



KENTUCKY TREATMENT OUTCOME STUDY
2025 FINDINGS AT A GLANCE

INTRODUCTION

This Findings at a Glance summarizes results from the Kentucky Treatment Outcome Study (KTOS) 2025 annual report. KTOS is an important part of the Department for Behavioral Health, Developmental, and Intellectual Disabilities, Division of Substance Use Disorder's performance-based measurement of treatment outcomes in Kentucky's communities. The goal of KTOS is to examine respondent perceptions of care and client-level outcomes for several specific targeted factors including: (1) substance use and severity of substance use, (2) mental health, physical health, and victimization, (3) economic and living circumstances, (4) criminal legal involvement, (5) subjective quality of life, and (6) recovery supports. Report findings support continued funding of substance use disorder treatment programs, which improve the lives of individuals and reduce the cost of untreated substance use to society.

Results for this study included analysis of self-reported data for 475 respondents who participated in CMHC substance use disorder treatment from July 2022 through June 2023, completed an intake interview, and then completed a follow-up interview about 12 months later (an average of 379 days). There was a low refusal rate for follow-up participation (1.1%) and a high follow-up rate (75.4%) for those respondents who were eligible for follow-up and were selected for the sample. For more information on KTOS or findings from the full report, visit cdar.uky.edu/ktos.

CHARACTERISTICS OF FOLLOW-UP SAMPLE

Of the 475 respondents who completed a 12-month follow-up interview:

- Over half (52.0%) were male.
- The majority were White (89.7%). A minority were African American/Black (4.4%) and 5.9% were Hispanic, American Indian, or multiracial.
- They were an average of 38 years old at the time of the intake interview.
- About 36% were married or cohabiting at intake.
- The majority (82.5%) had completed at least a high school diploma or GED.

FACTORS EXAMINED AT INTAKE AND FOLLOW-UP

Past-12-month Substance Use



REPORTED ANY
ILLICIT DRUG USE***

87% | **30%**
at intake | at follow-up



REPORTED ILLICIT
OPIOID USE¹***

39% | **9%**
at intake | at follow-up



REPORTED
STIMULANT USE***

58% | **12%**
at intake | at follow-up



REPORTED ANY
ALCOHOL USE***

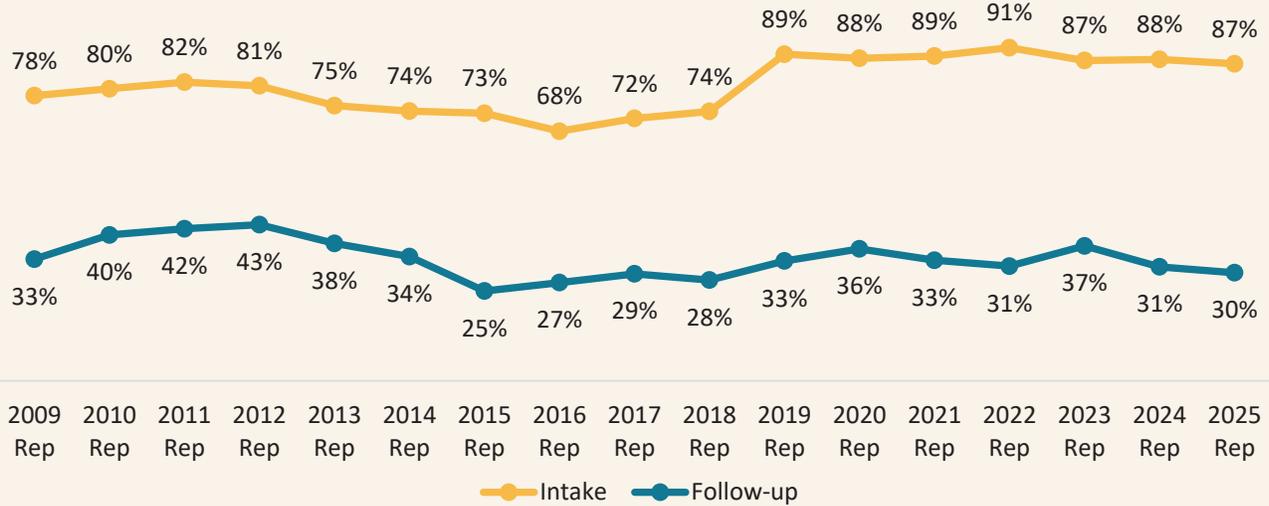
52% | **29%**
at intake | at follow-up

¹ Illicit use of opioids including heroin, prescription opioids, methadone, and buprenorphine-naloxone (bup-nx).

*p < .05, **p < .01, ***p < .001.

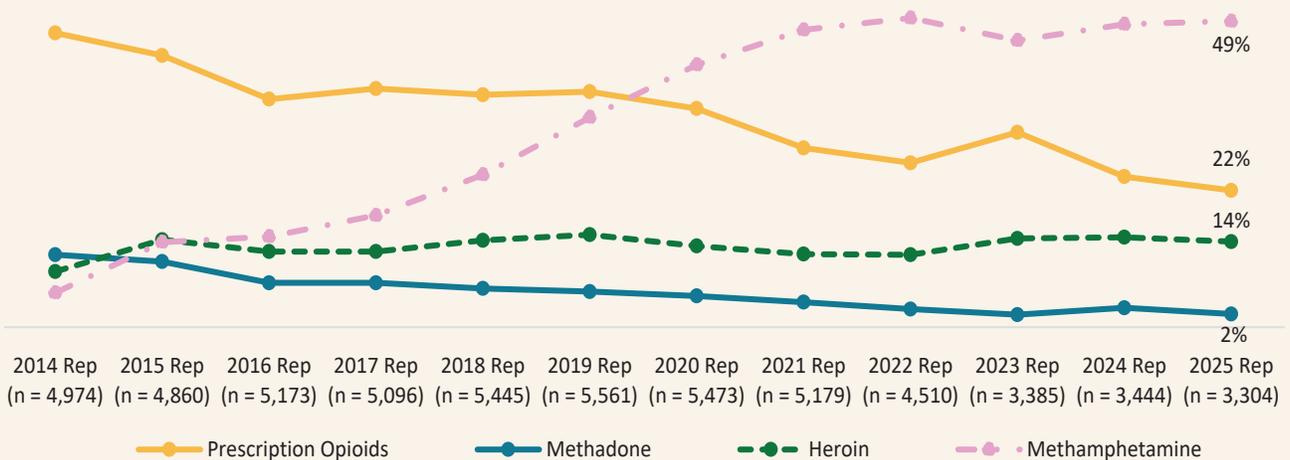
Trends in Any Alcohol and/or Illicit Drug Use

The number of KTOS respondents reporting alcohol and/or illicit drug use in the 12 months before treatment has been consistently high.² Overall, at follow-up, the number of respondents reporting alcohol and/or illicit drug use has decreased over the years.



How Much Has Use of Specific Illicit Drugs at Intake Changed Over Time for All Respondents?

This trend analysis examines trends over time for all respondents with completed intake surveys. Specifically, the trends in this graph show the percent of respondents who reported illicit use of prescription opioids, non-prescribed methadone, heroin, and methamphetamine in the 12 months before entering treatment from report year 2014 to report year 2025.



² In the several years preceding Rep 2019, the research team noticed that an increasing proportion of respondents with completed KTOS intake surveys reported no substance use. Because the focus of this report is on SUD treatment outcomes, to be included in the follow-up study individuals had to report past-12-month alcohol and/or drug use, if they were not incarcerated the entire 12 months before entering the program.

Severity of Substance Use Disorder

At intake, the majority of respondents met criteria for severe SUD per DSM-5 symptom criteria, while at follow-up, only 14% of respondents met criteria for severe SUD.



MET DSM-5 CRITERIA FOR SEVERE SUD***

59% | **14%**
at intake | at follow-up

Past-12-month Mental Health, Physical Health, and Victimization



MET STUDY CRITERIA FOR DEPRESSION***

59% | **33%**
at intake | at follow-up



MET STUDY CRITERIA FOR ANXIETY***

58% | **33%**
at intake | at follow-up



MET STUDY CRITERIA FOR DEPRESSION AND ANXIETY***

48% | **23%**
at intake | at follow-up

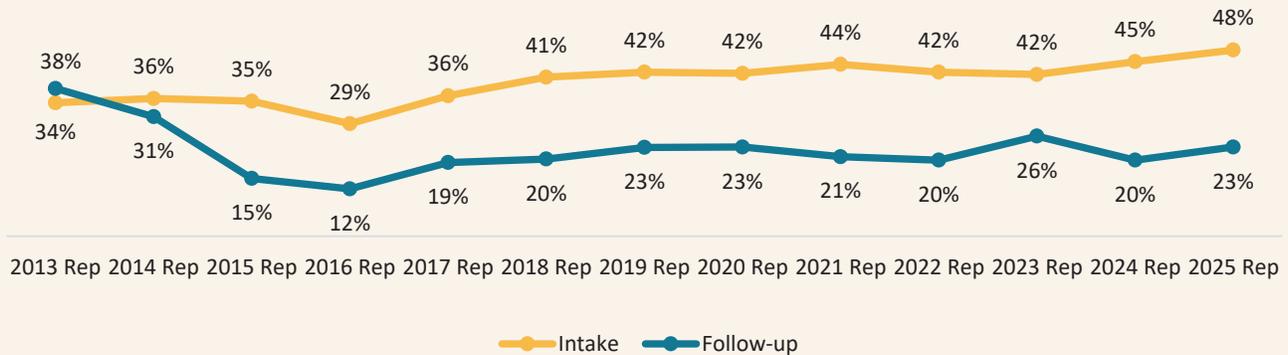


REPORTED SUICIDAL THOUGHTS AND/OR ATTEMPTS***

19% | **6%**
at intake | at follow-up

Trends in Comorbid Depression and Anxiety

Past-13-year trends for comorbid depression and anxiety show that beginning in the 2015 report the percentage of respondents who reported meeting criteria for comorbid depression and anxiety was significantly higher at intake than at follow-up. At follow-up, however, the percentage of respondents meeting criteria for comorbid depression and anxiety was relatively stable from the 2017 report through the 2022 report. In the 2023 report, there was an increase in the percentage of respondents with comorbid depression and anxiety at follow-up (26%), and then a decrease to 20% in 2024 and 23% in the 2025 reports.



AVERAGE NUMBER OF DAYS MENTAL HEALTH WAS POOR³***

14.3 | **4.1**
at intake | at follow-up



REPORTED USING SUBSTANCES TO REDUCE MENTAL HEALTH SYMPTOMS****

46% | **32%**
at intake | at follow-up



REPORTED CHRONIC PAIN***

31% | **21%**
at intake | at follow-up



REPORTED INTERPERSONAL VICTIMIZATION***

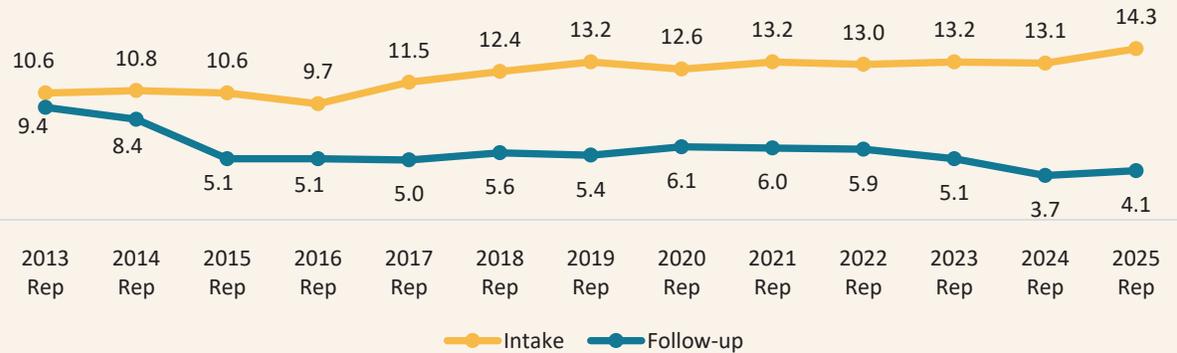
36% | **15%**
at intake | at follow-up

³Past 30 days.

*p < .05, **p < .01, ***p < .001.

Trends in Perception of Poor Mental Health

The average number of days respondents reported their mental health was not good in the past 30 days has increased at intake in the past several years to a high of 14.3 in this year's report. At follow-up, the average number of days respondents reported their mental health was not good in the past 30 days has decreased from a high of 9.4 days in the 2013 report to a low of 3.7 in the 2024 report. The average number of days respondents' mental health was not good was 3.5 times higher at intake than at follow-up in this year's report.



Past-12-month Economic Indicators



CURRENTLY EMPLOYED FULL-TIME***

28% at intake | **42%** at follow-up



CURRENTLY HOMELESS***

34% at intake | **8%** at follow-up



REPORTED DIFFICULTY IN MEETING BASIC NEEDS***

45% at intake | **27%** at follow-up



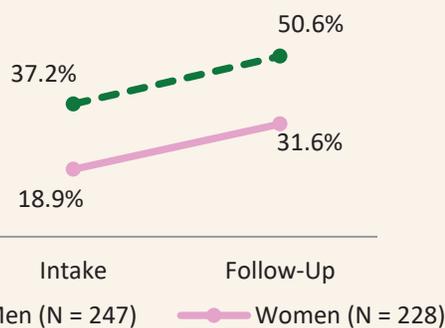
REPORTED DIFFICULTY IN MEETING HEALTH CARE NEEDS

25% at intake | **26%** at follow-up

Gender Differences in Current Employment

Gender Differences in Full-time Employment

The percentage of men who reported they were employed full-time was significantly greater than the percent of women who were employed full-time at intake (37.2% vs. 18.9%) and at follow-up (50.6% vs. 31.6%).



Gender Wage Gap

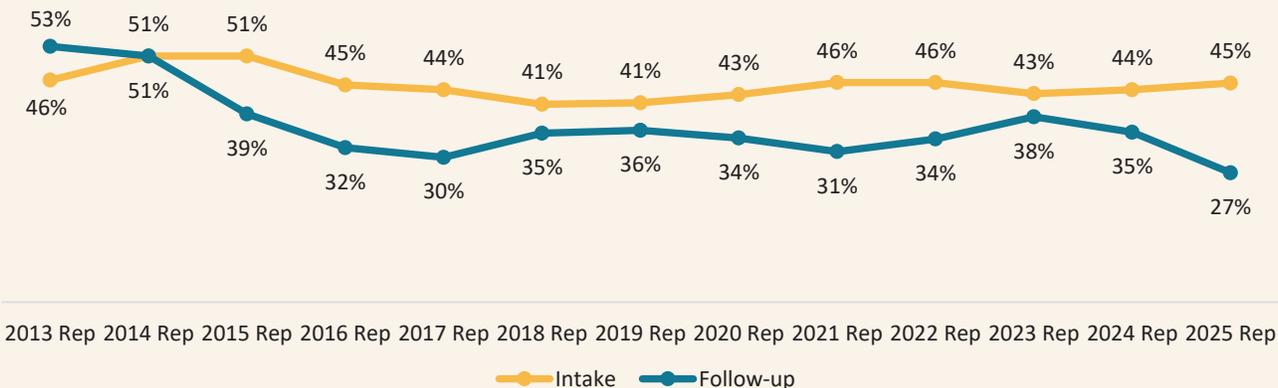
At follow-up, employed women made only \$0.75 for every dollar employed men made.

Therefore, the gender wage gap for employed respondents was **\$0.25**



Trends in Difficulty Meeting Basic Living Needs

The percentage of KTOS follow-up respondents who have reported difficulty meeting basic living needs at intake has fluctuated between 41% and 51%. The percentage of KTOS respondents who have reported difficulty meeting basic living needs at follow-up decreased from the 2013 report until the 2017 report, when it began increasing again. Nonetheless, the percent has not been to the level it was in the 2014 report (51%).



Past-12-month Criminal Legal Involvement



REPORTED AN ARREST***

60% at intake | **21%** at follow-up



REPORTED BEING INCARCERATED***

62% at intake | **28%** at follow-up

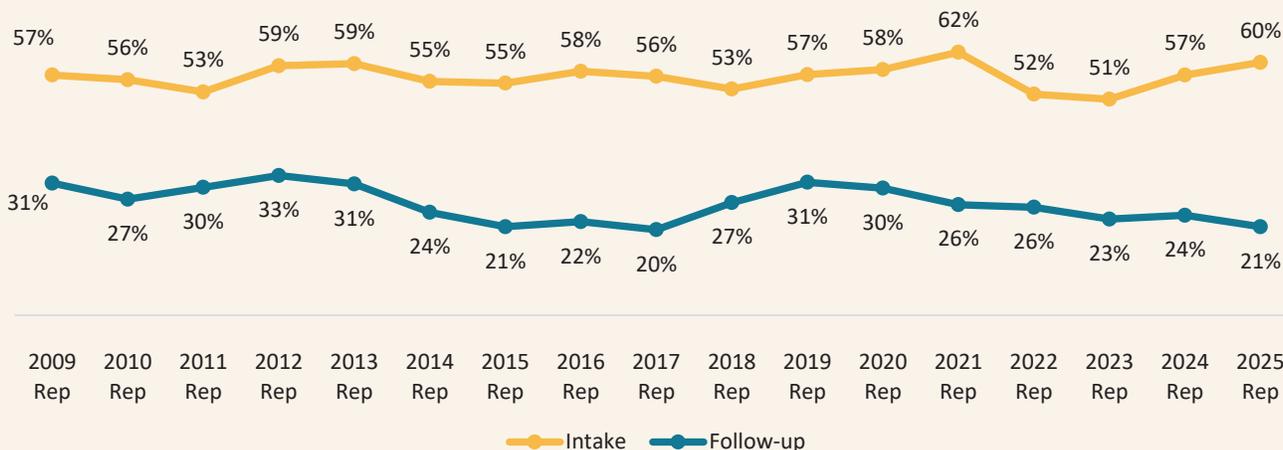


REPORTED BEING UNDER SUPERVISION BY THE CRIMINAL LEGAL SYSTEM

43% at intake | **40%** at follow-up

Trends in Past-12-month Arrests

Over the past 16 years the percent of respondents reporting an arrest in the past 12 months at intake has ranged from a low of 51% in the 2023 report to a high of 62% in the 2021 report. At follow-up, since the 2009 report, between one-fifth to nearly one-third of respondents reported an arrest, which were significant decreases from intake each year.



***p < .001.

Subjective Quality of Life



AVERAGE QUALITY OF LIFE RATING***

(1 = 'Worst imaginable' to 10 = 'Best imaginable')

7.0 at intake | **8.4** at follow-up

Trends in Subjective Quality of Life

KTOS clients rated their quality of life between 6.0 and 7.2, on average, at intake. The average quality of life rating at follow-up ranged from 7.6 to 8.3. Over the past 8 years, at both intake and follow-up, clients rated their quality of life as the highest in 2025.



Recovery Supports



REPORTED ATTENDING MUTUAL HELP RECOVERY MEETING IN THE PAST 30 DAYS***

37% at intake | **55%** at follow-up

What Will Be Most Useful in Staying Off Drugs/Alcohol

Intake



31.9%

Employment



23.9%

Support from family



23.7%

Children

Follow-up



25.7%

Support from family



21.4%

Self-talk



21.2%

Employment

Multidimensional Recovery Status

The multidimensional recovery status is based on individuals' reports of: no substance use disorder, employed at least part-time or in school, no reported homelessness, no arrest or incarceration, no suicide ideation (thoughts or attempts), fair to excellent overall health, had at least one person he/she could count on for recovery support, and mid to high-level of quality of life indicative of recovery.



HAVING ALL POSITIVE RECOVERY DIMENSIONS***

4% at intake | **47%** at follow-up

***p < .001.

OUTCOMES AT FOLLOW-UP BY COMPLETION STATUS

Treatment outcomes were examined by program completion status as reported by respondents at follow-up: (1) did not complete the program (n = 269), (2) completed the program (or left in good standing, n = 92), and (3) currently in the program (n = 102).

Significant Substance Use at Follow-up



REPORTED ANY ILLICIT DRUG USE***



REPORTED CANNABIS USE*



REPORTED STIMULANTS AND/OR COCAINE**



REPORTED OPIOID USE**



AVERAGE MONTHS OF ILLICIT DRUG USE***



MET DSM-5 CRITERIA FOR SEVERE SUD**



Significant Mental Health at Follow-up



MET CRITERIA FOR DEPRESSION AND/OR ANXIETY**



REPORTED SUICIDAL THOUGHTS AND/OR ATTEMPTS**



AVERAGE NUMBER OF DAYS MENTAL HEALTH WAS POOR**



*p < .05, **p < .01, ***p < .001.

Significant Economic Indicators and Criminal Legal System Involvement at Follow-up



CURRENTLY EMPLOYED FULL-TIME*

32% Did not complete	44% Completed program	43% Currently in program
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CURRENTLY HOMELESS**

15% Did not complete	5% Completed program	8% Currently in program
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REPORTED AN ARREST*

31% Did not complete	19% Completed program	18% Currently in program
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Significant Subjective Quality of Life and Recovery Supports at Follow-up



AVERAGE QUALITY OF LIFE RATING***

7.7 Did not complete	8.5 Completed program	8.5 Currently in program
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REPORTED ATTENDING MUTUAL HELP RECOVERY MEETING IN THE PAST 30 DAYS***

53% Did not complete	49% Completed program	71% Currently in program
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CHANCES OF ABSTAINING FROM ALCOHOL AND DRUG USE WAS MODERATELY TO VERY GOOD*

82% Did not complete	93% Completed program	93% Currently in program
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Perceptions of care at Follow-up



OVERALL RATING OF EXPERIENCE IN SUD TREATMENT***
(1 = 'Worst experience' to 10 = 'Best experience')

6.6 Did not complete	9.1 Completed program	9.3 Currently in program
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AVERAGE RATING OF SHARED DECISION-MAKING IN TREATMENT***
(1 = 'Worst experience' to 10 = 'Best experience')

7.3 Did not complete	9.1 Completed program	9.5 Currently in program
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AVERAGE RATING OF RESPECT IN TREATMENT***
(1 = 'Worst experience' to 10 = 'Best experience')

7.1 Did not complete	9.2 Completed program	9.5 Currently in program
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AVERAGE RATING OF COMMUNICATION IN TREATMENT***
(1 = 'Worst experience' to 10 = 'Best experience')

7.4 Did not complete	8.8 Completed program	9.3 Currently in program
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AVERAGE RATING OF THERAPEUTIC ALLIANCE IN TREATMENT***
(1 = 'Lowest' to 10 = 'Highest')

6.8 Did not complete	9.1 Completed program	9.4 Currently in program
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AVERAGE RATING OF PERCEIVED EFFECTIVENESS OF TREATMENT***
(1 = 'Worst experience' to 10 = 'Best experience')

6.5 Did not complete	9.0 Completed program	9.3 Currently in program
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*p < .05, **p < .01, ***p < .001.

RESPONDENTS' PERCEPTIONS OF THE TREATMENT PROGRAM

Respondents' Involvement in the Program



Respondents' Perception of Care

At follow-up, respondents were asked to rate their experience with the treatment program on a scale of 0 = "worst experience" to 10 = "best experience"



Ratings of Program Experiences



84%

program staff believed in me and that treatment would work for me



83%

worked on things that were most important to me



82%

had input into their treatment goals, plans and how they were progressing



81%

program staff cared about me and my treatment progress



81%

felt listened to and heard by counselor or program staff

COST SAVINGS OF SUBSTANCE USE DISORDER TREATMENT

Using national estimates of the cost of substance use disorder and applying them to respondents' self-reported substance use before and after program participation, there was an estimated \$4.74 return in cost savings for every dollar spent on providing treatment services.



Estimated cost-savings for taxpayers

\$4.74

CONCLUSION

The KTOS 2025 annual report indicates that CMHC substance use treatment programs in Kentucky have been successful in facilitating positive changes in individuals' lives in a variety of ways, including decreased substance use, decreased mental health symptoms, increased employment, decreased homelessness and decreased involvement with the criminal legal system. Results also show that respondents have more support for recovery after participating in treatment. Overall, KTOS respondents had significant improvements in key factors that have been associated with facilitating recovery.

"Being able to go in and open up about my feelings with others and have support—it helped me and gave me relief. It helped me continue on with my path."

— KTOS RESPONDENT