



Criminal Justice Kentucky Treatment  
Outcome Study (CJKTOS)

FY 2009 Follow-up Report

10.30.09

Criminal Justice  
Kentucky Treatment Outcome Study  
(CJTOS)

FY 2009 Follow-up Report  
(n=345)

October 30, 2009

Report prepared for:

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## ACKNOWLEDGEMENTS

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This report was prepared with the support of the Kentucky Department of Corrections. The authors of this report would like to thank corrections-based substance abuse program administrators and treatment counselors, prison case workers, pre-release coordinators, wardens, jailers, and probation and parole officers across the state for their support of the Criminal Justice Kentucky Treatment Outcome Study (CJTOS) and their collaboration to help make the study possible. In addition, we would like to thank the study participants for their time and willingness to complete the interviews.

## **CJKTOS Executive Summary FY 2009**

The Criminal Justice Kentucky Treatment Outcome Study (CJKTOS) focuses on substance abuse outcomes of offenders participating in corrections-based substance abuse treatment programs in Kentucky's prison and jails. This report includes baseline data collected during FY2007 and FY2008 by treatment counselors in Kentucky's prison and jail-based substance abuse treatment programs using personal digital assistants (PDAs) at treatment intake. Inmate clients who participated in the study were asked about their substance use in the year before they were incarcerated to establish a baseline of their pre-treatment use pattern. Twelve months after release from jail or prison, the treatment participants were interviewed again by the University of Kentucky Center on Drug and Alcohol Research (UK CDAR) staff to examine change from pre- to post treatment. This report provides data on 345 treatment participants who received Kentucky corrections-based substance abuse treatment and were released during FY2008. Follow-up data were collected from July 1, 2008 to August 30, 2009.

### **This report includes the following highlights:**

**Treatment participants are mostly male (64%) and about 32 years old. Over three-quarters (79%) are white and 41% are single, never married. Nearly three-quarters (71%) reported having a GED or 12 or more years of education.**

**About three-quarters of participants were not re-incarcerated in the 12 months following their release: 76% for those who received substance abuse treatment in jail and 72% of participants who received treatment in prison. The overall recidivism (reincarcerated on a felony charge in the 12 months following release) rate decreased to 26% for treatment participants in FY2009 compared to 31% in FY2008.**

**The percentage of jail and prison treatment participants reporting abstinence at 12 months post-release increased 9 times from pre-incarceration reports of drug use.**

**Self-reported illegal drug use during the 12 month post-release period decreased by 64% for jail participants and 61% for prison participants from pre-incarceration reports of drug use. Overall, the percentage of treatment participants reporting any illegal drug use in the 12 months following release decreased to 36% in FY2009 from 46% in FY2007.**

**Most treatment participants (82% of jail participants and 77% of prison participants) reported attending AA/NA meetings in the 12 months after release.**

**Almost half (45%) of jail and prison treatment participants reported entering community treatment after release.**

**Estimates for this study indicate that the victim crime cost offset of jail and prison substance abuse treatment completion during FY2008 saves an average of \$21,927 per year per participant.**

## Data Trends

Data was examined for changes in trends from FY2007 – FY2009. As shown in Table 1, there were some changes in the descriptive characteristics of the CJKTOS treatment sample across each of the fiscal years from 2007 – 2009. Most notably, for example, is race. The sample was 68.5% white in FY2007 and increased to 78.8% white in FY2009. The increase in the number of white participants has some implications for changes in drug use trends, specifically opiate use. Baseline opiate use (including the non-prescription use of pain medication) was 25.4% in FY2007. By FY2008, baseline opiate use was reported at 34.6%, and increased further to 49.0% in FY2009. Additional analysis on these numbers indicated that much of the increase was associated with race with white participants being nearly 9 times more likely to report opiate use compared to non-whites in each of the data collection periods.

In addition, changes are also noted for the CJKTOS sample for gender. The sample was 96.1% male in FY2007, 72.0% in FY2008, and 64.1% in FY2009. The increase in the number of females in the sample is largely related to increased number of treatment beds increasing from one program at KCIW in 2007 to an additional prison program at Otter Creek and two female jail programs by FY2009. In addition, females are oversampled in the CJKTOS follow-up sampling frame, which as baselines increase, leads to a greater number represented in the follow-up data collection periods. Changes in the gender make-up of the sample may also have some implications for understanding data trends, but the noted differences in opiate use were not significantly attributed to gender in additional analyses.

**Table 1. Changes in demographics by fiscal year**

	FY 2007 Follow-up Sample (n=350)	FY 2008 Follow-up Sample (n=350)	FY 2009 Follow-up Sample (n=345)
<b>Average Age</b>	32.6 (range 21 to 71)	32.3 (range 19 to 62)	32.2 (range 19 to 60)
<b>Race/ethnicity</b>	68.5% white	72.6% white	78.8% white
<b>Gender</b>	96.1% male	72.0% male	64.1% male
<b>Education</b>	***	74.9% GED or 12 or more years of education	70.8% GED or 12 or more years of education
<b>Marital Status</b>	53.5% Single, never married	49.1% Single, never married	40.6% Single, never married

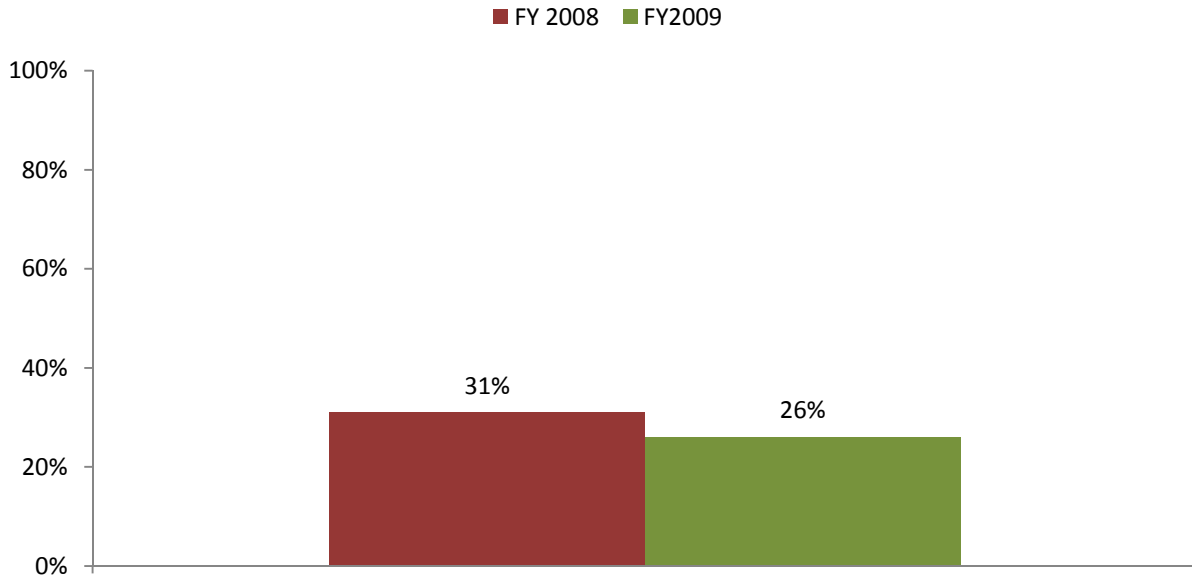
\*\*\*Data not available for GED in the FY2007 follow-up

## Trends in Follow-up Data

A notable trend in the follow-up data is the decreased recidivism rate from FY2008 to FY2009 (see Figure 2). The percentage of those reincarcerated on a felony charge within the 12 months following release decreased by 19% from 31% in FY2008 to 26% in FY2009. Related to the reductions in the number of participants reincarcerated in the 12 months following release, the sample of prison participants spent fewer nights in prison and jail, which contributes to increases in this year's treatment cost offset. It is also important to note that the majority of treatment participants (72.2%) who were re-

incarcerated in the 12 months following release returned due to a technical parole/probation violation rather than a new charge. While these trends are certainly favorable for reduced recidivism, it should also be noted that recidivism rates may have also slightly influenced by gender. For example, when examining the factors most associated with recidivism across each of the years of data collection, gender was a significant contributor for the FY2009 dataset with women being less likely to be reincarcerated than males. While the percentage of difference was small, it should be noted that that the increased number of females in the sample may have an impact on noted reductions in recidivism.

**Figure 2. Decrease in Recidivism 12 Months Post-Release**



The trends in reported substance use in the 12 months after release are noteworthy. As shown in Table 1, the percent of participants who received substance abuse treatment in jail or prison who reported any illegal drug use in the past 12 months at follow-up decreased by 22% (from 46% in FY2007 to 36% in FY2009).

**Table 1. Decrease in Substance Use 12 Months Post-Release**

	FY 2007 Follow-up Sample (n=350)	FY 2008 Follow-up Sample (n=350)	FY 2009 Follow-up Sample (n=345)
<b>Any Illegal Drug</b>	45.7%	42.3%	35.7%
<b>Alcohol</b>	44.9%	42.6%	38.6%
<b>Marijuana</b>	30.6%	24.6%	23.8%
<b>Cocaine/Crack</b>	23.4%	22.6%	13.6%

## Introduction

The Kentucky Department of Corrections (DOC) expanded its substance abuse treatment programs to focus on inmates with substance abuse problems related to their criminal activity. Inmates with a substance abuse history have the option to enter corrections-based treatment programs if they have at least 6 months left to serve before parole or release from the prison. Kentucky correctional programs are grounded in key elements of therapeutic community (De Leon, 2000) approaches that include incentives for positive participation and disincentives for negative behavior, and peer-oriented approaches which use the Recovery Dynamics curriculum. Currently there are 21 corrections-based substance abuse treatment programs in Kentucky with the capacity to serve 1,408 clients. Six prisons offer substance abuse treatment programs serving a capacity of 898 clients (See Appendix A for sites).

The Criminal Justice Kentucky Treatment Outcome Study (CJKTOS) was developed and implemented in April 2005 to 1) describe substance abusers entering treatment in Kentucky's prison and jail-based programs, and 2) to examine treatment outcomes 12 months post-release. The data collection instrument was modified from the Kentucky Substance Abuse Treatment Outcome Study, which has been used since 1996. The CJKTOS study is a baseline and 12 month follow-up design which is grounded in established substance abuse outcome studies (i.e., Hubbard et al., 1989; Simpson, Joe, & Brown, 1997; Simpson, Joe, Fletcher, Hubbard, & Anglin, 1999). Kentucky prison and jail-based program staff collect assessment data within the first two weeks of a client's admission to substance abuse treatment using personal digital assistants (PDAs). Few states use a PDA to collect data which is integrated into traditional clinical assessment (Staton-Tindall, et al., *in press*). Benefits of the PDA as a data collection program include: it can be used *anywhere*, it needs only a modem and phone line to send in data, it saves time when compared to paper forms, it corrects minor errors programmatically to keep data accurate, and it is unobtrusive when interviewing a client. Department of Corrections treatment providers also obtain informed consent and contact information which is used by the University of Kentucky to locate treatment participants for 12 month follow-up interviews post-release. All data are collected and stored in compliance with the University of Kentucky IRB and HIPAA regulations, including encrypted identification numbers, and abbreviated birthdays (month and year) to secure confidentiality of protected health information.

## Method

The 12-month follow-up study was conducted by the University of Kentucky Center on Drug and Alcohol Research. Treatment participants were eligible for inclusion in the follow-up sample if they 1) consented to participate in the follow-up, 2) were released from a jail or prison facility within the specified timeframe, and 3) provided locator information of at least one community telephone number and address. A group of eligible treatment participants were selected for follow-up after stratification by prison or jail. Using the same proportion from each correctional setting (prison or jail) as those meeting eligibility criteria, a final sample of 345 was included in the follow-up. The proportionate stratification approach used in this study produces estimates that are as efficient as those of a simple random selection (Pedhazur & Schmelkin, 1991).





UK research staff began to “track” treatment participants for follow-up at 10 months post-release with a target interview date at 12 months post-release. A participant was considered ineligible for follow-up if he or she was not located 14 months after release. Locator methods included mailing letters and flyers, phone calls, collaborating with parole officers, and internet searches. All 345 treatment participants completed interviews by phone, and all data provided is self-reported by the participants.

A total of 1,144 clients who completed a CJKTOS baseline were released from custody in FY 2008. Having a release date is considered the point of entry into the follow-up study sampling frame because the outcome data focuses on behaviors during the re-entry phase following custody. This design is unique compared to other Kentucky Treatment Outcome Study (KTOS) data collection which is anchored in the 12 months post-intake period.

The CJKTOS follow-up rates are presented in Table 2. Of those 1,144 clients who were released from custody in FY2008, 234 did not consent to participate in the follow-up study. Of the 910 research treatment participants who were eligible for follow-up (released in FY08 and voluntarily consented for follow-up), follow-up interviews were completed with a stratified sample of 345 treatment participants, which is 38% of those who consented and were released from the correctional facility. Of the number randomly sampled for follow-up (n=438), 19 were ineligible because at the time they were located for follow-up, staff learned that 17 participants moved out of state and 2 participants were deceased according to their family reports and verified by Kentucky vital statistics. Of the 419 eligible treatment participants, 345 treatment participants were successfully located and interviewed, for a follow-up rate of 82%. Of the study treatment participants who were not interviewed, 14 (3%) refused to participate in the follow-up interview and 60 (14%) were unable to be located (i.e. absconded or not under supervision) or would not return UK staff’s phone calls.

**Table 2. FY 2009 Follow-up Rates for Clients Who Consented to Follow-up and Were Randomly Selected for Follow-up (n=345)**

	Eligible	Completed	Percentage
Jail Sample	200	153	77%
Males	150	107	71%
Females	50	46	92%
Prison Sample	238	192	81%
Males	144	114	79%
Females	94	78	83%
Total	438	345	
Minus Ineligible for follow-up (includes 17 participants who moved out of state and 2 deceased)	19		
Final Total	419	345	82%
Refusals	14		3%
Unable to locate	60		14%

### Report Format

This CJTOS follow-up report includes 12 month post-release follow-up data for a stratified sample of 345 substance abuse treatment participants (153 jail treatment participants and 192 prison treatment participants) released during FY2008. This data collection focuses on client self-reported substance use and other behaviors. Comparisons used in this report are between treatment participants' self-reported substance use "on the street" in the 12 months *before they were incarcerated* (baseline) and treatment participants' self-reported use "on the street" *12 months after release* (follow-up). McNemar's test for correlated proportions is used to examine statistical differences in the proportion of clients who reported substance use at baseline compared to follow-up. In addition, substance abuse treatment utilization and criminal justice involvement during the 12 months post-release is also included, as well as indicators of costs associated with victim crime.

### Demographics

Clients are mostly male (64.1%) with an average age of about 32 years old. Over three-quarters (79%) are white and 41% are single and never married. Nearly three-quarters (71%) reported having a GED or 12 or more years of education, as shown in Table 3. Also, as shown in Table 2, the follow-up sample was descriptively very similar to the entire group of CJTOS treatment participants who were released but not randomly selected, which suggests that findings are likely to be generalizable to the population of treatment participants released from custody. The one exception is gender. Due to the small number of females release in FY2008 all the females were included in the follow-up study.

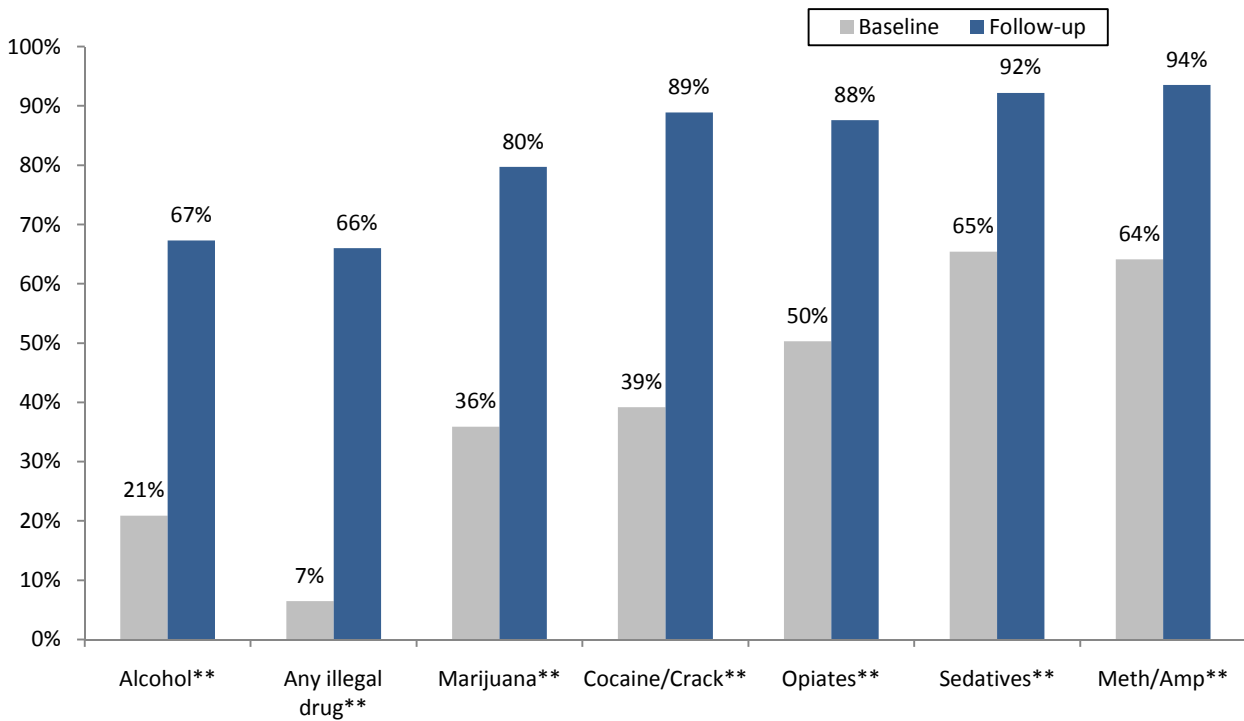
**Table 3. Demographic Characteristics of Follow-up Sample (n=345) Compared to Consenting CJTOS Treatment Participants Released in FY2008**

	Enrolled in Follow-up Study	Consenting CJTOS participants
<b>Average Age</b>	32.2 (range 19 to 60)	32.6 (range 19 to 63)
<b>Race/ethnicity</b>	78.8% white	71.7% white
<b>Gender</b>	64.1% male	84.4% male
<b>Education</b>	70.8% GED or 12 or more years of education	70.7% GED or 12 or more years of education
<b>Marital Status</b>	40.6% Single, never married	43.0% Single, never married

**Self-Reported Abstinence at 12-Months Post Release**

The percent of jail-released treatment participants who reported abstinence from any past 12 month illicit substance use increased over 9 times from baseline to follow-up (7% at baseline to 66% at follow-up). As noted in Figure 3, the increase in abstinence for all substances for jail released treatment participants was statistically significant at  $p < .001$ .

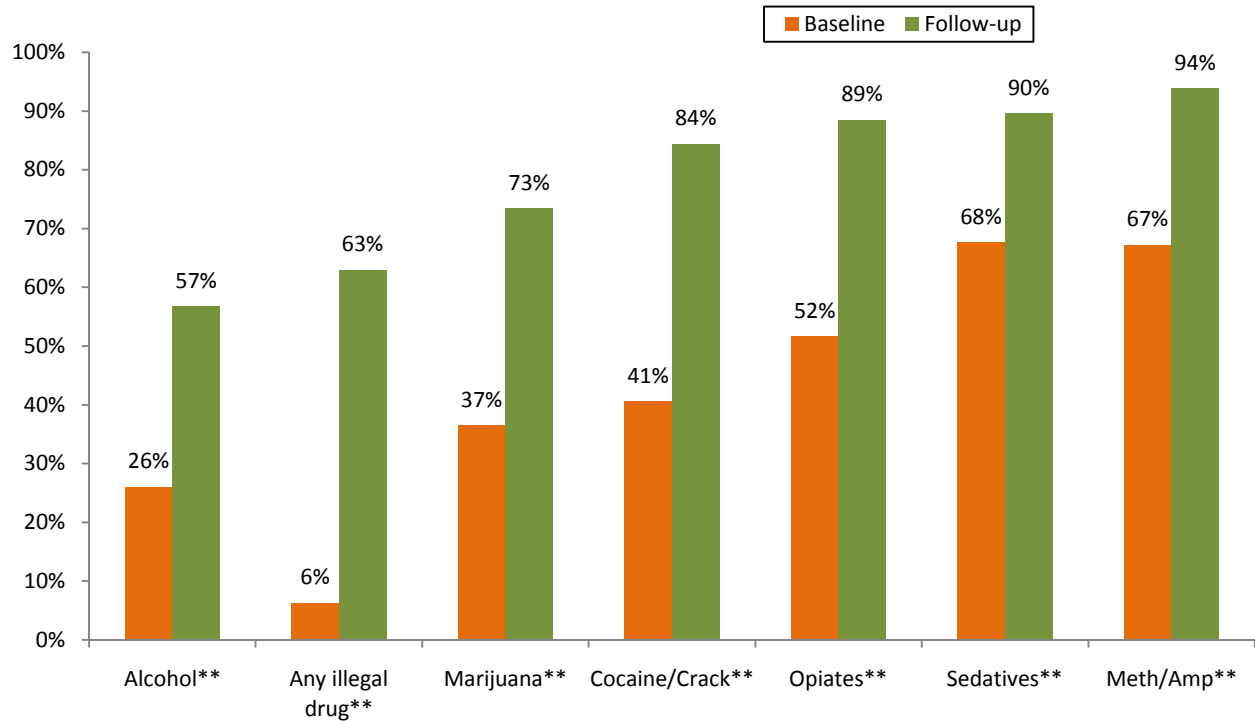
**Figure 3. Increase in Percent of Jail-released Treatment Participants Reporting Abstinence from Baseline to Follow-up Previous 12 Months (n=153)**



*Note: Significance established using McNemar's test for correlated proportions, \*\* $p < .001$*

The percent of participants who received substance abuse treatment in prison who reported past 12 month abstinence from any illicit substance increased 9 times from baseline to follow-up (6% at baseline to 63% at follow-up). As shown in Figure 4, the increase in abstinence for all substances for prison-released treatment participants was statistically significant at  $p < .001$ .

**Figure 4. Increase in Percent of *Prison-released* Treatment Participants Reporting Abstinence from Baseline to Follow-up Previous 12 Months (n=192)**

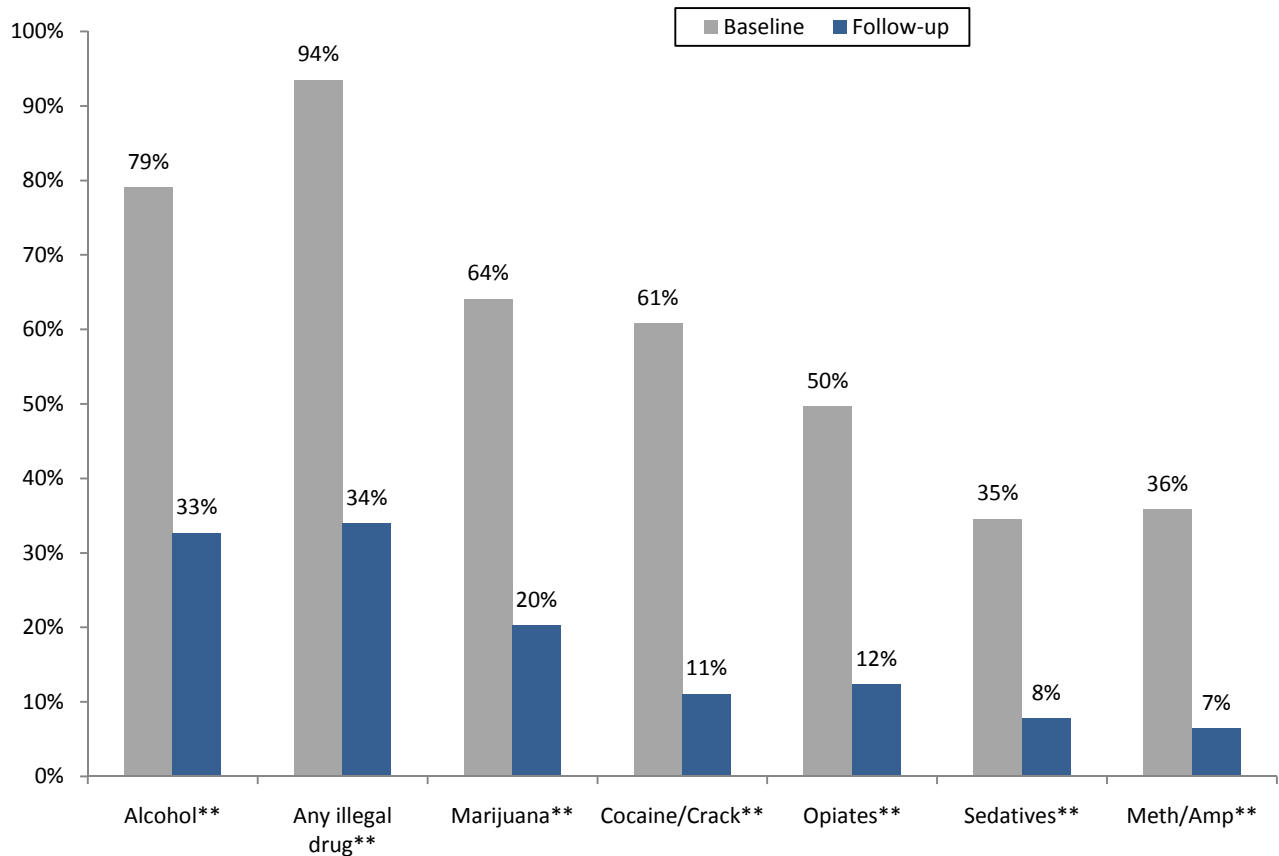


*Note: Significance established using McNemar's test for correlated proportions, \*\* $p < .001$*

### Substance use

The percent of participants who received substance abuse treatment in jails who reported any past 12 month illegal drug use at follow-up decreased by 64% (from 94% at baseline to 34% at follow-up). As shown in Figure 5, there was a statistically significant decrease in substance use for jail-released treatment participants ( $p < .001$ ) for all substances. Jail-released treatment participants who reported any illegal drug use during the 12 month follow-up ( $n=52$ ) reported being released more than 4 months (134 days) before their first use.

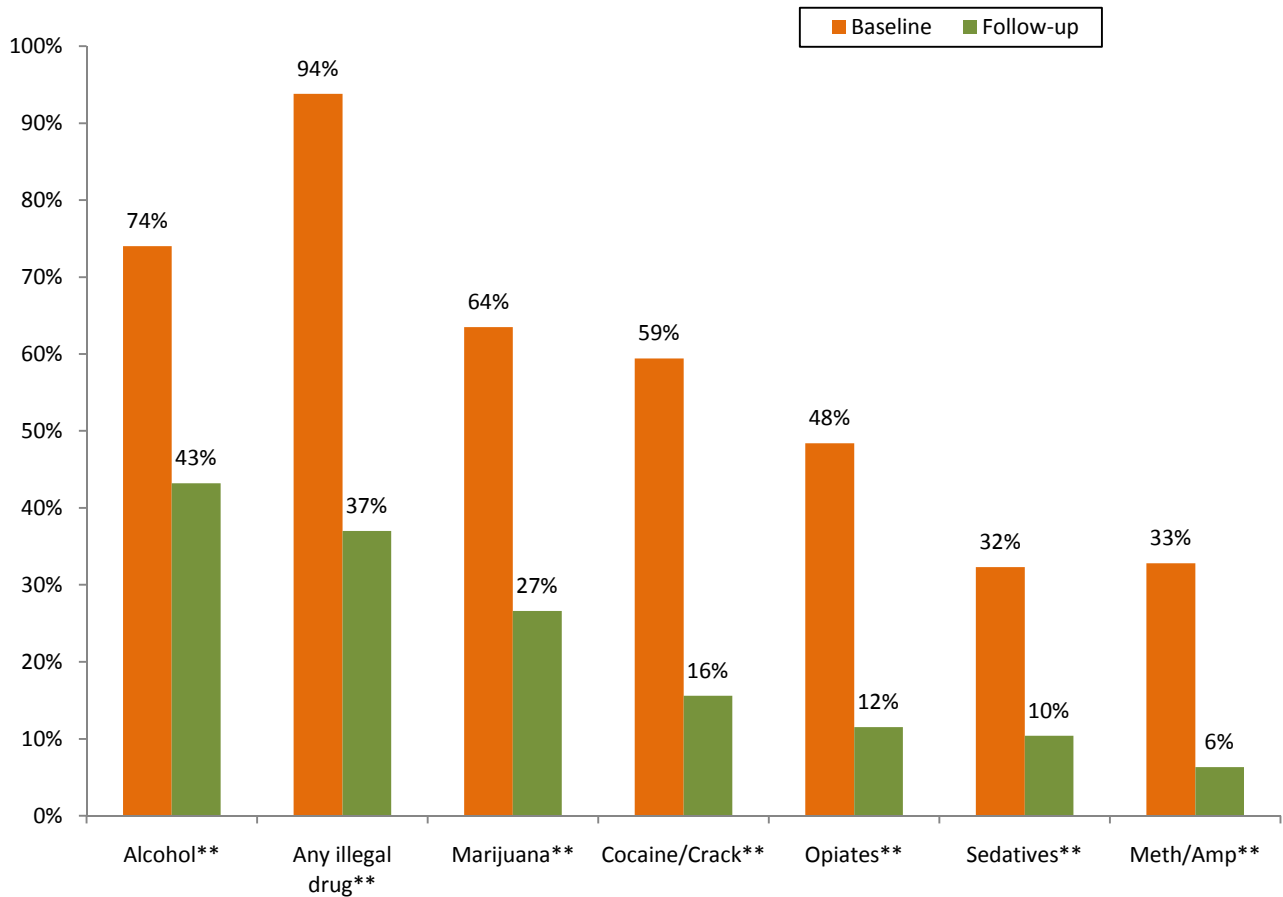
**Figure 5. Decrease in Percent of Jail-released Treatment Participants Reporting Any Drug Use from Baseline to Follow-up Previous 12 Months (n=153)**



*Note: Significance established using McNemar's test for correlated proportions, \*\* $p < .001$*

The percent of prison-released treatment participants who reported illegal drug use during the previous 12 months decreased by 61% from baseline to follow-up (94% at baseline to 37% at follow-up). As shown in Figure 6, there was a statistically significant decrease in substance use ( $p < .001$ ) for prison-released treatment participants for all substances. Prison-released treatment participants who reported any illegal drug use during the 12 month follow-up ( $n=71$ ) reported being released from prison nearly 4 months (114 days) before their first use.

**Figure 6. Decrease in Percent of *Prison-released* Treatment Participants Reporting Any Drug Use from Baseline to Follow-up Previous 12 Months (n=192)**

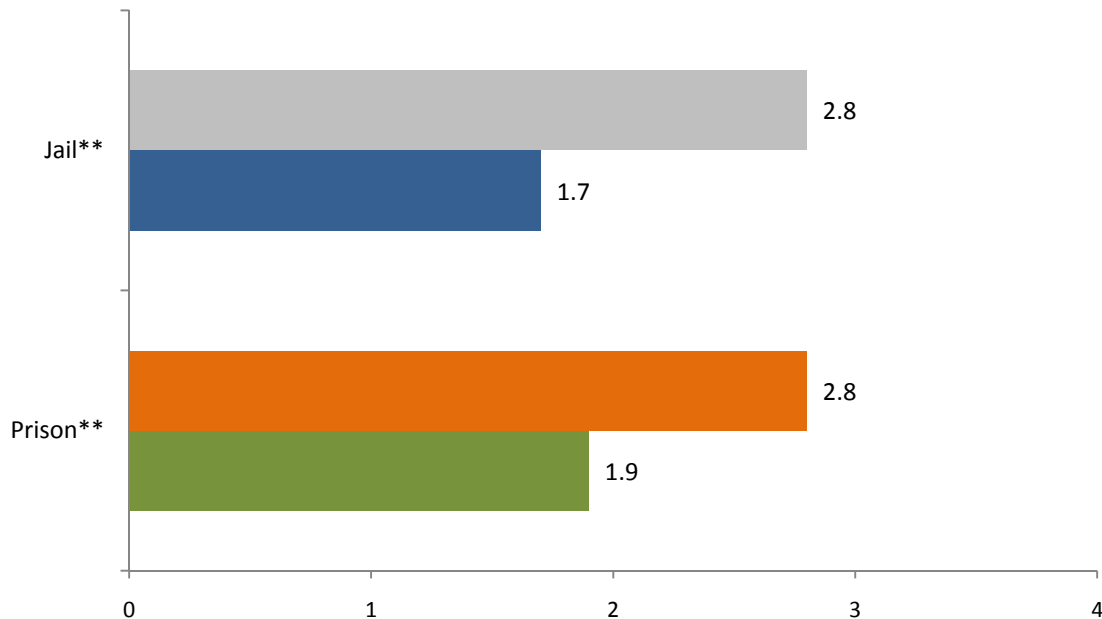


*Note: Significance established using McNemar's test for correlated proportions, \*\* $p < .001$*

### Number of drugs used

Only 35.7% of the follow-up sample reported any substance use in the past 12 months at follow-up. Among those who reported any illegal drug use at follow-up (n=52 jail-released treatment participants and 71 prison-released treatment participants), the number of different drugs used decreased by 36% from baseline to follow-up. Figure 7 shows the number of drugs used by treatment participants who reported any past 12 month illegal drug use at follow-up. The average number of drugs used by jail-released treatment participants decreased by 39% from 2.8 drugs at baseline to 1.7 drugs at follow-up. The average number of drugs used by prison-released treatment participants decreased by 32% from 2.8 drugs at baseline to 1.9 drugs at follow-up. The decrease in the average number of drugs used was statistically significant for both prison and jail treatment participants ( $p < .001$ ).

**Figure 7. Average Number of Drugs Used in the Previous 12 Months at Baseline and Follow-up Among those who reported any use**  
(\*Released from Jail n=52; \*Released from Prison n=71)



*\*\*Note: Significance established using paired sample t-test,  $**p < .001$ . Only treatment participants who reported drug use at follow-up are included in this analysis.*

### **AA/NA Meeting Attendance After Release**

Most treatment participants reported attending AA/NA meetings in the 12 months after their release. As shown in Table 4, 82% of jail-released treatment participants reported attending AA/NA in the previous 12 months and 77% of those who received substance abuse treatment in prison reported attending one or more AA/NA meetings. At follow-up jail treatment participants reported attending more AA/NA meetings (7.9) in the previous 30 days compared to prison-released treatment participants (5.8).

**Table 4. AA/NA Attendance in the 12 Months Post-Release**

	<b>Attended AA/NA Meetings in the 12 months after release</b>	<b>Average number of times attended AA/NA in previous 30 days*</b>
<b>Jail (n=153)</b>	81.7%	7.9 times
<b>Prison (n=192)</b>	77.1%	5.8 times
<b>Total (n=345)</b>	79.1%	6.7 times

*\*\*Note: Significance established using independent samples t-test, \*p<.05.*

### **Community Substance Abuse Treatment After Release**

Forty-five percent of treatment participants reported enrolling in community treatment programs after release. Nearly half (46.4%) of jail-released treatment participants reported receiving community treatment after release and 43.8% of prison-released treatment participants reported attending community treatment after release (see Table 5). Outpatient treatment was the most common community treatment reported.

**Table 5. Percent of Treatment Participants Reporting Community Substance Abuse Treatment in the 12 Months Post-Release**

	<b>Percent Reporting Community Treatment</b>
<b>Jail (n=153)</b>	46.4% (n=71)
<b>Prison (n=192)</b>	43.8% (n=84)
<b>Total (n=345)</b>	44.9% (n=155)



### **Recidivism at 12 month Follow-up**

Recidivism has important implications for corrections policies. Recidivism is defined for this study as “being re-incarcerated on a felony charge within the 12 months following release.” The University of Kentucky Center on Drug and Alcohol Research (UK CDAR) staff used the Kentucky Department of Corrections (DOC) state database, Kentucky Offender Management System (KOMS) to see if the 345 participants were re-incarcerated during the year following their release. The DOC counting rules were used (see page 23 for counting rule definition). As shown in Table 6, only a small percent of the follow-up sample was reincarcerated in the 12 months after release from jail or prison. Most importantly, a very small percent were reincarcerated for new criminal offenses. The majority were reincarcerated for parole or probation violation as shown in Table 7. Only 24.2% of jail and 27.6% of prison based follow-up cases were reincarcerated in the 12 months after release. Study participants who were re-incarcerated during the 12 months following release were out in the community an average of 6.7 months before re-incarceration.

**Table 6. Recidivism 12 Months Post-Release (n=345)**

	<b>Jail (n=153)</b>	<b>Prison (n=192)</b>	<b>Total (n=345)</b>
<b>Not Incarcerated</b>	75.8%	72.4%	73.9%
<b>Incarcerated</b>	24.2%	27.6%	26.1%

### **Arrest Types Among Recidivists**

The majority of treatment participants (72.2%) who were re-incarcerated on a felony charge in the 12 months following release returned for a technical parole/probation violation (see Table 7). Just over a quarter (27.8%) of treatment participants who were re-incarcerated in the 12 months following release returned on new charge(s). Only 9 jail-released individuals (5.8% of all jail-released participants) and 16 prison-released (8.3% of all prison-released participants) were reincarcerated due to new criminal charges. Overall, only 25 individuals or 7.2% of corrections-released participants were reincarcerated due to new criminal offenses.

**Table 7. Arrest Types Recidivates 12 Months Post-Release (n=108)**

	<b>Jail (n=37)</b>	<b>Prison (n=53)</b>	<b>Total (n=90)</b>
<b>Parole/Probation Violation</b>	75.7%	69.8%	72.2%
<b>New Charge(s)</b>	24.3%	30.2%	27.8%

### Victim Crime Cost Offset

Victim crime costs were developed from baseline to follow-up for prison treatment participants. **A cost offset in this analysis is the estimated costs of crime and arrests for 12 months post-release compared to pre-incarceration measures for the targeted sample of prison inmates.** This analysis was conducted for prison participants since the length of time of incarceration was longer than the shorter sentences for jail participants, as well as available state information on daily costs of incarceration and daily census in state prison facilities. "Victim crime costs" are defined in this report as projected costs attributed to an arrest for a particular type of crime (drug, property, violent, or DUI). Crime cost data were developed from Finigan's (1999) approach for assessing cost offsets resulting from drug court services and Miller, Cohen, and Wiersema's (1996) approach for assessing victim cost of crime. Victim crime cost estimates are based on losses of productivity/time away from work, medical care, police and fire services, social services, property loss and damage, and loss of quality of life. Costs of nights incarcerated or "bed costs" were not included in these figures. Cost per arrest figures were adjusted to 2009 dollars using the Federal Reserve Bank of Minneapolis Consumer Price Index Calculator <<http://www.minneapolisfed.org/index.cfm>>.

Specifically, the victim cost per arrest based on the above estimates was multiplied by the number of arrests at baseline (pre-incarceration) and follow-up (12 months post-release) for the type of crime to calculate the cost offset between the two time periods. As shown in Table 8, victim crime costs for the year before incarceration were compared to victim crime costs for the year after release from prison, which resulted in an aggregate cost offset of \$4,210,008 for the 192 prison participants. When the total cost is divided by the number of participants, estimates show a projected **cost offset of \$21,927 per year per prison treatment participant.** While this is a considerable cost offset per treatment participant, it is important to note that this figure under-represents the overall cost offset from prison-based treatment because the approach does not include offsets from the cost to incarcerate (bed costs), employment, and community health as well as mental health service utilization costs.

**Table 8. Cost Offset in Victim Crime/Arrest for Prison Treatment Participants (N=192)**

Arrests by crime type	Estimated cost per arrest*	Self-reported number of arrests in the 12 months prior to the last incarceration	Cost of crimes at baseline	Self-reported number of arrests at follow-up (Past 12 months)	Estimated Cost of crimes at follow-up	Reduction in cost
Drug	\$4,048	117	\$473,616	23	\$93,104	\$380,512
Property	\$17,433	130	\$2,266,290	9	\$156,897	\$2,109,393
Violence	\$40,418	39	\$1,576,302	5	\$202,090	\$1,374,212
DUI	\$26,607	24	\$638,568	11	\$292,677	\$345,891
<b>Total</b>		310	\$4,954,776	48	\$744,768	\$4,210,008
<b>Estimated projection of victim crime cost offset per participant</b>						<b>\$21,927</b>

*Cost per arrest figures were adjusted to 2009 dollars using the Federal Reserve Bank of Minneapolis Consumer Price Index Calculator. Accessed 9/9/2009. <<http://www.minneapolisfed.org/index.cfm>>*

Currently, it is not possible to distinguish the cost offset for prison-based substance abuse treatment compared to incarceration alone. However, examining the reduction of \$4.21 million in victim costs from crime during the first year after release suggests an important gain to public safety. Future analyses will compare recidivism costs for the prisoner treatment sample with a non-treatment sample.

### ***Conclusions***

The growth of prison and jail based treatment in Kentucky is indicative of the state's commitment to provide treatment for substance users. State correctional administrators recognized that simply incarcerating drug abusers is not enough to promote long term change and reduce the risk for a continued criminal career. Not only has the current correctional administration made a significant effort to provide additional treatment opportunities, but they have also prioritized research and evaluation within the Department of Corrections to identify evidenced-based practices for treating substance using offenders. This priority has been supported by a partnership between the Kentucky Department of Corrections (DOC) and the University of Kentucky Center on Drug and Alcohol Research (CDAR), which was established nearly 10 years ago through a shared vision to increase and enhance opportunities for treatment for incarcerated substance abusers in Kentucky (see Staton-Tindall et al., 2007).

This FY2009 CJKTOS follow-up report presents 12-month post-release data to describe the characteristics of individuals who participate in the Kentucky Department of Corrections substance abuse treatment programs during their incarceration in prison or jail. This follow-up report includes data from a stratified random sample of participants who received substance abuse treatment and were released during fiscal year 2008. Specifically, this 12-month follow-up study examined a randomly selected representative sample of 345 males and females who participated in jail or prison-based treatment and consented to follow-up.

Overall, trends in the baseline data are consistent from FY2007 to FY2009 follow-up studies, particularly for demographics, substance use, and prior criminal history. However, as noted in the introductory pages, self-reported baseline opiate use continued to rise in FY2009. Specifically, the percentage of the sample who reported opiate use in the 12 months prior to incarceration nearly doubled from 25.4% in FY2007 to 49.0% in FY2009. It was also noted that these trends in data changes should be referenced in the context of changing demographics of the sample from FY2007 – FY2009 with an increase in the number of white participants, and with white being nearly 9 times more likely to report opiate use compared to non-whites. Trends in recidivism were also noted. The percentage of the sample who was reincarcerated within the 12 months following release decreased by 19% from 31% in FY2008 to 26% in FY2009. It was also noted that changes in the gender composition of the follow-up samples should be considered in the reduction of recidivism with females being less likely to report being reincarcerated during the FY2009 dataset. Also notable, the percentage of participants who received substance abuse treatment in jail or prison who reported any past 12 month illegal drug use at follow-up decreased by 22% (from 46% in FY2007 to 36% in FY2009).

### ***Reduced substance use***

Findings from this 2009 data indicate that there were statistically significant increases in the number of individuals who participated in corrections-based substance abuse treatment who reported abstinence from baseline to follow-up. The percentage of participants receiving jail-based substance abuse treatment who self-reported using any illegal drug during the 12-months after release decreased by 64%

from before incarceration (94% at baseline compared to 34% at follow-up). The percentage of participants receiving prison-based substance abuse treatment who reported using any illegal drug during the 12-months after release decreased by 61% from before incarceration (94% at baseline to 37% at follow-up).

The reduced substance abuse reported by treatment participants in this study is comparable to other samples of offenders leaving prison-based treatment. Although findings vary based on follow-up time frames, the literature presents reductions in drug use following prison-based treatment. For example, Prendergast, Greenwell, and Lin (2007) reported that about one-third of participants leaving prison-based treatment reported any illicit drug use 3 months post-release. While the self-reported use is slightly higher in the Kentucky sample (any illicit use reported at 37%), data in this report is based on a one-year follow-up versus the 3 month follow-up. In addition, Butzin, Martin, and Inciardi (2005) found that approximately 60% of participants who completed prison-based treatment alone (not followed by community aftercare) reported being abstinent one year after release. This is consistent with Kentucky findings of 63% of participants remaining drug-free at follow-up.

### *Decreased recidivism*

Study findings indicate that the majority of study participants were not re-incarcerated on a felony charge during the 12 months following their release. Over three-quarters (76%) of participants who received substance abuse treatment in jail and 72% of participants who received substance abuse treatment in prison were not re-incarcerated. Of the treatment participants who returned to custody, they were in the community an average of 6.7 months before re-incarceration. In addition, most offenders who were re-incarcerated (72%) reported being charged with a parole or probation violation rather than a new charge. Most importantly, only 7.2% were reincarcerated due to new felony offenses. This means that the majority of reincarcerations were due to parole or probation violation and revocation. This finding suggests a need to more closely examine the factors leading to revocation. For example, given all that is known about the chronicity of substance abuse problems, if revocations are primarily caused by evidence of illegal drug use, there might be greater discretion in regard to graduated sanctions to place greater restraint on parolee without having to resort to revocation.

Other national studies have similar recidivism rates. For example, Burdon, Dang, Prendergast, Messina & Farabee (2007) reported 59.5% of participants who received prison-based therapeutic community substance abuse treatment in California prisons and who subsequently participated in community outpatient and residential treatment did not return to prison in the 12 months following release. Burdon et al. (2007) measured recidivism as returning to prison at anytime during the 12 months after release, similar to the way recidivism is defined in this study. However, it is unclear if Burdon et al. (2007) used the same approach which this study used to define recidivism. Even though there may be a limitation of comparison based on different recidivism definitions, more Kentucky prison participants (72%) were not incarcerated during the 12 months following release. It is also important to note that only 45% of Kentucky participants received community treatment following release while all the participants in Burdon et. al (2007) study received outpatient or residential treatment following release from prison.

Further, a recently released report from the California Department of Corrections found that recidivism rates were significantly reduced for offenders who completed in-prison and community-based substance abuse treatment programs (State of California, 2009). Overall, male offenders who completed both in-prison and community-based substance abuse treatment had a 25.4% returned to prison rate within one year. This is very close to the 26% recidivism rate reported in this study. However, it is

important to note again that only 45% of Kentucky participants received community treatment following release, whereas all the California participants received treatment in the community following release (State of California, 2009).

Although limited in comparison based on the time frame, a Kentucky Department of Corrections report on recidivism from 1999-2000 indicated that the rate of returning to custody for drug offenders was 29% <[www.corrections.ky.gov](http://www.corrections.ky.gov)>. This is slightly higher than the 26% reported in this study. It is also important to note that it is likely that the community supervision expectations for substance abuse treatment program parolees are different. The closer the parole or probation supervision, the greater the likelihood of detecting behaviors that can lead to revocation. Perhaps with increased supervision and regular urine screens, treatment participants who relapse to drugs and/or alcohol following community release have a greater chance of returning to custody than offenders who are not substance abusers. Again, as stated above, there is a possibility for re-examining rationales for revocation – particularly in regard to substance use alone in the absence of other criminal offenses.

#### *Community treatment engagement*

Although there is no mandatory aftercare for participants in Kentucky prison and jail based substance abuse treatment, findings from this study indicate that most prison and jail treatment participants participated in self-help groups after release. Specifically, 82% of participants who received substance abuse treatment in jail and 77% of participants who received substance abuse treatment in prison reported attending at least one AA/NA meeting in the 12-months after release.

Less than half (45%) of treatment participants enrolled in formal community treatment following release. Outpatient treatment was the most common treatment. This is slightly lower than community treatment participation in another study of offenders which reported that 63% of treatment participants engaged in community treatment within the first 3 months after release (Prendergast, Greenwell, & Lin, 2007). However, this study data was collected in predominantly urban areas, which may limit comparability to Kentucky given the number of treatment participants who paroled to rural areas where service opportunities are limited.

#### *Study limitations*

There are some limitations to this study. First, findings must be interpreted with the understanding that baseline data are self-reported at treatment intake and follow-up data are self-reported approximately 12 months post-release. In order to verify the reliability of self-reported follow-up drug use, CJKTOS staff examined data from the Department of Correction's information system, the Kentucky Offender Management System (KOMS), for positive drug tests. Of the 160 treatment participants who were under supervision at the time of their follow-up interview and reported no drug use, 140 had no positive drug tests in KOMS. This provides a self-report accuracy rate of 88%. In this study, a higher rate of substance use appears from the participants' self reports than from urine tests. Furthermore, urine tests only identify substances used in the past week or so. Thus, for past 12 month substance use, self reports remain an important part of research data collection. However, while self-report data has been shown to be valid (Del Boca & Noll, 2000; Rutherford, et al., 2000), it is a limitation. In addition, since baseline measures target behaviors prior to the current incarceration, reporting of substance use and other sensitive information may be affected by the participant's memory recall and may also be a study limitation. The presentation of victim crime costs and their reductions from the 12 months treatment participants were on the street before prison compared to their 12 months after release from prison are

also preliminary and do not include all costs associated with re-incarceration.

### *Implications*

This study brings support to the policy of corrections-based recovery interventions in the Kentucky Department of Corrections. Corrections based treatment programming in Kentucky has evolved into an approach of delivering services in both prisons and jails which incorporates therapeutic community concepts, which has demonstrated considerable success in the research literature (De Leon, 2000). The findings from this study indicate behavioral change for offenders following substance abuse treatment in Kentucky's prisons and jail which includes reductions in substance use from pre-incarceration, more than two-thirds not being incarcerated at the 12 month follow-up, and participation in community treatment and self-help groups. This report also raises questions about the role of discretion in reincarcerating parolees and probationers, given the small percent of recidivists who are reincarcerated due to new criminal offenses. There may be room to consider graduated responses to relapses that can avoid the high cost of reincarceration.

Findings from this study also suggest important considerations for treatment considering changes in the treatment population over time. Changes in drug trends must be examined in the context of changing the racial and gender composition of the treatment population. This may also have important implications for monitoring of drug offenders in the community. For example, it is possible that the increased number of white opiate users in the sample may be related to increased monitoring of prescription fraud in rural areas of Kentucky, as well as state monitoring systems such as KASPER. Thus, changes in drug trends and demographic composition of the sample have important implications for understanding the effectiveness of prison and jail-based treatment programs.

Findings in this report support the continued policy to treat substance abusers in the criminal justice system with increased efforts to strengthen the transition from institution to community in order to maintain successes achieved in corrections-based treatment. This preliminary report of reductions in victim costs of crime from one year prior to incarceration to the year after release from jail or prison suggest important gains for public safety in Kentucky. Future reports will examine these cost offsets and gains in more detail and with comparison to other populations. However, at a minimum, Kentucky receives gains for the public that are important in evaluating the net effects of substance abuse treatment in correctional facilities.

## KEY TERMS

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**Baseline** – Baseline refers to data collected at treatment intake by correctional treatment counselors. Baseline measures examine substance use prior to the current incarceration.

### **DOC Counting Rules–**

1. Include only those inmates who have completed their sentences, were released on parole, have received a conditional release, or were released on a split prison-probation sentence. Do not include temporary releases (e.g. inmates furloughed). To be counted the inmate must no longer be considered an inmate or in a total confinement status, except for those released from prison on a split prison-probation sentence.
2. Include only those inmates released to the community. Exclude from the count inmates who died, were transferred to another jurisdiction, escaped, absconded, or AWOL. Exclude all administrative (including inmates with a detainer(s)) and pre-trial release status releases.
3. Count number of inmates released, not number of releases. An inmate may have been released multiple times in that same year but is only counted once per calendar year. Thus, subsequent releases in the same calendar year should not be counted.
4. All releases (inmates who have completed their sentences, were released on parole, have received a conditional release, or were released on a split prison-probation sentence) by an agency per year constitute a release cohort. An inmate is only counted once per release cohort and thus can only fail once per cohort.
5. Do not include inmates incarcerated for a crime that occurred while in prison.
6. Inmates returned on a technical violation, but have a new conviction should be counted as a returned for a new conviction.

**Follow-up** – Follow-up refers to data collected 12-months post-release by the University of Kentucky Center on Drug and Alcohol Research. Follow-up measures examine substance use, community treatment, and criminal offenses 12-months post-release from a prison or jail.

**Jail Treatment Participants** – Clients who participated in a jail-based substance abuse treatment program and who met the eligibility to participate in the follow-up study and provided consent.

**McNemar’s Test for Correlated Proportions** – assesses the significance of the difference between two correlated proportions, such as might be found in the case where the two proportions are based on the same sample of subjects or on matched-pair samples <<http://faculty.vassar.edu/lowry/propcorr.html>>

**Paired Samples T Test**- compares the means of two variables by computing the difference between the two variables for each case, and tests to see if the average difference is significantly different from zero <<http://www.wellesley.edu/Psychology/Psych205/pairttest.html>>

**Prison Treatment Participants** – Clients who participated in a prison-based substance abuse treatment program and who met the eligibility to participate in the follow-up study and provided consent.

**Recidivism**– re-incarcerated on a felony charge within the 12 months following release.

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**Appendix A. CJKTOS PRISON DATA  
COLLECTION SITES**

Green River Correctional Complex (GRCC)  
1200 River Road  
P.O. Box 9300  
Central City, Kentucky 42330  
Phone: (270) 754-5415

Kentucky Correctional Institution for Women  
(KCIW)  
3000 Ash Ave.  
Pewee Valley, Kentucky 40056  
Phone: (502) 241-8454

Luther Luckett Correctional Complex  
Dawkins Road, Box 6  
LaGrange, Kentucky 40031  
Phone: (502) 222-0363/222-0365

Marion Adjustment Center  
95 Raywick Road  
St. Mary, Kentucky 40063-0010  
Phone: 270-692-9622

Northpoint Training Center  
P.O. Box 479, Hwy 33  
710 Walter Reed Road  
Burgin, KY 40310

Otter Creek Correctional Center  
Highway 306, P.O. Box 500  
Wheelwright, Kentucky 41669-0500  
Phone: 606-452-9700

Roederer Correctional Complex (RCC)  
P. O. Box 69  
LaGrange, Kentucky 40031  
Phone: (502) 222-0170/222/0173

**CKTOS JAIL DATA COLLECTION SITES**

Boyd County Detention Center  
P.O. Box 455  
Catlettsburg, KY 42219

Breckinridge County Detention Center  
500 Glen Nash Road  
Hardinsburg, Kentucky 40143  
(270)756-6244

Christian County Detention Center  
410 West Seventh St.  
Hopkinsville, Kentucky 42240-2116  
(270) 887-4152

Clark County Detention Center  
30 Wall Street  
Winchester, Kentucky 40391  
(859) 745-0270

Daviess County Detention Center  
3337 Highway 60 East  
Owensboro, Kentucky 42303-0220  
(270) 685-8466 or 8362

Floyd County Detention Center  
36 South Central Avenue  
Prestonsburg, KY 41653  
(606) 886-8021

Grayson County Detention Center  
320 Shaw Station Road  
Leitchfield, Kentucky 42754-8112  
(270) 259-3636

Hardin County Detention Center  
100 Laurel Street, P.O. Box 1390  
Elizabethtown, Kentucky 42702-1390  
(270) 735-1794

Hopkins County Detention Center  
2250 Laffoon Trail  
Madisonville, Kentucky 42431  
(270) 821-6704

Kenton County Detention Center  
303 Court Street  
Covington, Kentucky 41011  
(859) 392-1701

Three Forks Regional Jail (Lee County)  
2475 Center Street  
Beattyville, Kentucky 41311  
(606) 464-2598

Marion County Detention Center  
201 Warehouse Road  
Lebanon, Kentucky 40033-1844  
(270) 692-5802

Mason County Detention Center  
702 US 68  
Maysville, Kentucky 41056  
(606) 564-3621

Pike County Detention Center  
172 Division Street, Suite 103  
Pikeville, Kentucky 41501  
(606) 432-6232

Powell County Detention Center  
755 Breckenridge Street  
Stanton, KY 40380  
(606) 663-6400

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