2026
REPORT

PROJECT ACKNOWLEDGMENTS

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The Recovery Center Outcome Study is modeled after the Kentucky Treatment Outcome Study (KTOS), which is a collaborative partnership with the University of Kentucky Center on Drug and Alcohol Research and the Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities, Division of Substance Use Disorder.

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Phase 1 intake surveys submitted from July 1, 2023, through June 30, 2024 and follow-up assessments completed July 1, 2024 through June 30, 2025.

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Center on Drug and Alcohol Research

EXECUTIVE SUMMARY

Recovery Kentucky is a joint effort by the Kentucky Department for Local Government, the Department of Corrections, and Kentucky Housing Corporation. Local governments and communities at each Recovery Kentucky center have also contributed greatly to making these centers a reality. This is the fifteenth annual Recovery Center Outcome Study (RCOS) follow-up report conducted by the Behavioral Health Outcome Study team at the University of Kentucky Center on Drug and Alcohol Research (UK CDAR).

This 2026 report presents: (1) demographics and targeted factors for 1,497 individuals who entered Phase 1 in one of the Recovery Kentucky programs, agreed to participate in RCOS, and completed an RCOS intake interview in FY 2024; and (2) outcomes for 282 men and women who were randomly selected and completed a 12-month follow-up survey between July 2024 and June 2025. In addition, this report includes analysis and estimates of avoided costs to society in relation to the cost of recovery service programs.

Information from the intake survey data indicates that clients (N = 1,497) were an average of 39 years old, ranging from 18 to 78 years old. The majority of clients were male (65.1%) and 34.5% were female, because a larger number of centers are for male clients.[1] A very small percentage reported they were transgender (0.4%).The majority of clients (81.0%) self-reported they were referred to the recovery center by the criminal legal system (e.g., judge, probation officer, Department of Corrections).

Comparisons of clients who completed a follow-up survey and clients who did not for any reason (e.g. not selected into the follow-up sample, never successfully contacted to complete the follow-up survey) showed only four statistically significant differences. One difference was a result of the stratification by gender when selecting the follow-up sample: significantly more clients who completed a follow-up interview were female compared to clients who did not complete a follow-up interview. Second, a significantly lower percentage of followed-up clients met criteria for no SUD at intake compared to clients who did not complete a follow-up interview. Third, individuals who were followed-up had a significantly higher average ASI drug composite score compared to individuals who were not followed-up. Fourth, a significantly higher percentage of followed-up individuals met criteria for depression and met criteria for generalized anxiety relative to individuals who were not followed up. There were no significant differences in other sociodemographic, substance use, mental health, physical health, living situation, education, and employment at intake by follow-up status.

SUBSTANCE USE

RCOS clients predominately engage in polysubstance use when they enter Recovery

> [The Recovery Center program] was amazing. Anytime there were issues, you can talk to and confide in all of the staff members. **This is the first place where I've been a part of my treatment program—they didn't just try to rush you through.** It was all-around a good experience.
>
> - RCOS FOLLOW-UP RESPONDENT

[1] Intake surveys were completed in 17 Recovery Kentucky programs: 9 provided services to men and 8 to women.

Kentucky programs with a history of prior substance use disorder (SUD) treatment. Two-fifths of clients (40.1%) who completed an intake interview reported one of the following: (1) no substance use (11.2%), (2) alcohol use only (6.5%), or (3) alcohol use and only one drug class (22.4%) in the 6 months before they entered the program.[2] The majority of clients who were not in a controlled environment 180 days before entering the program (59.8%) reported using 2 or more drug classes with or without alcohol in the 6-month period.

A trend analysis shows that the age of first use for each substance has remained steady reports 2014 - 2021. In the 2022 report, the average age of first use of illicit drugs (16.0) was higher than in previous years, and in 2026, the average age of first use of illicit drugs was 16.3. Clients' average age of first alcoholic drink is consistently younger than the age reported for illicit drug and tobacco use while initiation of smoking regularly and drug use tend to co-occur at similar ages.

A trend analysis of intake data from the 2012 - 2026 annual reports examines substance use patterns in the 6 months before clients entered programs. Even though a higher percentage of clients reported using opioids than using heroin each fiscal year, the percentage of clients reporting they used prescription opioids and non-prescribed methadone has decreased. In contrast, the percentage of clients that used heroin increased through the 2019 report, before the percentages began to slowly decline. Beginning in the 2017 report, the percentage of individuals who reported using methamphetamine increased substantially from the high 20s to 53% in 2025. In the 2020 report, the percentage of clients who reported they had used prescription opioids and methamphetamine were the same: 54%. In the 2021 report, a higher percentage of RCOS clients reported they had used methamphetamine in the past 6 months than had used prescription opioids, which was the first year this has happened in the RCOS sample. This pattern continued through the 2026 report, with 51% of clients reporting methamphetamine use and 32% reporting prescription opioid use in the 6 months before entering the program. This trend corresponds to other data sources, including the National Survey on Drug Use and Health.[3]

In this year's data, decreases in substance use from intake to follow-up were statistically significant. Specifically, the percentage of clients who used illicit drugs decreased by 74.8%, from 81.6% at intake to 6.8% at follow-up. Smaller numbers of individuals reported alcohol use at intake and follow-up; there was a significant decrease in alcohol use from 42.7% at intake to 6.8% at follow-up. Furthermore, the percentage of individuals who met criteria for severe substance use disorder (SUD) decreased significantly from 73.0% at intake to 4.3% at follow-up. At the other end of the continuum, the percentage of individuals who met study criteria for no substance use disorder increased significantly from 15.7% at intake to 94.3% at follow-up.

Most individuals reported smoking tobacco in the 6 months before entering the recovery center (84.2%) and in the 6 months before follow-up (58.1%). At intake and at follow-up, about half of followed-up respondents reported use of vaporized nicotine (e.g., battery-powered nicotine delivery devices that vaporize a liquid mixture consisting of propylene glycol, glycerin, flavorings, nicotine, and other chemicals). The percentage of individuals who reported using smokeless tobacco decreased significantly from intake (26.1%) to follow-up (18.8%).

[2] This is the percentage among individuals who were not in a controlled environment all 180 days before entering the program.

[3] Substance Abuse and Mental Health Services Administration. (September, 2020). *Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health* (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data.

MENTAL HEALTH

Many clients reported significant improvements in their mental health at follow-up. The majority of respondents (72.7%) met study criteria for either depression or generalized anxiety at intake. By follow-up, only 32.6% met study criteria for either depression or anxiety. There were significant decreases from intake to follow-up in the percentage of respondents who met criteria for depression (by 44.3%), generalized anxiety (by 37.3%), comorbid depression and generalized anxiety (by 41.5%), suicidality (by 18.1%). Also, the average number of days respondents said their mental health was not good decreased significantly from 14.5 (out of the past 30) at intake to 2.7 at follow-up.

PHYSICAL HEALTH

General health status also improved from intake to follow-up. Only 19.2% of respondents reported their health was very good or excellent at intake. By follow-up, that percentage had increased to 38.8%. The average number of days (out of the past 30 days) of poor physical significantly decreased from intake to follow-up. For example, clients reported an average of 7.0 days at intake and 2.3 days follow-up that their physical health was not good. Importantly, the average number of days poor physical or mental health kept individuals from doing their usual activities decreased significantly from 10.5 at intake to 2.1 at follow-up. The percentage of respondents who reported chronic pain decreased significantly from 27.7% at intake to 12.1% at follow-up.

EXPERIENCES WITH INTERPERSONAL VIOLENCE

About one-third of respondents (34.8%) reported they had experiences with interpersonal violence in the 6 months before they entered the program. By follow-up, 8.2% reported they had experienced interpersonal violence in the past 6 months. This was a statistically significant decrease.

CRIMINAL LEGAL INVOLVEMENT

The percentage of clients who reported being arrested decreased significantly from 57.8% in the 6 months before involvement in the program to 5.7% after involvement in the program. Likewise, the percentage of clients reporting they spent at least one day in jail or prison decreased from 78.4% at intake to 6.7% at follow-up. Additionally, the percentage of individuals who reported they had been convicted for a misdemeanor and a felony offense decreased significantly from intake to follow-up. About four-fifths (79.8%) of respondents were under criminal legal system supervision at intake and the percentage decreased significantly to 58.9% at follow-up.

QUALITY OF LIFE

Respondents reported a significantly higher quality of life at follow-up than they did at program entry. On a scale of 1 (worst imaginable) to 10 (best imaginable), the average quality of life rating at intake was a 4.2. This increased significantly to 8.3 at follow-up.

EDUCATION AND EMPLOYMENT

Education and employment improved from intake to follow-up. At intake, 79.4% of individuals had a high school diploma/GED or higher degree and this increased to 86.1% at follow-up. Less than half of respondents (47.5%) reported working (full- or part-time) at least 1 month in the 6 months before program entry. At follow-up, significantly more respondents had worked at least one month in the past 6 months (71.3%), which was an increase of 23.8%.

LIVING SITUATION

The percentage of clients who considered themselves currently homeless decreased from 35.8% at intake to 11.0% at follow-up. At intake, similar percentages of clients reported their usual living situation in the 30 days before entering the program was in jail or

prison (43.1%) and in a private residence (their own home or someone else's home; 44.8%). At follow-up, however, the majority of clients (74.0%) reported their usual living situation was a private residence and no clients reported their usual living situation had been in jail or prison at follow-up. Even though the target date for the follow-up survey is 12 months after individuals complete their intake survey and entry into Phase 1, 26.0% reported at follow-up living in a recovery center, residential program, or sober living home in the past 30 days. At the time of the follow-up survey, 35 individuals reported they were living in a recovery center facility. Nearly half of the individuals who were living in a recovery center said they were living in one of the program phases (48.6%), 34.3% were living in transitional housing connected to the program, and 17.1% were a peer mentor at the time of follow-up.

Improvements in economic hardship were found in the 2026 follow-up sample. At intake 42.3% of clients reported they had difficulty meeting basic living needs (e.g., food, shelter, utilities, telephone). By follow-up, this number had decreased significantly to 18.3%. More than one-fourth of clients (27.1%) reported having difficulty in obtaining health care needs (e.g., doctor visits, dental visits, and filling prescriptions) for financial reasons at intake, with a significant decrease to 18.9% at follow-up.

RECOVERY SUPPORT

There was a significant increase in the percentage of individuals reporting they had attended mutual help recovery group meetings in the past 30 days, from 30.5% at intake to 76.6% at follow-up. Among individuals who did not attend meetings in the 30 days before program entry (n = 196), 74.0% had attended meetings in the 30 days before follow-up.

Even though more than four-fifths of respondents (82.3%) had interactions with family/friends who were supportive of their recovery at intake, the percentage increased significantly to 96.8% at follow-up. Additionally, significantly more respondents had supportive interactions with an AA/NA sponsor at follow-up (71.3%) compared to intake (20.2%). The average number of people individuals reported that they could count on for recovery support significantly increased from intake (6.1) to follow-up (30.9). Additionally, the majority of clients reported they felt their chances of getting off and staying off drugs or alcohol was

OVERALL, RECOVERY KENTUCKY CLIENTS MADE
SIGNIFICANT STRIDES IN ALL OF THE TARGETED AREAS

REPORTED ANY ILLICIT DRUG USE***

82% at intake | **7%** at follow-up

MET STUDY CRITERIA FOR EITHER DEPRESSION OR GENERALIZED ANXIETY***

73% at intake | **33%** at follow-up

CURRENTLY HOMELESS***

36% at intake | **11%** at follow-up

SPENT AT LEAST ONE DAY INCARCERATED***

78% at intake | **7%** at follow-up

***p < .001.

moderately or very good at intake (90.0%) and at follow-up (95.0%).

MULTIDIMENSIONAL RECOVERY

In the follow-up sample, only 1.1% of respondents had all eight positive dimensions of recovery at intake. By follow-up, 55.0% of clients had all eight positive dimensions of recovery, which was a statistically significant increase. In multivariate analysis, completing Phase I of the program was significantly associated with greater odds of having all eight positive dimensions of recovery at follow-up, controlling for numerous intake factors and the self-reported number of months in the program.

PERCEPTIONS OF CARE IN THE PROGRAM

Results show that most clients were very satisfied (overall average of 8.4 out of 10 as the highest possible score) with their Recovery Kentucky program experience. The majority of clients agreed with a number of statements about positive aspects of the recovery program experience. For example, the majority of clients reported that: program staff believed in them and that the program would work for them, their expectations and hopes for the program and recovery were met, they felt the program staff cared about them and their progress, they had a connection with a staff person during the program, the program approach and method was a good fit for them, they worked on and talked about the things that were most important to them, they fully discussed or talked about everything with their counselor/staff, they had input into their goals and how they were progressing over time, and when clients spoke about personal things they felt listened to by their counselors and staff. The majority of followed-up respondents (70.3%) reported the program length was just right as opposed to too short or too long (29.7%).

> I feel like I went in there kind of a child because they taught me a lot of things. **I owe that place my life.** The coordinator there had a lot of one on ones with me. Everyone there seemed that they genuinely cared about every woman in there. They taught me how to cook and clean and even start a lawn mower. **It taught me how to have better relationships with people and really take a good look at myself.**
>
> - RCOS FOLLOW-UP RESPONDENT

Respondents who completed Phase I had a higher average rating of their overall satisfaction with the program compared to individuals who did not complete Phase I. Additionally, individuals who completed Phase I gave higher ratings for the following dimensions of their experiences in the program (compared to individuals who did not complete Phase I: shared decision-making, respect, communication, therapeutic alliance, and perceived effectiveness of the program.

The majority of individuals stated that the beginning of the program was good for them (70.1%), but an even higher percentage reported the program ending was good for them (81.5%) among individuals whose participation had ended. The majority of clients stated the program worked extremely well (71.0%) or pretty well (21.1%) for them. Only a small minority reported the program worked somewhat for them (5.4%), and 2.5% reported the program did not work at all for them. Respondents reported the greatest benefits of the program were reduced substance use, major positive life changes, positive interactions and relationships with other people, improved mental health and feelings about self, and lessons learned in the program.

ASSOCIATION OF PROGRAM

COMPLETION WITH OUTCOMES

At follow-up, more than three-fourths of respondents (78.6%) reported they had completed Phase I of the recovery center program. Analysis of how the majority of individuals who ended up completing Phase I compared to the minority of individuals who did not end up completing Phase I by follow-up was conducted. There were few differences between the two groups at program entry. For example, a significantly higher percentage of individuals who did not complete Phase I were female than male. Additionally, at intake, a significantly higher percentage of individuals who did not complete Phase I reported illicit drug use and had experienced an overdose in the 6 months before entering the program compared to individuals who completed Phase I.

At follow-up, significantly more individuals who had not completed Phase I reported they had used illicit drugs, in general, and specifically, stimulants (including cocaine and methamphetamine) and opioids (including heroin). Additionally, more individuals who had not completed Phase I reported they had engaged in polydrug use in the 6 months before follow-up compared to individuals who had completed Phase I of the program. Other differences between the two groups were found in meeting study criteria for depression and/or anxiety, usual employment status, arrests, incarceration, attending mutual help recovery meetings, and the number of people the respondent could rely on for recovery support in the follow-up period. For each of these targeted factors, significantly more of individuals who had not completed Phase I had the worse outcome relative to individuals who had completed Phase I.

ANALYSIS OF RETURN TO SUBSTANCE USE

Using a logistic regression, targeted factors were examined in relation to having reported drug and/or alcohol use in the 6 months before follow-up. Results of the analysis show when controlling for intake variables in the model, only one predictor variable was associated with return to substance use during the follow-up period; not completing Phase I of the program was associated with greater odds of returning to substance use during the follow-up period.

LENGTH OF SERVICE

Overall, the clients who were followed up received, on average, about 7.8 months of services from the recovery centers. Clients who were referred to the program by DOC and clients who were not referred by DOC did not have significantly different length of stays in the recovery centers. Multivariate analysis examining the relationship between length of service, DOC referral status, and several targeted outcomes showed no significant associations between DOC referral status and the outcomes. Significant associations were found between length of service and two outcomes at follow-up. Specifically, lower length of service was associated with greater odds of:

- Being arrested in the past 6 months, and
- Being incarcerated in the past 6 months.

ESTIMATE OF AVOIDED COSTS

Conducting a cost-benefit analysis was beyond the scope of this outcome evaluation. Instead, we applied estimates of national costs

> I have a new way of life. They have **helped me find out who I am and see the better things about me** while I worked on the things that weren't so good.
>
> - RCOS FOLLOW-UP RESPONDENT

of drug and alcohol use disorders to society to RCOS participants in the year before and after their entry in the recovery programs to estimate costs of their substance use. We then calculated the cost of each participant's stay in the recovery programs from the number of days they were in the program multiplied by the daily cost of operating the programs. Estimates suggest that for every dollar invested in Recovery Kentucky programs there was a $2.15 return in avoided costs (or costs that would have been expected given the costs associated with drug and alcohol use before participation in Recovery Kentucky programs).

CONCLUSION

Overall, RCOS results indicate that recovery Kentucky programs have been successful in facilitating positive changes in clients' lives in a variety of areas including decreased substance use, improved mental health and physical health, decreased involvement in the criminal legal system, improved education and employment situations, lower economic hardship, and improved living circumstances. These trends in decreases in substance use, mental health symptoms, physical health problems, homelessness, economic hardship, and involvement in the criminal legal system as well as increases in quality of life, employment, and recovery supports have remained consistent over time across multiple annual reports. For example, trends show the vast majority of clients have reported illicit drug use in the 6 months before entering the program, with only 5.0% to 19.3% reporting illicit drug use at follow-up across the 14 years examined. Moreover, examining RCOS respondents' multiple dimensions of recovery, the majority reported having all eight positive dimensions of recovery at follow-up, which was a significant and substantial improvement from program entry. Findings also show that respondents who reported at follow-up that they had completed Phase I had lower illicit drug use, lower rates of depression and/or anxiety, lower unemployment, lower involvement with the criminal legal system, higher rates of attending mutual help recovery meetings and higher numbers of people they could rely on for recovery support during the follow-up period when compared to individuals who had not completed Phase I. Results also show that respondents appreciate their experiences in the recovery centers and believe the program was helpful, worked for them, and was a good fit for them.

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OVERVIEW OF REPORT

Recovery Kentucky is a Social Model, Recovery Housing program created to help Kentuckians recover from Substance Use Disorder, which often leads to chronic homelessness. Kentuckians participating in this Recovery Housing model benefit in multiple ways: reducing their substance use, increasing their employment, decreasing involvement in the criminal legal system, reducing mental health problems, preventing future physical health problems and increasing their involvement in a recovery support system that leads to long term sobriety and free from the use of drugs of abuse. In most of FY 2024, there were 17 Recovery Kentucky centers across the Commonwealth, providing housing and recovery services for up to 2,200 people simultaneously.

Recovery Kentucky is a joint effort by the Kentucky Department for Local Government, the Department of Corrections, and Kentucky Housing Corporation. Local governments and communities at each Recovery Kentucky center have also contributed greatly to making these centers a reality.[4]

This is the fifteenth annual Recovery Center Outcome Study (RCOS) follow-up report conducted by the Behavioral Health Outcome Study team at the University of Kentucky Center on Drug and Alcohol Research (UK CDAR). Seventeen Recovery Kentucky programs operating in FY 2024 participated in this year's Recovery Center Outcome Study (RCOS) by having clients who completed intake and follow-up interviews for this year's report.[5]

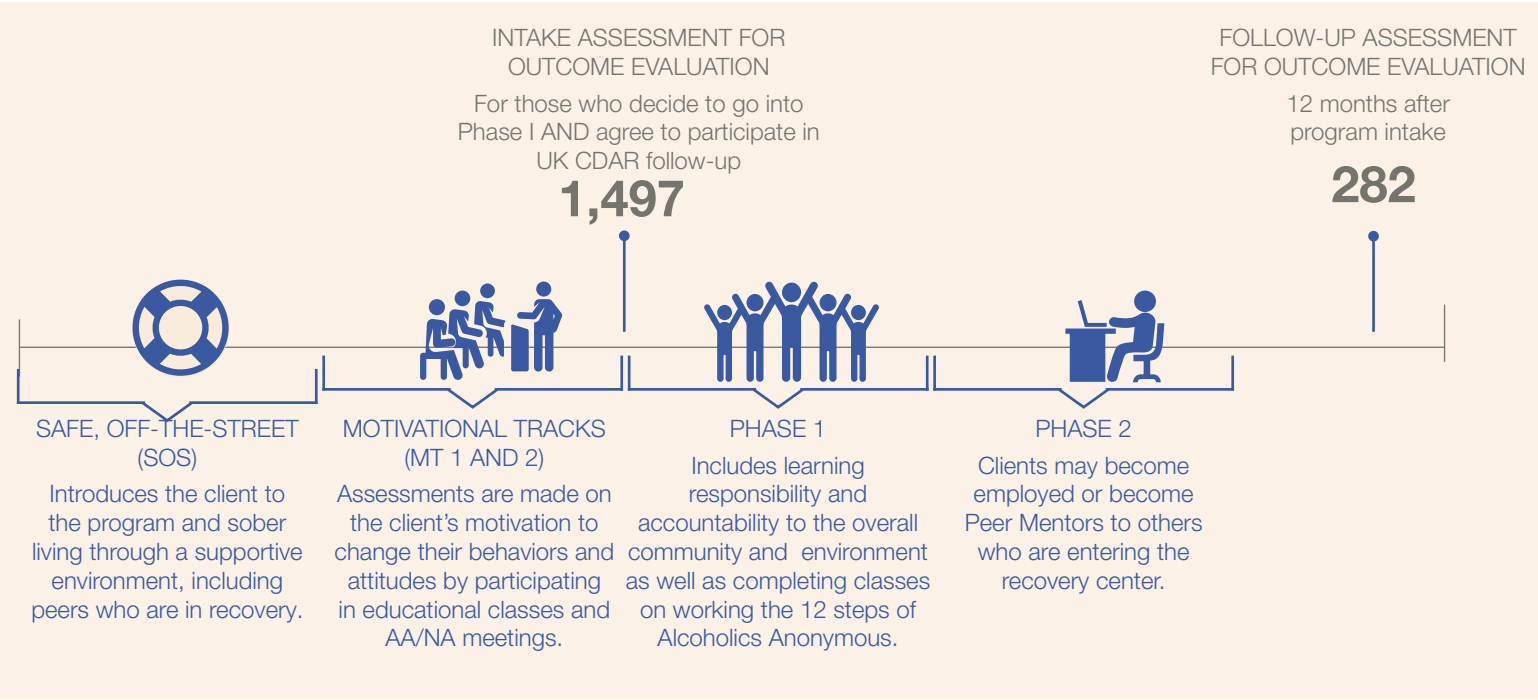
Figure 1 below shows the program modules and how the RCOS fits into the timing of the program modules. The first component of the program is the Safe, Off-the-Street (SOS) program which lasts about 3-7 days. Once clients successfully complete SOS they move into the Motivational Tracks which includes assessments of a client's readiness for recovery. Motivational Tracks I and II last approximately 5-6 weeks. After SOS and the Motivational Tracks are completed, clients enter Phase I. Phase I lasts about 5 months on average, and then clients can move to Phase 2, which can last 6 months or more. If clients drop out of the program during the motivational tracks or Phase I, they may reenter the program but will restart the SOS program.

[4] For more information about Recovery Kentucky, contact KHC's Mike Townsend toll-free in Kentucky at 800-633-8896 or 502-564-7630, extension 715; TTY711; or email MTownsend@kyhousing.org.

[5] Women's facilities include: Trilogy Center for Women – Hopkinsville; Women's Addiction Recovery Manor – Henderson; Brighton Recovery Center for Women – Florence; Liberty Place for Women – Richmond; Cumberland Hope Community Center for Women – Evarts; The Healing Place for Women – Louisville; The Hope Center for Women – Lexington; and Sky Hope Recovery Center-Somerset.

Men's facilities include: Owensboro Regional Recovery Center for Men – Owensboro; The Healing Place for Men – Louisville; The Transitions Grateful Life Center for Men – Erlanger; The Healing Place of Campbellsville – Campbellsville; George Privett Recovery Center– Lexington; CenterPoint Recovery Center for Men – Paducah; Hickory Hill Recovery Center – Knott County; Men's Addiction Recovery Campus—Bowling Green; and Genesis Recovery Kentucky Center--Grayson.

FIGURE 1. PROCESS OF RECOVERY KENTUCKY PROGRAM PARTICIPATION



Recovery Kentucky staff conduct a face-to-face interview with clients as they enter Phase 1; thus, only individuals who have progressed through Safe, Off-the-Street, Motivational Tracks 1 and 2, and have entered Phase 1 are offered the opportunity to participate in the outcome evaluation. At the Phase 1 intake, an evidence-based assessment is used to inform about substance use, mental health symptoms, adverse childhood experiences and victimization experiences, health and stress, criminal legal involvement, quality of life, education and employment status, living situation, and recovery supports prior to entering the recovery center.[6] Most items in the intake interview ask about the 6 months or 30 days before clients entered the recovery center. Then, an evidence-based follow-up interview is conducted with a selected sample of clients about 12 months after the intake interview is completed (see Figure 1). Follow-up interview items ask about the past-6-month or past-30-day periods. Interviewers at UK CDAR conduct the follow-up interviews over the telephone. Clients' responses to the follow-up interviews are kept confidential to help facilitate an honest evaluation of client outcomes and satisfaction with program services and in accord with human participant protections guidelines.

Trends across report years are presented throughout this report. Statistical tests of significant change across report years were not conducted. Descriptions of changes in percentages of individuals across report years are descriptive only. However, changes from intake to follow-up were analyzed with statistical tests of significance. Results are presented for the overall sample and by gender when there were statistically significant gender differences. There are fourteen main sections including:

Section 1. Overview of RCOS Methods and Client Characteristics. This section briefly describes the Recovery Center Outcome Study (RCOS) method including how clients are selected into the follow-up sample for the outcome evaluation. In addition, this section describes characteristics of clients who entered Phase 1 of a recovery center program and agreed to participate in RCOS

[6] Logan, T., Cole, J., Miller, J., Scrivner, A., & Walker, R. (2024). *Evidence Base for the Recovery Center Outcome Study Assessment and Methods*. Lexington, KY: University of Kentucky, Center on Drug and Alcohol Research. (Available upon request).

between July 1, 2023, and June 30, 2024. This section also describes characteristics for clients who completed a 12-month follow-up survey conducted by UK CDAR between July 1, 2024, and June 30, 2025.

Section 2. Substance Use. This section describes change in illicit drug, alcohol, tobacco and vaporized nicotine use for clients. Past-6-month substance use is examined, as well as past-30-day substance use, separately for clients who were not in a controlled environment all 30 days before entering the Recovery Kentucky program and clients who were in a controlled environment all 30 days before entering the program.

Section 3. Mental Health and Physical Health. This section describes changes in mental health and physical health including the following factors: (1) depression, (2) generalized anxiety, (3) comorbid depression and generalized anxiety, (4) suicidal thoughts or attempts, (5) posttraumatic stress symptoms, (6) general health status, and (7) chronic pain.

Section 4. Criminal Legal System Involvement. This section examines changes in clients' involvement with the criminal legal system from intake to follow-up. Specifically, information about: (1) arrests, (2) incarceration, (3) self-reported misdemeanor and felony convictions, and (4) self-reported supervision by the criminal legal system.

Section 5. Quality of Life Ratings. This section shows change over time for one measure of subjective quality of life from intake to follow-up.

Section 6. Education and Employment. This section examines changes in education and employment including: (1) highest level of education completed, (2) the percent of clients who worked full-time or part-time, (3) the number of months clients were employed full-time or part-time, among those who were employed the 6 months prior to program entry, (4) median hourly wage among employed individuals, and (5) the percent of clients who expect to be employed in the next 6 months.

Section 7. Living Situation. This section examines the clients' living situation before they entered the program and at follow-up. Specifically, clients are asked at both points: (1) if they consider themselves currently homeless, (2) in what type of situation (i.e., own home or someone else's home, residential program, shelter) they have lived, and (3) about economic hardship.

Section 8. Multidimensional Recovery. This section describes change from intake to follow-up in a measure of multiple dimensions of recovery that is based on: having no substance use disorder, being employed full-time or part-time, not being homeless, having no arrests or incarceration, having no suicidal thoughts or attempts, having fair to excellent health, having recovery support, and having a mid to high quality of life. Change in the multidimensional measure of recovery from intake to follow-up is presented. Furthermore, a multivariate analysis was conducted to examine the intake indicators of having all positive dimensions of recovery at follow-up.

Section 9. Recovery Supports. This section focuses on five main changes in recovery supports: (1) attending mutual help recovery group meetings, (2) recovery supportive interactions in the past 30 days, (3) the number of people the individual said they could count on for recovery support, (4) what will help them stay off drugs or alcohol, and (5) how good their chances are of staying off drugs or alcohol.

Section 10. Respondents' Perceptions of Care in Recovery Kentucky Programs. This section describes three aspects of client engagement with the program: (1) overall client satisfaction, (2) client ratings of their program experience, and (3) client ratings of the most positive outcomes of program participation.

Section 11. Association of Completion of Phase I and Outcomes. This section compares individuals who ended up completing Phase I of the program (as reported by respondents at follow-up) with individuals who did not complete Phase I on characteristics and targeted factors at program entry and outcomes at follow-up.

Section 12. Multivariate Analysis of Return to Substance Use. This section presents a comparison of those who reported drug and/or alcohol use at follow-up and those who did not on targeted factors. It also focuses on a multivariate analysis examining factors related to return to use in the 2025 RCOS follow-up sample.

Section 13: Estimate of Avoided Costs. This section examines cost reductions or avoided costs to society after Recovery Kentucky Program participation. Using the number of individuals who reported drug or alcohol use at intake and follow-up, a national per person cost was applied to the sample used in this study to estimate the cost to society of drug and alcohol use for the year before individuals were in recovery and then for the same individuals in the year following entry to Phase I.

Section 14. Conclusion and Study Limitations. This section summarizes the report's findings and discusses some major implications within the context of the limitations of the outcome evaluation study.

SECTION 1. **OVERVIEW OF RCOS METHOD AND CLIENT CHARACTERISTICS**

This section briefly describes the Recovery Center Outcome Study (RCOS) method including how clients are selected into the outcome evaluation. In addition, this section describes characteristics of clients who entered Phase I of a recovery center program and participated in RCOS between July 1, 2023, and June 30, 2024.

RCOS INTAKE SAMPLE

RCOS is comprised of a face-to-face intake interview using an evidence-based assessment conducted by recovery center staff with clients as they enter Phase I. This interview includes demographic questions as well as questions in four main targeted factors (substance use, mental health symptoms, criminal legal system involvement, and quality of life) and four supplemental areas (health and stress-related health consequences, adverse childhood experiences and victimization experiences, economic and living circumstances, and recovery supports).[7] Intake interviews are conducted with clients as they enter Phase I of the recovery center programs. Items related to adverse childhood experiences and interpersonal victimization experiences and overdose ask about lifetime experiences. However, most items on the intake interview ask about the 6 months or 30 days before clients entered the recovery center (i.e., intake). This report examines responses on intake interviews conducted between July 1, 2023, and June 30, 2024 (i.e., FY 2024) for 1,497 clients.[8]

CHARACTERISTICS OF RCOS CLIENTS AT PHASE I INTAKE

DEMOGRAPHICS

Table 1.1 presents demographic information on clients with an intake survey completed in FY 2024. Clients' average age was 39.5 years old and men made up 65.1% of the sample. The majority of individuals (86.3%) were White and 8.8% were Black, 1.2% were Hispanic, 3.0% were multiracial, and the remaining 0.7% reported they were American Indian, Asian or Pacific Islander, or another race. Nearly two-fifths of the RCOS clients reported they had never been married and were not cohabiting at intake (39.5%), 34.5% were separated or divorced, 22.9% were married or cohabiting, and 3.0% were widowed. The majority of RCOS clients (54.3%) had children under the age of 18. A small minority of individuals (3.3%) reported they were currently serving in the military or a veteran.

[7] For more information about the evidence-based assessment, see: Logan, T., Cole, J., Miller, J., Scrivner, A., & Walker, R. (2024). *Evidence Base for the Recovery Center Outcome Study Assessment and Methods*. Lexington, KY: University of Kentucky, Center on Drug and Alcohol Research. (Available upon request).

[8] When a client had more than one intake survey in the same fiscal year, the survey with the earliest submission date was kept in the data file and the other intake surveys were deleted so that each client was represented once and only once in the data set.

TABLE 1.1. DEMOGRAPHICS FOR ALL RCOS CLIENTS AT PHASE I INTAKE IN FY 2024 (N = 1,497)[9]

Age	39.5 *(Min. = 18, Max. = 78)*
Gender	
Male	65.1%
Female	34.5%
Transgender	0.4%
	(n = 1,492)[10]
Race	
White	86.3%
Black/African American	8.8%
Hispanic	1.2%
Asian, Pacific Islander, American Indian, or other race	0.7%
Multiracial	3.0%
Marital status	(n = 1,497)
Never married (and not cohabiting)	39.5%
Separated or divorced	34.5%
Married or cohabiting	22.9%
Widowed	3.0%
	(n = 1,494)[11]
Has children under 18 years old	54.3%
Active duty or military veteran	3.3%

SELF-REPORTED REFERRAL SOURCE

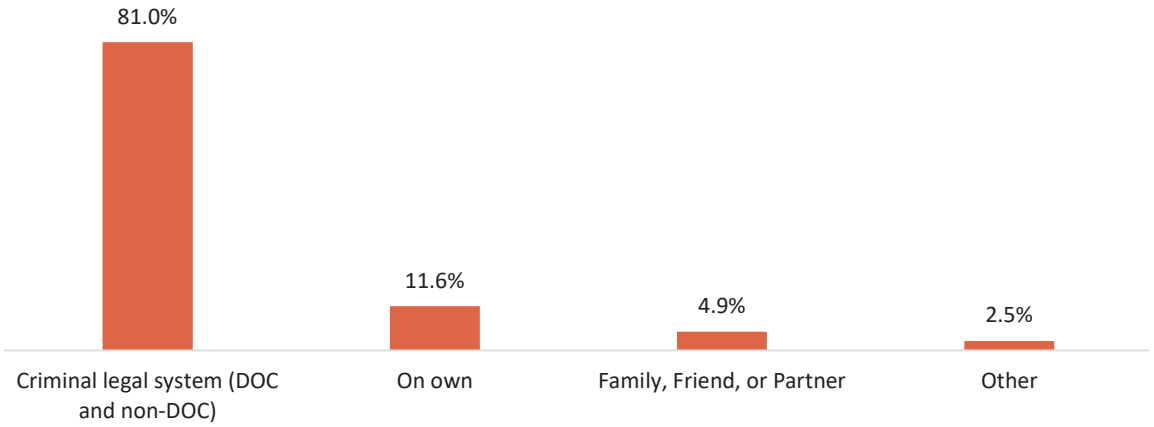
Figure 1.1 shows the self-reported referral source for RCOS clients. More than four-fifths of clients (81.0%) self-reported they were referred to the recovery center by the criminal legal system (e.g., judge, probation officer, Department of Corrections). The next two largest referral categories were the client decided to get help on his/her own (11.6%) and the client was referred to the recovery center by a relative, friend, or partner (4.9%). The remaining 2.5% indicated another referral source such as a treatment program, a health care provider, a mental health care provider, or another recovery center. In a separate question, 77.2% of clients reported that the court or other state agency ordered them to participate in a recovery center program (not depicted in a figure).

[9] Eleven clients had missing or invalid data for date of birth; thus, their age was not calculated.

[10] Five individuals had missing data about their race/ethnicity.

[11] Three individuals had missing data for the number of children under the age of 18.

FIGURE 1.1. REFERRAL SOURCE FOR ALL RCOS CLIENTS (N = 1,497)



SUBSTANCE USE

The majority of clients reported using illicit drugs and smoking tobacco in the 6-month period before entering the recovery center (see Figure 1.2). Around two-fifths of clients reported any alcohol use and less than one-half of clients reported using vaporized nicotine in the 6 months before entering the program.[12] A similar pattern was found when past-30-day use was examined for clients who were not in a controlled environment all 30 days before entering the recovery center.[13]

FIGURE 1.2. ALCOHOL, DRUG AND TOBACCO USE 6 MONTHS AND 30 DAYS BEFORE ENTERING RECOVERY CENTER

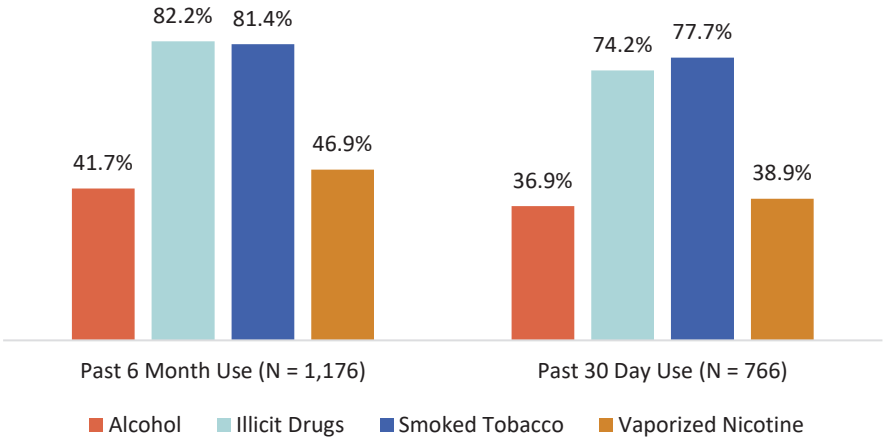


Figure 1.3 presents the percent distribution of individuals who used alcohol and/or illicit drugs in the 6 months before entering the program. The largest percentage of clients reported using illicit drugs

[12] Because being in a controlled environment reduces access to alcohol and illicit drugs, individuals who were in a controlled environment the entire intake 6-month period of the study (n = 267) and 54 individuals for whom this data was missing were not included in the analysis of substance use during that period (n = 321).

[13] Because being in a controlled environment reduces access to alcohol and illicit drugs, individuals who were in a controlled environment the entire intake 30-day period assessed for the study (n = 731) are not included in the analysis of substance use during that period.

solely (43.0%), and an additional 29.2% reported alcohol and illicit drug use. Among the individuals who were not incarcerated 180 days before entering the program, 47.1% reported illicit drug use solely and 35.1% reported alcohol and illicit drug use.

FIGURE 1.3. PAST-6-MONTH ALCOHOL AND ILLICIT DRUG USE AT INTAKE FOR THE TOTAL SAMPLE (N = 1,497) AND FOR THOSE NOT INCARCERATED ALL 180 DAYS BEFORE ENTERING THE PROGRAM (N = 1,176

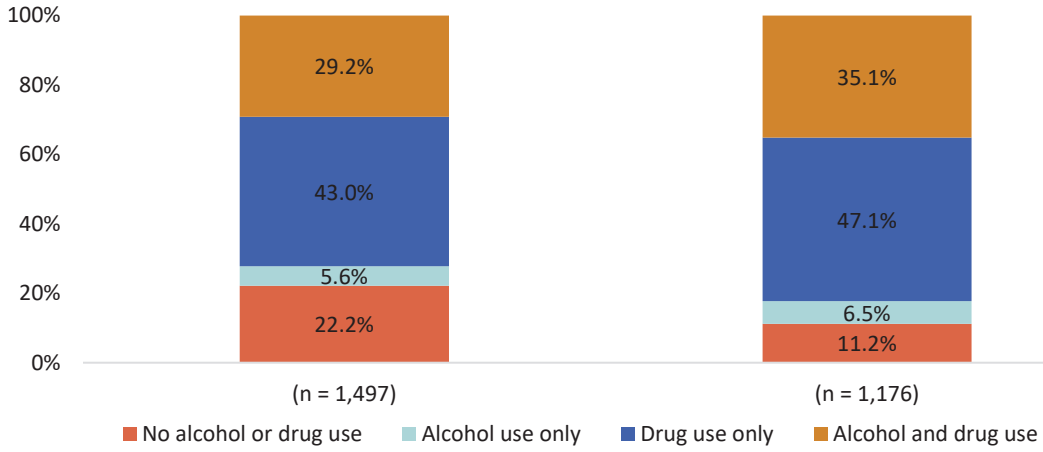
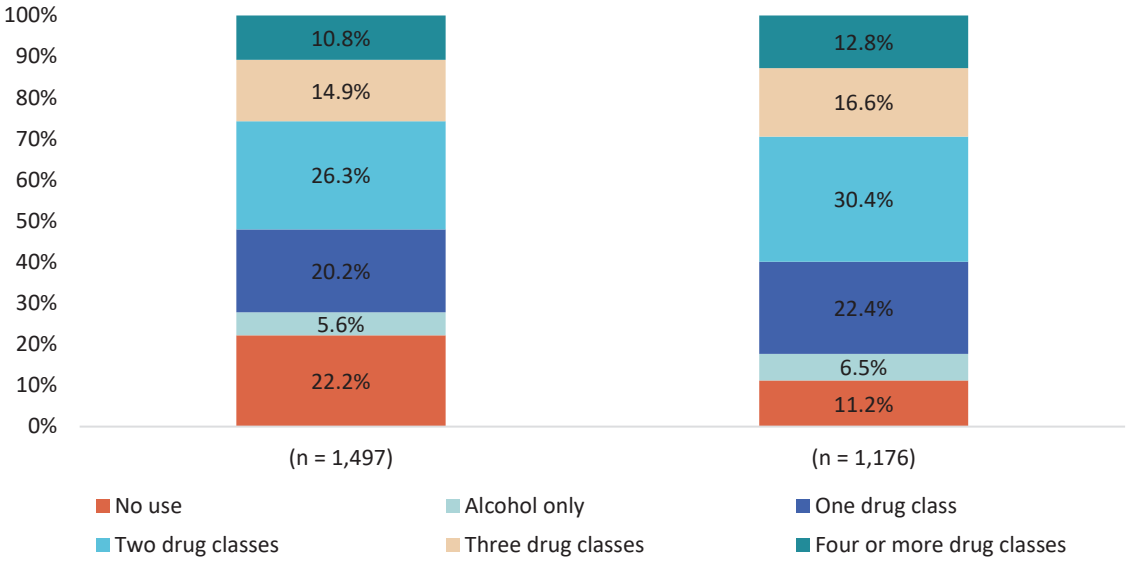


Figure 1.4 presents the percentages of RCOS clients who reported using no drugs, alcohol only, and then various numbers of broad drug classes from the following: cannabis, opioids (including prescription opioids, buprenorphine, methadone, heroin), CNS depressants (such as benzodiazepines, sedatives, barbiturates), stimulants (including amphetamines and cocaine), hallucinogens, synthetic marijuana, and inhalants. RCOS clients predominately engaged in polydrug use before entering recovery centers. Among clients who were not in a controlled environment 180 days before entering the program, 40.1% of clients reported either no substance use, alcohol use only, or alcohol use with only one broad drug class, while the majority reported using 2 or more broad drug classes (59.9%).

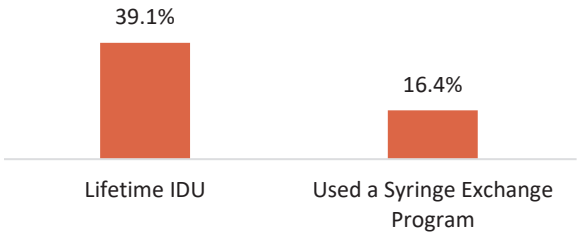
> I was in jail and my husband heard about it through our house cleaner. I absolutely hated it at first, but I did it and they loved me back to life. **I definitely needed it and I am loving myself again.** I even got peer support certified.
>
> - RCOS FOLLOW-UP RESPONDENT

FIGURE 1.4. PAST-6-MONTH POLYDRUG USE AT INTAKE FOR THE TOTAL SAMPLE (N = 1,497) AND FOR THOSE NOT INCARCERATED ALL 180 DAYS BEFORE ENTERING THE PROGRAM (N = 1,176)



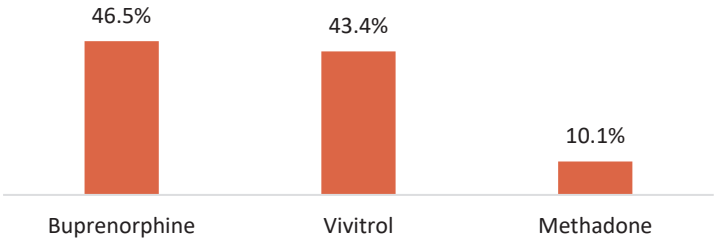
About 7 in 10 clients (71.0%) reported they had attended SUD treatment in their lifetime (not depicted in a figure). Less than two-fifths of clients (39.1%) had injected drugs in their lifetime. About 16.4% of the entire sample (or 42.0% of individuals who had ever reported they had injected drugs) reported they had used a syringe exchange program in Kentucky (see Figure 1.5).

FIGURE 1.5. LIFETIME INJECTING DRUG USE AND USED SYRINGE EXCHANGE PROGRAM (n = 1,497)



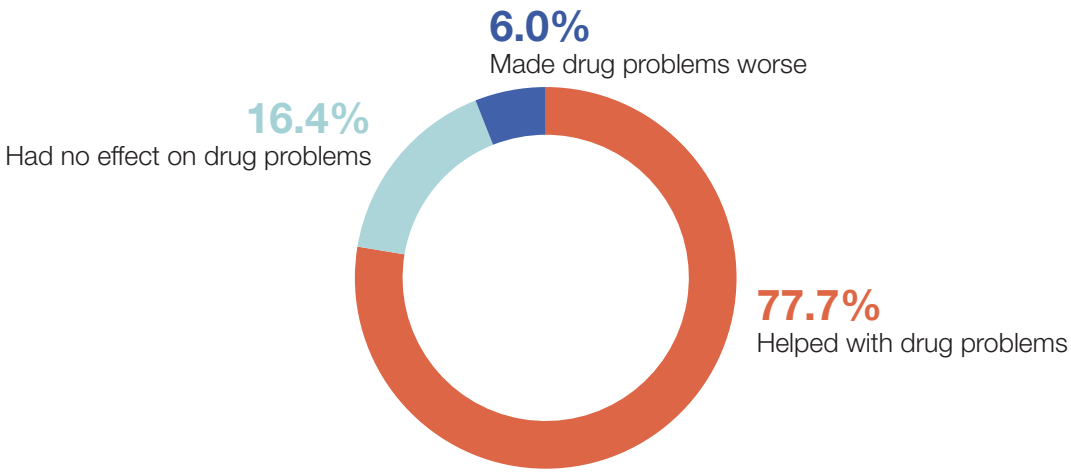
More than one-third of clients (34.3%, n = 514) reported they had participated in medication-assisted treatment (MAT) in their lifetime. Among the 514 clients who reported they had participated in MAT in their lifetime, the most recently taken medication was: buprenorphine (e.g., Suboxone, Subutex) for 46.5%, Vivitrol for 43.4%, and methadone for 10.1% (see Figure 1.6). At intake, 21.2% (n = 318) of clients reported they had participated in MAT in the 6 months before entering the recovery center.

FIGURE 1.6. MEDICATIONS MOST RECENTLY TAKEN IN MEDICATION-ASSISTED TREATMENT AMONG CLIENTS WHO REPORTED LIFETIME PARTICIPATION IN MAT (n = 514)



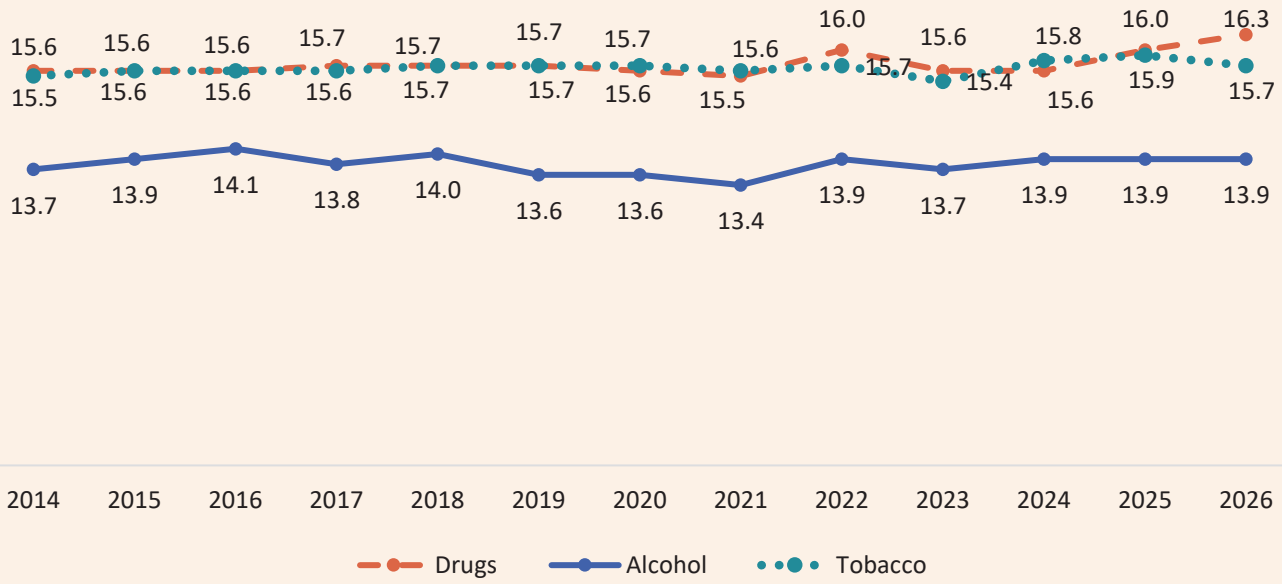
Among the individuals who reported they had participated in MAT in the 6 months before entering the recovery center, individuals reported using a medication prescribed for them for an average of 3.5 months out of the past 6 months (not depicted in a figure). Of the individuals who reported participating in MAT in the 6 months before entering the recovery program (n = 318), 46.9% obtained the medication from a physician in a general medical practice, 36.2% obtained the medication from a physician in a specialty clinic, and 17.0% obtained the medication from an OTP clinic. The majority stated the prescribed medication had helped with their drug problem (77.7%), 6.0% stated the medication made their drug problem worse, and 16.4% stated the medication had no effect on their drug problems (see Figure 1.7). Of clients who reported past-6-month participation in MAT, 39.6% reported they had received prescribed medication within the past 48 hours.

FIGURE 1.7. CLIENTS' PERCEPTION OF HOW HELPFUL THE PRESCRIBED MEDICATION WAS FOR THEIR DRUG PROBLEMS (n = 318)



TREND ALERT: AGE OF FIRST USE

Clients were asked, at intake, how old they were when they first began to use illicit drugs, when they had their first alcoholic drink (more than a few sips), and when they began smoking regularly.[14] The age of first use for each substance has remained steady for the first eight report years. In the 2022 report, the average age of first use of illicit drugs (16.0) was higher than in previous years and was 16.3 in the 2026 report. Clients' average age of first alcoholic drink is consistently younger than the age reported for illicit drug and tobacco use while initiation of smoking regularly and drug use tend to co-occur at similar ages.



ADVERSE CHILDHOOD EXPERIENCES

Items about ten types of adverse childhood experiences from the Adverse Childhood Experiences Study (ACE) were included in the intake interviews.[15, 16, 17] In addition to providing the percentage of men and women who reported each of the types of adverse childhood experiences before the age of 18 years old captured in ACE, the number of types of experiences was computed such that items individuals answered affirmatively were added to create a score equivalent to the ACE score. A score of 0 means the participant answered "No" to the five abuse and neglect items and the five household dysfunction items in the intake interview. A score of 10 means the participant reported all five forms

[14] The data reported here is for the entire RCOS intake sample over the past twelve annual reports of intake data, regardless of whether they were in a controlled environment.

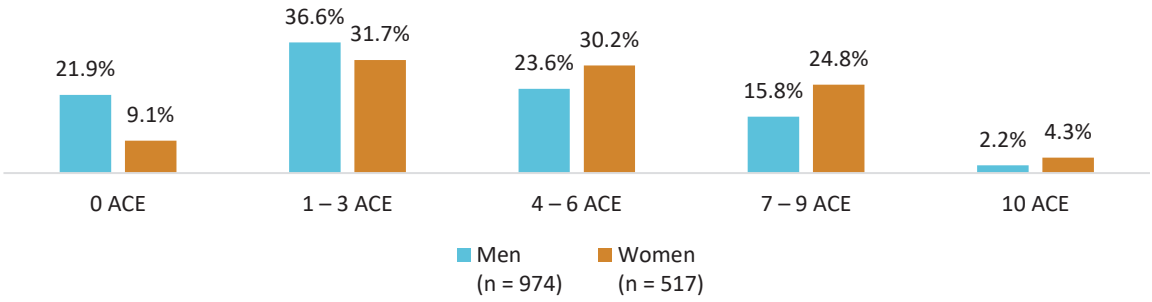
[15] Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine, 14*(4), 245-258.

[16] Centers for Disease Control and Prevention. (2014). *Prevalence of individual adverse childhood experiences.* Atlanta, GA: National Center for Injury Prevention and Control, Division of Violence Prevention. http://www.cdc.gov/violenceprevention/acestudy/prevalence.html.

[17] The intake assessment asked about 10 major categories of adverse childhood experiences: (a) three types of abuse (e.g., emotional maltreatment, physical maltreatment, and sexual abuse), (b) two types of neglect (e.g., emotional neglect, physical neglect), and (c) five types of family risks (e.g., witnessing partner violence victimization of parent, household member who was an alcoholic or drug user, a household member who was incarcerated, a household member who was diagnosed with a mental disorder or had committed suicide, and parents who were divorced/separated).

of child maltreatment and neglect, and all 5 types of household dysfunction before the age of 18. The average number of ACE clients reported was 3.8 (not depicted in figure). Figure 1.8 shows that 21.9% of men and 9.1% of women reported experiencing none of the ACE included in the interview. More than one-third of men reported experiencing 1 to 3 ACE, nearly one-fourth of men reported experiencing 4 – 6 ACE, and 15.8% of men reported 7 – 9 ACE. A very small percentage (2.2%) reported experiencing all 10 types of adverse childhood experiences. Significantly more men than women reported experiencing 0 types of ACE (21.9% vs. 9.1%), whereas significantly more women than men reported experiencing 4 - 6 – types of ACE (30.2% vs. 23.6%), 7 – 9 types of ACE 24.8% vs. 15.8%), and 10 ACE (4.3% vs. 2.2%).

FIGURE 1.8. NUMBER OF TYPES OF ADVERSE CHILDHOOD EXPERIENCES BY GENDER (n = 1,491)[18a]

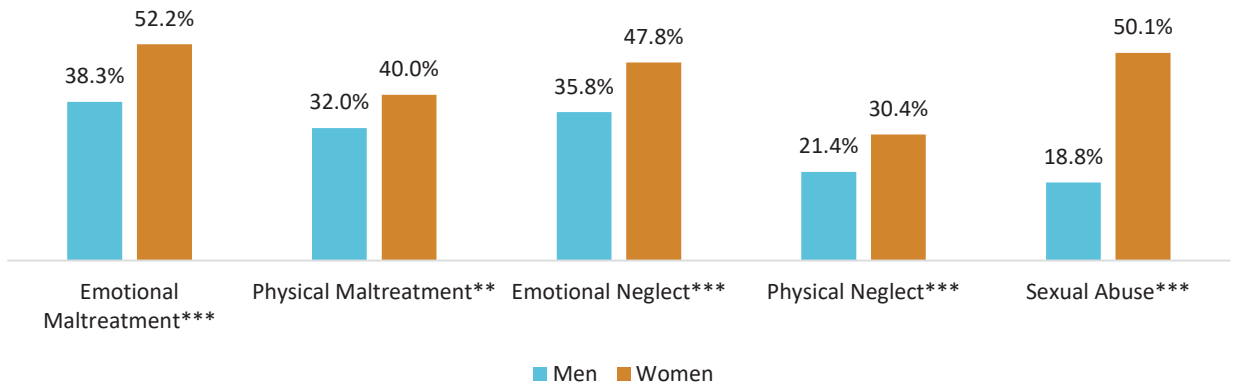


The average number of ACE that men and women reported was also statistically significantly different, with women reporting an average of 4.6 and men reporting an average of 3.3 ($t = -7.754$, $p < .001$).

Significantly more women reported all five types of maltreatment and abuse that were assessed: emotional maltreatment, physical maltreatment, emotional neglect, physical neglect, and sexual abuse relative to men (see Figure 1.9). The types of maltreatment/abuse reported by the most individuals were emotional maltreatment (52.2% of women and 38.3% of men) and emotional neglect (47.8% of women and 35.8% of men). Less than one-third of men (32.0%) and two-fifths of women (40.0%) reported physical maltreatment. More than one-third of men (35.8%) and nearly half of women (47.8%) reported emotional neglect, and 21.4% of men and 30.4% of women reported physical neglect in their childhood. More than twice as many women reported they had experienced sexual abuse before the age of 18 than men reported; yet, it is worth noting that 18.8% of men reported childhood sexual abuse.

[18] Data on ACE for six clients who reported being transgender are not presented in Figure 1.8.

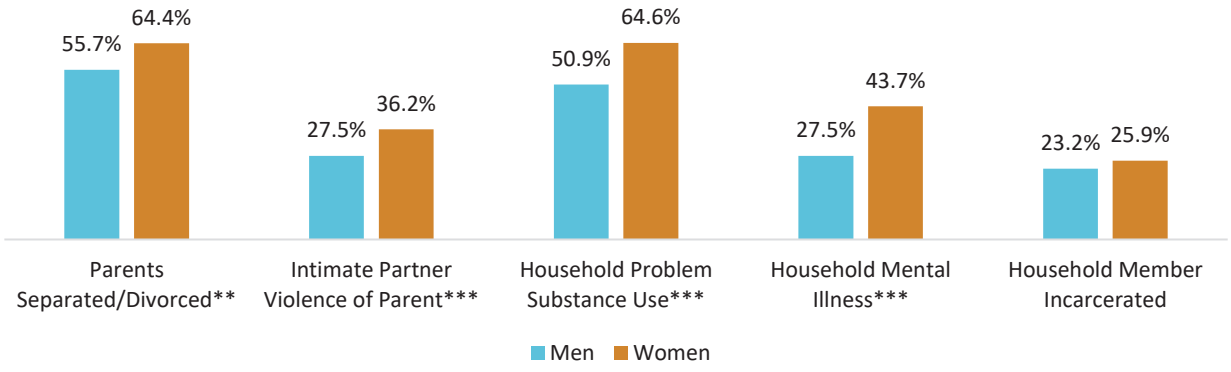
FIGURE 1.9. MALTREATMENT AND ABUSE EXPERIENCES IN CHILDHOOD BY GENDER (n = 1,491)[19]



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

The majority of individuals reported their parents were divorced or lived separately and had a household member with problem substance use (i.e., used illicit drugs and/or engaged in problem alcohol use; see Figure 1.10). Significantly more women than men reported they their parents were divorced/lived separately, they had witnessed intimate partner violence (IPV) of a parent, had a household member with problem substance use, had a household member with a mental illness or had committed suicide. Similar percentages of men and women reported that a household member had been incarcerated in their childhood.

FIGURE 1.10. HOUSEHOLD RISKS IN CHILDHOOD BY GENDER (n = 1,491)[20]



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

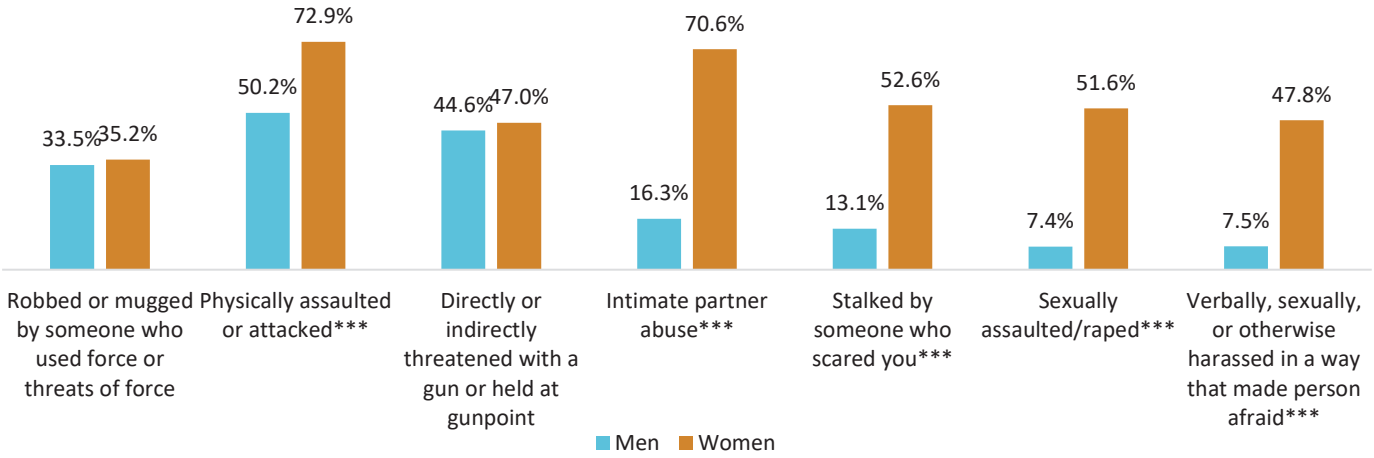
Individuals were also asked about victimization experiences (including when they may have been the victim of a crime, harmed by someone else, or felt unsafe) they had in their lifetime and in the 6 months before entering the recovery center program. The results for lifetime experiences of interpersonal victimization are presented by gender in Figure 1.11. Similar percentages of men and women reported they had ever been robbed and directly or indirectly threatened with a gun. Significantly more women than men reported the other types of interpersonal victimization measured

[19] Two transgender individuals were not represented in the data presented by gender.

[20] Six transgender individuals were not represented in the data presented by gender.

in their lifetime: physically assaulted/attacked, abused by an intimate partner (including controlling behavior), stalked by someone who scared them, sexually assaulted or raped, and verbally, sexually, or otherwise harassed in a way that made him/her afraid.

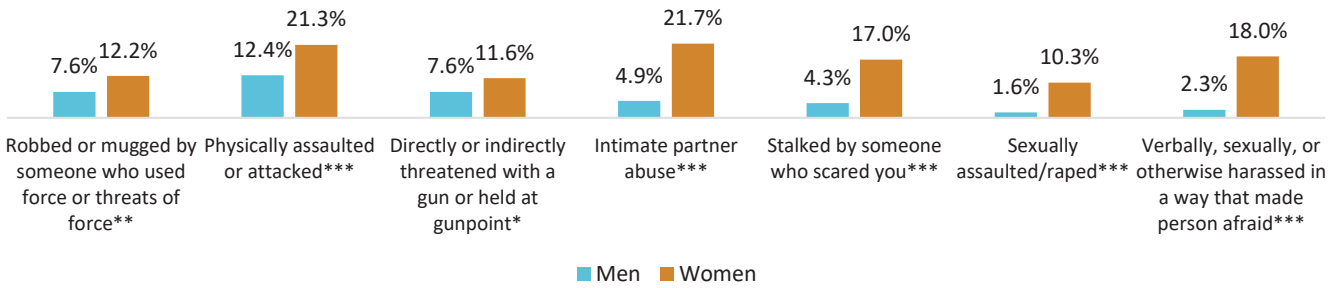
FIGURE 1.11. LIFETIME EXPERIENCES WITH INTERPERSONAL VIOLENCE BY GENDER (n = 1,491)[21]



***p < .001.

Smaller percentages of clients reported experiences with interpersonal violence in the 6 months before entering programs than in their lifetime (see Figure 1.12). Significantly higher percentages of women than men reported they had experienced each of the types of interpersonal victimization measured for the 6 months before they entered the program: robbed or mugged, physically assaulted or attacked, directly or indirectly threatened with a gun, intimate partner abuse, stalked by someone who scared them, sexually assaulted/raped, and verbally, sexually harassed, or otherwise harassed in a way that scared he person.

FIGURE 1.12. PAST-6-MONTH EXPERIENCES WITH INTERPERSONAL VIOLENCE BY GENDER (n = 1,491)[22]



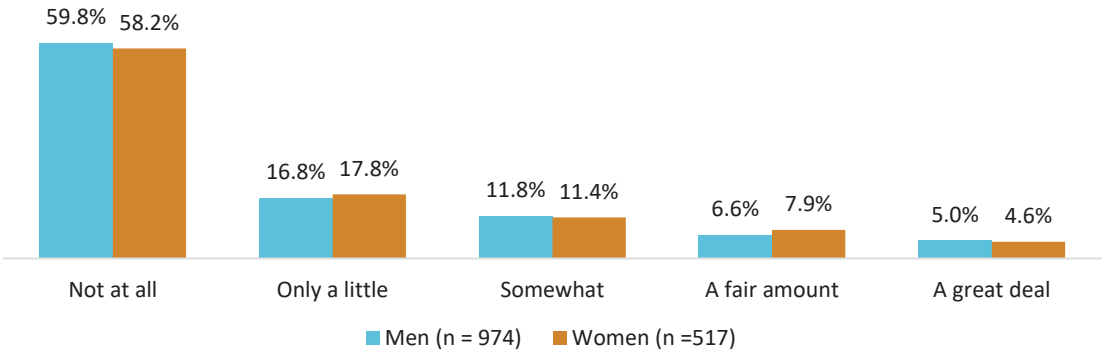
*p < .05, **p < .01, ***p < .001.

More than half of the sample reported they did not worry at all about their personal safety, with no significant difference by gender (see Figure 1.13). Only 11.9% of the individuals reported they worried a fair amount or a great deal.

[21] Six transgender individuals were not represented in the data presented by gender.

[22] Six transgender individuals were not represented in the data presented by gender.

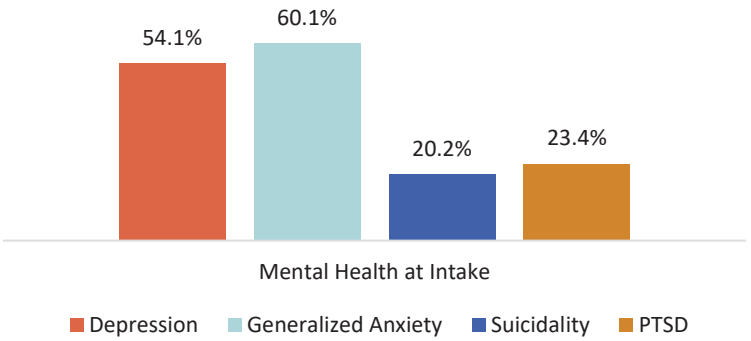
FIGURE 1.13. WORRY ABOUT PERSONAL SAFETY (n = 1,491)[23]



MENTAL HEALTH

At intake, more than one-half of RCOS clients (54.1%) met study criteria for depression in the past 6 months (see Figure 1.14), and 60.1% of clients met study criteria for generalized anxiety at intake. One-fifth reported suicidal thoughts or attempts (20.2%), and 23.4% had met study criteria for PTSD in the 6 months before entering the recovery center.

FIGURE 1.14. DEPRESSION, GENERALIZED ANXIETY, SUICIDALITY, AND POST TRAUMATIC STRESS DISORDER IN THE PAST 6 MONTHS AT INTAKE (N = 1,497)



PHYSICAL HEALTH

At intake, clients reported an average of 7.2 days of poor physical health in the past 30 days and an average of 14.2 days of poor mental health in the past 30 days (see table 1.2). One-fourth of RCOS clients reported chronic pain in the 6 months before entering the recovery center. Among the 374 individuals who reported chronic pain at intake, they reported experiencing chronic pain an average of 5.6 months out of the 6 months before entering the program, 26.1 days out of the 30 days before entering the recovery center, with an average pain level of 6.3 (with 10 as the maximum rating), and they reported first experiencing chronic pain at 29.3 years old, on average (see Table 1.2).

The majority of individuals (63.3%) reported they had at least one of the 16 chronic health problems listed on the intake interview. The most common health problems were hepatitis C, arthritis,

[23] Six transgender individuals were not represented in the data presented by gender.

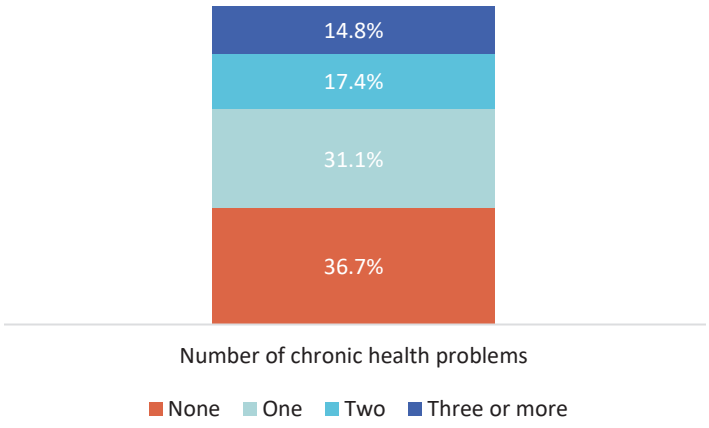
cardiovascular disease, severe dental problems, asthma, and sexually transmitted infections (other than HIV).

TABLE 1.2. HEALTH-RELATED CONCERNS FOR ALL RCOS CLIENTS AT INTAKE (N = 1,497)

Average number of poor physical health days in past 30 days	7.2
Average number of poor mental health days in past 30 days	14.2
Chronic pain	25.0%
Among those who reported chronic pain	(n = 374)
Average number of months experienced chronic pain in the 6 months before entering the program	5.6
Average number of days experienced chronic pain in the 30 days before entering the program	26.1
Average age first began having chronic pain	29.3
Average intensity of pain in the 30 days before entering the recovery program [0 = No pain, 10 = Pain as bad as you can imagine]	6.3
At least one chronic health problem	63.3%
Hepatitis C	21.2%
Arthritis	18.0%
Cardiovascular/heart disease	17.6%
Severe dental problems	15.4%
Asthma	12.9%
Sexually transmitted infections (other than HIV)	6.8%

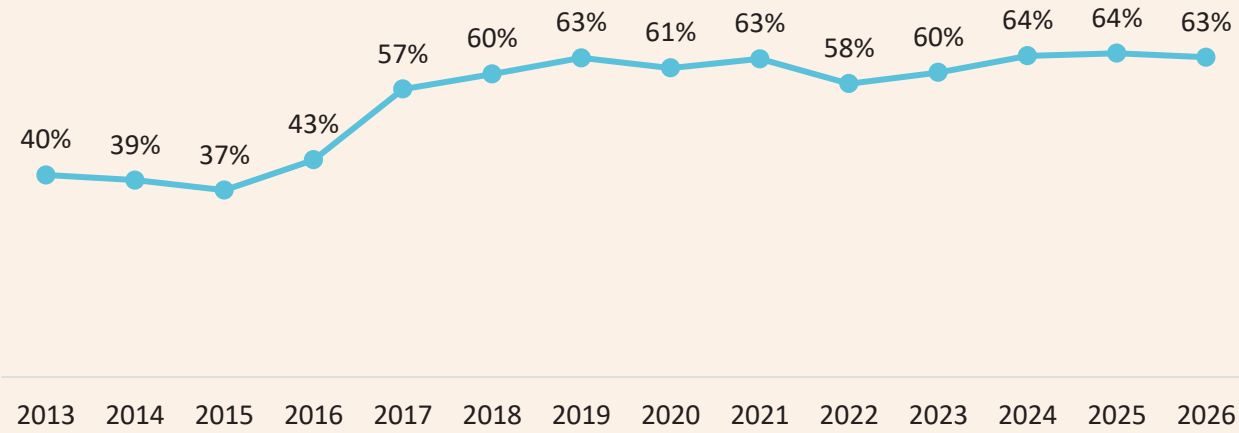
Figure 1.15 shows the percentage of clients who reported having different numbers of chronic health problems at intake. Less than one-third of individuals reported one chronic health problem, and 32.2% reported 2 or more chronic health problems.

FIGURE 1.15. NUMBER OF CHRONIC HEALTH PROBLEMS AT INTAKE FOR TOTAL SAMPLE (N = 1,497)



TRENDS IN CHRONIC HEALTH PROBLEMS AT INTAKE

At intake, clients were asked if, in their lifetime, they have been told by a doctor they have any of the chronic health problems listed (e.g., diabetes, arthritis, asthma, heart disease, chronic obstructive pulmonary disease, seizures, kidney disease, cancer, hepatitis B, hepatitis C, pancreatitis, tuberculosis, severe dental problems, cirrhosis of the liver, HIV/AIDS, and other sexually transmitted infections). The percentage of RCOS clients reporting at least one chronic health problem in their lifetime remained steady from the 2013 Report (40%) to the 2016 Report (37%) and has increased beginning in the 2017 report to between 57% to 64%.



A higher percentage of individuals were noted as having Medicare than expected (13.8%). Moreover, 95.1% of individuals who were reported at intake as having Medicare were under the age of 65, and only a minority of these individuals were reported as being on disability. Because Medicare is for people 65 or older, generally, and for individuals who have a disability, End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant), or ALS (also called Lou Gehrig's disease, it seems that there may be some confusion about the distinction between Medicare and Medicaid. For this reason, the health insurance categories of Medicaid and Medicare were combined this year.

> Before I went there I had no hope. They gave me the tools and knowledge I needed to better myself and **they made it possible for me to save my life.**
>
> - RCOS FOLLOW-UP RESPONDENT

The most common insurance provider reported at intake was Medicaid or Medicare (76.9%; see Table 1.3). More than 1 in 10 (13.3%) did not have any insurance. Small percentages of clients had insurance through an employer, including through a spouse, partner, or self-employment, and through the Health Exchange.

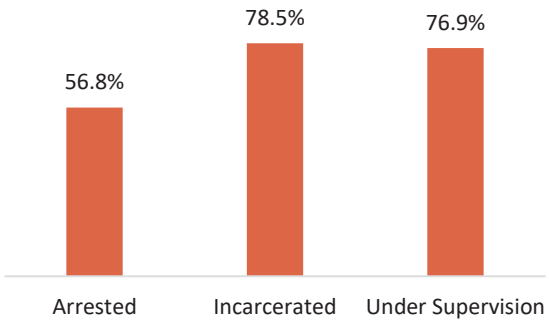
TABLE 1.3. SELF-REPORTED INSURANCE FOR ALL RCOS CLIENTS AT INTAKE (N = 1,495)[24]

No insurance	13.3%
Medicaid OR Medicare	76.9%
Through employer (including own or spouse's employer, parents' employer)	4.8%
Through Health Exchange	3.5%
Private insurance	0.7%
VA/Champus/Tricare	0.7%

CRIMINAL LEGAL INVOLVEMENT

The majority of individuals reported they had been arrested at least once (56.8%) and 78.5% reported they had been incarcerated at least one night in the 6 months before they entered the recovery center (see Figure 1.16). Three-fourths of clients reported they were currently under criminal legal supervision (i.e., probation, parole) at intake.

FIGURE 1.16. CRIMINAL LEGAL INVOLVEMENT BEFORE ENTERING THE RECOVERY CENTER (N = 1,497)

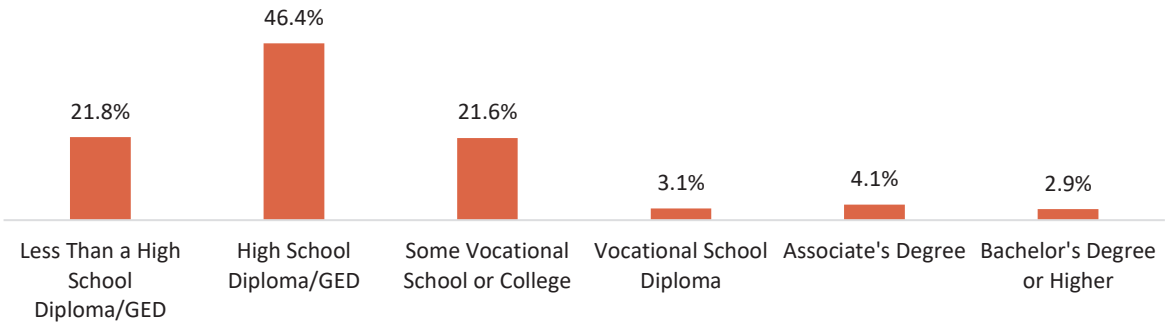


EDUCATION AND EMPLOYMENT STATUS

A minority of clients (21.8%) had less than a high school diploma or GED at intake (see Figure 1.17). Less than half of clients had a high school diploma or GED as their highest level of education (46.4%), 21.6% had completed some vocational/technical school or college as their highest level of education. Small minorities of clients had completed vocational/technical school (3.1%), an associate's degree (4.1%), or a bachelor's degree or higher (2.9%).

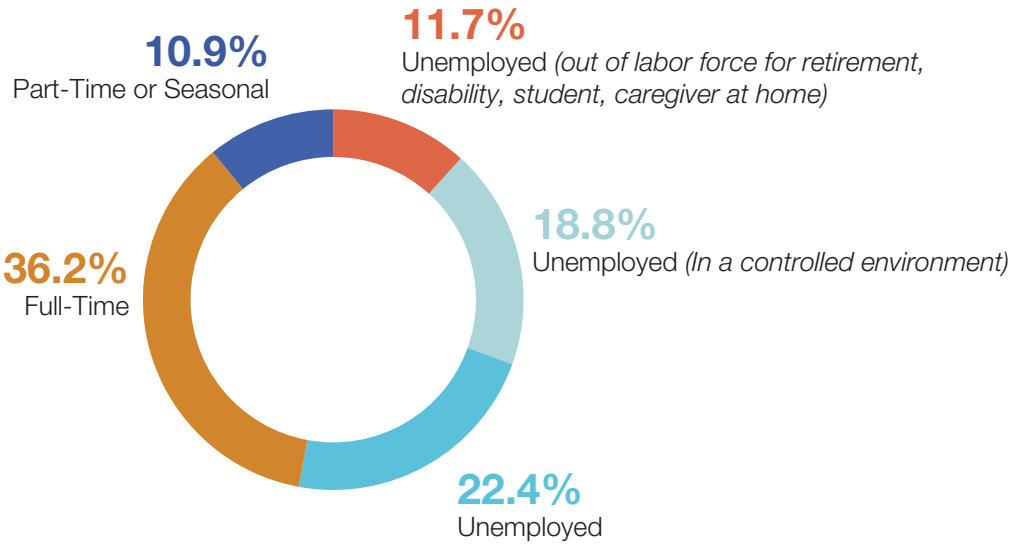
[24] Two individuals had missing values for medical insurance.

FIGURE 1.17. EDUCATION BEFORE ENTERING THE RECOVERY CENTER (N = 1,497)



More than one-third of clients (36.2%) reported their usual employment status in the 6 months before they entered the recovery center was full-time employment and 10.9% reported part-time or seasonal work (see Figure 1.18). More than one-tenth of clients (11.7%) reported they were out of the labor force because they were a full-time student, parent/homemaker, retired, or disabled. A minority were unemployed because they were in a controlled environment (18.8%) and 22.4% reported they were unemployed for some other reason (i.e., looking for work).

FIGURE 1.18. USUAL EMPLOYMENT STATUS AT INTAKE (N = 1,497)

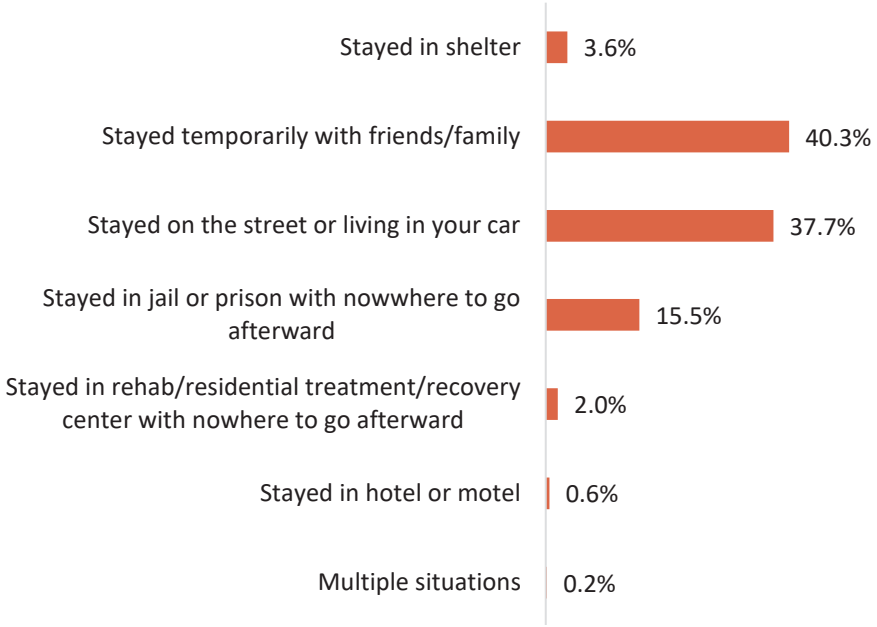


HOMELESSNESS

One-third of individuals (33.5%, n = 501) considered themselves homeless at some point in the 6 months before they entered the recovery center program. Of those clients (n = 496)[25], 40.3% reported they were staying temporarily with friends/family, 37.7% reported they were staying on the street or living in their car, and 15.5% reported they had nowhere to go after leaving jail or prison (see Figure 1.19). Small minorities of unhoused clients reported they had stayed in a shelter (3.6%), had stayed in rehabilitation/residential treatment/recovery center with nowhere to go afterward (2.0%), or staying in a hotel or motel (0.6%), and 0.2% reported multiple situations.

[25] Five clients had missing data for why the individual considered themselves homeless at intake.

FIGURE 1.19. REASONS INDIVIDUAL CONSIDERED THEMSELVES HOMELESS AT INTAKE (N = 496)



RCOS FOLLOW-UP SAMPLE

The following sections of this report describe outcomes for 282 men and women who completed both an intake and a follow-up interview about 12 months (average of 353.9 days) after the intake survey was completed.

Data from Kentucky Housing Corporation shows that the average length of service for the program participants included in this report was 7.8 months, which includes time in Safe Off the Streets, Motivational Tracks, Phase 1 and Phase 2. In the follow-up interview, interviewers asked individuals how many months they were in the recovery center program (not counting Phase 2); the average months clients reported they were in the recovery program through Phase 1 was 4.9, with a minimum of 0.5 and a maximum of 12.[26] About three-fourths of individuals (78.6%) reported at the follow-up that they had completed Phase 1 of the program.[27] At follow-up, 12.1% (n = 34) individuals reported they were currently a client in a recovery center program.

In the follow-up interview, individuals were asked several questions about their participation in different aspects of recovery center programs. While in the program, 18.1% of clients reported they had participated in extra educational classes and 66.9% participated in volunteer projects.[28] Over half of individuals (54.8%) reported they had transitioned to Phase 2 or became a peer mentor/assistant staff person in a Recovery Kentucky program. At follow-up, 17 individuals (6.0%) were working as assistant staff at follow-up, for an average of 4.6 months. Individuals were also asked to report the length of

[26] Comparison of the admission date reported in the intake survey with the admission date from the HMIS data matched to the follow-up cases found that 77.2% of the cases had the exact same date. Discrepancies between the HMIS start date and the admission date in the RCOS intake survey were the following: 12.1%, 1 to 7 days difference; 2.5%, 8 to 30 days difference; and 8.2%, 31 days or more difference.

[27] One individual had missing data for whether they had completed Phase 1.

[28] One individual had missing data for both of these questions.

time since they left Phase 1, which was an average of 8.6 months.[29]

Detailed information about the methods can be found in Appendix A. Individuals who gave at least one mailing address and one phone number, or two phone numbers if they did not have a mailing address in their locator information, were eligible for selection into the 12-month follow-up component of the study.[30] The follow-up interviews were conducted over the telephone by an interviewer at UK CDAR with eligible individuals. Client responses to the follow-up interview were kept confidential to help facilitate an accurate and unbiased evaluation of client outcomes and satisfaction with program services. Overall, 24 completed follow-up interviews are targeted for each month. Due to the cost of the follow-up component of the study, the follow-up sample is targeted for as close to 280 follow-up interviews as possible.

This report's sample was stratified by target month (i.e., 12 months after intake is the target month for each client) and gender. Samples in the reports predating the 2020 report were stratified by target month, gender, and DOC status. The primary reason the prior years' samples were stratified by DOC status was to allow examination of whether length of service differs by DOC referral status, and whether either of these factors are related to key targeted outcomes. Analysis in past years' reports showed that DOC referral status was not associated with any of the targeted outcomes, while length of service was associated with several targeted outcomes.

See Appendix B for detailed information about clients who were followed up (n = 282) compared to clients who were not followed up (n = 1,215). The only significant differences between individuals who were followed-up and individuals who were not followed-up were gender, vaporized nicotine use, severity of SUD based on DSM-5 criteria, ASI drug composite score, meeting criteria for depression and anxiety at intake. First, a significantly higher percentage of individuals who completed a follow-up survey were female compared to individuals who did not complete a follow-up survey. This is because of the stratification of the follow-up sample by gender; in which we targeted a follow-up sample to be composed of similar proportions of men and women. Second, a significantly lower percentage of followed-up clients met criteria for no SUD at intake compared to clients who did not complete a follow-up interview. Third, individuals who were followed-up had a significantly higher average ASI drug composite score compared to individuals who were not followed-up. Fourth, a significantly higher percentage of followed-up individuals met criteria for depression and met criteria for generalized anxiety relative to individuals who were not followed up. There were no significant differences in other sociodemographic, substance use, mental health, physical health, living situation, education, and employment at intake by follow-up status.

Of the 282 individuals who completed a follow-up survey, 12.1% (n = 34) reported they were a client in a recovery center at the time of the follow-up (not necessarily the same recovery center where they had their intake conducted). For those clients who were in a recovery center at the time of the follow-up, 2 clients were in Motivational Track, 5 in Phase 1, and 24 in Phase 2, and 3 clients had missing data for this question.[31]

[29] Nineteen individuals could not remember the month they left Phase 1, so these 19 cases have missing values for length of time since leaving Phase 1.

[30] Clients are not contacted for a variety of reasons including follow-up staff are not able to find a working address or phone number or are unable to contact any friends or family members of the client.

[31] Two cases had missing data for this item.

ABOUT RCOS LOCATING EFFORTS

In 2014, 527 cases that were included in the follow-up sample were used to examine efforts in locating and contacting participants. In 2019, 2020, and 2021, the research team repeated these efforts to compare how locating efforts and the quality of contact information provided at the end of intake interviews have changed over time.[32]

Locator efforts	2014 (n = 527)	2019 (n = 521)[33]	2020 (n = 526)	2021 (n = 534)
Phone Calls				
Average number of outgoing calls to reach client	3.3 (0-28 calls)	6.4 (0-32 calls)	7.5 (0-30)	4.4 (0-24)
Average number of outgoing calls to reach any contact	2.3 (0-37 calls)	2.6 (0-35 calls)	1.0 (0-24)	1.3 (0-15)
Total number of outgoing calls to reach client or any contact	2,958 calls	4,715 calls	4,482	3,047
Average outgoing calls for each completed follow-up	10.5	16.8	15.8	10.8
Mail				
Average number of mailings sent (to client/contact/other)	1.7 (0-7 mailings)	2.5 (0-5 mailings)	3.0 (1-6)	1.9 (1-6)
Total number of mailings sent (to client/ contact/other)	896 mailings	1,286 mailings	1,587	992
Average outgoing mail for each completed follow-up	3.2	4.6	5.6	3.5

Quality of Contact Information	2014 (n = 527)	2019 (n = 521)	2020 (n = 526)	2021 (n = 534)
First Contact Locator Number				
None listed, or number listed was already listed as the client's number	31.9%	42.0%	55.7%	53.6%
Number worked	25.4%	17.9%	6.3%	12.7%
Number worked but not successful	15.0%	17.1%	12.5%	17.6%
Number was disconnected	7.8%	5.2%	1.3%	3.0%
Number listed but never called	19.9%	17.9%	24.1%	13.1%
Second Contact Locator Number				
None listed, or number listed was already listed as the client's or first contact person's phone number	57.0%	76.2%	69.8%	64.8%
Number worked	10.6%	4.6%	3.2%	6.2%
Number worked but not successful	10.6%	5.6%	4.7%	10.5%
Number was disconnected	1.9%	2.1%	.9%	1.3%
Number listed but never called	19.8%	11.5%	21.3%	17.2%
Phone number listed but not unique to contact			12.9%	9.9%

[32] The number of clients included in the sample of individuals to contact to complete the follow-up surveys were the following by year: n = 527 for 2014, n = 521 for 2019, n = 526 for 2020, and n = 534 for 2021.

[33] There were 7 missing files when the extraction project was completed.

Efforts to locate and contact potential follow-up clients increased from 2014 to 2020 for two main reasons. First, because of the increase in robo and other scam calls people are more hesitant to pick up their phones and more skeptical when they do. Second, the quality of locator information is lower in recent years making it more difficult to find correct information for clients. Comparison of the efforts interviewers put into conducting the follow-up interviews from 2014 to 2020 shows that the average number of calls had almost doubled, and the average number of mailings had almost doubled.

CHARACTERISTICS OF RCOS FOLLOWED-UP CLIENTS AT INTAKE

DEMOGRAPHICS

Table 1.4 presents demographic information on clients with an intake survey submitted in FY 2024 and a follow-up interview completed between July 2024 and June 2025. Clients' average age was 39.4 years old and men made up 53.5% of the followed-up sample. The majority of clients (87.9%) were White and 8.5% were Black. The largest percentage of RCOS follow-up clients reported they had never been married (and were not cohabiting) at intake (39.7%), 31.6% were separated or divorced, and 27.0% were married or cohabiting. Less than half (47.7%) of RCOS clients had children under the age of 18. A small percentage (1.8%) reported they were currently serving in the military or a veteran.

TABLE 1.4. DEMOGRAPHICS FOR FOLLOWED-UP RCOS CLIENTS AT PHASE I INTAKE IN FY 2024 (N = 282)

Age	39.4 *(Min. = 19, Max. = 67)*
Gender	
Male	53.5%
Female	46.5%
Race	
White	87.9%
Black/African American	8.5%
Other or multiracial	3.5%
Marital status	
Never married (and not cohabiting)	39.7%
Separated or divorced	31.6%
Married or cohabiting	27.0%
Widowed	1.8%
Has children under 18 years old[34]	47.7%
Active duty or military veteran	1.8%

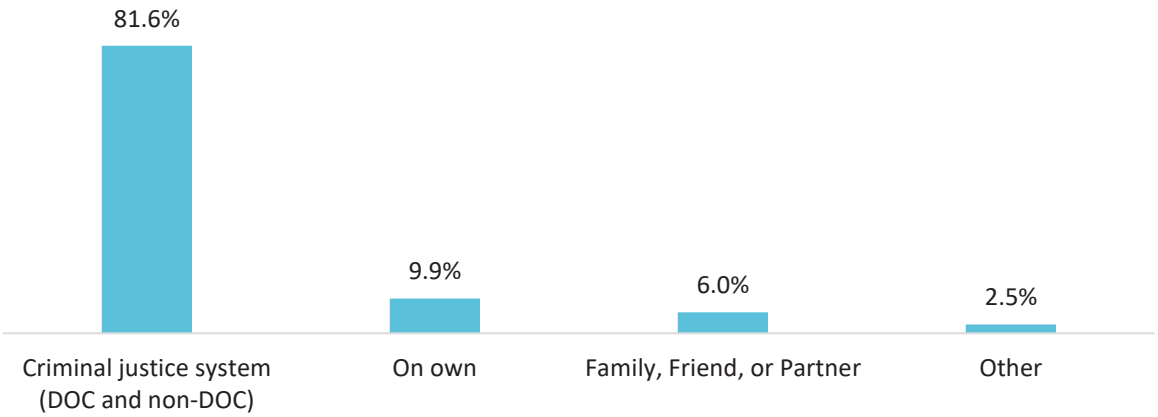
[34] One individual had missing data for number of children under the age of 18.

SELF-REPORTED REFERRAL SOURCE

Figure 1.20 shows the self-reported referral source for RCOS clients in the follow-up sample. The majority of clients (81.6%) self-reported they were referred to the recovery center by the criminal legal system (e.g., judge, probation officer, Department of Corrections). A small minority (9.9%) reported they entered the program on their own, and 6.0% were referred to the program by a family member, friend, or partner. The remaining 2.5% indicated another referral source such as a treatment program or mental health provider.

A separate question asked participants if they were ordered to the recovery program by the court or other state agency: 77.0% stated at intake that they were ordered to the program (not depicted in a figure).

FIGURE 1.20. SELF-REPORTED REFERRAL SOURCE FOR FOLLOWED-UP RCOS CLIENTS (N = 282)



SUBSTANCE USE

The majority of the follow-up sample reported using illicit drugs and smoking tobacco, around one-half reported using vaporized nicotine, and less than half of clients reported using alcohol in the 6-month period before entering the recovery center (see Figure 1.21).[35] A similar pattern, but with smaller percentages, was found when past-30-day use was examined for clients who were not in a controlled environment all 30 days before entering the recovery center.[36]

[35] Because being in a controlled environment reduces access to alcohol and illicit drugs, individuals who were in a controlled environment the entire intake 6-month period of the study (n = 40) and 8 individuals who did not know the number of days they were in a controlled environment were not included in the analysis of substance use during that period; a total of 48 individuals were excluded from this analysis.

[36] Because being in a controlled environment reduces access to alcohol and illicit drugs, individuals who were in a controlled environment the entire intake 30-day period assessed for the study (n = 139) are not included in the analysis of substance use during that period.

FIGURE 1.21. ALCOHOL, DRUG AND TOBACCO USE 6 MONTHS AND 30 DAYS BEFORE ENTERING RECOVERY CENTER AMONG THE FOLLOW-UP SAMPLE

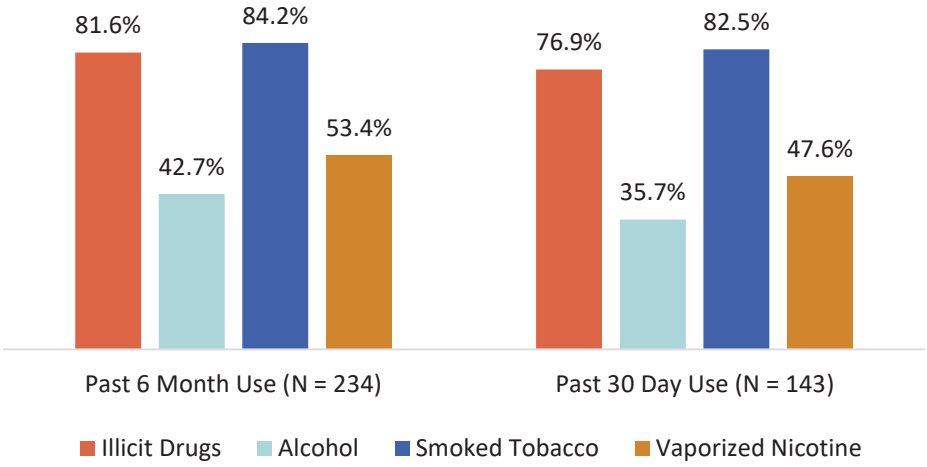


Figure 1.22 presents the percent distribution of individuals who used alcohol and/or illicit drugs in the 6 months before entering the program. Among the entire follow-up sample 41.5% reported illicit drug use solely and an additional 31.9% reported alcohol and illicit drug use. Among the individuals who were not incarcerated all 180 days before entering the program, less than one-half (46.2%) reported illicit drug use solely and 35.5% reported alcohol and illicit drug use.

FIGURE 1.22. PAST-6-MONTH ALCOHOL AND ILLICIT DRUG USE AT INTAKE FOR THE FOLLOW-UP SAMPLE (N = 282) AND FOR THOSE NOT INCARCERATED ALL 180 DAYS BEFORE ENTERING THE PROGRAM (N = 234)

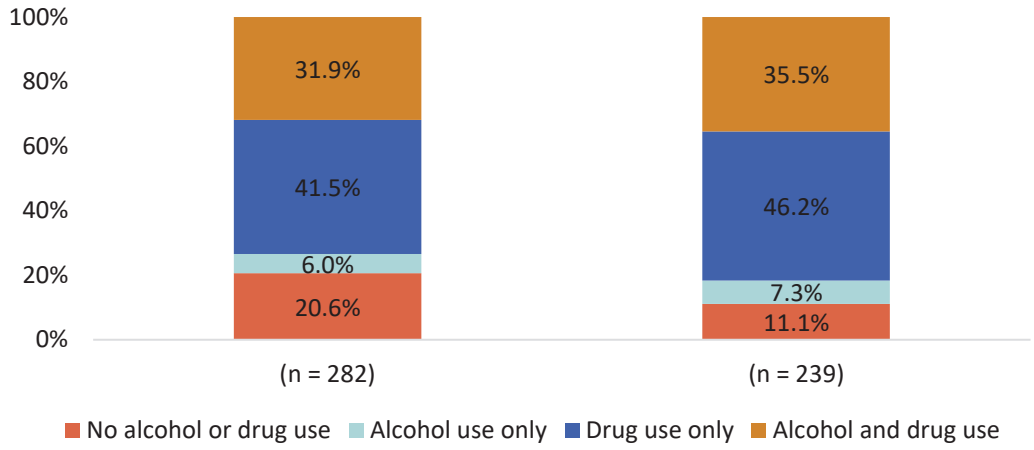
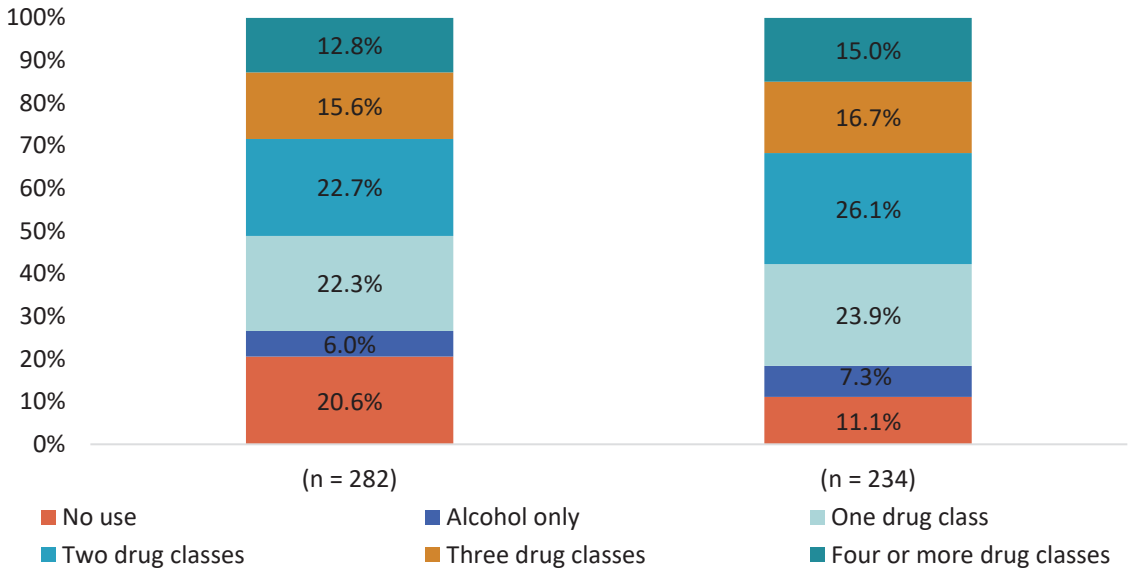


Figure 1.23 presents the percentages of RCOS followed-up participants who reported using no drugs, alcohol only, and then various numbers of drug classes from the following: (1) cannabis, (2) opioids (including prescription opioids, buprenorphine, methadone, heroin), (3) CNS depressants (such as benzodiazepines, sedatives, barbiturates), (4) stimulants (including amphetamines and cocaine), (5) hallucinogens, (6) synthetic marijuana, (7) inhalants, and (8) Tianeptine. RCOS follow-up clients are predominately polysubstance users when they enter programs. Among clients who were not in a controlled environment 180 days before entering the program, less than one-half (42.3%) of clients reported either no substance use, alcohol use only, or alcohol use with only one drug class, while 57.7% reported use of 2 or more broad classes of drugs.

FIGURE 1.23. PAST-6-MONTH POLYSUBSTANCE USE AT INTAKE FOR THE FOLLOW-UP SAMPLE (N = 282) AND FOR THOSE NOT INCARCERATED ALL 180 DAYS BEFORE ENTERING THE PROGRAM (N = 234)

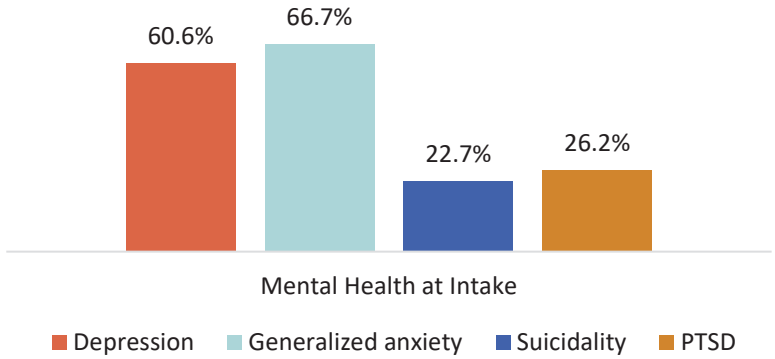


In the follow-up sample, 19.5% (n = 55) reported at follow-up that they had been in a treatment program since leaving the recovery center program. The majority of the 55 individuals (94.5%) reported they had had one treatment episode since leaving the recovery center (not depicted in a figure).

MENTAL HEALTH

At intake, 60.6% of RCOS clients in the follow-up sample met study criteria for depression in the past 6 months (see Figure 1.24). Two-thirds of followed-up clients (66.7%) met study criteria for generalized anxiety at intake. More than one-fifth (22.7%) reported suicidal thoughts or attempts in the 6 months before entering the recovery center, and about one-fourth (26.2%) had PTSD scores that indicated a risk of PTSD.

FIGURE 1.24. DEPRESSION, GENERALIZED ANXIETY, SUICIDALITY, AND POST TRAUMATIC STRESS DISORDER IN THE PAST 6 MONTHS AT INTAKE FOR FOLLOWED-UP RCOS CLIENTS (N = 282)



PHYSICAL HEALTH

At intake, clients in the follow-up sample reported an average of 7.0 days of poor physical health in the past 30 days and an average of 14.5 days of poor mental health in the past 30 days (see Table 1.5). More than one-fourth (27.7%) of RCOS followed-up clients reported chronic pain in the 6 months before entering the recovery center. Two-thirds of individuals in the follow-up sample (66.7%) reported they had at least one of the 15 chronic health problems listed on the intake interview. The most common medical problems were hepatitis C, severe dental problems, arthritis, cardiovascular disease, asthma, sexually transmitted diseases, diabetes, and seizures.

TABLE 1.5. HEALTH-RELATED CONCERNS FOR FOLLOWED-UP RCOS CLIENTS AT INTAKE (N = 282)

Average number of poor physical health days in past 30 days	7.0
Average number of poor mental health days in past 30 days	14.5
Chronic pain	27.7%
At least one chronic health problem	66.7%
Hepatitis C	22.7%
Severe dental problems	18.4%
Arthritis	18.1%
Cardiovascular/heart disease	18.1%
Asthma	16.0%
Sexually transmitted infections other than HIV (e.g., chlamydia, gonorrhea, genital herpes, syphilis)	10.3%
Diabetes	7.1%
Seizures	7.1%

Figure 1.25 shows the percentage of followed-up clients who reported having different numbers of chronic health problems at intake. About one-third of followed-up clients (33.7%) reported no problems, 30.5% reported having one chronic health problem, 18.4% reported two problems, and 17.7% had three or more chronic health problems.

FIGURE 1.25. NUMBER OF CHRONIC HEALTH PROBLEMS AT INTAKE FOR FOLLOW-UP SAMPLE (N = 282)

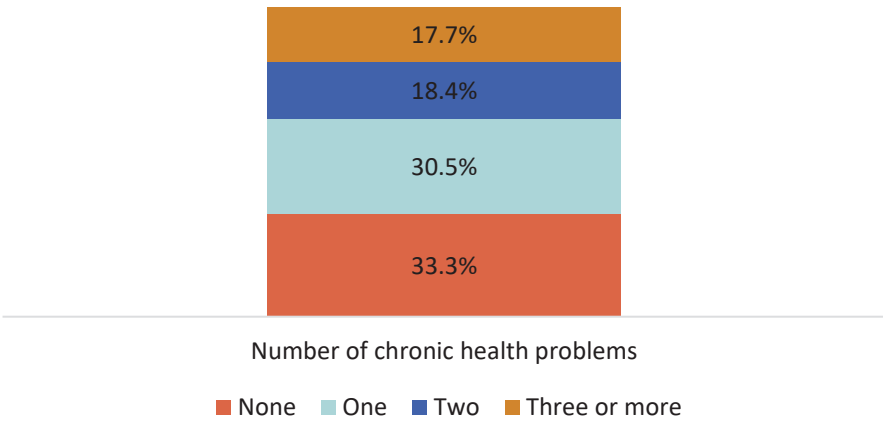


Table 1.6 shows the percentage of followed-up clients who reported having different types of medical insurance at intake.[37] At intake, about four-fifths of the follow-up sample (81.8%) reported they had Medicaid or Medicare, and 8.6% reported they had no medical insurance. A small percentage (5.4%) had medical insurance through their employer or a family member's employer.

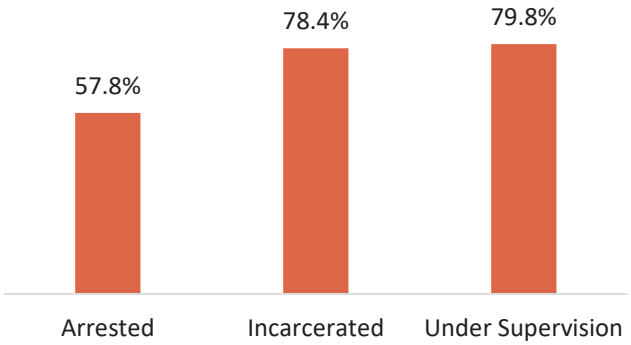
TABLE 1.6. TYPE OF MEDICAL INSURANCE AT INTAKE FOR FOLLOW-UP SAMPLE (N = 280)[38]

No insurance	8.6%
Medicaid OR Medicare	81.8%
Through employer (including own or spouse's employer, parents' employer)	5.4%
Through Health Exchange	2.9%
Private insurance	0.7%
VA/Champus/Tricare	0.7%

CRIMINAL LEGAL INVOLVEMENT

The majority of followed-up individuals reported they had been arrested at least once (57.8%) and the majority reported they had been incarcerated at least one night (78.4%) in the 6 months before they entered the recovery center (see Figure 1.26). Additionally, 79.8% of clients reported they were currently under criminal legal supervision (i.e., probation, parole) at intake.

FIGURE 1.26. CRIMINAL LEGAL INVOLVEMENT BEFORE ENTERING THE RECOVERY CENTER FOR FOLLOW UP SAMPLE (N = 282)



EDUCATION AND EMPLOYMENT STATUS

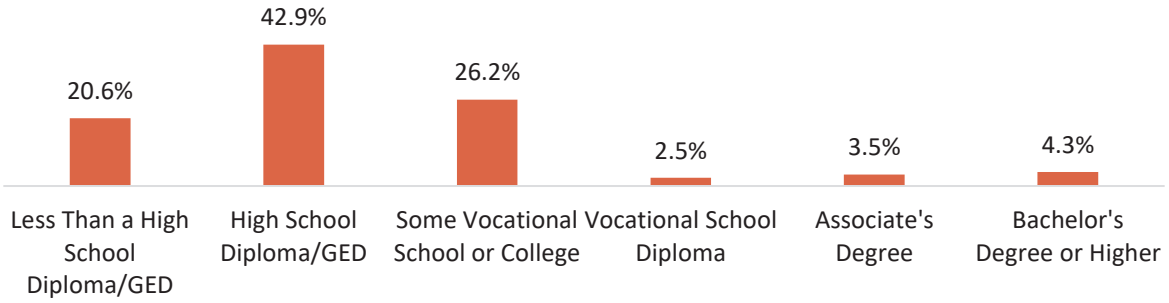
About 1 in 5 followed-up clients (20.6%) had less than a high school diploma or GED, and 42.9% had a high school diploma or GED as their highest level of education at intake (see Figure 1.27). Around

[37] A higher percentage of individuals in the intake sample were noted as having Medicare than expected (13.8%). Moreover, 95.1% of individuals who were reported at intake as having Medicare were under the age of 65, and only a minority of these individuals were reported as being on disability. Because Medicare is for people 65 or older, generally, and for individuals who have a disability, End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant), or ALS (also called Lou Gehrig's disease, it seems that there may be some confusion about the distinction between Medicare and Medicaid. For this reason, the health insurance categories of Medicaid and Medicare were combined this year.

[38] Two individuals had missing data for type of medical insurance.

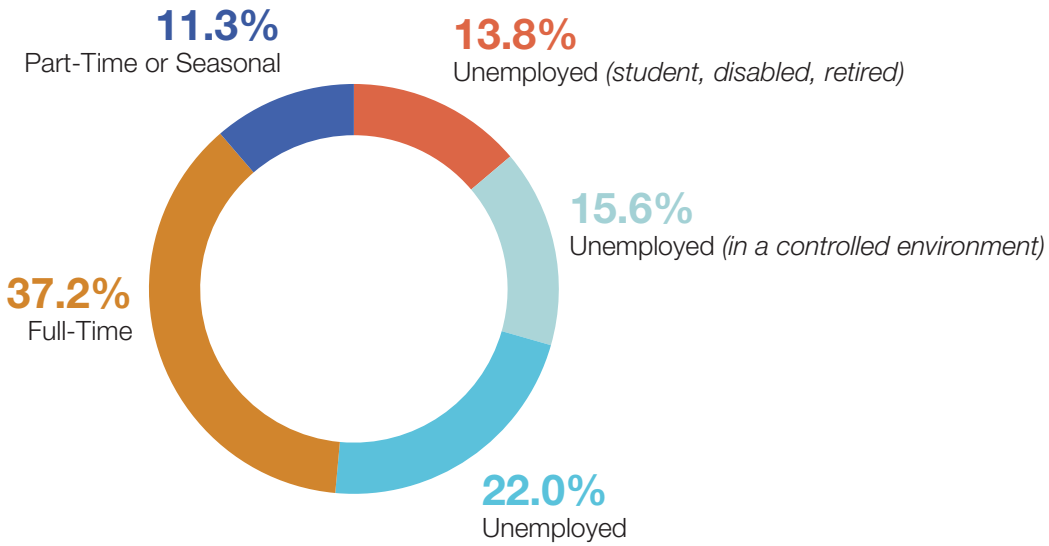
one-fourth (26.2%) had attended some vocational/technical school or college. Only small minorities of clients had completed vocational/technical school (2.5%), an associate's degree (3.5%), or a bachelor's degree or higher (4.3%).

FIGURE 1.27. HIGHEST LEVEL OF EDUCATION COMPLETED BY FOLLOW-UP SAMPLE AT INTAKE (N = 282)



Less than two-fifths of followed-up clients (37.2%) reported their usual employment status in the 6 months before they entered the recovery center was full-time employment and 11.3% reported part-time or seasonal work (see Figure 1.28). A minority of clients (13.8%) reported they were unemployed because they were a full-time student, parent/homemaker, retired, or disabled. A minority of participants (15.6%) reported their usual employment status was unemployed because they were in a controlled environment and 22.0% reported they were unemployed for some other reason (i.e., looking for work).

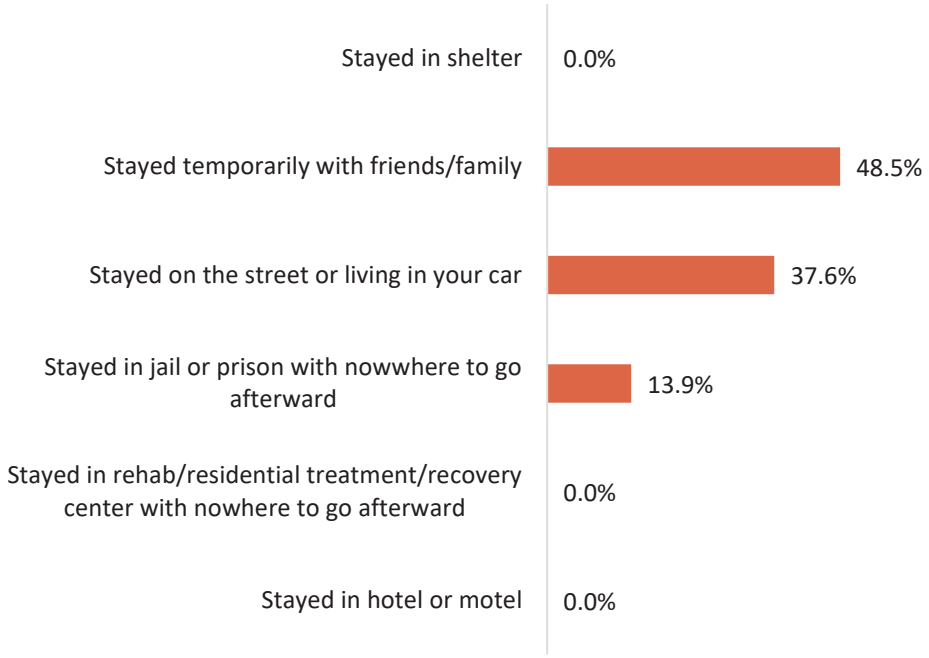
FIGURE 1.28. USUAL EMPLOYMENT STATUS FOR FOLLOW-UP SAMPLE AT INTAKE (N = 282)



HOMELESSNESS

In the 6 months before entering the recovery center, 35.8% of individuals considered themselves homeless. Of those clients (n = 101), almost half (48.5%) reported they were staying temporarily with friends/family and 37.6% reported they were staying on the street or living in their car (see Figure 1.29). A minority of clients were staying in jail or prison with nowhere to go afterward (13.9%).

FIGURE 1.29 REASONS INDIVIDUALS CONSIDERED THEMSELVES HOMELESS FOR FOLLOW-UP SAMPLE AT INTAKE (N = 101)



SECTION 2. **SUBSTANCE USE**

This section describes intake (before entry into SOS) compared to follow-up (i.e., 6 months and 30 days before the follow-up interview) change in illicit drug, alcohol, and tobacco use. Both past-6-months substance use and past 30-day substance use is examined separately for clients who were not in a controlled environment the entire period before entering a recovery program and clients who were in a controlled environment the entire period before entering the program (for the 30 day use). Results for each analysis are presented for the overall sample and then by gender if there were significant gender differences.

Section 2A examines change in the use of (1) any illicit drugs, (2) alcohol,[39] and (3) tobacco before entering the recovery center and before the follow-up for clients who were not in a controlled environment the entire period before entering the program (i.e., 6 months or 30 days).[40] Results and significant gender differences are presented for each substance group in four main subsections:

Change in 6-month substance use from intake to follow-up for clients not in a controlled environment. Comparisons of use of substances (any illicit drug use, alcohol use, and tobacco use) in the 6 months before the client entered the program and use of substances during the 6-month follow-up period are presented (n = 234).[41] Appendix C provides change over time on specific substances for men and women.

Average number of months individuals used substances. For those who used the substances, the number of months they used the substance before program entry and during the follow-up period are analyzed.

Change in 30-day substance use from intake to follow-up for clients not in a controlled environment.[42] Comparisons of any use in the 30 days before program entry and the 30 days before the follow-up interview for any illicit drugs, alcohol, and tobacco for clients who were not in a controlled environment all 30 days before entering the recovery center (n = 132) are presented.

Change in self-reported severity of substance use disorder from intake to follow-up. There are two indices of substance use severity presented in this report. One way to examine overall change in degree of severity of substance use is to ask participants to self-report whether they met the 11 criteria included in the DSM-5 for diagnosing substance use disorder in the past 6 months. Under DSM-5 anyone meeting any two of the 11 criteria during the same 6-month period would receive a diagnosis of substance use disorder (SUD) if their symptoms were causing clinically significant impairments in functioning. The severity of the substance use disorder in this report (i.e., none, mild, moderate, or severe) is based on the number of criteria met. The percentage of individuals in each of

[39] Alcohol use was asked three main ways: (1) how many months/days did you drink any alcohol (alcohol use), (2) how many months/days did you drink alcohol to intoxication (alcohol to intoxication), and (3) how many months/days did you have 5 or more (4 if female) alcoholic drinks in a period of about 2 hours (i.e., binge drinking).

[40] McNemar's test was used for significance testing of substance use; Chi-square test of independence was used to test for significant differences for gender at intake and then at follow-up.

[41] Forty-eight individuals were not included in the analysis of change in substance use from the 6 months before entering the recovery center to the 6 months before follow-up because they reported being incarcerated the entire period measured at intake (n = 40), or they did had missing data on the number of days incarcerated in the 6 months before entering the program (n = 8).

[42] One hundred forty individuals were not included in the analysis of change in substance use from the 30 days before entering the recovery center to the 30 days before follow-up because they were in a controlled environment the entire period measured at intake (n = 139), or they did had missing data on the number of days incarcerated in the 30 days before follow-up (n = 1).

the four categories at intake and follow-up is presented.[43]

The Addiction Severity Index (ASI) composite scores are examined for change over time among individuals who reported any illicit drug use (n = 110), among individuals who reported using any alcohol (n = 54) and those who reported both alcohol and/or illicit drug use (n = 120). The ASI composite score assesses self-reported addiction severity even among those reporting no substance use in the past 30 days. The alcohol and drug composite scores are computed from items about 30-day alcohol (or drug) use and the number of days individuals used multiple drugs in a day, as well as the impact of substance use on the individual's life, such as money spent on alcohol, number of days individuals had alcohol (or drug) problems, how troubled or bothered individuals were by their alcohol (or drug) problems, and how important treatment was to them.

Section 2B presents results for each substance group in two main subsections for clients who were in a controlled environment all 30 days before entering the program:

Change in 30-day substance use from intake to follow-up for clients who were in a controlled environment all 30 days before entering the recovery center. Comparisons of any use in the 30 days before program entry and the 30 days before the follow-up interview for any illicit drugs, alcohol, and tobacco for clients who were in a controlled environment all 30 days before entering the recovery center or follow-up (n = 139) are presented.

Change in self-reported severity of substance use disorder for clients who were in a controlled environment all 30 days before entering the recovery center. ASI alcohol and drug severity composite scores are examined for change over time for clients who reported alcohol use in the past 30 days (n = 21) and for clients who reported drug use in the past 30 days (n = 56) at intake and/or follow-up.

2A. SUBSTANCE USE FOR CLIENTS WHO WERE NOT IN A CONTROLLED ENVIRONMENT

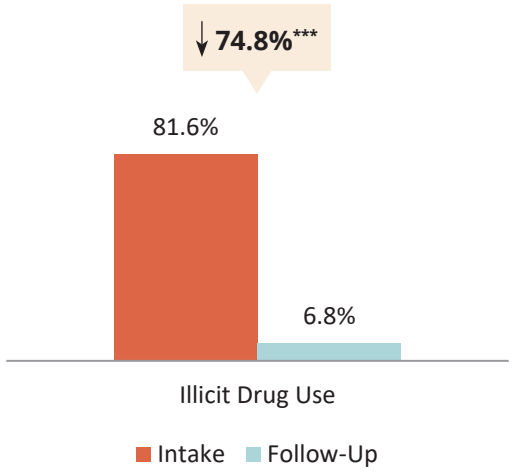
ANY ILLICIT DRUG USE

PAST-6-MONTH ILLICIT DRUG USE

At intake, 81.6% of clients reported using any illicit drugs (including prescription drug misuse and other illicit drugs) in the 6 months before entering the recovery center. At follow-up, 6.8% of individuals reported using illicit drugs in the 6 months before follow-up (a significant decrease of 74.8%; see Figure 2A.1).

[43] Because many individuals enter the Recovery Kentucky program after leaving jail or prison, substance use in the 30 days before entering the program was examined separately for individuals who were in a controlled environment all 30 days (n = 149) from individuals who were not in a controlled environment all 30 days (n = 133). The assumption for this divided analysis is that being in a controlled environment inhibits opportunities for alcohol and drug use. A total of 147 individuals were in a controlled environment all 30 days before entering the program, and 2 additional individuals were in a controlled environment all 30 days before follow-up.

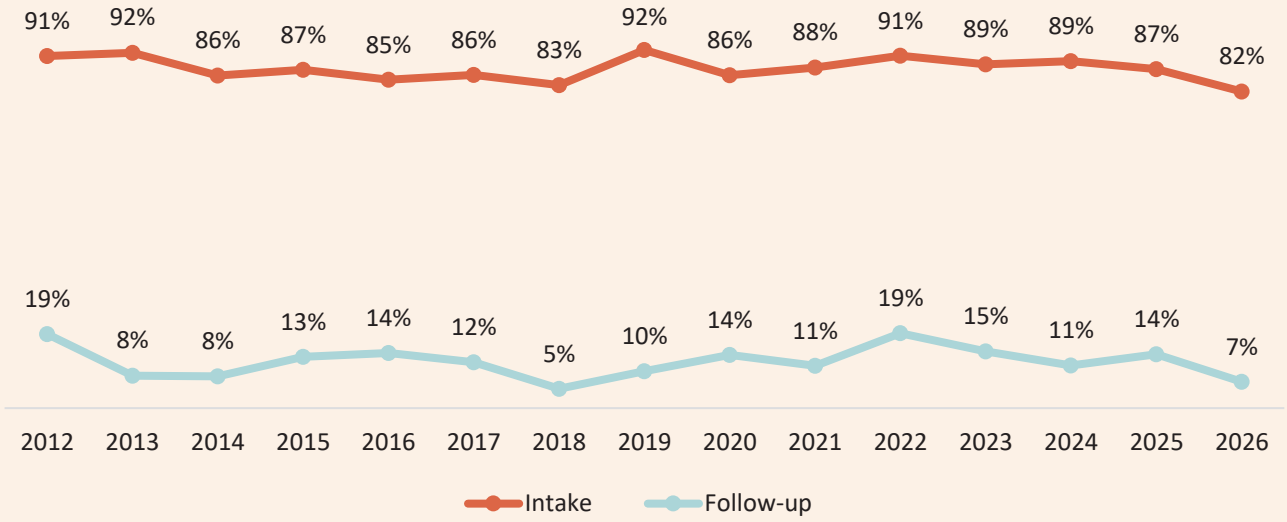
FIGURE 2A.1 ANY ILLICIT DRUG USE AT INTAKE AND FOLLOW-UP (N = 234)



***p < .001.

TRENDS IN PAST-6-MONTH ILLICIT DRUG USE

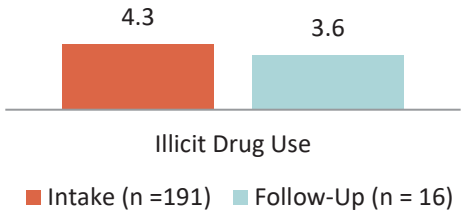
The number of RCOS clients reporting illicit drug use in the 6 months before intake has been consistently high. Each year, the percentage of clients reporting illicit drug use was significantly lower at follow-up than at intake. In this 2026 annual report, the smallest percentage of clients reported using illicit drugs in the 6 months before entering the program (82%) compared to previous years' data.



AVERAGE NUMBER OF MONTHS USED ANY ILLICIT DRUGS

Among clients who reported illicit drug use in the 6 months before entering the program (n = 191), they reported using drugs an average of 4.3 months (see Figure 2A.2). Among individuals who reported using illicit drugs at follow-up (n = 16), they reported using an average of 3.6 months.

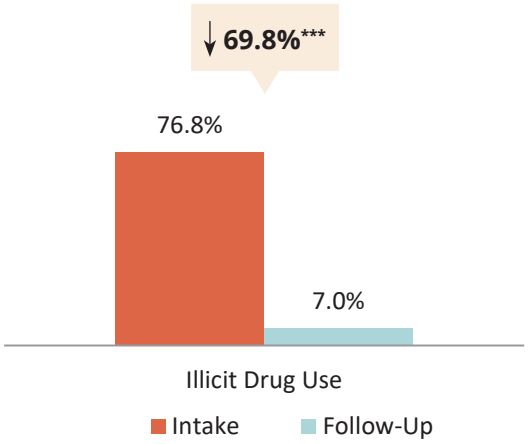
FIGURE 2A.2. AMONG CLIENTS WHO USED ANY ILLICIT DRUGS, THE AVERAGE NUMBER OF MONTHS INDIVIDUALS USED ILLICIT DRUGS



PAST-30-DAY ILLICIT DRUG USE

Around three-fourths of individuals (76.8%) who were not in a controlled environment all 30 days reported they had used illicit drugs (including prescription misuse and other illicit drugs) in the 30 days before entering the recovery center (see Figure 2A.3). At follow-up, only 7.0% of individuals reported they had used illicit drugs in the past 30 days—a significant decrease by 69.8%.

FIGURE 2A.3. PAST 30-DAY USE OF ANY ILLICIT DRUG USE AT INTAKE TO FOLLOW-UP (n = 142)



***p < .001.

> It completely changed my life. It gave me a new life— **the life I have now is exceedingly better than anything I've ever had before.** I have a new outlook.
>
> - RCOS FOLLOW-UP RESPONDENT

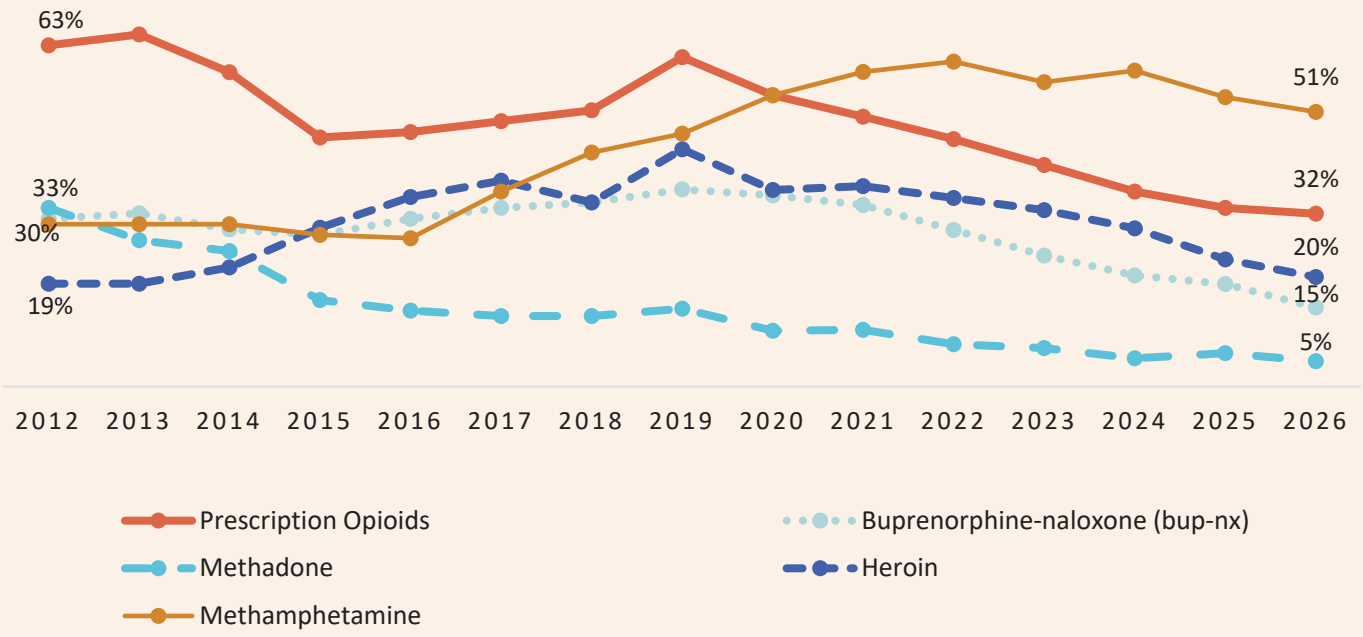
HOW MUCH HAS OPIOID AND METHAMPHETAMINE USE CHANGED OVER TIME?

This trend analysis examines the percentage of RCOS clients who reported misusing prescription opioids, non-prescribed methadone, non-prescribed buprenorphine-naloxone (bup-nx), heroin, and methamphetamine in the 6 months before entering the program from FY 2010 to FY 2024. This analysis examined data among the RCOS clients who completed an intake interview each fiscal year. Individuals who were incarcerated all 6 months before entering the program are excluded from this analysis.

As the figure shows, about two-thirds of clients reported misusing prescription opioids in the 2013 report. A significant decline in the percentage of clients reporting opioid misuse began in the 2014 report (58%) and continued through 2017 report (49%). This number began to slightly rise again in the 2018 report (51%) and continued until the 2019 report (61%). By the 2026 report, the percentage of individuals who reported illicit use of prescription opioids decreased to 32%.

The number of clients reporting non-prescribed bup-nx has fluctuated from a high of 36% in the 2019 report to a low of 15% in the 2026 report. The percentage of individuals reporting non-prescribed methadone use has steadily decreased from the 2012 report (33%) to this year's report (5%). Heroin use, however, increased from 19% in the 2012 report to a high of 44% in the 2019 report, before beginning to decline again. In this year's report, 20% of individuals reported heroin use.

The percentage of clients reporting methamphetamine use began increasing in the 2017 report, with the highest percentage in the 2022 report (60%). In the 2021 report, a higher percentage of RCOS clients reported they had used methamphetamine in the past 6 months (58%) than had used prescription opioids, which was the first year this had happened in the RCOS sample. This has continued through the 2026 report, with 51% of clients reporting methamphetamine use in the past 6 months in FY 2024 compared to 32% of clients reporting prescription opioid use.



ALCOHOL

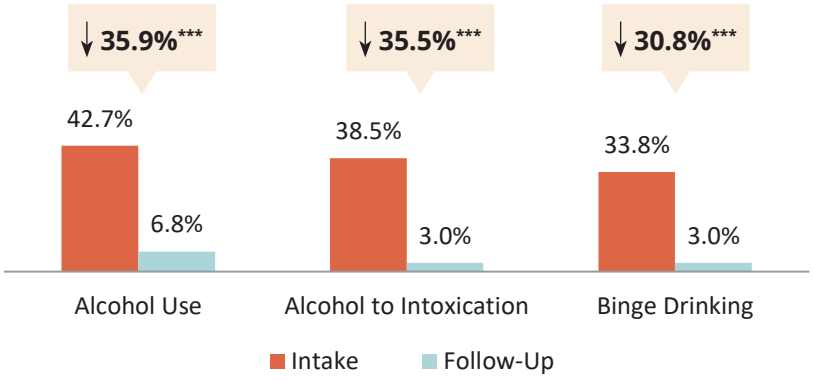
PAST-6-MONTH ALCOHOL USE

Alcohol use was asked three main ways: (1) how many months/days did you drink any alcohol (i.e., alcohol use), (2) how many months/days did you drink alcohol to intoxication (i.e., alcohol to intoxication), and (3) how many months/days did you have 5 or more (4 or more if female) alcoholic drinks in a period of about 2 hours (i.e., binge drinking).

> At intake, clients were asked how old they were when they had their first alcoholic drink (other than a few sips). RCOS follow-up clients, on average, reported they were 14.1 years old when they began drinking.[a]
>
> a—Eleven clients reported never using alcohol, so they are not included in the calculation of the average age.

About two-fifths of clients (42.7%) reported using alcohol in the 6 months before entering the recovery center, which decreased significantly to 6.8% of clients reported alcohol use in the 6 months before follow-up. There was a 35.9% decrease in the number of individuals reporting alcohol use (see Figure 2A.4). There were significant reductions in the percentage of clients who reported using alcohol to intoxication, and binge drinking from intake to follow-up: 35.5% decrease for alcohol use to intoxication, and 30.8% reduction for binge drinking.

FIGURE 2A.4. PAST-6-MONTH ALCOHOL USE AT INTAKE AND FOLLOW-UP (N = 234)[44]



***p < .001.

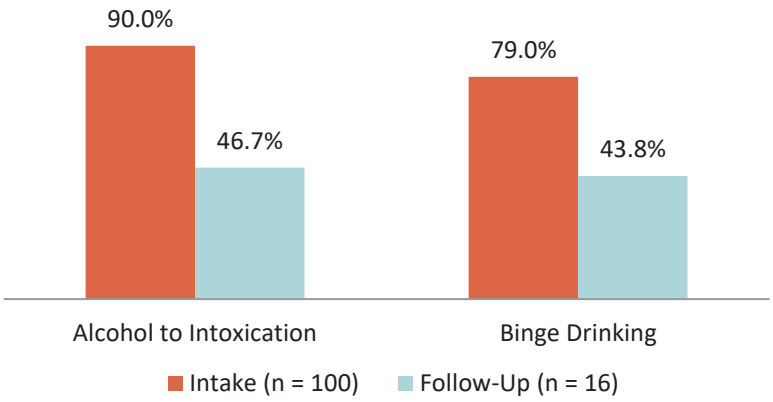
PAST-6-MONTH ALCOHOL INTOXICATION AND BINGE DRINKING AMONG THOSE WHO USED ALCOHOL

Of the individuals who used alcohol in the 6 months before entering the recovery center (n = 100), 90.0% used alcohol to intoxication and 79.0% binge drank alcohol (see Figure 2A.5). Of the individuals who used alcohol in the 6 months before follow-up (n = 16)[45], only 46.7% of clients reported alcohol use to intoxication and 43.8% reported binge drinking.

[44] One individual had missing data for use of alcohol to intoxication at intake.

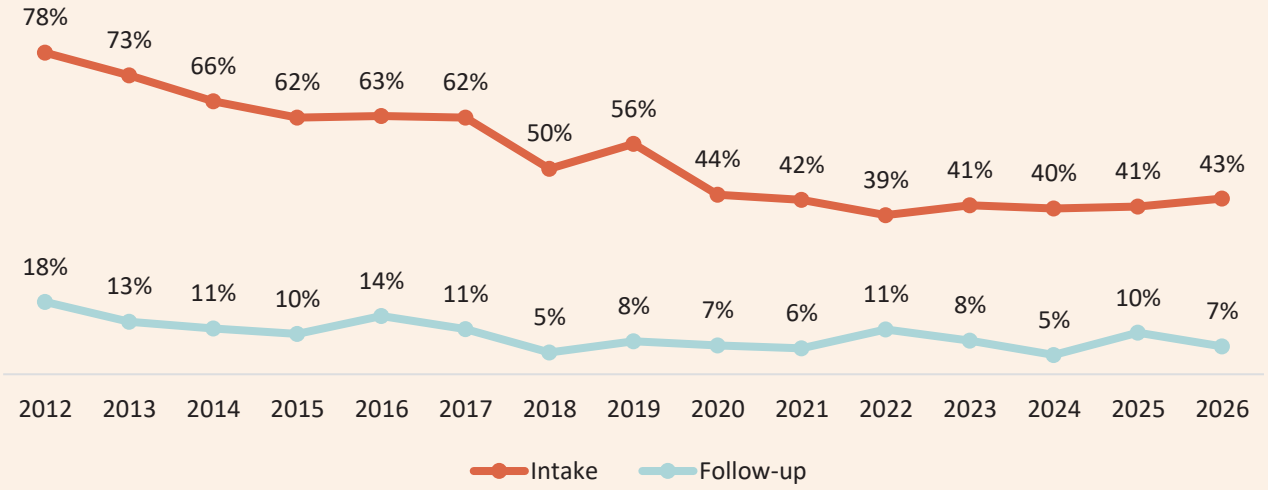
[45] One individual had missing data for alcohol use intoxication at intake.

FIGURE 2A.5. PAST-6-MONTH ALCOHOL USE TO INTOXICATION AND BINGE DRINKING AT INTAKE TO FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT



TRENDS IN ALCOHOL USE

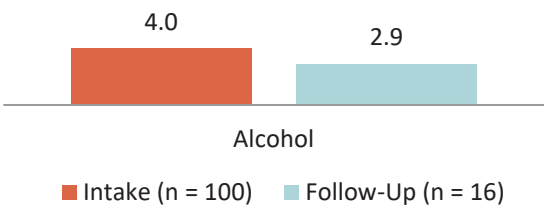
The percentage of RCOS clients reporting alcohol use in the 6 months before intake was high in the 2012 report, but has decreased over time, with the lowest percentage in the 2022 report (39%). Each year the percentage of clients reporting alcohol use has decreased significantly from intake to follow-up. In this year's report, 7% of individuals reported past-6-month alcohol use at follow-up.



AVERAGE NUMBER OF MONTHS USED ALCOHOL

Figure 2A.6 shows the number of months of alcohol use for those who reported using any alcohol in the 6 months before intake and any alcohol in the 6 months before follow-up. Among the individuals who reported using alcohol in the 6 months before entering the program (n = 100), they used an average of 4.0 months. Among individuals who reported using alcohol at follow-up (n = 16), they used an average of 2.9 months.

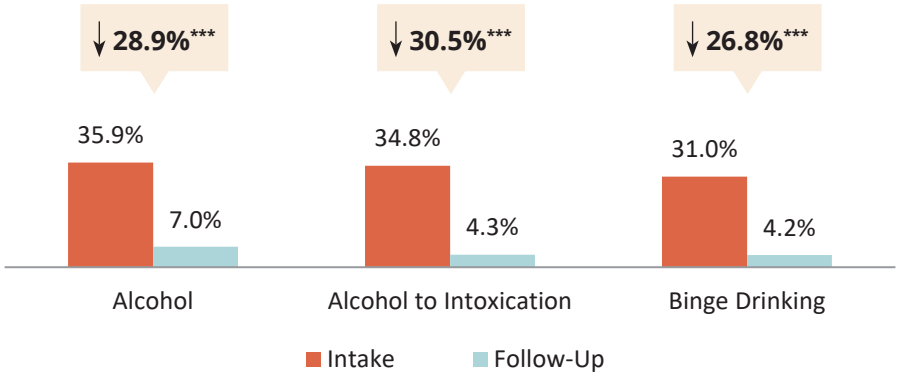
FIGURE 2A.6. AVERAGE NUMBER OF MONTHS OF ALCOHOL USE



PAST-30-DAY ALCOHOL USE

There was a decrease of 28.9% in the number of individuals who reported using alcohol in the past 30 days from intake (35.9%) to follow-up (7.0%; see Figure 2A.7). Decreases in the number of individuals who reported using alcohol to intoxication (by 30.5%) and binge drinking (by 26.8%) were also significant for the follow-up sample.

FIGURE 2A.7. PAST-30-DAY ALCOHOL USE FROM INTAKE TO FOLLOW-UP (N = 142)[46]



***p < .001.

ALCOHOL INTOXICATION AND BINGE DRINKING AMONG THOSE WHO USED ALCOHOL IN THE PAST 30 DAYS

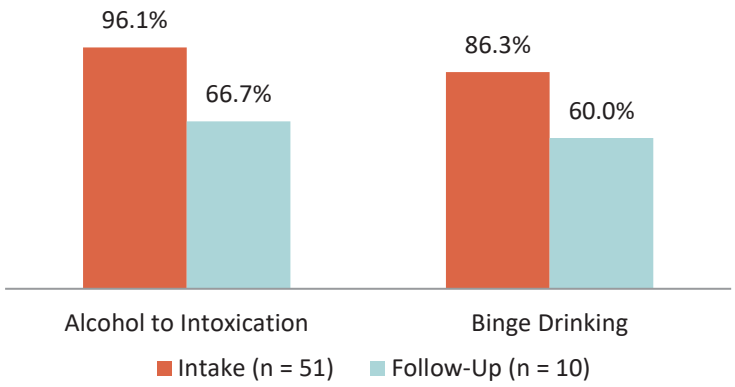
Among the 51 individuals who used alcohol in the 30 days before entering the recovery center, 96.1% used alcohol to intoxication and 86.3% binge drank alcohol in the 30 days before entering the program (see Figure 2A.8). Among the 10 individuals who reported using alcohol in the 30 days before follow-up, 66.7% reported alcohol use to intoxication[47] and 60.0% reported binge drinking.[48]

[46] One individual had missing data for the alcohol use to intoxication in the 30 days before entering the program

[47] One individual had missing data for using alcohol to intoxication in the 30 days before entering the program.

[48] It was not possible to conduct a chi square test to examine difference in the percent of men and women who used alcohol to intoxication and binge drank in the 30 days before follow-up among those who used alcohol because of the small number of individuals who reported using alcohol in the 30 days before follow-up (n = 6).

FIGURE 2A.8. PAST-30-DAY ALCOHOL TO INTOXICATION AND BINGE DRINKING AT INTAKE AND FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT



SELF-REPORTED SEVERITY OF ALCOHOL AND DRUG USE

DSM-5 CRITERIA FOR SUBSTANCE USE DISORDER, PAST 6 MONTHS

One way to examine the overall change in the degree of severity of substance use is to ask participants to self-report whether they meet any of the 11 symptoms included in the DSM-5 criteria for diagnosing substance use disorder (SUD) in the past 6 months.[49] The DSM-5 substance use disorder diagnosis has four levels of severity which were used to classify severity groups in this study: (1) no SUD (1 or no criteria met), (2) mild SUD (2 or 3 criteria met), (3) moderate SUD (4 or 5 criteria met), and (4) severe disorder (6 or more criteria met). Client self-reports of DSM-5 criteria suggest, but do not diagnose a substance use disorder.

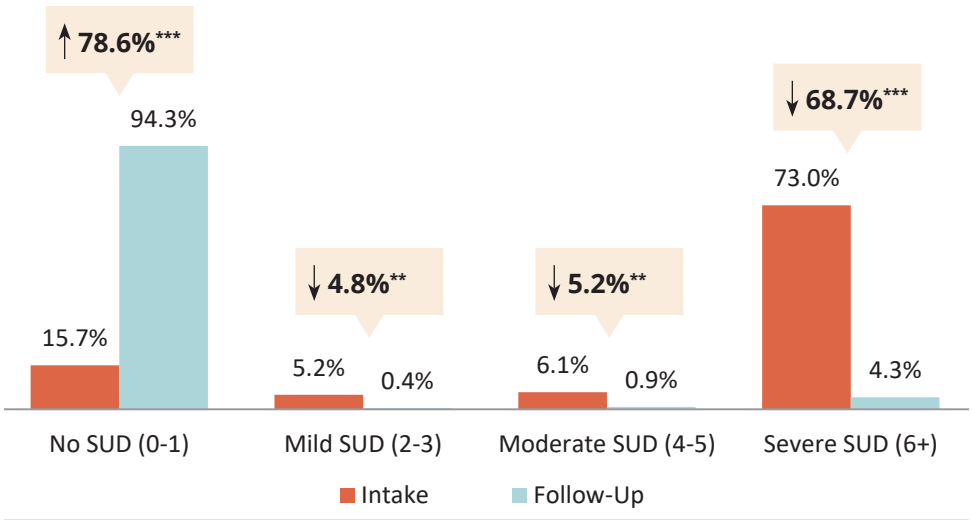
> The percentage of individuals who met the criteria for severe SUD decreased significantly from intake to follow-up

Change in the severity of SUD in the prior 6 months was examined for clients at intake and follow-up. Figure 2A.9 displays the change in the percent of individuals in each SUD severity classification, based on self-reported criteria in the preceding 6 months.[50] At intake, only 15.7% met the criteria for no substance use disorder (meaning they reported 0 or 1 DSM-5 criteria); in contrast, at follow-up, the vast majority (94.3%) met the criteria for no SUD, a significant increase of 78.6%. At the other extreme of the continuum, 73.0% of individuals met the criteria for severe SUD at intake, whereas, at follow-up, only 4.3% met the criteria for severe SUD, a significant decrease of 68.7%. Also, the percentage of clients who met the criteria for mild SUD and moderate SUD decreased significantly.

[49] The DSM-5 diagnostic criteria for substance use disorders included in the RCOS intake and follow-up interviews are similar to the criteria for DSM-IV, which has evidence of excellent test-retest reliability and validity. However, the DSM-5 eliminates the distinction between substance abuse and dependence, substituting severity ranking instead. In addition, the DSM-5 no longer includes the criterion about legal problems arising from substance use but adds a new criterion about craving and compulsion to use.

[50] Individuals who were in a controlled environment the entire 6-month period before intake or follow-up or had missing data for those variables (n = 48) were excluded from this analysis. Additionally, 4 individuals had missing data for at least one item used to calculate the severity of SUD. Thus, this analysis includes data from 230 individuals.

FIGURE 2A.9. DSM-5 SUD SEVERITY AT INTAKE AND FOLLOW-UP (N = 230)[a]



a – Significance tested with the Stuart-Maxwell Test for Marginal Homogeneity ($p < .001$).
**$p < .01$, ***$p < .001$.

ADDICTION SEVERITY INDEX (ASI), PAST 30 DAYS

Another way to examine overall change in degree of severity of substance use disorder is to use the Addiction Severity Index (ASI) composite scores for alcohol and drug use. These composite scores are computed based on self-reported severity of past-30-day alcohol and drug use, taking into consideration a number of issues including:

- number of days of alcohol (or drug) use,
- money spent on alcohol,
- the number of days individuals used multiple drugs (for drug use composite score),
- the number of days individuals experienced problems related to their alcohol (or drug) use,
- how troubled or bothered they are by their alcohol (or drug) use, and
- how important the recovery program is to them (see sidebar).

Change in the average ASI composite score for alcohol and drug use was examined for individuals who were not in a controlled environment all 30 days before entering the recovery center. Also, individuals who reported abstaining from alcohol or drugs at intake and follow-up were not included in the analysis of change for each composite score.

Figure 2A.10 displays the change in average scores.[51] Among

[51] In addition to the 140 individuals who were excluded because they were in a controlled environment all 30 days before intake or follow-up, the following numbers of cases were not included in the analysis of change in the composite score: 86 individuals reported abstaining from alcohol at intake and follow-up, 31 individuals reported abstaining from drugs at intake and follow-up, 2 individuals had missing values for the ASI alcohol CS at follow-up, and 1 individual had a missing value for the ASI drug CS at follow-up.

ASI ALCOHOL AND DRUG COMPOSITE SCORES AND SUBSTANCE USE DISORDERS

Rikoon et al. (2006) conducted two studies to determine the relationship between the ASI composite scores for alcohol and drug use and DSM-IV substance dependence diagnoses. They identified alcohol and drug use composite score cutoffs that had 85% sensitivity and 80% specificity with regard to identifying DSM-IV substance dependence diagnoses: .17 for alcohol composite score and .16 for drug composite score. These composite score cutoffs can be used to estimate the number of individuals who are likely to meet criteria for active alcohol or drug dependence, and to show reductions in self-reported severity of substance use. In previous years we have used the ASI composite scores to estimate the number and percent of clients who met a threshold for alcohol and drug dependence. However, recent changes in the diagnostics for substance abuse call into question the distinction between dependence and abuse. Thus, ASI composite scores that met the threshold can be considered indicative of severe substance use disorder to be compatible with current thinking about substance use disorders in the DSM-V, where we would have previously referred to them as meeting the threshold for dependence. Change from intake to follow-up in the severity rating as the same clinical relevance as moving from dependence to abuse in the older criteria.

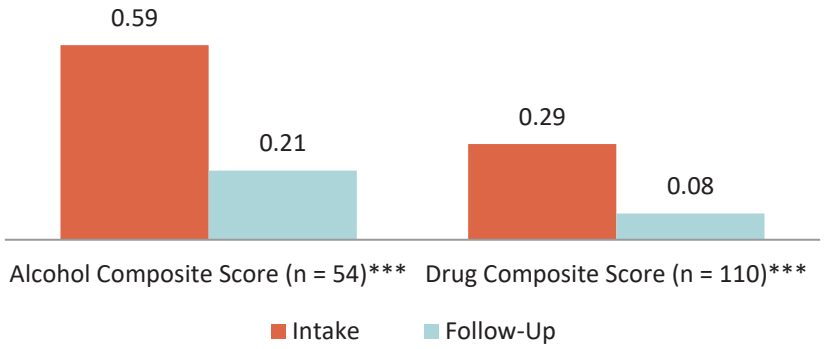
Rikoon, S., Cacciola, J., Carise, D., Alterman, A., McLellan, A. (2006). Predicting DSM-IV dependence diagnoses from Addiction Severity Index composite scores. Journal of Substance Abuse Treatment, 31(1), 17–24.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.

individuals who reported using any alcohol, the average alcohol composite score decreased significantly from 0.59 at intake to 0.21 at follow-up. Among individuals who reported any illicit drug use in the 30-day periods, the average drug composite score significantly decreased from 0.29 at intake to 0.08 at follow-up.

> The average ASI alcohol and drug composite scores decreased significantly from intake to follow-up

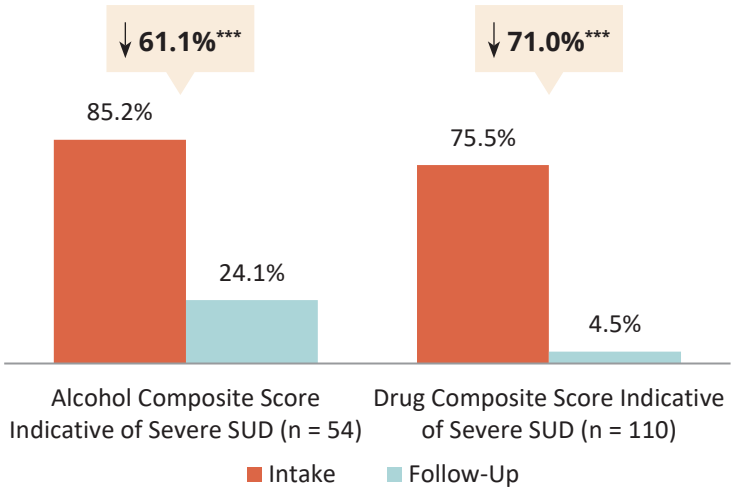
FIGURE 2A.10. AVERAGE ASI ALCOHOL AND DRUG COMPOSITE SCORES AT INTAKE AND FOLLOW-UP AMONG INDIVIDUALS WHO USED ALCOHOL AND DRUGS AT EITHER PERIOD



***p < .001

The percentage of individuals who had ASI composite scores that met the cutoff for severe substance use disorder (SUD) decreased significantly from intake to follow-up (see Figure 2A.11). At intake, the majority of individuals who used the substances had alcohol and drug composite scores that met the cutoff for severe SUD (85.2% and 75.5% respectively). At follow-up, the percentages of individuals with alcohol and drug composite scores that met the cutoff for severe SUD were significantly lower. Only 24.1% of individuals had an alcohol composite score that met the cutoff for severe SUD at follow-up and only 4.5% had a drug composite score that met the cutoff for severe SUD at follow-up.

FIGURE 2A.11. INDIVIDUALS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR SEVERE SUBSTANCE USE DISORDER AT INTAKE AND FOLLOW-UP

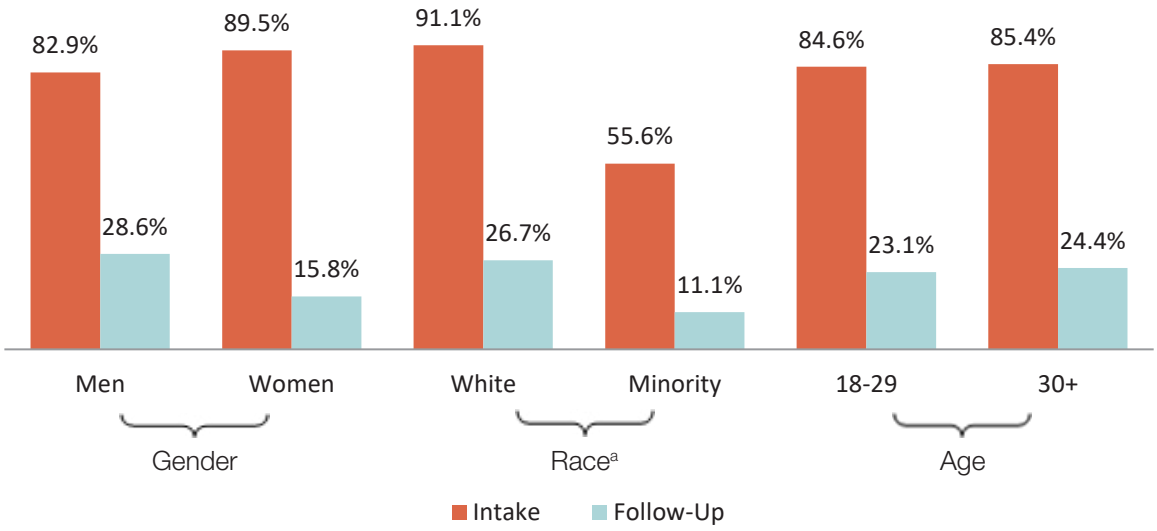


***p < .001.

Analysis was also conducted to examine differences between individuals who had an alcohol composite score meeting the cutoff for severe SUD at intake and follow-up by gender, race/ethnicity,

or age (see Figure 2A.12). There were no significant differences by gender, or age group at intake or follow-up. A significantly higher percentage of White individuals had an alcohol composite score meeting the cutoff for severe SUD at intake compared to individuals who were a racial minority or multiracial (91.1% vs. 55.6%). There was no difference by race/ethnicity at follow-up.

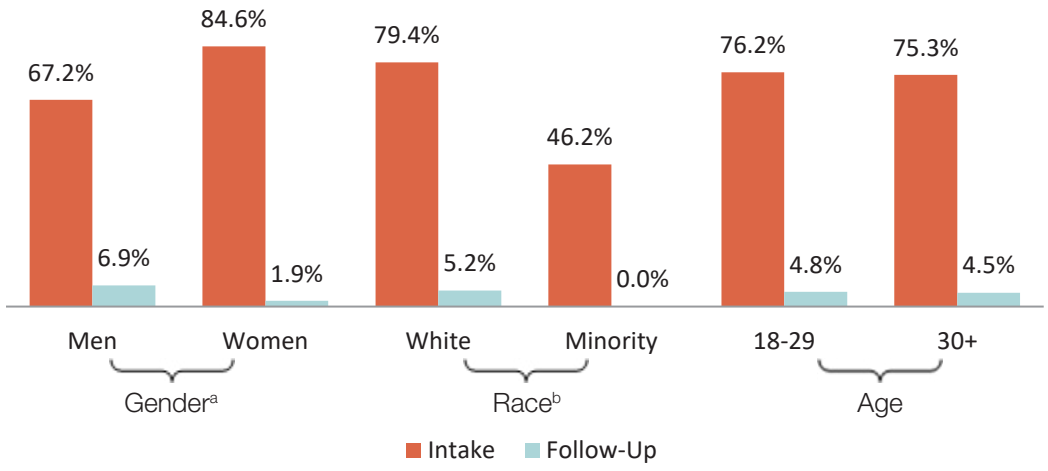
FIGURE 2A.12. ALCOHOL-USING INDIVIDUALS WITH AN ALCOHOL COMPOSITE SCORE INDICATIVE OF SEVERE SUD AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (N = 54)



a—Statistically significant difference by race at intake ($p < .01$).

Analysis was also conducted to examine whether individuals who had a drug composite score indicative of severe SUD at intake and follow-up differed by gender, race/ethnicity, or age (see Figure 2A.13). A significantly higher percentage of women had a drug composite score meeting the cutoff for severe SUD at intake relative to men (84.6% vs. 67.2%). By follow-up, there was no gender difference. Also, a significantly higher percentage of White individuals had a drug composite score indicative of severe drug use disorder at intake compared to minority individuals (79.4% vs. 46.2%). By follow-up, there was no difference by race/ethnicity.

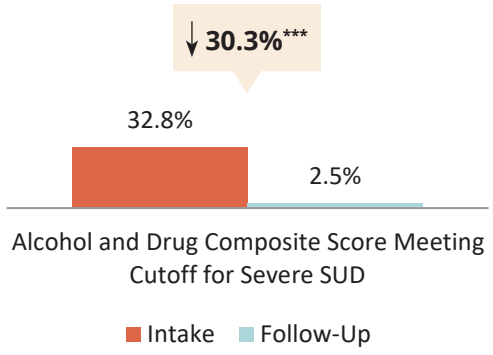
FIGURE 2A.13. DRUG-USING INDIVIDUALS WITH A DRUG COMPOSITE SCORE INDICATIVE OF SEVERE SUD AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (N = 110)



a—Statistically significant difference by gender at intake ($p < .05$).
b—Statistically significant difference by race/ethnicity at intake ($p < .01$).

Among individuals who used alcohol and/or drugs in the 30 days before intake (n = 119), 32.8% had alcohol and drug composite scores that met the cutoff for both severe alcohol use disorder and drug use disorder (see Figure 2A.14). The percentage of clients who had composite scores that met the cutoff for severe SUD for both alcohol and drugs decreased significantly to 2.5% at follow-up.

FIGURE 2A.14. INDIVIDUALS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR SEVERE ALCOHOL AND DRUG USE DISORDERS AT INTAKE AND FOLLOW-UP (n = 120)[52]

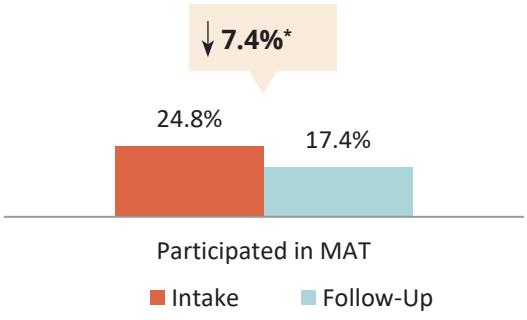


***p < .001.

MEDICATION-ASSISTED TREATMENT

In the follow-up survey, about half of followed-up individuals (49.3%) reported that they had in their lifetime received medication-assisted treatment (MAT), with significantly more women reporting they had received MAT in their lifetime compared to men (64.9% vs. 35.8%; not depicted in a figure). About one-fourth of clients (24.8%) reported at intake that they had participated in medication-assisted treatment in the previous 6 months, with a significant decrease from intake to follow-up (see Figure 2A.15).

FIGURE 2A.15. PARTICIPATED IN ANY MEDICATION-ASSISTED TREATMENT IN THE 6 MONTHS BEFORE INTAKE AND FOLLOW-UP (n = 282)



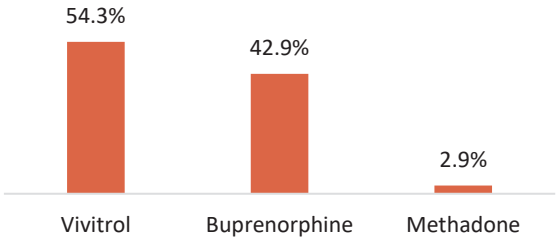
*p < .05.

Of the 70 clients who reported participating in any medication-assisted treatment in the 6 months before intake, they reported using the medication for an average of 3.5 months of the 6 months and 13.7 days in the past 30 days (not depicted in a figure).

[52] Among the 133 individuals who were not in a controlled environment all 30 days before intake or follow-up, 13 were excluded from this analysis because they did not report using alcohol or drugs in the 30 days before intake or follow-up.

Figure 2A.16 shows the percentage of clients who reported using the following medications as their most recent medication in the 6 months entering the recovery program: Vivitrol (54.3%), buprenorphine (42.9%), and methadone (2.9%).

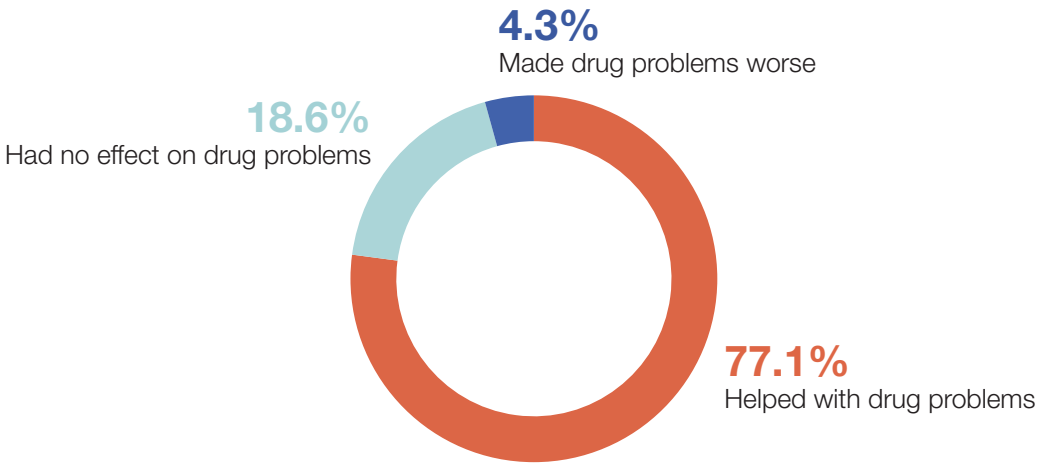
FIGURE 2A.16. MEDICATIONS TAKEN IN MEDICATION-ASSISTED TREATMENT IN THE 6 MONTHS BEFORE ENTERING THE RECOVERY CENTER (n = 70)



Among the 70 individuals who had participated in MAT in the 6 months before entering the recovery center, nearly half (47.1%) had obtained the medication from a doctor in a general medical practice. More than one-third (38.6%) reported the medication was prescribed by a doctor in a specialty clinic, and 14.3% reported the medication was dispensed in a clinic (not depicted in a figure).

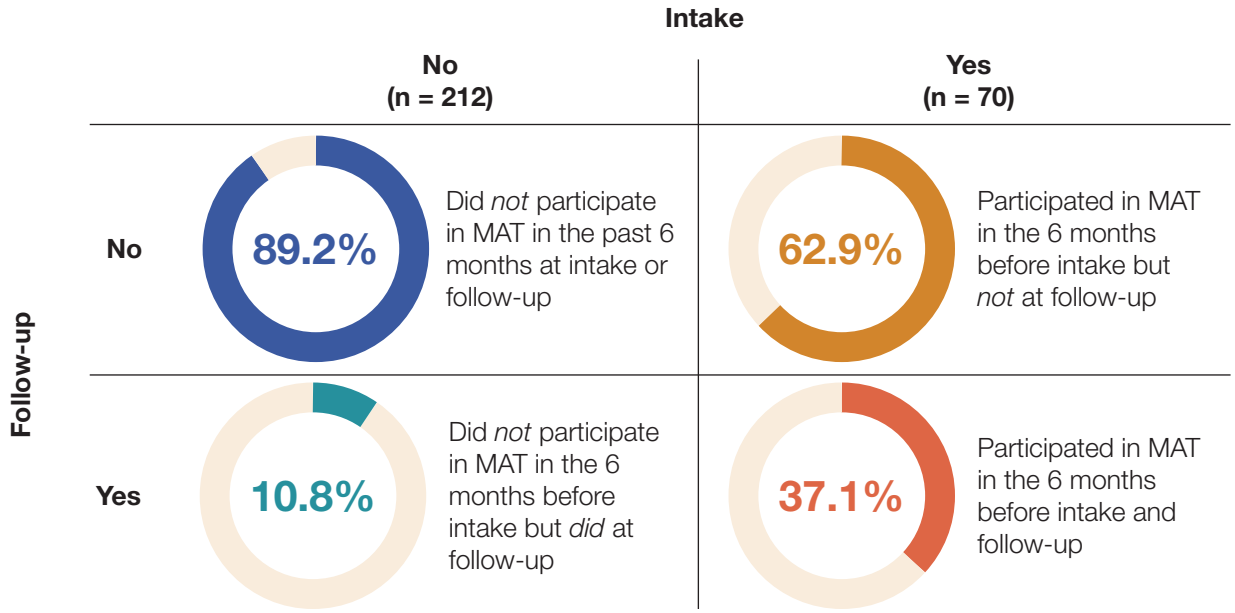
Among the 70 individuals who reported they had participated in MAT in the 6 months before entering the recovery center, the majority reported the prescribed medication helped them with their drug problems (77.1%), followed by 18.6% who reported the medication did not affect their drug problem, and 4.3% who reported the medication made their drug problems worse (see Figure 2A.17).

FIGURE 2A.17. CLIENTS' PERCEPTION OF HOW HELPFUL THE PRESCRIBED (n = 70)



Of the 70 clients who reported participating in MAT in the 6 months before intake, most of them (62.9%, n = 44) reported not having participated in MAT in the 6 months before follow-up (see Figure 2A.18).

FIGURE 2A.18. PARTICIPATION IN MEDICATION-ASSISTED TREATMENT AT FOLLOW-UP BY PARTICIPATION AT INTAKE



TOBACCO USE

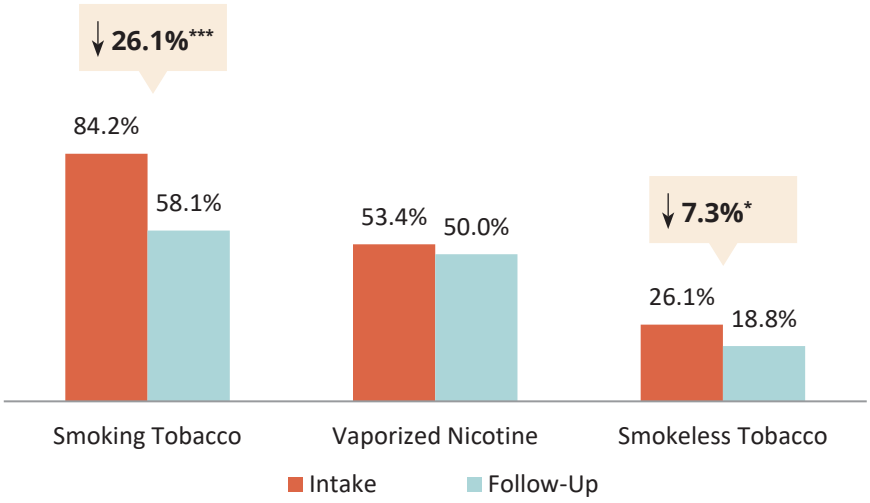
PAST-6-MONTH SMOKING, VAPORIZED NICOTINE, AND SMOKELESS TOBACCO USE

There were significant decreases in the percentage of individuals reporting smoking tobacco and using smokeless tobacco from intake to follow-up (see Figure 2A.19). Most individuals reported smoking tobacco in the 6 months before entering the recovery center (84.2%), with a significant decrease at follow-up (58.1%). The percentage of individuals reporting the use of vaporized nicotine (e.g., battery-powered nicotine delivery devices that vaporize a liquid mixture consisting of propylene glycol, glycerin, flavorings, nicotine, and other chemicals) was more than one-half at intake (53.4%) and one-half at follow-up (50.0%). The percentage of individuals who reported using smokeless tobacco decreased significantly from intake (26.1%) to follow-up (18.8%).

At intake, clients were asked how old they were when they began smoking regularly (on a daily basis). RCOS follow-up clients reported, on average, that they began smoking regularly at 15.8 years old.[a]

a—Twenty-one clients reported they had never smoked regularly, and two clients had missing data.

FIGURE 2A.19. PAST-6-MONTH SMOKING TOBACCO, VAPORIZED NICOTINE, AND SMOKELESS TOBACCO USE AT INTAKE AND FOLLOW-UP (N = 234)

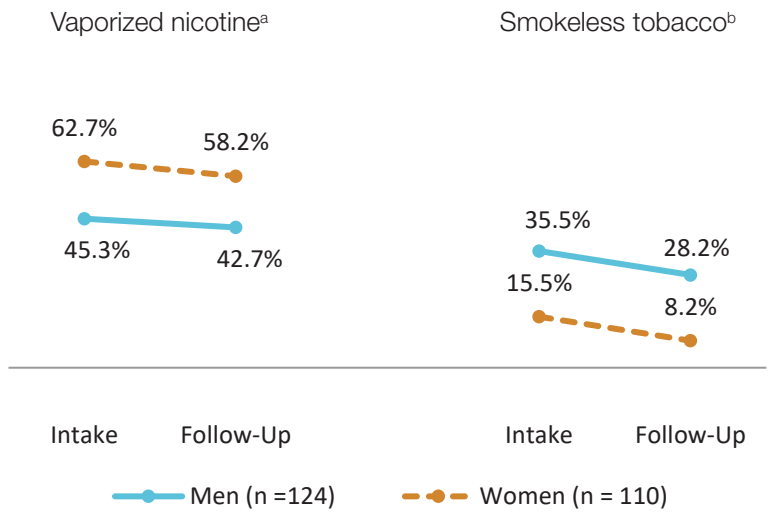


*p < .05, ***p<.001.

GENDER DIFFERENCES IN PAST-6-MONTH USE OF VAPORIZED NICOTINE AND SMOKELESS TOBACCO

At intake and follow-up, significantly more women reported using vaporized nicotine compared to men (see Figure 2A.20). Significantly more men reported using smokeless tobacco at follow-up compared to women. There were no significant changes in use of vaporized nicotine and smokeless tobacco for men or for women.

FIGURE 2A.20. GENDER DIFFERENCES IN PAST-6-MONTH USE OF VAPORIZED NICOTINE AND SMOKELESS TOBACCO USE AT INTAKE AND FOLLOW-UP

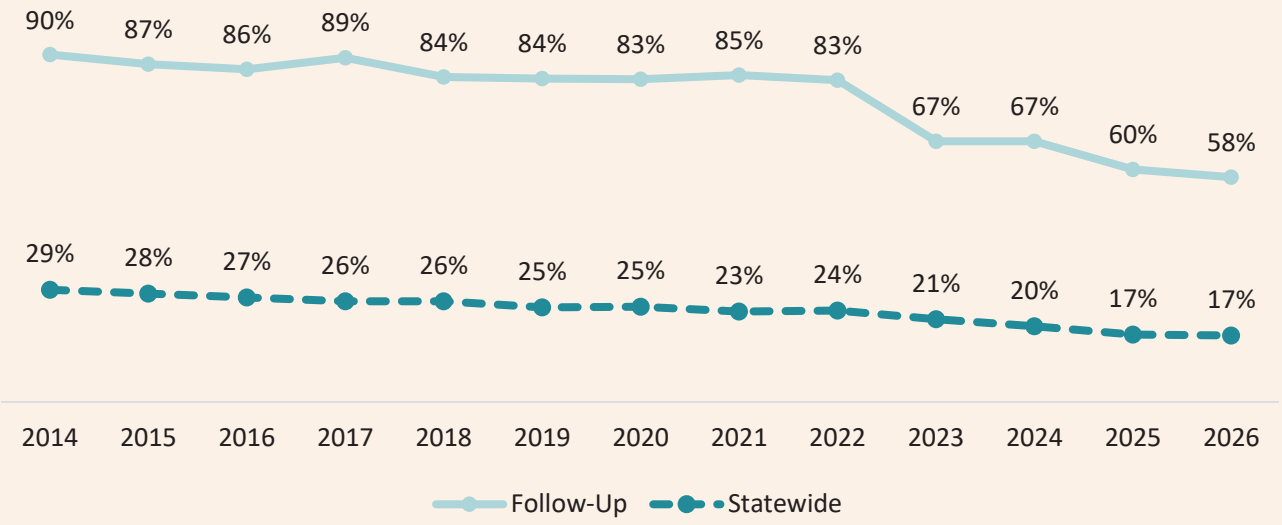


a—Significant difference by gender at intake (p < .01) and follow-up (p < .05).
b—Significant difference by gender at intake (p < .001) and follow-up (p < .001).

TRENDS IN PAST-6-MONTH SMOKING TOBACCO AT FOLLOW-UP COMPARED TO THE STATE

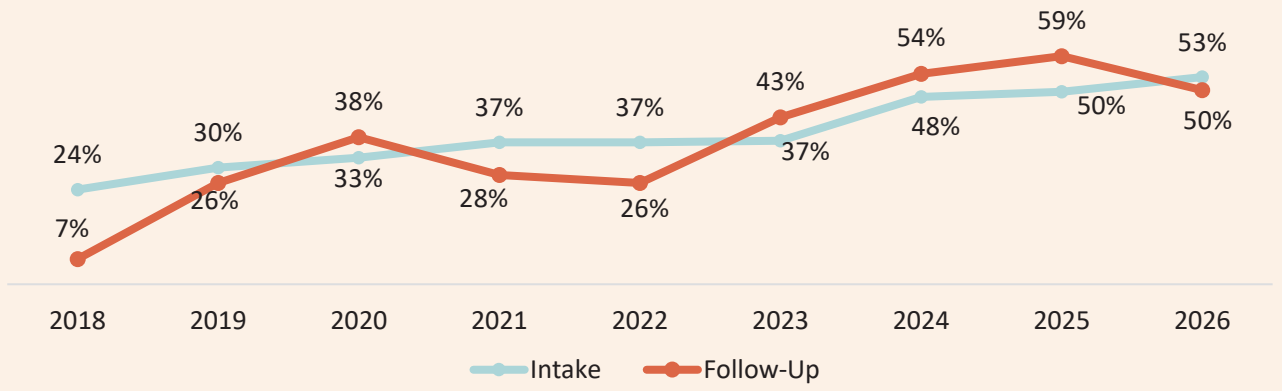
Tobacco smoking rates for RCOS clients consistently remain high in the 6 months before follow-up from the 2014 report to the 2022 report. In the 2014 report, 90% of clients reported smoking at follow-up. Beginning in the 2023 report, the percentage of RCOS participants who reported smoking tobacco fell to 67%, and then 58% in this year's report.

When compared to a statewide sample, over three times more RCOS clients report smoking at follow-up.[53]



TRENDS IN PAST-6-MONTH VAPORIZED NICOTINE AT INTAKE AND FOLLOW-UP

Use of vaporized nicotine in the 6 months before entering the recovery center has increased from 24% in the 2018 report to 53% in the 2026 report, among individuals who were not in a controlled environment all 6 months. In the 2018, 2022, and 2024 reports, the decrease in vaporized nicotine use from intake to follow-up was statistically significant. However, in the 2019, 2020, 2023, 2024, and 2026 reports, there was no significant change from intake to follow-up in the percentage of individuals reporting use of vaporized nicotine products.

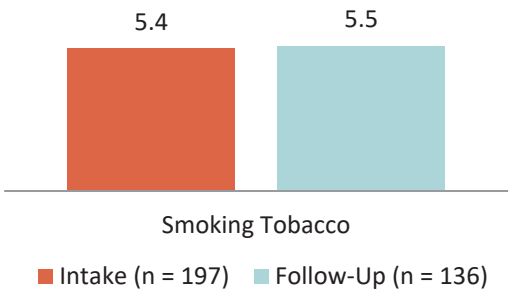


[53] America's Health Rankings analysis of U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, United Health Foundation, AmericasHealthRankings.org, accessed 2026.

AVERAGE NUMBER OF MONTHS SMOKED TOBACCO

Figure 2A.21 shows, among smokers, the average number of months clients reported smoking tobacco at intake and follow-up. Among the individuals who reported smoking tobacco in the 6 months before entering the program (n = 197), they reported smoking tobacco, on average, 5.4 months. Among individuals who reported smoking tobacco at follow-up (n = 136), they reported using, on average, 5.5 months of the 6-month period.

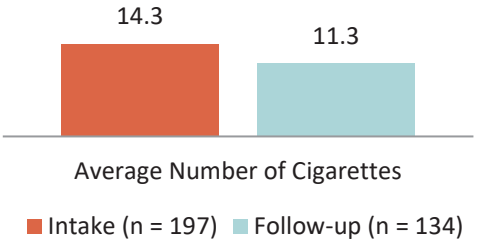
FIGURE 2A.21. AVERAGE NUMBER OF MONTHS TOBACCO USE



AVERAGE NUMBER OF CIGARETTES SMOKED PER DAY

Figure 2A.22 shows, among individuals who smoked tobacco, the average number of cigarettes smoked per day: 14.3 cigarettes per day at intake (n = 197) and 11.3 cigarettes per day at follow-up (n = 134).[54]

FIGURE 2A.22. AVERAGE NUMBER OF CIGARETTES SMOKED PER DAY

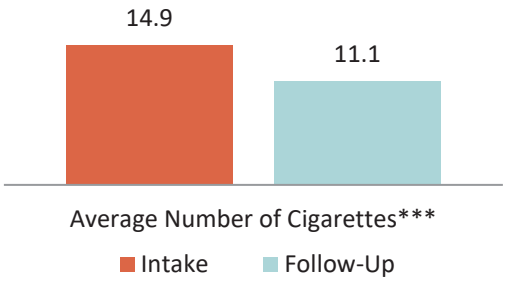


Among the individuals who reported smoking tobacco in the 6 months both before intake and the 6 months before follow-up (n = 124),[55] the average number of cigarettes they smoked per day decreased significantly from 14.9 at intake to 11.1 at follow-up (see Figure 2A.23).

[54] Two individuals had missing data for the number of cigarettes they smoked per day.

[55] 125 individuals reported smoking at both intake and follow-up; however, one had missing data for the number of cigarettes smoked per day at follow-up.

FIGURE 2A.23. AMONG INDIVIDUALS WHO SMOKED CIGARETTES AT INTAKE AND FOLLOW UP (N = 124),[56] THE AVERAGE NUMBER OF CIGARETTES SMOKED PER DAY[a]

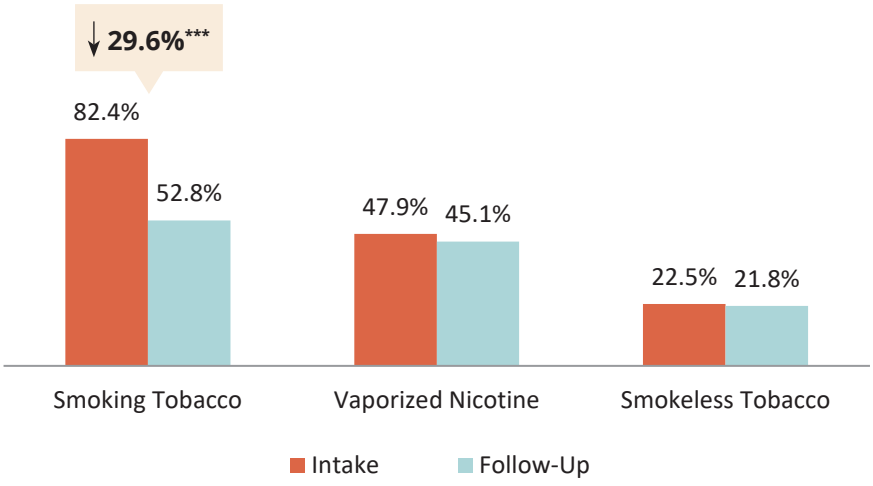


a—Paired sample t-test was conducted; the decrease in mean number of cigarettes smoked was statistically significant at $p < .001$.

PAST-30-DAY USE SMOKING, VAPORIZED NICOTINE, AND SMOKELESS TOBACCO USE

Among the individuals who were not in a controlled environment all 30 days before entering the program, the majority reported smoking tobacco in the 30 days before entering the recovery center (82.4%), with a significant decrease of 29.6% to half of participants reporting smoking tobacco in the 30 days before follow-up (52.8%; see Figure 2A.24). The percentage of individuals who reported using vaporized nicotine and smokeless tobacco in the past 30 days did not change significantly from intake to follow-up.

FIGURE 2A.24. PAST-30-DAY SMOKING, VAPORIZED NICOTINE, AND SMOKELESS TOBACCO USE AT INTAKE AND FOLLOW-UP (N = 142)



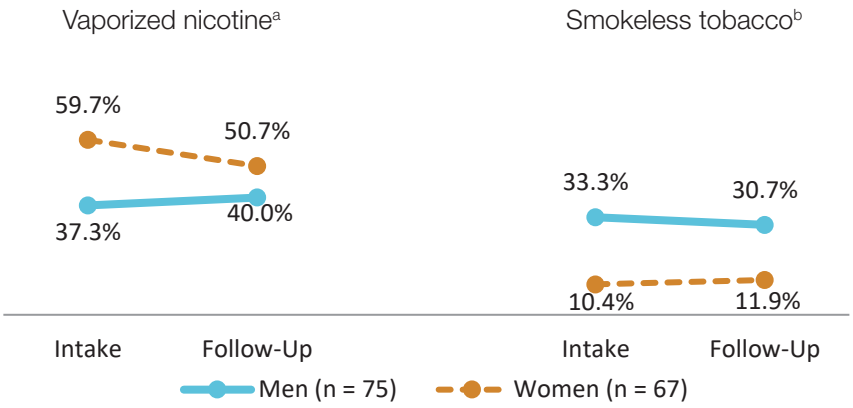
***$p < .001$.

[56] 135 individuals reported smoking tobacco in the 6 months before intake and follow-up, however, two had a missing value for number of cigarettes smoked at intake.

GENDER DIFFERENCES IN PAST-30-DAY VAPORIZED NICOTINE AND SMOKELESS TOBACCO USE

A significantly higher percentage of women reported using vaporized nicotine at intake compared to men. At follow-up, there was no significant difference by gender. Significantly more men reported use of smokeless tobacco in the 30 days before entering the program and follow-up compared to women (see Figure 2A.25). There was no significant change in the percentage of men and women who reported smokeless tobacco use from intake to follow-up.

FIGURE 2A.25. GENDER DIFFERENCES IN PAST-30-DAY USE OF VAPORIZED NICOTINE AND SMOKELESS TOBACCO AT INTAKE AND FOLLOW-UP



a – Significant difference by gender at intake ($p < .01$).
b—Significant difference by gender at intake ($p < .01$) and follow-up ($p < .01$).

2B. SUBSTANCE USE FOR CLIENTS WHO WERE IN A CONTROLLED ENVIRONMENT

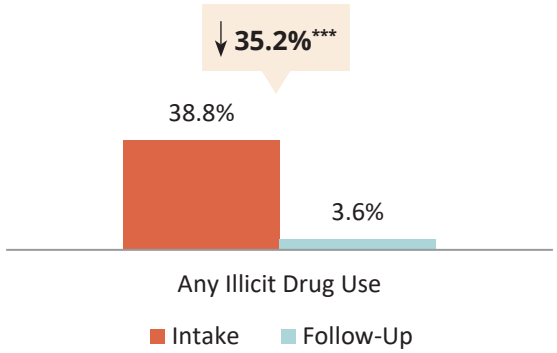
Changes in drug, alcohol, and tobacco use from intake to follow-up were analyzed separately for individuals who were in a controlled environment (e.g., prison, jail, other drug-free residential facility) all 30 days before entering the recovery center (n = 139), because being in a controlled environment reduces opportunities for alcohol and drug use.

PAST-30 DAY-USE OF ANY ILLICIT DRUGS

Of the individuals who were in a controlled environment all 30 days before intake or follow-up (n = 139), 38.8% reported they used illicit drugs (including cannabis, cocaine, heroin, methadone, hallucinogens, barbiturates, inhalants, synthetic marijuana, and non-prescribed use of prescription opiates, sedatives, and amphetamines) in the 30 days before they entered the recovery center (see Figure 2B.1). In the 30 days before follow-up, only 3.6% of clients reported illicit drug use, which is a significant decrease of 35.2%.

> From the moment I walked in the doors **I felt at home so much that I joined the staff.**
>
> - RCOS FOLLOW-UP RESPONDENT

FIGURE 2B.1. PAST-30-DAY ILLICIT DRUG USE AT INTAKE AND FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT (n = 139)

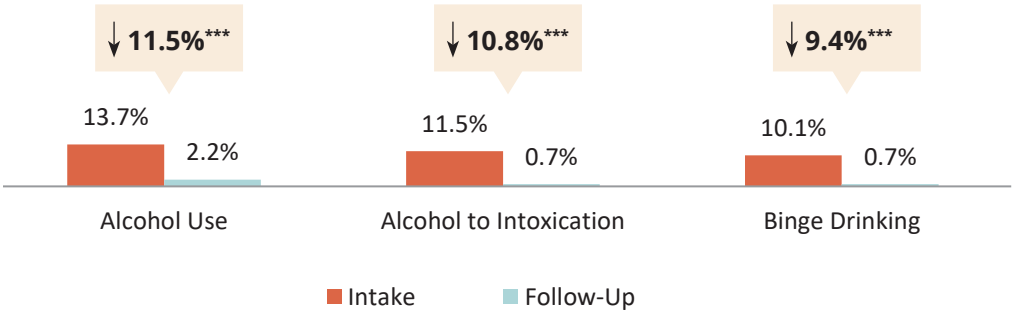


***p < .001.

PAST-30-DAY ALCOHOL USE

As expected, given their confinement to a controlled environment in the 30 days before entering the recovery center, only a minority (13.7%) of individuals reported they had used alcohol in those 30 days (see Figure 2B.2). There was a significant decrease from intake to follow-up in the percentage of individuals who reported using any alcohol, alcohol to intoxication, and binge drinking.

FIGURE 2B.2. PAST-30-DAY ALCOHOL USE AT INTAKE AND FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT (N = 139)

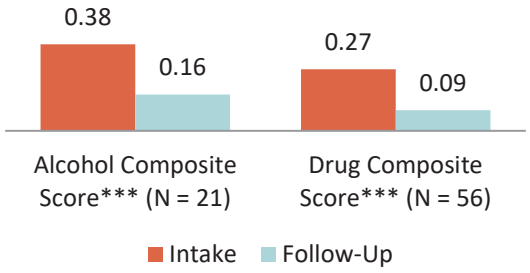


***p < .001.

SELF-REPORTED SEVERITY OF ALCOHOL AND DRUG USE AMONG CLIENTS WHO WERE IN A CONTROLLED ENVIRONMENT

Among the individuals who were in a controlled environment all 30 days before entering the program and who did not report abstaining from the substance (alcohol, drugs) at intake and follow-up, the average composite scores for alcohol use and drug use decreased significantly from intake to follow-up (see Figure 2B.3).

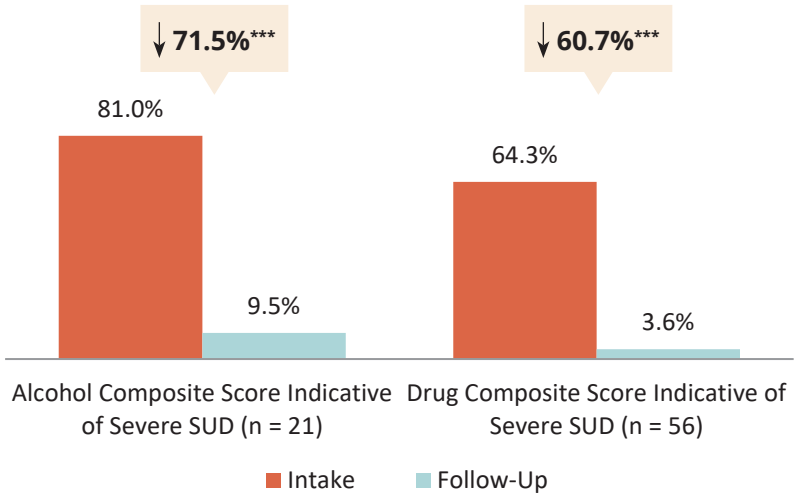
FIGURE 2B.3. AVERAGE ALCOHOL ASI ALCOHOL AND DRUG COMPOSITE SCORES AT INTAKE AND FOLLOW-UP[57]



***p < .001.

Among the individuals who were in a controlled environment all 30 days before entering the program and who did not report abstaining from the substance, the majority (81.0%) had an alcohol composite score that met the cutoff for severe SUD at intake. At follow-up, 9.5% of these individuals had an alcohol composite score that met the cutoff for severe SUD, which was a statistically significant decrease from intake (see Figure 2B.4). The majority of individuals (64.3%) had a drug composite score that met the cutoff for severe SUD, with a significant decrease of 48.7% to only 3.6% at follow-up.[58]

FIGURE 2B.4. ASI COMPOSITE SCORES MEETING THE CUTOFF FOR SEVERE SUBSTANCE USE DISORDER AT INTAKE AND FOLLOW-UP



***p < .001.

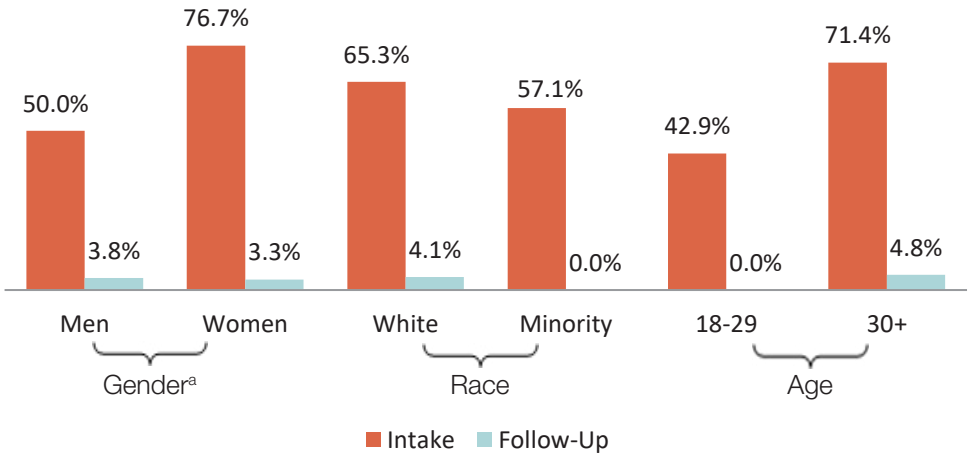
Analysis was also conducted to examine whether individuals who had a drug composite score indicative of severe drug use disorder at intake and follow-up differed by gender, race/ethnicity, or age (see Figure 2B.5). At intake, a significantly higher percentage of women had ASI drug composite scores meeting the cutoff for severe drug use disorder compared to men (76.7% vs. 50.0%). There

[57] Twenty-two individuals reported using alcohol at intake or follow-up and 57 individuals reported using illicit drugs at intake or follow-up. The following number of individuals had data on at least one of the variables used to compute the ASI alcohol composite score at follow-up (n = 1) and the ASI drug composite score at follow-up (n = 1).

[58] It was not possible to examine demographic differences between individuals who had alcohol composite scores indicative of severe alcohol use disorder with those who did not at intake or follow-up because the number of individuals in several of the cells of the cross tabulations.

were no other statistically significant differences in the percentage of individuals meeting the cutoff score for severe drug disorder.

FIGURE 2B.5. DRUG-USING INDIVIDUALS WITH A DRUG COMPOSITE SCORE INDICATIVE OF SEVERE SUD AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (N = 56)

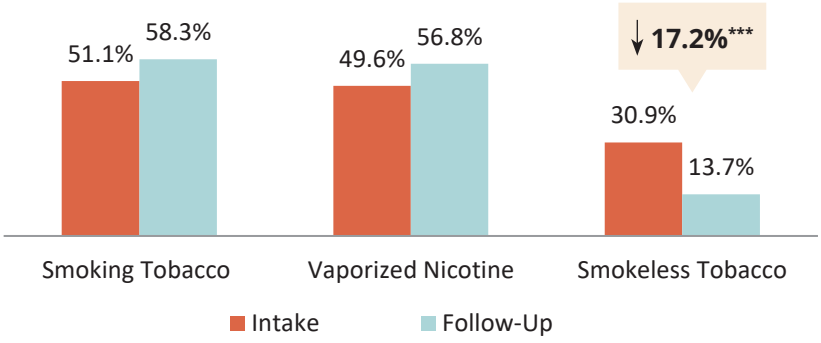


a—Significant difference by gender at intake ($p < .05$).

PAST-30-DAY SMOKING, VAPORIZED NICOTINE, AND SMOKELESS TOBACCO USE

Among individuals who were in a controlled environment all 30 days before they entered the recovery center, 51.1% reported they had smoked tobacco in those 30 days (see Figure 2B.6). Unlike alcohol and illicit drug use that decreased from intake to follow-up, there was no significant change in the percentage of participants reporting use of smoking tobacco and vaporized nicotine. There was a significant decrease of 17.2% in the percentage of individuals who reported using smokeless tobacco in the past 30 days at follow-up.

FIGURE 2B.6. PAST-30-DAY SMOKING, E-CIGARETTE, AND SMOKELESS TOBACCO AT INTAKE AND FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT (n = 139)

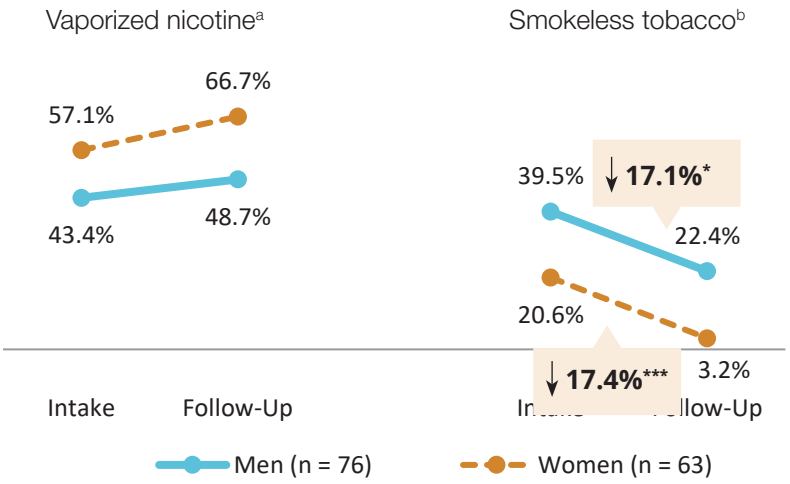


***$p < .001$.

GENDER DIFFERENCE IN PAST-30-DAY VAPORIZED NICOTINE AND SMOKELESS TOBACCO USE

Among the individuals in a controlled environment, significantly more women than men reported using vaporized nicotine at follow-up (see Figure 2B.7). There was no significant change from intake to follow-up in the percentage of men and women who reported vaporized nicotine use in the past 30 days. At intake and follow-up, a significantly higher percentage of men reported smokeless tobacco use compared to women. The decrease in the percentage of men and women who used smokeless tobacco from intake to follow-up was statistically significant.

FIGURE 2B.7. GENDER DIFFERENCES IN PAST-30-DAY VAPORIZED NICOTINE AND SMOKELESS TOBACCO USE AT INTAKE AND FOLLOW-UP[a]



a – Significant difference by gender at follow-up ($p < .05$).
b—Significant difference by gender at intake ($p < .05$) and follow-up ($p < .001$).

SECTION 3. MENTAL HEALTH AND PHYSICAL HEALTH

This section describes changes in mental health and physical health status at intake compared to follow-up including for: (1) depression, (2) generalized anxiety, (3) comorbid depression and generalized anxiety, (4) depression or anxiety, (5) suicidal thoughts or attempts, (6) posttraumatic stress disorder, (7) victimization, (8) general health status, and (9) chronic pain.

DEPRESSION

To assess depression, participants were first asked two screening questions:

"Did you have a two-week period when you were consistently depressed or down, most of the day, nearly every day?" and

"Did you have a two-week period when you were much less interested in most things or much less able to enjoy the things you used to enjoy most of the time?"

If participants answered "yes" to at least one of these two screening questions, they were then asked seven additional questions about symptoms of depression (e.g., sleep problems, weight loss or gain, feelings of hopelessness or worthlessness).

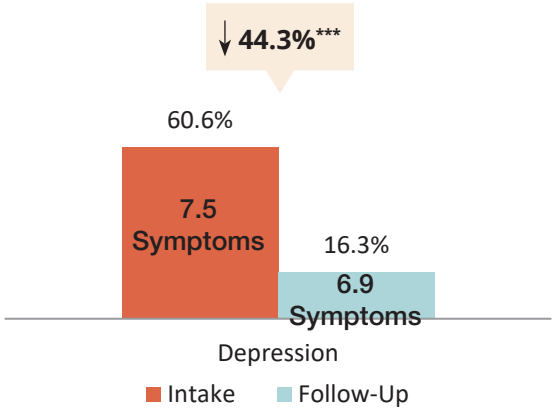
Study Criteria for Depression

To meet study criteria for depression, clients had to say "yes" to at least one of the two screening questions and at least 4 of the 7 symptoms. Thus, the minimum score to meet study criteria: 5 out of 9.

The majority of clients (60.6%) met study criteria for depression in the 6 months before they entered the recovery center (see Figure 3.1). By follow-up, only 16.3% met criteria for depression, representing a 44.3% significant decrease.

Of those who met criteria for depression at intake (n = 171), clients reported an average of 7.5 symptoms out of 9. Of those who met criteria for depression at follow-up (n = 46), they reported an average of 6.9 symptoms out of 9.

FIGURE 3.1. CLIENTS MEETING STUDY CRITERIA FOR DEPRESSION AT INTAKE AND FOLLOW-UP (N = 282)

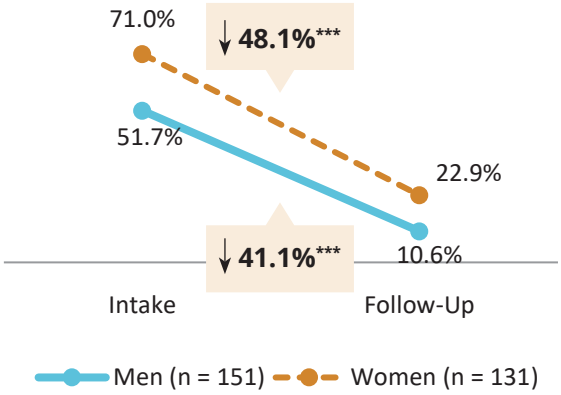


***p < .001.

GENDER DIFFERENCE IN MEETING STUDY CRITERIA FOR DEPRESSION

At intake, significantly more women than men met criteria for depression (71.0% vs. 51.7%; see Figure 3.2). The percentages of women and men who met criteria for depression at follow-up were significantly lower than at intake. At follow-up, there was still a gender difference in the percentage of individuals meeting criteria for depression.

FIGURE 3.2. GENDER DIFFERENCE IN MEETING CRITERIA FOR DEPRESSION AT INTAKE AND FOLLOW-UP[a]



a—Statistical difference by gender at intake ($p < .001$) and follow-up ($p < .01$).
***$p < .001$.

GENERALIZED ANXIETY

To assess for generalized anxiety, participants were first asked:

"Did you have a period lasting 6 months or longer where you worried excessively or were anxious about multiple things on more days than not (like family, health, finances, school, or work difficulties)?"

Participants who answered "yes" were then asked 6 additional questions about anxiety symptoms (e.g., felt restless, keyed up or on edge, have difficulty concentrating, feel irritable).

Study Criteria for General Anxiety Disorder

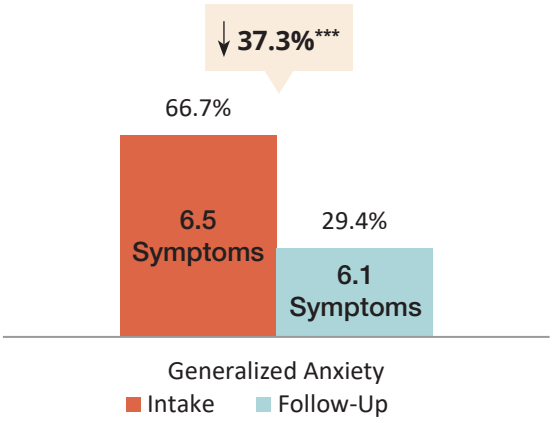
To meet study criteria for general anxiety disorder, clients had to say "yes" to the one screening question and at least 3 of the other 6 symptoms. Thus, minimum score to meet study criteria: 4 out of 7.

In the 6 months before entering the recovery center, 66.7% of clients reported symptoms that met the study criteria for generalized anxiety and 29.4% reported symptoms at follow-up (see Figure 3.3). There was a 37.3% significant decrease in the number of clients meeting the study criteria for generalized anxiety.

Of those who met study criteria for generalized anxiety at intake (n = 188), clients reported an average of 6.4 symptoms out of 7. At follow-up, those who met criteria for generalized anxiety (n = 81)[59] reported an average of 6.0 symptoms out of 7.

[59] 82 individuals met criteria for generalized anxiety at follow-up; however, one individual had a missing value for one of the symptom items.

FIGURE 3.3. CLIENTS MEETING STUDY CRITERIA FOR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP (N = 282)

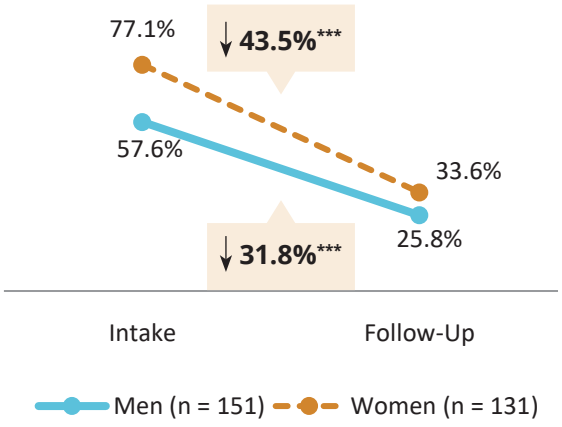


***p < .001.

GENDER DIFFERENCE IN MEETING STUDY CRITERIA FOR GENERALIZED ANXIETY

At intake, significantly more women than men met criteria for generalized anxiety (77.1% vs. 57.6%; see Figure 3.4). The percentages of women and men who met criteria for generalized anxiety at follow-up were significantly lower than at intake. At follow-up, there was not a statistically significant difference between the percentages of women and men who met criteria for generalized anxiety.

FIGURE 3.4. GENDER DIFFERENCE IN MEETING CRITERIA FOR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP[a]

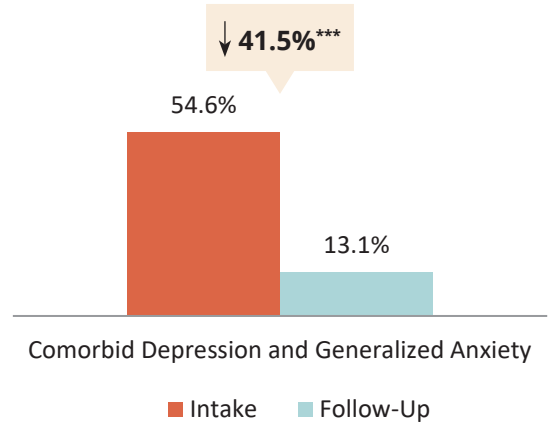


a—Statistical difference by gender at intake (p < .001).
***p < .001.

COMORBID DEPRESSION AND GENERALIZED ANXIETY

At intake, more than half of clients (54.6%) met criteria for both depression and generalized anxiety, and at follow-up, only 13.1% met criteria for both (see Figure 3.5). There was a 41.5% significant reduction in the number of individuals who reported symptoms that met the criteria for both depression and generalized anxiety at follow-up.

FIGURE 3.5. CLIENTS MEETING CRITERIA FOR COMORBID DEPRESSION AND GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP (N = 282)

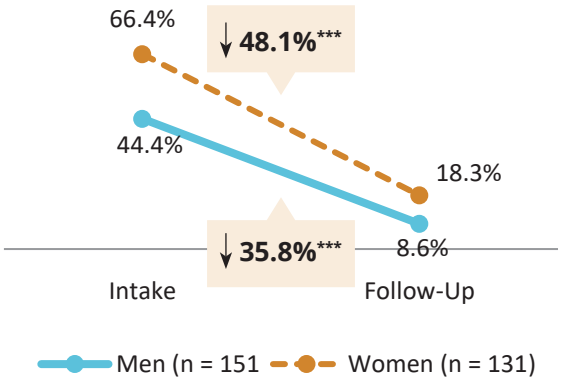


***p < .001.

GENDER DIFFERENCE IN MEETING STUDY CRITERIA FOR COMORBID DEPRESSION AND GENERALIZED ANXIETY

At intake, significantly more women than men met criteria for comorbid depression and generalized anxiety (66.4% vs. 44.4%; see Figure 3.6). There were significant decreases in the number of women and men who met criteria for comorbid depression and generalized anxiety, and significantly more women than men met criteria for comorbid depression and generalized anxiety at follow-up.

FIGURE 3.6. GENDER DIFFERENCE IN MEETING CRITERIA FOR COMORBID DEPRESSION AND GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP[a]

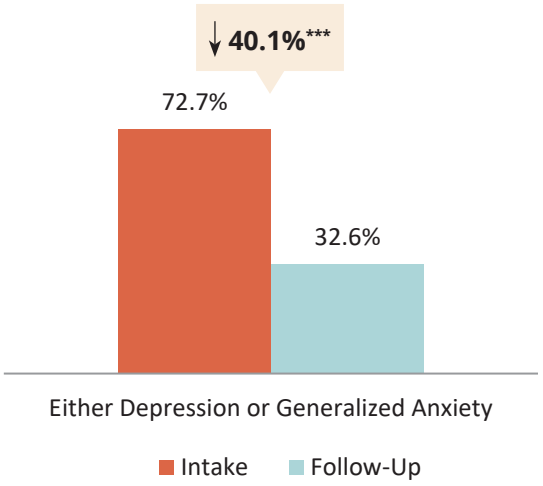


a—Statistical difference by gender at intake (p < .001) and follow-up (p < .05).
***p < .001.

EITHER DEPRESSION OR GENERALIZED ANXIETY

At intake, 72.7% of clients met criteria for either depression or generalized anxiety, and at follow-up, the percentage was significantly lower (32.6%; see Figure 3.7).

FIGURE 3.7. CLIENTS MEETING CRITERIA FOR EITHER DEPRESSION OR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP (N = 282)

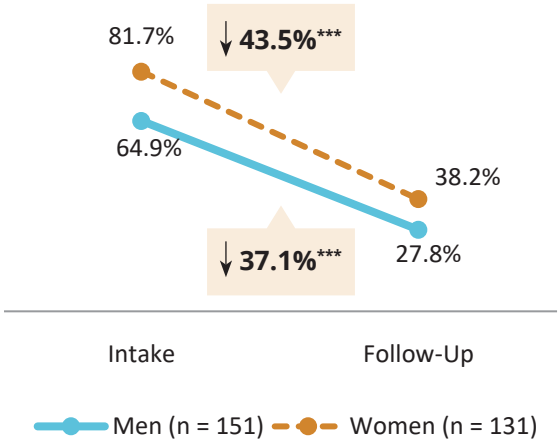


***p < .001.

GENDER DIFFERENCE IN MEETING STUDY CRITERIA FOR EITHER DEPRESSION OR GENERALIZED ANXIETY

At intake, four-fifths of women (81.7%) and around 64.9% of men met criteria for either depression or generalized anxiety (see Figure 3.8). There were significant decreases in the number of women and men who met criteria for either depression or generalized anxiety. At follow-up, there was no gender difference.

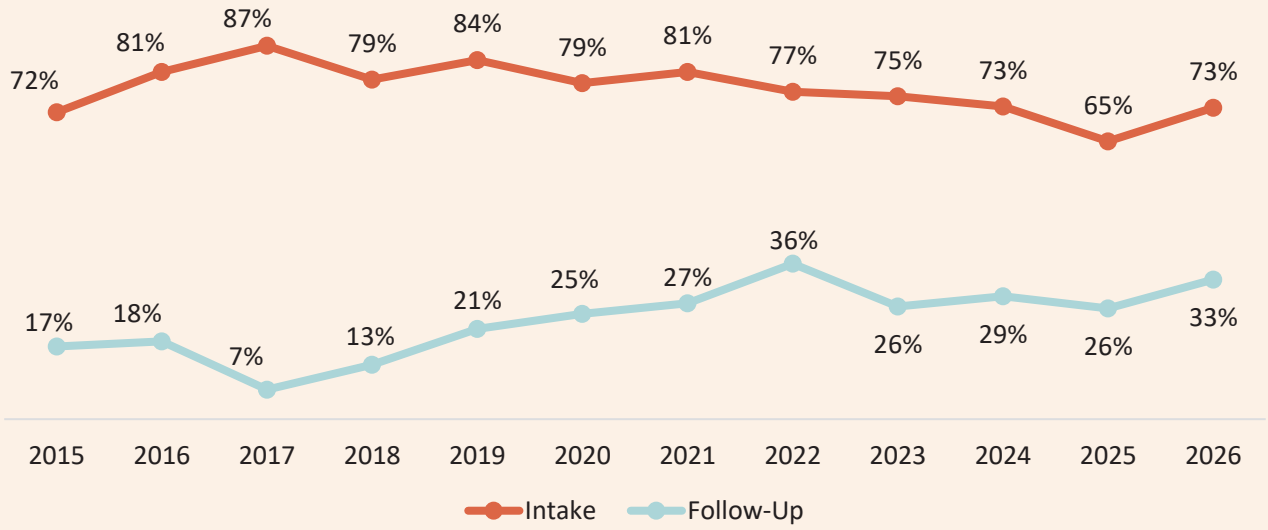
FIGURE 3.8. GENDER DIFFERENCE IN MEETING CRITERIA FOR EITHER DEPRESSION OR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP[a]



***p < .001.

TRENDS IN DEPRESSION OR GENERALIZED ANXIETY

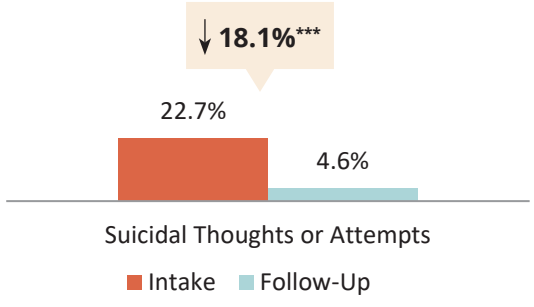
The percentage of clients meeting criteria for depression or generalized anxiety in the 6 months before entering the recovery center has fluctuated from a low of a little less than two-thirds (65%) to a high of 87% over the past twelve fiscal years. Each year there has been a significant decrease from intake to follow-up in the number of clients reporting either depression or generalized anxiety – with the lowest percentage at follow-up in the 2017 report (7%) and the highest in the 2022 report (36%).



SUICIDE IDEATION AND/OR ATTEMPTS

Suicide ideation and attempts were measured with questions about thoughts of suicide and attempts to commit suicide. About one-fifth of individuals (22.7%) reported thoughts of suicide or attempted suicide in the 6 months before entering the program. At follow-up, only 4.6% of individuals reported thoughts of suicide or attempted suicide, which was a significant decrease of 18.1% (see Figure 3.9).

FIGURE 3.9. CLIENTS REPORTING SUICIDAL IDEATION AND/OR ATTEMPTS AT INTAKE AND FOLLOW-UP (N = 282)

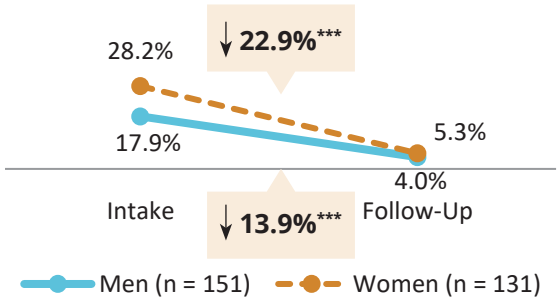


***p < .001.

GENDER DIFFERENCE IN SUICIDE IDEATION AND/OR ATTEMPTS

At intake, 28.2% of women and 17.9% of men reported they had experienced suicidal ideation and/or attempted suicide in the 6 months before entering the program (see Figure 3.10). There were significant decreases in the number of women and men who met criteria for either depression or generalized anxiety. At follow-up, there was no gender difference.

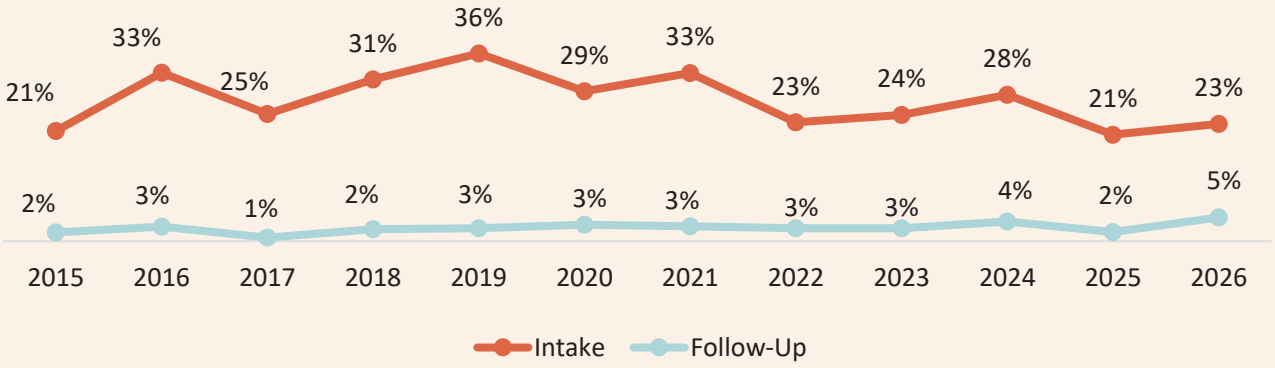
FIGURE 3.10. GENDER DIFFERENCE IN SUICIDE IDEATION AND/OR ATTEMPTS AT INTAKE AND FOLLOW-UP[a]



a—Statistical difference by gender at intake ($p < .05$).
***$p < .001$.

TRENDS IN SUICIDAL THOUGHTS AND/OR ATTEMPTS

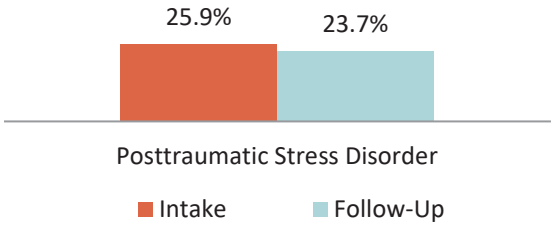
Over the past twelve annual reports, the percentage of clients reporting suicidal thoughts and/or attempts in the 6 months before entering the recovery center has fluctuated between a low of one-fifth in the 2015 and the 2025 reports and a high of a little over one-third in the 2019 report. Each year there has been a significant decrease from intake to follow-up in the number of clients reporting suicidality – with only 1%-5% of clients reported suicidal thoughts or attempts at follow-up.



POST TRAUMATIC STRESS DISORDER

All clients were asked to think about the worst stressful event in their lifetime when answering the four items from the PTSD checklist about how bothered they had been by the event in the prior 6 months at intake and follow-up.[60] At intake, one-fourth of clients (25.9%) met study criteria for PTSD. At follow-up, there was no significant change; 23.7% met criteria for PTSD (see Figure 3.11).

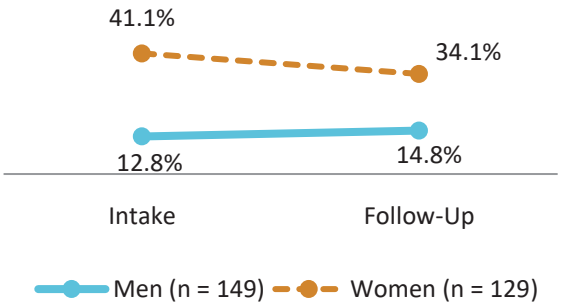
FIGURE 3.11. CLIENTS WHO MET STUDY CRITERIA FOR PTSD AT INTAKE AND PAST-6-MONTHS AT FOLLOW-UP (n = 278)[61]



GENDER DIFFERENCE IN MEETING STUDY CRITERIA FOR POSTTRAUMATIC STRESS DISORDER

At intake and follow-up, significantly more women met criteria for PTSD than men. The percentage of women who met criteria for PTSD was about 3.2 times than the percentage of men at intake (see Figure 3.12). There was no significant change from intake to follow-up in the percentage of women and men who met criteria for PTSD.

FIGURE 3.12 GENDER DIFFERENCES IN MEETING CRITERIA FOR PTSD AT INTAKE AND FOLLOW-UP[a]



a—Statistical difference by gender at intake ($p < .001$) and follow-up ($p < .001$).

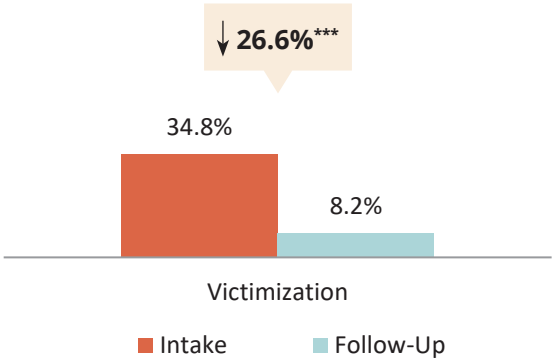
[60] Price, M., Szafranski, D., van Stolk-Cooke, K., & Gros, D. (2016). Investigation of an abbreviated 4 and 8-item version of the PTSD Checklist 5. *Psychiatry Research, 239*, 124-130.
In previous years' reports, the PTSD symptom questions had been anchored around lifetime victimization experiences; however, the decision was made to broaden the range of potentially traumatic events for these items and to ask clients to think of the worst event.

[61] Four individuals had missing data for at least one of the PTSD symptoms at follow-up.

VICTIMIZATION

About one-third of clients (34.8%) reported any interpersonal victimization in the 6 months before they entered the recovery center (see Figure 3.13). At follow-up, 8.2% experienced any victimization in the past 6 months, representing a significant decrease by 26.6%.

FIGURE 3.13. VICTIMIZATION AT INTAKE AND PAST-6-MONTHS AT FOLLOW-UP (n = 282)

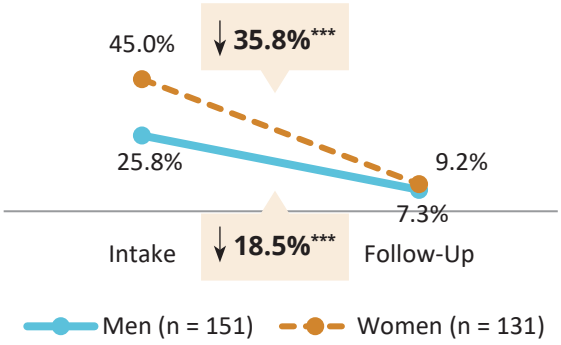


***p < .001.

GENDER DIFFERENCE IN EXPERIENCING INTERPERSONAL VICTIMIZATION

At intake, significantly more women (45.0%) than men (25.8%) reported they had experienced interpersonal victimization in the past 6 months (see Figure 3.14). There were significant decreases in the percentage of women and men reporting interpersonal victimization at follow-up. At follow-up, there was no difference for men and women in interpersonal victimization in the past 6 months.

FIGURE 3.14. GENDER DIFFERENCE IN EXPERIENCING INTERPERSONAL VICTIMIZATION AT INTAKE AND FOLLOW-UP[a]

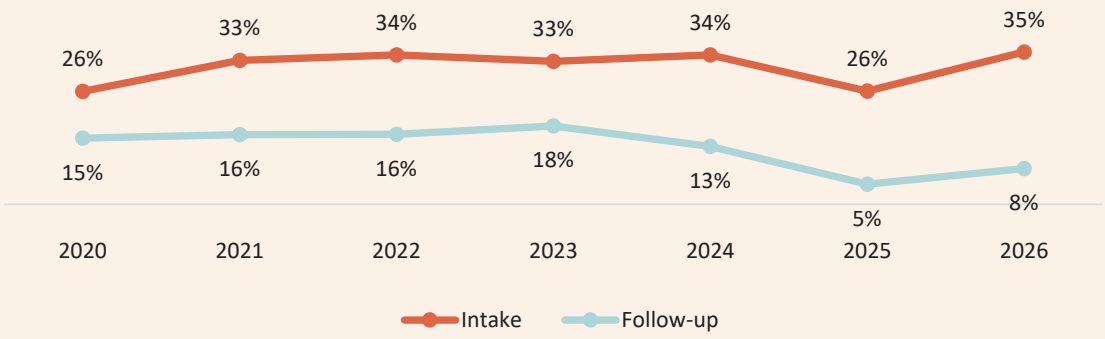


a—Statistical difference by gender at intake (p < .001).
***p < .001.

TRENDS IN EXPERIENCES WITH INTERPERSONAL VIOLENCE

The percentage of clients who reported experiencing interpersonal violence (e.g. assault, threats with a firearm, mugging/robbery, intimate partner violence, stalking, sexual assault, and harassment) in the 6 months before entering the program has ranged from about one-fourth to about one-third. There have been significant decreases from intake to follow-up in the percentage of individuals who have reported interpersonal victimization in the past 6 months, with a steady percent each year (13% - 18%), until 2025 and 2026, when only 5% and 8%, respectively, reported victimization in the 6 months before follow-up.

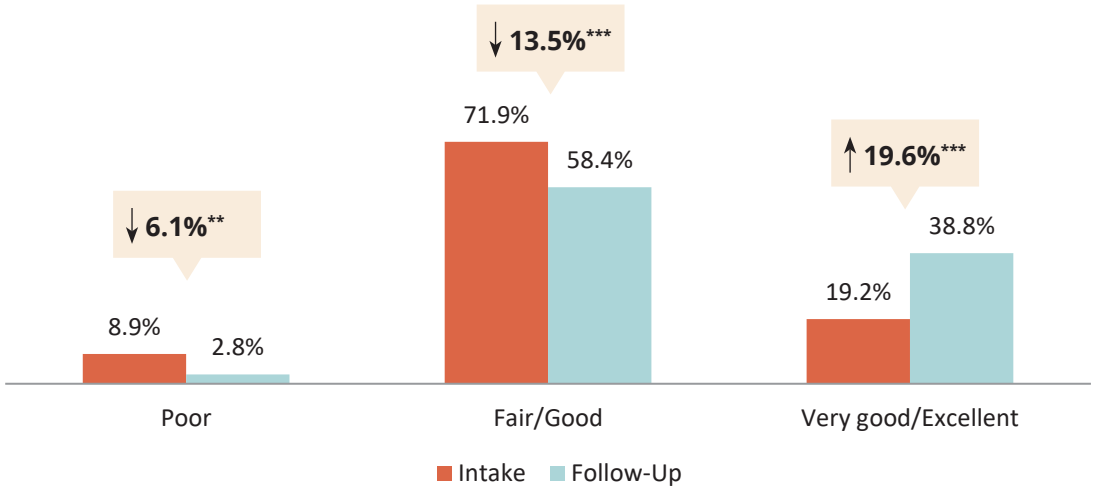
TRENDS IN THE PERCENTAGE OF CLIENTS REPORTING INTERPERSONAL VIOLENCE AT INTAKE AND FOLLOW-UP, REPORTS 2020 - 2026[62]



GENERAL HEALTH

At both intake and follow-up, clients were asked to rate their general health in the past 6 months from 1 = poor to 5 = excellent. Clients rated their health, on average, as 2.8 at intake and this significantly increased to 3.3 at follow-up (not depicted in figure). Figure 3.15 shows that significantly more clients rated their general health as very good or excellent (38.8%) at follow-up when compared to intake (19.2%).

FIGURE 3.15. CLIENTS' SELF-REPORT OF GENERAL HEALTH STATUS AT INTAKE AND FOLLOW-UP (N = 281)[63]



a – Significance tested with the Stuart-Maxwell Test for Marginal Homogeneity ($p < .001$).
**$p < .01$, ***$p < .001$.

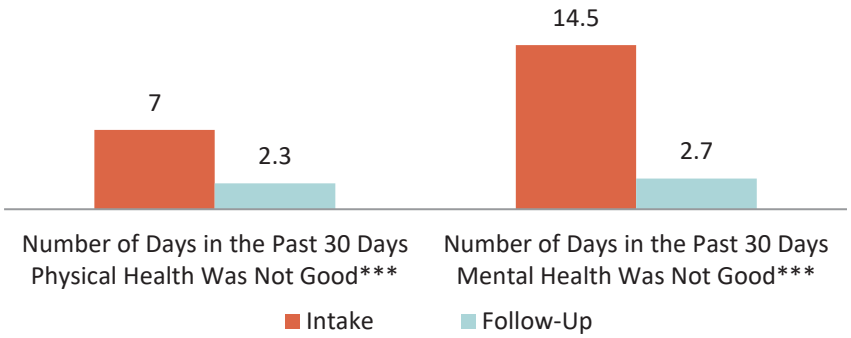
[62] The survey items for assessing interpersonal victimization were not comparable in FY 2017 when victimization items were first added in September 2016.

[63] One individual had missing data for general health status at intake.

NUMBER OF DAYS PHYSICAL AND MENTAL HEALTH WAS NOT GOOD

At intake and follow-up, individuals were asked how many days in the past 30 days their physical and mental health were not good. The average number of days individuals reported their physical health was not good decreased significantly from intake (7.0) to follow-up (2.3; see Figure 3.16). Individuals' self-reported number of days their mental health was not good decreased significantly from intake (14.5) to follow-up (2.7).

FIGURE 3.16. PERCEPTIONS OF POOR PHYSICAL HEALTH AND MENTAL HEALTH IN THE PAST 30 DAYS AT INTAKE AND FOLLOW-UP (N = 282)[64]

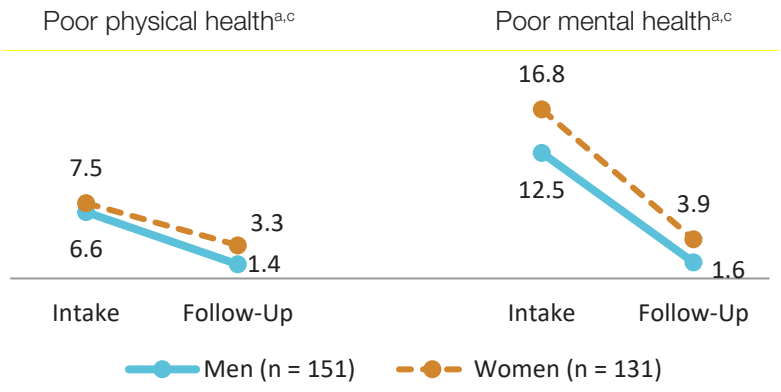


a—Statistical significance tested by paired t-test, ***p < .001.

GENDER DIFFERENCES IN AVERAGE NUMBER OF DAYS OF POOR PHYSICAL AND MENTAL HEALTH

At intake, there was no statistically significant difference in the average number of days their physical and mental health were not good (see Figure 3.17). However, at follow-up, women reported a significantly higher average number of days their physical health was not good compared to men. At intake and follow-up, women had a higher average number of days their mental health was not good compared to men. The average number of days of poor physical and mental health decreased significantly from intake to follow-up for women and men.

FIGURE 3.17. GENDER DIFFERENCES IN THE AVERAGE NUMBER OF DAYS OF POOR PHYSICAL AND MENTAL HEALTH AT INTAKE AND FOLLOW-UP[a,b]

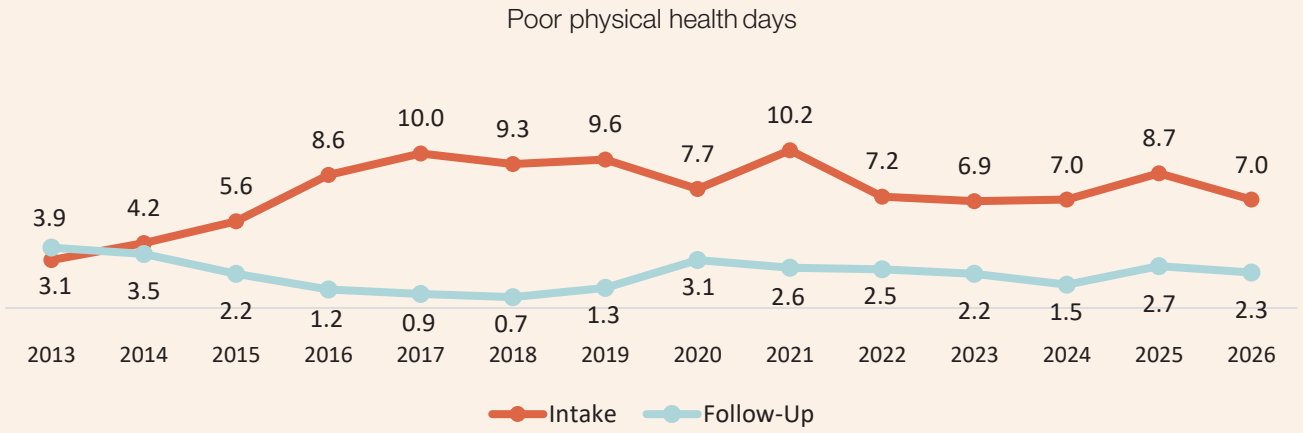


a—Significant difference by gender at follow-up (p < .01).
b—Significant difference by gender at intake (p < .01) and follow-up (p < .01).
c—There was a statistical decrease from intake to follow-up for men (p < .001) and women (p < .001).

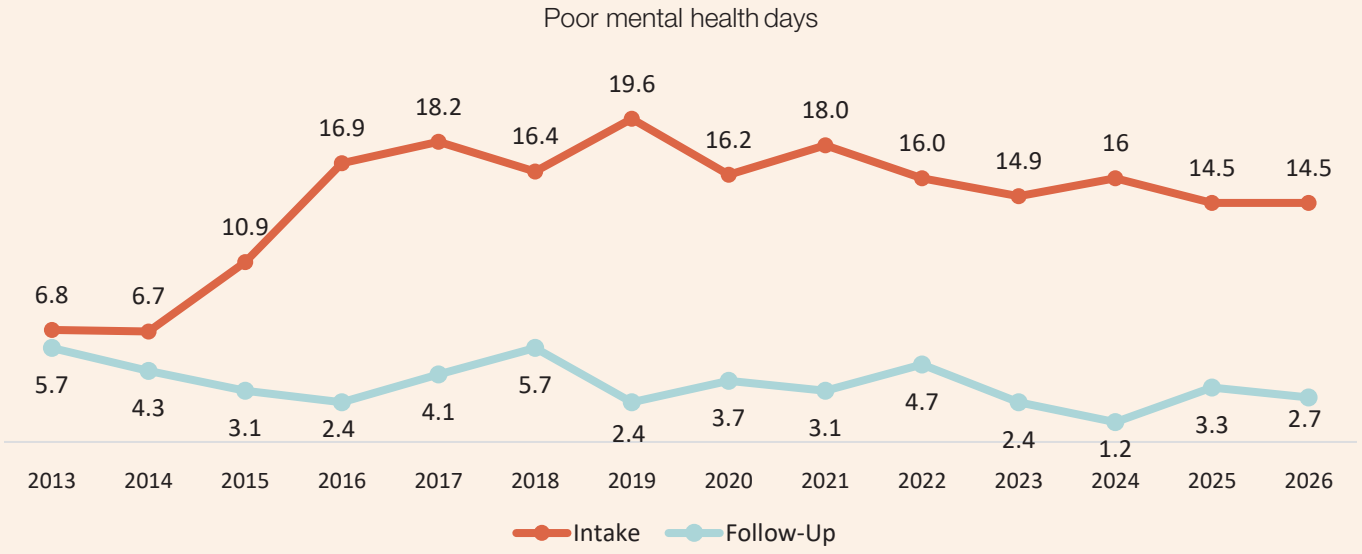
[64] One individual had missing data for the number of days their mental health was not good at follow-up.

TRENDS IN POOR PHYSICAL AND MENTAL HEALTH DAYS

At intake and follow-up, individuals are asked how many days in the past 30 days their physical health has been "not good". Since the 2013 report, the average number of poor physical health days at intake has increased from 3.1 days to a high of 10.2 days in the 2021 report. The average number of poor physical health days has been significantly lower at follow-up than at intake, since the 2015 report.



At intake and follow-up, clients are also asked how many days in the past 30 days their mental health has been "not good." The average number of poor mental health days reported at intake has increased dramatically from the 2013 report (6.8) to the 2019 report (19.6). In the last three reports, the average number of days of poor mental health has fluctuated between 14.5 and 16.0. Since the 2015 report, the average number of days of poor mental health has decreased from intake to follow-up.



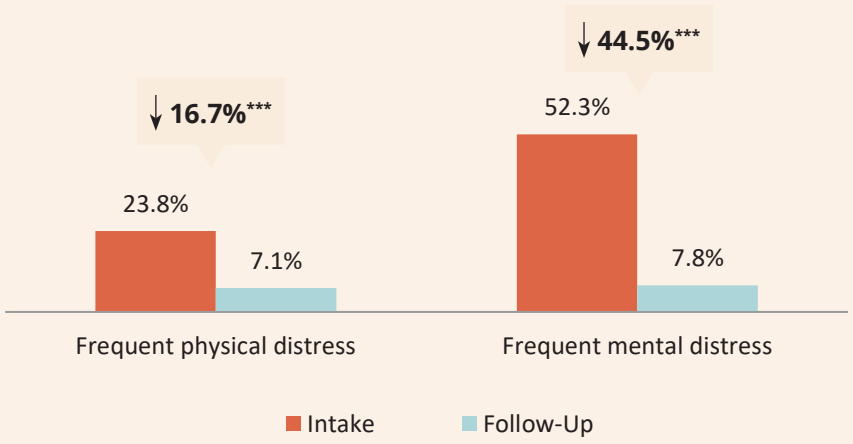
FREQUENT PHYSICAL AND MENTAL DISTRESS

Individuals who report 14 or more days (in the 30-day period) of their physical health not being good were classified as experiencing frequent physical distress.[65] The same classification was carried out for the number of days their mental health is not good.

At intake, 23.8% of RCOS respondents experienced frequent physical distress, and at follow-up, a significantly lower percentage had frequent physical distress (7.1%). In comparison, 17.4% of the general population of adults in Kentucky reported frequent physical distress in 2024. Kentucky was ranked 47th in the U.S. for frequent physical distress.[66]

At intake, around one-half of RCOS respondents experienced frequent mental distress, and at follow-up, there was significantly lower percentage (7.8%). In comparison, 18.4% of the general population in Kentucky in 2024 experienced frequent mental distress. Kentucky was ranked 44th in the U.S. for frequent mental distress.[67]

FIGURE 3.18. PERCENT OF RESPONDENTS WITH FREQUENT PHYSICAL DISTRESS AND MENTAL DISTRESS AT INTAKE AND FOLLOW-UP (N = 282)[68]



***p < .001.

NUMBER OF DAYS POOR PHYSICAL AND MENTAL HEALTH LIMITED ACTIVITIES

Individuals were also asked to report the number of days in the past 30 days poor physical or mental health had kept them from doing their usual activities (see Figure 3.19). The average number of days clients reported their physical or mental health kept them from doing their usual activities decreased significantly from intake to follow-up (10.5 to 2.1).

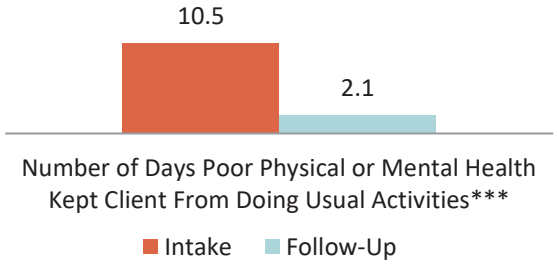
[65] Centers on Disease Control & Prevention, Behavioral Risk Factor Surveillance System, 2022.

[66] https://www.americashealthrankings.org/explore/measures/Physical_distress/KY

[67] https://www.americashealthrankings.org/explore/measures/mental_distress/KY

[68] One individual had missing data for the number of days their mental health was not good at follow-up.

FIGURE 3.19. AVERAGE NUMBER OF DAYS POOR PHYSICAL OR MENTAL HEALTH LIMITED ACTIVITIES IN THE PAST 30 DAYS (N = 281)[69]

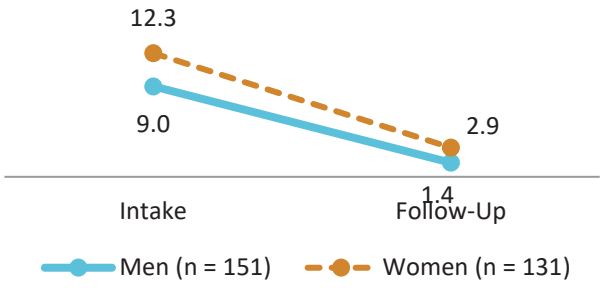


a—Statistical significance tested by paired t-test; ***p < .001

GENDER DIFFERENCE IN DAYS POOR HEALTH LIMITING ACTIVITIES

At intake and follow-up, compared to men, women reported a higher average number of days poor physical or mental health limited their activities (see Figure 3.20). The number of days poor physical or mental health limited their activities decreased significantly from intake to follow-up for men and women.

FIGURE 3.20. GENDER DIFFERENCE IN AVERAGE NUMBER OF DAYS POOR PHYSICAL AND MENTAL HEALTH LIMITED ACTIVITIES AT INTAKE AND FOLLOW-UP[a,b]



a—Significant different by gender at intake (p < .05) and follow-up (p < .05).
b—There was a statistical decrease from intake to follow-up for men (p < .001) and women (p < .001).

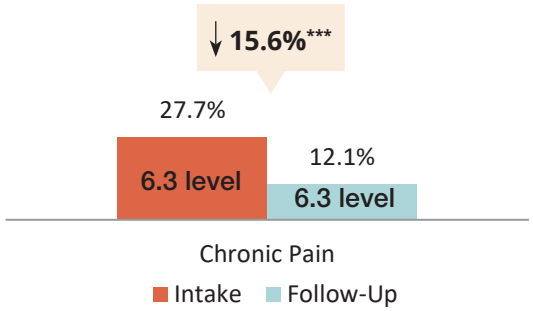
CHRONIC PAIN

The percentage of clients who reported chronic pain that was persistent and lasted at least 3 months decreased significantly 15.6% from intake to follow-up (see Figure 3.21). Among the followed-up individuals who reported chronic pain at intake (n = 78), they reported an average pain intensity level of 6.3 and experiencing pain 25.0 days out of the 30 days before entering the program. Among the followed-up individuals who reported chronic pain at follow-up (n = 34)[70], they had an average pain intensity rating of 6.3 and experienced chronic pain an average of 24.8 days out of the past 30.

[69] One individual had a missing value for number of days mental health was not good and number of days poor physical and mental health limited activities at follow-up.

[70] One individual had missing date for the rating of their average pain intensity at follow-up.

FIGURE 3.21. CLIENTS REPORTING CHRONIC PAIN AT INTAKE AND FOLLOW-UP (N = 282)



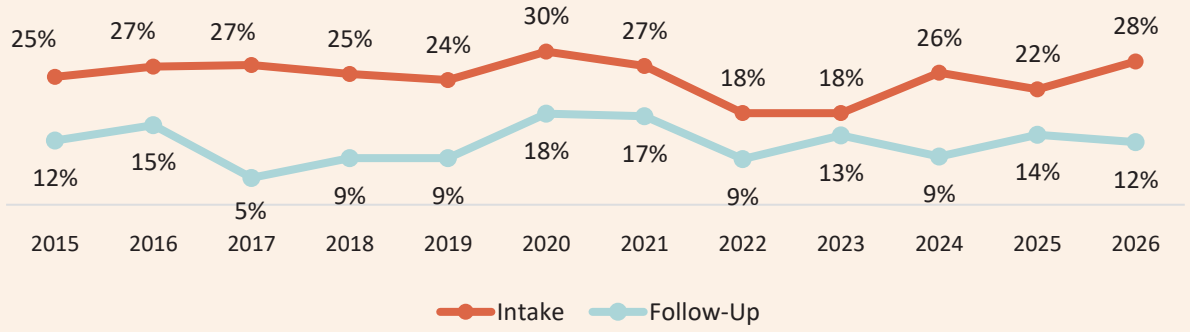
***p < .001.

TRENDS IN CHRONIC PAIN

An important caveat is that a question asking respondents the number of months they experienced chronic pain was added to the intake surveys in the last month for the 2021 report and for the follow-up surveys in the 2021 report. Before this, individuals were asked to report if they had experienced chronic pain that lasted at least 3 months in the 6-month period at intake and at follow-up. Once we added the question about number of months, we discovered that a small number of individuals reported they had experienced chronic pain but then reported they had it fewer than 3 months. For those individuals we computed a new variable for chronic pain. Respondents were classified as experiencing chronic pain if they reported "yes" to the question and reported 3 or more months in the 6-month period.

Over the past twelve report years, the percentage of RCOS clients reporting chronic pain that persisted for at least 3 months in the 6 months before entering the recovery center has ranged from a high of 30% in the 2020 report to a low of 18% in the 2022 and 2023 reports.

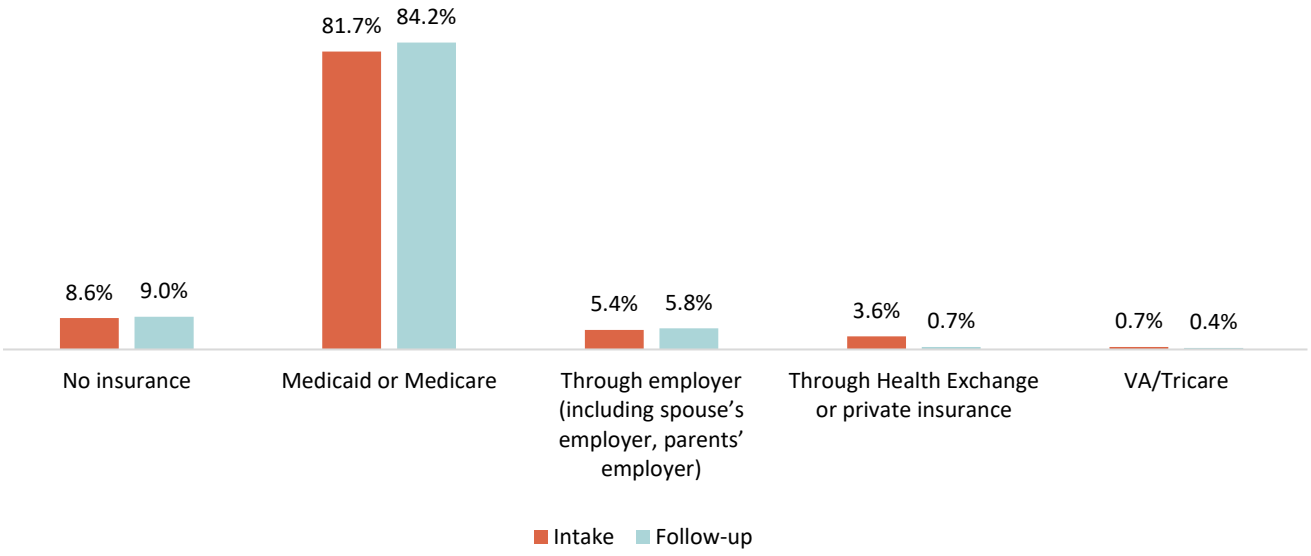
At follow-up, the percentage of clients reporting persistent chronic pain in the past 6 months ranged from a high of 18% in the 2020 report to a low of 5% in the 2017 report.



HEALTH INSURANCE

At intake, about four-fifths of RCOS clients reported they had health insurance through Medicaid or Medicare (81.7%; see Figure 3.22). A small percentage did not have any insurance (8.6%). Small numbers of clients had insurance through an employer, including through a spouse or parent (5.4%), and very small percentages reported they had health insurance through Health Exchange or private insurance (0.7%), and VA/Tricare (0.4%). At follow-up, there was no significant change in the percentage of respondents with each of the types of health insurance.

FIGURE 3.22. HEALTH INSURANCE FOR RCOS CLIENTS AT INTAKE AND FOLLOW-UP (N = 278)[a71]



a – Significance tested with the Stuart-Maxwell Test for Marginal Homogeneity; not statistically significant.

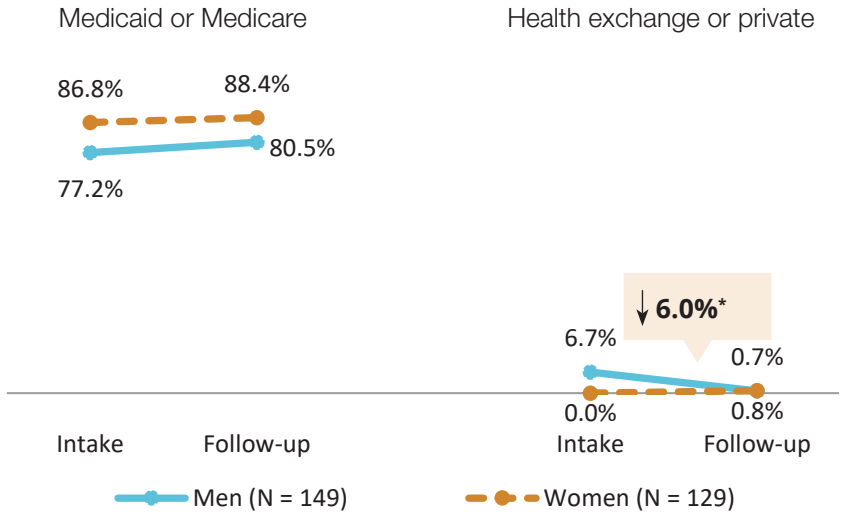
GENDER DIFFERENCE IN MEDICAL INSURANCE

Compared to men, significantly more women reported having Medicaid or Medicare at intake (see Figure 3.23). Also at intake, significantly more men than women reported they had health insurance through the health exchange or private insurance. There was no statistically significant change in the percentage of men and women who had Medicaid at follow-up relative to intake. However, there was a statistically significant decrease in the percentage of individuals who reported insurance through the Health Exchange or private insurance from intake to follow-up.

> **Everyday I hated being there, but everyday I loved being there, too.** Now that I'm 6 months removed, I looks back on his time there very fondly. I don't think I would be as successful at the program I'm at now without the [recovery program]. It teaches you personal accountability and responsibility.
>
> - RCOS FOLLOW-UP RESPONDENT

[71] Four individuals had missing data for medical insurance: 2 at intake and 2 at follow-up.

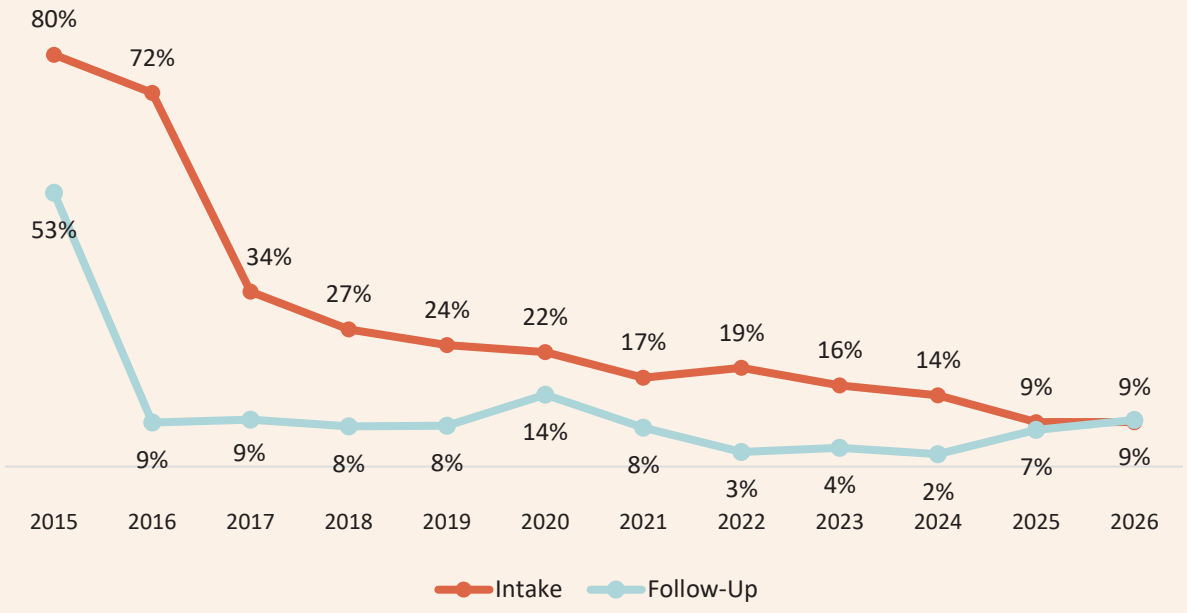
FIGURE 3.23. GENDER DIFFERENCE IN CLIENTS REPORTING HAVING MEDICAID AND INSURANCE THROUGH AN EMPLOYER PLAN AT INTAKE AND FOLLOW-UP[a]



a—Statistical difference by gender at intake ($p < .05$).
*$p < .05$.

TRENDS IN NO HEALTH INSURANCE

With the expansion of Medicaid starting in 2014 in Kentucky, the percentage of RCOS clients reporting they did not have health insurance at intake decreased dramatically in the 2017 report (corresponding to intake surveys conducted in FY 2015) and at follow-up in the 2016 report (corresponding to follow-up surveys conducted in FY 2015).



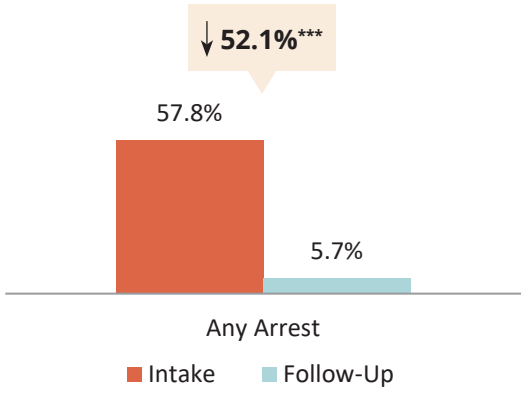
SECTION 4. INVOLVEMENT IN THE CRIMINAL LEGAL SYSTEM

This section describes changes in client involvement with the criminal legal system from intake to follow-up. Specifically, the following targeted factors are presented in this section: (1) arrests, (2) incarceration, (3) self-reported misdemeanor and felony convictions, and (4) self-reported supervision by the criminal legal system.

ARRESTS

At intake, individuals were asked about their arrests in the 6 months before they entered the recovery center and at follow-up individuals were asked about their arrests in the past 6 months. The majority of individuals (57.8%) reported an arrest in the 6 months before entering the recovery center (see Figure 4.1). At follow-up, this percentage decreased significantly by 52.1% to 5.7%.

FIGURE 4.1. CLIENTS REPORTING ANY ARRESTS AT INTAKE AND FOLLOW-UP (N = 282)

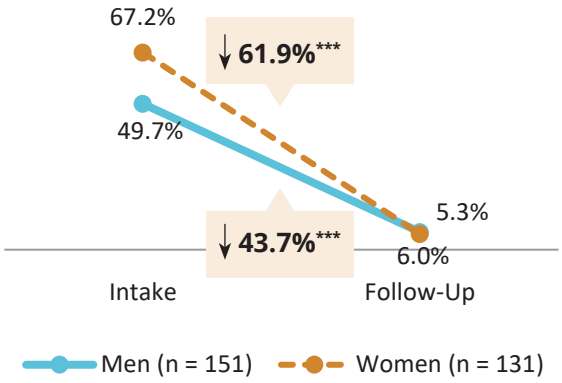


***p < .001.

GENDER DIFFERENCE IN ARRESTS

Compared to men (49.7%), significantly more women (67.2%) reported they had been arrested in the 6 months before entering the program (see Figure 4.2). From intake to follow-up, there was a significant decrease in the percentage of men and women who reported they had been arrested in the past 6 months. At follow-up, there was no gender difference in the percentage of individuals who reported an arrest.

FIGURE 4.2. GENDER DIFFERENCE IN CLIENTS REPORTING HAVING BEEN ARRESTED AT INTAKE AND FOLLOW-UP[a]

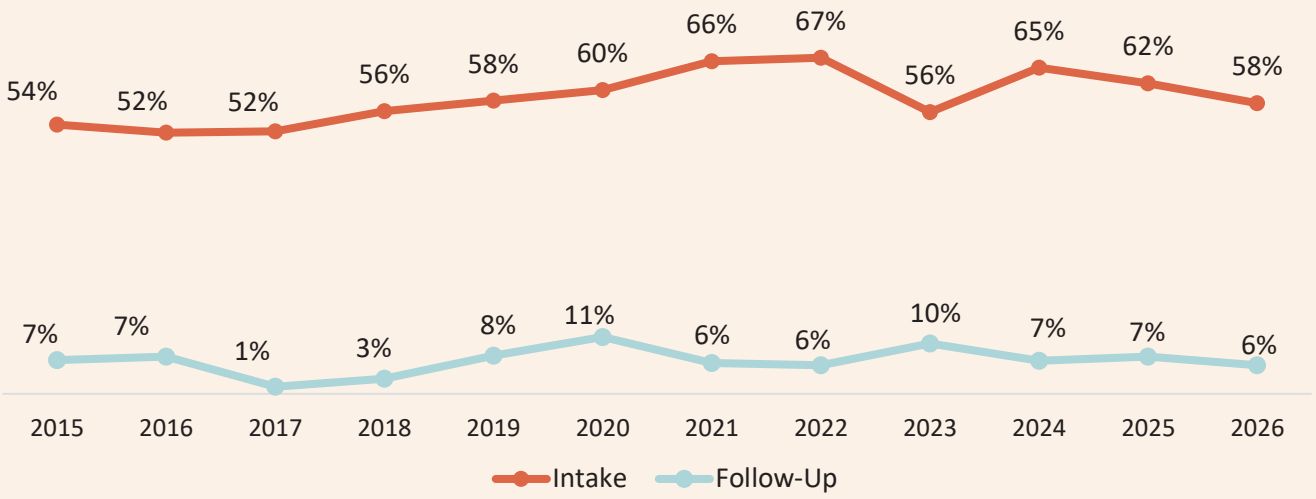


a—Statistical difference by gender at intake ($p < .01$).
***$p < .001$.

TRENDS IN ARRESTS

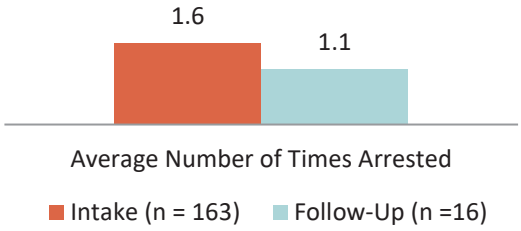
In the past twelve annual reports, over half of RCOS clients reported at least one arrest in the past 6 months at intake. The percentage has increased from a low of 52% in the 2017 report to a high of 67% in the 2022 report.

Compared to intake, significantly fewer clients reported an arrest in the past 6 months at follow-up in each of the twelve annual reports. The percentage of individuals reporting an arrest in the 6 months before follow-up has been a low of 1% in the 2017 report to a high of 11% in the 2020 report.



Among the individuals who reported they had been arrested in the 6 months before entering the recovery center (n = 163), they were arrested an average of 1.6 times (see Figure 4.3). Among the small number of individuals who reported an arrest in the 6 months before follow-up (n = 16), they reported being arrested an average of 1.1 times.

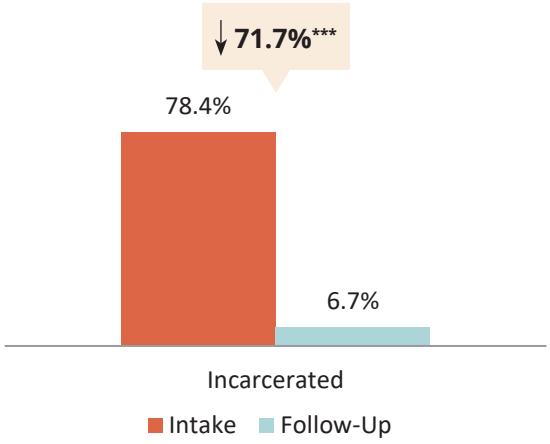
FIGURE 4.3. AMONG INDIVIDUALS WHO WERE ARRESTED, THE AVERAGE NUMBER OF TIMES ARRESTED AT INTAKE AND FOLLOW-UP



INCARCERATION

More than three-fourths of clients (78.4%) reported spending at least one day in jail or prison in the 6 months prior to entering the recovery center (see Figure 4.4). At follow-up, only 6.7% reported spending at least one day incarcerated in the past 6 months, which was a significant decrease of 71.7%.

FIGURE 4.4. CLIENTS REPORTING INCARCERATION AT INTAKE AND FOLLOW-UP (N = 282)

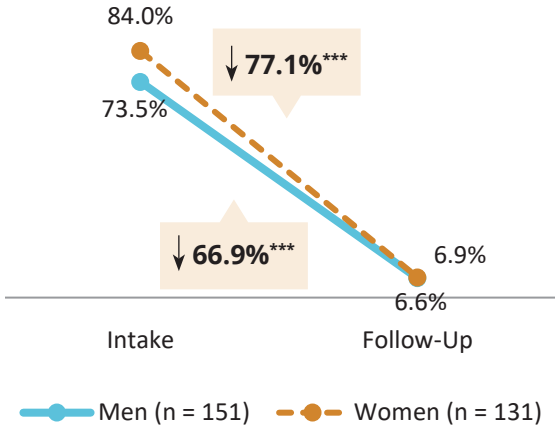


***p < .001.

GENDER DIFFERENCE IN INCARCERATION

Significantly more women (84.0%) than men (73.5%) reported they had been incarcerated in the 6 months before entering the program (see Figure 4.5). From intake to follow-up, there was a significant decrease in the percentage of men and women who reported they had been incarcerated in the past 6 months. At follow-up, there was no gender difference in the percentage of individuals who reported incarceration.

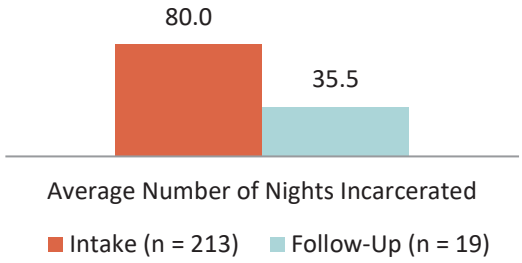
FIGURE 4.5. GENDER DIFFERENCE IN CLIENTS REPORTING HAVING BEEN INCARCERATED AT INTAKE AND FOLLOW-UP[a]



a—Statistical difference by gender at intake ($p < .05$).
***$p < .001$.

Among individuals who were incarcerated in the 6 months before entering the program (n = 213)[72], the average number of nights incarcerated was 80.0 (see Figure 4.6). Among the number of individuals who reported being incarcerated in the 6 months before follow-up (n = 19), the average number of nights incarcerated was 35.5.

FIGURE 4.6. AMONG INDIVIDUALS WHO WERE INCARCERATED, THE AVERAGE NUMBER OF NIGHTS INCARCERATED AT INTAKE AND FOLLOW-UP

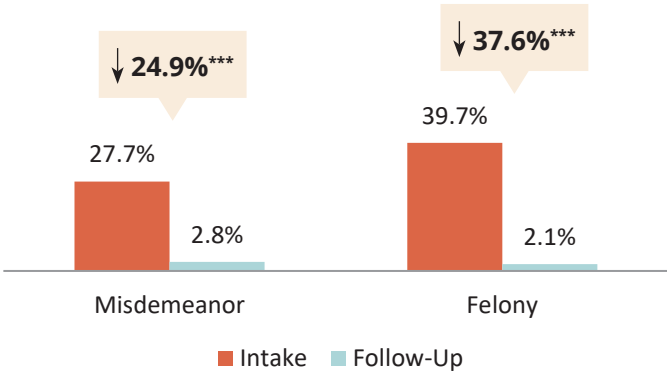


SELF-REPORTED MISDEMEANOR AND FELONY CONVICTIONS

At intake 27.7% of individuals reported they had been convicted of a misdemeanor in the 6 months before entering the recovery center (see Figure 4.7). The percentage decreased significantly to 2.8% at follow-up. The percentage of individuals who reported being convicted of a felony also significantly decreased from intake (39.7%) to follow-up (2.1%).

[72] Eight individuals knew they had been incarcerated but had missing data for the number of days they were incarcerated at intake.

FIGURE 4.7. CLIENTS REPORTING CONVICTIONS AT INTAKE AND FOLLOW-UP (N = 282)

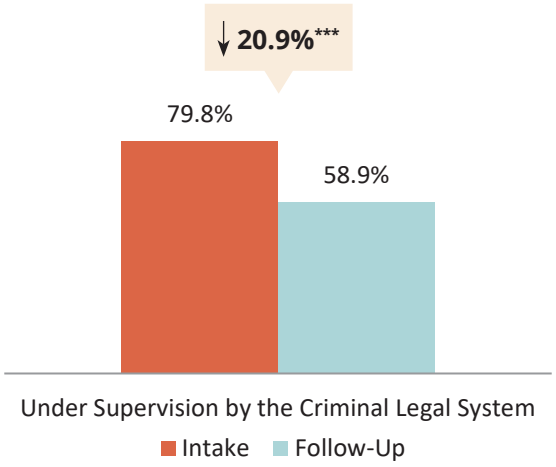


***p < .001.

SELF-REPORTED CRIMINAL LEGAL SYSTEM SUPERVISION

About four-fifths of clients (79.8%) were under supervision by the criminal legal system (e.g., probation or parole) when they entered Phase I of the recovery center program, whereas a significantly smaller percent were under supervision by the criminal legal system at follow-up (58.9%)--a significant decrease of 20.9%; see Figure 4.8).

FIGURE 4.8. CLIENTS REPORTING SUPERVISION BY THE CRIMINAL LEGAL SYSTEM AT INTAKE AND FOLLOW-UP (N = 282)



***p < .001.

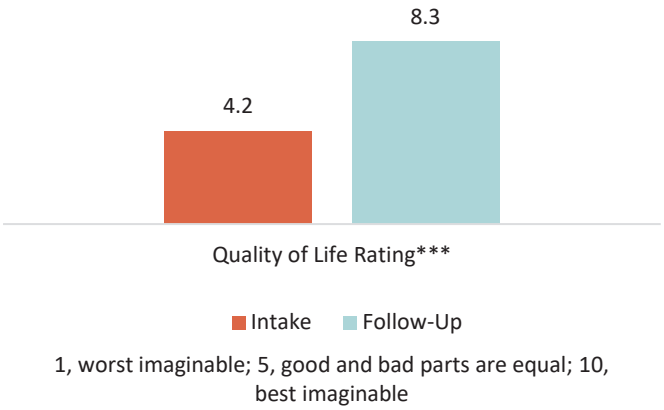
SECTION 5. **QUALITY OF LIFE**

Clients' perception of their overall quality of life was measured at intake and follow-up and are presented in this section.

SUBJECTIVE RATING OF QUALITY OF LIFE

At intake, clients were asked to rate their quality of life before entering the recovery center. Ratings were from 1='Worst imaginable' to 5='Good and bad parts were about equal' to 10='Best imaginable'. RCOS clients rated their quality of life before entering the recovery center, on average, as 4.2 (see Figure 5.1). At follow-up, individuals were asked the same question about their current quality of life. The average rating of subjective quality of life at follow-up increased significantly to 8.3.

FIGURE 5.1. SUBJECTIVE QUALITY OF LIFE BEFORE AND AFTER THE PROGRAM (N = 280)[73]



***p < .001.

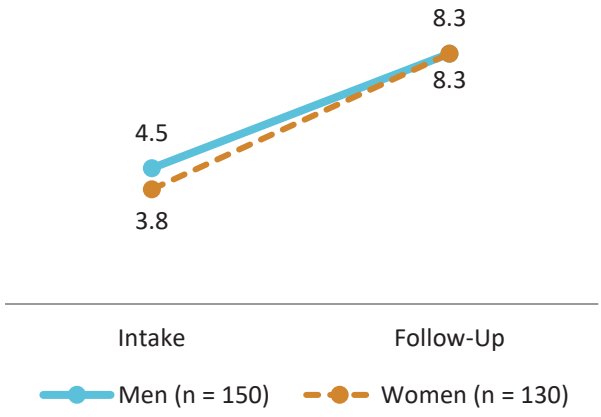
GENDER DIFFERENCE IN RATING OF SUBJECTIVE QUALITY OF LIFE

Women reported a significantly lower average rating of their quality of life at intake relative to men (see 5.2). For both women and men, the average rating of subjective quality of life increased significantly at follow-up. At follow-up, there was no longer a gender difference in the rating.

> I have seen a lot of people be successful in the program and I'm friends with a lot of the girls there, the people that got sober, the counselors. **It is a tough program, but it really does work.**
>
> - RCOS FOLLOW-UP RESPONDENT

[73] Two individuals had missing data for the rating of their subjective quality of life at follow-up.

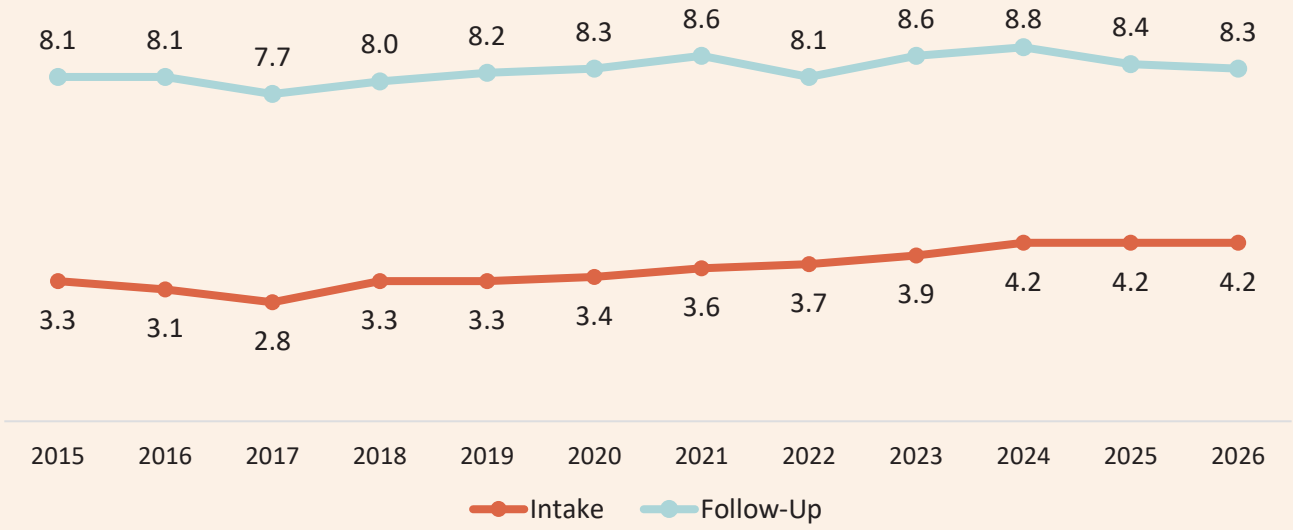
FIGURE 5.2. GENDER DIFFERENCE IN AVERAGE RATING OF SUBJECTIVE QUALITY OF LIFE AT INTAKE AND FOLLOW-UP[a,b]



a—Significant different by gender at intake ($p < .05$).
b—There was a statistical decrease from intake to follow-up for men ($p < .001$) and women ($p < .001$).

TRENDS IN OVERALL QUALITY OF LIFE RATING

Clients are asked to rank their overall quality of life on a scale from 1 (worst imaginable) to 10 (best imaginable) at both intake and follow-up. At intake until the 2023 report, RCOS clients have consistently rated their quality of life, on average, between 3 and 4. In the 2024 and 2025 reports, the average rating was 4.2. Compared to intake, that rating at follow-up significantly increased each year, to an average of about 8 in most years, but 8.6 in the 2021 and 2023 reports, and 8.8 in the 2024 report.



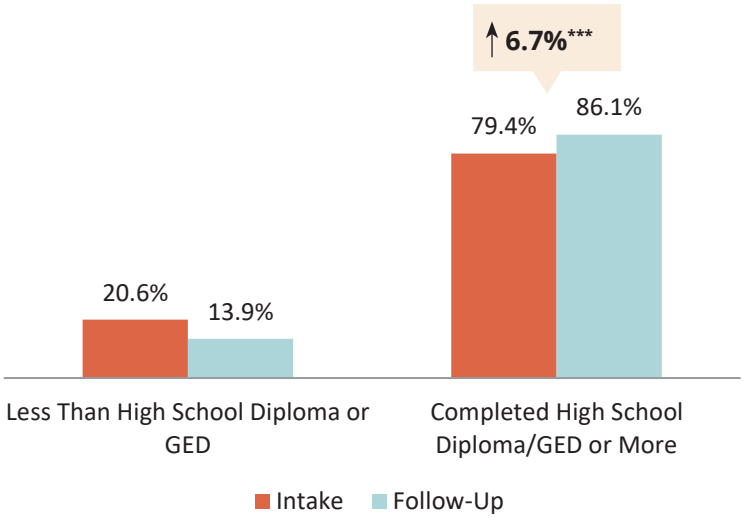
SECTION 6. **EDUCATION AND EMPLOYMENT**

This section examines changes in education and employment from intake to follow-up including: (1) highest level of education completed, (2) the percent of clients who worked full-time or part-time, (3) the number of months clients were employed full-time or part-time, among those who were employed at any point in the 6-month period, (4) the median hourly wage, among those who were employed in the prior 30 days, and (5) expectations to be employed in the next 6 months.

EDUCATION

Based on respondents' highest level of education completed, they were categorized into one of two categories: (1) less than a high school diploma or GED, or (2) a high school diploma or GED or higher (see Figure 6.1). At intake, 79.4% of the follow-up sample had a high school diploma or GED or had attended school beyond a high school diploma or GED and at follow-up, the percentage had increased significantly to 86.1%. At intake, 20.6% of the follow-up sample reported that they had less than a high school diploma or GED. At follow-up, 13.9% reported that they had completed less than a high school diploma or GED.

FIGURE 6.1. HIGHEST LEVEL OF EDUCATION COMPLETED AT INTAKE AND FOLLOW-UP (N = 281)[74]



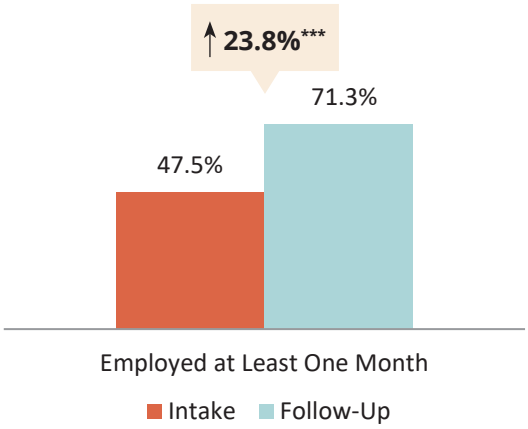
***p < .001.

EMPLOYMENT

Respondents were asked in the intake survey to report the number of months they were employed full-time or part-time in the 6 months before they entered the recovery center. At follow-up, they were asked to report the number of months they were employed full-time or part-time in the 6 months before the follow-up survey. Nearly half of clients (47.5%) reported at intake they had worked full-time or part-time at least one month (see Figure 6.2). At follow-up, 71.3% worked part-time or full-time at least one month in the past 6 months, which was a significant increase of 23.8%.

[74] One individual had missing data for highest level of education at follow-up.

FIGURE 6.2. EMPLOYED FULL-TIME OR PART-TIME FOR AT LEAST ONE MONTH AT INTAKE AND FOLLOW-UP (N= 282)

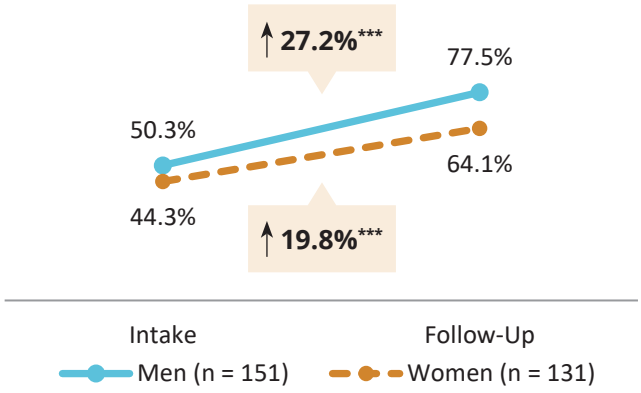


***p < .001.

GENDER DIFFERENCE IN THE PERCENT OF INDIVIDUALS EMPLOYED

A significantly higher percentage of men relative to women reported they were employed part-time or full-time at least one month follow-up (see Figure 6.3). For both men and women, there was a significant increase in the percent reporting employment from intake to follow-up, 27.2% and 19.8% respectively.

FIGURE 6.3. GENDER DIFFERENCE IN EMPLOYED AT LEAST ONE MONTH AT INTAKE AND FOLLOW-UP (N = 282)[a]



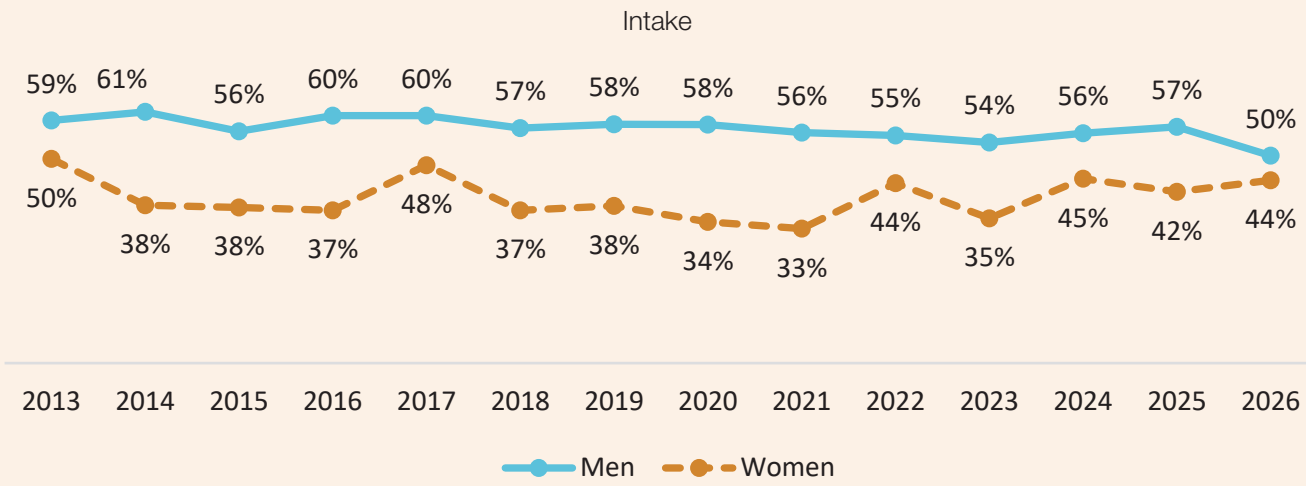
a—Significant difference by gender at follow-up (p < .05).
***p<.001.

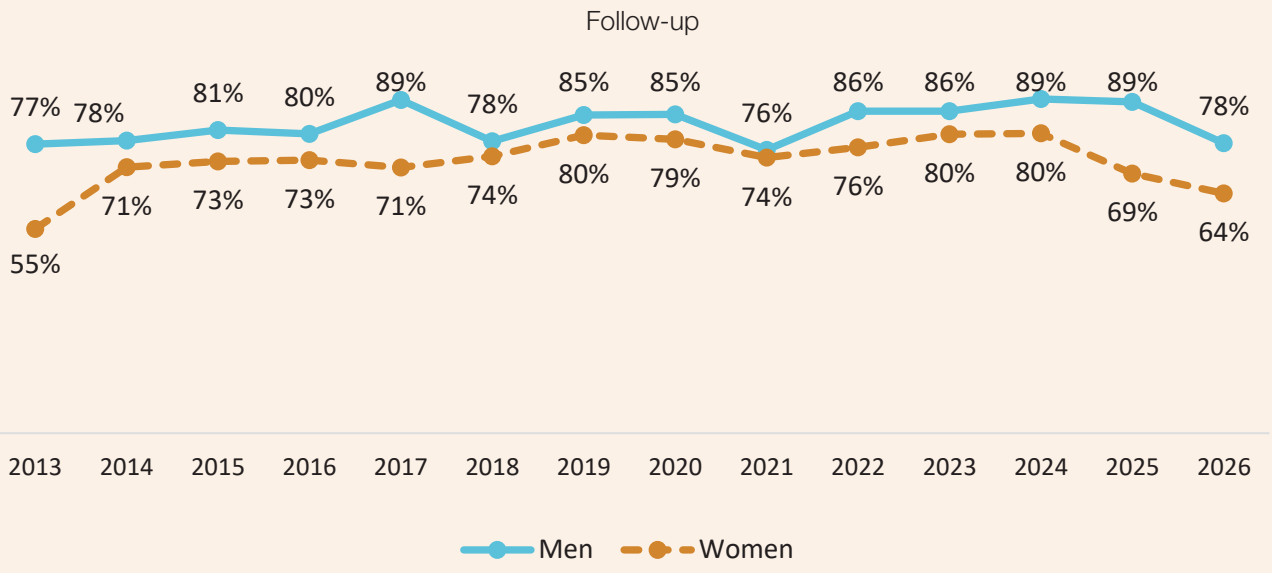
TRENDS IN EMPLOYMENT TRENDS BY GENDER

Since the 2013 report, the disparity in employment between men and women in the RCOS follow-up sample has been presented in every annual report.

From FY 2012 to FY 2014, significantly fewer women reported being employed at intake compared to men; however, in 2017, there was no significant difference in the percent of men and women reporting employment at intake. In the 2018 report, only 37% of women were employed at least one month at intake while 57% of men reported employment. A similar disparity in the percent of men vs. women who reported being employed at least one month before entering the program was found in the 2019 through 2021 reports, and again in the 2023 and 2025 reports. In the 2022, 2024, and 2026 reports, there was no gender difference at program entry.

By follow-up, on average, the majority of women reported they were employed full-time or part-time at least one month in the past 6 months; however, significantly more men reported employment during that same time frame in several reports. However, in the 2018 through 2021 reports and again in the 2023 report, there was no significant difference in the number of men and women who reported employment at least one month in the past 6 months. In the past three annual reports (2024 – 2026), significantly more men reported they were employed full-time or part-time compared to women.

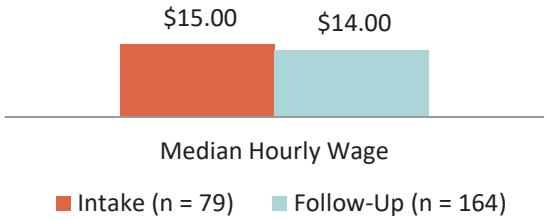




MEDIAN HOURLY WAGE

At each period, individuals who reported they were employed in the 30 days before entering the program (past 30 days, at follow-up) were asked their hourly wage. Only a small percentage of clients reported they were currently employed at intake and reported an hourly wage (n = 79),[75] and their median hourly wage was $15.00 (see Figure 6.6). At follow-up, the median hourly wage was $14.00 for the 164 individuals who were employed and reported an hourly wage.[76]

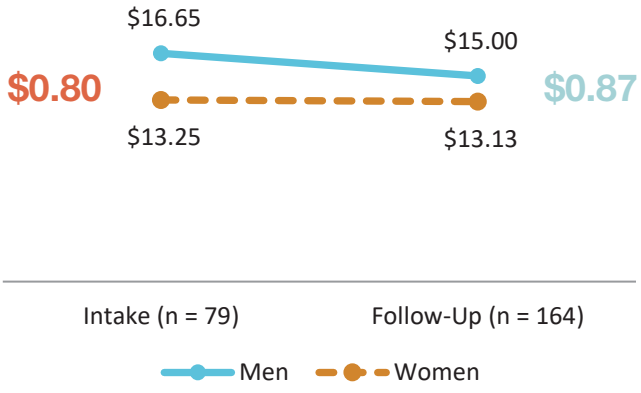
FIGURE 6.4. MEDIAN HOURLY WAGE AT INTAKE AND FOLLOW-UP, AMONG THOSE WHO REPORTED BEING CURRENTLY EMPLOYED



GENDER DIFFERENCE IN MEDIAN HOURLY WAGE

At intake, employed women reported a median hourly wage of $13.25, which was significantly lower than the median hourly wage for employed men, $16.65 (see Figure 6.5). At intake, employed women earned $0.80 for every dollar employed earned. At follow-up, men reported significantly higher median hourly wages compared to women ($15.00 for men and $13.13 for women). At follow-up, employed women earned $0.87 for every dollar employed men earned.[77]

FIGURE 6.5. GENDER DIFFERENCE MEDIAN HOURLY WAGE AT INTAKE AND FOLLOW-UP[a]



a—Significant difference at intake ($p < .01$) and follow-up ($p < .01$) by gender tested with independent-samples median test.

[75] Two individuals had missing values for their hourly wage at intake.

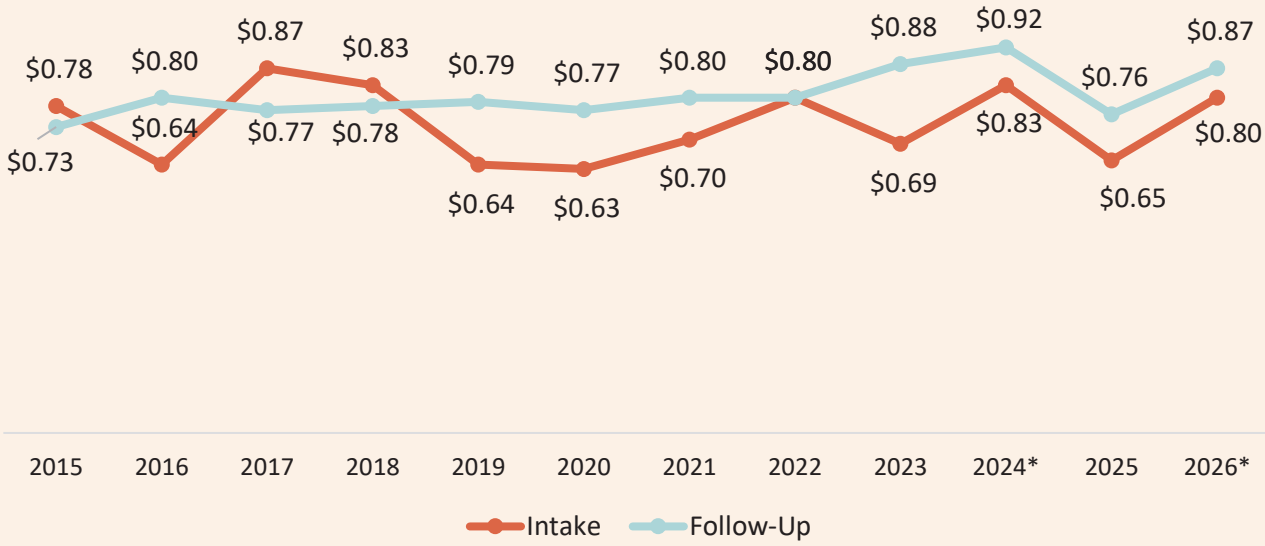
[76] Among the 198 individuals who reported they had been employed in the 30 days before follow-up, 10 had missing values for hourly wage.

[77] We noted a discrepancy in classification of occupation at follow-up compared to past years' reports; therefore, occupation type by gender will not be presented in this year's report.

TRENDS IN GENDER WAGE GAP

For the first nine report years examined, among employed individuals there was a gender wage gap at intake and follow-up: men had higher median hourly wages compared to women, meaning that women made less than $1.00 for every $1.00 that men made. However, in the 2024 report, at intake there was no statistically significant difference in median hourly wage by gender.

In more than half of the report years, the wage gap was greater at intake than at follow-up. At follow-up, for the most extreme gap, employed women earned $0.73 for every $1.00 employed men earned in the 2015 report. The smallest wage gap at follow-up was in the 2024 report; employed women earned $0.92 for every $1.00 employed men earned.



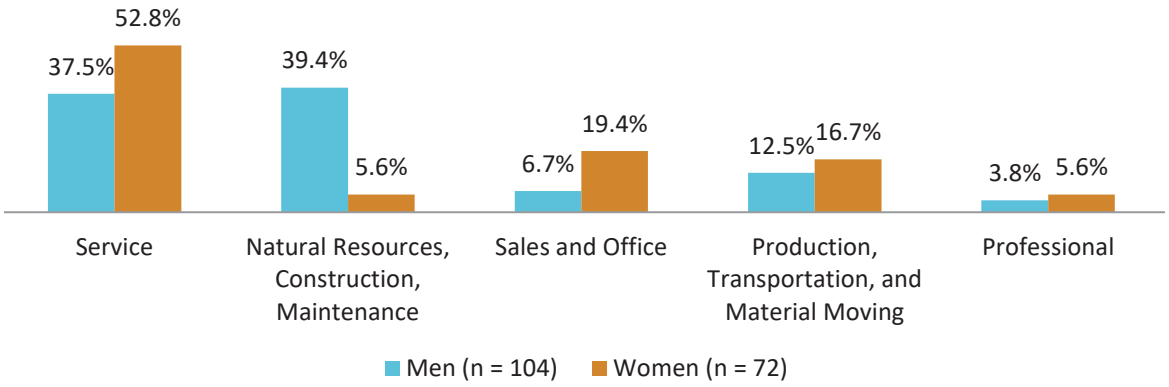
*The median hourly wage for men and women were not statistically different at intake in 2024 and 2026.

GENDER DIFFERENCES IN OCCUPATION TYPE

There are significant differences by gender in occupation type for employed individuals.[78] At follow-up, the majority of employed women (52.8%) reported having a service job (i.e., food preparation and serving, childcare, landscaping, housekeeping, lifeguard, hair stylist, etc.) whereas 37.5% of employed men had a service job (see Figure 6.6). Significantly more employed men reported having a natural resources, construction, or maintenance job (i.e., mining, farming, logging, construction, plumber, mechanic, etc.) than women (39.4% vs. 5.6%). Significantly more women (19.4%) had sales and office jobs (i.e., cashier, retail, telemarketer, bank teller, etc.) compared to men (6.7%). Production, transportation, and material moving jobs (i.e., factory production line, power plant, bus driver, sanitation worker, etc.) were reported by 12.5% of employed men and 16.7% of employed women. Small percentages of men and women reported having professional jobs.

[78] Occupation type was asked only of individuals who reported they were employed in the 30 days before entering the recovery center at intake and the past 30 days at follow-up. Because so few individuals reported employment in the 30 days before entering the recovery center, there were too few cases reporting several occupation types at intake to examine statistical difference by gender.

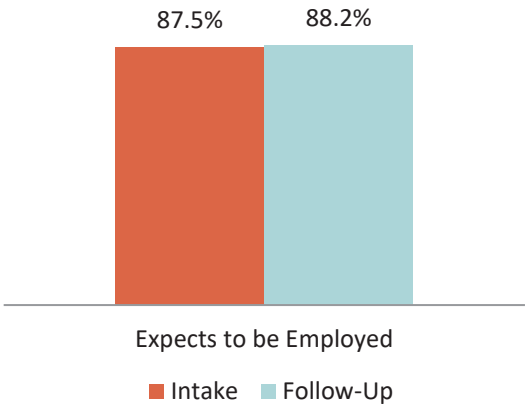
FIGURE 6.6. AMONG EMPLOYED INDIVIDUALS, TYPE OF OCCUPATION BY GENDER AT FOLLOW-UP (n = 176)



EXPECT TO BE EMPLOYED

The vast majority of clients reported they expected to be employed in the next 6 months at intake and follow-up, with no difference from intake to follow-up (see Figure 6.7).

FIGURE 6.7. CLIENT EXPECTS TO BE EMPLOYED IN THE NEXT 6 MONTHS AT INTAKE AND FOLLOW-UP (N = 279)[79]

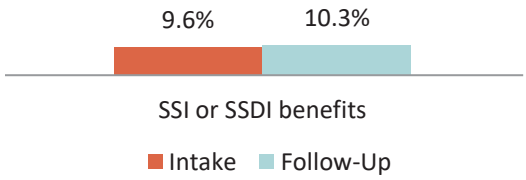


SSI/SSDI BENEFITS

Similar small percentages of individuals reported at intake and follow-up that they were currently receiving SSI or SSDI benefits (see Figure 6.8).

[79] Three individuals had missing data for expected to be employed in the next 6 months at follow-up.

FIGURE 6.8. CLIENT CURRENTLY RECEIVES SSI OR SSDI BENEFITS AT INTAKE AND FOLLOW-UP (N = 281)[80]



[80] One individual had missing information for SSI or SSDI benefits at follow-up.

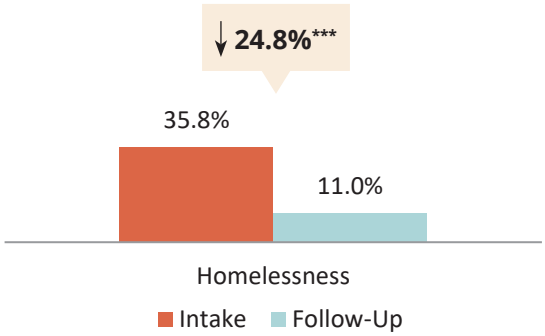
SECTION 7. **LIVING SITUATION**

This section of targeted factors examines the clients' living situation before they entered the program and at follow-up. Specifically, clients are asked in both surveys: (1) if they consider themselves currently homeless, (2) in what type of situation (i.e., own home or someone else's home, residential program, shelter) they have lived, and about (3) economic hardship.

HOMELESSNESS

More than one-third of clients (35.8%) reported being homeless when they entered the recovery center and 11.0% reported they had been homeless at some point in the past 6 months at follow-up. This is a significant decrease of 24.8% in the number of clients who reported they were homeless (see Figure 7.1).

FIGURE 7.1. HOMELESSNESS AT INTAKE AND FOLLOW-UP (N = 282)

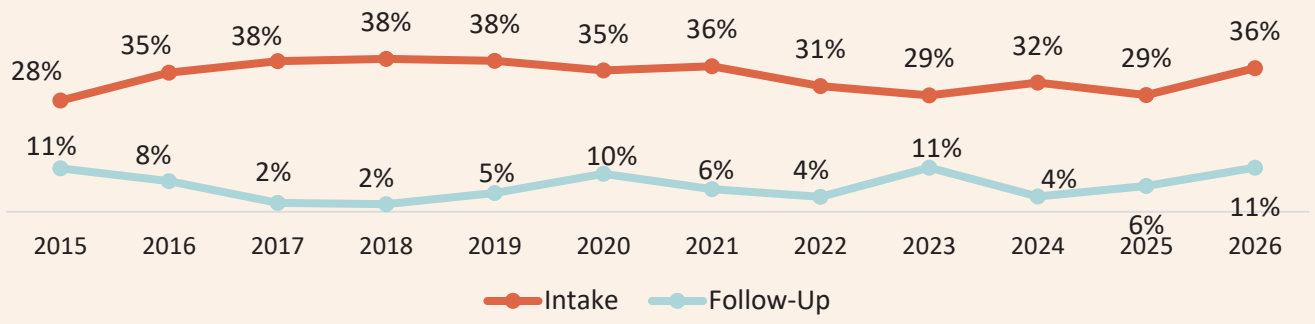


***p < .001.

TRENDS IN HOMELESSNESS

From the 2015 to the 2017 report, at intake, the percentage of people reporting homelessness increased and remained stable from 2017 through 2021. From the 2022 report to the 2025 report, the percentage was around 30% at intake. In this year's report, 36% of individuals reported they had been homeless at some point in the 6 months before entering the program.

The percentage of people reporting homelessness at follow-up has decreased from intake every report year. The percentages of individuals reporting a period homelessness at follow-up has been a low of 2% to a high of 11%.

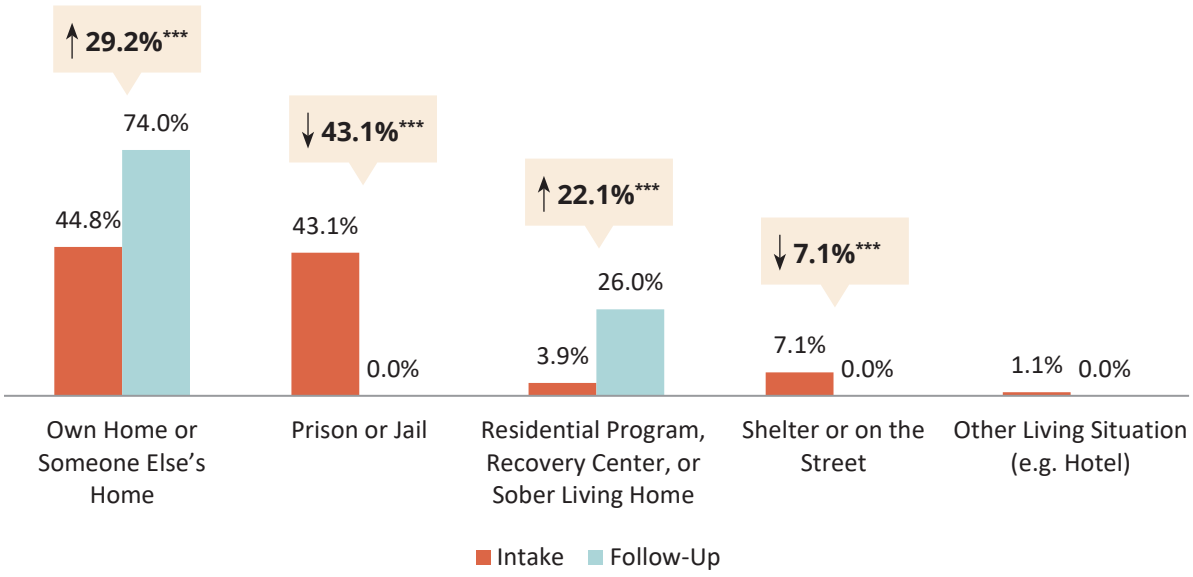


LIVING SITUATION

Change in living situation from intake to follow-up was examined for the RCOS follow-up sample (see Figure 7.2). At intake, individuals were asked about where they lived before entering the recovery center. At intake, less than half of individuals (44.8%) reported living in a private residence (i.e., their own home or someone else's home), whereas at follow-up, the majority (74.0%) reported living in their own home or someone else's home at follow-up—a significant increase of 29.2%. The number of clients who reported living in a jail or prison decreased significantly from 43.1% at intake to 0.0% at follow-up.

Even though the target date for the follow-up survey is 12 months after individuals completed their intake survey and entry into Phase 1, 26.0% reported at follow-up living in a recovery center, residential program, or sober living home in the past 30 days—a significant increase from intake (3.9%). The number of individuals who reported living in a shelter or on the street decreased from intake (7.1%) follow-up (0.0%).

FIGURE 7.2. LIVING SITUATION AT INTAKE AND FOLLOW-UP (N=281)[a81]



a – Significance tested with the Stuart-Maxwell Test for Marginal Homogeneity ($p < .001$).
***$p < .001$.

At the time of the follow-up survey, 35 individuals reported they were living in a recovery center facility. Of the 35 individuals who were living in a recovery center at follow-up, 48.6% were in one of the phases of the program, 34.3% said they were living in transitional housing connected to the program, and 17.1% were a peer mentor or staff member.

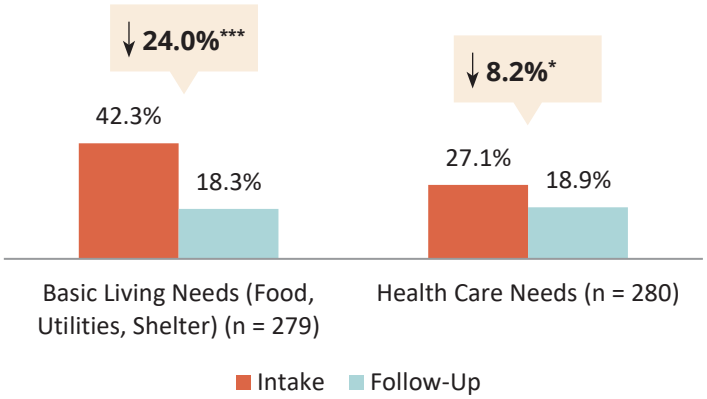
ECONOMIC HARDSHIP

Economic hardship may be a better indicator of the actual day-to-day living situation clients face than a measure of income. Therefore, the intake and follow-up surveys included several questions about

[81] One individual had missing data for where they lived at follow-up.

clients' difficulty meeting basic living needs and health care needs.[82] Clients were asked eight items, five of which asked about difficulty meeting basic living needs such as food, shelter, utilities, and telephone, and three items asked about difficulty for financial reasons in obtaining health care. The percentage of clients who reported having difficulty meeting basic living needs decreased significantly from intake (42.3%) to follow-up (18.3%; see Figure 7.3). More than one-fourth of clients (27.1%) reported having difficulty in obtaining health care needs (e.g., doctor visits, dental visits, and filling prescriptions) for financial reasons at intake, with a significant decrease to 18.9% at follow-up.

FIGURE 7.3. ECONOMIC HARDSHIP AT INTAKE AND FOLLOW-UP[83]



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

> It saved my life honestly. **It helped me take a look at myself and see both the truth and what wasn't real.** They helped me a lot and they became a second family to me. When they showed me that they really cared and wanted me to do good it really changed a lot for me.
>
> - RCOS FOLLOW-UP RESPONDENT

[82] She, P., & Livermore, G. (2007). Material hardship, poverty, and disability among working-age adults. *Social Science Quarterly, 88*(4), 970-989.

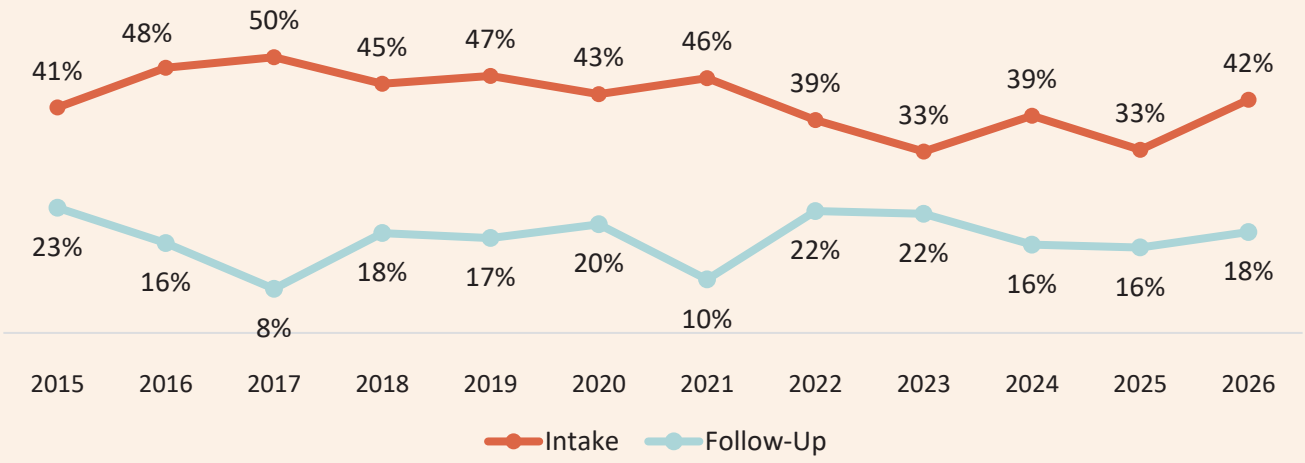
[83] Five individuals had missing values for the items at difficulty meeting basic living needs at follow-up.

TRENDS IN ECONOMIC HARDSHIP

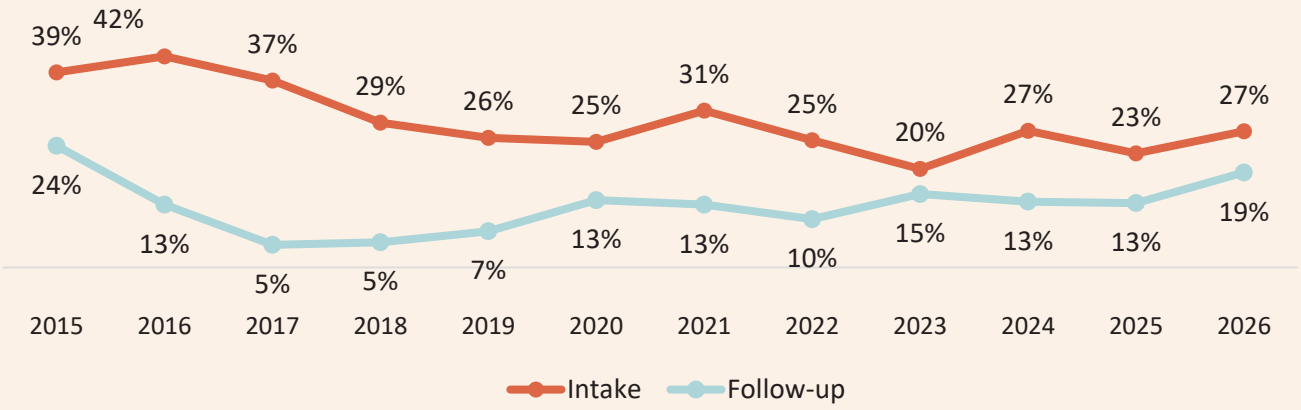
Since the 2015 report, there has been a significant decrease from intake to follow-up each year in the percentage of clients who reported they had difficulty meeting basic living needs in the past 6 months. At intake, the percentage of clients who had difficulty meeting basic living needs (e.g., housing, utilities, and food) has increased from 41% in 2025 to a high of 50% in 2017 before decreasing to 33% in the 2023 and 2025 reports. At follow-up, the percentage of clients who had difficulty meeting basic living needs fluctuated from a high of 23% in 2015 to a low of 8% in 2017.

The percentage of clients reporting difficulty meeting health care needs (e.g., unable to see a doctor, dentist, or pay for prescription medication) had more dramatic decreases from intake to follow-up in report years 2016 to 2017. The expansion of Medicaid in the state under the implementation of the Affordable Care Act corresponds to the follow-up period in the 2017 report. Nonetheless, the decrease from intake to follow-up was significant in all years except in the 2023 report.

Basic living needs



Health care needs



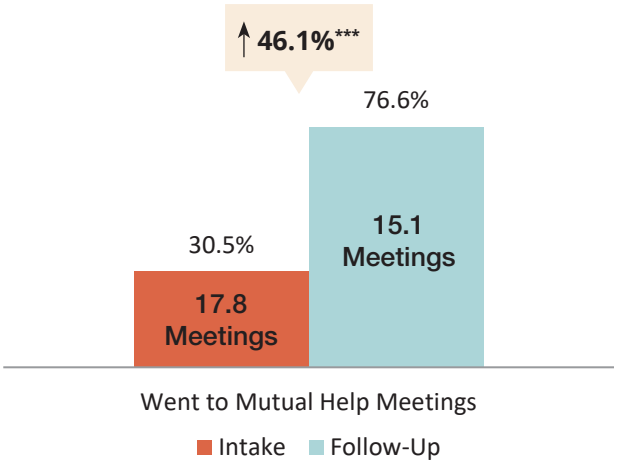
SECTION 8. **RECOVERY SUPPORTS**

This section focuses on five changes in recovery supports: (1) percent of clients attending mutual help recovery group meetings, (2) recovery supportive interactions in the past 30 days, (3) the number of people the individual said they could count on for recovery support, (4) what would be most useful to them in staying off drugs or alcohol, and (5) how good they felt their chances were of staying off drugs or alcohol in the future.

ATTENDANCE OF MUTUAL HELP RECOVERY GROUP MEETINGS

At intake, 30.5% of individuals reported going to mutual help recovery group meetings (e.g., AA, NA) in the 30 days before they entered the recovery center (see Figure 8.1). Among the 86 individuals who attended meetings in the 30 days before entering the program, they attended an average of 17.8 meetings. At follow-up, there was a significant increase of 46.1%, with 76.6% of individuals reporting they had gone to mutual help recovery group meetings in the past 30 days. Among the 216 individuals who attended meetings in the 30 days before follow-up, they attended an average of 15.1 meetings.

FIGURE 8.1. RECOVERY SUPPORTS AT INTAKE AND FOLLOW-UP (N=282)

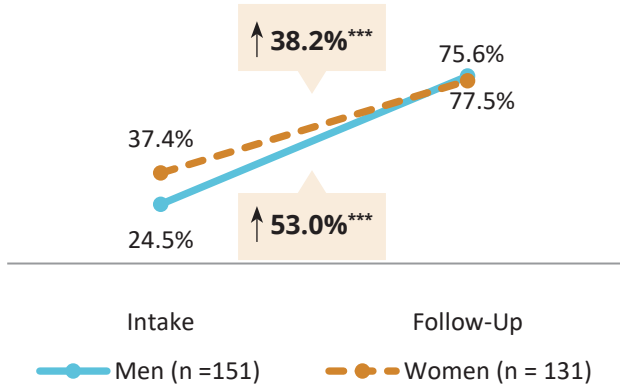


***p < .001.

GENDER DIFFERENCE IN ATTENDING MUTUAL HELP RECOVERY MEETINGS AT INTAKE AND FOLLOW-UP

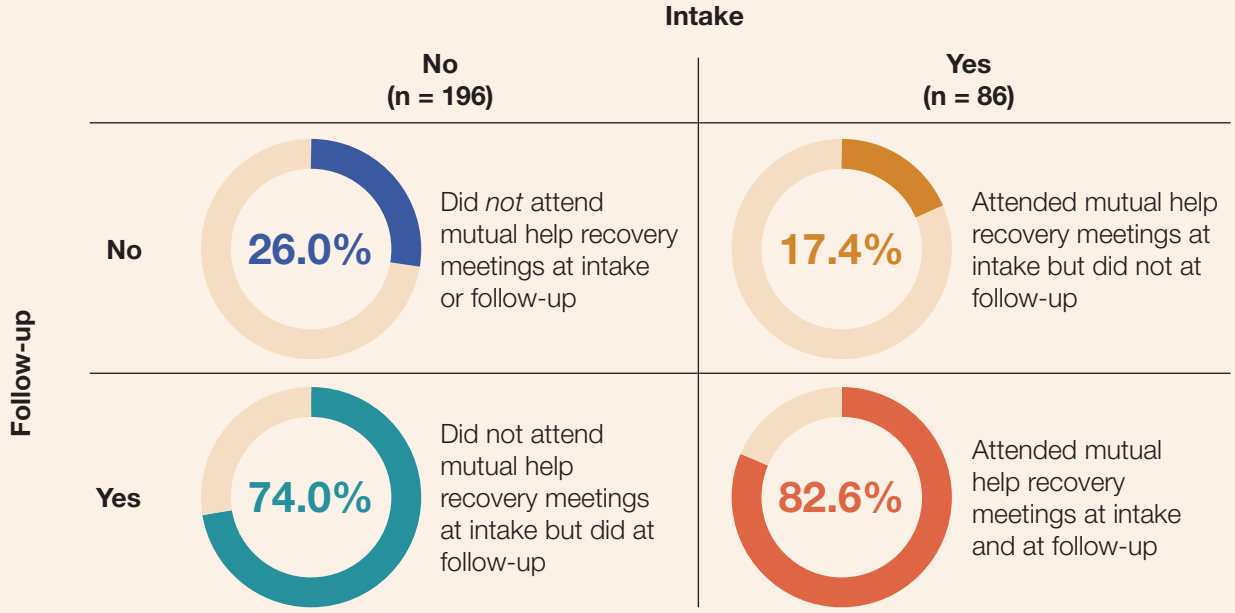
At intake, significantly more women than men reported they had attended mutual help recovery meetings (see Figure 8.2). By follow-up, there were significant increases in the percentage of women and men who reported they had attended meetings in the past 30 days. At follow-up, there was no difference by gender.

FIGURE 8.2. GENDER DIFFERENCE IN ATTENDING MUTUAL HELP RECOVERY MEETINGS AT INTAKE AND FOLLOW-UP[a]



a – Significant difference by gender at intake ($p < .05$).
*** $p < .001$.

More than one-fourth of clients reported attending mutual help recovery group meetings in the 30 days before entering the recovery center (28.7%; n = 86). Of the clients who attended meetings at intake, 82.6% also attended meetings in the 30 days before follow-up. Of the individuals who did not attend recovery self-help meetings at intake (n = 196), 74.0% attended at least one meeting in the past 30 days at follow-up

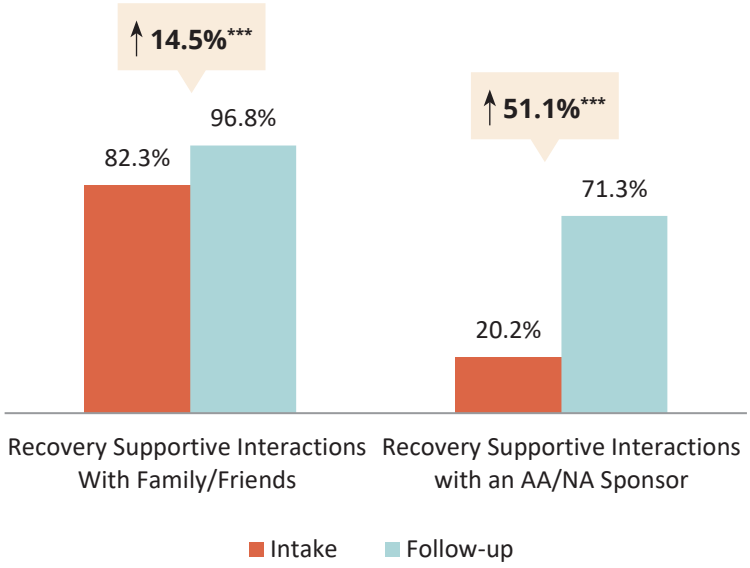


RECOVERY SUPPORTIVE INTERACTIONS

As seen in Figure 8.3, at follow-up, significantly more individuals (96.8%) reported that they had interactions with family and friends who were supportive of their recovery in the past 30 days compared to intake (82.3%).

The percentage of individuals who reported having contact with an AA, NA, or other self-help group sponsor in the past 30 days also significantly increased by 51.1% from intake (20.2%) to follow-up (71.3%).

FIGURE 8.3. RECOVERY SUPPORTIVE INTERACTIONS IN THE PAST 30 DAYS AT INTAKE AND FOLLOW-UP (N = 282)

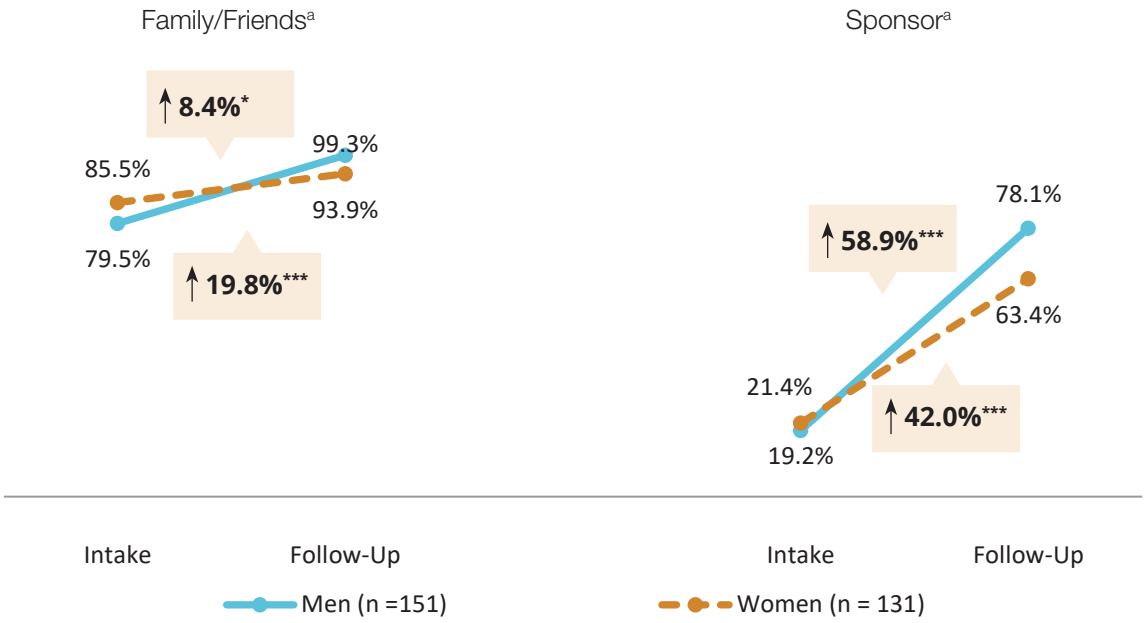


***p < .001.

GENDER DIFFERENCES IN RECOVERY SUPPORTIVE INTERACTIONS AT INTAKE AND FOLLOW-UP

At intake, there was no gender difference in the percentage of individuals who reported they had interacted with family/friends who were supportive of their recovery in the past 30 days (see Figure 8.4). By follow-up, there were significant increases in the percent of women and men who reported interactions with family/friends who were supportive of their recovery. At follow-up, a significantly higher percentage of men than women reported they had interacted with family/friends who were supportive of their recovery. Also, there was no gender difference in the percentage of individuals who reported they had contact with a sponsor in the 30 days before intake. Significantly more men and women reported they had contact with a sponsor at follow-up than at intake. By follow-up, a significantly higher percentage of men reported they had contact with a sponsor compared to women.

FIGURE 8.4. GENDER DIFFERENCES RECOVERY SUPPORTIVE INTERACTIONS AT INTAKE AND FOLLOW-UP



a – Significant difference by gender at follow-up ($p < .01$).
***$p < .001$.

AVERAGE NUMBER OF PEOPLE THE CLIENT COULD COUNT ON FOR RECOVERY SUPPORT

The average number of people individuals reported that they could count on for recovery support increased significantly from 6.1 people at intake to 30.9 people at follow-up (see Figure 8.5).

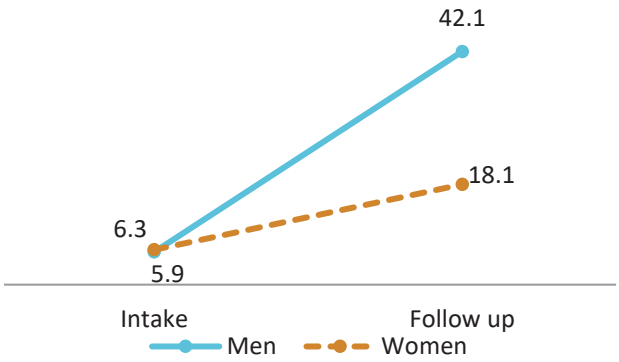
FIGURE 8.5. AVERAGE NUMBER OF PEOPLE CLIENTS SAID THEY COULD COUNT ON FOR RECOVERY SUPPORT AT INTAKE AND FOLLOW-UP (N = 282)[a]

a – Significant increase from intake to follow-up as measured by a paired t-test ($p < .001$).

GENDER DIFFERENCES IN THE AVERAGE NUMBER OF PEOPLE THE INDIVIDUAL COULD COUNT ON FOR RECOVERY SUPPORT AT INTAKE AND FOLLOW-UP

At intake, there was no gender difference in the average number of people individuals said they could count on for recovery support (see Figure 8.6). At follow-up, men reported a significantly higher average number of people they could count on for recovery support compared to women. For both men and women, the average number of people they could count on for recovery support increased significantly.

FIGURE 8.6. GENDER DIFFERENCE IN AVERAGE NUMBER OF PEOPLE CLIENTS SAID THEY COULD COUNT ON FOR RECOVERY SUPPORT AT INTAKE AND FOLLOW-UP (N = 282)[a, b]

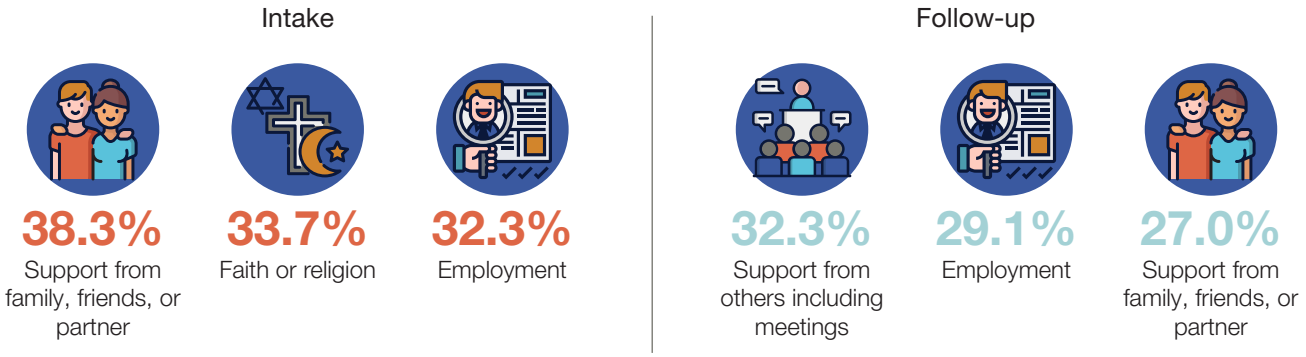


a – Significant difference by gender at follow-up ($p < .01$).
b—Significant increase from intake to follow-up for men and women ($p < .001$).

WHAT WILL BE MOST USEFUL IN STAYING OFF DRUGS/ALCOHOL

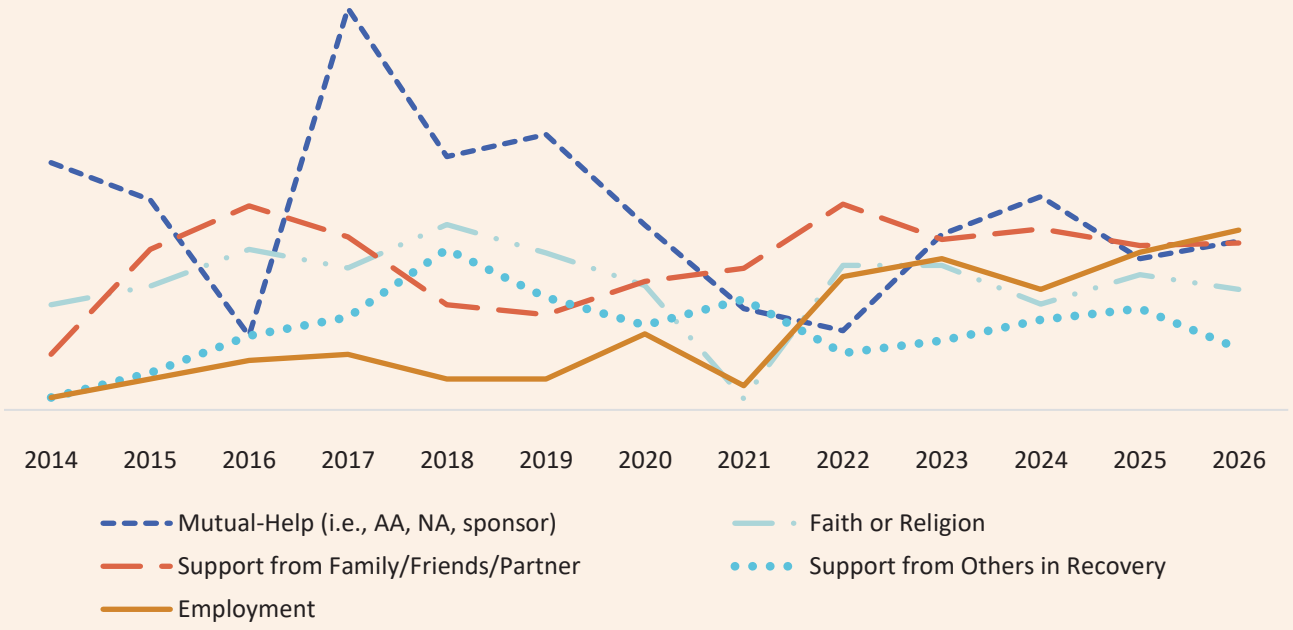
At intake and follow-up, clients were asked what, other than being at the recovery center, they believed would be most useful in helping them quit or stay off drugs/alcohol. Rather than conduct analysis on change in responses from intake to follow-up, responses that were reported by 15% of clients or more are presented for descriptive purposes in Figure 8.7. At intake, the most common responses were support from family/friends/partners, faith or religion, employment, and support from other people in recovery. At follow-up, the most common responses were support from others in recovery, employment, support from family/friends/partner, staying busy, and faith or religion.

FIGURE 8.7. CLIENTS REPORTING WHAT WILL BE MOST USEFUL IN STAYING OFF DRUGS AND/OR ALCOHOL (N = 282)



TRENDS IN WHAT WILL BE MOST USEFUL IN STAYING OFF DRUGS/ALCOHOL AT FOLLOW-UP

At follow-up, clients were asked what, other than being at the recovery center, would be most useful in helping them quit or stay off drugs or alcohol. Examining the trends in five of the most common responses shows quite a bit of variability in the responses that were most frequently mentioned.



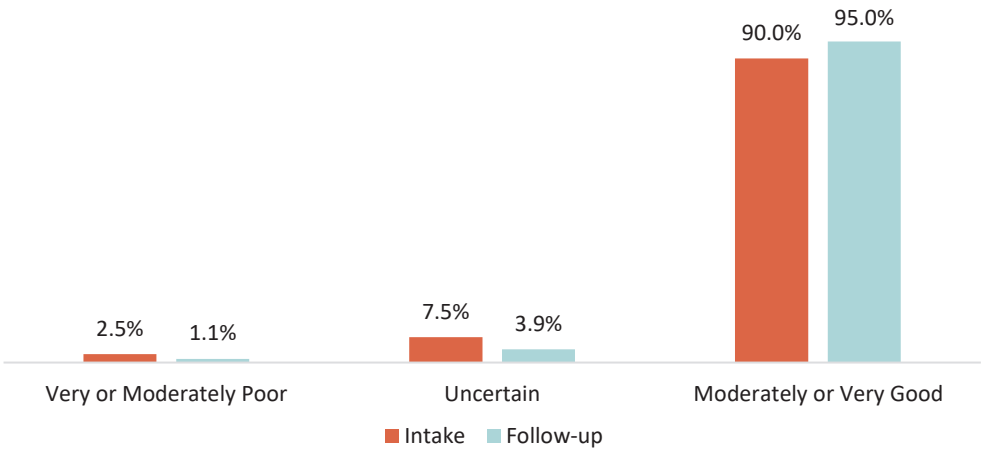
CHANCES OF STAYING OFF DRUGS/ALCOHOL

Clients were asked, based upon their situation, how good they believed their chances were of getting off and staying off drugs/alcohol using a scale from 1 (Very poor) to 5 (Very good). Clients rated their chances of getting off and staying off drugs/alcohol as a 4.5 at intake and 4.7 at follow-up, which was a significant increase (not depicted in figure).

The majority of respondents believed they had moderately or very good chances of staying off drugs/alcohol at intake (90.0%) and at follow-up (95.0%; see Figure 8.8). There was no significant change in the percentage of individuals who rated their chances for staying off/getting off drugs or alcohol.

> It's what I needed. Thirty-day programs aren't enough for people who are addicted usually. **The program got me out of my comfort zone and made me face real challenges and issues.**
>
> - RCOS FOLLOW-UP RESPONDENT

FIGURE 8.8 CLIENTS REPORTING THEIR CHANCES OF GETTING OFF AND STAYING OFF DRUGS/ALCOHOL AT INTAKE AND FOLLOW-UP (N = 281)[a84]



a – Significance tested with the Stuart-Maxwell Test for Marginal Homogeneity; not statistically significant.

[84] One individual had missing data for their chances of staying off drugs/alcohol at follow-up.

SECTION 9. **MULTIDIMENSIONAL RECOVERY**

This section examines multidimensional recovery at follow up as well as change in multidimensional recovery before entering the program and at follow-up.

Recovery goes beyond return to occasional drug or alcohol use. Recovery from substance use disorders can be defined as "a process of change through which an individual achieves abstinence and improved health, wellness and quality of life: (p. 5).[85] The SAMHSA definition of recovery is similarly worded and encompasses health (including but not limited to abstinence from alcohol and drugs), having a stable and safe home, a sense of purpose through meaningful daily activities, and a sense of community.[86] In other words, recovery encompasses multiple dimensions of individuals' lives and functioning. The multidimensional recovery measure uses items from the intake and follow-up surveys to classify individuals who have all positive dimensions of recovery.

TABLE 9.1. COMPONENTS OF MULTIDIMENSIONAL RECOVERY STATUS

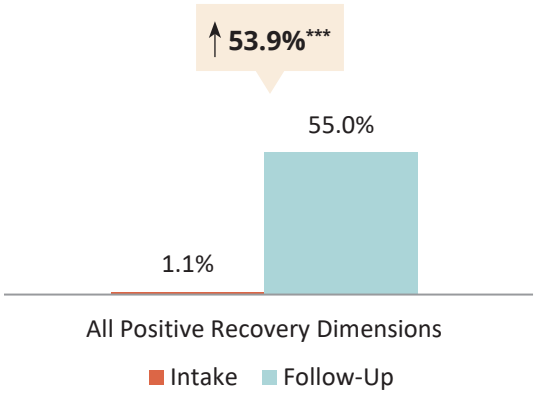
INDICATOR	POSITIVE RECOVERY DIMENSIONS	NEGATIVE RECOVERY DIMENSIONS
Substance use disorder (SUD) symptoms	No or mild substance use disorder (SUD)	Moderate or severe substance use disorder (SUD)
Employment	Employed at least part-time or in school	Unemployed (not on disability, not going to school, not a caregiver)
Homelessness	No reported homelessness	Reported homelessness
Criminal legal System Involvement	No arrest or incarceration	Any arrest or incarceration
Suicide ideation	No suicide ideation (thoughts or attempts)	Any suicide ideation (thoughts or attempts)
Overall health	Fair to excellent overall health	Poor overall health
Recovery support	Had at least one person he/she could count on for recovery support	Had no one he/she could count on for recovery support
Quality of life	Mid to high-level of quality of life	Low-level quality of life

At intake, only three individuals (1.1%) were classified as having all positive dimensions of recovery when entering the program, whereas at follow-up, more than one-half of participants (55.0%) were classified as having all positive dimensions of recovery at follow-up, which was a significant increase of 53.9% (see Figure 9.1).

[85] Center on Substance Abuse Treatment. (2007). *National summit on recovery: conference report* (DHHS Publication No. SMA 07-4276). Rockville, MD: Substance Abuse and Mental Health Services Administration.

[86] Laudet, A. (2016). *Measuring recovery from substance use disorders. Workshop presentation at National Academies of Sciences, Engineering, and Medicine* (February 24, 2016). Retrieved from https://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_171025.pdf

FIGURE 9.1. MULTIDIMENSIONAL RECOVERY AT INTAKE AND FOLLOW-UP (N = 282)

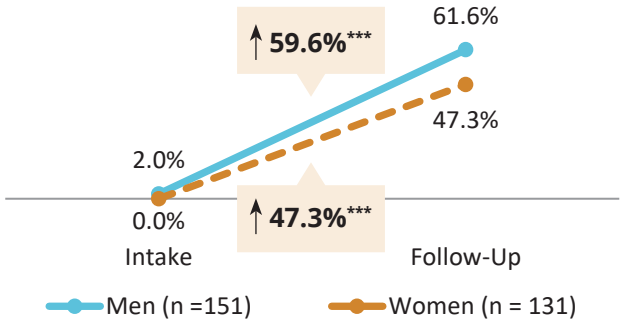


***p < .001.

GENDER DIFFERENCES IN THE AVERAGE NUMBER OF PEOPLE THE INDIVIDUAL COULD COUNT ON FOR RECOVERY SUPPORT AT INTAKE AND FOLLOW-UP

At intake, there was no gender difference in the percentage of individuals who had all positive dimensions of recovery (see Figure 9.2). At follow-up, a significantly higher percentage of men had all positive dimensions of recovery compared to women. For men, the increase in the percentage of individuals with all positive dimensions of recovery was statistically significant. The statistical test could not be conducted for the increase in the percentage of women having all positive dimensions of recovery because of the 0 value in the crosstabulation.

FIGURE 9.2. GENDER DIFFERENCE IN HAVING ALL POSITIVE DIMENSIONS OF RECOVERY AT INTAKE AND FOLLOW-UP (N = 282)[a,b]



a – Significant difference by gender at follow-up (p < .05).
b—McNemar test of significance could not be conducted because one of the cells had a value of 0.
*** p <.001.

Table 9.3 presents the frequency of clients who reported each of the specific components of the multidimensional recovery measure at intake and follow-up. At intake, the factors with the lowest percentage of individuals indicated were no arrests or incarceration, no substance use disorder, and a higher quality of life. At follow-up, the factors with the lowest percentage of individuals reporting the positive dimensions of recovery were having employment full-time and part-time, and not being homeless at some point in the past 6 months.

TABLE 9.2. PERCENTAGE OF CLIENTS WITH SPECIFIC POSITIVE DIMENSIONS OF RECOVERY AT INTAKE AND FOLLOW-UP (n = 282)

Factor	Intake Yes	Follow-Up Yes
Met DSM-5 criteria for no SUD in the past 6 months[87]	25.2%	94.6%
Usual employment was employed full-time or part-time in the past 6 months (or unemployed because a student, home caregiver, on disability)	62.4%	69.9%
Reported no homelessness (or living in recovery center at follow-up)	64.2%	89.0%
Reported not being arrested and/or incarcerated in the past 6 months	17.4%	92.9%
Reported no thoughts of suicide or attempted suicide in the past 6 months	77.3%	95.4%
Self-rating of general health at follow-up was fair, good, very good, or excellent[88]	91.1%	97.2%
Reported having someone they could count on for recovery support	86.9%	98.9%
Reported a quality-of-life rating in the mid or higher range (rating of 5 or higher)[89]	41.5%	98.9%

To better understand which factors at entry to the program are associated with having all positive dimensions of recovery at follow-up, each element that defined the multidimensional recovery measure at intake as well as the number of months the client self-reported they spent in the recovery center program and their completion of the program (Yes/No) were entered as predictor variables in a logistic regression model. The continuous variable for the following factors were included as predictor variables instead of the binary variables that are presented in Table 9.3: the number of criteria for DSM-5 substance use disorder met, number of months employed, rating of general health, rating of quality of life, and the number of people the individual could count on for recovery support at intake. Having all the positive dimensions of recovery at follow-up was the criterion (i.e., dependent) variable. Only one predictor variable was statistically significantly associated with having all positive dimensions of recovery at follow-up: having completed phase I of the recovery program.

> It was the first time I had ever gone to rehab. It wasn't court ordered. I chose to go there myself and I chose to do a 6 month program because I knew I had a problem and I wanted to get it taken care of. **That was the best decision of my life.**
>
> - RCOS FOLLOW-UP RESPONDENT

[87] Four individuals had missing data for meeting DSM-5 criteria for SUD at follow-up.

[88] One individual had missing data for general health at intake.

[89] Two individuals had missing data for subjective quality of life at follow-up.

TABLE 9.3. MULTIVARIATE ASSOCIATIONS WITH HAVING ALL POSITIVE DIMENSIONS OF RECOVERY AT FOLLOW-UP (n = 270)[90]

Factor				95% CI	
	B	Wald	Odds Ratio	Lower	Upper
Self-reported number of months in the recovery center program	-.043	.474	.958	.847	1.083
Completed phase I of the recovery center program [0 = No, 1 = Yes]	1.111	11.038	3.038***	1.577	5.851
Number of DSM-5 criteria for SUD in the 6 months before entering the program	-.027	.682	.973	.913	1.038
Number of months employed full-time or part-time in the 6 months before entering the program	.079	2.203	1.082	.975	1.202
Homelessness in the 6 months before entering the program [0 = No, 1 = Yes]	-.048	.029	.953	.547	1.661
Arrested or incarcerated in the 6months before entering the program [0 = No, 1 = Yes]	.444	1.608	1.558	.785	3.092
Reported thoughts of suicide or attempted suicide in the 6 months before entering the program [0 = No, 1 = Yes]	.319	.924	1.376	.718	2.635
Self-rating of general health at intake [1 – 5]	.016	.015	1.017	.782	1.321
Number of people client could count on for recovery support before entering the program	-.004	.079	.996	.968	1.025
Rating of quality of life before entering the program [1 – 10]	-.052	.762	.949	.844	1.067

Note: Categorical variables were coded in the following ways: Completed phase I (0 = No, 1 = Yes), homeless (0 = No, 1 = Yes), arrested or incarcerated (0 = No, 1 = Yes), had thoughts of suicide or attempts (0 = No, 1 = Yes).
***p < .001.

[90] Twelve individuals had missing data for at least one of the variables included in the OLS regression.

SECTION 10. CLIENTS' PERCEPTIONS OF CARE IN THE RECOVERY CENTER PROGRAMS

One of the important outcomes assessed during the follow-up interview is the clients' perception of the Recovery Center program experience. This section describes three aspects of clients' satisfaction with the program: (1) overall rating of the program, (2) clients' ratings of program experiences, and (3) positive outcomes of program participation.

OVERALL RATING OF THE PROGRAM

The majority of individuals (77.7%) rated their experience in the Recovery Kentucky program between an 8 and a 10, where 0 represented "not at all right for the client" and 10 represented "exactly right for the client (a perfect fit)" (not in a table). The average rating was 8.4. Male clients had a higher average rating of their program experience compared to women (8.8 vs. 7.9, $t(280) = 2.760$, $p < .01$).

The majority of clients (78.4%) reported at follow-up that they had completed Phase I of the recovery program.[91] Significantly more men reported they had completed Phase I compared to women (86.7% vs. 69.5%, χ^2 (1, 281) = 12.321, $p < .001$).

Clients were asked to report their perceptions of how the recovery center programs worked for them. The statements presented in Figure 10.1 had separate response options, with ratings ranging from 0 to 10. The higher values corresponded to the more positive responses, and the lower values corresponded to the negative responses. For example, for the statement, "My expectations and hopes for recovery were met" the anchors were 0 "Not at all met" and 10 "Perfectly met." Even the negatively worded items had anchors in which the higher values represented the more positive side of the continuum. For example, for the statement, "There were things I did not talk about or that I did not fully discuss with my counselor/program staff" the response option 0 corresponds to "I did not discuss lots of things, I held things back," and 10 corresponds to "I discussed everything, I held back nothing." The majority of followed-up clients gave high positive ratings about all the aspects of the program we asked about in the follow-up survey.

> **The opportunity of it all— now I have a license, an ID, a GED and now I'm getting a job.**
>
> - RCOS FOLLOW-UP RESPONDENT

[91] One individual had missing data for completing Phase I.

FIGURE 10.1. PERCENTAGE OF INDIVIDUALS WHO GAVE A RATING OF 8 – 10 AT FOLLOW-UP TO THE FOLLOWING STATEMENTS ABOUT THE RECOVERY KENTUCKY PROGRAM (N = 282)

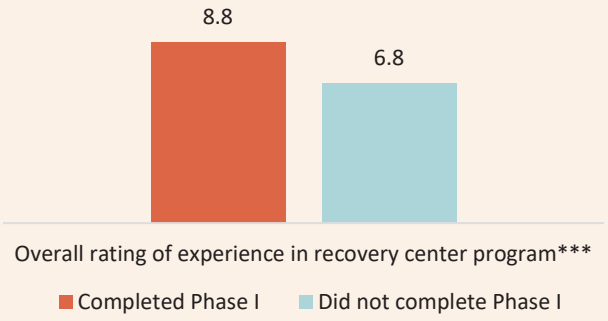
About 7 in 10 participants (70.3%) reported that the program length was just right as opposed to being too short (2.2%) or too long (27.6%; not depicted in a figure).[92]

ASSOCIATION OF PERCEPTIONS OF CARE AND COMPLETION OF PHASE I

Respondents' perceptions of care in the recovery center program were examined by Phase I completion status to better understand if there are aspects of the program that individuals who did not complete perceived of differently from individuals who had completed Phase I.

As expected, individuals who completed Phase I of the program had a higher average rating of their experience in the program compared to individuals who did not complete Phase I (8.8 vs. 6.8, t (279) = -5.963, $p < .001$; see Figure 10.2).

FIGURE 10.2. AVERAGE RATING OF OVERALL EXPERIENCE IN THE PROGRAM AT FOLLOW-UP BY PHASE I COMPLETION STATUS

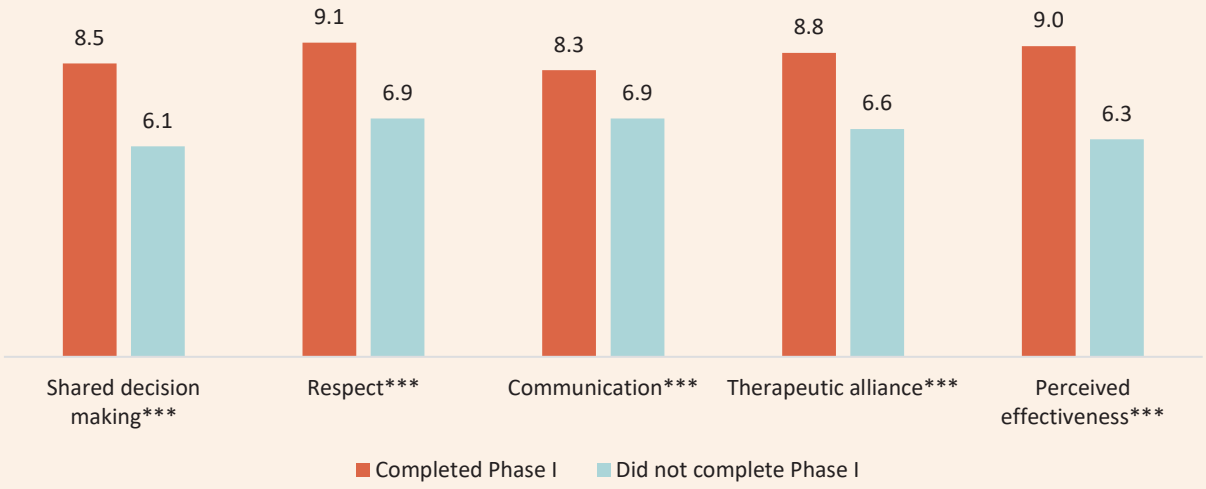


***p < .001.

[92] Three individuals had missing data for their perception of the length of the program.

Respondents' perceptions of care includes their assessment of the overall quality of the program as well as specific aspects of care they received, such as access to care, shared decision making, communication, respect, willingness to recommend the program to others and overall satisfaction with services (IOM, 2015). Various items were included in the follow-up surveys asking respondents about their perceptions of the programs in which they participated. Using the dimensions of clients'/patients' perceptions of care identified by the IOM (2015), specific items included in the follow-up surveys, as seen in Figure 10.1, were mapped onto the domains with face validity, but no other psychometrics were assessed (see Figure 10.3). For each of the domains, the group of individuals who had completed Phase I gave significantly higher ratings than individuals who had completed Phase I.

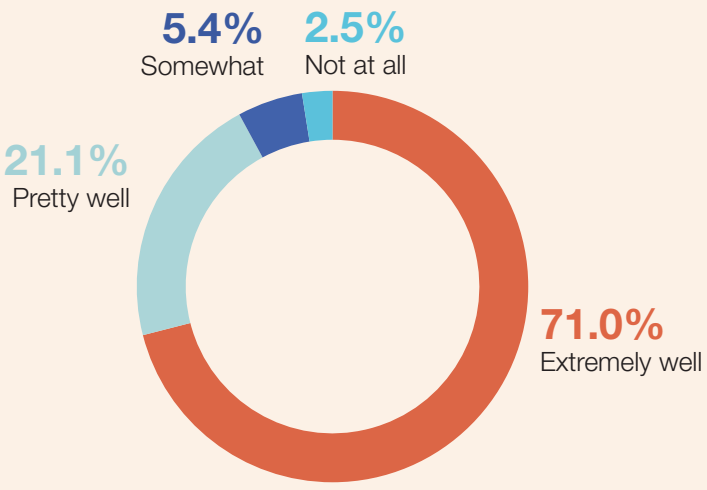
FIGURE 10.3. AVERAGE RATINGS OF CARE IN THE PROGRAM AT FOLLOW-UP BY PROGRAM COMPLETION STATUS



***p < .001.

Thinking about their experience with the recovery center program most individuals stated the program worked extremely well (71.0%) or pretty well (21.1%) for them (see Figure 10.4). A small percentage (5.4%) reported the program worked somewhat for them and 2.5% said the program worked not at all for them.

FIGURE 10.4. RESPONDENTS' PERCEPTION OF HOW WELL THE PROGRAM WORKED FOR THEM (N = 279)[93]

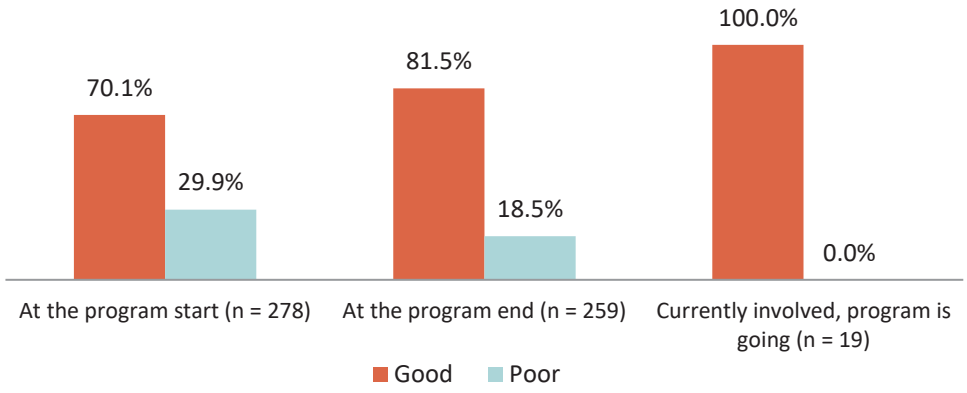


[93] Three individuals had missing data for how well they believed the program worked for them.

The majority (86.1%) stated they would refer a close friend or family member to the recovery center program, with 13.9% stating they would not refer a close friend or family member.[94] Among the individuals who would refer a friend or family member to the program (n = 239),[95] 41.0% said they would warn the friend/relative about certain things or tell them who to work with or who to avoid in the program.

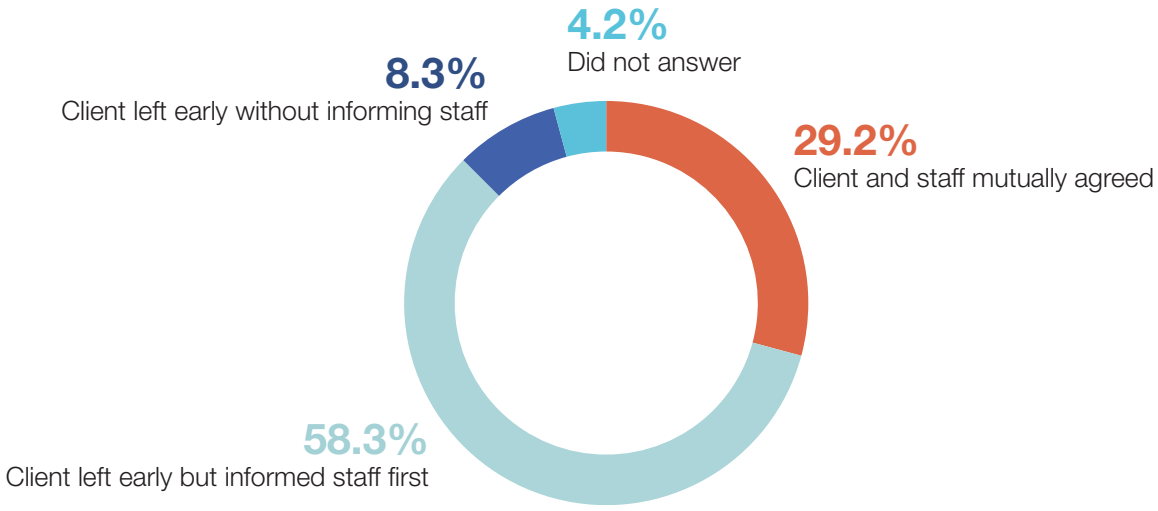
Figure 10.5 shows the percentage of individuals who reported the program started poor or good and ended poor or good. The majority of individuals (70.1%) reported the start of the program was good for them, and among the 259 individuals who were no longer involved in the program, 81.5% reported the end of the program was good for them. All nineteen individuals who were still involved in the program reported that it was currently good.

FIGURE 10.5. PERCENTAGE OF INDIVIDUALS WHO REPORTED AT FOLLOW-UP THE RECOVERY CENTER PROGRAM STARTED AND ENDED POOR OR GOOD[96]



Among the individuals who stated the program ended poorly for them (n = 48), 33.3% reported they had completed Phase I of the program. Figure 10.6 presents the ways that participants reported their involvement with the program ended.

FIGURE 10.6. AMONG INDIVIDUALS WHO RATED THE END OF THEIR PARTICIPATION IN THE PROGRAM AS POOR (N = 48), HOW THEIR INVOLVEMENT WITH THE PROGRAM ENDED



[94] Two individuals had missing data for whether they would refer others to the program.

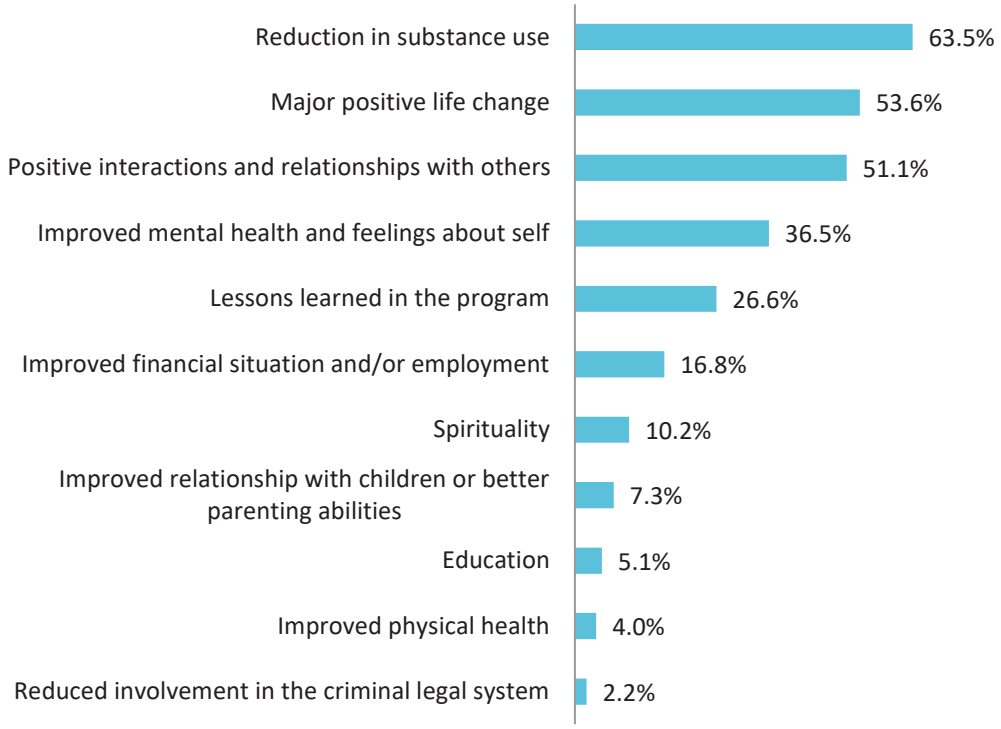
[95] Four individuals had missing data for whether they would warn others about something about the program.

[96] Four individuals declined to answer how the treatment program started and ended for them.

POSITIVE OUTCOMES OF PROGRAM PARTICIPATION

At the beginning of the follow-up survey, individuals were also asked about the three most positive outcomes of their Recovery Kentucky program experience (see Figure 10.7). The most commonly self-reported positive outcomes of the program included increased reduction in substance use, major positive life change (e.g., better quality of life, better able to function, having a "normal" life, having greater control over life), positive interactions and relationships with other people, improved mental health and feelings about themselves, lessons learned in the program, and improved financial situation/employment. Smaller percentages reported the following positive outcomes: spirituality (religious faith), better relationship with and ability to parent children, education, improved physical health, and reduced involvement with the criminal legal system.

FIGURE 10.7. PERCENTAGE OF INDIVIDUALS REPORTING THE MOST POSITIVE OUTCOMES THEY EXPERIENCED FROM THEIR RECOVERY KENTUCKY PROGRAM EXPERIENCE AT FOLLOW-UP (n = 274)[97]



[97] Eight individuals had missing data for the most positive outcomes they experienced from their program experience.

SECTION 11. ASSOCIATION OF PROGRAM COMPLETION AND OUTCOMES

We examined the association of completion of Phase I (as reported by respondents at follow-up) with characteristics at program entry and outcomes during the follow-up period.

CHARACTERISTICS OF INDIVIDUALS AT INTAKE BY PROGRAM COMPLETION STATUS

The majority of followed up individuals reported that they had completed Phase I of the recovery center program (78.6%, n = 221). Respondents' demographics and targeted factors at program entry were examined by Phase I completion status. The only demographic difference between the two groups was gender. A significantly higher percentage of women did not complete the program than completed Phase I.

Regarding targeted risk factors other than substance use, no statistically significant differences by Phase I completion status were found (see Table 11.1).

TABLE 11.1. DEMOGRAPHICS AND TARGETED FACTORS OTHER THAN SUBSTANCE USE FOR RCOS RESPONDENTS BY PHASE I COMPLETION[98]

	Completed Phase I	
	Yes (n = 221)	No (n = 60)
Age	39.4	39.4
Gender* **		
Male	58.8%	33.3%
Female	41.2%	66.7%
Race		
White/Caucasian	87.8%	90.0%
Black/African American	8.6%	6.7%
Other or multiracial	3.6%	3.3%
Current marital/relationship status		
Never married	48.3%	39.7%
Married or cohabiting	30.3%	15.0%
Separated or divorced	31.2%	33.3%
Widowed	1.4%	3.3%
Highest level of education		
Less than a high school diploma/GED	18.6%	28.3%
High school diploma/GED	42.5%	43.3%
Some vocational school to graduate degree	38.9%	28.3%

[98] One individual had missing data for whether they complete Phase I of the program.

	Completed Phase I	
	Yes (n = 221)	No (n = 60)
In the 6 months before entering the program:		
Usual employment was:		
Employed full-time	37.1%	38.3%
Employed part-time (including irregular work)	11.8%	10.0%
Unemployed (student, caregiver, retired, disabled, or in a controlled environment)	29.0%	31.7%
Unemployed	22.2%	20.0%
had children under the age of 18 [Yes]	47.3%	50.0%
had children under the age of 18 living with them [Yes]	20.1%	18.6%
considered self to be homeless at any point [Yes]	37.1%	31.7%
had difficulty paying for basic living needs [Yes]	40.7%	48.3%
had difficulty getting health care needs for financial reasons [Yes]	28.5%	23.3%
arrested and charged with a criminal offense [Yes]	55.7%	65.0%
incarcerated at least one night [Yes]	77.4%	81.7%
met study criteria for depression and/or generalized anxiety [Yes]	73.3%	71.7%
had suicidal thoughts or attempted suicide [Yes]	21.7%	26.7%
PTSD symptoms	25.8%	28.3%
Referred to the program by the criminal legal system [Yes]	81.4%	81.7%
Attended mutual help recovery meetings in the 30 days before entering the program (Yes)	29.4%	33.3%
Average number of people individuals could count on for recovery support	6.0	6.4
Average number of types of adverse childhood experiences in lifetime	3.8	4.0

***p < .001.

Substance use and related factors in the 6 months before entering the program and lifetime were examined by Phase I completion status. There were two statistically significant differences between the two groups (see Table 11.2). A significantly lower percentage of individuals who completed Phase I reported they had used illicit drugs and had an overdose in the 6 months before entering the program compared to individuals who did not completed Phase I.

> From the first day there, I felt at home. Everyone made me feel important. **I felt useless and everything was falling apart on the outside, but everyone there had been through that before.** It tested my willingness, but I gave it a shot and it worked.
>
> - RCOS FOLLOW-UP RESPONDENT

TABLE 11.2. AMONG INDIVIDUALS WHO WERE NOT INCARCERATED THE ENTIRE 6-MONTH PERIOD, SUBSTANCE USE REPORTED IN THE 6 MONTHS BEFORE ENTERING THE PROGRAM BY PHASE I COMPLETION STATUS

	Completed Phase I	
	Yes	No
In the 6 months before entering the program	(n = 183)	(n = 50)
Problem alcohol use (i.e., used to intoxication, binge drank)	41.0%	32.0%
Illicit drugs*	78.7%	92.0%
Cannabis	50.3%	52.0%
Stimulants and/or cocaine	59.6%	72.0%
Opioids (including heroin)	45.4%	44.0%
CNS depressants (e.g., sedatives, tranquilizers, benzodiazepines)	15.8%	20.0%
Polydrug use (based on broad categories of drug classes)		
No illicit drug use	21.3%	8.0%
Used one drug class	24.0%	24.0%
Used more than one drug class	54.6%	68.0%
Severity of SUD (per DSM-5 criteria)		
No SUD	15.3%	14.0%
Mild SUD	4.4%	10.0%
Moderate SUD	4.4%	12.0%
Severe SUD	76.0%	64.0%
Had an overdose*	12.6%	24.0%
In lifetime	(n = 221)	(n = 60)
Had an overdose	31.7%	43.3%
Injected drugs	41.2%	45.0%
Ever attended SUD treatment	74.7%	73.3%
Ever participated in MOUD	23.5%	30.0%
Average number of times attended SUD treatment	2.8	2.8

*$p < .05$

OUTCOMES AT FOLLOW-UP BY PHASE I COMPLETION STATUS

Substance use at follow-up was examined by Phase I completion status. Even though there were significant reductions from intake to follow-up in substance use in the sample overall, a significantly lower percentage of individuals who completed Phase I reported they had used illicit drugs in the follow-up period relative to individuals who did not complete Phase I. Significant differences by Phase I completion status were found for use two substance classes: of stimulants/cocaine and opioids (including heroin) during the follow-up period. Specifically, lower percentages of individuals who completed Phase I reported use of these drug classes compared to individuals who did not complete Phase I. Also, a significantly lower percentage of individuals who completed Phase I reported polydrug use in the 6 months before the follow-up survey compared to individuals who did not complete Phase I. There was no difference by Phase I completion status in problem alcohol use, cannabis use, CNS depressant use, severity of SUD per the DSM-5 criteria, having experienced an overdose, and participating in MOUD during the follow-up period.

TABLE 11.3. AMONG INDIVIDUALS WHO WERE NOT INCARCERATED THE ENTIRE 6-MONTH PERIOD, SUBSTANCE USE REPORTED IN THE 6 MONTHS BEFORE FOLLOW-UP BY PHASE I COMPLETION STATUS

	Completed Phase I	
	Yes	No
In the 6 months before follow-up	(n = 221)	(n = 60)
Problem alcohol use (i.e., used to intoxication, binge drank)	3.2%	3.3%
Illicit drugs**	4.5%	15.0%
Cannabis	4.5%	8.3%
Stimulants and/or cocaine***	0.9%	11.7%
Opioids (including heroin)*	0.5%	5.0%
CNS depressants (e.g., sedatives, tranquilizers, benzodiazepines)	0.5%	1.7%
Polydrug use (based on broad categories of drug classes)**		
No illicit drug use	95.5%a	85.0%b
Used one drug class	3.6%a	8.3%a
Used more than one drug class	0.9%a	6.7%b
Severity of SUD (per DSM-5 criteria)	(n = 219)	(n = 58)[99]
No SUD	95.9%	89.7%
Mild SUD	0.5%	1.7%
Moderate SUD	0.5%	1.7%
Severe SUD	3.2%	6.9%
Had an overdose	18.1%	26.7%
Participated in medication-assisted treatment	16.3%	21.7%

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

The association of Phase I completion with targeted factors at follow-up was examined. Suicidality, PTSD, homelessness, difficulty meeting basic living needs and health care needs, perception of chances for sobriety, and subjective quality of life were not associated with completion of Phase I (see Table 11.4). Usual employment status was associated with Phase I completion. Significantly more individuals who completed Phase I reported they were employed full-time and part-time, and significantly more individuals who did not complete Phase I reported they were unemployed. Finally, significantly higher percentages of individuals who did not complete Phase I had involvement with the criminal legal system compared to individuals who completed Phase I--specifically arrests and incarceration.

> **I had several different addictions and issues. They dealt with all of them.** The staff is really good and it really makes you want to give back.
>
> - RCOS FOLLOW-UP RESPONDENT

[99] Five individuals had missing data for severity of SUD at follow-up.

TABLE 11.4. TARGETED RISK FACTORS (NON-SUBSTANCE USE-RELATED) IN THE 6 MONTHS BEFORE FOLLOW-UP BY PHASE I COMPLETION STATUS

	Completed Phase I	
	Yes	No
In the 6 months before follow-up	(n = 221)	(n = 60)
Met study criteria for depression and/or anxiety*	29.0%[a]	45.0%[b]
Had suicidal thoughts/attempts	4.5%	5.0%
Met criteria for PTSD	21.7%	30.0%
Usual employment status**		
Employed full-time	48.9%[a]	33.3%[b]
Employed part-time (including seasonal work)	16.7%[a]	6.7%[b]
Unemployed, out of the labor force (student, caregiver, disabled, retired, in a controlled environment)	16.7%[a]	26.7%[a]
Unemployed	17.6%[a]	33.3%[b]
Experienced homelessness	10.9%	11.7%
Had difficulty meeting basic living needs	17.4%	21.7%
Had difficulty meeting health care needs	18.7%	20.0%
Had an arrest**	3.6%[a]	13.3%[b]
Incarcerated at least one night***	3.6%[a]	18.3%[b]
Attended mutual help recovery meetings in the past 30 days*	79.6%[a]	65.0%[b]
Average number of people respondent can count on for recovery support**	34.5	16.7
Perception of chances getting off/staying off substance use		
Very to moderately poor	1.4%	0.0%
Uncertain	3.6%	5.0%
Moderately to very good	95.0%	95.0%
Mean rating for subjective quality of life	8.3	8.2

a,b—Values with different subscripts differ from each other at $p < .05$.
*$p < .05$, **$p < .01$, ***$p < .001$.

SECTION 12. BIVARIATE AND MULTIVARIATE ANALYSIS OF FACTORS ASSOCIATED WITH RETURN TO USE

This section focuses on a multivariate analysis examining factors related to return to substance use in the 2026 RCOS follow-up sample.

RCOS respondents who reported using any illicit drugs and/or alcohol in the 6 months before follow-up (n = 31, 11.0%) were compared to clients who did not report use of drugs or alcohol in the 6 months before follow-up (n = 251, 89.0%).

In comparing the two groups on the targeted factors, only one statistically significant difference was found in bivariate statistical tests: lower percentages of individuals reported return to use at follow-up had completed Phase I than individuals who did not report return to substance use (see Table 12.1).

TABLE 12.1. BIVARIATE ASSOCIATION OF TARGETED FACTORS FOR RETURN TO USE VS. NO SUBSTANCE USE FOR THE FOLLOW-UP SAMPLE

INTAKE VARIABLES	Used illicit drugs and/or alcohol in past 6 months at follow-up (n = 31)	Did not use illicit drugs or alcohol in the past 6 months at follow-up (n =251)
Average age at intake	39.2	39.4
Male	45.2%	54.6%
Number of months in the program (self-reported)[100]	4.5	4.9
Completed Phase I [Yes][101]*	61.3%	80.8%
Met criteria for moderate or severe SUD per DSM-5 criteria	74.2%	68.5%
Number of nights incarcerated in the 6 months before intake[102]	44.4	64.5
Employed full- or part-time in the 6 months before intake [Yes][103]	54.8%	49.2%
Average number of mental health symptoms (depression and anxiety) reported at intake	9.6	9.1
Experienced homelessness [Yes]	45.2%	34.7%
Average number of people clients could count on for recovery support at intake	4.6	6.3
Average quality of life rating at intake	4.1	4.2
Number of adverse childhood experiences	3.5	3.9

*p < .05.

A logistic regression was used to examine the association between selected targeted factors and use of drugs or alcohol during the follow-up period (i.e., return to use). Intake factors including the demographic variables of gender and age and variables related to criminal legal involvement, mental health symptoms, recovery support, and experiences with violence were included as predictor variables in a logistic regression model. Self-reported drug or alcohol use in the past 6 months at follow-up (No/Yes) was entered as the dependent variable. Results of the analysis show that individuals who did not complete Phase I in the program had greater odds of return to substance use during the 6-month follow-up period, when controlling for the other predictor variables. No other predictor variable was significantly associated with return to use at follow-up, when controlling for the other predictor variables.

[100] Eleven respondents had missing data for number of months they were in the program before completing Phase I or leaving.

[101] One respondent had missing data for completing Phase I.

[102] Eight respondents had missing data for the number nights they were incarcerated in the 6 months before entering the program.

[103] Two respondents had missing data for employment in the 6 months before entering the program.

TABLE 12.2. ASSOCIATION OF TARGETED FACTORS AT INTAKE AND RETURN TO USE DURING THE FOLLOW-UP PERIOD (N = 242)

Factor	B	Wald	Odds Ratio	95% CI	
				Lower	Upper
Gender	.121	.082	1.129	.493	2.585
Age (Years)	-.001	.005	.999	.962	1.036
Completed Phase I	-.896	4.337	.408*	.176	.949
Number of nights incarcerated	-.005	2.420	.995	.988	1.001
Had a period of homelessness	.456	1.195	1.578	.697	3.574
Total number of depression and generalized anxiety symptoms	-.006	.034	.994	.927	1.1065
Number of people clients could count on for recovery support	-.028	.731	.973	.913	1.036

Note: Categorical variables were coded in the following ways: gender (1=male, 2= female), completed Phase I (0 = no, 1 = yes), had a period of homelessness (0 = no, 1 = yes).
*p < .05.

SECTION 13. COST AND IMPLICATIONS FOR KENTUCKY

This section examines cost reductions or avoided costs to society after Recovery Kentucky Program participation. Using the number of individuals who reported drug and/or alcohol use at intake and follow-up, a national per person cost was applied to this study's follow-up sample to estimate the cost to society for the year before individuals were in recovery and then for the same individuals during the period after leaving Phase I. The difference in the estimate of cost before and after entering recovery services was then divided by the cost of providing Recovery Kentucky Program services, yielding a return of $2.15 for every dollar spent on recovery programs.

RETURN ON INVESTMENT IN RECOVERY KENTUCKY PROGRAMS

Examining cost reductions or avoided costs to society after Recovery Kentucky participation is of high interest to policymakers, providers, and consumers. Thorough analysis of cost savings, while increasingly popular in policy-making settings, is extremely difficult and complex. Immediate proximate costs can be examined relatively easily; however, a thorough assessment requires a great number of econometrics. In order to accommodate these complexities at an aggregate level, data were extrapolated from a large federal study that estimated annual costs drug abuse in the United States[104] and a separate study of the societal costs of excessive alcohol consumption in the U.S. in 2006.[105] In 2010 the estimated costs of excessive alcohol consumption in the United States was updated and in 2011 the National Drug Intelligence Center updated the estimates of drug abuse in the United States for 2007.[106, 107] These updated costs were used in the calculations for the cost savings analysis in this RCOS follow-up report.

Most studies on the estimates of cost offsets from interventions with substance use disorder focus on savings in various forms after participation in substance use disorder treatment. Recovery services are not treatment and thus call for separate analysis. Among the recovery centers sponsored by Recovery Kentucky and the Kentucky Housing Corporation, daily cost of care is very low. Recovery centers use considerable volunteer effort from residents and peer mentors who assist in running day-to-day activities such as housekeeping, kitchen work, and other duties. However, individuals stay in residential care for extended periods and these two factors mark the Recovery Kentucky Program as very different from treatment programs where residential stays average less than 20 days statewide.

METHOD

The national cost reports factored in many explicit and implicit costs of alcohol and drug use disorders to the nation, such as the costs of lost labor due to illness, accidents, the costs of crime to victims, costs of incarceration, hospital and other medical treatment, social services, motor accidents, and other costs. Thus, these reports consider both the hidden and obvious costs of substance use disorder.

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[104] Harwood, H., Fountain, D., & Livermore, G. (1998). *The Economic Costs of Alcohol and Drug Abuse in the United States, 1992*. Report prepared for the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health, Department of Health and Human Services. NIH Publication No. 98-4327. Rockville, MD: National Institutes of Health.

[105] Bouchery, E.E., Harwood, H.J., Sacks, J.J., Simon, C.J., & Brewer, R.D. (2011). Economic costs of excessive alcohol consumption in the U.S., 2006. *American Journal of Preventive Medicine, 41*(5), 516–524.

[106] Sacks, J.J., Gonzales, K.R., Bouchery, E.E., Tomedi, L.E., & Brewer, R.D. (2015). 2010 national and state costs of excessive alcohol consumption. *American Journal of Preventive Medicine, 49*(5), e73-e79.

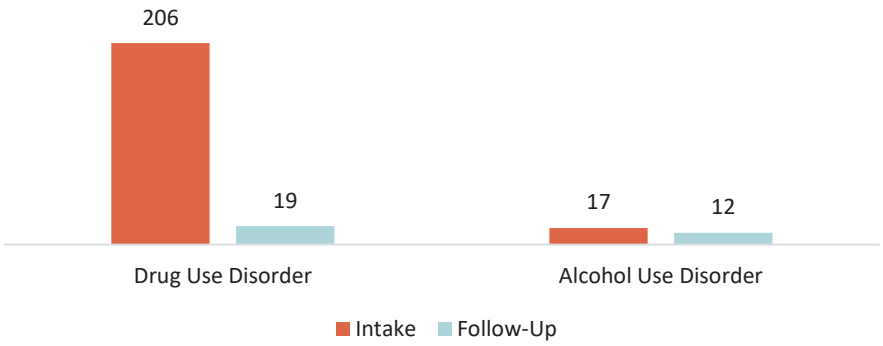
[107] National Drug Intelligence Center. (2011). *The Economic Impact of Illicit Drug Use on American Society.* Washington, DC: United States Department of Justice.

To calculate the estimate of the cost per alcohol user or drug user, the national cost estimates were divided by the estimate of the number of individuals with alcohol or drug use disorder in the corresponding years (2010 for alcohol use and 2007 for drug use).[108, 109] The estimate of the cost to society of excessive alcohol consumption was $249,026,400,000 in 2010. This amount was then divided by the 17,900,000 individuals estimated in the NSDUH in 2010 to have an alcohol use disorder, yielding a cost per person of alcohol abuse of $13,912 (after rounding to a whole dollar) in 2010 dollars. The estimate of the cost to society of drug use was $193,096,930,000 in 2007. This amount was then divided by the 6,900,000 individuals estimated in the NSDUH in 2007 to have an illicit drug abuse or dependence disorder, yielding a cost per person of drug abuse of $27,985 (after rounding to a whole dollar) in 2007 dollars. The costs per person were then converted to 2024 dollars using a CPI indexing from https://www.bls.gov/data/inflation_calculator.htm. Thus, the estimate of cost per person of alcohol abuse is $19,801 in 2024 dollars and the estimate of the cost per person of drug abuse is $42,640 in 2024 dollars.

Given the high prevalence of severe SUD among the individuals entering recovery centers, analyses hinged on estimating the differences in cost to society between individuals who are engaging in substance use compared to those who are abstinent from drug and/or alcohol use. Thus, the role that abstinence plays in reducing costs to society was examined because abstinent individuals are far less likely to be arrested, more likely to be employed or spending time volunteering, less likely to be drawing down social services supports, and less likely to be dependent on other family members. These per-person costs were then applied to the follow-up sample used in this study to estimate the cost to society for the year before individuals were in Recovery Kentucky programs and then for the same individuals during the period after leaving Phase I.

Individuals who reported any illicit drug use in the corresponding period were classified in the drug use disorder category. Individuals who reported using alcohol but not using illicit drugs were classified in the alcohol use disorder category. The change from intake to follow-up was substantial (see Figure 13.1). At intake, 206 of the 281 RCOS clients included in the follow-up sample were classified in the drug use category and 17 in the alcohol use category. At follow-up, only 19 individuals were classified in the drug use category and 12 individuals in the alcohol use category.

FIGURE 13.1 CHANGE IN THE NUMBER OF INDIVIDUALS WHO WERE USING ILLICIT DRUGS AND ALCOHOL FROM INTAKE TO FOLLOW-UP (N = 281)[110]



[108] Substance Abuse and Mental Health Services Administration. (2008). *Results from the 2007 National Survey on Drug Use and Health: National findings.* (DHHS Publication No. SMA 08-4343, NSDUH Series H-34). Rockville, MD: Office of Applied Studies. Retrieved from https://oas.samhsa.gov

[109] Substance Abuse and Mental Health Services Administration. (2011). *Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings.* (HHS Publication No. SMA 11-4658, NSDUH Series, H-41. Rockville, MD: Substance Abuse and Mental Health Services.

[110] One individual was not included in the avoided costs analysis because they were missing data on their length of service.

When the estimated cost per individual drug user was applied to the 206 individuals who reported use of illicit drugs at intake, the annual estimated cost to society for the RCOS individuals who used illicit drugs before entry into the recovery center was $8,783,840. When the average annual cost of excessive alcohol consumption was applied to the 17 individuals who reported alcohol use (but no illicit drug use) at intake, the estimated cost to society was $336,617. The total estimated cost of drug and alcohol use applied to the sample of individuals in RCOS was $9,120,457. By follow-up, the estimated cost of the 17 individuals who reported drug use during the follow-up period was $810,160 and the estimated cost of the 12 individuals who used alcohol (but no illicit drugs) was $237,612, for a total of $1,047,772. Thus, as shown in Figure 13.2, after participation in a Recovery Kentucky program, the aggregate cost to society for the RCOS follow-up sample was estimated to be reduced by $8,072,685.

FIGURE 13.2. CHANGE IN COST TO SOCIETY AT INTAKE AND FOLLOW-UP (AMOUNTS IN MILLIONS OF DOLLARS) (N = 281)

The daily cost of participation in a Recovery Kentucky program in FY 2024 was $47.51 per person (Kentucky Housing Corporation communication). Funding sources for the per diem cost include the Kentucky Department of Corrections, Supplemental Nutrition Assistance Program (SNAP), Section 8 Housing Assistance, and the Community Development Block Grant (CDBG). The total number of days clients in the follow-up sample participated in Recovery Kentucky programs was obtained for each participant. The number of days of participation for each client was multiplied by the daily cost of $47.51, for a total cost of $3,762,763 for the 281 individuals in the RCOS follow-up sample. When the cost of Recovery Kentucky programs was subtracted from the cost savings from increased alcohol and drug abstinence, there is an estimated net savings to society of $8,072,685 for serving this sample of 281 individuals. **Examining the total avoided costs in relation to expenditures on recovery services, these figures suggest that for every dollar invested in recovery, there was a $2.15 return in avoided costs.**

SECTION 14. **CONCLUSION**

This section summarizes the report findings and discusses some major implications within the context of the limitations of the outcome evaluation study.

This report describes outcomes for 282 men and women who participated in a Recovery Kentucky program and completed an intake interview at Phase 1 entry in FY 2024 and a follow-up telephone interview about 12 months after the intake survey.

AREAS OF SUCCESS

The 2026 evaluation results indicate that Recovery Kentucky programs have been successful in facilitating substantial positive changes in clients' lives. The majority of respondents (78.6%) reported at follow-up that they had completed Phase I of the recovery program. Respondents' level of satisfaction with the programs was high. Specifically, the majority indicated that the program worked extremely well for them and the average rating of the program was 8.4 on a scale from 1 to 10, with 10 representing the best possible program. The majority of clients agreed with a number of statements about positive aspects of the recovery program experience. For example, the majority of clients reported that: program staff believed in them and that the program would work for them, their expectations and hopes for the program and recovery were met, they felt the program staff cared about them and their progress, they had a connection with a staff person during the program, the program approach and method was a good fit for them, they worked on and talked about the things that were most important to them, they fully discussed or talked about everything with their counselor/staff, they had input into their goals and how they were progressing over time, and when clients spoke about personal things they felt listened to by their counselors and staff. The majority of followed-up respondents (70.3%) reported the program length was just right as opposed to too short or too long (29.7%).

The report's findings also show that self-reported completion of Phase I of the program was associated with lower illicit drug use, overall, and lower stimulant and opioid use. Individuals who reported completing Phase I of the program also reported lower rates of polydrug use, meeting criteria for depression and/or anxiety, lower involvement with the criminal legal system in terms of arrests and incarceration, higher full-time employment in the 6-month follow-up period. Individuals who completed Phase I also had higher participation in mutual help recovery meetings and a greater number of people they could count on for recovery support at follow-up.

Significant improvements in respondents' lives and functioning from intake to follow-up were made in the following areas:

SUBSTANCE USE

Importantly, there was a 69% reduction in the percentage of individuals meeting DSM-5 symptom criteria for severe substance use disorder from intake to follow-up. At one end of the continuum, there was a significant increase of 74% from intake to follow-up in the percentage of respondents who met criteria for no SUD. At follow-up, 94% of followed-up respondents met criteria for no SUD. There was a significant decrease in past-6-month use of illicit drugs as well as a decrease in past-6-month use of alcohol from intake to follow-up among respondents who were not in a controlled environment for the entire period at intake. About 93% of RCOS respondents reported abstinence from illicit drugs and 93% reported abstinence from alcohol in the past 6 months at follow-up. Abstinence is linked

to a decrease in drug-related consequences[111] as well as improvements in health and a decrease in mortality, reductions in crime, increases in employment, and an improved quality of life.[112]

MENTAL HEALTH

Compared to the general population, individuals who have a substance use disorder are more likely to have a co-occurring mental health disorder.[113] At intake, the majority of respondents met study criteria depression, generalized anxiety, comorbid depression and generalized anxiety. At follow-up, significantly lower percentages of respondents met criteria for these mental health disorders.

Even though a little less than one-fourth of respondents reported suicidal thoughts and/or attempted suicide at intake, there was a significant decrease in the percentage at follow-up—a decrease of 18%. Also, at intake, RCOS followed-up respondents reported an average of 14.5 days in the past 30 days that their mental health was not good. At follow-up, the average number of days was 2.7. Based on this measure of number of days mental health was not good, individuals with 14 or more days are considered to experience frequent mental distress.[114] At follow-up, 7.8% of the RCOS follow-up sample met the criteria for frequent mental distress. For comparison, in 2024, 18.4% of the general population in Kentucky experienced frequent mental distress.[115]

EXPERIENCES WITH VIOLENCE

Many studies have examined the association of lifetime and recent victimization with severity of substance use disorder and treatment, finding that victimization is higher among individuals with SUD and some studies have found that victimization is associated with post-treatment outcomes. However, few studies have examined how victimization experiences post-treatment or during recovery may impact the likelihood of return to use. A study from 2002 found that individuals who were victimized in the two years following SUD treatment had a greater risk of return to use, and most individuals reported they were under the influence of substances when the victimization occurred.[116] In this year's RCOS follow-up sample, at intake, 35% of respondents reported they had experienced interpersonal victimization in the 6 months before entering the program. At follow-up, there was a significant decrease, with only 8% of the follow-up sample reporting experiences with violence in the past 6 months.

PHYSICAL HEALTH

Because of the negative effects of substance use on physical health, changes in physical health were examined in RCOS. Respondents' self-reported overall health improved from intake to follow-up. Only 19% of respondents rated their general health as "very good" or "excellent" at intake, which increased significantly to 39% rating their general health as "very good" or "excellent" at follow-up. The number of days individuals reported their physical health was not good in the past 30 days decreased

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[111] Park, T., Cheng, D., Lloyd-Travaglini, C., Bernstein, J., Palfai, T., & Saitz, R. (2015). Changes in health outcomes as a function of abstinence and reduction in illicit psychoactive drug use: A prospective study in primary care. *Addiction, 110*, 1476-1483.

[112] Vederhus, J., Birkeland, B., & Clausen, T. (2016). Perceived quality of life, 6 months after detoxification: Is abstinence a modifying factor? *Quality of Life Research, 25*, 2315-2322.

[113] https://www.samhsa.gov/treatment#co-occurring

[114] Centers on Disease Control & Prevention, Behavioral Risk Factor Surveillance System, 2022.

[115] https://www.americashealthrankings.org/explore/measures/mental_distress/KY.

[116] Walton, M.A., Chermack, S.T., Blow, F.C. (2002). Correlates of received and expressed violence persistence following substance abuse treatment. *Drug and Alcohol Dependence, 67*, 1-12.

significantly from intake (7.0) to follow-up (2.3). Another way to examine the data about poor physical health is to classify individuals as experiencing frequent physical distress if they report 14 or more days that their physical health was not good. At intake, 24% of RCOS respondents experienced frequent physical distress. The percentage of RCOS respondents experiencing frequent physical distress at follow-up was significantly lower (7%). Comparing RCOS respondents to a statewide sample, the percentage of the general population in Kentucky reporting frequent physical distress was 17% in 2024. Kentucky's population has a high rate of residents with frequent physical distress, ranked 47th in the U.S.[117] Additionally, there was a significant reduction in the number of respondents reporting chronic pain in the past 6 months from intake to follow-up.

CRIMINAL LEGAL INVOLVEMENT

Research has shown that criminal legal involvement, specifically post-treatment arrests, may increase the likelihood of return to substance use.[118] A review of studies on the economic benefits of SUD treatment found that reductions in criminal justice costs accounted for the largest or second largest component of the economic benefits of SUD treatment in the studies.[119] The number of RCOS respondents reporting arrests and incarceration in the past 6 months at follow-up was significantly less than the number at intake. Only around 6% of respondents reported an arrest and 7% reported spending any time incarcerated at follow-up. The percentage of respondents who self-reported at least one conviction for a misdemeanor or felony also decreased significantly from intake to follow-up.

QUALITY OF LIFE

A key component of recovery is quality of life.[120] Including a quality of life rating or measure in SUD treatment and recovery program outcomes may be important because it is the individual's subjective appraisal of their life, allowing individuals to synthesize information from multiple domains of their lives. For this reason, clients' subjective quality of life ratings may be a useful indicator of recovery.[121, 122] In this report's data, respondents' subjective quality of life improved from intake to follow-up (4.2 vs. 8.3) on a scale from 1, worst imaginable to 10 best imaginable.

EDUCATION

Lower levels of educational attainment are an obstacle to obtaining employment during recovery or following SUD treatment.[123] Even though most respondents (79%) reported they had a high school

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[117] https://www.americashealthrankings.org/explore/measures/Physical_distress/KY.

[118] Kopak, A., Haugh, S., Hoffmann, N. (2016). The entanglement between relapse and posttreatment criminal justice involvement. *The American Journal of Drug and Alcohol Abuse, 42*(5), 606-613.

[119] Fardone E, Montoya ID, Schackman BR, McCollister KE. (2023). Economic benefits of substance use disorder treatment: A systematic literature review of economic evaluation studies from 2003 to 2021. *Journal of Substance Use & Addiction Treatment, 152*:209084. doi: 10.1016/j.josat.2023.209084. Epub 2023 Jun 9. PMID: 37302488; PMCID: PMC10530001.

[120] Laudet, A. B., Becker, J. B., & White, W. L. (2009). "Don't wanna go through that madness no more": Quality of life satisfaction as predictor of sustained remission from Illicit drug misuse. *Substance Use & Misuse, 44*(2), 227–252. https://doi.org/10.1080/10826080802714462

[121] Laudet, A. B. (2011). The case for considering quality of life in addiction research and clinical practice. *Addiction Science & Clinical Practice, 6*(1), 44–55.

[122] Muller, A. E., Skurtveit, S., & Clausen, T. (2016a). Many correlates of poor quality of life among substance users entering treatment are not addiction-specific. *Health and Quality of Life Outcomes, 14*(1). https://doi.org/10.1186/s12955-016-0439-1

[123] Martinson, Karin, Doug McDonald, Amy Berninger, and Kyla Wasserman. 2021. *Building Evidence-Based Strategies to Improve Employment Outcomes for Individuals with Substance Use Disorders.* OPRE Report 2020-171. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

diploma or GED at intake, there was a significant increase in the percentage reporting a high school diploma or GED at follow-up (86%).

EMPLOYMENT

Unemployment has been linked to higher rates of smoking, alcohol consumption, and illicit drug use and an increased risk of return to use.[124, 125, 126] Further, a primary barrier to employment among individuals in SUD treatment is having a felony conviction or any drug or theft conviction in one's background.[127] There was a significant increase in employment for RCOS respondents from intake (48%) to follow-up (71%). The percentage of men who were employed at least one month out of the past 6 months increased by 27% and the number of women employed increased by 20%.

HOMELESSNESS

Research has shown that homelessness and substance use often go together and one recent study found that among individuals with any SUD diagnosis in their lifetime, three-fourths had also experienced an episode of homelessness.[128] Evidence indicates that having a safe place to live provides stability that allows individuals focus on higher order aspects of their health and well-being. Having a safe, stable housing situation is one of the four major dimensions of recovery as laid out in SAMHSA's working definition of recovery.[129] Overall, there was a significant decrease in the number of RCOS respondents reporting homelessness in the last 6 months, from 36% at intake to 11% at follow-up.

ECONOMIC HARDSHIP

Economic hardship may be a better indicator of the actual day-to-day living situation individuals face than a measure of income. The percent of respondents reporting they had difficulty meeting basic living needs and health care needs decreased significantly from intake to follow-up. For example, 42% of the respondents had difficulty meeting basic living needs at intake, whereas the percentage decreased to 18% at follow-up. More than one-fourth of respondents (27%) reported they had difficulty meeting health care needs in the 6 months before entering the program, whereas in the 6 months before follow-up, only 19% reported difficulty meeting health care needs for financial reasons.

RECOVERY SUPPORT

Research has shown that positive social and recovery supports, like AA, NA, and other 12-step

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[124] Henkel, D. (2011). Unemployment and substance use: A review of the literature (1990-2010). *Current Drug Abuse Reviews, 4*, 4-27.

[125] Nordfjærn, T. (2010). Relapse patterns among patients with substance use disorders. *Journal of Substance Use, 16*(4), 313–329. https://doi.org/10.3109/14659890903580482

[126] Kopak, A.M., Hoffmann, N.G. & Proctor, S.L. Key Risk Factors for Relapse and Rearrest Among Substance Use Treatment Patients Involved in the Criminal Justice System. *American Journal of Criminal Justice, 41*, 14–30 (2016). https://doi.org/10.1007/s12103-015-9330-6

[127] Sherba, R.T., Coxe, K.A., Gersper, B.E., & Linley, J.V. (2018). Employment services and substance abuse treatment. *Journal of Substance Abuse Treatment, 87*, 70-78.

[128] Greenberg, G. & Rosenheck, R. (2010). Correlates of past homelessness in the National Epidemiological Survey of Alcohol and Related Conditions. *Administration and Policy in Mental Health and Mental Health Services Research, 37*, 357-366.

[129] Substance Abuse & Mental Health Services Administration. (2012). *Working definition of recovery.* https://store.samhsa.gov/sites/default/files/d7/priv/pep12-recdef.pdf

programs, are linked to a lower risk of return to use.[130] For RCOS respondents, there was a significant increase in attendance of mutual-help recovery meetings in the past 30 days from 31% at intake to 77% at follow-up. Among individuals who did not attend mutual-help group meetings at intake, 74% did attend at least one meeting in the past 30 days at follow-up. At follow-up, significantly more RCOS respondents reported having contact with family, friends, and sponsors who were supportive of their recovery. Additionally, the average number of people respondents could count on for support was significantly higher at follow-up (30.9) compared to intake (6.1).

MULTIDIMENSIONAL RECOVERY

Consistent with the framework that recovery is a multidimensional construct, encompassing multiple dimensions of individuals' lives and functioning, items from the intake and follow-up surveys were combined to measure change in dimensions of individuals' lives that are key to recovery. The multidimensional recovery measure combines items from the intake and follow-up surveys to create one measure of recovery. At intake, 1% of the individuals had all eight positive dimensions of recovery, whereas at follow-up, 55% had all positive dimensions, which is a significant and meaningful improvement. In a multivariate model, the only predictor variable that was associated with having all 8 positive dimensions of recovery at follow-up was completing Phase I of the program (as reported by respondents at follow-up).

AVOIDED COSTS

A cost-benefit analysis was beyond the scope of this outcome evaluation. Nonetheless, an estimate of the avoided costs to society in the follow-up period based on national estimates of the cost of alcohol and drug abuse and taking into account the cost of recovery Kentucky services suggests that recovery Kentucky has a positive return on investment. The estimate of avoided costs to society of $8,072,685 divided by the cost of recovery Kentucky services to the individuals in the follow-up sample suggest that for every dollar spent there was an estimated $2.15 of avoided costs to society.

AREAS OF CONCERN

As with all outcome evaluations, there were a few areas where the data results suggest additional attention is warranted:

HIGH RATES OF METHAMPHETAMINE USE

The percentage of respondents reporting methamphetamine use at intake began increasing in the 2017 report (36%), with the highest percentage in the 2022 report (60%). For the sixth consecutive annual report, in this year's report, a higher percentage of RCOS respondents reported they had used methamphetamine in the 6 months before entering the recovery center program (51%) than had used prescription opioids (32%). In the follow-up sample, there was a significant 49% reduction in the percentage of individuals who reported using methamphetamine in the past 6 months from intake (51%) to follow-up (3%).

[130] Havassy, B., Hall, S. & Wasserman, D. (1991). Social support and relapse: Commonalities among alcoholics, opiate users, and cigarette smokers. *Addictive Behaviors, 16*, 235-246.

SMOKING TOBACCO AND VAPORIZED NICOTINE USE

Even though the percentage of RCOS respondents not in a controlled environment who reported past-6-month smoking tobacco was high at follow-up (68%), the percentage was significantly lower than at intake (84%). Nonetheless, compared to a statewide sample (17%), 3.4 times more RCOS respondents report smoking at follow-up (58%, for the past 30 days).[131] Kentucky is ranked 46th for vaporized nicotine use among adults (10.7%). For comparison, among RCOS respondents who completed a follow-up, 50% reported they had used vaporized nicotine in the past 30 days. While the percentage of RCOS individuals who smoked tobacco decreased significantly from intake to follow-up, there was no change in use of vaporized nicotine. This relationship may be explained by the research indicating an association between e-cigarette use and quitting tobacco cigarettes. The study found that individuals who started using e-cigarettes were more likely to stop smoking cigarettes.[132]

ECONOMIC HARDSHIP

Meeting basic needs (including healthcare), stable living arrangements, having a purpose with daily meaningful activities, and recovery community are the four key dimensions for recovery.[133] Even though there was a significant decrease in the percentage of clients who had difficulty meeting their basic living and healthcare needs from intake to follow-up, 18% of respondents reported they had difficulty meeting basic living needs and 19% had difficulty meeting healthcare needs at follow-up. Also, despite significant increases in the percentage of men and women who were employed at least one month, significantly fewer women reported working in the past 6 months at follow-up relative to men, and women earned a lower median hourly wage at intake and follow-up compared to men. Chronic stressors like sustained economic hardship and unemployment are associated with return to substance use.[134] Additionally, increased substance use may occur in those with financial strain to help alleviate the stress.[135]

PROGRAM CONCERNS

Most RCOS respondents rated their time at the recovery center as positive and helpful in multiple aspects of their lives. Nonetheless, there were some aspects of the program that a minority of respondents found problematic. For example, 30% of individuals stated the start of the program was poor for them and about 19% of respondents who were not still involved in the program at follow-up reported that the program ended poorly for them. Among the minority of individuals who stated the program ended poorly for them, 66% left the program on terms other than completing Phase I. Also, 30% of individuals believed the length of the program was either too short or too long. As expected, individuals who gave a lower rating of the program were less likely to complete Phase I. Importantly, not completing Phase I was associated with illicit drug use, unemployment, criminal legal involvement, and worse recovery support during the follow-up period. Thus, a better understanding of factors that may be associated with lower perceptions of care and possible modifications or accommodations to the program that could increase client engagement may lead to better program outcomes.

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[131] America's Health Rankings https://www.americashealthrankings.org/explore/annual/measure/Smoking/state/KY

[132] Kasza K., Edwards K., Kimmel H., et al. (2021). Association of e-Cigarette Use With Discontinuation of Cigarette Smoking Among Adult Smokers Who Were Initially Never Planning to Quit. *JAMA Netw Open, 4*(12):e2140880. doi:10.1001/jamanetworkopen.2021.40880

[133] https://www.samhsa.gov/find-help-recovery.

[134] Tate, S., Brown, S., Glasner, S., Unrod, M., & McQuaid, J. (2006). Chronic life stress, acute stress events, and substance availability in relapse. *Addiction Research and Theory, 14*(3), 303-322.

[135] Shaw, B. A., Agahi, N., & Krause, N. (2011). Are Changes in Financial Strain Associated with Changes in Alcohol Use and Smoking Among Older Adults? *Journal of Studies on Alcohol and Drugs, 72*(6), 917-925.

ADVERSE CHILDHOOD EXPERIENCES AND EXPERIENCES WITH VIOLENCE IN ADULTHOOD

Adverse childhood experiences were reported by the majority of respondents who completed intake surveys: 79% of men and 91% of women. Women reported significantly more adverse childhood experiences relative to men. The average number of ACE reported by women was 4.6 and by men, 3.3. Of the maltreatment and abuse experiences, the most reported experiences for the total sample were emotional maltreatment, emotional neglect, and physical maltreatment. Of the household risk experiences, the most frequently reported experiences were parents being separated/divorced, problem substance use by a household member, and mental illness of a household member. More than one-fourth of women (29%) reported 7 or more types of ACE compared to 18% of men. Significantly more women than men reported they had experienced emotional maltreatment, physical maltreatment, emotional neglect, physical neglect, sexual abuse, and all but one of the five types of household risks.

The majority of the RCOS sample reported physical assault, almost half had been threatened with a gun, and almost one-third had been mugged or robbed in their lifetime. There was a significant gender difference for five of the seven types of violence in their lifetime. Significantly higher percentages of women than men reported ever being physically assaulted or attacked, intimate partner violence (including controlling behavior), stalked by someone who scared them, sexually assaulted or raped, and verbally, sexually, or otherwise harassed in a way that made them afraid. The high number of clients who experience adverse childhood events and interpersonal victimization in adulthood suggest a need to address interpersonal victimization and traumatic events in programs. Moreover, discussion of safety measures and safety planning that address the challenges individuals face may be beneficial.

STUDY LIMITATIONS

The study findings must be considered within the context of the project's limitations. First, the data included in this write-up was self-reported by Recovery Kentucky respondents. There is reason to question the validity and reliability of self-reported data, particularly about sensitive topics, such as illegal behavior and stigmatizing issues such as mental health and substance use. However, some research has supported findings about the reliability and accuracy of individuals' reports of their substance use.[136, 137, 138] For example, in many studies that have compared agreement between self-report and urinalysis the concordance or agreement is acceptable to high.[139, 140, 141] In fact, in some studies, when there were discrepant results between self-report and urinalysis of drugs and alcohol, the majority were self-reported substance use that was not detected with the biochemical

[136] Del Boca, F.K., & Noll, J.A. (2000). Truth or consequences: The validity of self-report data in health services research on addictions. *Addiction, 95*, 347-360.

[137] Harrison, L. D., Martin, S. S., Enev, T., & Harrington, D. (2007). *Comparing drug testing and self-report of drug use among youths and young adults in the general population* (DHHS Publication No. SMA 07-4249, Methodology Series M-7). Rockville, MD: Substance abuse and Mental Health Services Administration, Office of Applied Studies.

[138] Rutherford, M.J., Cacciola, J.S., Alterman, A.I., McKay, J.R., & Cook, T.G. (2000). Contrasts between admitters and deniers of drug use. *Journal of Substance Abuse Treatment, 18*, 343-348.

[139] Rowe, C., Vittinghoff, E., Colfax, G., Coffin, P. O., & Santos, G. M. (2018). Correlates of validity of self-reported methamphetamine use among a sample of dependent adults. *Substance Use & Misuse, 53*(10), 1742-1755.

[140] Rygaard Hjorthoj, C., Rygaard Hjorthoj, A., & Nordentoft, M. (2012). Validity of Timeline Follow-Back for self-reported use of cannabis and other illicit substances—Systematic review and meta-analysis. *Addictive Behaviors, 37*, 225-233.

[141] Wilcox, C. E., Bogenschutz, M. P., Nakazawa, M., & Woody, G. (2013). Concordance between self-report and urine drug screen data in adolescent opioid dependent clinical trial participants. *Addictive Behaviors, 38*, 2568-2574.

measures.[142, 143, 144] In other studies, higher percentages of underreporting have been found.[145] Prevalence of underreporting of substance use is quite varied in studies. Nonetheless, research has found that certain conditions facilitate the accuracy of self-report data such as assurances of confidentiality and memory prompts.[146] Moreover, the "gold standard" of biochemical measures of substance use have many limitations: short windows of detection that vary by substance; detection varies on many factors such as the amount of the substance consumed, chronicity of use, sensitivity of the analytic method used.[147] Therefore, the study method includes several key strategies to facilitate accurate reporting of sensitive behaviors at follow-up including: (a) the follow-up interviews are conducted by telephone with a University of Kentucky Center on Drug and Alcohol Research (UK CDAR) staff person who is not associated with any Recovery Kentucky program; (b) the follow-up responses are confidential and are reported at a group level, meaning no individual responses are linked to participants' identity; (c) the study procedures, including data protections, are consistent with federal regulations and approved by the University of Kentucky Human Subjects Institutional Review Board; (d) confidentiality is protected under Federal law through a Federal Certificate of Confidentiality; (e) participants can skip any question they do not want to answer; and (f) UK CDAR staff are trained to facilitate accurate reporting of behaviors and are regularly supervised for quality data collection and adherence to confidentiality.

Even though the project sample was limited to 282 follow-up surveys this fiscal year because of budget constraints, there are several ways the study method helps to minimize the impact of this limitation including: (a) the follow-up sample is randomly selected from individuals who agree to participate and who provide minimal locator information in the study and is stratified to ensure there are similar numbers of males and females; and (b) individuals who did and individuals who did not complete a follow-up interview are compared to see how different the follow-up sample is from those not followed up on sociodemographic factors and targeted factors at Phase 1 intake. Results show there were only four significant differences in this year's report data and one was a result of the stratification by gender when selecting the follow-up sample: significantly more individuals who completed a follow-up interview were female compared to clients who did not complete a follow-up interview. Second, a significantly lower percentage of followed-up clients met criteria for no SUD at intake compared to clients who did not complete a follow-up interview. Third, individuals who were followed-up had a significantly higher average ASI drug composite score compared to individuals who were not followed-up. Fourth, a significantly higher percentage of followed-up individuals met criteria for depression and met criteria for generalized anxiety relative to individuals who were not followed up. There were no significant differences in other sociodemographic, substance use, mental health, physical health, living situation, education, and employment at intake by follow-up status.
Finally, a longer-term follow-up would provide more information about the impact of the Recovery Kentucky Program on longer time life changes and events.

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[142] Denis, C., Fatséas, M., Beltran, V., Bonnet, C., Picard, S., Combourieu, I., Daulouède, J., & Auriacombe, M. (2012). Validity of the self-reported drug use section of the Addiction Severity and associated factors used under naturalistic conditions. *Substance Use & Misuse, 47*, 356-363.

[143] Hilario, E. Y., Griffin, M. L., McHugh, R. K., McDermott, K. A., Connery, H. S., Fitzmaurice, G. M., & Weiss, R. D. (2015). Denial of urinalysis-confirmed opioid use in prescription opioid dependence. *Journal of Substance Abuse Treatment, 48*, 85-90.

[144] Williams, R. J., & Nowatzki, N. (2005). Validity of self-report of substance use. *Substance Use & Misuse, 40*, 299-313.

[145] Chermack, S. T., Roll, J., Reilly, M., Davis, L., Kilaru, U., Grabowski, J. (2000). Comparison of patient self-reports and urianalysis results obtained under naturalistic methadone treatment conditions. *Drug and Alcohol Dependence, 59*, 43-49.

[146] Del Boca, F. K., & Noll, J. A. (2000). Truth or consequences: the validity of self-report data in health services research on addictions. *Addiction, 95* (Suppl. 3), S347—S360.

[147] Williams, R. J., & Nowatzki, N. (2005). Validity of self-report of substance use. *Substance Use & Misuse, 40*, 299-313.

CONCLUSION

This RCOS 2026 report findings are encouraging and continue the first multi-year systematic evaluation of long-term residential recovery supports in the United States. Further study will lead to more research to validate the continuing value of recovery services as a key part of the state's commitment to intervening with the growing problem of substance use disorder in Kentucky.

Overall, Recovery Kentucky respondents made significant strides in all the targeted areas, respondents were largely satisfied and appreciative of the services they received through the recovery centers, and Recovery Kentucky saved taxpayer dollars through avoided costs to society or costs that would have been expected based on the rates of drug and alcohol use prior to entry into the recovery center. The improvements in global functioning and overall quality of life ratings suggest that respondents' lives have improved meaningfully and significantly. The finding of reductions in costs related to increased abstinence suggests that commitment of public funds to recovery centers is a solid investment in the futures of many Kentucky citizens. While this study was not resourced to examine net effects of human capital investment, the past research suggests that individuals who commit themselves to recovery and abstinence go on to have gainful employment and reduced involvement with public sector services in their future years.

APPENDIX A. **METHODS**

A total of 1,497 unduplicated individuals had an intake survey completed between July 1, 2023, and June 30, 2024. The target month for the follow-up survey was 12 months after the intake survey was conducted. Cases were randomly selected into the follow-up sample by gender [male, female] so that equal numbers of men and women were selected for the follow-up sample. The window for completing a follow-up survey with an individual selected into the follow-up sample began one month before the target month and spanned until two months after the target month. For example, if an individual was eligible for the follow-up survey in May (i.e., target month was May), then the interviewers would attempt to complete the follow-up survey beginning in April and ending in July.

A total of 527 individuals were selected into the sample of individuals to be followed up from July 2024 to June 2025. At the time of follow-up, 39 individuals were ineligible to complete the follow-up; these cases are not included in the calculation of the follow-up rate (see Table AA.1). Of the remaining 488 individuals, interviewers completed follow-up surveys with 282 individuals, representing a follow-up rate of 57.8%. Of the eligible individuals, 200 (41.0%) were never successfully contacted or if they were contacted, interviewers were not able to complete a follow-up survey with them during the follow-up period: these cases are classified as expired. Six individuals (1.2%) declined to complete the follow-up survey when the interviewer contacted them. The project interviewers' efforts accounted for 62.0% of the cases (n = 327) included in the follow-up sample. The only cases not considered accounted for are those individuals who are classified as expired.

TABLE AA.1. FINAL CASE OUTCOMES FOR FOLLOW-UP EFFORTS

	Number of Records (N = 527)	Percent
Ineligible for follow-up survey	39	7.4%
	Number of cases eligible for follow-up (N = 488)	
Completed follow-up surveys	282	
Follow-up rate is calculated by dividing the number of completed surveys by the number of eligible cases and multiplying by 100		57.8%
Expired cases (i.e., never contacted, did not complete the survey during the follow-up period)	200	
Expired rate ((the number of expired cases/eligible cases)*100)		41.0%
Refusal	6	
Refusal rate ((the number of refusal cases/eligible cases)*100)		1.2%
Cases accounted for (i.e., records ineligible for follow-up + completed surveys + refusals)	327	
Percent of cases accounted for ((# of cases accounted for/total number of records in the follow-up sample)*100)		62.0%

A total of 39 individuals selected into the follow-up sample were ineligible for participating in the follow-up study at the target period for follow-up (see Table AA.2). Of the 39 cases that were ineligible for follow-up, the majority (76.9%) was ineligible because they were incarcerated during the follow-up period. Six individuals were ineligible because they were in residential treatment, 3 were deceased.

TABLE AA.2. REASONS CLIENTS WERE INELIGIBLE FOR FOLLOW-UP (N = 39)

	Number	Percent
Incarcerated	30	76.9%
Residential treatment	6	15.4%
Deceased	3	7.7%

APPENDIX B. CLIENT CHARACTERISTICS AT INTAKE FOR THOSE WITH COMPLETED FOLLOW-UP INTERVIEWS AND THOSE WITHOUT COMPLETED FOLLOW-UP INTERVIEWS

Individuals who completed a follow-up interview are compared in this section with individuals who did not complete a follow-up interview for any reason (e.g., not selected into the follow-up sample, ineligible for follow-up, and interviewers were unable to locate the client for the follow-up survey).[148]

DEMOGRAPHIC CHARACTERISTICS

The average age of clients was 39.5 for clients who did not complete a follow-up and 39.4 for clients who completed a follow-up (see Table AB.1). Because of the stratification of sampling for the follow-up sample (half men, half women), there was a significantly higher percentage of women in the follow-up group than in the not followed up group. The majority of the sample for this annual report was White/Caucasian. The highest percentage of clients in both groups reported at intake that they had never been married and the next highest percentage reported they were separated or divorced. Age, race, and marital status did not differ significantly by follow-up status.

TABLE AB.1. COMPARISON OF DEMOGRAPHICS FOR CLIENTS WHO WERE FOLLOWED UP AND CLIENTS WHO WERE NOT FOLLOWED UP

	FOLLOWED UP	
	NO n = 1,204[149]	YES n = 282
Age	39.5 Years	39.4 Years
Gender***		
Male	68.1%	53.5%
Female	31.9%	46.5%
Race[150]		
White	85.9%	87.9%
African American/black	8.8%	8.5%
Other or multiracial	5.3%	3.5%
Marital status		
Never married	39.5%	39.7%
Married or cohabiting	22.0%	27.0%
Separated or divorced	35.2%	31.6%
Widowed	3.3%	1.8%

***p < .001.

SUBSTANCE USE AT INTAKE

Use of illicit drugs, alcohol, and tobacco in the 6 months before entering the recovery center is presented by follow-up status in Table AB.2 for those clients who were not incarcerated the entire

148 Significance is reported for p<.05.

149 Eleven individuals had missing data for DOB, so age could not be calculated.

150 Five individuals had missing data for race/ethnicity.

period.[151] There were no statistically significant differences by follow-up status.

The majority of the clients reported using any illicit drug in the 6 months before entering the program. The drug class used by the greatest percent of clients was cannabis, followed by stimulants (methamphetamine, non-prescribed Adderall, Ecstasy), and then opioids (other than heroin). Use of heroin was reported by 19.9% of clients who did not complete a follow-up and by 22.2% of clients who completed a follow-up survey. About one-fourth of clients who completed a follow-up and clients who did not complete a follow-up reported cocaine/crack use. Less than one-fifth of clients used CNS depressants. A minority of clients in both groups used other illicit drugs (e.g., synthetic drugs, hallucinogens, inhalants).

About two-fifths of clients reported using any alcohol at intake. The majority of clients reported smoking tobacco products in the 6 months before entering the program. A significantly higher percentage of clients who completed the follow-up reported using vaporized nicotine products (e.g., e-cigarettes) at intake compared to clients who did not complete the follow-up survey. About one-fourth of clients reported using smokeless tobacco.

TABLE AB.2. PERCENT OF INDIVIDUALS REPORTING ILLICIT DRUG USE, ALCOHOL, AND TOBACCO IN THE 6 MONTHS BEFORE ENTERING THE RECOVERY CENTER

SUBSTANCES	FOLLOWED UP	
	NO n = 942	YES n = 234
Any illicit drug	82.4%	81.6%
Cannabis	53.3%	50.9%
Stimulants (methamphetamine, Adderall, Ecstasy)	51.5%	53.4%
Opioids (including methadone and buprenorphine-naloxone)	38.3%	39.7%
Heroin	19.9%	22.2%
Cocaine	24.4%	25.6%
CNS depressants	16.1%	16.7%
Other illicit drugs (e.g., synthetic drugs, hallucinogens, inhalants)	12.7%	15.4%
Alcohol	41.4%	42.7%
Smoked tobacco	80.7%	84.2%
Vaporized nicotine*	45.2%	53.4%
Smokeless tobacco	26.5%	26.1%

Analysis of past-30-day substance use of clients who were followed up compared to clients who were not followed up showed similar patterns to the 6-month substance use.

Table AB.3 shows the percentage of followed-up and non-followed-up individuals in each DSM-5 severity classification based on self-reported criteria of the 6 months before entering the recovery center, among clients who were not in a controlled environment the entire 6-month period before entering the program. The majority of both groups reported six or more DSM-5 symptoms at intake. A

[151] Of those who did not complete a follow-up, 227 were incarcerated all 6 months before entering the program and 46 had missing data for how many days they were incarcerated in the 6-month period. Of those who completed a follow-up, 40 were incarcerated all 6 months before entering the program, and 8 had missing data for how many days they were incarcerated in the 6-month period.

significantly lower percentage of individuals who completed a follow-up had a severity level of no SUD at intake relative to individuals who did not complete a follow-up survey.

TABLE AB.3. SELF-REPORTED DSM-5 SYMPTOMS OF SUBSTANCE USE DISORDER[152]

	FOLLOWED UP	
	NO n = 942	YES n = 234
Severity level of SUD symptoms*		
No SUD (0-1 symptom)	23.7%	15.4%
Mild SUD (2-3 symptoms)	4.5%	5.6%
Moderate SUD (4-5 symptoms)	3.2%	6.0%
Severe SUD (6+ symptoms)	68.7%	73.1%

*$p < .05$.

Alcohol and drug composite severity scores were calculated from items included in the intake survey. Because the ASI composite severity scores are based on past-30-day measures, it is important to account for clients being in a controlled environment all 30 days when examining composite severity scores. Thus, alcohol and drug severity composite scores are presented in Table AB.4 separately for those individuals who were not in a controlled environment all 30 days before entering the recovery center and individuals who were in a controlled environment all 30 days before entering the recovery center. The highest composite score is 1.0 for each of the two substance categories.

Of the individuals who were not in a controlled environment all 30 days, the majority met or surpassed the Addiction Severity Index (ASI) composite score (CS) cutoff for alcohol and/or drug use disorder, with no difference by follow-up status (73.7% for not followed up and 72.7% for followed up individuals; see Table AB.4). Among individuals who were not in a controlled environment all 30 days before entering the program, there was no difference in the percentage of individuals who had an ASI alcohol composite score indicative or alcohol use disorder, with no difference by follow-up status. Among individuals who were not in a controlled environment all 30 days, a little more than the majority of individuals who did not complete the follow-up and individuals who completed the follow-up had an ASI drug composite score indicative of drug use disorder, with no difference between the groups. The average score on the alcohol severity composite score was .30 for both groups of individuals. Among clients who were not in a controlled environment all 30 days before entering the program, the average score for the drug severity composite score was .21 for those not followed up and .24 for those who were followed up, with was significantly higher. These average cutoff scores include individuals with scores of 0 on the composites.

Of the individuals who were in a controlled environment all 30 days before entering the recovery center, less than half met or surpassed the cutoff for the ASI CS for alcohol and/or drug use disorder, with no difference by follow-up status (see Table AB.4). Among individuals who were in a controlled environment all 30 days before entering the program, about one-fourth or higher met or surpassed the cutoff for the ASI alcohol CS for severe alcohol use disorder. The percentage of individuals who met or surpassed the cutoff for the ASI drug CS for severe drug use disorder was 35.8% for individuals who

[152] Of those who did not complete a follow-up, 222 were incarcerated all 6 months before entering the program and 37 had missing data for how many days they were incarcerated in the 6-month period. Of those who completed a follow-up, 36 were incarcerated all 6 months before entering the program, and 7 had missing data for how many days they were incarcerated in the 6-month period.

did not complete a follow-up survey and 30.9% for individuals who completed a follow-up survey, with no difference by follow-up status.

TABLE AB.4. SELF-REPORTED ALCOHOL AND DRUG USE SEVERITY AT INTAKE

	Not in a controlled environment all 30 days before entering the recovery center		In a controlled environment all 30 days before entering the recovery center	
	FOLLOWED UP		FOLLOWED UP	
	NO (n = 623)	YES (n = 143)	NO (n =592)	YES (n =139)
Percent of Individuals with ASI composite score equal to or greater than cutoff score for …				
alcohol or drug use disorder	73.7%	72.7%	46.5%	46.0%
alcohol use disorder	44.1%	40.1%	25.8%	28.8%
drug use disorder	55.2%	60.8%	35.8%	30.9%
Average ASI composite score for alcohol use[a]	.30	.30	.17	.16
Average ASI composite score for drug use[b]	.21	.24*	.16	.15

[a] Score equal to or greater than .17 is indicative of alcohol dependence.
[b] Score equal to or greater than .16 is indicative of drug dependence.
*p < .05.

SUBSTANCE USE DISORDER TREATMENT

A majority of RCOS clients reported that they had been in SUD treatment in their lifetime, with no difference by follow-up status (see Table AB.5). Among clients who reported a history of substance abuse treatment, the average number of lifetime treatment episodes was 3.8 for individuals who did not complete a follow-up interview and 3.7 for individuals who did complete a follow-up interview. A minority of clients reported they had participated in any medication-assisted treatment within the past 6 months, with no difference by follow-up status.

TABLE AB.5. HISTORY OF SUBSTANCE USE DISORDER TREATMENT IN LIFETIME

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Ever been in SUD treatment in lifetime	70.2%	74.5%
Among those who had ever been in SUD treatment in lifetime,	(n = 853)	(n = 210)
Average number of times in treatment	3.8	3.7
Participated in any MAT in the 6 months before entering the recovery center	20.4%	24.8%

MENTAL HEALTH AT INTAKE

The mental health questions included in the RCOS intake and follow-up surveys are not clinical measures, but instead are research measures. A total of 9 questions were asked to determine if they

met study criteria for depression, including the two screening questions: (1) "Did you have a two-week period when you were consistently depressed or down, most of the day, nearly every day?" and (2) "Did you have a two-week period when you were much less interested in most things or much less able to enjoy the things you used to enjoy most of the time?" The majority of clients reported symptoms that met study criteria for depression, with no significantly more individuals who completed a follow-up meeting criteria for depression compared to individuals who did not complete a follow-up survey (60.6% vs. 52.6%; see Table AB.6).

A total of 7 questions were asked to determine if individuals met criteria for generalized anxiety, including the screening question: "In the 6 months before you entered this recovery center, did you worry excessively or were you anxious about multiple things on more days than not (like family, health, finances, school, or work difficulties) all 6 months?" The majority of clients reported symptoms that met the criteria for generalized anxiety, with a significantly higher percentage of individuals who completed a follow-up survey meeting criteria for generalized criteria relative to individuals who did not complete a follow-up survey (66.7% vs. 58.6%).

Two questions were included in the intake survey that asked about thoughts of suicide and attempted suicide in the 6 months before clients entered recovery centers. Around 1 in 5 participants in both groups reported suicide ideation and/or attempts at intake, with no difference by follow-up status (see Table AB.6).

The abbreviated version of the PTSD Checklist-5 (PCL-5), comprised of 4 items, was added to intake and follow-up interviews.[153] A score of 10 or higher is indicative of clinically significant PTSD symptomatology. More than 1 in 5 individuals who did not complete a follow-up and about 1 in 4 individuals who completed a follow-up survey met criteria for PTSD, with no statistically significant difference by follow-up status.

TABLE AB.6. PERCENT OF INDIVIDUALS REPORTING MENTAL HEALTH PROBLEMS IN THE 6 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Depression*	52.6%	60.6%
Generalized anxiety*	58.6%	66.7%
Suicidality (e.g., thoughts of suicide or suicide attempts)	19.7%	22.7%
PTSD	22.8%	26.2%

*$p < .05$.

CRIMINAL LEGAL SYSTEM INVOLVEMENT AT INTAKE

There was no significant difference by follow-up status in the percentage of clients who were referred to the recovery center by the criminal legal system (e.g., judge, drug court, probation, Department of Corrections): 80.9% of those who did not complete a follow-up vs. 81.6% of those who did complete a follow-up (not depicted in a Table or Figure).

The majority of individuals (56.6% of individuals who were not followed up and 57.8% of individuals who were followed up) reported they had been arrested in the 6 months before entering the recovery center (see Table AB.7). Most clients were under supervision by the criminal legal system (e.g., on probation or parole) when they entered the recovery center, with no significant difference by follow-up

[153] Price, M., Szafranski, D. D., van Stolk-Cooke, K., & Gros, D. F. (2016). Investigation of abbreviated 4 and 8 item versions of the PTSD Checklist 5. *Psychiatry Research, 239*, 124–130.

status.

TABLE AB.7. CRIMINAL LEGAL SYSTEM INVOLVEMENT WHEN ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Arrested for any charge in the 6 months before entering the Recovery Center	56.6%	57.8%
Currently under supervision by the criminal legal system	76.2%	79.8%
On probation	61.4%	62.8%
On parole	17.9%	20.9%

The majority of clients in each group reported they were incarcerated for at least one day in the past 6 months before entering the program, with no difference by follow-up status (See Table AB.8). Among those who reported they were incarcerated at least one day in the 6 months before entering the program, the average number of days they were incarcerated did not differ by follow-up status.

TABLE AB.8. INCARCERATION HISTORY IN THE 6 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Incarcerated at least one day	78.5% (n = 908)[154]	78.4% (n = 213)
Among those incarcerated at least one day, the average number of days incarcerated	81.4	80.0

PHYSICAL HEALTH AT INTAKE

Table AB.9 presents comparison of physical health status of clients who were not followed up with clients who were followed up. There were no significant differences by follow-up status. The majority of clients reported they had been told by a doctor they had a chronic health problem in their lifetime, such as hepatitis C, cardiovascular disease, arthritis, asthma, severe dental problems, and sexually transmitted illnesses. Similar percentages of clients in both groups reported they had experienced chronic pain in the 6 months before entering the program. There was no statistically significant difference in the average number of days clients' physical health and mental health was not good in the 30 days before entering the recovery center.

TABLE AB.9. CLIENT'S PHYSICAL HEALTH STATUS AT INTAKE

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Client was ever told by a doctor that client had a chronic health problem	62.6%	66.7%

[154] Eighteen individuals in the not followed-up group and 12 individuals in the follow-up group had missing values for the number of days they were incarcerated in the 6 months before entering the program, although they were incarcerated.

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Experienced chronic pain (pain lasting 3 months or more).....	24.4%	27.7%
In the 30 days before entering the program:		
Average number of days physical health was not good	7.2	7.0
Average number of days mental health was not good	14.1	14.5

ECONOMIC AND LIVING CIRCUMSTANCES AT INTAKE

Table AB.10 describes clients' level of education when entering the recovery center. A minority of individuals had less than a high school diploma or GED, with no significant difference by follow-up status.

TABLE AB.10. CLIENTS' HIGHEST LEVEL OF EDUCATION COMPLETED AT INTAKE

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Highest level of education completed		
Less than GED or high school diploma	22.1%	20.6%
GED/high school diploma	47.2%	42.9%
Vocational to graduate school	30.6%	36.5%

There were no differences in usual employment status at intake by follow-up status (see Table AB.11). More than half of followed up and not followed up clients were unemployed, either because they were out of the labor force because they were a student, homemaker, retired, disabled, or in a controlled environment, or unemployed and they were looking for work. A minority of clients reported they currently received SSI or SSDI benefits.

TABLE AB.11. EMPLOYMENT IN THE 6 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Usual employment status		
Employed full-time.....	36.0%	37.2%
Employed part-time (including seasonal, occasional work).....	10.8%	11.3%
Unemployed and not looking for work due to being a student, homemaker, retired, disabled, or in a controlled environment....	30.8%	29.4%
Unemployed.....	22.5%	22.0%
Currently receives SSI or SSDI benefits	10.6%	9.9%

There were no significant differences in living situation at intake between individuals who completed a follow-up interview and individuals who did not. Similar percentages in each group reported their usual living situation to be in a private residence and in jail/prison (see Table AB.12). Small percentages of individuals reported their usual living arrangement had been in a shelter or on the street, or in a

controlled environment that was not a jail or prison, such as a recovery center, residential treatment, sober living home, or hospital.

At the time individuals entered recovery centers, 32.9% of clients who were not followed up and 35.8% of clients who were followed up considered themselves to be homeless, with many of those individuals stating that they were temporarily living with family or friends, staying on the street or living in a car, or in jail or prison (see Table AB.12).

TABLE AB.12 LIVING SITUATION OF CLIENTS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Usual living arrangement in the 6 months before entering the program		
Own or someone else's home or apartment	45.7%	44.7%
Jail or prison	41.4%	43.3%
Shelter or on the street	6.8%	7.1%
Residential program, hospital, recovery center, or sober living home	5.4%	3.9%
Other living situation	0.7%	1.1%
Considers self to be currently homeless	32.9%	35.8%
Why the individual considers himself/herself to be homeless	(n = 395)[155]	(n = 101)
Staying temporarily with friends or family	38.2%	48.5%
Staying on the street or living in a car	37.7%	37.6%
In jail or prison	15.9%	13.9%
Staying in a shelter	4.6%	0.0%
Staying in a hotel or motel	0.8%	0.0%
In residential treatment, or other recovery center	2.5%	0.0%
Multiple situations	0.3%	0.0%

A sizeable minority of clients reported they had difficulty meeting any needs for financial reasons in the 6 months before entering the program, with no significant difference by follow-up status (see Table AB.13). Similar percentages of clients who were followed up and clients who were not followed up reported they had difficulty meeting basic living needs or health care needs.

[155] Five clients had a missing value for the item about reason for homelessness: 5 clients who did not complete a follow-up survey.

TABLE AB.13. CLIENTS WHO HAD DIFFICULTY MEETING BASIC NEEDS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n = 1,215	YES n = 282
Client's household had difficulty meeting any needs in the 6 months before entering the program	43.0%	47.9%
Basic living needs (e.g., housing, utilities, telephone service, food).....	39.3%	42.2%
Health care needs	26.2%	27.3%

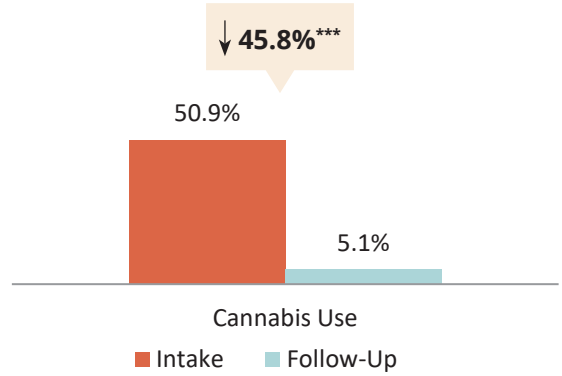
APPENDIX C. CHANGE IN USE OF SPECIFIC CLASSES OF DRUGS FROM INTAKE TO FOLLOW-UP

CHANGE IN 6-MONTH DRUG USE FROM INTAKE TO FOLLOW-UP FOR INDIVIDUALS NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER

PAST-6-MONTH CANNABIS USE

Clients' self-reported cannabis use decreased significantly by 45.8% from the 6 months before entering the program to the 6 months before follow-up (see Table AC.1). There was no gender difference in the percent of respondents reporting use of cannabis at intake or follow-up.

FIGURE AC.1. CANNABIS USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

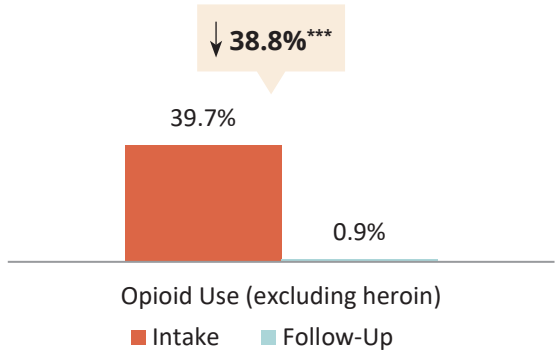


***p<.001.

PAST-6-MONTH OPIOID (EXCLUDING HEROIN) USE

Individuals' self-reported use of opioids including prescription opiates, methadone, and buprenorphine-naloxone (bup-nx) decreased significantly by 38.8% from the 6 months before entering the recovery center to the 6 months before follow-up (see Table AC.2). There was no gender difference in the percentage of respondents reporting use of opioids at intake or follow-up.

FIGURE AC.2. OPIOID USE (EXCLUDING HEROIN) FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

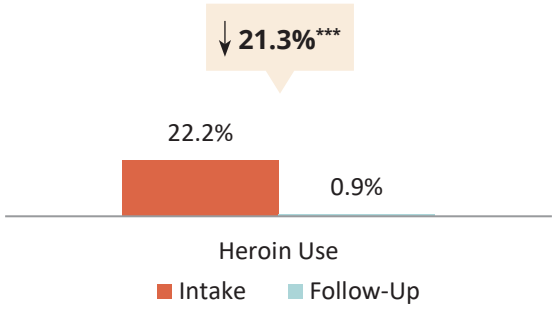


***p<.001.

PAST-6-MONTH HEROIN USE

The number of individuals who reported using heroin decreased significantly by 21.3% in the period before entering the recovery center to the 6 months before follow-up (see Figure AC.3). There was no significant difference in use of heroin at intake or follow-up by gender.

FIGURE AC.3. HEROIN USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

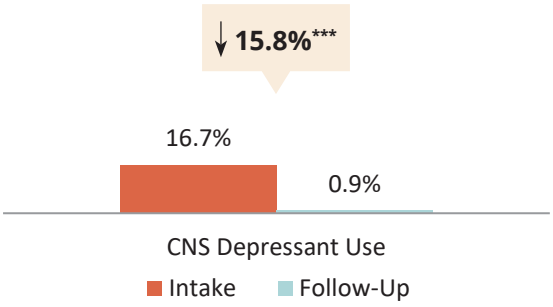


***p<.001.

PAST-6-MONTH CENTRAL NERVOUS SYSTEM (CNS) DEPRESSANT USE

The number of individuals who reported using CNS depressants (e.g., tranquilizers, barbiturates, benzodiazepines, sedatives) decreased significantly by 15.8% in the 6 months before entering the recovery center to the 6 months before follow-up (see Figure AC.4). There was no gender difference in the percent of respondents reporting use of CNS depressants at intake or follow-up.

FIGURE AC.4. CNS DEPRESSANT USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

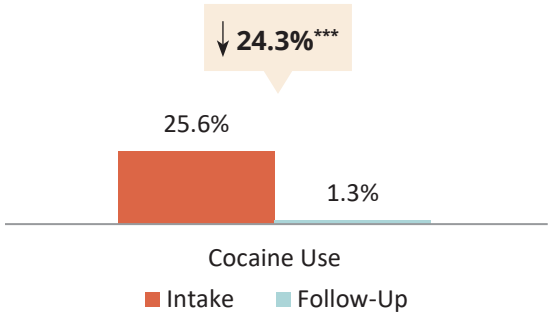


***p<.001.

PAST-6-MONTH COCAINE USE

The number of individuals who reported using cocaine decreased significantly by 24.3% in the period before entering the recovery center to the 6 months before follow-up (see Figure AC.5). There were no gender differences at intake or follow-up .

FIGURE AC.5. COCAINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

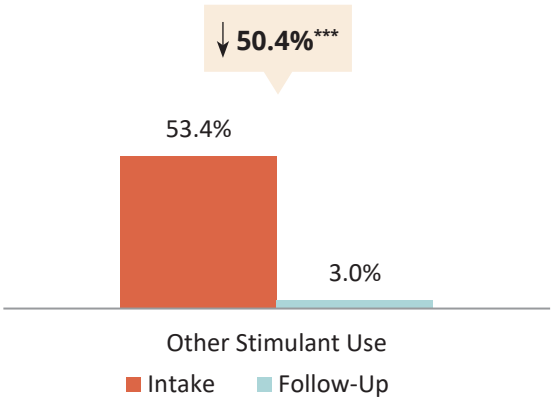


***p<.001.

PAST-6-MONTH STIMULANT USE (OTHER THAN COCAINE)

The number of individuals who reported using stimulants other than cocaine (e.g., amphetamine, methamphetamine, ecstasy, Ritalin) decreased significantly by 50.4% in the period before entering the recovery center to the 6 months before follow-up (see Figure AC.6). At intake, a significantly higher percentage of women (63.6%) reported stimulant use compared to men (44.4%). There was no gender difference at follow-up.

FIGURE AC.6. OTHER STIMULANT USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

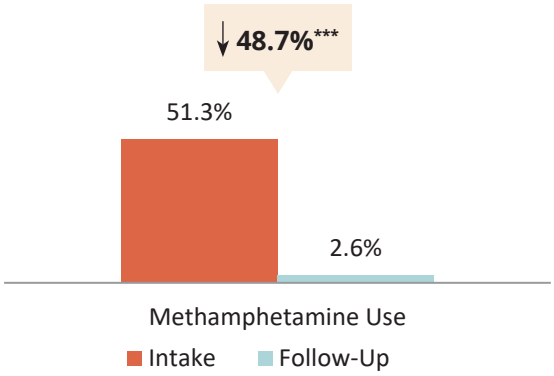


***p<.001.

PAST-6-MONTH METHAMPHETAMINE USE

Within the class of stimulant use, methamphetamine use was noted. The number of individuals who reported using methamphetamine decreased significantly by 48.7% in the period before entering the recovery center to the 6 months before follow-up (see Figure AC.7). At intake, a significantly higher percentage of women (61.8%) reported methamphetamine use compared to men (41.9%). Thee was no gender difference at follow-up.

FIGURE AC.7. METHAMPHETAMINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)

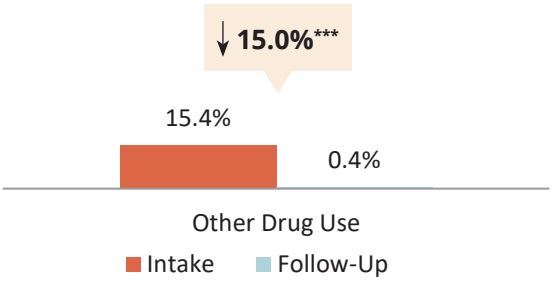


***p<.001.

PAST-6-MONTH USE OF OTHER DRUGS

The number of individuals who reported using other illicit drugs (e.g., inhalants, hallucinogens, synthetic drugs) decreased significantly by 15.0% (see Figure AC.8). There were no gender differences in the percent of clients who reported using other illicit drugs at intake or at follow-up.

FIGURE AC.8. USE OF OTHER DRUGS FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT THE ENTIRE PERIOD BEFORE ENTERING THE RECOVERY CENTER (N = 234)



***p<.001.

APPENDIX D. **LENGTH OF SERVICE, DOC-REFERRAL STATUS, AND TARGETED OUTCOMES**

This section describes the relationship between the length of service (i.e., number of days between entry into the program and discharge), DOC referral status, and targeted outcomes at follow-up: (1) illicit drug or alcohol use (yes/no) and average ASI alcohol and drug composite scores, (2) mental health (e.g., meeting criteria for depression or anxiety), (3) employment status (e.g., employed or unemployed), and (4) criminal legal system involvement (e.g., arrested at least once, spent at least one night incarcerated).

Overall, the clients who were followed up received about 7.8 months, on average, of services from the recovery centers. Clients who were referred to the program by DOC and clients who were not referred by DOC did not have significantly different lengths of stay in the recovery centers (235.4 days vs. 236.3 days, $t(279) = .062$, $p > .05$).

Multivariate analysis examining the relationship between length of service, DOC referral status, and several targeted outcomes showed no significant associations between DOC referral status and the outcomes. Significant associations were found between length of service and two outcomes at follow-up. Specifically, lower length of service was associated with greater odds of:

- being arrested in the past 6 months,
- being incarcerated in the past 6 months.