings realized from the diversion of persons from prison to probation under the new law. In its most recent report, AOC reported that 8,575 probationers participated in substance abuse treatment funded by the DTEF during FY 2005 alone. As a result of the diversion of drug possession offenders from incarceration into treatment, AOC estimated that the state avoided more than \$11.7 million in prison costs during FY 2005.<sup>93</sup>

### Kansas

Kansas has received national attention in recent years for its success in reducing prison population growth. In FY 2004, the average daily prison population in Kansas was 9,126. By FY 2008, that number had dropped to 8,773.<sup>94</sup> While the state's success in curbing prison population growth is due to several factors (see Section 9), a shift in state policy regarding drug offenders has played a significant role.

In 2003, the Kansas legislature passed Senate Bill (SB) 123 which was designed to provide community supervision and drug treatment to offenders with drug abuse problems in order to reserve correctional facility capacity for more serious, violent offenders.<sup>95</sup> Specifically, the legislation created a non-prison sentence of drug abuse treatment. It also required judges to sentence certain offenders convicted of felony drug possession to community-based supervision and treatment instead of incarceration.<sup>96</sup> While the state's sentencing guidelines specify the offenses that are eligible for diversion into treatment under the new law, non-violent adult offenders sentenced for a first or second drug possession offense (with no prior felony convictions for drug trafficking, drug

***In 2003, the Kansas legislature passed Senate Bill 123 which was designed to provide community supervision and drug treatment to offenders with drug abuse problems in order to reserve correctional facility capacity for more serious, violent offenders.***

manufacturing or drug possession with intent to sell) are generally treatment eligible.

Under SB 123, offenders are sentenced to community-based substance abuse treatment until they are deemed suitable for discharge, but not for longer than 18 months. Treatment options include detoxification, drug education, outpatient treatment, and residential treatment. Offenders are supervised during their time in treatment by community corrections officers. Successful completion of treatment results in release from supervision, but all offenders sentenced under SB 123 have a felony conviction on their record. Offenders convicted of a new felony during treatment or found by the court to have a pattern of refusal to comply or participate in treatment can have their treatment sentence revoked and be subject to sentencing according to statute.

The Kansas Department of Corrections is responsible for the certification of all providers who treat offenders sentenced under SB123. The cost for all drug abuse assessments and treatment is paid by the Kansas Sentencing Commission from funds appropriated by the legislature for this purpose. State costs are offset by payments made by offenders who are deemed able to pay by the court.

In 2005, the Kansas Sentencing Commission contracted with the Vera Institute of Justice to conduct an implementation evaluation of SB 123 (Stemen and Rengifo, 2006). The study period for the evaluation covered November 1, 2003 through May 31, 2005. Although SB 123 required judges to sentence all eligible offenders to community-based treatment, the researchers found that only 72% of the eligible offenders received SB 123 sentences during the study period. On average, eligible offenders sentenced to SB 123 also received slightly longer sentences (16.6 months)

<sup>93</sup> Ibid.

<sup>94</sup> Kansas Department of Corrections. (2008). *Statistical Profile, FY 2008 Offender Population*. Page 18.

<sup>95</sup> Kansas Department of Corrections. <http://www.doc.ks.gov/2003-sb-123>. Accessed August 18, 2009.

<sup>96</sup> Marijuana possession remained a class A misdemeanor.

than eligible offenders sentenced to a regular community corrections sentence (15.3 months). About 9% of all SB 123 sentences imposed during the study period were for ineligible offenders.

Only 60% of community corrections officers and drug treatment counselors surveyed for the evaluation believed that SB 123 offenders were getting the treatment they needed. Treatment availability in rural parts of the state was a significant concern. While the number of offenders discharged from a SB 123 sentence was small at the time of the study, SB 123 offenders had a higher success rate and lower incidence of revocations than drug possession offenders sentenced to regular community corrections.<sup>97</sup> More intensive treatment and supervision levels appeared to be linked with better outcomes (Stemen and Rengifo, 2006:ii-v).

***Stemen and Rengifo (2006) found that SB 123 offenders had a higher success rate and lower incidence of probation revocations than drug possession offenders sentenced to regular community corrections. However, in a survey of community corrections officers and drug treatment counselors, only 60% of the respondents reported that they believed SB 123 offenders were getting the treatment they needed. Treatment availability in rural parts of the state was a significant concern.***

More recently, the Kansas Sentencing Commission reported that 6,776 offenders were assessed and treated under SB 123 between November 2003 – when the law was enacted - and March 2009.<sup>98</sup> Many of these offenders previously would have been incarcerated (a second or third possession conviction previously carried a presumptive prison sentence). Through FY 2008, an estimated

\$38 million in prison operating costs were avoided because of SB 123 (Table 4). Even when the treatment costs of SB 123 are factored in, the state saved nearly \$7.5 million by diverting drug offenders into treatment through FY 2008. This does not include savings from avoided prison construction costs. Sentencing Commission researchers estimated that SB 123 saved the state more than 400 prison beds in FY 2008 (Table 4). About 400-500 beds are projected to be saved each year for the foreseeable future due to diversion under SB 123.

**Table 4  
Cost of SB 123 and Benefits Produced (Prison Beds Avoided, Prison Costs Avoided and Total State Savings) Fiscal Years 2004 - 2008**

Fiscal Year	Prison Beds Avoided	Prison Operating Costs Avoided	SB123 Treatment Costs	Total State Savings
2004	79	\$1,975,000	\$982,482	\$992,518
2005	270	\$6,750,000	\$4,950,701	\$1,799,299
2006	379	\$9,475,000	\$7,647,406	\$1,827,594
2007	387	\$9,675,000	\$8,437,546	\$1,237,454
2008	405	\$10,125,000	\$8,504,206	\$1,620,794
Total	1520	\$38,000,000	\$30,522,341	\$7,477,659

Source: Kansas Sentencing Commission<sup>99</sup>

### California

One of the most significant drug policy reform efforts to date has taken place in California under the state’s Substance Abuse and Crime Prevention Act (SACPA) of 2000. Better known as Proposition 36 (Prop 36), the law drastically changed the way many substance abusing offenders are handled in California. Under the new law, adults convicted of non-violent drug possession or use offenses who meet eligibility criteria must be sentenced to probation with substance abuse treatment instead of either probation without treatment or a term of incarceration. Individuals convicted for the first or second time of possession or being under the

<sup>97</sup> The outcome analysis was based on 280 offenders.  
<sup>98</sup> Kansas Sentencing Commission presentation at the June 11, 2009 SB 123 Update Conference. Kansas Sentencing Commission website:  
<http://www.kansas.gov/ksc/sb123/SB123WichitaUpdateConf061109.pdf>. Accessed August, 19, 2009.

<sup>99</sup> Ibid.

influence of an illicit drug are typically eligible for Prop 36 treatment.<sup>100</sup> Offenders are generally excluded from Prop 36 treatment if they have a prior conviction for a serious or violent felony unless they have served their prison time and have been out of prison for five years with no felony convictions or misdemeanor convictions involving violence. Offenders on probation or parole who commit non-violent drug offenses or who violate drug related conditions of their release may also receive treatment under Prop 36.

Prop 36 represents a major policy shift whereby substance abuse is largely removed from the criminal justice system for most drug possession offenders and dealt with in the public health system. It statutorily mandates that eligible offenders be sentenced to community-based treatment. Incarceration is no longer a sentencing option for these offenders. They may be imprisoned only if they violate supervision conditions through behaviors other than drug possession or use or if they repeatedly fail in community-based treatment. In fact, the law requires that initial treatment failures be reengaged in treatment services.

Offenders sentenced under Prop 36 are placed on probation and required to complete a substance abuse treatment program lasting up to one year. Levels of care may include drug education,

outpatient treatment, short- and long-term residential treatment, and narcotic replacement therapy (methadone maintenance) for heroin abusers (Urada et al. 2008:13). The court sets supervision conditions that may include drug testing, contact with a probation officer and other restrictions. Once the offender successfully completes treatment, charges may be dismissed and the arrest and conviction record effectively sealed. Violating the conditions of community supervision may result in a revocation of probation if the violation is not directly related to drug use. A drug-related probation violation or an arrest for a non-violent drug possession offense can result in treatment termination and removal from community supervision only upon a third occurrence. Parole violators sent to treatment under Prop 36 are handled somewhat differently. Parole authorities set the conditions of supervision for a parolee in treatment and can return serious or repeat violators of those conditions to prison.

***When an offender sentenced under Prop 36 successfully completes treatment, charges may be dismissed and the arrest and conviction record effectively sealed.***

***California's Substance Abuse and Crime Prevention Act of 2000, better known as Prop 36, represents a major policy shift whereby substance abuse is largely removed from the criminal justice system for many drug offenders and dealt with in the public health system. Incarceration is not an option for non-violent offenders convicted for the first or second time of drug possession or use, even if the offender has multiple prior convictions for certain types of other crimes.***

Prop 36 provided a major new funding stream for treatment providers throughout the state. Once Prop 36 was enacted, a direct appropriation that did not require legislative or gubernatorial approval was mandated in the amount of \$120 million annually through the 2006 fiscal year. The legislature then approved funding amounts of \$145 million in FY 2007, and \$120 million in FY 2008.<sup>101</sup> This significantly expanded the availability of treatment for criminal justice clients.

The success of Prop 36 has been debated, primarily because of concerns about a lack of offender compliance with treatment provisions. Roughly 25% of the offenders referred to treatment under Prop 36 do not enter treatment.

<sup>100</sup> Offenders with two prior Prop 36 sentences are generally not eligible for Prop 36 treatment again.

<sup>101</sup> This includes \$25 million in FY 2007 and \$20 million in FY 2008 for the Offender Treatment Program which was created by the legislature for the purpose of improving Prop 36 performance and outcomes.

Among those offenders that do enter treatment, about 1 out of every 3 completes it successfully.

An independent evaluation of Prop 36 found that diverting substance abusing offenders into treatment under Prop 36 yielded significant cost savings to state and local governments (Hawken et al, 2008). Over a 42-month period, \$2 was saved for every \$1 invested in Prop 36. The return on investment was even greater - \$4 saved for every \$1 invested in Prop 36 - for those offenders completing treatment. Reoffending was also consistently lower among Prop 36 offenders who completed treatment compared to offenders who did not.

California's escalating prison population and the fact that more than 23,000 inmates are serving a life sentence masks the overall impact of Prop 36. Since the law's enactment, annual prison admissions for drug offenses in California have fallen from 14,397 in 2000 to 13,380 in 2007.<sup>102</sup> This drop occurred despite a 12% increase in felony drug arrests over the same time period.<sup>103</sup> The number of drug offenders in prison has declined as well, falling 24% between year-end 2000 and year-end 2007. There were 43,998 drug

***The success of Prop 36 has been debated, primarily because of concerns about a lack of offender compliance with treatment. An independent evaluation of Prop 36, however, found that diverting substance abusing offenders into treatment yielded significant cost savings to state and local governments. Over a 42-month period, \$2 was saved for every \$1 invested in Prop 36. The return on investment was even greater - \$4 saved for every \$1 invested - for those offenders completing treatment.***

***Since the enactment of Prop 36 in November 2000, annual prison admissions for drug offenses in California have declined. This drop occurred despite an increase in drug arrests. The number of drug offenders in prison in California has declined as well, falling 24% between year-end 2000 and year-end 2007.***

offenders in prison at year-end 2000 (27.6% of the total inmate population), compared to 33,378 at year-end 2007 (19.8% of the total inmate population). Over the same time period, California's total inmate population increased 6.7%, from 160,655 to 171,444 inmates.

Prop 36 was enacted in California by voter initiative and passed with 61% of the vote. Since the law's enactment, legislation has been introduced to change its provisions. In 2006, Senate Bill (SB) 1137, which enabled judges to incarcerate people who suffer drug relapses during treatment, was passed by the California legislature and signed by Governor Schwarzenegger. The constitutionality of SB 1137 was immediately challenged by Cliff Gardner, the official ballot proponent of Prop 36, as well as by the California Society of Addiction Medicine (CSAM) and the Drug Policy Alliance (DPA). CSAM and DPA also filed suit to block the implementation of SB 1137. A temporary restraining order followed by a preliminary injunction stopped SB 1137 from being implemented while the court is considering its constitutionality.

While Prop 36 is still operating in its original form, the state budget passed in the 2009 legislative session significantly reduced funding for many state programs, including Prop 36. Overall, Prop 36 funding was cut by about \$90 million, to \$18 million for the 2009-2010 fiscal year.<sup>104</sup> While the sentencing requirements of Prop 36 will still be in effect, treatment capacity is expected to sharply decline. As a result, advocates of Prop 36 have argued that the state's ability to treat and monitor

<sup>102</sup> *California Prisoners and Parolees 2007* and *California Prisoners and Parolees 2001*. California Department of Corrections and Rehabilitation.

<sup>103</sup> *Crime in California 2007* and *Crime and Delinquency in California 2000*. California Department of Justice.

<sup>104</sup> *July 2009 Budget Package*, Legislative Analyst's Office, State of California.



Prop 36 offenders will be decimated. Indeed, researchers at UCLA have previously recommended that Prop 36 be funded at an annual amount of \$229 million to ensure that adequate treatment capacity is available for Prop 36 offenders.

## New York

New York has enacted a series of reforms that may be the most far-reaching to date. These reforms have focused on changing the provisions of certain state statutes that are often referred to as the Rockefeller Drug Laws. Enacted in the 1970s under then Governor Nelson Rockefeller, these laws were among the harshest in the nation because they mandated lengthy minimum prison sentences for many drug offenders, even those with no prior convictions.

In 2004, the New York legislature eliminated the stiffest provisions of the Rockefeller laws, including life sentences for certain drug crimes. In addition, New York's drug sentencing scheme was changed from an indeterminate sentencing system to a determinate sentencing system so that all drug offenders would be sentenced to a fixed term, rather than a parole-eligible sentencing range. The 2004 law generally lowered sentence lengths for non-violent drug offenders but increased sentence lengths for drug offenders with a history of violence.

Far more sweeping changes were signed into law as part of the state budget bill in 2009. Like California's Prop 36, New York's 2009 drug law reform legislation reflects a major policy shift away from strict criminal penalties for many substance abusing offenders to treatment in the public health system. As the summary of Bill A6085 states:

*Thirty-five years of a drug policy focused on punishing drug users and spending billions of dollars on incarceration has failed to significantly reduce the use of drugs or the commission of drug-related crime. Instead, over the last three and a half decades, large numbers of drug abusers have been imprisoned, families and communities, particularly communities of color, have been harmed or destroyed, and billions of dollars have been devoted to incarceration while resources for prevention and treatment*

***“Thirty-five years of a drug policy focused on punishing drug users and spending billions of dollars on incarceration has failed to significantly reduce the use of drugs or the commission of drug-related crime. Instead, over the last three and a half decades, large numbers of drug abusers have been imprisoned, families and communities, particularly communities of color, have been harmed or destroyed, and billions of dollars have been devoted to incarceration while resources for prevention and treatment services have been drained.”***

***New York State Assembly Bill A6085 Summary (2009)***

*services have been drained. The dramatic and comprehensive reforms proposed by this legislation, if fully enacted, would over time significantly reduce the number of New Yorkers abusing and addicted to controlled substances and the incidence of drug-related crimes.<sup>105</sup>*

New York's 2009 reform legislation returns to judges much of the discretion they had before the enactment of the Rockefeller Drug Laws. Under the new law, judges are authorized to sentence eligible substance abusing offenders to probation and drug treatment rather than prison where appropriate. In response to a request from the prosecution or defense, the court may order a defendant charged with a drug crime – either possession or sale – or certain low-level property crimes, to submit to an alcohol or substance abuse assessment. If found to be in need of treatment and the court approves, the offender may enter a

<sup>105</sup> New York State Assembly *A06085 Summary*. Bill A06085 is referred to as Bill A6085. The summary is available at <http://assembly.state.ny.us/leg/?bn=A.6085>. The reform legislation referred to here was ultimately passed and became law as part of the budget bill (A 156-13 Budget and S 56-B Budget), now known as L 2009, ch 56.

***New York's 2009 reform legislation returns to judges much of the discretion they had before the enactment of the Rockefeller Drug Laws in the 1970s. Under the new law, a broad group of substance abusing offenders may be diverted by the court from prison into community-based treatment. Non-violent drug law violators – including those charged with possession and many sales offenses – and low-level, non-violent property offenders are generally eligible for judicial diversion. An assessment must find that the offender is in need of treatment for diversion to take place. Prosecutor consent for diversion into treatment is not required.***

provisional guilty plea and be diverted to a substance abuse treatment program.<sup>106</sup> Prosecutor consent is not necessary for diversion to take place. The diversion agreement between the court and the offender may provide terms for disposition of the case. Successfully completing treatment would typically result in a withdrawal of the guilty plea and dismissal of the charge, or withdrawal of the guilty plea and reduction of the charge to a misdemeanor with a probation sentence. Offenders that violate the terms of supervision and treatment may be sanctioned, and for a serious violation, be imprisoned.

New York's reform is particularly noteworthy because a broad group of offenders in need of treatment are now eligible for judicial diversion. Non-violent drug law violators charged with all but the most serious drug offenses are generally eligible for community-based treatment instead of incarceration, as are non-violent offenders charged with certain low-level property offenses. A drug selling charge does not automatically

<sup>106</sup> A guilty plea is not required if there are exceptional circumstances or the prosecutor consents.

disqualify a non-violent offender from diversion. Offenders generally ineligible for diversion are those charged with a violent offense, a serious property offense, or the most serious drug law violations. Offenders who, within the preceding 10 years, excluding time incarcerated, have been convicted of a Class A (the most serious) drug offense or a violent felony also are not eligible for diversion.

Another provision of the reform legislation affects the sealing of a criminal record. The bill authorizes the court on motion of the defendant to conditionally seal a first-time felony drug conviction (and arrest record) and up to three drug misdemeanor drug convictions if the defendant has remained crime-free for a specified period or has completed a court-ordered treatment program. Sealed records can still be seen by law enforcement and other qualified agencies. In addition, sealing may be provisionally undone if the individual is charged with a new crime, and permanently undone upon conviction.

***New York's new law authorizes the court on motion of the defendant to conditionally seal a first-time felony drug conviction (and arrest record) and up to three misdemeanor drug convictions if the defendant has remained crime-free for a specified period or has completed a court-ordered treatment program.***

The new law also expanded eligibility for placement in shock incarceration, also known as boot camp. The maximum eligible age for boot camp participation was raised to 50, and a prior exclusion of anyone sentenced to a determinate sentence of 3 ½ years or more was removed. In addition, direct court-ordered boot camp participation was authorized. First and second conviction non-violent offenders who have not previously served a prison sentence are eligible for shock incarceration. Certain drug offenders sentenced to shock incarceration under the new law would be required to serve six months in boot camp, receive intensive, in-prison drug abuse

treatment and then be mandated to participate in additional drug abuse treatment following release. The new law also gives courts the option to sentence certain persons convicted of non-violent offenses to a prison-based drug treatment program. This sentence would include at least 90 days imprisonment followed by community supervision and at least one year of post-release drug abuse treatment.

One of the key features of New York's drug laws is that the length of a prison sentence for many of the most serious crimes is based on the weight of the substance possessed, transferred or sold. The initial 2004 drug law reform increased the weight thresholds for some of the most serious cocaine and heroin possession crimes. The 2009 bill in similar fashion increases the weight thresholds for the most serious drug crimes that were not adjusted in the 2004 law. For example, unlawful possession of 625 milligrams of a hallucinogen was an A-II felony punishable by a determinate sentence of up to 10, 14 or 17 years. The bill raises the minimum A-II felony weight threshold for this crime to 1,250 milligrams, but retains the current maximum prison terms of 10, 14 or 17 years.

Provisions of the new law also allow about 1,500 of New York's 10,000 prison inmates serving time for a drug offense to apply for sentence reductions.

Finally, the 2009 reforms also created a new drug "kingpin" offense that targets organized drug traffickers as well as a new crime aimed at adults who sell drugs to children. Offenders convicted of these new offenses are required to serve time in prison.

## Washington

Washington state has enacted a series of reforms affecting drug offenders over the past decade. In 2002, the Washington legislature reduced the penalties for certain drug crimes and established a dedicated account with the savings from those reduced sentences to fund treatment for drug offenders.

Substitute House Bill 2338 reduced the severity of certain crimes involving the manufacture, delivery or possession of heroin or cocaine.<sup>107</sup> Under the

---

<sup>107</sup> For example, under the old law, first time delivery of cocaine held the same offense classification as manslaughter;

new law, drug offenses were placed in the lowest (least severe) felony class level. A new "drug sentencing grid" was also created for the sole purpose of sentencing offenders convicted of drug crimes.<sup>108</sup>

Provisions of the new law also specified that the Department of Corrections calculate the savings that results from reduced sentences. Seventy-five percent of those savings are then dedicated to a criminal justice treatment account. Seventy percent of those funds are distributed to counties for spending pursuant to an approved county or regional plan. The other 30% is distributed as grants to be used to treat drug offenders. The remaining 25% of the sentencing savings are provided to the Department of Corrections for the treatment of substance abusers in prison.<sup>109</sup>

Another component of Washington's reforms is the Drug Offender Sentencing Alternative (DOSA). Originally passed in 1995, DOSA allows certain eligible drug and property felony offenders to reduce their time in prison by 50% if they complete treatment and abide by other conditions. Generally, the sentence length is split between prison and community supervision if treatment is successfully completed. A motion for a DOSA sentence may be made by the court, the offender, or the state.

The original DOSA law was modified in 1999 and then again in 2005. Each of these modifications expanded the eligibility criteria for participating in treatment under DOSA. The original 1999 law, for example, generally allowed offenders convicted of drug possession or sales offenses to participate in DOSA treatment, provided they had no prior felony convictions. The 2005 law expanded DOSA eligibility to all non-violent felons, provided they had not served a DOSA sentence within the past 10 years and they had not been convicted of a sex offense.

The 2005 amendment also created a new community-based sentencing alternative under DOSA. This new provision allowed a non-violent offender with substance abuse addiction to be sentenced to community custody with supervised

---

under the new law, first time delivery of cocaine holds the same classification as theft over \$1,500.

<sup>108</sup> Washington courts 2002 legislative summary.

<sup>109</sup> Ibid.



residential substance abuse treatment.<sup>110</sup> Offenders sentenced in this manner are on probation and may be revoked and sent to prison for violating the terms of their community supervision. The conviction record for anyone successfully completing a DOSA sentence remains on the offender's criminal record.

An evaluation of DOSA conducted by the Washington State Institute for Public Policy found that prison-based DOSA significantly lowered recidivism rates for drug offenders (Drake, 2006). It did not have the same effect on substance abusing property offenders. A cost-benefit analysis also found that for drug offenders given a DOSA sentence, Washington state received between \$7 and \$10 in benefits for every \$1 of cost. The return on investment for drug-involved property offenders was far lower, only about \$1 in benefits was generated per \$1 dollar of cost (Aos et al., 2005).

**Washington's Drug Offender Sentencing Alternative allows most non-violent felons in need of treatment who are sent to prison to reduce their incarceration time by 50% if they complete treatment and abide by other conditions. Generally, the sentence length is split between prison and community supervision if treatment is successfully completed.**

## Maryland

Maryland has also enacted a diversion law for substance abusing offenders. Passed by the legislature in 2004, House Bill 295/Senate Bill 194, also called the Treatment Instead of Incarceration bill, enabled judges to divert non-violent drug-involved offenders to substance abuse treatment. Maryland's reform legislation is particularly noteworthy because, like in New York,

<sup>110</sup> Eligibility for a DOSA sentence is also affected by other criteria. For prison-based DOSA, the offender must have a standard sentence range greater than 12 months. Community-based DOSA is available only if the midpoint of the offender's standard sentence range is 24 months or less.

**Passed by the legislature in 2004, Maryland's Treatment Instead of Incarceration bill enabled judges to divert eligible non-violent drug-involved offenders to substance abuse treatment. Charges are dismissed upon successful completion of treatment. Offenders who successfully complete treatment may also have their record expunged.**

diversion into treatment is not restricted to offenders charged with a drug law violation. A broad group of non-violent offenders in need of treatment, excluding those charged with large scale drug distribution offenses, may be diverted into treatment at the court's discretion.

Diverted offenders have their charges placed on an inactive docket and charges are dismissed upon successful completion of treatment. Offenders who successfully complete treatment may also have their record expunged. Diverted offenders who violate the conditions of their treatment plan may be returned to court for prosecution on the original charges. Provisions of the law also allow prison inmates to be released on parole in order to undergo drug or alcohol treatment if the inmate is not serving a sentence for a crime of violence and has been determined to be amenable to drug or alcohol treatment.

Maryland's diversion law also created local drug and alcohol abuse councils that identify priorities and set strategies for providing substance abuse prevention, intervention and treatment services. The law also created the Maryland Substance Abuse Fund to offset the local costs of the councils and support treatment services for offenders. A fee charged to diverted offenders who are able to pay is used to support the fund.

## Hawaii

The Hawaii legislature passed Act 161 in 2002 in response to the state's growing methamphetamine problem. The Act mandated substance abuse treatment for all first-time non-violent offenders convicted of drug possession or

use. Offenders sentenced to treatment under Act 161 are placed on probation. Those successfully completing treatment may have their charges dismissed and expunged from their record. Offenders on probation or parole who commit drug-related technical violations of their community supervision, such as the possession or use of drugs, are also eligible for treatment placement under Act 161. Offenders on probation or parole cannot have their community supervision revoked for a first violation involving possession or use of drugs. They are required to continue treatment instead. If the offender fails to complete a treatment program and if no other suitable treatment is available, community supervision may be revoked and the offender may be incarcerated.

In 2004, an amendment to Act 161 expanded eligibility for diversion into treatment to any non-violent offender convicted of possession or use for the first time, regardless of past convictions for many other types of non-violent offenses. Offenders with prior violent or drug distribution convictions are still not eligible for diversion under the new provisions. The amendment also made diversionary treatment a discretionary rather than a mandatory sentence.

***Legislation passed in Hawaii in 2004 allows the court to sentence offenders convicted of drug possession or use for the first time to probation with substance abuse treatment, regardless of past convictions for many other types of non-violent offenses. Those offenders successfully completing treatment may have their charges dismissed and expunged from their record.***

## Montana

Montana is an interesting case study because the state's initial success at curbing prison population growth was spurred at least in part by the governor's political will. Between FY 2003 and FY 2006, Montana's average daily prison population increased 25%. In fiscal years 2007 and 2008, the

state's average daily prison population declined.<sup>111</sup> While drug policy reform was not undertaken per se, the governor's insistence that Montana move in a new direction and make greater use of community supervision and substance abuse treatment clearly played a role in the turnaround.

One of the hallmarks of Governor Schweitzer's push for a new policy direction was Executive Order 22, issued in 2005. The order stated that 80% of all inmates under the jurisdiction of the Department of Corrections (DOC) would be supervised in the community, and only 20% would be held in prison.<sup>112</sup> The governor's push for correctional reform is also evident in Executive Order 20 which revised the purpose and duties of Montana's Correctional Advisory Council. The Council provides guidance and recommendations to the governor and Department of Corrections regarding corrections policy. Executive Order 20 specifically directed the Council to consider various options for slowing prison population growth, reducing recidivism, and providing health care and treatment to offenders for mental illness and substance abuse. Minutes of the November 2005 Advisory Council meeting report that the governor challenged the Council to find new directions for corrections, emphasizing the importance of reentry and the methamphetamine problem.

In 2005 and 2007, the legislature approved new funding that expanded community corrections

***One of the hallmarks of Montana's push for a new policy direction was Executive Order 22, issued by Governor Schweitzer in 2005. The order stated that 80% of all inmates under the jurisdiction of the Department of Corrections would be supervised in the community, and only 20% would be held in prison.***

<sup>111</sup> Montana Department of Corrections, *2009 Biennial Report and 2007 Biennial Report*.

<sup>112</sup> Offenders sentenced to prison as well as those sentenced to probation are under the jurisdiction of the Montana Department of Corrections. The Department also supervises offenders on parole.

and substance abuse services for offenders. This expansion included the creation of 172 more prerelease beds, 120 community-based methamphetamine treatment beds, a 40-bed community-based DUI treatment center, and a 155-bed facility for women, featuring a prerelease center, substance abuse assessment and treatment, and a sanction center.

**Treatment expansion.** Montana's treatment expansion included two community-based methamphetamine treatment programs – believed to be the first of their kind in the nation. One is a 40-bed treatment center for female methamphetamine abusing offenders and the other is an 80-bed treatment center for male methamphetamine abusing offenders. Both are community-based and operated by the Montana Department of Corrections.

**Montana's substance abuse treatment expansion initiative included two community-based methamphetamine treatment programs for offenders – believed to be the first of their kind in the nation.**

The treatment centers generally provide services to offenders with two or more convictions for methamphetamine possession. Offenders spend nine months in intense treatment at the facility, followed by six months of aftercare at a prerelease center. Offenders can be sent to the centers directly by the court, by the Department of Corrections, or after violating conditions of parole or conditional release. In addition, the state Board of Pardons and Parole can make a stay at one of the centers a condition of an inmate's parole. In 2005, Montana also opened a new felony DUI treatment center as an extension of a previously existing program. The new treatment center provides services for up to 40 offenders as part of a six-month program for those convicted of fourth and subsequent DUIs.

Montana also has used federal grants to expand treatment capacity, particularly for methamphetamine abusers. The Montana Board of Crime Control was awarded a capacity expansion grant from SAMHSA in 2005. These dollars were used to expand methamphetamine

treatment through established providers to some of Montana's previously underserved rural counties. The target population of the expansion project was methamphetamine-addicted adults who lived within the defined service areas. They were largely un- or underemployed and living on incomes below federal poverty levels. The target population included a broad spectrum of pregnant women, adults with dependent children, families who had lost their children to the child welfare system, and men and women suffering from Post-Traumatic Stress Disorder (PTSD). Many had been involved with the criminal justice system; many more had co-occurring mental illnesses.<sup>113</sup> Treatment services were based on the Matrix Model and Contingency Management (see Section 5 for a description of these modalities).

One of the unique aspects of Montana's treatment expansion initiative was the institutionalization of services after grant dollars expired. According to the Montana Board of Crime Control, treatment providers were encouraged to seamlessly build methamphetamine treatment into their existing service structure and coached on implementing strategies that would help ensure that new treatment services would be sustained.

It is important to note that the Montana Board of Crime Control voiced concerns that their methamphetamine treatment outreach initiative was hurt by an ongoing media campaign designed to depict the negative consequences of methamphetamine use. Specifically, the intensely negative depiction of methamphetamine used in the campaign (including rape, prostitution, disease and death), caused a number of potential treatment clients to refrain from seeking treatment because of the stigma engendered by the media campaign.<sup>114</sup> This is an important point given the recent introduction of a similar methamphetamine media campaign in Colorado.

**Violations Center.** The Montana legislature also endorsed a new community corrections facility intended to serve as an alternative to incarceration for parolees who are noncompliant with the conditions of their release. The START (Sanction Treatment, Assessment, Revocation and

<sup>113</sup> Montana Board of Crime Control. (2009). *A Light at the End of the Tunnel: The Montana Adult Methamphetamine Treatment Coalition, 2009*. Montana Board of Crime Control. Helena, MT. page 7.

<sup>114</sup> Ibid.

Transition) Center is an 80-bed facility for male offenders who violate conditions of their parole, prerelease or conditional release placements. Offenders are typically sent to the START center for 30 days or less, but some offenders stay up to 120 days while corrections officials determine if further community placement is appropriate. After completing their stay in the START center, most offenders return to their previous status on parole, probation, prerelease or conditional release. While at the START center, offenders can continue to hold a job and participate in other law-abiding community activities.

Two new day reporting programs were also opened in 2006. These programs provide another alternative to incarceration for those offenders who have been unsuccessful with their community supervision.

In closing, it remains too early to conclude if the impact of Montana's reforms will be lasting or not. Montana's prison population may be starting to rise again, suggesting that the existing community corrections capacity is insufficient for a lasting effect.<sup>115</sup> While programs can be found in larger communities, Montana's size and geography make it difficult to reach everyone in need.

## Summary

The information presented here reflects a variety of approaches to state-level drug policy reform. While each state's approach is unique in terms of the scope and details of the correctional or sentencing policy changes enacted, common themes are also evident. These include the use of community-based substance abuse treatment instead of incarceration and the creation of dedicated funding streams to support offender treatment.

In most of the states profiled above, reform was enacted by the legislature. Arizona and California, however, both enacted significant drug policy reform through a ballot initiative directly passed by voters. Arizona's Proposition 200 passed with

---

<sup>115</sup> *Report to the Governor, Managing Montana's Growing Adult Offender Population*, Montana Department of Corrections Advisory Council, August 2009. New projections suggest that the Montana Department of Corrections total offender population – institutional and community corrections combined – will grow by an average of 3.9% annually between 2008 and 2025.

65% of the vote, while California's Proposition 36 passed with 61% of the vote.

Drug policy reforms enacted through the legislative process have been sponsored or passed by both major political parties, sometimes in the face of strong opposition from stakeholders in the criminal justice system. New York's 2009 reform legislation, for example, was passed by a legislature controlled by Democrats and signed by a Democratic governor, despite strong opposition by state prosecutors who argued that they needed mandatory prison sentences as a tool to get offenders to plead guilty to lesser crimes. In Kansas, SB 123 was passed by a Republican controlled legislature and signed by a Democratic governor, despite opposition from the Kansas Sheriffs' Association, the Kansas Attorney General, the Kansas Bureau of Investigation, and the Kansas Peace Officers Association. Maryland's Treatment Instead of Incarceration bill (HB 295/SB 194) was sponsored by a Republican governor and the Republican House leadership and passed with bi-partisan support in a legislature where Democrats held a majority. The legislation passed the Maryland Assembly 139-1, while the Senate voted unanimously for the bill. Opposition came primarily from judges who were concerned about losing discretion. The bill that became law did not make diversion into treatment mandatory for any offenders, but rather left the diversion decision in the hands of the court.

***Drug policy reforms enacted through the legislative process have been sponsored or passed by both major political parties, sometimes in the face of strong opposition from stakeholders in the criminal justice system.***

In each of the states profiled above, the use of treatment in lieu of incarceration was a centerpiece of reform. Arizona, California and Kansas made treatment instead of incarceration mandatory for certain offenders, while other states gave judges the discretion to divert certain offenders to substance abuse treatment. California generally prohibited the use of incarceration for diversion eligible offenders unless there are repeated failures in treatment, repeated violations of community supervision for drug possession or

use, or non-drug related violations of community supervision. While this policy has been a point of contention, advocates have argued that it is a necessary practice given the prevalence of relapse and the need to keep substance abusing offenders in treatment.

Another notable theme is that several states did not restrict diversion into treatment to first time drug possession offenders. New York and Maryland, for example, provided a treatment diversion option for a broad group of non-violent offenders in need of treatment, including some offenders charged with drug sales or property offenses. In California, only offenders convicted of drug possession or use are eligible for diversion into treatment under Proposition 36, but prior criminal convictions generally do not disqualify an offender from diversion unless they include a conviction for a violent or other serious offense or two prior treatment diversion failures.

***The use of treatment in lieu of incarceration has been a centerpiece of drug policy reform in several states. Eligibility for diversion into treatment has been extended in some states to a broad group of non-violent offenders in need of treatment – including those with several prior convictions and those charged with drug selling or non-drug crimes.***

Most of the states that enacted diversion into treatment allowed the underlying charge to be dismissed upon successful treatment completion. Several states also allowed the arrest and conviction record to be expunged or sealed. Parole and probation violators are eligible for diversion into treatment in several states, although these offenders are typically handled differently than someone sent to treatment directly by the court.

Most of the states profiled above created a dedicated funding stream to support substance abuse treatment for offenders. In California, the ballot initiative that mandated treatment instead of incarceration for many offenders convicted of

drug possession or use also mandated a direct annual appropriation for over five years to support offender treatment. Funding during that time period did not require legislative or gubernatorial approval. Arizona supports its treatment fund with a tax on alcohol. SB 123 in Kansas originally included a liquor tax as a funding source for treatment, but that provision was removed prior to the bill being passed. Tax increases on alcohol products have been shown to decrease alcohol consumption in the general population.<sup>116</sup>

Assessments of the impact of these reforms have been consistently positive. Overall, states that have enacted drug policy reform have realized significant savings or cost offsets due to a reduction in the use of incarceration.

---

<sup>116</sup> National Center on Addiction and Substance Abuse at Columbia University. (2009). *Shoveling Up II: The Impact of Substance Abuse on Federal, State and Local Budgets*. National Center on Addiction and Substance Abuse at Columbia University. New York, New York. Page 55.





## Bibliography

---

Alcohol and Drug Abuse Division (2007). *The Costs and Effectiveness of Substance Use Disorder Programs in the State of Colorado*. Report to the General Assembly House and Senate Committees On Health and Human Services. Department of Human Services. Denver, CO. Pages 10-11, 23.

Allgood, S., Mustard, D. and Warren, Jr., R.S. (2007). *The Impact of Youth Criminal Behavior on Adult Earnings*. Available at [http://www.terry.uga.edu/~rswjr/Crime\\_Paper\\_JHC\\_Version\\_August\\_6\\_2007.pdf](http://www.terry.uga.edu/~rswjr/Crime_Paper_JHC_Version_August_6_2007.pdf) Accessed August 29, 2009.

Andrews, S. and Janes, L. (2006). Ohio's evidence-based approach to community sanctions and supervision. In *Effectively Managing Violations and Revocations, Topics in Community Corrections, Annual Issue 2006*. National Institute of Corrections, Longmont, CO.

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

Aos, S., Miller, M. and Drake, E. (2006). *Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs, and Crime Rates*. Washington State Institute for Public Policy, Olympia, WA.

Aos, S., Phipps, P. and Barnoski, R. (2004). *Washington's Drug Offender Sentencing Alternative: An Evaluation of Benefits and Costs*. Washington State Institute for Public Policy. Olympia, WA.

Aos, S. (2003). *The Criminal Justice System in Washington State: Incarceration Rates, Taxpayer Costs, Crime Rates, and Prison Economics*. Washington State Institute for Public Policy, Olympia, WA.

Aos, S., Phipps, P., Barnoski, R. and Lieb, R. (2001). *The Comparative Costs and Benefits of Programs to Reduce Crime*. Washington State Institute for Public Policy, Olympia, WA.

Arizona Supreme Court, Administrative Office of the Courts (2006). *Drug Treatment and Education Fund, Report Detailing Fiscal Year 2005*. Arizona Supreme Court, Administrative Office of the Courts, Adult Probation Services Division, Phoenix, Arizona.

Baird, S.C., Wagner, D. and DeComo, R. (1995). *Evaluation of the Impact of Oregon's Structured Sanctions Program*. National Council on Crime and Delinquency, Madison, WI.

Belenko, S., Patapis, N. and French, M.T. (2005). *Economic Benefits of Drug Treatment: A critical review of the evidence for policy makers*. Treatment Research Institute at the University of Pennsylvania, Philadelphia, PA.

Bhati, A.S. (2007). *An Information Theoretic Method for Estimating the Number of Crimes Averted by Incarceration*. Urban Institute, Washington, DC.

Blumstein, A. and Nakamura, K. (2009). Redemption in the presence of widespread criminal background checks, *Criminology*, 47, 2.

Blumstein, A. and Nakamura, K. (2009). Redemption in an era of widespread criminal background checks. *NIJ Journal*, Issue No. 263. U.S. Department of Justice, National Institute of Justice. Washington, D.C.

Blumstein, A. (2000). Disaggregating the violence trends. In Blumstein, A., and Wallman, J. (eds.), *The Crime Drop in America*. Cambridge University Press, New York, NY.

Blumstein, A. and Wallman, J. (2000). *The Crime Drop in America*. Cambridge University Press, New York, NY.



- Blumstein, A. and Wallman, J. (2000). The recent rise and fall of American violence. In Blumstein, A., and Wallman, J. (eds.), *The Crime Drop in America*. Cambridge University Press, New York, NY
- Blumstein, A. and Beck, A. (1999). Population growth in U.S. prisons, 1980-1996. In Tonry, M. and Petersilia, J. (eds.), *Prisons* (pp. 17-61). University of Chicago Press. Chicago, IL.
- Bosley, B., Donner, C., McLean, C. and Toomey-Hale, E. (2002). *Parenting From Prison - A Resource Guide for Parents Incarcerated in Colorado*. Parenting from Prison Guide Committee, Denver, CO.
- Bureau of Justice Statistics (2000). *Correctional Populations in the United States, 1997*. Bureau of Justice Statistics, U.S. Department of Justice. Washington, D.C: (NCJ 177613)
- Burke, M., (2006). *2004 Reference and Background Checking Survey Report: A Study by the Society for Human Resource Management*. Society for Human Resource Management. Alexandria, VA.
- Bushway, S., Piquero, A., Broidy, L., Cauffman, E. and Mazerolle, P. (2001). An empirical framework for studying desistance as a process. *Criminology*, 39, 491-516.
- Bushway, S. (1996). *The Impact of a Criminal History Record on Access to Legitimate Employment*. PhD. Dissertation. Carnegie Mellon University, Pittsburgh, PA.
- California Department of Corrections and Rehabilitation (2008). *California Prisoners and Parolees 2007*. Department of Corrections and Rehabilitation, Offender Information Services Branch, Estimates and Statistical Analysis Section, Data Analysis Unit, Sacramento, CA.
- California Department of Corrections and Rehabilitation (2001). *California Prisoners and Parolees 2001*. Department of Corrections, Office of Correctional Planning, Offender Information Services Branch, Estimates and Statistical Analysis Section, Data Analysis Unit, Sacramento, CA.
- California Department of Justice (2008). *Crime in California 2007*. California Department of Justice, Division of California Justice Information Services, Bureau of Criminal Information and Analysis, Criminal Justice Statistics Center. Sacramento, CA.
- California Department of Justice (n.d.) *Crime and Delinquency in California 2000*. California Department of Justice, Division of Criminal Justice Information Services, Bureau of Criminal Information and Analysis.
- Carroll, K. (1997). Enhancing retention in clinical trials of psychosocial treatments: Practical strategies. In L. Onken, J. Blaine, & J. Boren (eds.), *Beyond the Therapeutic Alliance: Keeping the Drug-Dependent Individual in Treatment*. NIDA Research Monograph Series (No. 165, pp. 4-24). Washington, D.C.
- Carroll, K. (1996). Relapse prevention as a psychosocial treatment: A review of controlled clinical trials. *Experimental and Clinical Psychopharmacology*, 4, 46-54.
- Cartwright, W.S. (2000). Cost-benefit analysis of drug treatment services: Review of the literature. *Journal of Mental Health Policy and Economics*, 3, 11-26.
- Cartwright, W.S. (1998). Cost-benefit and cost-effectiveness analysis of drug abuse treatment services. *Evaluation Review*, 2, 609-36.
- Caulkins, J., Rydell, P., Schwabe, W. and Chiesa, J. (1997). *Research Brief: Are Mandatory Minimum Sentences Cost-effective?* Drug Policy Research Center, RAND. Santa Monica, CA.

Chanhatasilpa, C., MacKenzie, D. and Hickman, L. (2000). The effectiveness of community-based programs for chemically dependent offenders: A review and assessment of the research. *Journal of Substance Abuse Treatment*, 19, 383-393.

Chiricos, T., Barrick, K., Bales, W. and Bontrager, S. (2007). The labeling of convicted felons and the consequences for recidivism: A multi-level analysis. *Criminology*, 45, 547-581.

Clear, T., Waring, E. and Scully, K. (2005). Communities and reentry: concentrated reentry cycling. In Travis, J. and Visher, C. (eds.), *Prisoner Reentry and Public Safety in America*. Cambridge University Press, New York, NY.

Colorado Attorney General. (2006). Press release dated July 25, 2006.

Colorado Department of Corrections. (Multiple years). Colorado Springs, CO. Available at <http://www.doc.state.co.us/Statistics/3StatisticalReports.htm>.

Colorado Department of Corrections. (Multiple dates). *Monthly Population and Capacity Reports*. Colorado Springs, CO. Available at <http://www.doc.state.co.us/Statistics/MonthReport/Current.pdf>.

Colorado Department of Corrections (2006). *Trend Analysis of Felony Drug Convictions Resulting in Prison Sentences and Prison Impact Analysis of S.B. 03-318*. Colorado Springs, CO.

Colorado Department of Human Services (2006). *The Costs and Effectiveness of Substance Use Disorder Programs in the State of Colorado, Report to the General Assembly House and Senate Committees On Health and Human Services*. Alcohol and Drug Abuse Division, Colorado Department of Human Services, Denver, CO.

Cook, P. (1986). The demand and supply of criminal opportunities. *Crime and Justice: An Annual Review of Research* 7:1-28.

Cork, D. (1999). Examining space-time interaction in city-level homicide data: Crack markets and the diffusion of guns among youth. *Journal of Quantitative Criminology*, 5, 379-406.

Craddock, A. (2004). Estimating criminal justice system costs and cost-savings benefits of day reporting centers. *Journal of Offender Rehabilitation*, 39, 69-98.

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, 516-528.

Dowden, C. and Andrews, D.A. (October 2000). Effective correctional treatment and violent reoffending: A meta-analysis. *Canadian Journal of Criminology*, 3, 449-467.

Dowden, C. and Andrews, D.A. (1999). What works for female offenders: A meta-analytic review. *Crime and Delinquency*, 4, 438-52.

Drake, E. (2006). *Washington's Drug Offender Sentencing Alternative: An Update on Recidivism Findings*. Washington State Institute for Public Policy, Olympia, WA.

Ettner, S., Huang, D., Evans, E., Rose, D., Ash, M., Jourabchi, M. and Hser, Y. (2006). Benefit-Cost in the California Treatment Outcome Project: Does Substance Abuse Treatment Pay for Itself? *Health Services Research*, 41, 192-213.

Finigan, M. (1996). *Societal Outcomes of Drug and Alcohol Treatment in the State of Oregon*. Oregon Office of Alcohol & Drug Abuse Programs, Salem, OR.

- Flynn, P., Kristiansen, J. and Porto, R. (1999). Costs and benefits of treatment for cocaine addiction in DATOS. *Drug and Alcohol Dependence*, 57, 167-174.
- Freeman, R. (2008). Incarceration, criminal background checks and employment in a low(er) crime society. *Criminology and Public Policy*, 7, 3.
- Freeman, R. (1996). Why do so many young American men commit crimes and what might we do about it? *The Journal of Economic Perspectives*, 10:25-42.
- Freeman, Richard (1991), *Crime and the Employment of Disadvantaged Youths*. NBER Working Paper No. 3875.
- French, M., McCollister, K., Cacciola, J, Durell, J. and Stephens, R. (2002a). Benefit-cost analysis of addiction treatment in Arkansas: Specialty and standard residential programs for pregnant and parenting women. *Substance Abuse*, 23, 31-51.
- French, M., McCollister, K., Sacks, S., McKendrick, K. and DeLeon, G. (2002b). Benefit cost analysis of a modified therapeutic community for mentally ill chemical abusers. *Evaluation and Program Planning*, 25, 137-48.
- Gabor, T. and Crutcher, N. (2002). *Mandatory Minimum Penalties: Their Effects on Crime, Sentencing Disparities, and Justice System Expenditures*. Research and Statistics Division, Department of Justice, Canada. Ottawa, Canada.
- Geller, A., Garfinkel, I. and Western, B. (2006). *The Effects of Incarceration on Employment and Wages: An Analysis of the Fragile Families Survey*. Center for Research on Child Wellbeing Working Paper # 2006-01-FF. Revised August 2006.
- Gendreau, P. and Smith, P. (2006). The theory of effective correctional intervention: Empirical status and future directions. In F. Cullen, J. Wright, and K. Blevins (eds.), *Taking Stock: The Status of Criminological Theory—Advances in Criminological Theory*. Transaction, New Brunswick, NJ.
- Gendreau, P., Goggin, C. and Cullen, F. (1999). *The Effects of Prison Sentences on Recidivism*. A Report to the Corrections Research and Development and Aboriginal Policy Branch, Solicitor General of Canada, Ottawa, Ontario.
- Gendreau P., Goggin C. and Smith, P. (1999). The forgotten issue in effective correctional treatment: Program implementation. *International Journal of Offender Therapy and Comparative Criminology*, 43, 180-87.
- Gendreau, P. (1996). The principles of effective intervention with offenders. In A. Harland (ed.), *Choosing Correctional Interventions That Work: Defining the Demand and Evaluating the Supply*. Sage, Newbury Park, CA
- Gerstein, D. R., Datta, R.A., Ingels, J.S., Johnson, R.A., Rasinski, K.A., Schildhaus, S. and Talley, K. (1997). *Final Report: National Treatment Improvement Evaluation Survey*. National Opinion Research Center, Chicago, IL
- Gerstein, D., Johnson, R., Larison, C., Harwood, H. and Fountain, D. (1997). *Alcohol and Other Drug Treatment for Parents and Welfare Recipients: Outcomes, Costs and Benefits, Final Report*. U.S. Department of Health and Human Services. Washington, DC.
- Gerstein, D., Harwood, H., Suter, N. and Malloy, K. (1994). *Evaluating Recovery Services: The California Drug and Alcohol Treatment Assessment*. Prepared by the National Opinion Research Center for the California Department of Alcohol and Drug Programs, Health and Welfare Agency, Sacramento, CA.
- Gottfredson, M. and Hirschi, T. (1990). *A General Theory of Crime*. Stanford University Press. Stanford, CA.

Greene, J. and Pranis, K. (2006). *Treatment Instead of Prisons: A Roadmap for Sentencing and Correctional Policy Reform in Wisconsin*. Justice Strategies, Brooklyn, NY.

Griffith, J., Hiller, M., Knight, K. and Simpson, D. (1999). A cost-effectiveness analysis of in-prison therapeutic community treatment and risk classification. *The Prison Journal*, 79, 352-368.

Grogger, J. (2000). An economic model of recent trends in violence. In Blumstein, A., and Wallman, J. (eds.), *The Crime Drop in America*. Cambridge University Press, New York, NY.

Grogger, J. (1995). Effect of arrests on the employment and earnings of young men. *Quarterly Journal of Economics*, 110, 52-71.

Grogger, J. (1992). Arrests, persistent youth joblessness, and black/white employment differentials. *Review of Economics and Statistics*, 74, 100-106.

Harwood, H.J., Malhotra, D., Villarivera, C., Liu, C., Chong, U. and Gilani, J. (2002). *Cost Effectiveness and Cost-Benefit Analysis of Substance Abuse Treatment: A Literature Review*. Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment, U.S. Department of Health and Human Services, Rockville, MD.

Hawken, A. and Kleiman, M. (July, 2008). *Research Brief: Evaluation of HOPE Probation*. Available at: [http://www.pewcenteronthestates.org/uploadedFiles/HOPE\\_Research\\_Brief.pdf](http://www.pewcenteronthestates.org/uploadedFiles/HOPE_Research_Brief.pdf)

Hawken, A., Longshore, D., Urada, D., Fan, J. and Anglin, D. (2008). Proposition 36 benefit-cost analysis. In Urada et al. *Evaluation of Proposition 36: The Substance Abuse and Crime Prevention Act of 2000, 2008 Report*. Prepared for the Department of Alcohol and Drug Programs, California Health and Human Services Agency. University of California Los Angeles, Integrated Substance Abuse Programs, Los Angeles, CA.

Henry, J. and Jacobs, J. (2007). Ban the box to promote ex-offender employment. *Criminology and Public Policy*, 6, 4.

Hetz-Burrell, N. and K. English (2006). *Community Corrections in Colorado: A Study of Program Outcomes and Recidivism, FY00-04*. Colorado Division of Criminal Justice, Denver, CO. Available at [http://dcj.state.co.us/ors/pdf/docs/Comm\\_Corr\\_05\\_06.pdf](http://dcj.state.co.us/ors/pdf/docs/Comm_Corr_05_06.pdf).

Holloway, K., Bennett, T. and Farrington, D. (2008). *Effectiveness of Drug Treatment Programmes in Reducing Criminal Behaviour*. National Council on Crime Prevention, Stockholm.

Holzer, H. (2007). *Collateral Costs: The Effects of Incarceration on the Employment and Earnings of Young Workers*. Discussion Paper Series, Institute for the Study of Labor. Bonn, Germany.

Holzer, H., Raphael, S. and Stoll, M. (2007). The effect of an applicant's criminal history on employer hiring decisions and screening practices: New evidence from Los Angeles. In S. Bushway, M. Stoll and D. Weiman (eds.), *Barriers to Reentry? The Labor Market for Released Prisoners in Post-Industrial America*. Russell Sage Foundation, New York, NY.

Holzer, H., Raphael, S. and Stoll, M. (2006). Perceived criminality, criminal background checks and the racial hiring practices of employers. *Journal of Law and Economics*, 49, 451-80.

Holzer, H., Raphael, S. and Stoll, M. (2004). Will employers hire former offenders? Employer preference, background checks and their determinants. In M. Pattillo, D. Weiman and B. Western (eds.), *Imprisoning America: The Social Effects of Mass Incarceration*. Russell Sage Foundation, New York, NY.

Hser, Y., Stark, M., Paredes, A., Huang, D., Anglin, .D. and Rawson, R. (2006). A 12-year follow-up of a treated cocaine-dependent sample. *Journal of Substance Abuse Treatment*, 30, 219-226.

Hubbard, R., Craddock, S., Flynn, P., Anderson, J. and Etheridge, R. (1997). Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors*, 11, 261-278.

Institute for Defense Analysis. (2008). *Technical Report for the Price and Purity of Illicit Drugs: 1981-2007*, IDA Paper P-4333. Institute for Defense Analysis. Alexandria, VA.

Joseph, M. (2001). *The Effect of Arrests on the Earnings of Young Men: Evidence from the National Survey of Youth*. Working Paper, Harris School of Public Policy Studies, the University of Chicago.

Kane-Willis, K., Janicheck, J., Cooley, T., Grimmer, A., Enoch, K. and Schmitz, S. (n.d.). *Through A Different Lens: Shifting the Focus on Illinois Drug Policy*. The Illinois Consortium on Drug Policy. Institute for Metropolitan Affairs, Roosevelt University, Chicago, IL.

Kansas Department of Corrections. (2008). *Statistical Profile, FY 2008 Offender Population*. Kansas Department of Corrections. Topeka, KS.

Kansas Sentencing Commission presentation at the June 11, 2009 SB 123 Update Conference. Kansas Sentencing Commission website: <http://www.kansas.gov/ksc/sb123/SB123WichitaUpdateConf061109.pdf>.

Klebe, K. and O'Keefe, M. (2004). *Outcome Evaluation of the Crossroads to Freedom House and Peer I Therapeutic Communities*. National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC.

Kleiman, M. (2004). Toward (more nearly) optimal sentencing for drug offenders. *Criminology and Public Policy*, 3, 3.

Kling, J. (2006). Incarceration length, employment and earnings. *American Economic Review*, 96, 863-76.

Kovandzic, T. and Vieraitis, L. (2006). The effect of county-level prison population growth on crime rates. *Criminology and Public Policy*, 5, 213-244.

Lang, M. and Belenko, S. (2000). Predicting retention in a residential drug treatment alternative to prison program. *Journal of Substance Abuse Treatment*, 19, 145-160.

Legal Action Center website: *After Prison: Roadblocks to Reentry, A Report on State Legal Barriers Facing People with Criminal Record*, State Report Cards at <http://www.lac.org/roadblocks-to-reentry/main.php?view=state>. Accessed August 25, 2009.

Legal Action Center. (2009). *Drug Law Reform 2009 – Dramatic Cost savings for New York State*. Legal Action Center. New York, NY.

Lengyel, T. and Brown, M. (2009). *Everyone Pays: A Social Cost Analysis of Incarcerating Parents for Drug Offenses in Hawaii*. Unpublished manuscript.

Lengyel, T. (2006). *Spreading the Pain: The Social Cost of Incarcerating Parents*. Alliance for Children and Families. Milwaukee, WI. Available at: <http://www.alliance1.org/Research/artsarchives.htm#incarcerate>.

Liedka, R., Piehl, A. and Useem, B. (2006). The crime-control effect of incarceration: Does scale matter? *Criminology and Public Policy*, 5, 245-276.

- Lipsey, M. and Cullen, F. (2007). The effectiveness of correctional rehabilitation: A review of systematic reviews. *Annual Review of Law and Social Science*, 3.
- Lipsey, M., Landenberger, N. and Wilson, S. (2007). *Effects of Cognitive-Behavioral Programs for Criminal Offenders*. A Campbell Collaborative Systematic Review. Center for Evaluation Research and Methodology, Vanderbilt Institute for Public Policy Studies, Nashville, TN.
- Lipsey, M. (2002). Meta-analysis and program evaluation. *Socialvetenskaplig Tidskrift*, 9, 194-208. (Translated.)
- Lipsey, M. and Wilson, D. (2001). *Practical Meta-Analysis*. Sage Publications, Thousand Oaks, CA.
- Lipsey, M., Wilson, D. and Cothorn, L. (2000). *Effective Intervention for Serious Juvenile Offenders*. Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice, Washington, DC.
- Lipsey, M. (1999). Can rehabilitative programs reduce the recidivism of juvenile offenders? An inquiry into the effectiveness of practical programs. *Virginia Journal of Social Policy & the Law*, 6, 611-641.
- Lipsey, M. and Derzon, J. (1998). Predictors of violent or serious delinquency in adolescence and early adulthood. In R. Loeber and D.P. Farrington (eds.), *Serious and Violent Juvenile Offenders: Risk Factors and Successful Interventions*. Sage Publications, Thousand Oaks, CA.
- Lipsey, M. and Wilson, D. (1998). Effective interventions for serious juvenile offenders: A synthesis of research. In R. Loeber and D.P. Farrington (eds.), *Serious and Violent Juvenile Offenders: Risk Factors and Successful Interventions*. Sage Publications, Thousand Oaks, CA.
- Lott, J. (1990). The effect of conviction on the legitimate income of criminals. *Economics Letters*, 34, 381-385.
- MacCoun, R., Kilmer, B. and Reuter, P. (2003). *Research on Drugs-Crime Linkages: The Next Generation, NIJ Special Report*. U.S. Department of Justice, National Institute of Justice. Washington, DC.
- MacKenzie, D.L. (2006). *What Works in Corrections: Reducing the Criminal Activities of Offenders and Delinquents*. Cambridge University Press, New York, NY.
- Marsch, L. A. (1998). The efficacy of methadone maintenance interventions in reducing illicit opiate use, HIV risk behaviour and criminality: A meta-analysis. *Addiction*, 93, 515-532.
- Martin, B. and Van Dine, S. (2008). *Examining the Impact of Ohio's Progressive Sanction Grid, Final Report*. Ohio Department of Rehabilitation and Correction. Columbus, Ohio
- Martin, C., Olson, D. and Lurigio, A. (2000). *An Evaluation of the Cook County Sheriff's Day Reporting Center Program: Rearrest and Reincarceration after Discharge*. Illinois Criminal Justice Information Authority. Chicago, IL.
- Martin, E., Gabriel, R. and Gallon, S. (n.d.) *Oregon Research Brief on Addiction Treatment Effectiveness*. The Association of Alcoholism & Drug Abuse Counselors of Oregon, The Northwest Frontier Addiction Technology Transfer Center and The Addiction Counselor Certification Board of Oregon.
- Maruna, S. and Toch, H. (2005). The impact of imprisonment on the desistance process. In Travis, J. and Visher, C. (eds.), *Prisoner Reentry and Crime in America*, Cambridge. University Press, New York, NY.

- Maruna, S. (2001). *Making good: How Ex-Convicts Reform and Rebuild Their Lives*. American Psychological Association, Washington, DC.
- McCollister, K. (2008). *Cost Effectiveness of Substance Abuse Treatment in Criminal Justice Settings*. Knowledge Asset, Web site created by the Robert Wood Johnson Foundation Substance Abuse Policy Research Program. Available at: [http://saprp.org/knowledgeassets/knowledge\\_detail.cfm?KAID=10](http://saprp.org/knowledgeassets/knowledge_detail.cfm?KAID=10). Accessed August 21, 2009.
- McCollister, K. and French, M. (2003). The relative contribution of outcome domains in the total economic benefit of addiction interventions: A review of first findings. *Addiction*, 89, 1647-1659.
- McCollister, K., French M., Inciardi J., Butzin C., Martin S., and Hooper R.M. (2003). A cost-effectiveness analysis of post-release substance abuse treatment for criminal offenders. *Journal of Quantitative Criminology*, 19, 389-407.
- McCollister, K., French, M., Prendergast, M., Wexler, H., Sacks, S., and Hall, E. (2003). Is in-prison treatment enough? A cost-effectiveness analysis of prison-based treatment and aftercare services for substance abusing offenders. *Law and Policy*, 25, 62-83.
- Mears, L., Dubin, G. and Travis, J. (2002). *The Practice and Promise of Prison Programming*. Urban Institute, Washington, DC.
- Mendelson, B. (June 2008). *Patterns and Trends in Drug Abuse in Denver and Colorado: January–December 2007*. Proceedings of the Community Epidemiology Work Group. Vol. II. Denver, CO.
- Mitchell, O., Wilson, D. and MacKenzie, D. (2005). *The Effectiveness of Incarceration-Based Drug Treatment on Criminal Behavior*. Submitted to the Campbell Collaboration, Criminal Justice Review Group.
- Montana Board of Crime Control (2009). *A Light at the End of the Tunnel: The Montana Adult Methamphetamine Treatment Coalition, 2009*. Montana Board of Crime Control, Helena, MT.
- Montana Department of Corrections (2009). *Biennial Report*. Montana Department of Corrections, Helena, MT.
- Montana Department of Corrections (2007). *Biennial Report*. Montana Department of Corrections, Helena, MT.
- Montana Department of Corrections, Corrections Advisory Council (2009). *Report to the Governor, Managing Montana's Growing Adult Offender Population*.
- Mumola, C.J. and Karberg, J.C. (2007 revised). *Drug Use and Dependence, State and Federal Prisoners, 2004*. Bureau of Justice Statistics, U.S. Department of Justice, Washington DC. (NCJ 213530)
- Mumola, C. (2000). *Incarcerated Parents and Their Children*. Bureau of Justice Statistics, Special Report. Bureau of Justice Statistics, U.S. Department of Justice, Washington DC. (NCJ 182335)
- Mumola, C.J. (1999). *Substance Abuse and Treatment, State and Federal Prisoners, 1997*. Bureau of Justice Statistics, U.S. Department of Justice, Washington, DC. (NCJ 172871)
- Mumola, C.J. and Bonczar, T.P. (1996). *Substance Abuse Treatment of Adults on Probation, 1995*. Bureau of Justice Statistics, U.S. Department of Justice, Washington, DC. (NCJ 1666611)
- Nagin, D. and Waldfoegel, J. (1998). The effect of conviction on income through the life cycle. *International Review of Law and Economics* 18:25- 40.



National Center on Addiction and Substance Abuse at Columbia University (2009). *Shoveling Up II: The Impact of Substance Abuse on Federal, State and Local Budgets*. National Center on Addiction and Substance Abuse at Columbia University. New York, New York.

National Drug Intelligence Center (May 2003). *Colorado Drug Threat Assessment*.

National Institute on Drug Abuse (2007). *Drugs, Brains and Behavior: The Science of Addiction*. National Institutes of Health, Department of Health and Human Services, Washington, DC. Publication Number 07-5605.

National Institute on Drug Abuse (2007). *Understanding Drug Abuse and Addiction*. National Institutes of Health, Department of Health and Human Services, Washington DC.

National Institute on Drug Abuse (2006). *Principles of Drug Abuse Treatment for Criminal Justice Populations*. National Institutes of Health, Department of Health and Human Services, Washington, DC.

National Institute on Drug Abuse. (2006). *Availability and Effectiveness of Programs to Treat Methamphetamine Abuse*. Testimony before the Subcommittee on Criminal Justice, Drug Policy, and Human Resources, Committee on Government Reform, United States House of Representatives. Nora D. Volkow, M.D. Director, National Institute on Drug Abuse, National Institutes of Health, Department of Health and Human Services, June 28, 2006.

National Research Council (2008). *Parole, Desistance from Crime, and Community Integration*. Committee on Community Supervision and Desistance from Crime. Committee on Law and Justice, Division of Behavioral and Social Sciences and Education. The National Press, Washington, DC.

Niv, N. and Hser, Y. (2006). Drug treatment service utilization and outcomes for Hispanic and White methamphetamine abusers. *Health Services Research, 41*, 1242-1257.

Nurco, D., Hanlon, T., Kinlock, T. and Duszynski, K. (1988). Differential criminal patterns of narcotic addicts over an addiction career. *Criminology, 26*, 407-424.

Office of the Inspector General (2007). *Special Review into In-Prison Substance Abuse Programs Managed by the California Department of Corrections and Rehabilitation*. State of California, Sacramento, CA.

Office of National Drug Control Policy (2004). *The Price and Purity of Illicit Drugs: 1981 through the Second Quarter of 2003*. Executive Office of the President, Office of National Drug Control Policy. Washington, D.C.

O'Keefe, M. and Barr, B. (2009). *Statistical Report: Fiscal Year 2008*. Colorado Department of Corrections, Colorado Springs, CO. Available at [https://exdoc.state.co.us/secure/combo2.0.0/userfiles/folder\\_18/StatRpt08final.pdf](https://exdoc.state.co.us/secure/combo2.0.0/userfiles/folder_18/StatRpt08final.pdf).

O'Keefe, M., Klebe, K., Roebken, K. and Fisher, E. (2004). *Effectiveness of Arrowhead and Peer 1 Therapeutic Communities*. Colorado Department of Corrections and the University of Colorado at Colorado Springs, Colorado Springs, CO.

Oregon Department of Corrections website at: <http://www.doc.state.or.us/DOC/TRANS/CC/whatiscc.shtml>. Accessed August, 19, 2009.

Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology, 108*, 37-75.

Pearson, F. and Lipton, D. (1999). A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *The Prison Journal, 79*, 384-410.

Petersilia, J. (2003). *When Prisoners Come Home: Parole and Prisoner Reentry*. Oxford University Press, New York, NY.

Pettit, B. and Lyons, C. (2007). Status and the stigma of incarceration: The labor market effects of incarceration by race, class and criminal involvement. In S. Bushway, M. Stoll and D. Weiman (eds.), *Barriers to Reentry? The Labor Market for Released Prisoners in Post-Industrial America*. Russell Sage Foundation. New York, NY.

Piehl, A.M., Useem, B. and J. Dilulio, Jr. (1999). *Right-Sizing Justice: A Cost Benefit Analysis of Imprisonment in Three States*. Center for Civic Innovation at the Manhattan Institute, No. 8, New York, NY.

Pranis, K. (2006). *Progress and Challenges: An analysis of drug treatment and imprisonment in Maryland*. Justice Strategies. Brooklyn, NY.

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

Prendergast, M. and Podus, D. (2000). Drug treatment effectiveness: An examination of conceptual and policy issues. *Substance Use & Misuse*, 35, 1629-1657.

Prendergast, M., Podus, D. and Chang, E. (2000). Program factors and treatment outcomes in drug dependence treatment: An examination using meta-analysis. *Substance Use & Misuse*, 35, 1931-1965.

Przybylski, R. (2008). *What Works, Effective Recidivism Reduction and Risk-Focused Prevention Programs: A Compendium of Evidence-Based Options for Preventing New and Persistent Criminal Behavior*. Colorado Department of Public Safety, Division of Criminal Justice, Denver, CO.

Ramirez, J. and Crano, W. (2003). Deterrence and incapacitation: An interrupted time series analysis of California's Three Strikes Law. *Journal of Applied Social Psychology*, 33, 110-144.

Ramker, G. (2006). *Improving Criminal History Records for Background Checks, 2005*. U.S. Department of Justice, Bureau of Justice Statistics. Washington, DC.

Raphael, S. (2007). *The Impact of Incarceration on the Employment Outcomes of Former Inmates: Policy Options for Fostering Self-Sufficiency and an Assessment of the Cost-Effectiveness of Current Corrections Policy*. Paper prepared for the Institute for Research on Poverty Working Conference. Madison, WI.

Raphael, S. (2007) *Boosting the Earnings and Employment of Low-Skilled Workers in the United States: Making Work Pay and Removing Barriers to Employment and Social Mobility*. Unpublished manuscript. University of California at Berkeley.

Raphael, S. (2007). Early Incarceration Spells and the Transition to Adulthood. In Danziger, S., Furstenberg, F. and Rouse, C. (eds.), *The Price of Independence*. Russell Sage Foundation. New York, NY.

Raphael, S. and Winter-Ebmer, R. (2001). Identifying the effect of unemployment on crime. *Journal of Law and Economics*, 44, 259-283.

Rawson, R., Marinelli-Casey, P., Anglin, D., Dickow, A., Frazier, Y., Gallagher, C., Galloway, G., Herrell, J., Huber, A., McCann, M., Obert, J., Pennell, S., Reiber, C., Vandersloot, D., Zweben, J. and Methamphetamine Treatment Project (2004). A multi-site comparison of psychosocial approaches for the treatment of methamphetamine dependence. *Addiction*, 99, 708–717.

- Rawson, R. and McCann, M. (n.d.). *The Matrix Model of Intensive Outpatient Treatment, A Guideline Developed for the Behavioral Health Recovery Management Project*. [The Behavioral Health Recovery Management project is an initiative of Fayette Companies, Peoria, IL; Chestnut Health Systems, Bloomington, IL; and the University of Chicago Center for Psychiatric Rehabilitation.]
- Rosenfeld, R. (2000). Patterns in adult homicide: 1980-1995. In A. Blumstein and J. Wallman (eds.), *The Crime Drop In America*. Cambridge University Press, New York, NY.
- Sabol, W. (December 2007). *Prisoners in 2006*. Bureau of Justice Statistics, U.S. Department of Justice. Appendix Table 6. Available at <http://www.ojp.usdoj.gov/bjs/pub/pdf/p06.pdf>.
- Salome, H., French, M., Scott, C., Foss, M. and Dennis, M. (2003). Investigating the economic costs and benefits of addiction treatment: econometric analysis of the Chicago Target Cities Project. *Evaluation and Programming Planning*, 26, 325-38.
- Sampson, R. and Laub, J. (1993). *Crime in the Making: Pathways and Turning Points Through Life*. Harvard University Press, Cambridge, MA.
- Saner, H., MacCoun, R. and Reuter, P. (1995). On the ubiquity of drug selling among youthful offenders in Washington, D.C., 1985-1991: Age, period, or cohort effect? *Journal of Quantitative Criminology*, 11, 337-362.
- Schiraldi, V. and Ziedenberg, J. (2003). *Costs and Benefits? The Impact of Drug Imprisonment in New Jersey*. Justice Policy Institute, Washington, D.C.
- Schiraldi, V., Holman, B. and Beatty, P. (2000). *Poor Prescription: The Costs of Imprisoning Drug Offenders in the United States*. Justice Policy Institute, Washington, D.C.
- Scott-Hayward, S. (2009). *The Fiscal Crisis in Corrections: Rethinking Policies and Practices*. Vera Institute of Justice, New York, NY
- Sherman, L., Gottfredson, D., MacKenzie, D., Eck, J., Reuter, P. and Bushway, S. (1997). *Preventing Crime: What Works, What Doesn't, What's Promising*. A Report to the United States Congress. Prepared for the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC.
- Smith, P., Goggin, C. and Gendreau, P. (2002). *The Effects of Prisons Sanctions on Recidivism: General Effects and Individual Differences*. Public Works and Government Services Canada. Available at: [www.sgc.gc.ca](http://www.sgc.gc.ca).
- Solomon, A., Kachnowski, V. and Bhati, A. (2005). *Does Parole Work? Analyzing the Impact of Post-prison Supervision on Rearrest Outcomes*. Urban Institute, Washington, DC.
- Spelman, W. (2000). The limited importance of prison expansion. In A. Blumstein and J. Wallman (eds.), *The Crime Drop In America*. Cambridge University Press, New York, NY.
- Spelman, W. (1994). *Criminal Incapacitation*. Plenum, New York, NY.
- State of California, Legislative Analyst's Office. (2009). *July 2009 Budget Package*.
- State of Colorado, Methamphetamine Task Force. (2009). *Third Annual Report, January 2009*.
- Stemen, D. and Rengifo, A. (2006). *Kansas Senate Bill 123: A Process and Implementation Evaluation*. Prepared for the Kansas Sentencing Commission. Vera Institute of Justice. New York, NY.
- Stoll, M. and Bushway, S. (2008). The effect of criminal background checks on hiring ex-offenders. *Criminology and Public Policy*, 7, 3.

Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. (1999). *SAMHSA/CSAT Treatment Improvement Protocols, TIP 33: Treatment for Stimulant Use Disorders*. Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. Rockville, MD. Available at: <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.section.57641>.

UCLA Integrated Substance Abuse Programs. <http://www.methamphetamine.org/html/treatment.html>.

Uggen, C., Behrens, A. and Manza, A. (2005). Criminal disenfranchisement. *Annual Review of Law and Social Science*, 1, 307-322.

Uniform Law Commission (2009). *Uniform Collateral Consequences of Conviction Act Press Release, July 15, 2009*.

Urada, D., Ph.D., Hawken, A., Conner, B., Evans, E., Anglin, D., Yang, J., Teruya, C., Herbeck, D., Fan, J., Rutkowski, B., Gonzales, R., Rawson, R., Grella, C., Prendergast, M., Hser, Y.I., Hunter, J. and Poe, A. (2008). *Evaluation of Proposition 36: The Substance Abuse and Crime Prevention Act of 2000, 2008 Report*. Prepared for the Department of Alcohol and Drug Programs, California Health and Human Services Agency. UCLA Integrated Substance Abuse Programs, Los Angeles, CA.

Waldfoegel, J. (1994). The effect of criminal conviction on income and the trust. Reposed in the Workmen. *Journal of Human Resources*, 29, 62-81.

Western, B. (2008). Criminal background checks and employment among workers with criminal records. *Criminology and Public Policy*, 7, 3.

Western, B. (2006). *Punishment and Inequality in America*. Russell Sage Foundation. New York, NY.

Western, B. (2002). The impact of incarceration on wage mobility and inequality. *American Sociological Review*, 67, 526-46.

Western, B., Kling, J. and Weiman, D. (2001). The labor market consequences of incarceration. *Crime and Delinquency*, 47, 410-27.

Wexler, H. (1996). *The Amity Prison TC Evaluation: Inmate Profiles and Reincarceration Outcomes*. Presentation for the California Department of Corrections.

Wexler, H., Williams, R., Early, K. and Trotman, C. (1996). Prison treatment for substance abusers: Stay'n Out revisited. In Kevin E. Early (ed.), *Drug Treatment Behind Bars: Prison-Based Strategies for Change*. Westport, CT: Praeger Publishers.

Wilson, J.A. (2007). *Habilitation or Harm: Project Greenlight and the Potential Consequences of Correctional Programming*. National Institute of Justice, Office of Justice Programs, U.S. Department of Justice, Washington, DC

Wool, J. and Stemen, D. (2004). *Changing Fortunes or Changing Attitudes? Sentencing and Corrections Reforms in 2003*. Vera Institute of Justice, New York, NY.

Zarkin, G., Dunlap, L., Belenko, S. and Dynia, P. (2005). A benefit-cost analysis of the Kings County District Attorney's office Drug Treatment Alternative to Prison (DTAP) program. *Justice Research and Policy* 7, 1-25.

## Appendix A

---

### Cost-Benefit Analysis

One of the most common approaches to economic evaluation is cost-benefit analysis (CBA). A cost-benefit study examines and places monetary value on both the costs and effects of an intervention. The result is usually a single summary statistic – expressed as the benefit-cost ratio or net present value – that indicates whether and to what extent the benefits of an intervention exceed its costs.

A benefit-cost ratio (BCR) is calculated by dividing total monetary benefits by total monetary costs. When the result is greater than 1.0, program benefits outweigh costs. In other words, a BCR greater than 1.0 indicates a positive return on investment.

The net present value statistic is calculated by subtracting total monetary costs from total monetary benefits. When the result is a positive number, the program is producing a positive return on investment.

Because CBA evaluates all interventions strictly in monetary terms, it provides the basis for comparing many different programs or policies, even those with widely disparate outcome objectives. From a decision making perspective, CBA has a fundamental advantage over other forms of economic evaluation because it provides a basis for comparing a much broader range of competing alternatives. CBA can determine if a program is a good investment in and of itself, but it also can be used to determine which program out of *any* set of alternatives has the highest ratio of benefits to costs. In theory, CBA could be used to compare, for example, a corrections program, an education program and a public health program.

The primary disadvantage of CBA is that all costs and benefits must be quantified in monetary terms. In practice, this is a complex and often difficult process. Monetary valuations of costs and benefits can be imprecise, and all CBAs employ certain assumptions about what costs and benefits should be measured and how they should be measured. The analyst's decision to measure or not measure certain costs or benefits can radically affect the program's bottom line.

While CBA theory implies that *all* costs and benefits should be measured and valued monetarily, this is rarely done in practice. Most studies of criminal justice-related programs exclude at least some benefits from the analysis, and many exclude intangible benefits – those that do not have a direct market price, such as pain and suffering – altogether. Studies that exclude intangible benefits may avoid a major source of uncertainty, but they also are likely to understate a program's monetary value.

Currently, there are no universally accepted standards that are followed when conducting a CBA of crime control policies or programs. In fact, there are different and sometimes competing views about the proper approach to take. Perhaps the most common approach is often referred to as the taxpayer perspective. Cost-benefit studies of criminal justice-related programs that use this approach will typically tabulate the costs of an intervention and compare it to the monetary value of the public safety benefits produced. In practice, those benefits are conceptualized as crimes prevented, and the monetary value, which is derived from cost of crime research, is calculated as criminal justice system processing and victimization costs avoided. Hence, the taxpayer perspective is generally concerned with the costs and benefits that accrue to government agencies and crime victims. A competing approach is the societal perspective which attempts to examine a broader array of costs or benefits, such as those that might accrue to an offender, or to an imprisoned offender's family.

The broader societal perspective may better align with CBA theory, but it often is criticized on two points. First, benefits that are valued in the societal perspective are often of minor interest to many criminal justice system stakeholders; hence, they tend to be disregarded as irrelevant to the decision making process. Second, the monetary value of broad social costs and benefits is subject to considerable uncertainty; hence, the societal perspective has been criticized as inherently imprecise. Although the taxpayer perspective may be better aligned with some stakeholder interests and have a higher degree of precision, it too is imperfect because it tends to understate a program's true cost or value.

The fact that CBA is such a complex undertaking has important implications for the manner in which CBA findings are interpreted and used. This is especially true when making cross-study comparisons. When cost-benefit summary statistics are derived in markedly different ways, comparisons can lead to inaccurate or biased conclusions. Transparency on the part of CBA researchers can help ensure that users of CBA results have the information they need to avoid biased comparisons and improper conclusions, but users outside the research community typically do not have the expertise to interpret the caveats, assumptions and other details of the analysis, no matter how well expressed. Therefore, when comparing the benefit-cost ratios of one or more interventions derived from different studies, more confident conclusions can be reached by avoiding direct dollar to dollar comparisons and focusing instead on the magnitude of BCR or NPV differences and the consistency of findings across studies.

Similar caution must be exercised when projecting CBA findings across settings that appreciably differ in scale. Program outcomes are often influenced by environmental, contextual and other factors related to program implementation and delivery. As a program increases in size or scale through expansion or replication, it is difficult to predict how outcomes and return on investment may be affected.

Thanks to the work of numerous scholars, along with the application of more sophisticated tools, the techniques for conducting cost-benefit analysis are improving all the time. Researchers at the University of Miami, for example, have developed tools that can be used to collect cost data from substance abuse treatment programs more accurately. Sophisticated models for quantifying the costs and monetary benefits of criminal and juvenile justice programs have been developed by researchers at the Washington State Institute for Public Policy and the Urban Institute. And improved techniques for conducting sensitivity analysis have provided cost-benefit researchers with better ways to gauge the effects of their assumptions.

Despite its current limitations, cost-benefit estimates are becoming more precise, and most researchers agree that cost-benefit analysis is a valuable tool for estimating a program's return on

investment. In addition, the federal Office of Management and Budget recommends cost-benefit analysis as the technique to use in a formal economic analysis of government programs or projects.





