

# **CJKTOS**

## **CRIMINAL JUSTICE KENTUCKY TREATMENT OUTCOME STUDY**

**FY2019**

**Prepared for:**

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## **Report Summary**

The Criminal Justice Kentucky Treatment Outcome Study (CJTOS) examines substance abuse outcomes of state offenders participating in substance abuse treatment programs in Kentucky's prisons, jails, and community custody settings. This report includes data collected during FY2019 for 320 randomly selected participants who entered Department of Corrections (DOC) substance abuse treatment programs (SAP), participated in an intake assessment by treatment counselors, and were followed-up 12-months later in the community following their treatment completion and release from custody. This report includes data collected during FY2019 from July 1, 2018 to June 30, 2019.

### **Among SAP graduates from KY jails, prisons, and community corrections facilities interviewed 12 months post-release...**

- 61.6% had not been re-incarcerated.
- 87.8% were living in stable housing.
- 76.6% were employed.
- 77.1% of those with children reported providing financial support to their children.
- 58.8% did not have a positive drug test in the year since release.
- 67.5% attended 12-Step meetings.
- 67.2% of those referred to aftercare, attended aftercare.

### **Of the SAP graduates who returned to DOC custody...**

- 52.9% were re-incarcerated on a new charge in addition to a technical or probation/parole violation.
- 63.4% were employed, whereas 84.8% of non-recidivists were employed.
- 80.5% reported using drugs in the year since release and 56.9% had a positive drug test.

### **Treatment graduates noted positives about SAP participation, including...**

- 81.5% felt better about themselves as a result of treatment.
- 81.9% received services they needed to get better.
- 83.1% considered the treatment program to be successful.

### **Cost offset analysis indicated that...**

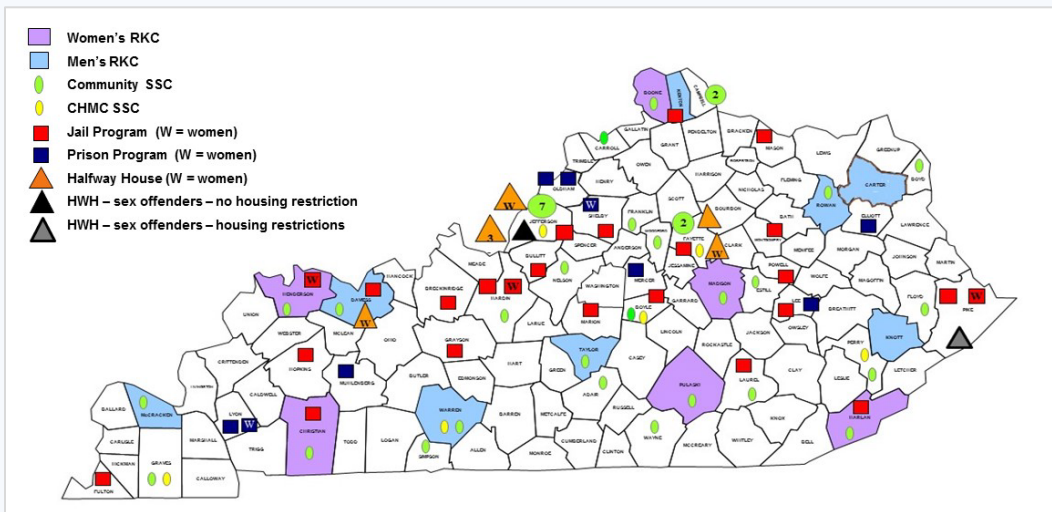
- For every \$1 spent on Kentucky corrections-based substance abuse treatment there is a \$3.94 cost offset.

The importance of employment and housing among SAP graduates aligns with the Department's recent re-entry initiatives. In February, 2018, DOC formed the Division of Re-entry Services with the overall purpose of creating individualized reentry plans, empowering individuals with resources, support and programming, to promote successful reintegration into the community. Re-Entry Division Director Kristin Porter said, "we are excited about the close collaboration with the Division of Addiction Services in order to enhance re-entry efforts for individuals in recovery".

### Introduction

The Kentucky Department of Corrections (DOC) Division of Addiction Services provides substance abuse treatment programs throughout the state (See Figure 1). The treatment approach has been described in earlier reports and is grounded in the key components of therapeutic community modalities (De Leon, 2000).

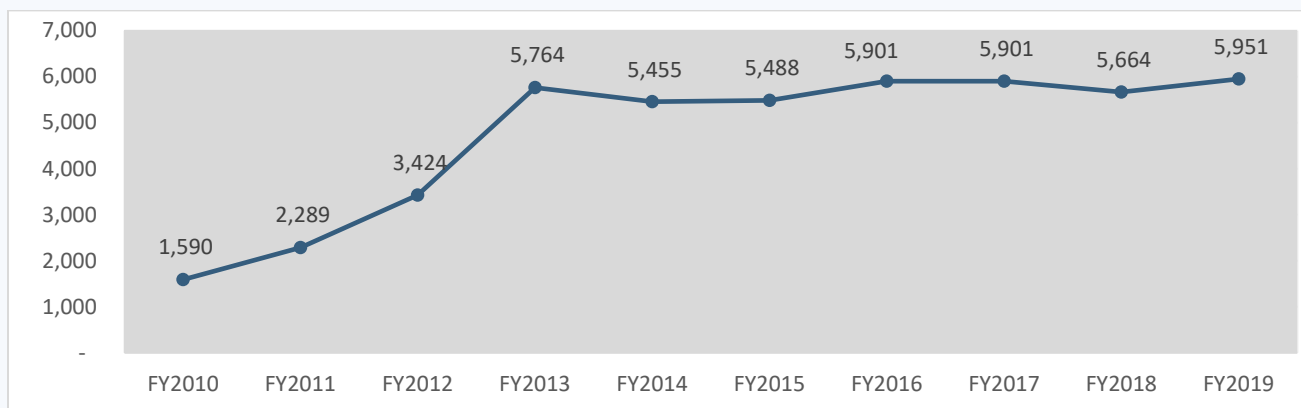
Figure 1. Location of Kentucky’s Corrections-based Substance Abuse Treatment Programs (2019)



In FY2019, there were an average number of 5,951 corrections-based substance abuse treatment slots in jails, prisons, halfway houses, Recovery Kentucky Centers, community mental health centers, and intensive outpatient centers (See Figure 2, more details on specific DOC program modalities in Appendix A). This evaluation report focuses on traditional substance abuse programming (SAP) using a modified therapeutic community in institutional sessions (30 programs in 22 jails and 11 programs in 8 prisons) and in four reentry service centers serving individuals with community custody status (See Appendix B for sites).

**In FY2019, the number of treatment slots for KY DOC offenders was 5,951 – the highest number of treatment slots to date.**

Figure 2. Trends in Number of Corrections-based Substance Abuse Treatment Slots



## SAP Graduates

Data on behaviors prior to incarceration were collected by treatment providers at intake into the DOC treatment programs (jail, prison, or community custody) (See Methodology, Appendix C). Follow-up data was collected by the University of Kentucky Center on Drug and Alcohol Research 12 months after the individual completed treatment and was released to the community. Therefore, data in this report is 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 and 30 days post-release from incarceration in which they successfully completed DOC SAP treatment in prisons, jails, or community reentry service centers RSCs).

**There were no differences between the treatment sample and overall treatment population, making the results of the CJKTOS FY2019 study generalizable.**

This report profiles three categories of SAP graduates: (1) individuals completing substance abuse program services in state prisons; (2) individuals completing substance abuse program services in county or regional jails; and (3) individuals completing residential substance abuse services in the community reentry service center but still under state custody. As shown in Table 1, the randomly selected follow-up sample of SAP graduates was not different from the entire population of eligible SAP graduates.

Table 1. Demographic Characteristics of FY2019 Follow-up SAP Sample Compared to All SAP Graduates Eligible for Follow-up

	Follow-up SAP Graduates (n=320)	All SAP Graduates Eligible for Follow-up (n=2,052)
<b>Average Age</b>	36.6 years old (range 20 to 72)	35 years old (range 18 to 78)
<b>Race/ethnicity</b>	86.6% white	81.0% white
<b>Gender</b>	80.0% male	80.0% male
<b>Education</b>	75.0% GED or high school diploma	73.7% GED or high school diploma
<b>Marital Status</b>	48.1% Single, never married	45.9% Single, never married

More than half of the follow-up SAP participants (52.2%) who completed treatment during FY2019 were referred to SAP as “parole upon completion.”

## Treatment Satisfaction

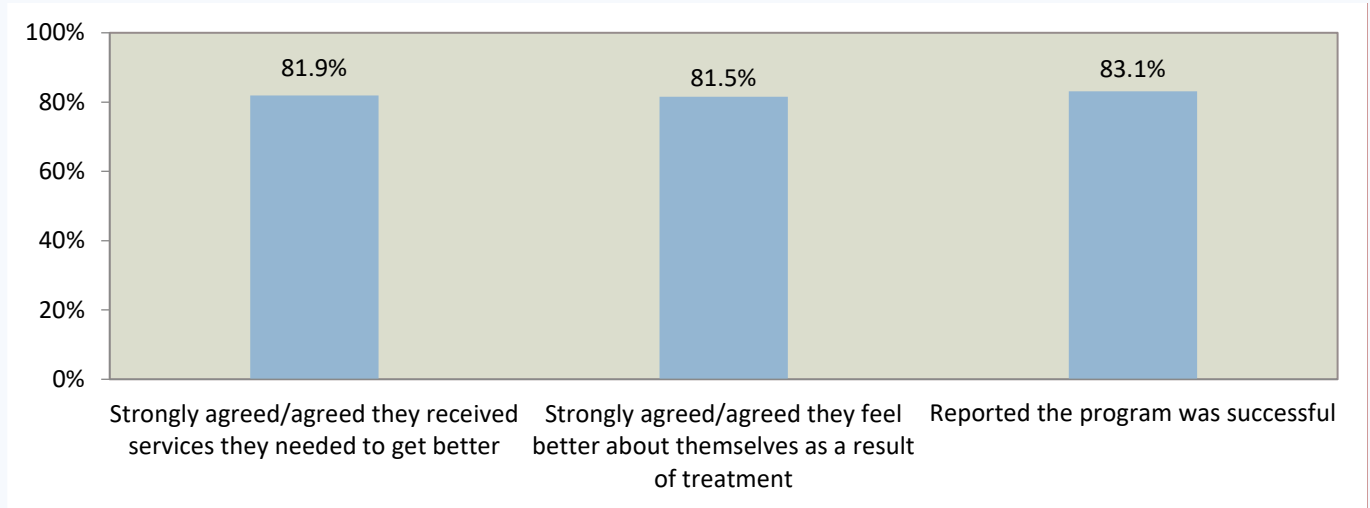
During FY2019, DOC SAP graduates were asked about their overall satisfaction with treatment as well as questions related to specific components of the program. As shown in Figure 3, the majority of SAP graduates at follow-up (81.9%) agreed or strongly agreed that they received the services they needed to help themselves get better. The majority of SAP graduates (81.5%) also agreed or strongly agreed that that they felt better about themselves as a result of treatment.

**“WHEN I GOT OUT, I WASN’T USING... I WANTED TO BE A BETTER MEMBER OF SOCIETY. [SAP] MADE ME FEEL LIKE I WASN’T THE PERSON I THOUGHT I WAS.”**

Also reported in Figure 3, 83.1% of SAP graduates considered the program to be an overall success. When asked to explain why they believed the program was successful, many pointed to their achievements post-release as evidence that the program was effective. Participants credited their continuing sobriety, employment, relationships with children and family, and not being re-incarcerated as proof that SAP had a positive impact on their behaviors and thinking patterns. Overall, many participants agreed that features of the program themselves – accountability, structure, and a staff who “genuinely cared” – helped them understand their addictions, as did the shared experience and support from living in a community of others in recovery. Finally, participants agreed that readiness and motivation to change was a key element to success both in, and after, the SAP program.

**“I WAS LOCKED UP A LONG TIME BEFORE I WENT INTO SAP, AND AT FIRST I DIDN’T WANNA DO IT, BUT THEN SOMETHING STUCK... I WENT INTO SAP LOOKING FORWARD TO GETTING HIGH WHEN I GOT OUT, BUT THEN THINGS CHANGED.”**

Figure 3. Treatment Program Satisfaction (N=320)



SAP graduates at follow-up were asked to describe what they liked best about the program. Many appreciated classes and process groups, AA/NA meetings, fun activities (such as cookouts or rec time), individual counseling sessions, the structure and strictness of SAP, and the supportive and nonjudgmental staff. Others said they appreciated the chance to teach or mentor others, to learn about addiction and their own behaviors, to share their stories and hear about others’ experiences, and to be a part of the fellowship and community of the program.

**“[SAP] HELPED ME LOOK AT MYSELF IN A WHOLE DIFFERENT WAY. BEFORE, I WAS JUST THINKING ABOUT GETTING OUT AND PICKING UP MY OLD WAYS, BUT THIS TIME I WAS TRYING TO DO THE RIGHT THING.”**

When asked to explain why they rated SAP highly, many graduates praised the services offered through SAP (such as classes or groups), while others focused on the structure and environment more generally (including order and routine, but also camaraderie with other clients). Once again, many graduates spoke very highly of caring and compassionate counselors and staff members, who “see you as a person,

not a criminal” and “made us feel like we were human again.” Many believed that their successes post-release and positive personal growth were directly attributable to their experiences in SAP.

**CST and Criminogenic Needs**

In July of 2017, Kentucky adopted the Kentucky Risk Assessment Screen (KY-RAS) which was adapted from the Ohio Risk Assessment Screen (ORAS, Latessa et al., 2010) as part of the state’s initiative to enhance assessment processes through HB 463. Table 2 describes follow-up SAP graduates’ scores on the KY-RAS. Just over 10% of follow-up SAP graduates who had available KY-RAS data (n=280) were assessed as being overall high or very high risk. Domains with the highest risk were 1) Neighborhood Problems, 2) Education, Employment, and Financial Situation, and 3) Substance Use.

**Nearly one-third (31.8%) of follow-up SAP graduates were assessed as being high or very high risk in the Neighborhood Problems domain.**

Table 2. DOC Treatment KY-RAS Report of High or Very High Rankings

<b>DOC Treatment Follow-up Graduates (n=280*)</b>	
<b>Overall Risk</b>	10.8%
<b>Criminal History</b>	7.9%
<b>Education/Employment/Financial Situation</b>	26.1%
<b>Family/Social Support</b>	6.8%
<b>Neighborhood Problems</b>	31.8%
<b>Substance Use</b>	22.1%
<b>Peer Associations</b>	6.4%
<b>Criminal Attitudes/Behaviors</b>	0.7%

\*KY-RAS data unavailable in KOMS for N=40

**Criminal History**

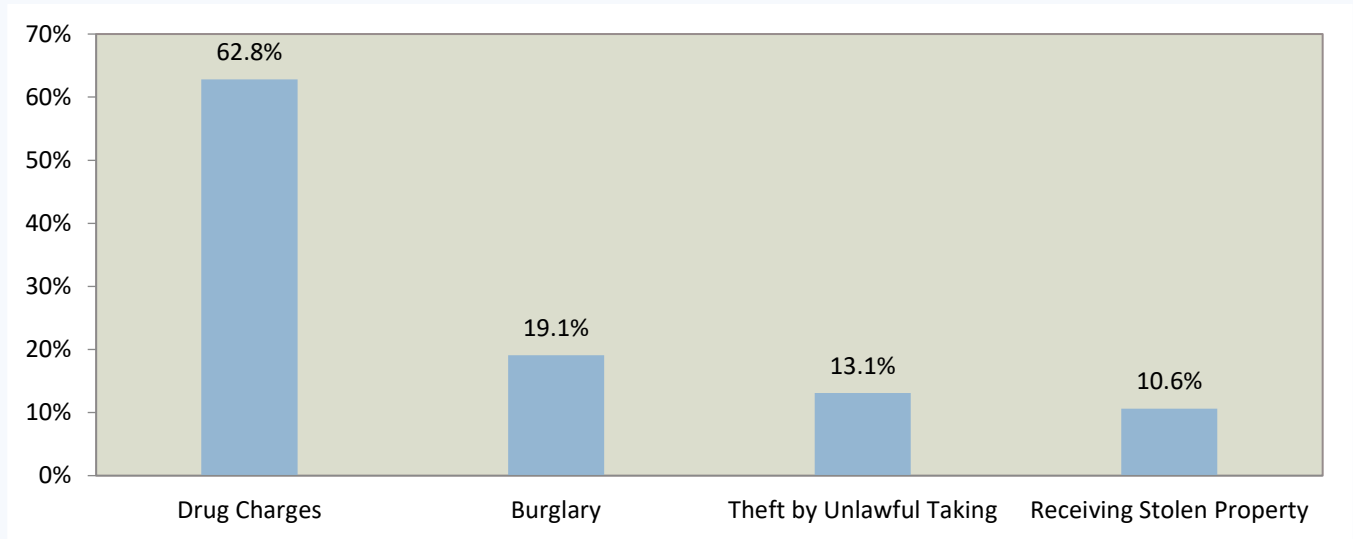
At intake into SAP, the charges participants most commonly reported being arrested on during the 12 months before their incarceration, not including current charges, included drug charges (35.0%), parole or probation violations (24.1%), and burglary (10.0%). Further, SAP graduates had spent an average of 47 nights incarcerated in the 12 months prior to their current incarceration, and also reported an average of 9.2 lifetime convictions.

**SAP graduates had most commonly been arrested on drug charges in the 12 months prior to their current incarceration.**

Figure 4 shows the types of charges SAP graduates reported as the reason for their current incarceration. Graduates’ current charges were most likely to include drug charges (62.8%), burglary (19.1%), theft by

unlawful taking (13.1%), and receiving stolen property (10.6%). At the time of intake, they had been incarcerated an average of 23.2 months.

Figure 4. Criminal Charges at SAP Intake (N=320)



**Recidivism**

Data from the Kentucky Offender Management System (KOMS) was used to examine SAP graduates’ re-incarceration during the year following release. As shown in Table 3, 63.0% of jail, 58.5% of prison, and 64.3% of community custody-released follow-up cases were not re-incarcerated within the 12 months’ post release from prison or jail. It is also noteworthy that graduates who were re-incarcerated were in the community an average of 6.0 months before being re-incarcerated. Lower recidivism among SAP graduates from community custody and jail-based programs compared to prison programs suggests these individuals have been appropriately assigned to treatment modality based on recidivism risk (in part due to a less severe history of substance use), indicating that DOC has made significant progress in recommending offenders to a suitable level of care.

**The majority of SAP graduates were not re-incarcerated during follow-up period. Of those who returned to custody, they spent an average of 6 months on the street.**

Table 3. Recidivism\* 12 Months Post-release (N=320)

	Jail (n=200)	Prison (n=106)	Community Custody (n=14)	Total (N=320)
<b>Not Incarcerated</b>	63.0%	58.5%	64.3%	61.6%
<b>Incarcerated</b>	37.0%	41.5%	35.7%	38.4%

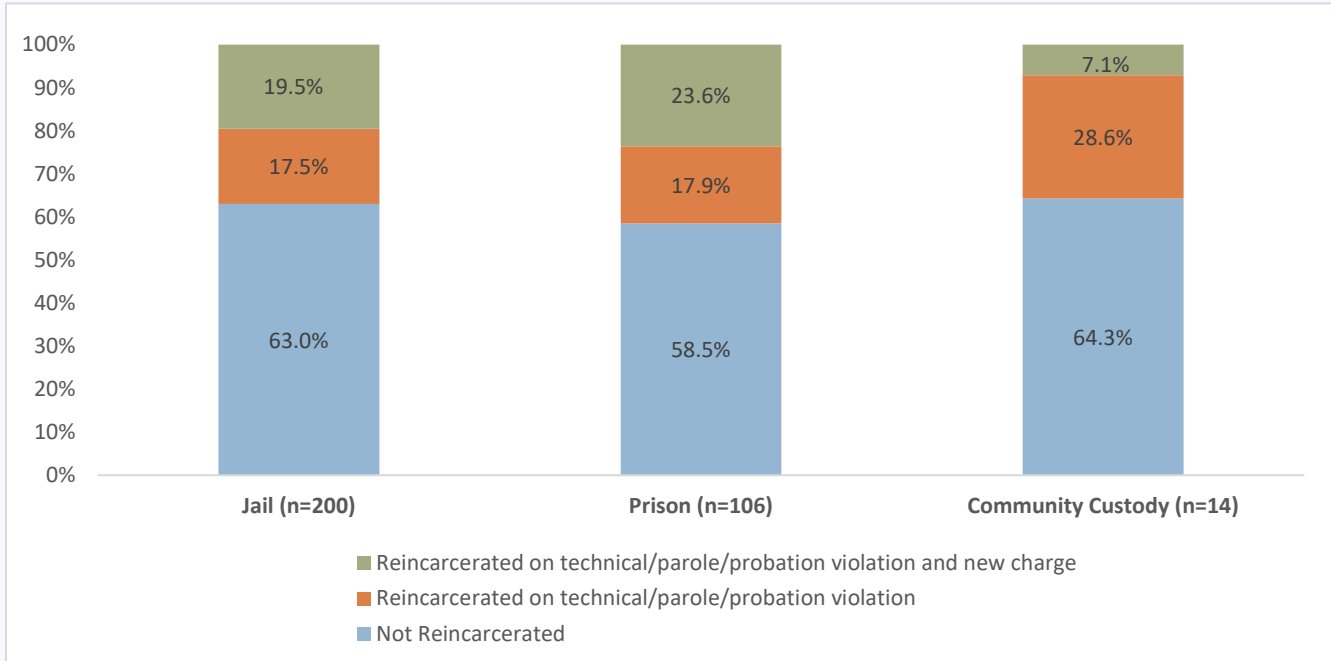
\* The DOC counting rules were used to define recidivism (see page 22 for counting rule definition used in this report).



**More than 50% of graduates who were re-incarcerated (n=123) were returned to custody on a technical or parole/probation violation in addition to a new charge.**

Of the 38% of the sample who were returned to custody (n=123), the majority were re-incarcerated on a technical or parole/probation violation as well as a new charge (52.9%), while fewer were re-incarcerated on only a violation (47.1%). Figure 5 shows the reason for re-incarceration across each of the DOC treatment programs.

Figure 5. Recidivism and Reason for Re-incarceration (N=320)



Of those SAP graduates re-incarcerated for a technical or parole/probation violation (with or without a new charge; n=123, or 38.4% of the total sample), the most common violations included absconding (59.3% of violators), and the Department has made recent changes in the absconder protocol (<https://corrections.ky.gov/About/cpp/Pages/Chapter-27.aspx>). Other common violations included having a new charge (43.1%), failure to report (35.8%), failure to complete substance abuse treatment or report for a substance abuse assessment (32.5%), and positive drug test or admission of drug/alcohol use (26.8%). Although arrests for violations are more common among SAP graduates than arrests for new charges, the Kentucky DOC has made efforts to reduce re-incarceration and more effectively meet treatment needs through increased reentry supports (both pre- and post-release) and implementation of graduated sanctions in a statewide initiative. Probation and Parole Division Director, Erica Hargis, indicated that “Department level changes in recent years are intended to increase the likelihood of individual’s success while they are on community supervision. We want to give individuals every opportunity to be successful rather than immediately rising to the highest level of sanctions for violations.”

**Through increased reentry supports and implementation of graduated sanctions, the Kentucky DOC has made efforts to more effectively meet the needs of those returning to the community on supervision.**

Depending on the risk level of the offender and type of offense, graduated sanctions allow parolees to be placed in discretionary detention for up to 10 days following violations, without revocation of parole. Social service clinicians then provide assessments to determine offenders’ needed level of care, including IOP, residential, or outpatient services. This initiative reflects the DOC’s commitment to data-driven decision making by identifying offenders on supervision in need of further substance abuse treatment and allowing their needs to be met directly. This is also likely reflected in the lower recidivism rate overall for SAP graduates during this FY compared to last FY (38% vs. 43%).

SAP graduates who recidivated during the 12 months following their release had a number of differences when compared to non-recidivists. For example, those who recidivated during the follow-up period were significantly more likely to report at intake that they had been arrested in the 12 months prior to incarceration compared to non-recidivists (78.0% vs 66.5%). Additional comparisons between recidivists and non-recidivists, including drug use and employment, can be found in the sections to follow. While, in general, it could be suggested that recidivism rates for this sample of SAP graduates is somewhat high, it should also be noted that individuals who enter substance abuse treatment during incarceration are among the highest risk for recidivism based on all assessed risk and criminogenic need factors.

**Education, Employment, & Financial Situation**

**76.6% of participants were employed part-time or full-time.**

Fifteen percent of SAP graduates reported attending either an educational or vocational training program during the 12 months following release. Specifically, 16 attended a job training program, 13 attended a GED program, and 19 attended either a college or vocational school.

The majority of SAP graduates reported working one-year post-release. Approximately three-fourths (76.6%) reported their usual employment pattern as working full or part-time in the year since release, with graduates at follow-up reporting working an average of 14.9 days in their last 30 days on the street. Of those who worked at least part time in the year following release, they had an average of less than 2 jobs during the 12-month period. Furthermore, SAP graduates reported an average past-month legal income of \$1,368, and, as shown in Table 4, 87.8% reported stable housing in an apartment, room, house or residential treatment facility – an increase from FY 2018 (86.0%).

Table 4. Education, Employment, and Income in the 12 Months Post-release (N=320)

	Jail (n=200)	Prison (n=106)	Community Custody (n=14)	Total (N=320)
Participated in education or vocational program	14.0%	17.0%	14.3%	15.0%
Employed full- or part-time	73.5%	85.8%	50.0%	76.6%
Housed in apartment, room, house or residential treatment facility	86.5%	91.5%	78.6%	87.8%

There were notable differences between individuals who recidivated and those who did not. As shown in Table 5, recidivists were far less likely to be employed or to have stable housing compared to those who did not recidivate during the 12 months following release. Those who recidivated and reported income (n=123) also reported a lower legal income in their last 30 days on the street compared to those who did not return to DOC custody (n=197; \$1,095 vs. \$1,539). These findings have important implications for DOC’s new re-entry initiatives and speak to the importance of wrap around services for individuals in recovery.

Table 5. Education, Employment, and Income by Recidivism in the 12 Months Post-release (N=320)

	Recidivists (n=123)	Non-recidivists (n=197)
Participated in education or vocational program	14.6%	15.2%
Employed full- or part-time	63.4%	84.8%
Housed in apartment, room, house or residential treatment facility	74.8%	95.9%

Furthermore, although nearly two-thirds (63.4%) of recidivists were employed at least part time during the 12 months post-release, recidivists who were employed were on the street an average of 45 days longer before returning to DOC custody than those who were not employed (195.3 days vs. 150.7 days).

**Of recidivists, those who were employed were on the street 45 days longer.**

**Family & Social Support**

Graduates of DOC treatment reported improved family relationships at one-year post-release. Significantly more SAP graduates reported spending most of their free time with family at follow-up (66.3%) than before incarceration (53.8%). SAP graduates also reported a higher average number of friends at follow-up (4.03) compared to pre-incarceration (2.58). Furthermore, almost 4 out of every 5 (83.1%) graduates reported feeling ‘quite a bit’ or ‘extremely’ cared about and supported by the important people in their life.

**“[I LEARNED] TO THINK ABOUT THINGS BEFORE I REACT. I UNDERSTAND THAT IT’S NOT JUST ME, BUT MY ACTIONS COULD AFFECT OTHERS AROUND ME, AND BEFORE I DIDN’T PAY ATTENTION TO THAT.”**

SAP graduates noted that their time in the program had taught them many useful interpersonal skills that helped their relationships with family after release. These included specific skills in coping, anger management, and parenting, as well as work on boundaries and co-dependence, particularly with family members or partners who may have enabled substance use. Overall, graduates reported improved self-discipline, patience, and integrity, as well as better communication skills, including listening and honesty with others. They also reported greater empathy, open-mindedness, self-awareness, and understanding, which helped them to be accountable for their actions, to make amends, and to have respect for themselves and others.

**“I LEARNED HOW TO  
MAKE AMENDS AND  
HEAL DAMAGED  
RELATIONSHIPS.”**

In addition, nearly two-thirds (67.8%) of SAP graduates reported having a close relationship with their children at follow-up. Also, of those with children (n=205), over three-quarters of graduates (77.1%) reported providing financial support to their children under the age of 18 in the 12 months post-release.

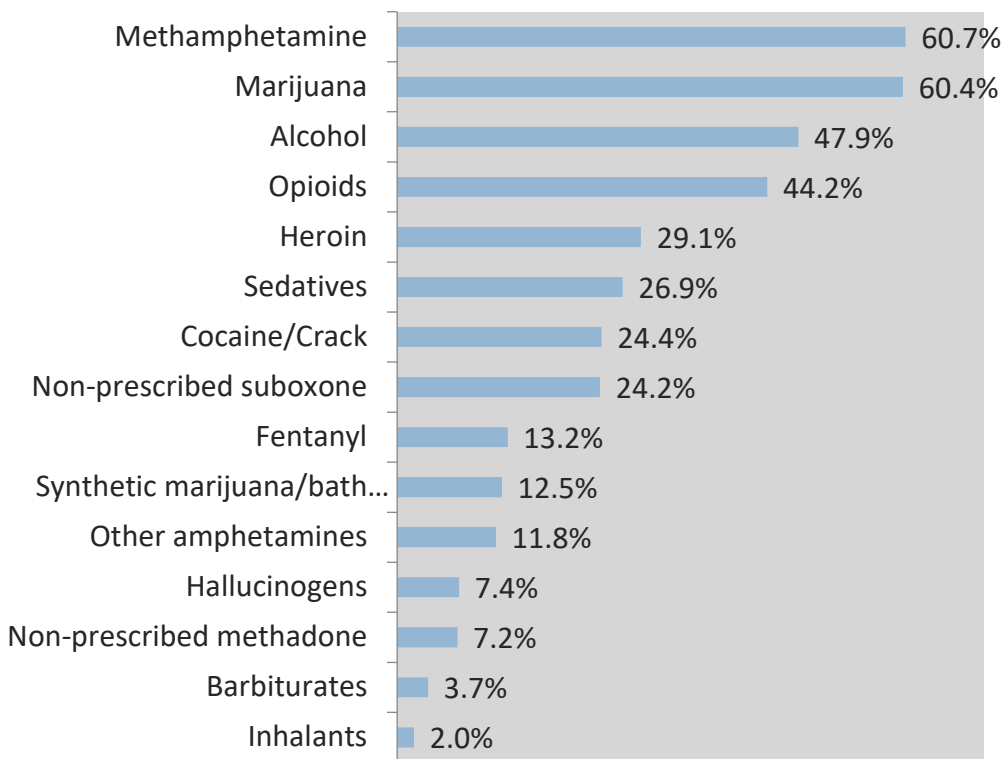
Despite overall positive family and social support-related outcomes following SAP participation, there were marked differences between those who returned to DOC custody and those who did not. Specifically, graduates who did not recidivate were more likely to report feeling supported by family and friends, report having a close relationship with siblings and children, and were more likely to spend their free time with their family. Thus, family support is critical to recovery success. These outcomes closely align with the Divisions efforts around family engagement both during incarceration and as individuals transition to the community. During incarceration, family engagement activities include extended visitation times that include a number of fun activities, as well as education on re-entry resources and family support. Following release, these engagement activities also include re-entry simulations, connections with local providers and resources, and Narcan training and distribution.

**Substance Use**

Figure 6 on the following page shows substance use during the pre-incarceration period for SAP participants (both graduates and non-graduates) who completed a baseline assessment during FY2019. In the 12 months prior to incarceration, the greatest percentage of participants reported methamphetamine use (60.7%), followed by marijuana use (60.4%) and alcohol use (47.9%). Between FY2014 and FY2018, marijuana had been the most commonly reported substance used.

**Methamphetamine was the most commonly used substance in the 12 months prior to incarceration.**

Figure 6. Profile of Pre-incarceration Substance Use among SAP Participants (n=6,387)



*Heroin*

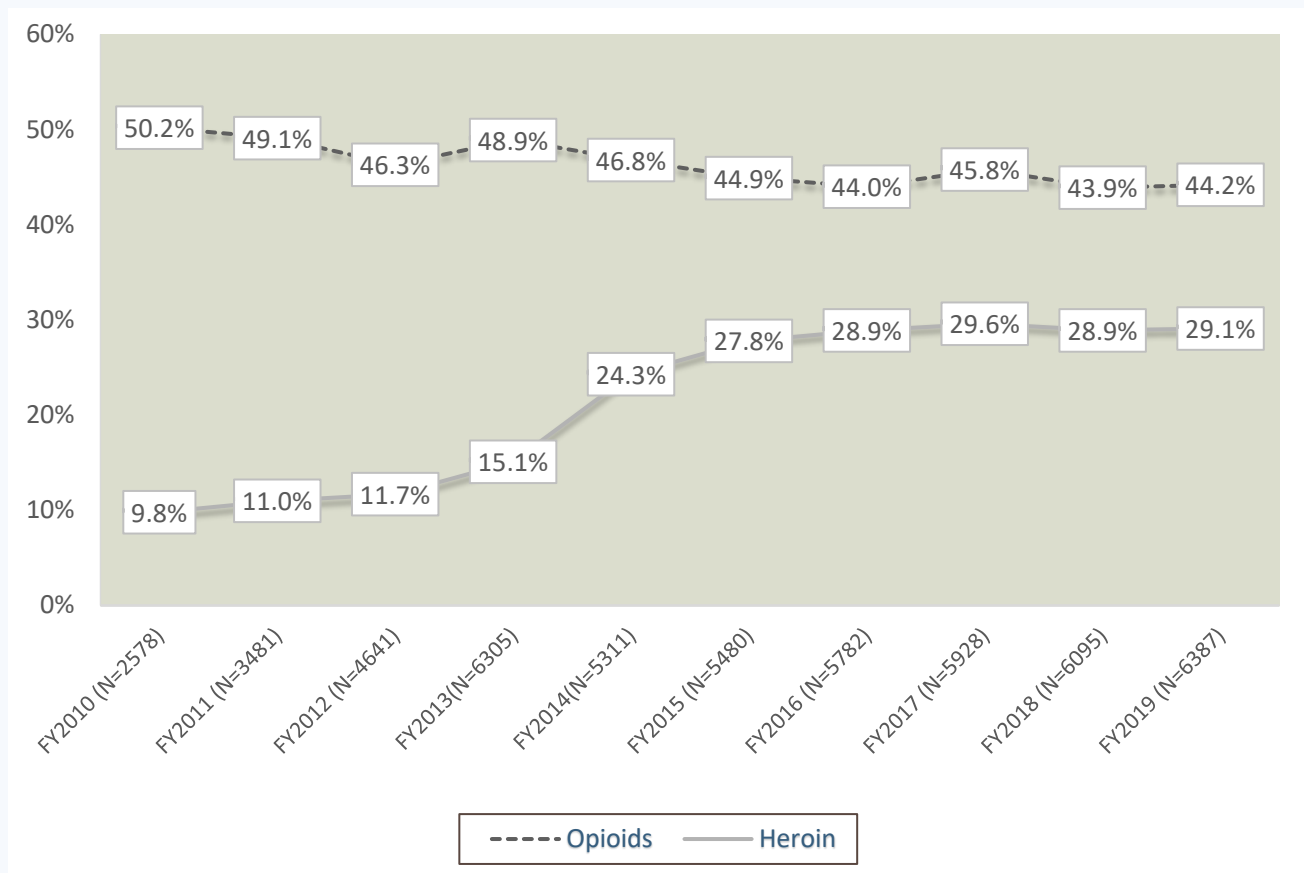
For over a decade there has been a significant increase in self-reported heroin use prior to incarceration. As shown in Figure 7, the percentage of offenders entering corrections-based substance abuse reporting any heroin use in the 12 months prior to incarceration increased from 9.8% in FY2010 to 29.1% in FY2019. Also illustrated in Figure 7, self-reported illicit opioid use (not including heroin, methadone or buprenorphine) peaked at 50.2% in FY2010 and has since decreased overall to 44.2% in FY2019.

**Mirroring a national trend, heroin use has steadily increased among KY offenders in the past decade.**

In response to the increase in heroin use in Kentucky, the state legislature passed Senate Bill 192 in March 2015, which has been progressive and proactive in its attempt to mitigate the commonwealth's

heroin crisis. SB 192 includes provisions such as the availability of naloxone to emergency medical workers to curb rates of overdose, needle-exchange programs, millions of dollars in increased state and Medicaid funding for addiction treatment, and tougher sanctions for traffickers without a paired mandatory minimum sentencing for those who use caught in possession of the drug (Kentucky Legislature, 2015). These advances in treatment of illicit opioid and heroin use make the SAP program more relevant than ever.

Figure 7. Reporting Illicit Opioid and Heroin Use in the 12 Months Prior to Incarceration

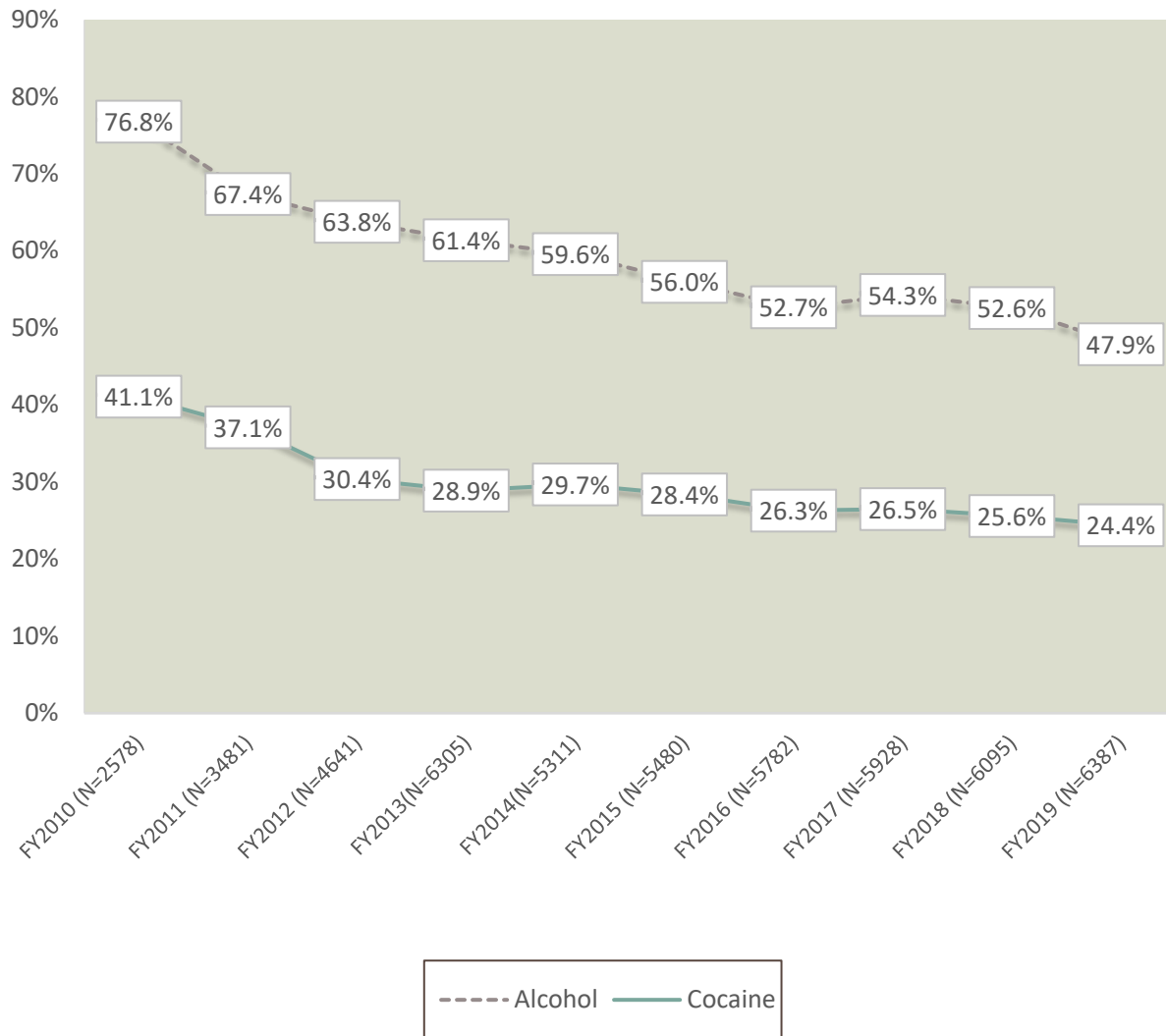


*Alcohol and Cocaine*

The steady decrease in alcohol consumption and a decline of reported cocaine/crack usage among Kentucky offenders is another noteworthy trend. As highlighted in Figure 8, the percentage of offenders who report alcohol use at baseline has fallen from 76.8% to 47.9%, resulting in an overall decrease of 28.9 percentage points from FY2010 to FY2019 – the largest decrease for any illicit substance. For this same period, reported cocaine or crack use declined 16.7 percentage points, from 41.1% down to 24.4%.

**There has been a steady decrease in alcohol consumption and a decline of reported cocaine/crack usage.**

Figure 8. Reporting Alcohol and Illicit Cocaine Use in 12 Months Prior to Incarceration



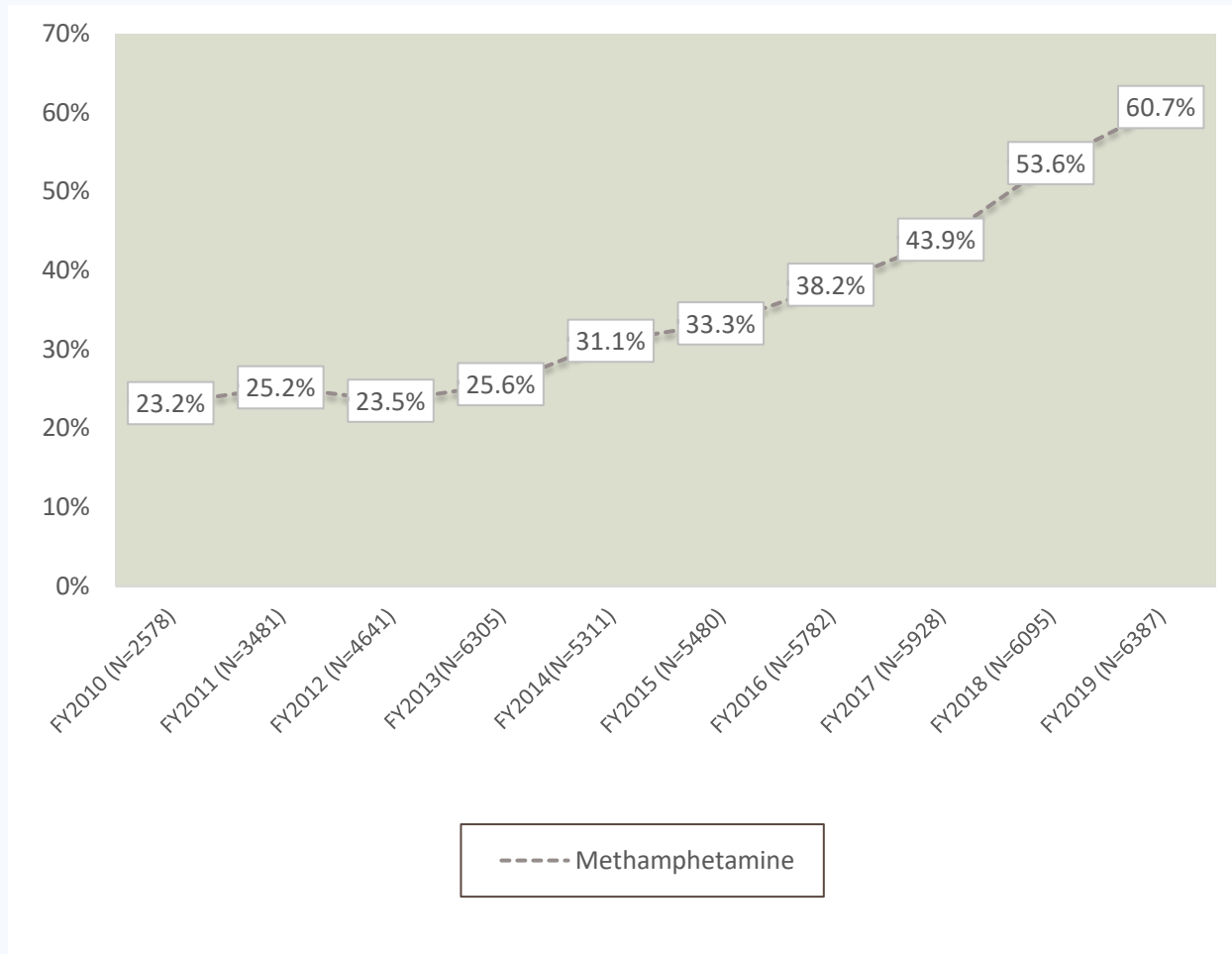
**Methamphetamine**

Another noteworthy substance use trend includes the recent increase in methamphetamine use over the past seven years. As highlighted in Figure 9, the percentage of offenders who report methamphetamine use at baseline has risen from 23.5 % in FY2012 to 60.7% in FY2019, resulting in an overall increase of 37.2 percentage points. This continued increase in methamphetamine use mirrors trends observed in other states (Enos, 2018). This trend is of particular concern given recent research highlighting the increase in methamphetamine use among individuals reporting opioid use (Strickland, Havens, & Stoops, 2019) and among those with an opioid use disorder entering treatment (Ellis, Kasper, & Cicero, 2018). Individuals entering treatment with an opioid use disorder have indicated that methamphetamine 1) offers a

**The prevalence of KY offenders reporting methamphetamine use has increased by more than 150% since FY2012.**

synergistic high when used in combination with opioids, 2) balances the effects of opioids, and 3) serves as an “opioid substitute” due to the increasingly limited access to opioids (Ellis, Kasper, & Cicero, 2018).

Figure 9. Reporting Illicit Methamphetamine Use in 12 Months Prior to Incarceration

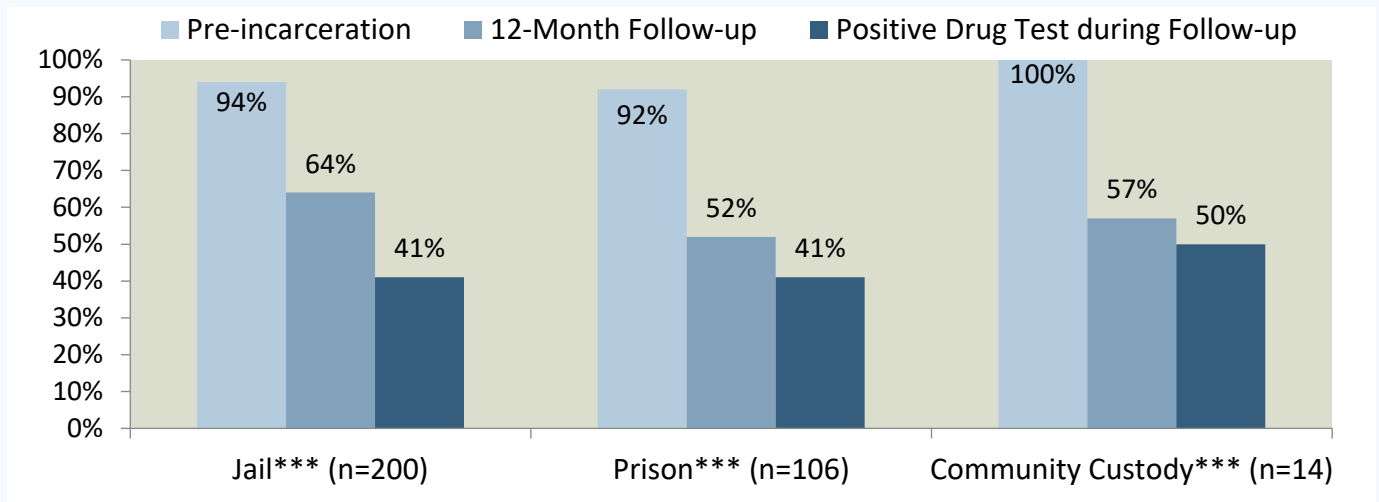




*Decreases in Substance Use During Follow-up*

As shown in Figure 10, those who graduated from DOC treatment in prison, jail, or community custody programs reported a significant decrease in use of any illegal drug following treatment. Further, only 41% of SAP graduates who participated in the follow-up had a positive drug test during the 12 months following release.

Figure 10. Drug Use from Pre-incarceration to One-year Post-release (N=320)



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

Although there was an overall decrease in substance use during the 12 months following incarceration, 81% of those who returned to DOC custody reported using drugs during the follow-up period compared to only 46% of those who did not recidivate. More than half (57%) of those SAP graduates who recidivated had a positive drug test during the 12 months following incarceration. Recidivists who reported using drugs during the follow-up period (n=99) were on the street an average of 72 days before they used any illegal drugs.

**Mental Health**

While not a direct focus of DOC substance abuse treatment, data also indicate improvements in mental health status during the one-year period post-release. Significantly fewer SAP graduates reported experiencing serious depression at follow-up (35.3%) when compared to pre-incarceration (46.3%), as illustrated in Table 6. In addition, significantly fewer graduates reported suicidal thoughts at follow-up (5.3%) when compared to pre-incarceration (11.6%). However, the prevalence of SAP graduates reporting anxiety did not change between pre-incarceration and follow-up (48.1%).

**SAP graduates reported significant decreases in instances of serious depression and suicidal thoughts 12 months following release.**

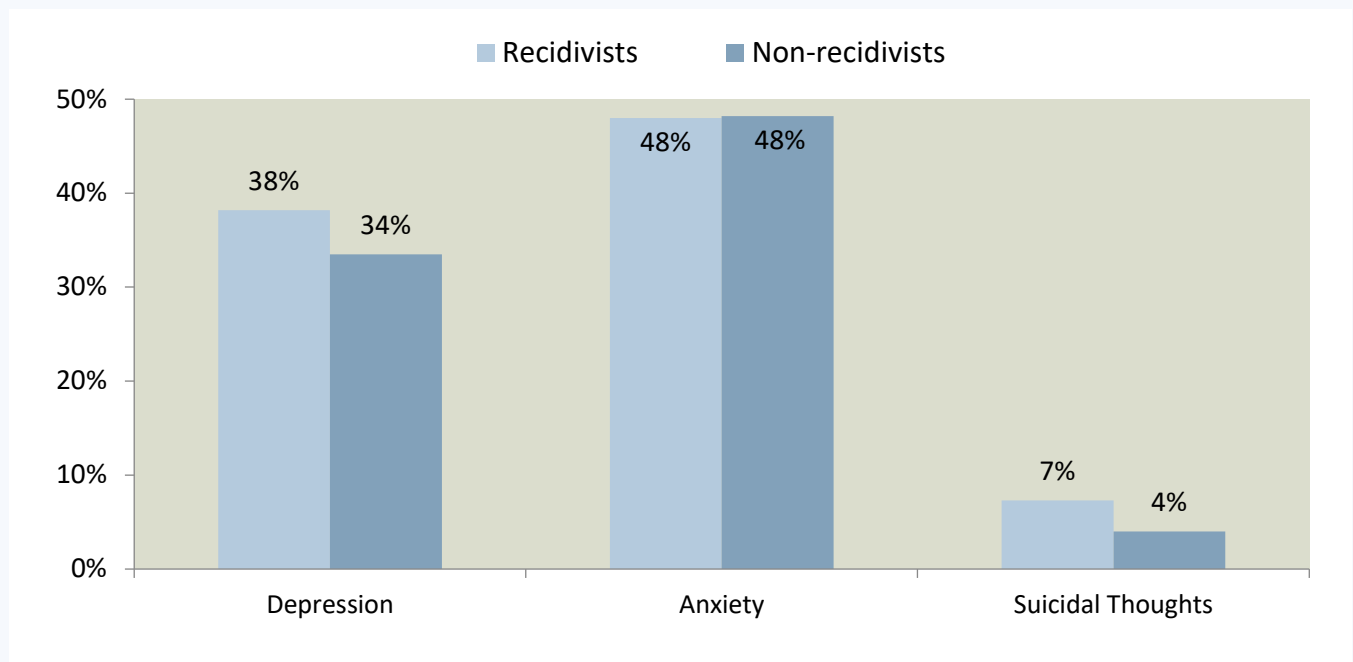
Table 6. Mental Health Pre-incarceration and Post-release (N=320)

	Pre-incarceration	12-Month Follow-up
Experienced serious depression in previous 12 months**	46.3%	35.3%
Experienced serious anxiety in previous 12 months	48.1%	48.1%
Experienced serious thoughts of suicide in previous 12 months**	11.6%	5.3%

Note: Significance established using McNemar’s test for correlated proportions, \*\*p<.01, see Appendix B.

Though there was a decrease overall in the prevalence of mental health problems experienced by SAP graduates during the follow-up period, there was little variation between those who returned to DOC custody and those who did not. For example, the follow-up data revealed that 38.2% of those who recidivated experienced depression during the 12 months following incarceration compared to 33.5% of those who did not recidivate. As shown in Figure 11, the prevalence of anxiety and suicidal thoughts was also similar across groups.

Figure 11. Mental Health by Recidivism Status (N=320)



### 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. For CJKTOS and this report, a person who is actively using substances is defined as someone abusing drugs and/or alcohol in the 30 days prior to incarceration (both at baseline/intake and at follow-up 12-months post-release).

**For every \$1 spent on Kentucky's corrections-based substance abuse treatment program, there is a \$3.94 cost offset.**

The first step in the analysis focused on estimating the average cost per individual actively using substances, using two comprehensive federally funded economic studies. In 2007, the annual cost to the United States for drug abuse was \$193 billion (NDIC, 2011). Updated to FY2019 values, this figure translates to \$239,320,000,000 (Bureau of Labor Statistics, 2019). The most recent results from the National Survey on Drug Use and Health indicate that there are 20.3 million individuals with a substance use disorder in the United States (Substance Abuse and Mental Health Services Administration, 2019). Thus, the average cost per year for an individual actively using substances (\$11,789) was calculated as the total annual cost of drug abuse divided by the number of individuals with substance use disorders using SAMHSA and DSM-V criteria.

Table 7 shows the cost of active substance use to society for the year prior to incarceration and for the 12 months post incarceration. 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 \$3,407,021 while the cost for a comparison 12-month period after treatment is estimated at \$919,542. This analysis shows a net reduction in cost for the sample of \$2,487,479.

Table 7. Costs Associated with Drug and Alcohol Use (Pre-treatment to Post-treatment)

	Baseline N	Per person cost of substance abuse	Cost of substance abuse (pre-treatment)	Follow-up N	Per person cost of substance abuse	Cost of substance abuse (post- treatment)
Study participants who were actively using substances in the past 30 days	289	\$11,789	\$3,407,021	78	\$11,789	\$919,542

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 8. 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 \$503,296 for the sample.

Table 8. Cost of Corrections-based Treatment\*

	Number of treatment days	Cost per day of treatment*	Total treatment cost
Jail (n=200)	36,660	\$9.00	\$329,940
Prison (n=106)	19,472	\$8.24	\$160,449
Community Custody (n=14)	2,566	\$5.03	\$12,907
<b>Total cost</b>			<b>\$503,296</b>

\*Treatment costs supplied by KY Department of Corrections, 12/13/19 It should also be noted that costs projected for community custody only includes individuals receiving traditional SAP in halfway houses and should not be interpreted for all DOC community-based programs.

As shown in Table 9, the initial cost to the state for drug and alcohol abuse/dependence for this sample of offenders would have been \$3,407,021 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 \$919,542. The gross difference in the cost to society was \$2,487,479. After subtracting the direct costs of the treatment programs, there was a net avoided cost of \$1,984,183. Therefore, for every dollar spent on corrections-based treatment there was a return of \$3.94 in cost offsets.

Table 9. Cost Offset for the Follow-up Sample (N=320)

Cost Item	Dollars
<b>Annual cost to Kentucky before participation in corrections-based substance abuse treatment</b>	\$3,407,021
<b>Annual cost to Kentucky after participation in corrections-based substance abuse treatment</b>	\$919,542
<b>Gross difference in post versus pre-treatment participation</b>	\$2,487,479
<b>The direct cost of corrections-based substance abuse treatment</b>	\$503,296
<b>Net avoided cost after corrections-based substance abuse treatment</b>	\$1,984,183
<b>Ratio showing cost of treatment to savings</b>	1: 3.94
<b>Expressed as return on investment</b>	<b>\$3.94 return for every \$1 of cost</b>

### ***Factors Associated with Post-treatment Success***

While data reflect the benefits of SAP based on cost-offset, there is also a genuine human investment and payoff associated with SAP, as evidenced by qualitative interviews conducted with SAP graduates. The vast majority of graduates reflected that the program had made a positive impact and they had received valuable skills to use in their life post-release. There was consensus that SAP had provided tools that would help them continue in their recovery.

SAP graduates were asked to reflect upon what factors are needed to be successful after treatment. Although the idea of “success” and the means by which to achieve it differed, among the wide range of

responses given, the factors most often associated with being successful post-treatment included several important themes:

- ❖ **Changing the old people, places, and things associated with drug and alcohol use**
- ❖ **Being held accountable by a strong support system, especially family**
- ❖ **Asking for help when cravings or relapses happen**
- ❖ **Setting attainable goals and staying focused on them, even when outcomes are not achieved immediately**
- ❖ **Having a structured schedule and staying busy with constructive activities, particularly employment**
- ❖ **Keeping an optimistic and positive outlook in spite of setbacks**
- ❖ **Going to AA/NA meetings, helping others in recovery, and having a sponsor**
- ❖ **Exercising the patience to take life “one day at a time”**
- ❖ **Being connected to religious faith, spirituality, or a higher power**
- ❖ **Having the willpower and dedication to persevere in recovery**

**Recovery Support**

In addition to the aforementioned factors related to successful reentry following incarceration, a majority of SAP graduates also engaged in 12-step programs and some type of aftercare.

Regular attendance of 12-step meetings has been recognized as an effective form of support following substance abuse treatment (Fiorentine, 1999; Kaskutas, 2009; Kownacki & Shadish, 1999; Tonigan, Toscova, & Miller, 1996). Most SAP graduates reported attending at least one AA/NA meeting in the 12 months after their release. Specifically, as shown in Table 10, more than two-thirds (67.5%) reported attending AA/NA, and they reported attending meetings an average of 4.8 days in the past 30.

**The majority of SAP graduates (67.5%) reported attending AA/NA meetings in the 12 months following release.**

Table 10. AA/NA Attendance in the 12 Months Following Release (N=320)

	<b>Attended AA/NA Meetings</b>	<b>Average number of days attended AA/NA in past 30 days</b>
Jail (n=200)	71.0%	4.9 days
Prison (n=106)	63.2%	4.5 days
Community Custody (n=14)	50.0%	5.1 days
<b>Total (N=320)</b>	<b>67.5%</b>	<b>4.8 days</b>

Further, 83.8% of SAP graduates were eligible for aftercare. Of those graduates eligible for aftercare (n=268), more than two-thirds were eventually referred to aftercare (70.5%) by a Social Service Clinician (SSC), and more than half of those referred (n=189) went on to attend aftercare (67.2%).

### Limitations

Findings in this evaluation report should be interpreted with some limitations in mind. First, pre-incarceration data are self-reported at SAP 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 and the Kentucky Offender Management System (KOMS) for positive drug tests. Of the 130 SAP graduates on supervision during the 12-month follow-up period who reported no drug use, 102 had no positive drug tests in KOMS. This provides a self-report accuracy rate of 78.5%. 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, Cacciola, Alterman, McKay, & Cook, 2000), it should be noted as a potential 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 into account all costs associated with re-incarceration.

### Conclusions

This FY2019 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 random sample of participants who received substance abuse treatment in DOC prison, jail, and halfway house programs and were released during fiscal year 2018. Specifically, this 12-month follow-up study examined a randomly selected representative sample of 320 males and females who successfully completed jail, prison, or community custody-based treatment in halfway houses and consented to follow-up.

**“THE PROGRAM, WHAT PEOPLE TOLD ME AND WHAT I LEARNED, GAVE ME A NEW PERSPECTIVE ON LIFE SO WHEN I GOT OUT I WAS ABLE TO THINK DIFFERENT.”**

Findings from the FY2019 CJKTOS indicate a number of positive outcomes following successful completion of KY DOC SAP programs, including:

- \* Reduced substance use
- \* Decreased recidivism
- \* Reduced cost to the community
- \* Increase in employment
- \* Increased housing stability
- \* Program satisfaction
- \* Improved family relationships
- \* Improved mental and emotional wellbeing
- \* Increase in self-esteem
- \* Increased recovery supports

There were also a number of noteworthy differences between the findings from FY2019 CJKTOS and prior years' findings, including:

- \* Compared to FY2018, employment rates during the follow-up period increased by 14.1 percentage points in FY2019.
- \* The percentage of re-incarcerations continued to decrease between FY2018 (43.3%) and FY2019 (38.4%).
- \* The prevalence of SAP graduates who reported having drug charges at SAP intake increased from 53.5% in FY2018 to 62.8% in FY2019.
- \* For the first time, the prevalence of methamphetamine use prior to incarceration surpassed the prevalence of both marijuana and alcohol use.
- \* The percentage of participants reporting mental health problems at the 12-month follow-up increased overall between FY2018 and FY2019.

### ***Implications***

Findings from this CJKTOS report indicate a number of positive outcomes associated with Kentucky Department of Corrections Substance Abuse Programs. These programs have continued to evolve over the last decade to meet the treatment demands of individuals and to provide services that are effective in reducing drug use and crime while simultaneously promoting reintegration of individuals back into the community. The growth of prison and jail-based treatment in Kentucky is indicative of the state's commitment to provide treatment for those who use substances. With the implementation of HB463 in 2011 and SB192 in 2015, the Department's commitment to treatment has been enhanced by state level initiatives to provide additional services and an emphasis on evidence-based interventions, as well as enhanced services during community re-entry to support individuals in sustaining long-term recovery.

## Key Terms

**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 released).
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. (See <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. (See <http://www.wellesley.edu/Psychology/Psych205/pairttest.html>)

**Chi Square Test of Independence**- evaluates if two categorical variables are associated in some population. (See <https://www.spss-tutorials.com/spss-chi-square-independence-test/>)

**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. Kentucky Department of Corrections Substance Abuse Treatment Modalities

**Prison Therapeutic Community:** A six-month evidence-based substance abuse treatment opportunity for those individuals assessed with Substance Use Disorder and classified to be housed in a prison setting. Residents in these programs are housed separately from the prison general population, thereby forming their own community that encourages responsibility and accountability through peer support and uninterrupted focus on substance use treatment.

**Jail Therapeutic Community:** The Kentucky Department of Corrections contracts with 24 detention centers to provide evidence-based substance abuse treatment programming for individuals classified to a jail setting. Individuals are housed separate from the jail general population, fostering a community accountable to, and responsible for, a supportive treatment environment.

**Recovery Kentucky Centers:** Through a joint effort by the Kentucky Department of Corrections, Kentucky Housing Corporation, and the Department for Local Government (DLG), Recovery Kentucky was created to assist Kentuckians recover from substance use disorders and to reduce homelessness. There are 13 Recovery Kentucky Centers across the Commonwealth. Each Center offers 100 treatment/recovery beds. The Kentucky Department of Corrections contracts for 60 beds in each location.

**Reentry Service Centers:** Those individuals in need of substance abuse treatment, who meet the classification criteria for community custody, may participate in programs available in halfway houses approved by the department to offer substance abuse treatment programming.

**Community Intensive Outpatient:** Through an agreement with the 14 Regional Community Mental Health Centers, individuals who meet the clinical and classification criteria may attend a less restrictive 6-month Intensive Outpatient Program in a location compatible with their approved home placement. Clients meet three times per week, must abide by all treatment program standards, and submit to random drug testing.

**Contracted Intensive Outpatient Programs:** Because the majority of the probationers, parolees, and pre-trial diversion clients reside in Louisville, Lexington, or Northern Kentucky, the department contracts with treatment agencies in these areas to provide substance abuse treatment services akin to those offered in the Community Mental Health centers. Eligible candidates include probationers, parolees, and pre-trial diversions.

**Prison Outpatient Programs:** Kentucky State Reformatory serves as the primary medical center for the Department of Corrections. In response to those individuals who are medically unable to transfer to facilities where substance abuse treatment programming is offered, the Department offers evidence-based outpatient substance abuse programming.

**P-SAP Jail Programs:** In response to Senate Bill 4, passed into law in 2009, individuals charged with Class C or D felony drug and/or alcohol crimes, with no felony convictions within the past 10 years may be eligible for treatment as an alternative to conviction. At initial incarceration, the Jail Pre-Trial Officer may alert the Division of Substance Abuse Branch Manager to conduct a clinical assessment to determine eligibility for substance abuse treatment. Upon an agreement between the judge, the commonwealth attorney, the inmate in question, and his/her attorney, successful completion of a jail based, six-month treatment program may serve as an alternative to a felony conviction.

**Prison Co-Occurring Program:** Individuals with verifiable histories of substance abuse and mental health disorders are eligible to receive an integrated treatment program to address both mental health and substance use disorders. Programs are available in male and female prisons for those classified with prison status.

**Community Co-Occurring Programs:** Individuals with verifiable substance use and mental health disorders, and have community status, may receive co-occurring treatment through Community Mental Health Centers or through private providers. The Community Social Service Clinician can assist with this referral.

**Reentry Drug Supervision:** Mandated by Senate Bill 120, the Kentucky Department of Corrections shall implement a reentry drug supervision pilot program with a goal of restoring the lives of those experiencing substance use disorders. Through a team-based oversight and evidence-based behavior modification, individuals will address issues of substance abuse with support and oversight by the Parole Officer, Social Service Clinician, Administrative Law Judge, Parole Board, and mental health and substance abuse treatment providers. This program is currently piloted in Floyd and Campbell Counties.

**Reentry Centers:** Through provisions of SB 120, this unique reentry opportunity focuses on specific area of need for each client. This could include employment, education, medical, psychological, vocational, housing, Intensive Outpatient substance abuse treatment, and family reunification. Eligible candidates may include probationers, parolees, misdemeanants, those on MRS, and pre-trial diversion.

**Medication for Addiction Treatment** In 2015, the Kentucky General Assembly, through SB 192, provided \$3 million to the Kentucky Department of Corrections to provide Medically Assisted Treatment (Injectable Naltrexone) in conjunction with evidence based substance abuse treatment for those individuals at risk for heroin and/or heroin relapse upon release from incarceration. Through the use of regularly scheduled Injectable Naltrexone (Vivitrol), clients are able to eliminate the cravings that lead to heroin and opiate relapse. By maintaining this protocol, clients are best prepared for reentry to the community. There is no cost to the client for these services. Protocol requires enrollment in a jail or prison evidence-based substance abuse program.

**Social Service Clinician Community Groups:** As part of the division of Substance Abuse Services effort to stem the high rate of substance abuse disorders associated with incarcerated populations, Social Service Clinicians are assigned to all Probation and Parole District Officers throughout the state and are responsible for all substance abuse clinical assessments, referrals and treatment. In this capacity, Social Service Clinicians may provide group treatment for probationers, parolees, and other eligible clients.

**Private Non-Contact Providers:** Community based Social Service Clinicians are encouraged to utilize all available evidence based resources in the geographic catchment area. This may include agencies not formerly contracted with by the Department. Awareness of client needs and a knowledge of all local clinical resources allows for broader opportunities for change.

## Appendix B. CJKTOS Data Collection Sites

### 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

Lee Adjustment Center  
168 Lee Adjustment Center Drive  
Beattyville, KY 41311  
(606) 464-2866

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

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/Ross-Cash  
374 New Bethel Church Road  
Fredonia, KY 42411  
(270) 388-9781

### 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

\*Fayette County Detention Center  
600 Old Frankfort Circle  
Lexington, Kentucky 40510  
(859) 425-2700

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

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

Hardin County Detention Center  
100 Lawson Blvd  
Elizabethtown, Kentucky 42701  
(270) 765-4159

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

Kenton County Detention Center  
3000 Decker Crane Lane  
Covington, Kentucky 41017  
(859) 363-2400

Laurel County Detention Center  
204 W 4<sup>th</sup> Street  
London, Kentucky 40741  
(606) 878-9431

\*Louisville Metro Corrections  
400 S. Sixth Street  
Louisville, Kentucky 40202  
(502) 574-8477

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

\*Montgomery County Detention  
Center  
751 Chenault Lane  
Mt. Sterling, Kentucky 40353  
(859) 498-8747

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

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

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

Three Forks Regional Jail (Lee  
County)  
2475 Center Street  
Beattyville, Kentucky 41311  
(606) 464-259

*\*Jails which serve county inmates. These programs are typically 90 days and are not recognized by the Department of Corrections for good time credit. Because of different programming and structure, these individuals are not included in the follow-up sampling.*

### **COMMUNITY REENTRY SERVICE CENTERS DATA COLLECTION SITES**

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

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

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

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

## Appendix C. Evaluation methodology

The Criminal Justice Kentucky Treatment Outcome Study (CJKTOS) was developed and implemented in April 2005 to 1) describe those who use substances 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 corrections-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 SAP 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. SAP participants were eligible for inclusion in the follow-up sample if they 1) consented to participate in the follow-up, 2) successfully completed SAP, 3) were released from a jail, prison, or community custody facility within the specified timeframe, and 4) provided locator information of at least one community telephone number and address. A group of eligible SAP participants were randomly selected for follow-up after proportionate stratification by prison, jail, and community custody, using the same proportion from each correctional setting as those meeting eligibility criteria. 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 SAP participants for follow-up at 10-months post-release with a target interview date at 12 months post-release; efforts to locate participants ceased at 14 months after their release date, at which point they were classified as "unable to locate." Locator methods included mailing letters and flyers, phone calls, and internet searches. All follow-up interviews were completed by phone, and all data provided is self-reported by the participants.

### Sampling approach

A total of 3,065 clients who completed a CJKTOS baseline were released from custody in FY2018. 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 3,065 CJKTOS clients who were released from custody in FY2018, 163 did not consent to participate in the follow-up study and of the 2,902 who consented to participate, 1,089 did not successfully complete SAP or did not have a completed discharge report. This left 1,813 SAP participants who were eligible for follow-up (released in FY2018, known to have successfully completed SAP, and voluntarily consented for follow-up). Of those, 26.9% were randomly selected to participate in the follow-up interview (n=487). The sample of 487 was proportionate to the number of males and females released from jails, prisons, and community custody treatment programs.

Of the 487 DOC SAP graduates randomly selected for follow-up in the community 12-months post-release, 320 were successfully located and interviewed (200 jail treatment participants, 106 prison treatment participants and 14 community custody treatment participants), for a follow-up rate of 67% (See Table 11).



Table 11. FY2019 Follow-up Rates

	<i>Eligible</i>	<i>Completed</i>	<i>Percentage</i>
<i>Jail Sample</i>	309	200	65%
<i>Males</i>	258	163	63%
<i>Females</i>	51	37	73%
<i>Prison Sample</i>	157	106	68%
<i>Males</i>	119	82	69%
<i>Females</i>	38	24	63%
<i>Community Custody Sample</i>	21	14	67%
<i>Males</i>	18	11	61%
<i>Females</i>	3	3	100%
<i>Total</i>	487	320	66%
<i>Ineligible for follow-up*</i>	12		
<i>Final Total</i>	475		67%
<i>Refusals</i>	24		5%
<i>Unable to locate</i>	131		28%

\*Note: ineligible for follow-up was defined as participants moving out of state (n=5) or deceased (n=7).

### Statistical Analysis

Changes in this report between participants' self-reported substance use "on the street" in the 12 months before incarceration (baseline) and SAP 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.

Changes between those who completed SAP and those who terminated were measured using the chi-square test for independence. The chi-square test examines the correlation between two categorical variables – testing if there is a significant relationship between the two variables by comparing the frequency of each category of one categorical variable across categories of the second categorical variable.

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