



# **Adult Kentucky Treatment Outcome Study**

**2020 FINDINGS AT A GLANCE**

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# Introduction

This Findings at a Glance summarizes results from the 2020 Adult Kentucky Treatment Outcome Study annual report. The Kentucky Treatment Outcome Study (KTOS) is an important part of the Department for Behavioral Health, Developmental, and Intellectual Disabilities, Division of Behavioral Health's performance-based measurement of treatment outcomes in Kentucky's communities. Results for this study included analysis of self-report responses for 1,175 clients who participated in publicly-funded substance abuse treatment from July 2017 through June 2018 and then completed a follow-up interview about 12 months later (an average of 353 days). There was a low refusal rate for follow-up participation (2.2%) and a high follow-up rate (69.4%) for those clients who were eligible for follow-up and were randomly selected for the sample. For more information on KTOS or findings from the full report, visit [cdar.uky.edu/ktos](http://cdar.uky.edu/ktos).

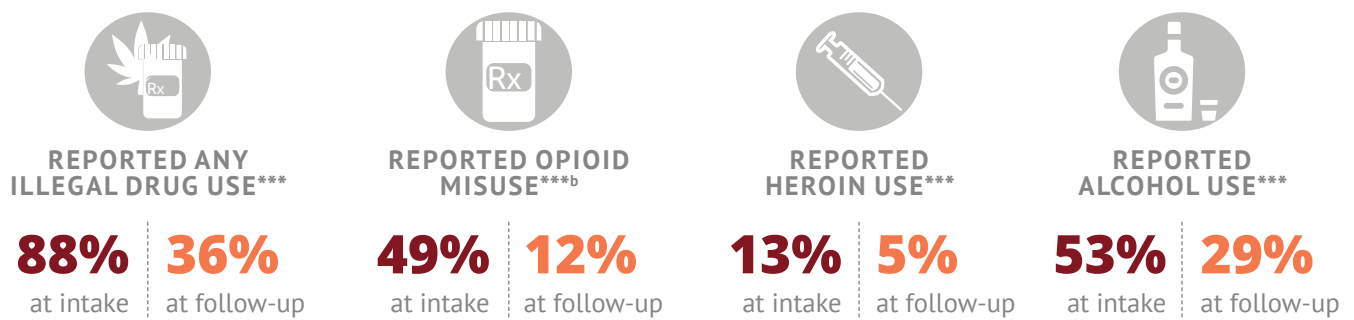
## Characteristics of KTOS Clients Included in the Follow-up Sample

Of the 1,175 clients who completed a 12-month follow-up interview:

- Half were female.
- The majority were White (93%). A minority were African American/Black (5%) and 2% were Hispanic, American Indian, or multiracial.
- They were an average of 35 years old at the time of the intake interview.
- Not quite half (46%) were married or cohabiting at intake.
- Over half of clients (59%) reported they had at least one chronic health problem.
- Chronic pain was reported by 36% of clients.
- Over three-quarters of clients (79%) had health insurance through Medicaid.

## Past-12-month Substance Use<sup>a</sup>

The number of clients who reported substance use decreased significantly from intake to follow-up.



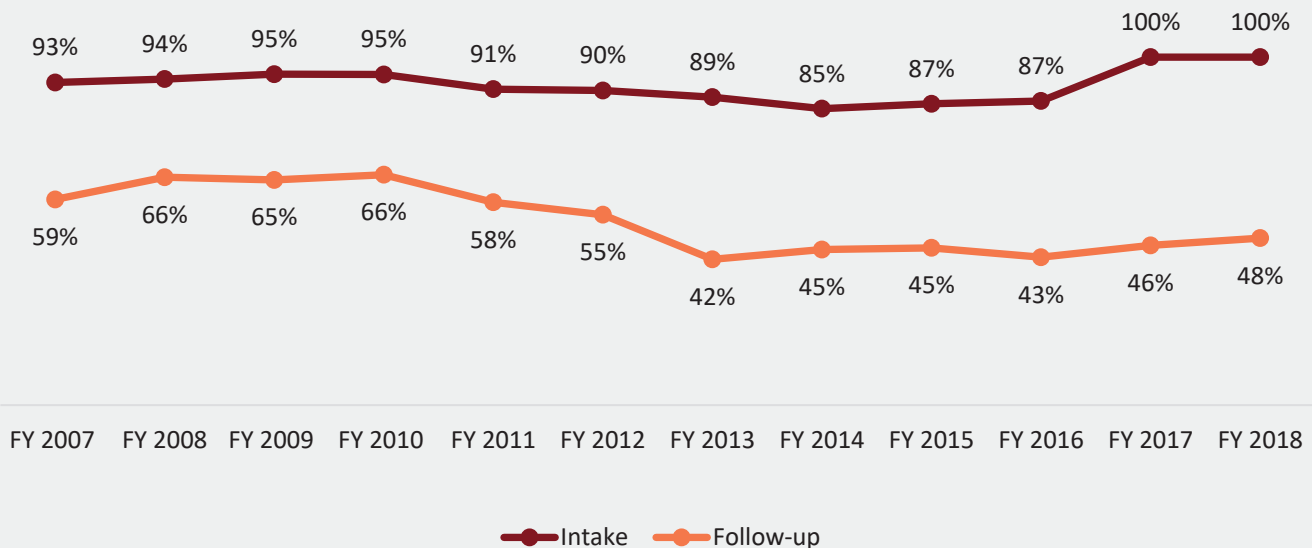
\*\*\*  $p < .001$ ; statistically significant difference from intake to follow-up.

<sup>a</sup> Because being in a controlled environment inhibits opportunities for alcohol and drug use, 16 cases were excluded from this analysis because they were incarcerated all 365 days before entering treatment, and 4 cases were excluded because either the interviewer skipped the question ( $n = 2$ ), the client did not know how many days they were incarcerated ( $n = 1$ ), or the client declined to answer ( $n = 2$ ) at follow-up.

<sup>b</sup> Misuse of opioids other than heroin, including prescription opiates, methadone, and buprenorphine-naloxone.

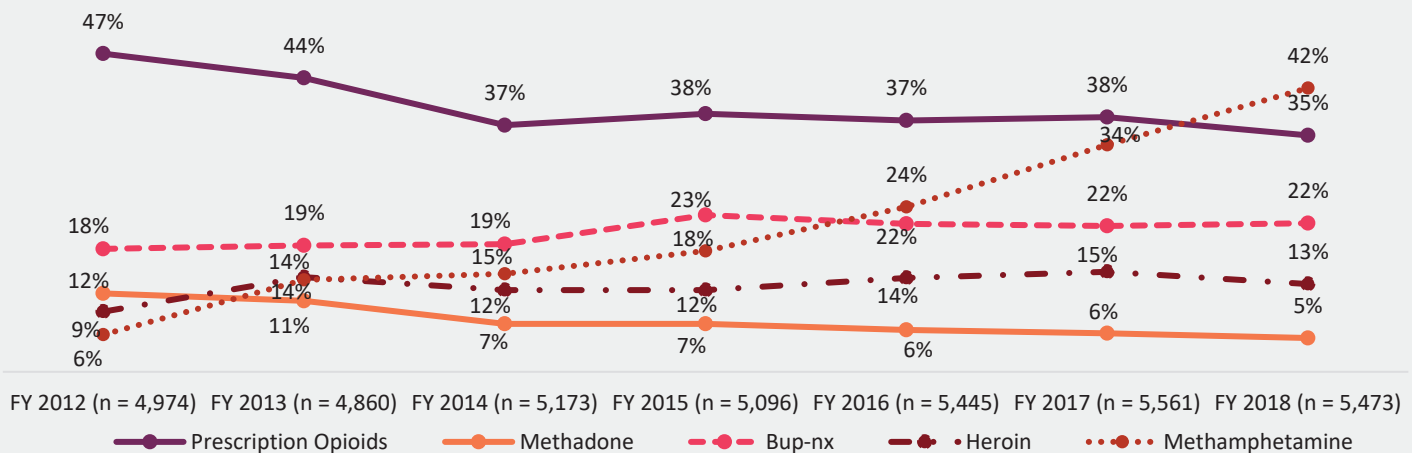
## Trends in Any Alcohol and/or Drug Use in the Past-12-Month for Clients in the Follow-up Sample

The number of KTOS clients reporting alcohol and/or drug use in the 12 months before treatment was consistently high. Overall, at follow-up, the number of clients reporting alcohol and/or drug use has decreased over the years.<sup>c</sup>



## How Much Has Use of Specific Illegal Drugs at Intake Changed Over Time for All Clients?

This trend analysis examines trends over time for all clients with completed intake surveys. Specifically, the trends in this graph show the percent of clients who reported misusing prescription opiates/opioids, non-prescribed methadone, non-prescribed buprenorphine-naloxone (bup-nx), heroin, and methamphetamine in the 12 months before entering treatment from FY 2012 to FY 2018.



<sup>c</sup> In the several years preceding FY 2017, the research team noticed that an increasing proportion of clients with completed KTOS intake surveys reported no substance use. Because the focus of this report is on substance abuse 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.

## Past-12-month Mental Health, Physical Health and Stress

Clients' mental health symptoms improved significantly from intake to follow-up.



**MET STUDY  
CRITERIA FOR  
DEPRESSION\*\*\***

**53%** at intake  
**34%** at follow-up



**MET STUDY  
CRITERIA FOR  
ANXIETY\*\*\***

**52%** at intake  
**33%** at follow-up



**MET STUDY CRITERIA  
FOR COMORBID  
DEPRESSION AND  
ANXIETY\*\*\***

**42%** at intake  
**23%** at follow-up



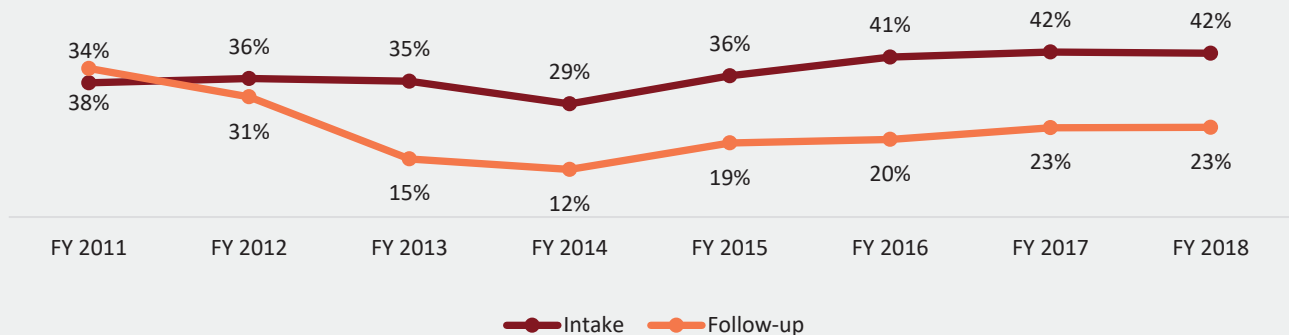
**REPORTED  
SUICIDAL  
IDEATION AND/OR  
ATTEMPTS\*\*\***

**21%** at intake  
**11%** at follow-up

\*\*\* p < .001; statistically significant difference from intake to follow-up.

### Trends in Comorbid Depression and Anxiety in the Follow-up Sample

Past-8-year trends for comorbid depression and anxiety show that, in general, more clients met study criteria for comorbid depression and anxiety at intake in FY 2018 (42%) than in FY 2011. At follow-up, however, the percent of clients meeting criteria for comorbid depression and anxiety has remained fairly steady the past 4 years.



**AVERAGE NUMBER OF  
DAYS PHYSICAL HEALTH  
WAS NOT GOOD<sup>c\*\*\*</sup>**

**6.8** at intake  
**4.8** at follow-up



**AVERAGE NUMBER OF  
DAYS MENTAL HEALTH  
WAS NOT GOOD<sup>c\*\*\*</sup>**

**12.6** at intake  
**6.1** at follow-up



**INTERPERSONAL  
VICTIMIZATION\*\*\***

**26%** at intake  
**15%** at follow-up



**REPORTED USE OF  
SUBSTANCES TO  
MANAGE STRESS<sup>d\*\*\*</sup>**

**42%** at intake  
**26%** at follow-up

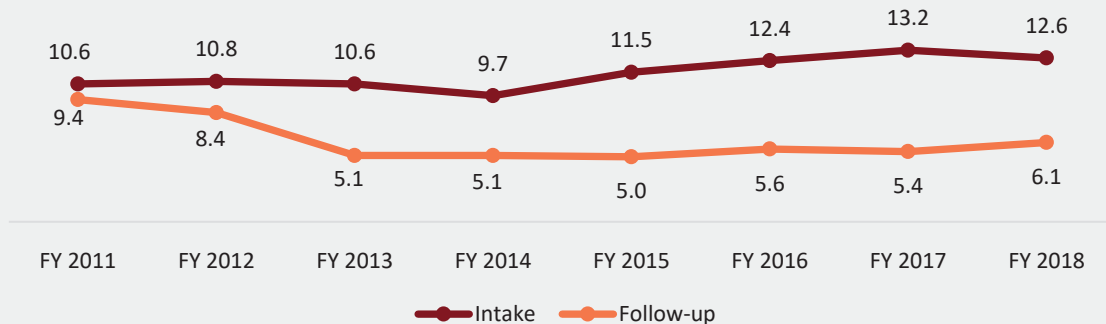
\*\*\* p < .001; statistically significant difference from intake to follow-up.

<sup>c</sup> Past 30 days.

<sup>d</sup> Measure of symptoms in the past 7 days.

## Trends in Past-30-day Perceptions of Poor Mental Health for Clients in the Follow-up Sample

The average number of days clients reported their mental health was not good in the past 30 days has increased at intake in the past several years. The average number of days clients reported their mental health was poor in the past 30 days at follow-up has decreased from 9.4 days in FY 2011 to 6.1 days in FY 2018, which is a slight increase from the previous 5 years.



## Past-12-month Economic Indicators

KTOS clients showed improvements in economic and living circumstances from intake to follow-up.



**CURRENTLY EMPLOYED  
FULL-TIME\*\*\***

**23%** at intake  
**41%** at follow-up



**CURRENTLY  
HOMELESS\*\*\***

**25%** at intake  
**8%** at follow-up



**REPORTED DIFFICULTY  
MEETING BASIC LIVING  
NEEDS\*\*\***

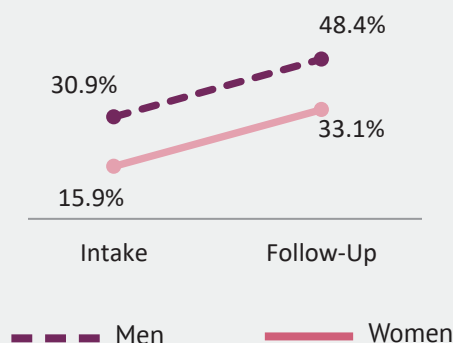
**43%** at intake  
**34%** at follow-up

\*\*p < .01, \*\*\* p < .001; statistically significant difference from intake to follow-up.

## Gender Differences in Current Employment for Clients in the Follow-up Sample

### Gender Differences in Full-time Employment

The number of men who reported they were employed full-time was almost 2 times higher than the number of women at intake and 1.5 times higher at follow-up.



### Gender Wage Gap

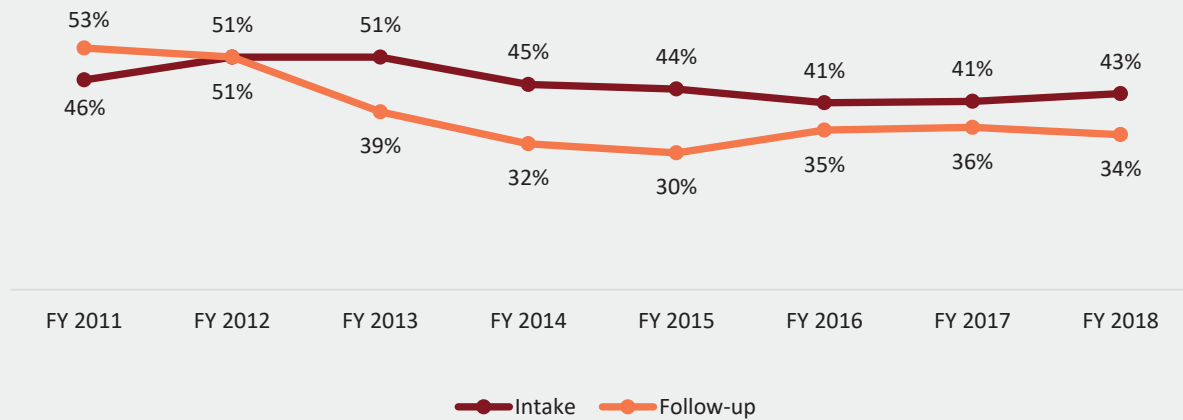
At follow-up, employed women made only \$0.76 for every dollar employed men made.

Therefore, the gender wage gap for employed clients was **24¢**



## Trends in Difficulty Meeting Basic Living in the Past 12 Months

The percent of KTOS clients who have reported difficulty meeting basic living needs at follow-up decreased from FY 2011 until FY 2015, when it began increasing again to 34% in FY 2018, but not to the level it was in FY 2011 (53%).



## Past-12-month Criminal Justice System Involvement

Involvement in the criminal justice system, in terms of being arrested, incarcerated, or under the supervision of the criminal justice system decreased significantly from intake to follow-up.



**REPORTED ANY ARREST\*\*\***

**58%** at intake  
**30%** at follow-up



**REPORTED BEING INCARCERATED\*\*\***

**61%** at intake  
**34%** at follow-up



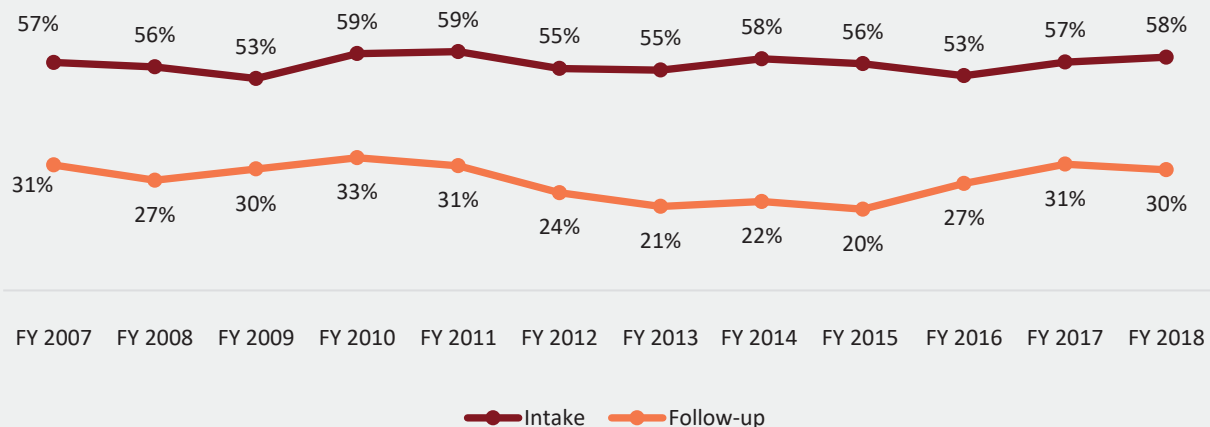
**REPORTED CRIMINAL JUSTICE SUPERVISION\*\*\***

**41%** at intake  
**34%** at follow-up

\*\*\* p < .001; statistically significant difference from intake to follow-up.

## Trends in Any Arrest in the Past 12 Months for Clients in the Follow-up Sample

The percent of clients reporting an arrest in the past 12 months at intake has remained stable over the past 12 years with over half of clients reporting an arrest. Between one-quarter and one-third of clients reported an arrest at follow-up since FY 2007.



## Quality of Life and Well-being

Ratings were from 1='Worst imaginable' to 5='Good and bad parts were about equal' to 10='Best imaginable'.

### FUNCTIONING AND WELL-BEING

Ratings were from 0, "Not at all good" to 10, "Extremely good."



AVERAGE QUALITY OF LIFE RATINGS\*\*\*

**6.3** **7.8**

at intake at follow-up



OVERALL WELL-BEING\*\*\*

**6.2** **7.8**

at intake at follow-up



PERSONAL WELL-BEING\*\*\*

**6.5** **8.1**

at intake at follow-up



INTERPERSONAL WELL-BEING\*\*\*

**6.8** **7.9**

at intake at follow-up



SOCIAL WELL-BEING\*\*\*

**5.9** **7.5**

at intake at follow-up

\*\*\*  $p < .001$ ; statistically significant difference from intake to follow-up.

## Past-30-day Recovery Supports

Compared to intake, significantly more individuals reported they had attended mutual help recovery group meetings in the past 30 days at follow-up.



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

**33%** **48%**

at intake at follow-up

### WHAT WILL BE MOST USEFUL IN STAYING OFF DRUGS/ALCOHOL AT INTAKE AND FOLLOW-UP

INTAKE

FOLLOW-UP



**32%**

employment



**29%**

support from family



**29%**

children



**24%**

support from family



**22%**

children



**18%**

employment

\*\*\*  $p < .001$ ; statistically significant difference from intake to follow-up.

## Past-6-month 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 better status.



HAD ALL DIMENSIONS OF RECOVERY INDICATIVE OF BETTER RECOVERY\*\*

**6%** **36%**

at intake at follow-up

\*\*\*  $p < .001$ ; statistically significant difference from intake to follow-up.

## Program Satisfaction

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At follow-up, clients were asked to rate their level of satisfaction with the treatment program on a scale from 1 (worst worst experience ) to 10 (best experience).



COMPLETED THE PROGRAM THEY ATTENDED OR THE PROGRAM AGREED THEY WERE READY TO LEAVE

**55%**



WOULD REFER A CLOSE FRIEND OR FAMILY MEMBER TO THEIR TREATMENT PROVIDER

**89%**



THE TREATMENT EPISODE WAS WORKING/WORKED PRETTY WELL OR EXTREMELY WELL FOR THEM

**79%**

## Cost Savings of Substance Abuse Treatment

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Using national estimates of the cost of substance abuse and applying them to clients' substance use before and after program participation, there was an estimated \$3.59 return in cost savings for every dollar spent on providing treatment services.

ESTIMATED  
**\$3.59**  
COST-SAVINGS  
FOR TAXPAYERS

## Conclusion

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The 2020 KTOS evaluation indicates that publicly-funded substance abuse treatment programs in Kentucky have been successful in facilitating positive changes in clients' lives in a variety of ways, including decreased substance use, decreased mental health symptoms, decreased economic hardship, and decreased involvement with the criminal justice system. Results also show that clients have more support for recovery after participating in treatment. Overall, KTOS clients had significant improvements in key factors that have been associated with facilitating recovery.