

# CRIMINAL JUSTICE-KENTUCKY TREATMENT OUTCOME STUDY CJKTOS

FY 2013 Annual Report



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## Acknowledgements

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## ***Report Summary***

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The Criminal Justice Kentucky Treatment Outcome Study (CJKTOS) examines substance abuse outcomes of state offenders participating in substance abuse treatment programs in Kentucky's prisons, jails, and in the community. This report includes data collected during FY2013 for 346 randomly selected participants who entered Department of Corrections (DOC) treatment programs, participated in an intake interview by treatment counselors, and were followed-up 12 months later in the community following their release. This report provides data collected from July 1, 2012 to August 31, 2013.

Findings from the FY2013 data indicate that among DOC treatment participants who were interviewed 12-months following release:

- ❖ 46% reported decreased drug use
- ❖ 74% were not reincarcerated
- ❖ 90% lived in stable housing
- ❖ 62% were employed
- ❖ 76% reported attending AA/NA meetings
- ❖ 9% reported improved mental health
- ❖ 18% regained custody of their children

Cost analysis indicated that for every \$1 spent on Kentucky Corrections-based substance abuse treatment, there is a \$4.41 cost offset.

These findings indicate that Kentucky corrections-based treatment reduces drug use and recidivism, and HB 463 has had an impact on the benefits of substance abuse programming.

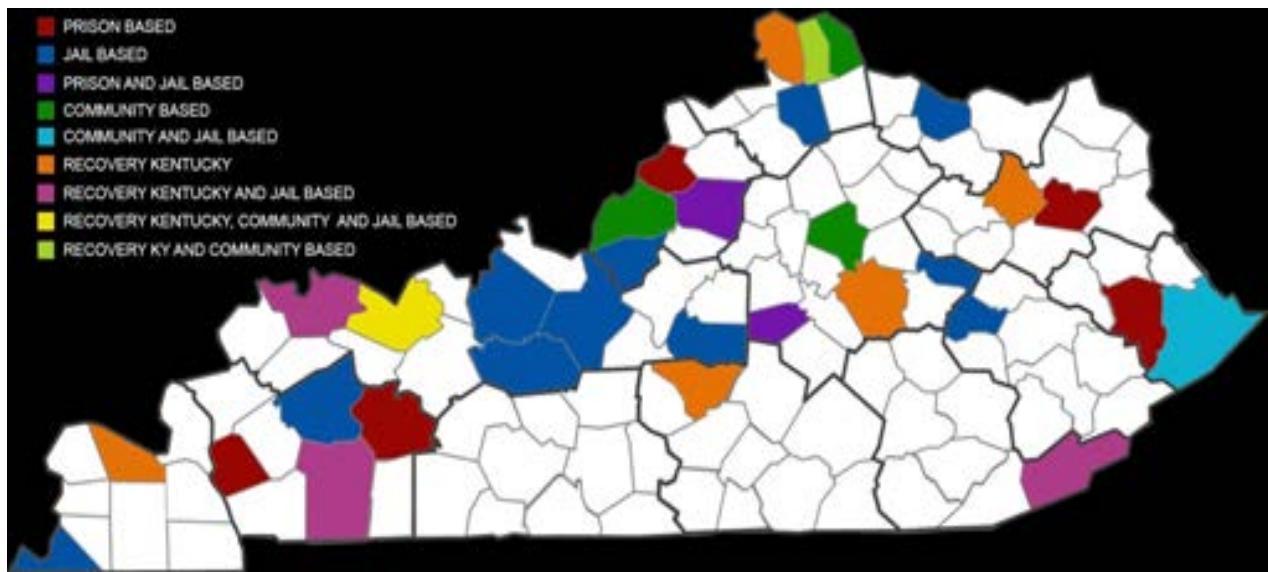
## Introduction

### **The Kentucky Department of Corrections Substance Abuse Treatment Programs**

The Kentucky Department of Corrections (DOC) Division of Substance Abuse provides substance abuse treatment programs throughout the state (See Figure 1).

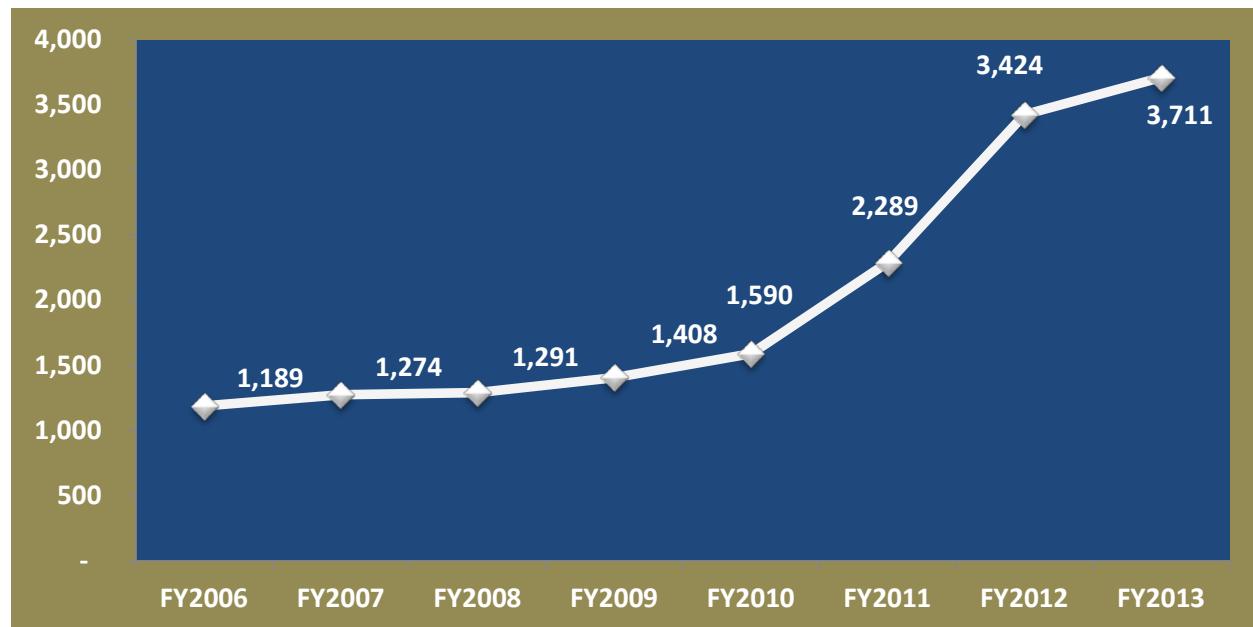
Kentucky correctional programs are grounded in the key components of therapeutic community modalities (De Leon, 2000). These approaches include incentives for positive participation, and peer-oriented approaches which use the Recovery Dynamics curriculum. Offenders with a substance abuse history have the option to enter corrections-based treatment programs if they have at least 6 months to serve before parole or release from the prison, jail or community custody program. Inmates can also be paroled with the condition of completing substance abuse treatment before release.

**Figure 1. Location of Kentucky's Corrections-based Substance Abuse Treatment Programs (2013)**



DOC Division of Substance Abuse expanded substance abuse treatment programs significantly in the past seven years (See Figure 2). As of October 2013, there were 3,711 corrections-based substance abuse treatment slots in jails, prisons, Recovery Kentucky Centers and community custody programs. There are 10 substance abuse programs in prisons and 20 jail programs (See Appendix C for sites). These increases in treatment are noteworthy given the overall decrease in the state inmate population following implementation of HB463 in 2011. Specifically, the statewide inmate population decreased 5.9% from 21,713 offenders on November 30, 2011 to 20,424 offenders on January 8, 2014 (Kentucky Department of Corrections, 2014).

**Figure 2. Increasing trends in number of corrections-based substance abuse treatment slots**



In addition, with the implementation of HB463 in 2011, DOC's commitment to providing increased treatment opportunities in the community led to an expansion of programs for community-custody individuals. Community custody is defined in this report as individuals who are no longer incarcerated in a jail or prison, but have transitioned to the community in controlled environments. These individuals are also still under state custody. Community-custody programs are provided in four different community agencies, and the primary modality of treatment is a modified-therapeutic community.

### **Evaluation methodology**

A description of CJKTOS methodology and sampling procedures is found in Appendix A. In summary, pre-incarceration measures are collected by treatment providers at intake into the DOC treatment programs (jail, prison, or community custody). Individuals enroll in treatment during the last 6-9 months of their sentence, as they prepare for community re-entry. Follow-up data collection is conducted by the UK research team 12 months after the individual is released from the facility. Therefore, data in this report will be categorized as “*pre-incarceration*” (risk behaviors in the 12 months and 30 days prior to incarceration) and as “*follow-up*” (risk behaviors during the 12 months post-release from the incarceration period in which they participated in DOC treatment).

Three populations are examined for this follow-up report: (1) individuals receiving substance abuse program services in state prisons; (2) individuals receiving substance abuse program services in county or regional jails; and (3) individuals receiving residential substance abuse services in the community but still under state custody. Thus, all three groups have received substance abuse treatment services prior to release from either incarceration or custody into local communities.

Of the 438 DOC treatment participants randomly selected for follow-up in the community 12-months post-release, 346 were successfully located and interviewed (154 jail treatment participants, 129 prison treatment participants and 63 community custody treatment participants), for a follow-up rate of 82% (See Table 1).

**Table 1. FY 2013 Follow-up Rates**

|                           | Eligible | Completed | Percentage |
|---------------------------|----------|-----------|------------|
| Jail Sample               | 205      | 154       | 75%        |
| Males                     | 180      | 135       | 75%        |
| Females                   | 25       | 19        | 76%        |
| Prison Sample             | 149      | 129       | 87%        |
| Males                     | 125      | 106       | 85%        |
| Females                   | 24       | 23        | 96%        |
| Community Custody Sample  | 84       | 63        | 75%        |
| Males                     | 84       | 63        | 75%        |
| Females                   | 0        | 0         | N/A        |
| Total                     | 438      | 346       | 79%        |
| Ineligible for follow-up* | 15       |           |            |
| Final Total               | 423      | 346       | 82%        |
| Refusals                  | 31       |           | 7%         |
| Unable to locate          | 46       |           | 11%        |

\*Note: ineligible for follow-up was defined as participants moving out of state (n=8), being detained on other charges and not released (n=6), or being deceased (n=1).

## ***DOC Treatment Participants***

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As shown in Table 2, the sample of DOC treatment participants who participated in the follow-up had no significant differences from the overall sample of DOC treatment participants, which suggests that findings from the follow-up sample can be reasonably generalized to other treatment participants. The entire population of consenting DOC treatment participants were mostly male (89.2%) with an average age of about 33.9 years old at intake. Over three-quarters (75.9%) were white and 48.6 % were single and never married. Just under three quarters (71.9%) reported having a GED or 12 or more years of education.

**Table 2. Demographic Characteristics of Follow-up Sample (n=346) Compared to All Consenting DOC Treatment Participants Released in FY2012**

|                | Follow-up Participants              | All released DOC treatment participants    |
|----------------|-------------------------------------|--|
| Average Age    | 34.0 (range 19 to 59)               | 33.9 (range 19 to 64)                      |
| Race/ethnicity | 78.6% white                         | 75.9% white                                |
| Gender         | 87.6% male                          | 89.2% male                                 |
| Education      | 75.4% GED or 12+ years of education | 71.9% GED or 12 or more years of education |
| Marital Status | 44.2% Single, never married         | 48.6% Single, never married                |

Most of the DOC treatment participants (83%) were referred as “parole upon completion”. DOC treatment participants were also compared with the entire population of KY DOC offenders who have completed the Level of Service/Case Management Inventory (LSCMI) data as part of the state’s initiative to enhance assessment processes through HB 463. The LSCMI is an assessment that measures the risk and need factors of offenders and is collected during re-entry preparation. As shown in Table 3, DOC treatment participants were assessed as higher across ratings of overall risk, criminal history, companion risk, and substance use.

**Table 3. DOC Treatment and KY DOC LSCMI Comparison of High/Very High Rankings**

|                  | DOC Treatment participants | KY DOC* |
|------------------|----------------------------|---------|
| Overall Risk     | 47%                        | 38%     |
| Criminal History | 39%                        | 31%     |
| Companions       | 45%                        | 41%     |
| Substance Abuse  | 51%                        | 35%     |

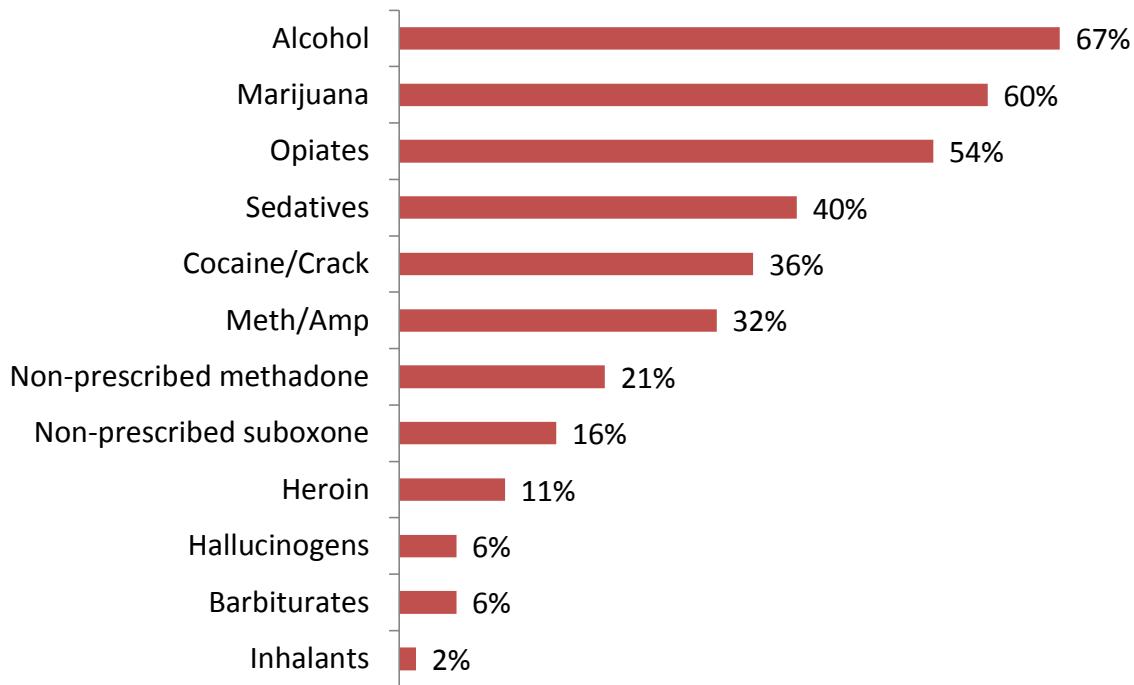
\*LSCMI data supplied by KY Department of Corrections, 7/30/2013.

## ***Changes in Drug Use***

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As shown in Figure 3, the greatest percent of participants reported alcohol use (67%) and marijuana use (60%) in the past 12 months. In addition, the percent of participants reporting opiate use (54%) and sedative use (40%) in the 12 months before incarceration has surpassed the percent of participants reporting cocaine and crack use (36%). Nearly one-third of participants reported use of methamphetamines/ amphetamines in the 12 months before incarceration. Other substances used by participants in the 12 months prior to incarceration include non-prescribed methadone (21%), non-prescribed suboxone (16%), heroin (11%), hallucinogens (6%), barbiturates (6%), and inhalants (2%).

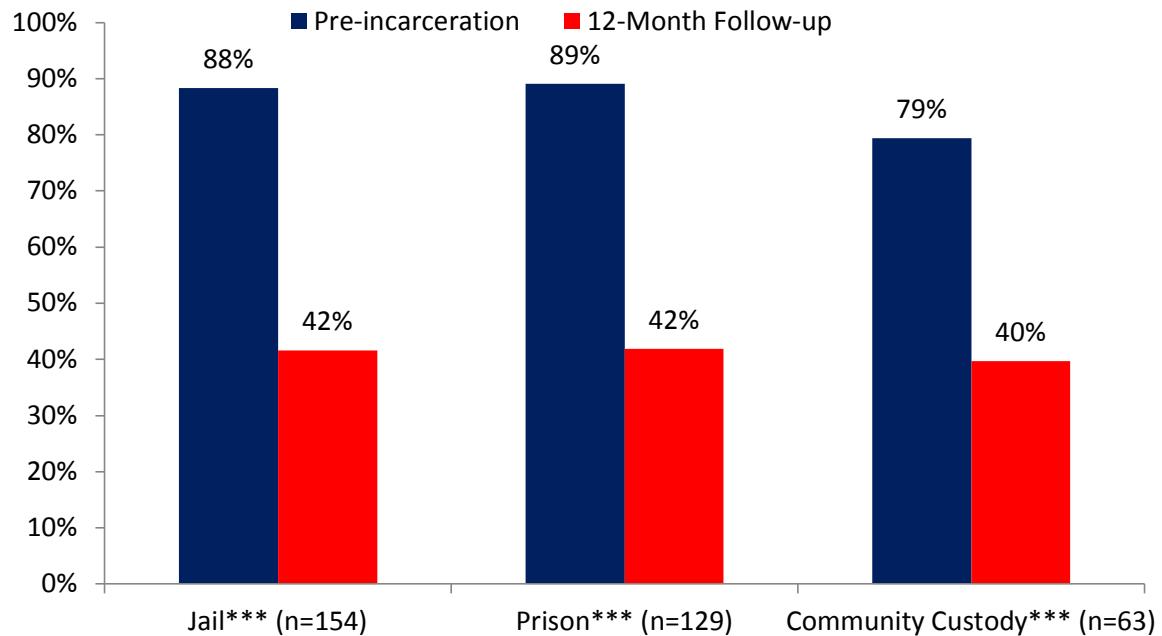
**Figure 3. Profile of pre-incarceration substance use among DOC treatment participants (n=346)**



The majority of DOC treatment participants reported being abstinent in the 12 months following release. As shown in Figure 4, those who received DOC treatment in prison, jail, or community custody programs reported a significant decrease use of any illegal drug following treatment.

- Participants who received jail-based treatment reduced illegal drug use by 46% (from 88% of participants at pre-incarceration to 42% at follow-up).
- Participants who received prison-based treatment reduced illegal drug use by 47% (from 89% of participants at pre-incarceration to 42% at follow-up).
- Participants who received community-custody treatment reduced illegal drug use by 39% (79% of participants pre-incarceration to 40% at follow-up).
- DOC treatment participants who reported *any* illegal drug use (n=143) reported being drug-free on the street an average of 86 days before their first use (nearly 3 months).
- Among participants who reported any illegal drug use at follow-up (n=143) the average number of drugs used decreased from 3.1 drugs pre-incarceration to 2.3 at follow-up.

**Figure 4. Decrease Reporting Any Drug Use from Pre-incarceration to 12-Month Follow-up**



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

## **Recovery Supports**

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Most DOC treatment participants reported attending at least one AA/NA meeting in the 12 months after their release. Specifically shown in Table 4, over three-fourths (76%) of participants reported attending AA/NA in the 12 months following release, and they reported attending an average of 5 meetings in the past 30 days.

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

|                          | Attended AA/NA Meetings | Average number of times attended AA/NA in past 30 days |
|--------------------------|-------------------------|--|
| Jail (n=154)             | 72.7%                   | 4.7 times  |
| Prison (n=129)           | 80.6%                   | 5.5 times  |
| Community Custody (n=63) | 73.0%                   | 4.8 times  |
| Total (n=346)            | 75.7%                   | 5.0 times  |

While about the same AA/NA attendance was reported in previous years, only 15% of treatment participants *self-reported* enrolling in a community treatment program at follow-up (See Table 5). Outpatient treatment was the most commonly reported community treatment.

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

|                          | Service Utilization Data on Community Treatment* |
|--------------------------|--|
| Jail (n=154)             | 25.3% (n=39)                                     |
| Prison (n=129)           | 22.5% (n=29)                                     |
| Community Custody (n=63) | 19.0% (n=12)                                     |
| Total (n=346)            | 23.0% (n=80)                                     |

\* Service utilization data received through the University of Kentucky Research and Data Management Center for all state-funded substance abuse services data with a source of pay coded as DMHMRS, Medicaid, Medicare, Self-Pay, Commercial Insurance or Other.

## ***Recidivism***

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The Kentucky Department of Corrections (DOC) state database, Kentucky Offender Management System (KOMS) was used to examine participants' re-incarceration during the year following release. As shown in Table 6, 27.9% of jail, 25.6% of prison and 20.6% of community custody-released follow-up cases were re-incarcerated within the 12 months post release from prison or jail. Participants who were re-incarcerated were in the community an average of 7.2 months before being re-incarcerated.

**Table 6. Recidivism\* 12 Months Post-Release (n=346)**

|                  | Jail<br>(n=154) | Prison (n=129) | Community<br>Custody (n=63) | Total (n=346) |
|------------------|-----------------|----------------|-----------------------------|---------------|
| Not Incarcerated | 72.1%           | 74.4%          | 79.4%                       | 74.3%         |
| Incarcerated     | 27.9%           | 25.6%          | 20.6%                       | 25.7%         |

\*Recidivism is defined here as "being re-incarcerated on a felony charge within the 12 months following release." The DOC counting rules were used (see page 22 for counting rule definition used in this report).

The overwhelming majority of participants (86.5%) were re-incarcerated on a parole or probation violation (see Table 7). Only 13.5% of participants who were re-incarcerated returned on new charge(s).

**Table 7. Arrests Among Recidivates at 12 Months Post-Release (n=89)**

|                                 | Jail<br>(n=43) | Prison (n=33) | Community<br>Custody<br>(n=13) | Total<br>(n=89) |
|---------------------------------|----------------|---------------|--------------------------------|-----------------|
| Parole/Probation Violation Only | 86.0%          | 81.8%         | 100%                           | 86.5%           |
| New Charge(s)                   | 14.0%          | 18.2%         | 0%                             | 13.5%           |

## ***Housing and Employment***

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The majority of DOC treatment participants reported living in a stable environment and working at the 12-month follow-up. As shown in Table 8, 89.6% reported being housed in an apartment, room, house or residential treatment facility. About two-thirds (62.1%) reported their usual employment pattern as working full or part-time.

**Table 8. Employment and Housing in the 12 Months Post-Release**

|  | Jail<br>(n=154) | Prison<br>(n=129) | Community<br>Custody<br>(n=63) | Total<br>(n=346) |
|--|-----------------|-------------------|--------------------------------|------------------|
| Housed in apartment, room, house or residential treatment facility | 89.0%           | 88.4%             | 93.7%                          | 89.6%            |
| Employed full or part-time   | 63.0%           | 55.8%             | 73.0%                          | 62.1%            |

## ***Mental Health***

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While not a direct focus of DOC substance abuse treatment, data also indicate significant improvements in mental health status following release. Significantly fewer participants reported experiencing serious depression at follow-up (30.9%) when compared to pre-incarceration (40.2%), as illustrated in Table 9. Although not statistically significant, fewer participants reported anxiety at follow-up (39.9%) when compared to before incarceration (43.6%).

**Table 9. Mental Health Improvements at Follow-up**

|   | Pre-incarceration | 12-Month Follow-up |
|---|-------------------|--------------------|
| Experienced serious depression in previous 12 months* | 40.2%             | 30.9%              |
| Experienced serious anxiety in previous 12 months     | 43.6%             | 39.9%              |

*Note: Significance established using McNemar's test for correlated proportions, \*p<.05, see Appendix B.*

## ***Family and Relationships***

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Participants in DOC treatment reported improved families and relationships after treatment. Significantly more participants reported spending most of their free time with family at follow-up (78.9%) than before incarceration (59.0%), as shown in Table 10. Also, significantly more participants reported having a close relationship with a sexual partner/spouse, as well as other people at the 12-month follow-up.

**Table 10. Relationships with family and others among DOC treatment participants**

|  | Pre-Incarceration | 12-Month Follow-up |
|--|-------------------|--------------------|
| Reported spending most of their free time with family***                                       | 59.0%             | 78.9%              |
| Reported a close relationship with sexual partner/spouse*                                      | 67.9%             | 78.3%              |
| Other close relationships* (includes AA sponsors, church members, and extended family members) | 11.0%             | 22.9%              |

*Note: Significance established using McNemar's test for correlated proportions, \*\*\*p<.001, \*p<.05, see Appendix B.*

In addition, fewer participants reported having children in someone else's temporary legal custody at follow-up (24%) when compared to baseline (41.6%), as illustrated in Table 11. Also, significantly fewer participants reported being arrested and charged with failure to pay child support (0.6% at follow-up compared to 3.8% than before incarceration). Another noteworthy finding is that of the 221 participants who reported having children at follow-up, 84.2% reported providing financial support to their children in the 12 months after release.

**Table 11. Relationships with children among DOC treatment participants**

|   | Pre-incarceration | 12-Month Follow-up |
|---|-------------------|--------------------|
| Child/ren in someone else's temporary legal custody***  | 41.6%             | 24.0%              |
| Arrested and charged with failure to pay child support* | 3.8%              | 0.6%               |

*Note: Significance established using McNemar's test for correlated proportions, \*\*\*p<.001, \*p<.05, see Appendix B.*

## Treatment Cost-offset

The public funding of substance abuse treatment and recovery services typically must justify its costs by showing reductions in social and financial costs to society. Kentucky has faced rising costs associated with increasing numbers of individuals incarcerated for drug-related crimes. However, with the passing of HB463 legislation in July 2011, the Department of Corrections launched a critical initiative in the state to expand treatment opportunities for substance abusing offenders as a way of enhancing the stability of inmates going back into their communities. The logic for the services is that individuals who are given opportunities to manage their substance abuse problems will be less likely to harm the public and to drive up costs to the state.

For every \$1 spent on Kentucky' corrections-based substance abuse treatment, there is a \$4.41 cost offset.

In response to this policy interest, the cost offset of corrections-based programs during FY2012 is presented in this section. This analysis examines the cost to society posed by study participants during their last year on the street (the 12 months before their last incarceration) and the same costs one year after release from prison, jail or community custody. Thus, the intent is to examine the cost of these individuals to society before state interventions and then their cost after interventions, taking into consideration the cost of the interventions.

The first step in the analysis focused on estimating the average cost per substance abuser, using two comprehensive federally funded economic studies. In 2007, the annual cost to the United States for drug abuse was \$189 billion (NDIC, 2011). Updated to 2013 values, this figure translates to \$212,846,049,966 (Bureau of Labor Statistics, 2014). The National Survey on Drug Use and Health 2012 reports that there are 22.2 million individuals who are substance dependent in the United States. Thus, the average cost per substance abuser per year (\$9,587) was calculated as the total annual cost of drug abuse divided by the number of individuals who are substance abusing or dependent using SAMHSA and DSM-IV criteria.

For CJKTOS, an *active* substance user is defined in this report as abusing drugs and/or alcohol in the 30 days prior to incarceration (both at baseline/intake and at follow-up 12 months post-release). Table 12 shows the cost of active substance abusers to society for the year prior to incarceration and for the 12 months post incarceration and post-treatment. Abstinent individuals represent the goal of the interventions and abstinence at follow-up is a robust indicator of positive treatment outcome and reduced cost to society. Thus, the cost of this sample for the year prior to incarceration is estimated at \$2,914,448 while the cost for a comparison 12 month period after treatment is estimated at \$891,591. This analysis shows a net reduction in cost for the sample of \$2,022,857.

**Table 12. Costs associated with drug and alcohol use (pre-treatment to post-treatment)**

|  | Baseline<br>N | Per person<br>cost of<br>substance<br>abuse | Cost of<br>substance<br>abuse<br>(pre-<br>treatment) | Follow-up<br>N | Per person<br>cost of<br>substance<br>abuse | Cost of<br>substance<br>abuse<br>(post-<br>treatment) |
|--|---------------|---|--|----------------|---|---|
| <b>Study participants<br/>who were <i>active</i><br/>users of substances<br/>as measured by past<br/>30 use.</b> | 304           | \$9,587                                     | \$2,914,448  | 93             | \$9,587                                     | \$891,591   |

However to obtain a more defensible net reduction in cost we estimated the cost of the interventions for substance use disorders for this entire sample. The costs of DOC substance abuse treatment is illustrated in Table 13. The total number of treatment days for study participants were calculated for each category of treatment (prison, jail, or community custody) and multiplied by the cost per day of treatment to arrive at a total treatment cost of \$373,757 for the sample.

**Table 13. Cost of Corrections-based Treatment\***

|                          | Number of<br>treatment days | Cost per day of<br>treatment* | Total Treatment<br>Cost |
|--------------------------|-----------------------------|-------------------------------|-------------------------|
| Jail (n=154)             | 26,689                      | \$9.00                        | \$240,201               |
| Prison (n=129)           | 24,702                      | \$4.09                        | \$101,031               |
| Community Custody (n=63) | 11,493                      | \$2.83                        | \$32,525                |
| <b>Total cost</b>        |                             |                               | <b>\$373,757</b>        |

\*Treatment costs supplied by KY Department of Corrections, 1/2/14.

As shown in Table 14, the initial cost to the state for drug and alcohol abuse/dependence for this sample of offenders would have been \$2,914,448 without intervention. After corrections-based treatment, there was a significant decrease in the number of participants reporting drug and alcohol use, reducing the cost to \$891,591. The gross difference in the cost to society was \$2,022,857. After subtracting the direct costs of the treatment programs, there was a net avoided cost of \$1,649,100. ***Therefore, for every dollar spent on corrections-based treatment there was a return of \$4.41 in cost offsets.***

**Table 14. Cost Offset for the Follow-up Sample (N=346)**

| Cost Item  | Dollars                                |
|--|--|
| Annual cost to Kentucky <b>before</b> participation in corrections-based substance abuse treatment | \$2,914,448                            |
| Annual cost to Kentucky <b>after</b> participation in corrections-based substance abuse treatment  | \$891,591                              |
| Gross difference in post versus pre-treatment participation  | \$2,022,857                            |
| The direct cost of corrections-based substance abuse treatment                                     | \$373,757                              |
| Net avoided cost after corrections-based substance abuse treatment                                 | \$1,649,100                            |
| Ratio showing cost of treatment to savings   | 1:4.41                                 |
| Expressed as return on investment  | \$4.41 return for every \$1.00 of cost |

## ***Study Limitations***

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There are study limitations. 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 examine 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 169 substance abuse treatment participants on supervision at the time of their follow-up interview reporting no drug use, 136 had no positive drug tests in KOMS. This provides a self-report accuracy rate of 92.6%. In this study, a higher rate of substance use is self-reported than from urine test results. Furthermore, urine tests only identify substances used recently. Thus, for past 12 month substance use, self-report remains 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 participant's memory recall and could be a study limitation. Victim crime costs and their reductions before prison compared to their 12 months after prison do not take in account all costs associated with re-incarceration.

## Conclusions

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This FY2013 CJKTOS follow-up report presents 12-month post-release data on the characteristics of individuals who participate in the Kentucky Department of Corrections substance abuse treatment programs during their incarceration in prison or jail, as well as community custody programs. This follow-up report includes data from a stratified random sample of participants who received substance abuse treatment and were released during fiscal year 2012. Specifically, this 12-month follow-up study examined a randomly selected representative sample of 346 males and females who participated in jail, prison, or community custody-based treatment and consented to follow-up.

**Reduced substance use.** FY2013 findings indicate that there were statistically significant increases in the number of individuals who participated in corrections-based substance abuse treatment who reported reductions in drug use at follow-up. While this reduced substance abuse reported by treatment participants is comparable to other national follow-up prison studies (i.e., Prendergast, Greenwell, Lin, 2007; Butzin, Martin, Inciardi, 2005), the analysis of multiple correctional-based treatment programs in this evaluation including jail, prison, and community custody is unique and speaks to Kentucky's commitment to offer quality substance abuse services for offenders. The consistency in findings across venues with regard to reductions in substance use patterns one-year post release also highlight uniformity in treatment approach (modified therapeutic communities), treatment staff training, and ongoing supervision provided by Department administration.

**Decreased recidivism.** The majority of study participants were not re-incarcerated on a felony charge during the 12 months following their release. In addition, most offenders who were re-incarcerated (87%) reported being charged with a parole or probation violation rather than a new charge. Other national studies report 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. That recidivism rate of about 30% is what the KY DOC cites for one-year follow-up without any treatment (Halladay, 2012). However, these findings suggest that, with treatment, recidivism can be further reduced in KY to about 26%.

**Recovery Supports.** Although there is no mandatory aftercare following Kentucky prison, jail and community custody-based substance abuse treatment, findings from this study indicate that most treatment participants participated in self-help groups after release. Specifically, 73% of those who received substance abuse treatment in jail, 81% of those who received substance abuse treatment in prison and 73% of those who received substance abuse treatment in community custody reported attending at least one AA/NA meeting in the 12-months after release. Twenty-three percent of treatment participants enrolled in community treatment following release. Outpatient treatment was the most common treatment. This is 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). This continues to be a focus of the Department – to ensure a continuum of care for offenders as they transition from the institution to the community.

**Housing and Employment.** This year's report also includes other significant outcomes for treatment participants to show that they are transitioning to the community successfully and reintegrating into society. The majority of treatment participants reported being housed in a stable environment and were working in the 12 months post release. More specifically, 90% reported being housed in an

apartment, room, house or residential treatment facility most of the time in the 12 months following release. In addition, 62% reported their usual employment pattern in the 12 months following release as working full or part-time. It has been noted that employment and housing can be two of the most difficult challenges that re-entering individuals face (Re-entry Policy Council, 2005). The number of successful individuals in this follow-up report suggests that the benefits of substance abuse treatment extend beyond staying clean and avoiding reincarceration.

**Improved Families.** Another benefit of DOC substance abuse treatment reported by participants was stronger families at follow-up. More participants reported spending most of their free time with family at follow-up (78.9%) than at baseline (59.0%). Also, more participants reported having a close relationship with a sexual partner/spouse at follow-up (78.3%) when compared to baseline (67.9%) and having other close relationships at follow-up (22.9%) compared to baseline (11.0%). When asked about relationships with their children, fewer participants reported having children in someone else's temporary legal custody at follow-up (24%) when compared to baseline (41.6%). Also, fewer participants reported being arrested and charged with failure to pay child support at follow-up (0.6%) compared to baseline (3.8%). Of the participants who reported having children at follow-up, 84.2% reported providing financial support to their children in the 12 months after release.

**Improved Mental Health.** An improvement in mental health was reported by participants after DOC substance abuse treatment. Significantly fewer participants reported experiencing serious depression at follow-up (30.9%) when compared to baseline (40.2%) and significantly fewer participants reported thoughts of suicide at follow-up (5.8%) when compared to baseline (11.3%). Also, fewer participants reported anxiety at follow-up (39.9%) when compared to baseline (43.6%).

**Cost Offset to Society.** A cost offset to society was examined in this report. The initial cost to the state for drug and alcohol abuse/dependence for this sample of offenders would have been \$2,914,448 without intervention. After corrections-based treatment, there was a significant decrease in the number of participants reporting drug and alcohol use, reducing the cost to \$891,591. The gross difference in the cost to society was \$2,022,857. After subtracting the direct costs of the treatment programs, there was a net avoided cost of \$1,649,100. ***Therefore, for every dollar spent on corrections-based treatment there was a return of \$4.41 in cost offsets.***

## ***Implications***

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The growth of prison and jail based treatment in Kentucky is indicative of the state's commitment to provide treatment for substance users. With the implementation of HB463 in 2011, the Department's commitment to treatment has been enhanced by the provision of additional services and an emphasis on evidence-based interventions. 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 evaluate treatment for incarcerated substance abusers in Kentucky (see Staton-Tindall et al., 2007).

This evaluation indicates that the Kentucky Department of Corrections has successfully evolved to provide services in prisons, jails, and with the implementation of HB463, community custody programs which are effective in reducing drug use, reducing recidivism, and promoting reintegration into society. Findings in this report support the treatment of substance abusers in the criminal justice system with increased efforts to strengthen the transition from institution to community to maintain successes achieved in corrections-based treatment. This analysis of reductions in costs of substance abuse from the year prior to incarceration to the year after release suggests important gains for society. Future reports will examine these cost offsets and gains in more detail and with comparisons to other populations.

## **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.

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

**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.**

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### ***Evaluation methodology***

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 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.

In FY2011 CJKTOS transitioned from collecting baseline data using personal digital assistants (PDAs) to a web-based data collection system. Department of Corrections treatment providers obtain informed consent and contact information which is forwarded to 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.

For this report, the 12-month follow-up study was conducted by research staff at 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, prison, or community custody 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 randomly selected for follow-up after proportionate stratification by prison and jail. Due to the small number of females released during the 12-month time frame, all females were included. Using the same proportion from each correctional setting as those meeting eligibility criteria, a final sample of 350 was included in the follow-up. This proportionate stratification approach produces estimates that are as efficient as those of a simple random selection (Pedhazur & Schmelkin, 1991).

UK research staff began to locate 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 follow-up interviews were completed interviews by phone, and all data provided is self-reported by the participants.

### ***Sampling approach***

A total of 1,988 clients who completed a CJKTOS baseline were released from custody in FY 2012. Having a release date is the point of entry into the follow-up study sampling frame. The CJKTOS follow-up rates are presented in Table 1. Of those 3,268 CJKTOS clients who were released from custody in FY2012, 1,280 did not consent to participate in the follow-up study. Of the 1,988 research treatment participants who were eligible for follow-up (released in FY12 and voluntarily consented for follow-up), 22% were randomly selected to participate in the follow-up interview ( $n=438$ ). The sample of 438 was proportionate to the number of individuals released from jails, prisons, and community custody treatment programs. Of the 438 randomly selected, 15 were ineligible because at the time they were

located for follow-up, 6 participants were detained and were never released, 8 moved out of state and 1 participant was deceased according to their family reports and verified by Kentucky vital statistics.

## ***Appendix B.***

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### ***Statistical Analysis***

Changes in this report between participants' self-reported substance use "on the street" in the 12 months before incarceration (baseline) and treatment participants' self-reported use "on the street" 12 months after release (follow-up) from jail, prison, and community custody programs. McNemar's test for correlated proportions examines statistical differences for the proportion of participants who reported substance use at baseline compared to follow-up. Substance abuse treatment utilization and criminal justice involvement during the 12 months post-release is also included, as are indicators of costs associated with victim crime.

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## ***Appendix C.***

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### **CJKTOS PRISON DATA COLLECTION SITES**

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

Kentucky Correctional Institution for Women  
3000 Ash Avenue  
Pewee Valley, Kentucky 40056  
(502) 241-8454

Kentucky State Reformatory  
3001 W Highway 146  
LaGrange, Kentucky 40031  
(502) 222-9441

Little Sandy Correctional Complex  
505 Prison Connector  
Sandy Hook, Kentucky 41171  
(606) 738-6133

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

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

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

Roederer Correctional Complex  
P. O. Box 69  
LaGrange, Kentucky 40031  
(502) 222-0170

Western Kentucky Correctional Complex  
374 New Bethel Church Road  
Fredonia, KY 42411  
(270) 388-9781

**CKTOS JAIL DATA COLLECTION SITES**

Boyle County Detention Center  
1860 S Danville Bypass  
Danville, KY 40422  
(606) 739-4224

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

Bullitt County Detention Center  
1671 Preston Highway  
Shepherdsville, Kentucky 40165  
(502) 543-7263

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

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

Fulton County Detention Center  
210 South 7<sup>th</sup> Street  
Hickman, KY 42050  
(270) 236-2405

Grant County Detention Center  
212 Barnes Road  
Williamstown, KY 41097  
(859) 824-0796

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

Harlan County Detention Center  
6000 Highway 38  
Evarts, Kentucky 40828  
(606) 837-0096

Henderson County Detention Center  
380 Borax Drive  
Henderson, Kentucky 42420  
(270) 827-5560

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

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

Shelby County Detention Center  
100 Detention Road  
Shelbyville, KY 40065  
(502) 633-2343

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

#### CJKTOS COMMUNITY CORRECTIONS DATA COLLECTION SITES

CTS-Russell  
1407 West Jefferson Street  
Louisville, KY 40203  
(502) 855-6500

Dismas Charities-Diersen  
1219 West Oak Street  
Louisville, Kentucky 40210  
(502) 636-1572

Dismas Charities-Owensboro  
615 Carlton Drive  
Owensboro, KY 42303  
(270) 685-6054

Dismas Charities- St. Ann's  
1515 Algonquin Parkway  
Louisville, KY 40210  
(502) 637-9150

Hope Center Detention Program  
Fayette County Detention Center  
600 Old Frankfort Circle  
Lexington, KY 40510  
(859) 425-2700

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