

Findings from the

Recovery Center Outcome Study

2013 Report

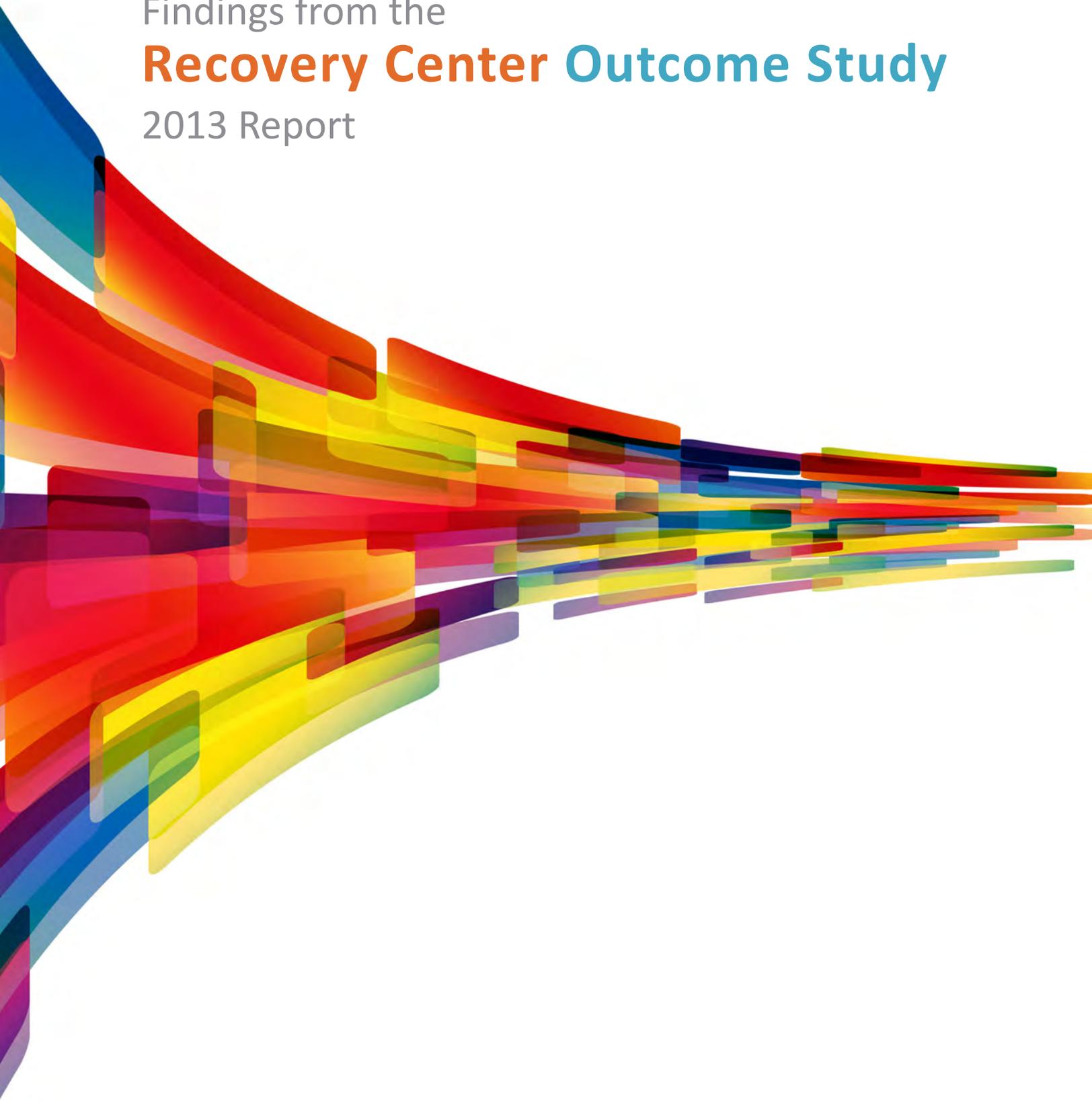


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FINDINGS FROM THE RECOVERY CENTER OUTCOME STUDY 2013 REPORT

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Center on Drug and Alcohol Research



EXECUTIVE SUMMARY

The Behavioral Health Outcome Study team at the University of Kentucky Center on Drug and Alcohol Research (UK CDAR) conducts an annual outcome evaluation for the Recovery Kentucky Centers. This is the second annual Recovery Center Outcome Study (RCOS) follow-up report. The goal of RCOS is to examine client satisfaction, recovery support, and outcomes for several specific targeted factors including: (1) substance use; (2) mental and physical health; (3) education; (4) employment; (5) homelessness and living situation; and (6) criminal justice involvement. In addition, RCOS estimates avoided costs to society in relation to the cost of recovery services. This report describes outcomes for 325 men and women who participated in a Recovery Center program, and who completed an intake interview at entry to Phase 1 and a follow-up telephone interview about 12 months after the intake survey was submitted to UK CDAR. At follow-up several positive changes were found, including:



PROGRAM SATISFACTION. Clients overwhelmingly reported satisfaction with Recovery Center Services.

- On a scale of 1 to 10, with 1 being the worst possible experience and 10 being the best possible experience, clients rated their Recovery Center experience on average as 8.3.
- Well over 90% of clients reported getting the services needed to get better, feeling better about themselves, and feeling they were treated with respect.
- The most commonly self-reported positive outcomes of the program included positive interactions and relationships with other people, improved mental health, improvement in feelings about themselves, and reductions in substance use.

Clients rated their Recovery Center experience on average as 8.3.

- RCOS clients rated their quality of life on a scale of 0 being the worst and 10 being the best. Before entering the Recovery Center rated life as an of average 2.0. Quality of life ratings significantly increased by 309.0% to 8.8 at follow-up.

CHANGES IN TARGETED FACTORS. At follow-up, there were significant reductions in substance use, improvements in mental health, employment and living situation, decreased involvement with the criminal justice system, and improvements in recovery supports.

Substance use decreases¹

- At intake 91.6% of clients indicated using illegal drugs in the 12 months before entering the Recovery Center while during the 6 month follow-up period only 8.4% of clients reported using illegal drugs.
- In addition, at intake 68.4% of clients reported using alcohol to intoxication and 62.1% reported binge drinking in the 12 months before program entry, but only 6.7% of clients reported using alcohol to intoxication and 6% reported binge drinking during the 6 month follow-up period.
- Although significantly more men reported alcohol use and alcohol use to intoxication at intake by follow-up, both men and women reported low rates of alcohol use.

Only 8.4% of clients reported using illegal drugs at follow-up.

Improvement in mental health and physical health

- About 76% of clients met criteria for self-reported depression at intake and by follow-up only 13% of clients met criteria for self-reported depression, representing an 83% significant decrease.
- More women than men self-reported depression at intake, but by follow-up there were no significant gender differences with men and women having significant reductions in depression.
- At intake, 70% of clients self-reported symptoms that met criteria for Generalized Anxiety Disorder and at follow-up about 33% met this self-reported criteria, which was a 54% decrease.
- In addition, there was an 83% decrease in the number of clients self-reporting criteria for both depression and Generalized Anxiety Disorder (from 62% at intake to 11% at follow-up).

¹ These results are for those not in a controlled environment all 12 months before the intake. Results for substance use among those in a controlled environment all 12 months show similar trends in significant reductions in use.

- The percentage of clients self-reporting suicide ideation and/or attempts decreased from 31% at intake to 3% at follow-up, a significant decrease of 89%.
- Over one-third of clients reported physiological consequences related to stress at intake, but only 10.2% reported this at follow-up. However, women's stress-related consequences were significantly higher than men's at follow-up.
- Clients also reported on the number of days out of the past 30 days their physical and mental health problems kept them from doing usual activities. Overall, there was a slight reduction in days from intake to follow-up. For men there was a significant decline reporting mental or physical health kept them from usual activities 2.9 days at intake and 1.2 days at follow-up, while women reported no decline at follow-up.

Improvement in employment

- Overall education improved significantly from intake to follow-up and men (91.3%) were more likely to report they had a high school diploma or GED equivalent than women (78.4%).
- At intake 52.9% of clients reported working at least 1 month in the 12 months before program entry and 63% reported working at least 1 month during the follow-up period. Men were more likely to report working at intake and follow-up than women. Further, more men gained employment at follow-up while women's rates of employment

Self-reported depression decreased by 83% and self-reported Generalized Anxiety decreased by 54%.

remained flat.

- The average number of months clients reported being employed increased by 75% from 5.5 months at intake to 8.8 months at follow-up.

Improved living situation

- The percentage of clients who considered themselves currently homeless decreased from 39% at intake to 8% at follow-up; a significant decrease of 80%.

Decreased involvement with the criminal justice system

- The number of clients who reported being arrested decreased 88% from the 12 months before entering the Recovery Center to 6 months before follow-up.
- Likewise, the percentage of clients reporting spending at least one day in jail or prison decreased 88%.

IMPROVEMENT IN RECOVERY SUPPORTS

- At intake, 42% of clients reported going to a mutual help recovery group meeting (e.g. AA, NA, or faith-based). At follow-up, 88% of clients reporting they had gone to mutual help recovery group meetings in the past 30 days (a significant increase of 11.0%). Also there was an increase in the average number of meetings clients attended from 6.6 meetings at intake to

The percentage of clients who considered themselves currently homeless decreased 80%.

15.7 meetings at follow-up.

- At follow-up, significantly more individuals (99%) reported that they had interactions with family and friends who were supportive of their recovery in the past 30 days compared to intake (86%).

COST SAVINGS OF RECOVERY CENTER SERVICES.

Examining the total costs of drug and alcohol abuse to society in relation to expenditures on recovery services, estimates suggest that for every dollar spent on recovery services there was a \$3.73 return in avoided costs (or costs that would have been expected given the costs associated with drug and alcohol use before participation in Recovery Services).

IMPLICATIONS FOR KENTUCKY. Overall, evaluation results indicate that Recovery Center programs have been successful in facilitating positive changes in clients in a variety of areas including decreased substance use, improved mental health problems, improved employment situations, improved living situations and a decrease in involvement with the criminal justice system. Results also suggest clients appreciate their experiences in the Recovery Centers and have much more support for their recovery after participation. Further, Recovery Centers saved money with a return of \$3.73 for every dollar spent.

Estimates suggest that for every dollar spent on recovery services there was a \$3.73 return in avoided costs



INTRODUCTION AND OVERVIEW

The Behavioral Health Outcome Study team at the University of Kentucky Center on Drug and Alcohol Research (UK CDAR) conducts an annual outcome evaluation for the Recovery Kentucky Centers. This is the second annual Recovery Center Outcome Study (RCOS) follow-up report. The objectives for UK CDAR Recovery Center Outcome Study (RCOS) are to: (1) provide highly credible data with ethical standards to support the Recovery Center programs through collaborative evaluation practices; and (2) translate the research findings in ways that communicate to practitioners, community members, politicians, and other key stakeholders the meaning of research findings.

All 14 of the currently established Recovery Centers participate in the independently conducted Recovery Center Outcome Study (RCOS). There are currently 7 Recovery Center facilities for women and 7 Recovery Center facilities for men across the state². RCOS includes a face-to-face Phase 1 intake interview with program staff to assess targeted factors such as substance use, mental health symptoms, education, employment status, living situation, and criminal justice involvement prior to entering the Recovery Center. Then, a 6 month follow-up interview is conducted with a selected sample of clients. The follow-up interviews are conducted over the telephone by an interviewer at UK CDAR³. Client responses to the follow-up interviews are kept confidential to help facilitate the honest evaluation of client outcomes and satisfaction with program services. The professionalism of the outcome study is reflected in low refusal rates for follow-up participation at about 1% or fewer, and in the high follow-up rates for the Recovery Center follow-up (84-88% on average). This means only about 12% of clients were not contacted for the follow-up telephone interviews⁴. These elements all indicate RCOS is a solid, dependable research study for the Recovery Kentucky and Kentucky Housing.

This report describes outcomes for 325 men and women who participated in a Recovery Center program and who completed an intake interview at entry to Phase 1 and a follow-up telephone interview about 12 months (average of 370.1 days) after the intake survey was submitted to UK CDAR⁵. Detailed information about the methods can be found in Appendix A.

Of the 325 individuals who completed a follow-up survey, 17.2% (n = 56) were still in the Recovery Center at follow-up, which was targeted to be about 12 months after the intake survey was completed (intakes are done close to entry to Phase 1). For those clients who were still at the Recovery Center at the time of the follow-up, 12.7% were in Phase 1 and 87.3% were in Phase 2 (of those in Phase 2, 20.0% were very near completion of Phase 2).

² 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

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; Morehead Inspiration Center for Men – Morehead; The Healing Place of Campbellsville – Campbellsville; George Privett Recovery Center – Lexington; CenterPoint Recovery Center for Men – Paducah

³ Until December 2011 the follow-up strategy was based on selecting individuals who had a completed intake survey, a completed discharge record, and agreed to be contacted for the follow-up interview. The target date for the follow-up interview was for 6 months after the discharge date. Because the typical length of Phase 1 participation for Recovery Center programs is 6 months, questions in the follow-up interviews asked about the past 6 months to gather information on clients' behaviors when they were not involved in the program. Even though this was the objective, some clients were contacted for the follow-up survey while they were still involved in the Recovery Center program. After December 2011 the sampling strategy for follow-up was simplified to target the follow-up interview for 12 months after the intake was completed.

⁴ Clients are not contacted for a variety of reasons including follow-up staff were not able to find a working address or phone number or able to contact any friends or family members of the client.

⁵ The actual date the intake interview was completed is not known. Some sites do the intake interviews on paper and submit them to UK CDAR through the website at a later date. Although UK CDAR requests the intake information be submitted within 7 days it is not clear whether or not that is the case.

Also, of the 325 clients with follow-up interviews 46.5% (n=151) were referred by the Department of Corrections (DOC), 42.8% were not DOC-referred, and 10.8% did not have information provided about DOC referral.

Of the 325 clients included in this report, 64% were female and 36% male (see Appendix B for detailed information about clients). Clients were mostly White (88%) or African American (10.2%) and were an average of 33 years old at the time of the intake interview. Overall, at intake, clients reported they were separated/divorced (34.8%) or were married or cohabiting (21.2%). About two-thirds of clients (41.2%) indicated they had never been married and were not currently cohabiting.

When those with a follow-up interview were compared with those who did not have a follow-up interview on a variety of intake variables there were no significant differences for demographics, socioeconomic status indicators (education, employment, living situation), substance abuse, mental health, criminal justice involvement, and treatment history. See Appendix B for specific comparisons on demographic and targeted factors.

Results are presented in four main sections including:

Section 1: Client Satisfaction with Recovery Center Programs. This section describes three aspects of client satisfaction: (1) overall client satisfaction; (2) client ratings of program experiences; and, (3) quality of life rating changes.

Section 2: Changes in Targeted Factors. Section 2 examines change in targeted factors including substance use (illegal drugs, alcohol and tobacco), mental health symptoms, education and employment, homelessness, and involvement with the criminal justice system from intake to follow-up for the overall sample.

Section 3: Change in Recovery Supports. Section 3 focuses on three main changes in recovery supports: (1) percentage of clients attending mutual help recovery group meetings; (2) recovery supportive interactions with family/friends in the past 30 days; and, (3) the number of people the participant said they could count on for recovery support.

Section 4: Cost and Implications for Kentucky. Section 4 examines cost reductions or avoided costs to society after Recovery Center 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 during the period after leaving Phase I.

SECTION 1

CLIENT SATISFACTION WITH RECOVERY CENTER PROGRAMS

One of the important outcomes assessed during the follow-up interview is the client's perception of the Recovery Center program experience. This section describes three aspects of client satisfaction: (1) overall client satisfaction; (2) client ratings of program experiences; and, (3) client quality of life ratings for before and after involvement in the program.

OVERALL CLIENT SATISFACTION

The majority of individuals (74.2%) gave a positive rating (between 8 and 10) of their experience in the Recovery Center program, where 10 represented the best possible experience (not in a table). Overall, the mean rating was 8.3 indicating a very positive experience.

CLIENT RATINGS OF PROGRAM EXPERIENCES

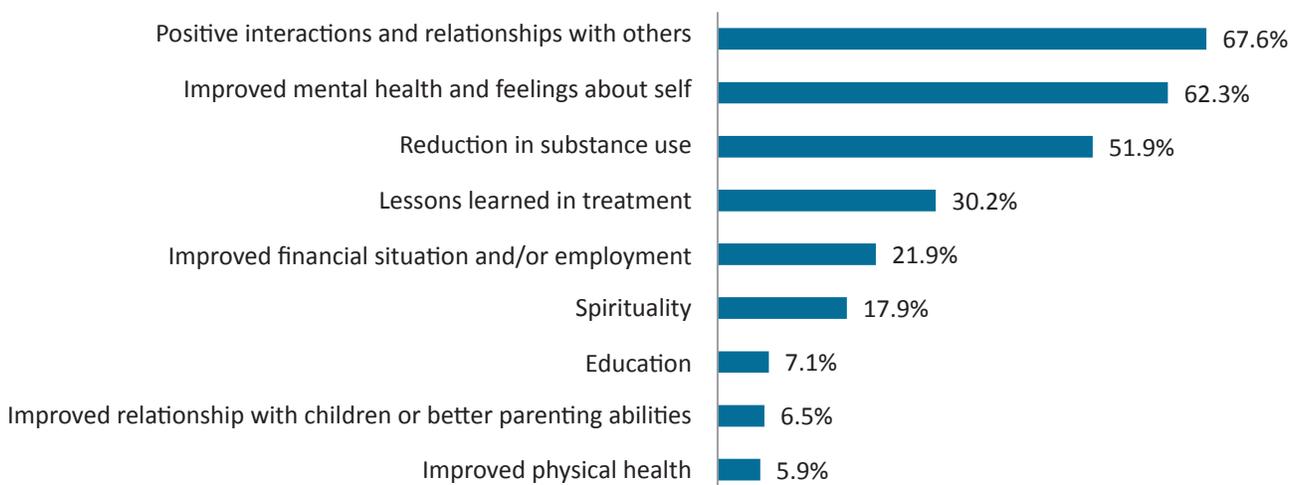
When asked about specific aspects of the program, the majority of clients reported they either agreed or strongly agreed with each aspect of the Recovery Center program assessed (See Figure 1.1). Clients overwhelmingly reported getting the services needed to get better, feeling better about themselves, and feeling they were treated with respect.

FIGURE 1.1. PERCENTAGE OF INDIVIDUALS WHO AGREED/STRONGLY AGREED WITH THE FOLLOWING STATEMENTS ABOUT THE RECOVERY CENTER PROGRAM AT FOLLOW-UP (n = 325)



At the beginning of the follow-up survey, individuals were also asked about the most positive outcomes from their Recovery Center experience (see Figure 1.2). The most commonly self-reported positive outcomes of the program included positive interactions and relationships with other people, improved mental health and feelings about themselves, and reductions in substance use.

FIGURE 1.2. PERCENTAGE OF INDIVIDUALS WHO REPORTED THE MOST POSITIVE OUTCOMES OF THEIR RECOVERY CENTER EXPERIENCE AT FOLLOW-UP (n = 325)

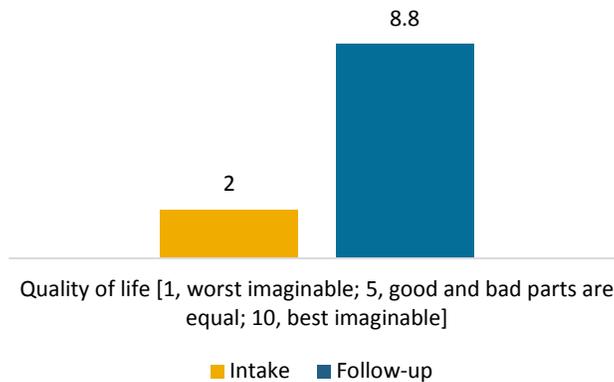


QUALITY OF LIFE RATINGS

At follow-up, individuals were asked to reflect on their quality of life before entering the Recovery Center and after 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 as on average 2.0 (see Figure 1.3). Quality of life ratings significantly increased by 309% to 8.8.

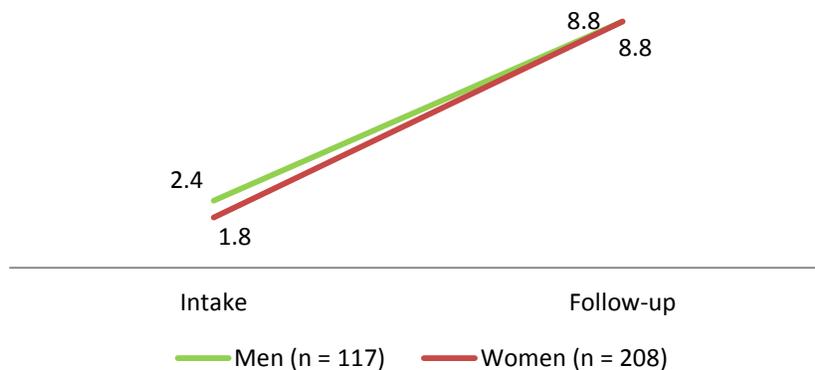
RCOS client quality of life ratings significantly increased by 309% after entering the Recovery Center

FIGURE 1.3. CHANGE IN PERCEPTION OF QUALITY OF LIFE BEFORE AND AFTER ENTERING THE RECOVERY CENTER (n = 325)



Women’s quality of life ratings before entering the Recovery Center were significantly lower than men’s ratings (see Figure 1.4). However, women’s and men’s quality of life ratings after entering the Recovery Center were the same.

FIGURE 1.4. GENDER DIFFERENCES IN QUALITY OF LIFE RATINGS FROM INTAKE TO FOLLOW-UP^a



a—Significant difference by gender at intake; $p < .01$.

SOCIAL STANDING

Another way to measure quality of life is to assess individuals’ perceptions of their social standing in society. Individuals were asked to place themselves on a ladder, representing their perception of their standing in society (Adler e al., 2000). The bottom rung, 1, represents “people who are the worst off, those who have the least money, least education, and worst jobs or no jobs” and the top rung, 10, represents “people who are the best off, those who have the most money, most education, and best jobs.” Overall, clients’ rated themselves as a 4.5

on average, (just below the middle of the ladder) at intake, and a 5.6 (just above the middle) at follow-up, which was a significant increase.

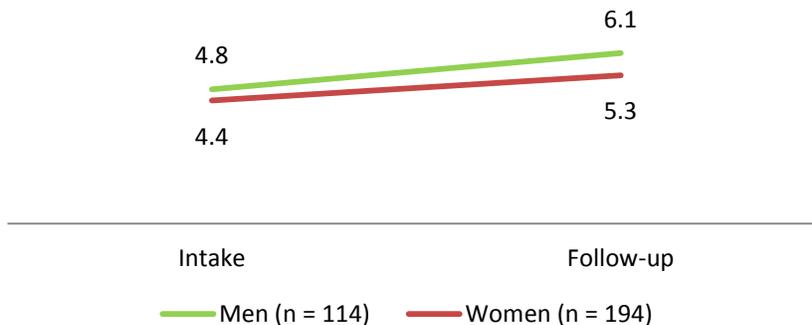
FIGURE 1.5 BREAKDOWN OF HOW CLIENTS SEE THEMSELVES IN SOCIETY (n = 266)



GENDER DIFFERENCES IN SOCIAL STANDING

Although, there was no difference in subjective social standing by gender at intake (4.8 vs. 4.4), men gave themselves significantly higher ratings in social standing than women (6.1 vs. 5.3) at follow-up (see Figure 1.6).

FIGURE 1.6. GENDER DIFFERENCES IN HOW CLIENTS SEE THEMSELVES IN SOCIETY^a



^a—Significant difference by gender at follow-up; p < .001.

“New outlook on life; can turn any negative into a positive, grateful for everything”

-RCOS client on satisfaction with the program



SECTION 2

TARGETED FACTORS

This section describes pre-program compared to post-program change on six primary targeted factors including:

- (1) illegal drug, alcohol, and tobacco use,
- (2) mental and physical health,
- (3) education,
- (4) employment,
- (5) housing/homelessness, and
- (6) criminal justice system involvement.

Results for each targeted factor are presented for the overall sample and separately by gender when there were significant differences. Appendix D provides details for gender and the overall results for pre- and post-program for every targeted factor.

2A. CHANGES IN SUBSTANCE USE FROM INTAKE TO FOLLOW-UP

This subsection of targeted factors examines change in use of (1) any illegal drugs; (2) alcohol⁶; and, (3) tobacco before entering the Recovery Centers and before the follow-up. Results are presented for each substance in 3 main subsections for clients not in a controlled environment:

1. **Change in 12-month/6-month substance use from intake to follow-up for clients not in a controlled environment⁷.** Comparisons of use of substances (any illegal drug use, alcohol use, and tobacco use) in the 12 months before the client entered the program and use of substances during the 6 month follow-up period (n=297) are presented^{8,9}. Significant gender differences are highlighted.
2. **Mean number of months individuals used substances.** For those who used any of the substances, the average number of months used before program entry (out of a 12 month period) and during the follow-up period (out of a projected 12 month period) are reported¹⁰.
3. **Change in 30 day substance use from intake to follow-up for clients not in a controlled environment.** Comparisons of any use in the 30 days before program entry and the 30 days before the follow-up interview for any illegal drugs, alcohol, and tobacco for clients who were not in a controlled environment all 30 days before entering the Recovery Center program (n=179) are presented¹¹. Significant gender differences are highlighted. Appendix C displays change in past 30 day substance use from intake to follow-up for specific substances including marijuana, prescription opiates, heroin, non-prescribed methadone, cocaine, amphetamines, barbiturates, and tranquilizers/sedatives/benzodiazepines. There were significant reductions in use for all of the specific drugs.



Results of the Addiction Severity Index (ASI) composite score are examined for change over time for illegal drugs (n=118), alcohol (n=135) and those with both alcohol and illegal drug use (n = 157). The ASI composite score assesses addiction severity even among those reporting no substance use in the past 30 days. The ASI composite score takes into consideration substance use as well as the impact of substance use on an individual's life.

Further, after results are presented for clients who were not in a controlled environment, results of substance use change for the 30 days prior to the intake and the 30 days prior to the follow-up interview for those clients who were in a controlled environment are presented (n=146) as well as the change in ASI scores for drugs (n=30) and alcohol (n=44) for individuals who did not report abstaining from the substance at intake and follow-up.

⁶ 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).

⁷ Individuals who were incarcerated all 365 days before entering the Recovery Center were not included in the analysis examining change in substance use from the 12 months before entering the Recovery Center to the 6 months before follow-up. No clients reported being incarcerated all 182 days before the follow-up.

⁸ z test for proportion 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.

⁹ If the client progresses through the phases of the Recovery Center in a typical manner, the follow-up interview should occur about 6 months after they are discharged from Phase I. However, because client's progress through phases at their own pace and many factors can affect when they are discharged from Phase 1 the follow-up timing varies by client. For example, some individuals may not complete Phase 1 and may be discharged before the approximate 6 months it should take to complete Phase 1

¹⁰ Because the reference period before Recovery Center program entry was 12 months and the reference period at follow-up was 6 months, the proportion of months in each period individuals reported using particular substances (e.g., any illegal drugs, alcohol, tobacco) was calculated. Then, that proportion was applied to a projected 12-month period at follow-up to facilitate comparisons. For example, if a client reported using tobacco all 12 months in the 6 months before follow-up, then the percent of months of use was 100%, and when this percent was applied to a 12-month period, the value was 12 for the projected follow-up period.

¹¹ Because many individuals enter the Recovery Center 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 from individuals who were not in a controlled environment all 30 days. The assumption for this divided analysis is that being in a controlled environment inhibits opportunities for alcohol and drug use.

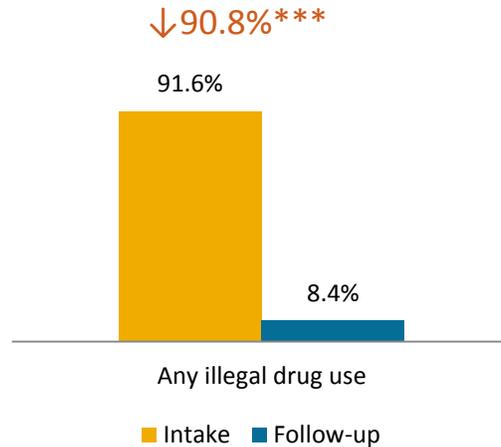
ANY ILLEGAL DRUG USE

CHANGE IN PERCENTAGE OF CLIENTS REPORTING ANY ILLEGAL DRUG USE, PAST 12-MONTH/6-MONTH

The percentage of clients reporting illegal drug use decreased 91%

At intake, 91.6% of clients reported using any illegal drugs (including prescription drug misuse and other illegal drugs) in the 12 months before entering the Recovery Center. At follow-up, only 8.4% of clients reported using illegal drugs in the 6 months before follow-up (a significant decrease of 90.8%).

FIGURE 2A.1. CHANGE IN ANY ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 297)

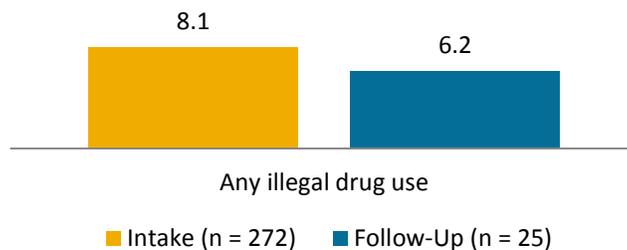


*p < .05, **p < .01, ***p < .001.

MEAN NUMBER OF MONTHS USED ANY ILLEGAL DRUGS

Among clients who reported illegal drug use in the 12 months before entering the program (n = 272), they reported using drugs an average of 8.1 months (see Figure 2A.2). Among individuals who reported using illegal drugs at follow-up (n = 25), they reported using an average of 6.2 of the projected follow-up months.

FIGURE 2A.2. MEAN NUMBER OF MONTHS INDIVIDUALS USED ANY ILLEGAL DRUGS

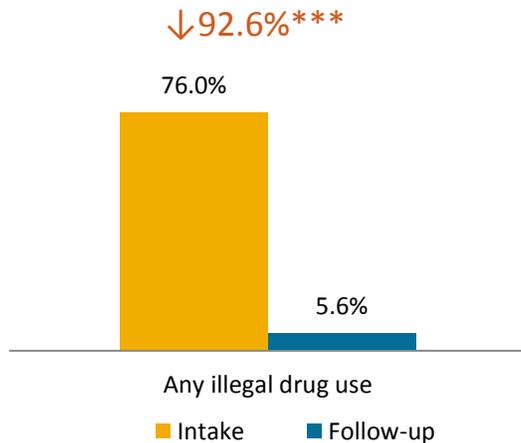


CHANGE IN PERCENTAGE OF CLIENTS REPORTING ANY ILLEGAL DRUGS, PAST 30 DAYS

A little more than three fourths of individuals (76.0%) who were not in a controlled environment all 30 days reported they had used illegal drugs (including prescription misuse and other illegal drugs) in the 30 days before entering the Recovery Center (see Figure 2A.3). At follow-up, only 5.6% of individuals reported they had used illegal drugs in the past 30 days—a significant decrease by 92.6%.

The number of individuals who reported using illegal drugs in the past 30 days decreased by 93%

FIGURE 2A.3. CHANGE IN PAST 30 DAY USE OF ANY ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 179)



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



“[I am] part of my little girl’s life”

-RCOS client on satisfaction with the program



TREND ALERT

Has the decrease in prescription opiate misuse meant heroin use has increased?

To examine opiate and heroin use over time the figure below examines RCOS clients 12 months before entry into the program on rates of prescription opiate misuse and heroin use for 2012 and 2013. As the figure shows there was a slight decrease in prescription opiate misuse (from 73% to 68%) while reported heroin use remained stable (21% and 20%). Interestingly in 2013 more females reported prescription opiate misuse (74.6%) than males (54.8%), but there were no other gender differences.



ALCOHOL

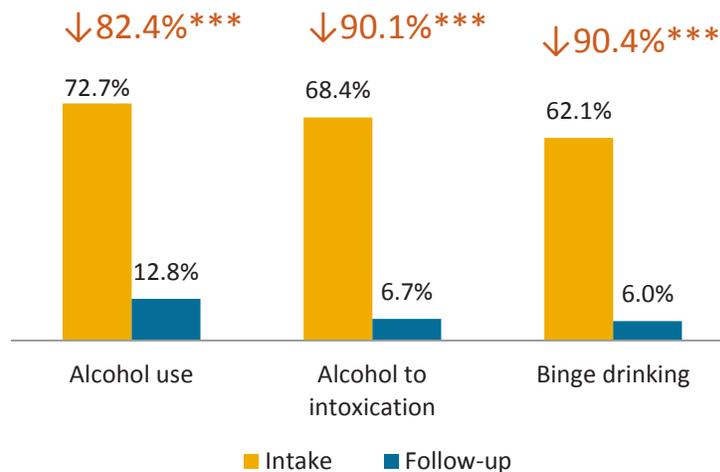
CHANGE IN PERCENTAGE OF CLIENTS REPORTING ALCOHOL USE, PAST 12-MONTH/6-MONTH

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).

The number of clients reporting alcohol use decreased 82%

The majority of individuals (72.7%) reported using alcohol in the 12 months before entering the Recovery Center while 12.8% of clients reported alcohol use in the 6 months before follow-up. There was an 82.4% decrease in the number of individuals reporting alcohol use (see Figure 2A.4)¹². Overall, 68.4% of individuals reported using alcohol to intoxication in the 12 months before entering the Recovery Center and 6.7% reported using alcohol to intoxication at follow-up—a 90.1% decline. Also, 62.1% of individuals reported binge drinking in the 12 months before program entry and only 6% reported binge drinking in the follow-up period—90.4% decrease.

FIGURE 2A.4. CHANGE IN ALCOHOL USE FROM INTAKE TO FOLLOW-UP (n = 297)



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

GENDER DIFFERENCES IN ALCOHOL USE, PAST 12-MONTH/6-MONTH

Significantly more men than women reported alcohol use at intake (81.7% vs. 67.9%). The number of men and women who reported alcohol use in the 6 months before follow-up was significantly decreased by 78.8% and

Significantly more men reported alcohol use at intake compared to women



84.7% respectively (see Figure 2A.5). Also, significantly more men used alcohol to intoxication in the 12 months before entering the Recovery Center compared to women; however, there was no gender difference at follow-up (76.0% vs. 64.2%). At follow-up, only 5.8% of men and 7.3% of women reported using alcohol to intoxication. There was no significant difference by gender in binge drinking in the 12 months before entering the Recovery Center or the 6 months before follow-up.

¹² Missing data on binge drinking for 12 cases because a different version of the baseline was used

FIGURE 2A.5. GENDER DIFFERENCES IN ALCOHOL USE FROM INTAKE TO FOLLOW-UP^a



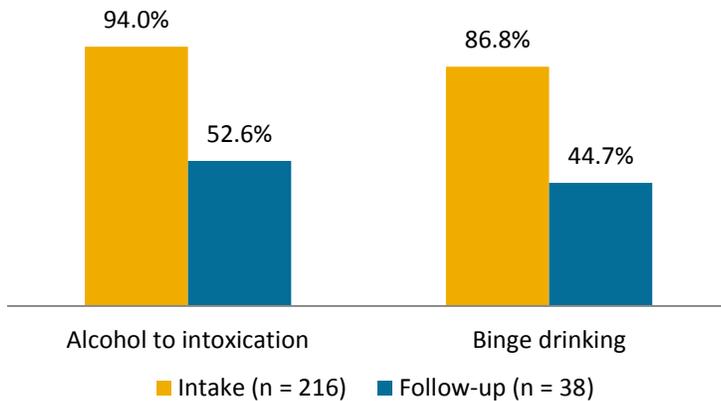
*p < .05, **p < .01, ***p < .001.
 a—Significant difference by gender at intake, p < .05.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING ALCOHOL INTOXICATION AND BINGE DRINKING AMONG THOSE WHO USED ALCOHOL, PAST 12-MONTH/6-MONTH

Of the individuals who used alcohol in the 12 months before entering the Recovery Center (n = 216), 94.0% used alcohol to intoxication (see Figure 2A.6). Of the individuals who used alcohol in the 6 months before follow-up (n = 38), 52.6% of clients reported using alcohol to intoxication. Of the 216 individuals who used alcohol in the 12 months before intake, 86.8% reported binge drinking in the 12 months before entering the Recovery Center¹³. At follow-up, of those reporting alcohol use (n = 38), 44.7% reported binge drinking.



FIGURE 2A.6. CHANGE IN ALCOHOL TO INTOXICATION AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT

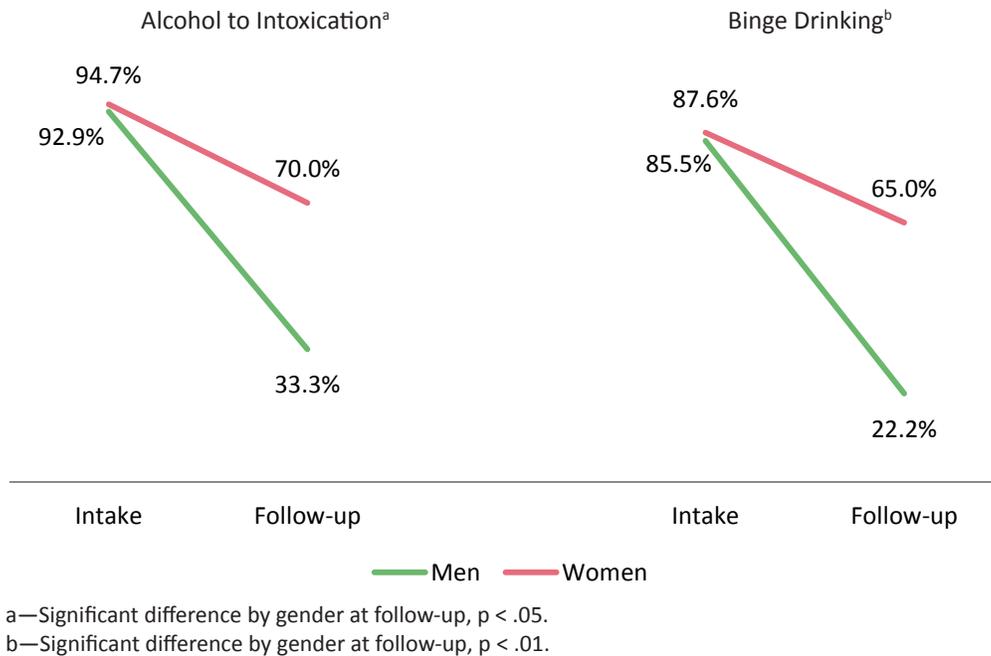


¹³ While 216 clients responded to alcohol intoxication questions at intake, 12 individuals had missing data on binge drinking (because a different intake survey was used) leaving a sample of 204 individuals with information about binge drinking at intake.

GENDER DIFFERENCES IN ALCOHOL TO INTOXICATION AND BINGE DRINKING AMONG THOSE REPORTING ALCOHOL USE

There were no gender differences on either alcohol to intoxication or binge drinking at intake (see Figure 2A.7). Of the individuals who used alcohol in the 6 months before follow-up ($n = 38$), significantly more women reported using alcohol to intoxication compared to men (70.0% vs. 33.3%). Of the individuals who used alcohol in the 6 months before follow-up, significantly more women compared to men reported binge drinking (65.0% vs. 22.2%).

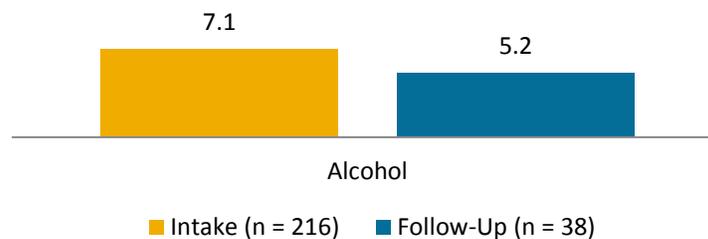
FIGURE 2A.7. GENDER DIFFERENCES IN ALCOHOL TO INTOXICATION AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT



MEAN NUMBER OF MONTHS USED ALCOHOL

Figure 2A.8 shows the number of months of alcohol use for those who reported using any alcohol at intake and any alcohol at follow-up. Among the individuals who reported using alcohol in the 12 months before entering the program ($n = 216$), they used an average of 7.1 months. Among individuals who reported using alcohol at follow-up ($n = 38$), they used an average of 5.2 projected months.

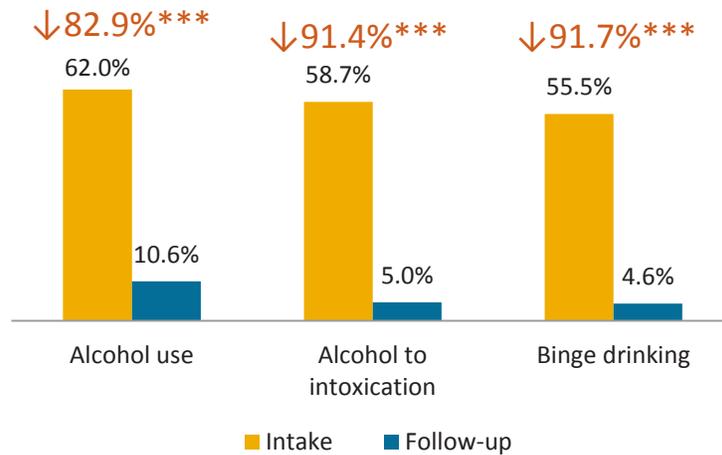
FIGURE 2A.8. MEAN NUMBER OF MONTHS OF ALCOHOL USE



CHANGE IN PERCENTAGE OF CLIENTS REPORTING ALCOHOL, PAST 30 DAY USE

There was a decrease in the percentage of individuals who reported using alcohol in the past 30 days from intake (62.0%) to follow-up (10.6%). This means that the number of RCOS clients reporting alcohol use decreased 82.9% from intake to follow-up. Decreases in the number of individuals who reported using alcohol to intoxication were also significant for the sample overall (by 91.4%). There were similar significant decreases in the number of individuals who reported binge drinking¹⁴ at follow-up compared to the 30 days before entering the Recovery Center (see Figure 2A.9).

FIGURE 2A.9. CHANGE IN PAST 30 DAY ALCOHOL USE FROM INTAKE TO FOLLOW-UP (n = 179)



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

GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING ALCOHOL USE IN THE PAST 30 DAYS

Figure 2A.10 shows that nearly three-fourths of men reported using alcohol in the 30 days before entering the Recovery Center, and by follow-up, only 12.8% reported alcohol use, representing an 82.8% significant decrease. Significantly more men than women reported using alcohol, alcohol to intoxication, and binge drinking in the 30 days before entering the program. By follow-up, however, these significant differences between men and women were no longer evident. Decreases in the number of individuals who reported using alcohol to intoxication were significant for men (92.7%) and women (90.0%) separately. There were similar significant decreases in the number of individuals who reported binge drinking at follow-up compared to the 30 days before entering the Recovery Center.



Significantly more men than women reported using alcohol, alcohol to intoxication, and binge drinking in the 30 days before entering the program

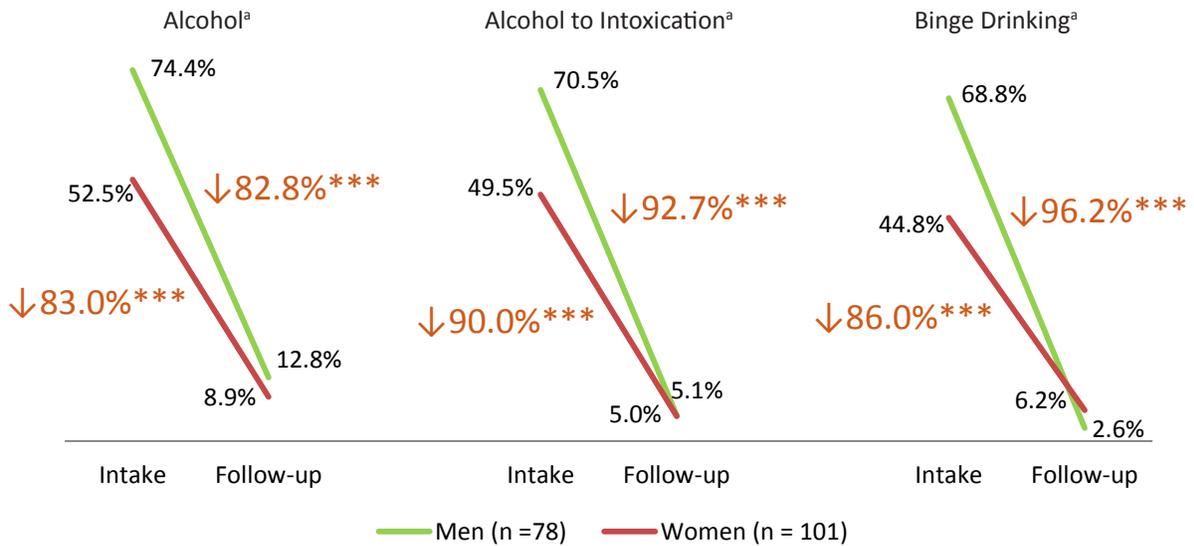
“Learned about myself, learned to cope with the world, learned to say ‘no’”

-RCOS client on satisfaction with the program



¹⁴ 6 cases had missing data on binge drinking at intake because a different version of the intake survey was used.

FIGURE 2A.10. GENDER DIFFERENCES IN PAST 30 DAY ALCOHOL USE, ALCOHOL TO INTOXICATION, AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP



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

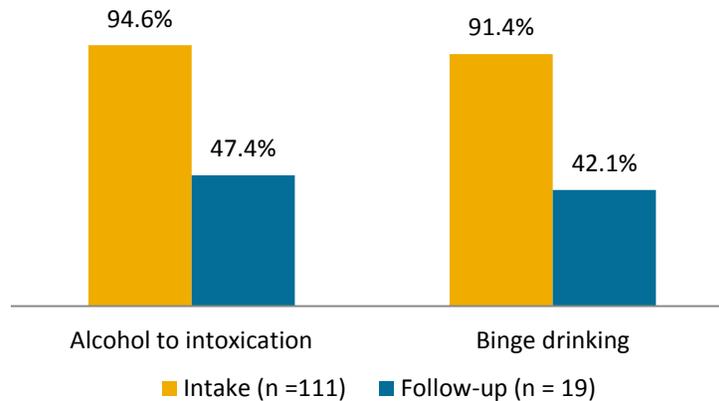
a—Significant difference by gender at intake, p < .01.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING ALCOHOL INTOXICATION AND BINGE DRINKING AMONG THOSE WHO USED ALCOHOL IN THE PAST 30 DAYS

Of the 111 individuals who used alcohol in the 30 days before entering the Recovery Center, 94.6% used alcohol to intoxication in the 30 days before entering the program (see Figure 2A.11). Of the 19 individuals who reported using alcohol in the 30 days before follow-up, 47.4% reported alcohol use to intoxication.

Of the 111 individuals who used alcohol in the 30 days before entering the Recovery Center, 91.4% reported binge drinking in the 30 days before entering the Recovery Center¹⁵. Of the 19 individuals who used alcohol in the 30 days before follow-up, 42.1% reported binge drinking.

FIGURE 2A.11. CHANGE IN PAST 30 DAY ALCOHOL TO INTOXICATION AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT

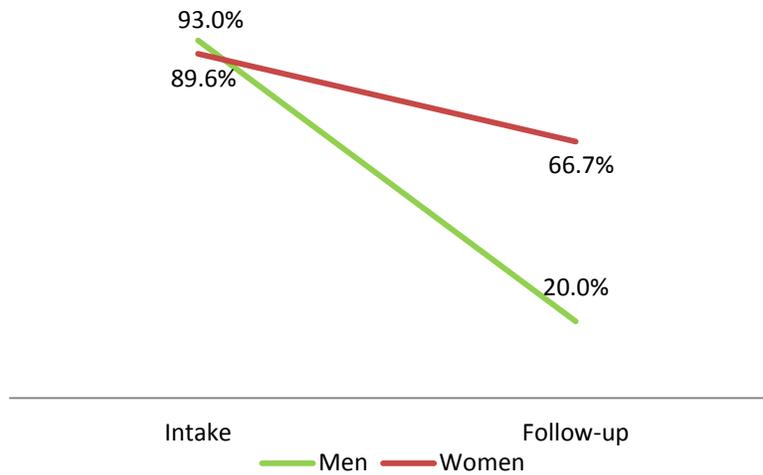


¹⁵ 6 individuals had missing data on binge drinking (because a different intake survey was used) leaving a sample of 105 individuals with information about binge drinking.

GENDER DIFFERENCES IN ALCOHOL TO INTOXICATION AND BINGE DRINKING AMONG THOSE REPORTING ALCOHOL USE IN THE PAST 30 DAYS

There were no differences between genders on alcohol to intoxication among those clients who reported alcohol use in the past 30 days at either intake or follow-up (see Figure 2A.12). Of the 105 individuals that used alcohol and had information on binge drinking at intake, 93.0% of men and 89.6% of women reported binge drinking in the 30 days before entering the Recovery Center. Of the 19 individuals who used alcohol in the 30 days before follow-up, significantly more women than men reported binge drinking (66.7% vs. 20.0%).

FIGURE 2A.12. GENDER DIFFERENCES IN PAST 30 DAY BINGE DRINKING FROM INTAKE TO FOLLOW-UP, AMONG THOSE REPORTING ALCOHOL USE AT EACH POINT^a



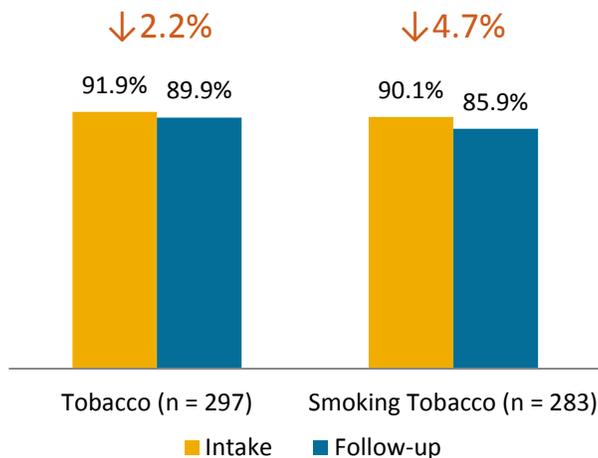
a—Significant difference by gender at follow-up, $p < .05$.

TOBACCO USE AND SMOKING

CHANGE IN PERCENTAGE OF CLIENTS REPORTING TOBACCO USE AND SMOKING, PAST 12-MONTH/6-MONTH

Overall, there was no change in tobacco use from intake to follow-up (see Figure 2A.13). Most individuals reported using tobacco in the 12 months before entering the Recovery Center (91.9%) and in the 6 months before follow-up (89.9%), with a non-significant decrease. Similarly, the majority of individuals (90.1%) reported smoking tobacco¹⁶ in the 12 months before entering the Recovery Center, with a non-significant decrease at follow-up (85.9%).

FIGURE 2A.13. OVERALL CHANGE IN TOBACCO USE FROM INTAKE TO FOLLOW-UP

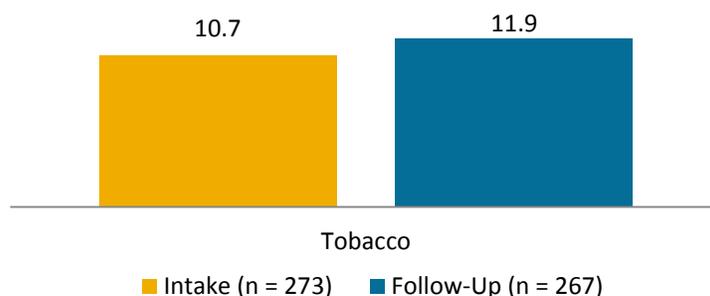


¹⁶ Missing data on smoking tobacco at intake for 14 cases.

MEAN NUMBER OF MONTHS USED TOBACCO

Figure 2A.14 shows, among tobacco users, the number of months clients reported using tobacco at intake and for the projected follow-up. Among the individuals who reported using tobacco in the 12 months before entering the program (n = 273), they reported using tobacco, on average, 10.7 months. Among individuals who reported using tobacco at follow-up (n = 267), they reported using, on average, 11.9 of the projected follow-up months.

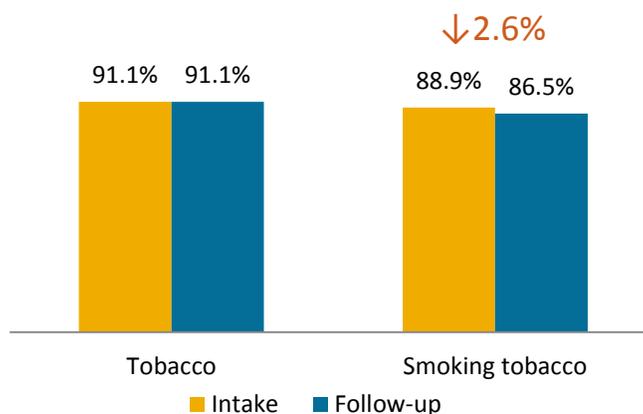
FIGURE 2A.14. NUMBER OF MONTHS TOBACCO USE



CHANGE IN PERCENTAGE OF CLIENTS REPORTING TOBACCO USE AND SMOKING, PAST 30 DAY USE

The majority of individuals reported using tobacco in the 30 days before entering the Recovery Center (91.1%) and at follow-up (91.1%). There was no change in tobacco use from intake to follow-up (see Figure 2A.15). Additionally, there was no significant change in smoking tobacco¹⁷.

FIGURE 2A.15. CHANGE IN PAST 30 DAY TOBACCO USE FROM INTAKE TO FOLLOW-UP (n = 179)



“Got self-respect back; got myself back”

-RCOS client on satisfaction with the program



¹⁷ 8 cases had missing data on tobacco smoking because a different version of the intake survey was used.

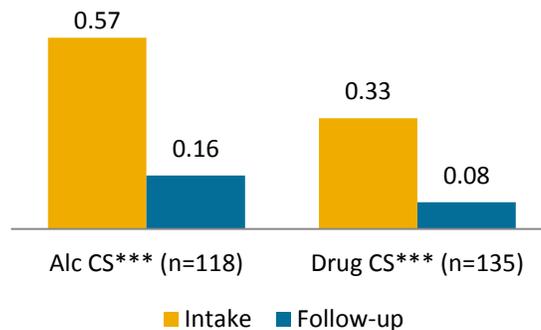
ADDICTION SEVERITY INDEX COMPOSITE SCORE CHANGE FOR CLIENTS NOT IN A CONTROLLED ENVIRONMENT

The number of individuals with ASI composite scores indicating alcohol or drug dependence decreased significantly at follow-up

Another way to examine overall change in degree of severity of substance use disorder is to use the Addiction Severity Index (ASI) composite score (CS). This can be used to estimate the prevalence of individuals who are likely to meet criteria for active alcohol or drug dependence and to show mean reductions in severity scores. Change in the mean ASI CS for alcohol and drugs was examined for individuals who were not in a controlled environment all 30 days before entering the Recovery Center. 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.16 displays the change in mean scores¹⁸. Mean score for the Alcohol CS significantly decreased from 0.57 at intake to 0.16 at follow-up. The mean score for the Drug CS significantly decreased from 0.33 at intake to 0.08 at follow-up.

FIGURE 2A.16. MEAN ASI ALCOHOL AND DRUG COMPOSITE SCORES AT INTAKE AND FOLLOW-UP



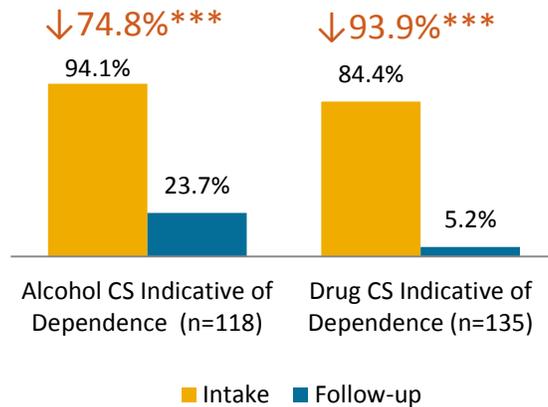
*p < .05, **p < .01, ***p < .001.

Among the individuals who were not in a controlled environment all 30 days before entering the Recovery Center and who did not report abstaining from the substance (alcohol, drugs) both at intake and follow-up, the percentage of individuals who had ASI CS that met the cutoff for dependence decreased significantly from intake to follow-up (see Figure 2A.17). The vast majority of individuals had Alcohol CS and Drug CS that met the cutoff for dependence at intake (94.1% and 84.4% respectively), while the percentages of individuals with Alcohol CS and Drug CS that met the cutoff for dependence decreased significantly at follow-up. Only 23.7% of individuals had an Alcohol CS that met the cutoff for dependence at follow-up, and only 5.2% had a Drug CS that met the cutoff for dependence at follow-up. Thus, the number of individuals who had an Alcohol CS that met the cutoff for dependence decreased significantly by 74.8% and the number of individuals who had a Drug CS that met the cutoff for dependence at follow-up decreased significantly by 93.9%.



¹⁸ The following numbers of cases were not included in the analysis of change in the CS because 61 individuals reported abstaining from alcohol and 42 individuals reported abstaining from drugs at intake and follow-up, and two individuals had missing data from items included in the calculation of the drug CS at follow-up.

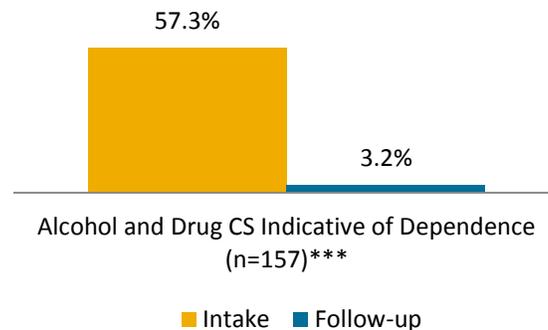
FIGURE 2A.17. PERCENTAGE OF INDIVIDUALS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR ALCOHOL OR DRUG DEPENDENCE AT INTAKE AND FOLLOW-UP



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

Among the individuals who were not in a controlled environment all 30 days before entering the Recovery Center and who did not report abstaining from all substances (i.e., alcohol and drugs) both at intake and follow-up, the percentage of individuals who had ASI CS that met the cutoff for dependence for both alcohol and drugs also decreased significantly from intake to follow-up (see Figure 2A.18). More than half of clients (57.3%) who used alcohol and/drugs at intake or follow-up had ASI CS scores that met the cutoff for dependence for alcohol and drugs at intake. The percentage of clients who had ASI CS scores that met the cutoff for dependence for alcohol and drugs decreased significantly to only 3.2% (n = 5) at follow-up.

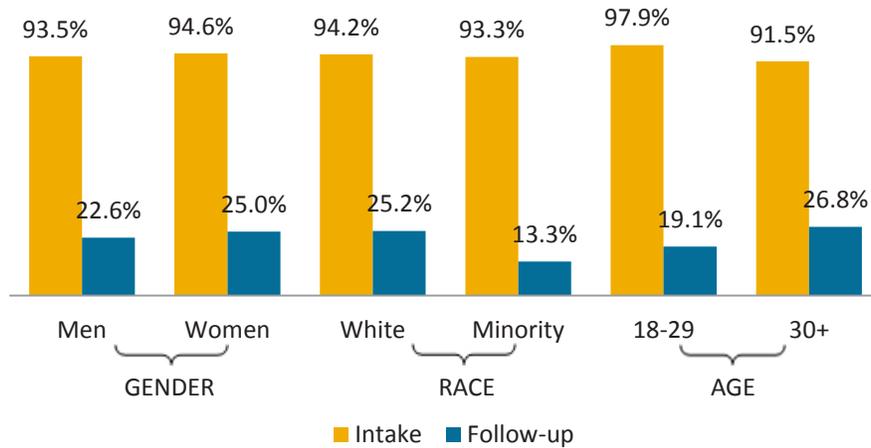
FIGURE 2A.18. PERCENTAGE OF INDIVIDUALS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR BOTH ALCOHOL AND DRUG DEPENDENCE AT INTAKE AND FOLLOW-UP



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

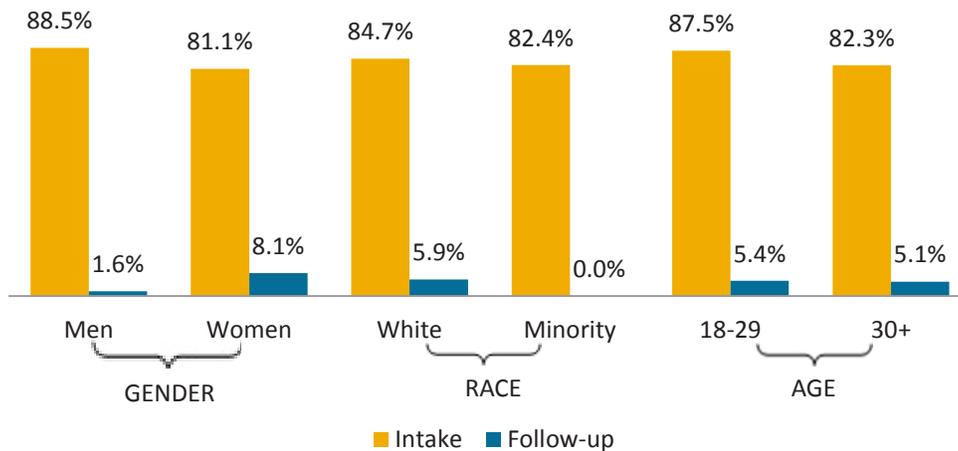
The data were examined to determine whether individuals who had Alcohol CS indicative of dependence at intake and follow-up differed by gender, race/ethnicity, or age (see Figure 2A.19). No statistically significant differences were found. In other words, at intake and follow-up, the percentage of individuals with an Alcohol CS indicative of dependence did not differ between men and women, White and racial minority clients, or older and younger clients.

FIGURE 2A.19. PERCENTAGE OF ALCOHOL USING INDIVIDUALS WITH AN ALCOHOL CS INDICATIVE OF DEPENDENCE AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (n = 118)



Analyses were also conducted to determine if individuals who had a Drug CS indicative of dependence at intake and follow-up differed by gender, race/ethnicity, or age (see Figure 2A.20). There were no significant differences in the percentage of individuals who had a Drug CS indicative of dependence at intake or follow-up by gender, race or age group. In other words, at intake and follow-up, men and women did not differ on the percentage of individuals who had a Drug CS indicative of dependence. Similarly, White and racial minority clients did not differ on the percentage of individuals who had a Drug CS indicative of dependence at intake or follow-up. Younger and older clients did not differ on the percentage of individuals who met criteria for drug dependence at either intake or follow-up.

FIGURE 2A.20. PERCENTAGE OF DRUG USING INDIVIDUALS WITH A DRUG CS INDICATIVE OF DEPENDENCE AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (n = 135)



“Drugs don’t make anything better.”

-RCOS client on the most important thing they learned from the Recovery Center program



How is past 30 day substance use different for clients who were in a controlled environment all 30 days before entering the Recovery Center?

Changes in drug and alcohol 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 = 146) because being in a controlled environment inhibits opportunities for alcohol and drug use.

CHANGE IN PAST 30 DAY SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT

ANY ILLEGAL DRUGS, PAST 30 DAY USE

Of the individuals who were in a controlled environment all 30 days, 29.5% reported they used illegal drugs (including marijuana, cocaine, heroin, methadone, hallucinogens, barbiturates, inhalants, and non-prescribed use of prescription opiates, sedatives and amphetamines) in the 30 days before they entered the Recovery Center (see Figure 2A.21). In the 30 days before follow-up, 2.7% of clients reported illegal drug use which is a 90.7% significant decrease from intake to follow-up.

FIGURE 2A.21. OVERALL CHANGE IN PAST 30 DAY ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT (n = 146)



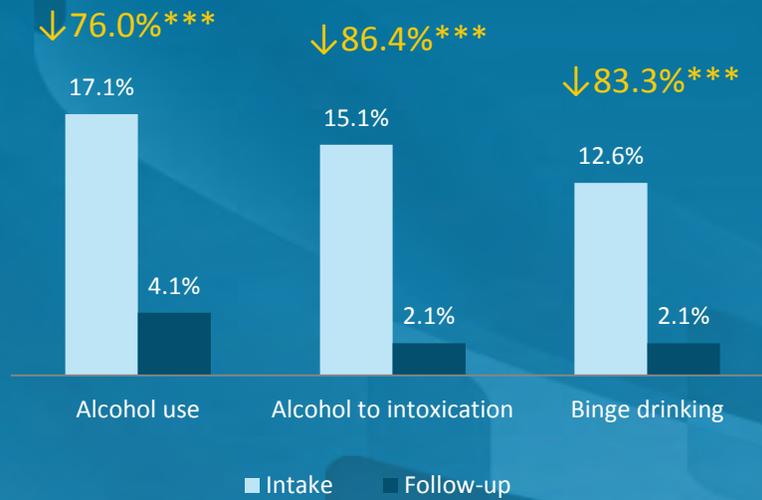
*p < .05, **p < .01, ***p < .001.

ALCOHOL, PAST 30 DAY USE

As expected, given their confinement to a controlled environment in the 30 days before entering the Recovery Center, only a minority of individuals reported they had used alcohol in those 30 days. The percentage of individuals who reported alcohol use at follow-up decreased to 4.1% (a significant decrease of 76.0%). At follow-up, 2.1% reported they used alcohol to intoxication, and 2.1% reported they had engaged in binge drinking¹⁹. Thus, there were significant decreases in alcohol use, alcohol use to intoxication, and binge drinking for men and women.

¹⁹ Missing data for 3 cases that used a different version of the intake survey.

FIGURE 2A.22. OVERALL CHANGE IN PAST 30 DAY ALCOHOL USE FROM INTAKE TO FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT (n = 146)

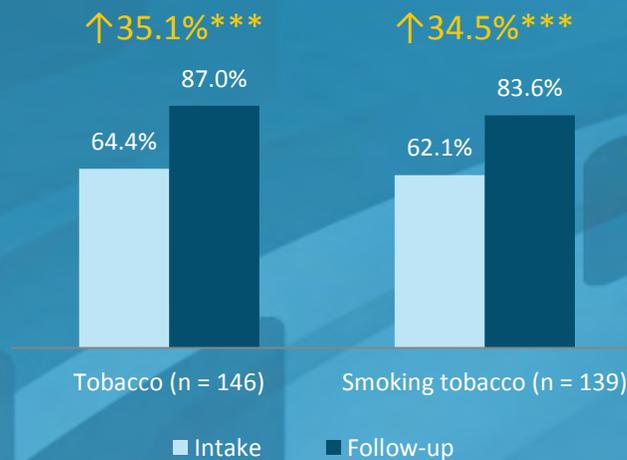


*p < .05, **p < .01, ***p < .001.

TOBACCO, PAST 30 DAY USE

Among individuals who were in a controlled environment all 30 days before they entered the Recovery Center, 64.4% reported they had used tobacco in those 30 days. Unlike alcohol and illegal drug use, which decreased from intake to follow-up, there was a significant increase in the number of clients who reported past-30-day tobacco use at follow-up to 87.0% (an increase of 35.1%). Similarly, 62.1% of clients reported smoking tobacco in the past 30 days at intake and 83.6% reported smoking tobacco in the past 30 days before follow-up.

FIGURE 2A.23. OVERALL CHANGE IN PAST 30 DAY TOBACCO USE FROM INTAKE TO FOLLOW-UP FOR CLIENTS IN A CONTROLLED ENVIRONMENT



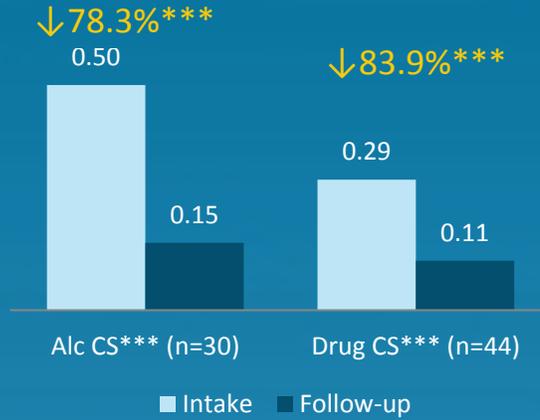
*p < .05, **p < .01, ***p < .001.

ADDICTION SEVERITY INDEX COMPOSITE SCORE CHANGE FOR CLIENTS 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 mean ASI CS for alcohol

and drugs decreased significantly from intake to follow-up (see Figure 2A.24)²⁰.

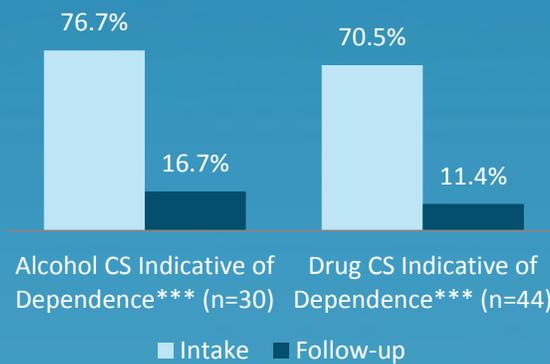
FIGURE 2A.24. MEAN ALCOHOL ASI ALCOHOL AND DRUG COMPOSITE SCORES AT INTAKE AND FOLLOW-UP



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

The majority of individuals had an Alcohol CS and Drug CS that met the cutoff for dependence at intake (76.7% and 70.5% respectively), while the percentages of individuals with Alcohol CS and Drug CS that met the cutoff for dependence decreased significantly at follow-up (see Figure 2A.25). A minority of individuals (16.7%) had an Alcohol CS that met the cutoff for dependence at follow-up, and only 11.4% had a Drug CS that met the cutoff for dependence at follow-up. Thus, for the group of individuals who were in a controlled environment all 30 days before entering the program and who used alcohol or drugs at intake, follow-up, or both, the number of individuals with an Alcohol CS that met cutoff for dependence decreased significantly by 78.3% and the number of individuals with a Drug CS that met cutoff for dependence decreased significantly by 83.9%.

FIGURE 2A.25. ASI COMPOSITE SCORES MEETING THE CUTOFF FOR DEPENDENCE AT INTAKE AND FOLLOW-UP



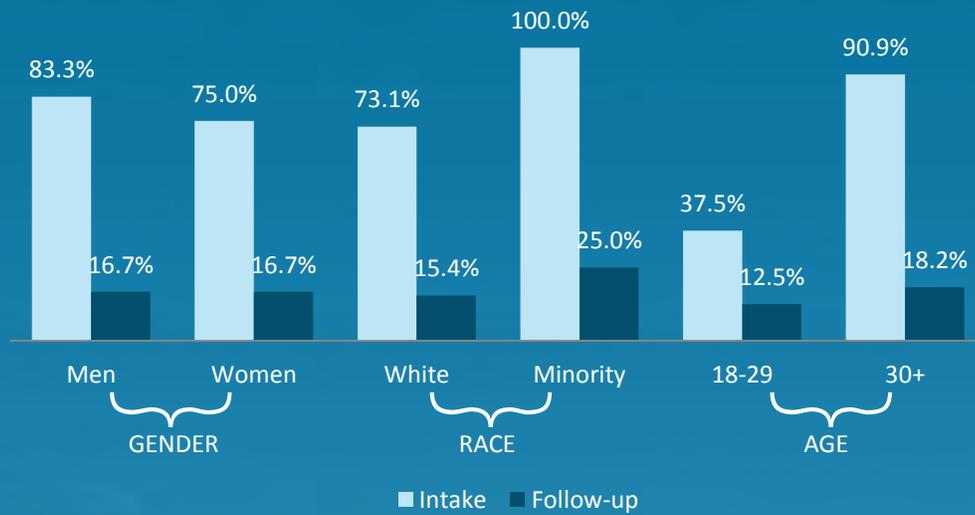
*p < .05, **p < .01, ***p < .001.

Analyses were also conducted to examine difference between individuals who had an Alcohol Composite Score indicative of dependence at intake and follow-up by gender, race/ethnicity, or age²¹ (see Figure 2A.26). Significantly fewer younger individuals had an Alcohol CS indicative of dependence at intake compared to older individuals; however, this difference was not found at follow-up. No other demographic differences were found at intake or follow-up for the percentage of individuals who had an Alcohol CS indicative of dependence.

²⁰ Of the 146 cases where the individual was in a controlled environment all 30 days before entering the Recovery Center, 30 individuals used alcohol and 44 individuals used drugs in the 30 days before entering the Recovery Center, follow-up or both periods.

²¹ Chi square tests were conducted to examine differences by group

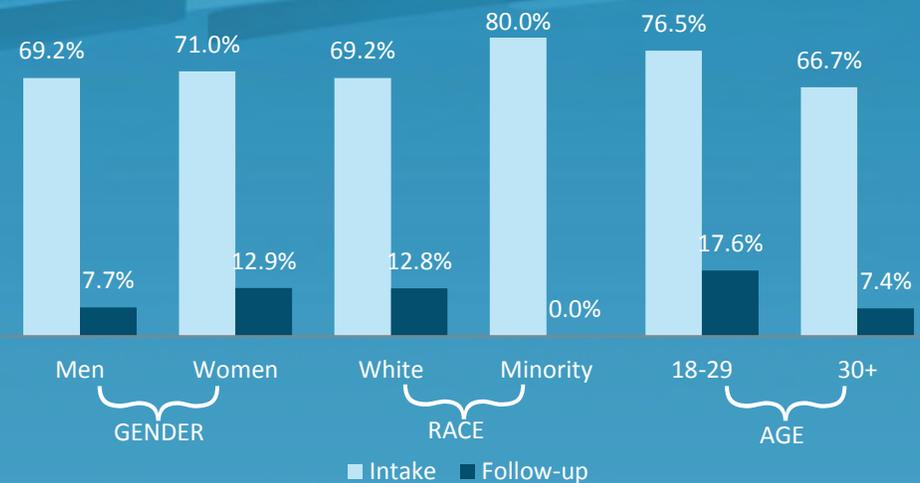
FIGURE 2A.26. PERCENTAGE OF ALCOHOL USING INDIVIDUALS WITH AN ALCOHOL COMPOSITE SCORE INDICATIVE OF DEPENDENCE AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (n = 30)



a—Indicates that there was a statistically significant difference ($p < .01$) in percent of individuals with alcohol CS equal to or greater than the cutoff score at intake by group

Data were analyzed to examine whether individuals who had a Drug CS indicative of dependence at intake and follow-up differed by gender, race/ethnicity, or age (see Figure 2A.27). No statistically significant differences were found at intake or follow-up. This lack of finding of statistically significant differences may be in part explained by the small number of individuals included in these analyses (n = 44).

FIGURE 2A.27. PERCENTAGE OF DRUG USING INDIVIDUALS WITH A DRUG COMPOSITE SCORE INDICATIVE OF DEPENDENCE AT INTAKE AND FOLLOW-UP BY DEMOGRAPHIC FACTORS (n = 44)



2B. CHANGE IN MENTAL HEALTH PROBLEMS FROM INTAKE TO FOLLOW-UP

This subsection examines changes in mental health and stress symptoms from intake to follow-up. Specifically, this subsection examines: (1) depression and/or anxiety symptoms; (2) suicide ideation and attempts; (3) stress symptoms; and, (5) perceptions of physical and mental health status. The mental health and stress questions in the RCOS intake and follow-up surveys were self-report measures of mental health symptoms and stress symptoms²².

CHANGE IN PERCENTAGE OF CLIENTS REPORTING DEPRESSION AND/OR ANXIETY SYMPTOMS

To assess depression, participants were first asked 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?”

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). To meet the study criteria for depression, individuals had to say “yes” to at least one of the two screening questions and at least 4 of the other symptoms.

About 3 in 4 individuals (76.3%) met study criteria for depression in the 12 months before they entered the Recovery Center (see Figure 2B.1). By follow-up, only 13.3% met criteria for depression, representing an 82.6% significant decrease.

The percentage of clients meeting criteria for depression decreased 83% at follow-up

To assess for Generalized Anxiety Disorder, participants were first asked:

1. “In the 12 months before you entered this Recovery Center, did you have a period lasting 3 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)?”

The percentage of clients meeting criteria for self-report Generalized Anxiety Disorder decreased 54% at follow-up

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). To meet criteria for self-reported Generalized Anxiety Disorder, individuals had to answer “yes” to the screening question and to at least 3 of the symptom items.

In the 12 months before entering the Recovery Center, 7 in 10 individuals (70.1%) reported symptoms that met the study criteria for self-reported Generalized Anxiety Disorder and 32.5% reported symptoms at follow-up. This indicates

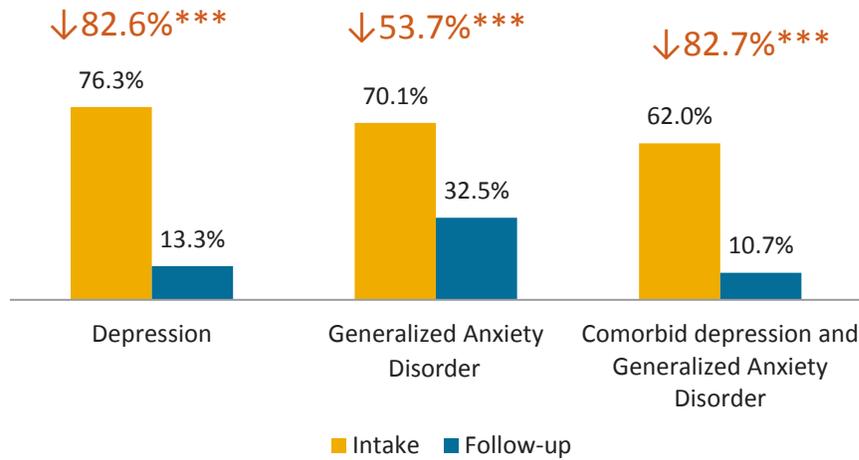
there was a 53.7% significant decrease in the number of clients meeting the study criteria for self-reported Generalized Anxiety Disorder.

At intake, over 6 in 10 clients (62.0%) met criteria for both self-reported depression and Generalized Anxiety Disorder and at follow-up about 1 in 10 (10.7%) met criteria for both. There was an 82.7% significant reduction in the number of individuals who reported symptoms that met the criteria for both self-reported depression and Generalized Anxiety Disorder at follow-up.

The percentage of clients meeting criteria for both self-reported depression and Generalized Anxiety Disorder decreased 83% at follow-up

²² Results are presented as change in the percentage of clients meeting criteria for mental health problems in the 12 months before entering the Recovery Center to the 6 months before follow-up. A small percent, 17 cases, used a different intake survey which did not include these mental health questions.

FIGURE 2B.1. CHANGE IN PERCENTAGE OF CLIENTS MEETING CRITERIA FOR DEPRESSION, GENERALIZED ANXIETY DISORDER AND COMORBID DEPRESSION AND GENERALIZED ANXIETY DISORDER (n = 308)



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

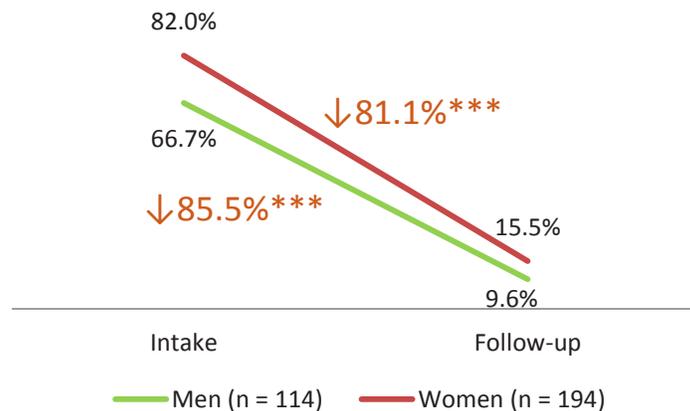
GENDER DIFFERENCES IN DEPRESSION SYMPTOMS

Significantly more women met criteria for depression at intake compared to men



Significantly more women met criteria for depression at intake compared to men (82.0% vs. 66.7%). By follow-up, only 9.6% of men and 15.5% of women met criteria for depression, which represents an 85.5% significant decrease in depression for men and an 81.1% significant decrease for women. In addition, at follow-up there was no significant difference in the number of men and women who reported depression.

FIGURE 2B.2. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS MEETING CRITERIA FOR DEPRESSION^a



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

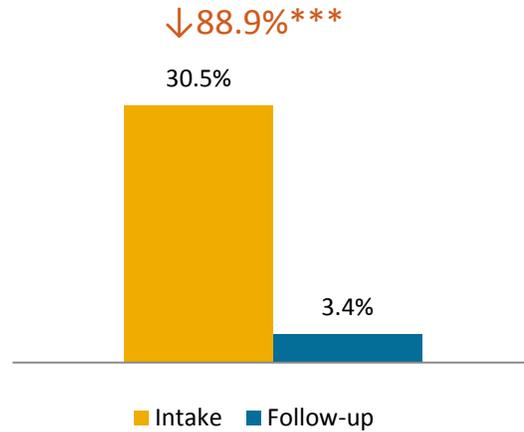
a—Statistical difference by gender at intake; p < .05.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING SUICIDE IDEATION AND/OR ATTEMPTS

Suicide ideation and attempts were measured with questions about thoughts of suicide, specific plans, and attempts to commit suicide. Three in 10 (30.5%) individuals reported thoughts of suicide or attempted suicide in the 12 months before entering the program. At follow-up, only 3.4% of individuals reported thoughts of suicide or attempted suicide in the 6 months before follow-up. There was an 88.9% decrease in suicide ideation and attempts from intake to follow-up (see Figure 2B.3).

The percentage of clients reporting suicide ideation and/or attempts decreased 89% at follow-up

FIGURE 2B.3. CHANGE IN PERCENTAGE OF CLIENTS REPORTING SUICIDE IDEATION AND/OR ATTEMPTS (n = 325)



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

CHANGE IN MEAN STRESS INDEX SCORES

Clients were also asked about their physiological symptoms often associated with higher stress called the Stress Index²³. The index contains 15 symptoms wherein the client indicates how often they have experienced each item in the past 7 days (e.g., experienced unexplained aches and pains, slept poorly, experienced an increased heart rate). Higher scores (maximum of 75) on the Stress Index indicate higher stress and greater physiological indicators of stress. For the overall sample, scores on the Stress Index decreased significantly from 35.5 at intake to 10.2 at follow-up, representing a decrease of 71.3% (see Figure 2B.4).

FIGURE 2B.4. CHANGE IN MEAN SCORES ON THE STRESS INDEX



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

“I have a decision in everything I do; starts and ends with me.”

-RCOS client on the most important thing they learned from the Recovery Center program



²³ Measure created by Logan, T. and Walker, R. Stress and Allostatic Load.

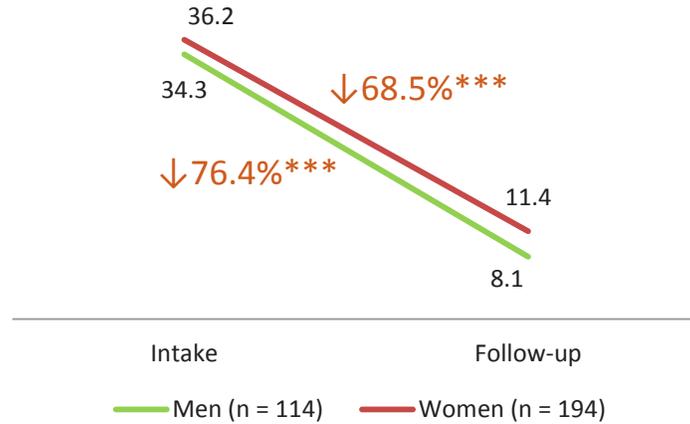
GENDER DIFFERENCES IN MEAN STRESS INDEX SCORES

At follow-up, women's Stress Index scores were significantly higher than men's scores



Figure 2B.5 shows that men's scores on the Stress Index had a greater decrease from intake to follow-up compared to women's such that, at follow-up, women's scores were significantly higher than men's scores (11.4 compared to 8.1, respectively). Nonetheless, women's scores on the Stress Index decreased significantly by 68.5%.

FIGURE 2B.5. GENDER DIFFERENCES IN MEAN SCORES ON THE STRESS INDEX^a



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

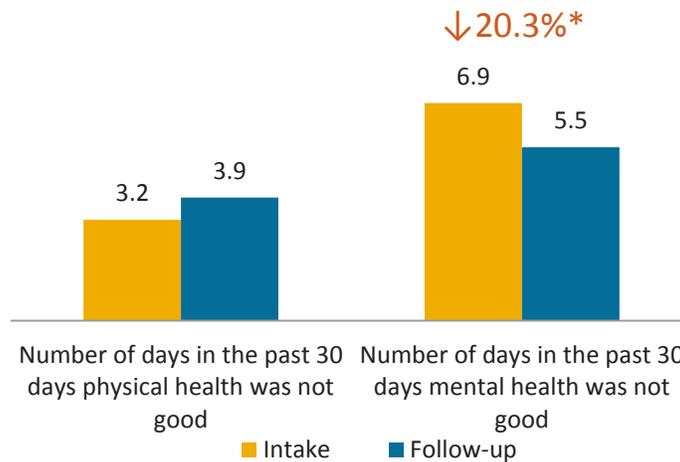
a—Statistical difference by gender at follow-up; p < .01.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING POOR PHYSICAL AND MENTAL HEALTH STATUS

The number of days clients reported their mental health was not good decreased significantly

Individuals were asked how many days in the past 30 days their physical and mental health were not good, at intake and follow-up (see Figure 2B.6). The number of days individuals reported their physical health was not good slightly increased from intake to follow-up, but this increase was not significant. Overall, the number of days mental health was not good decreased significantly, by 20.3%, from intake to follow-up.

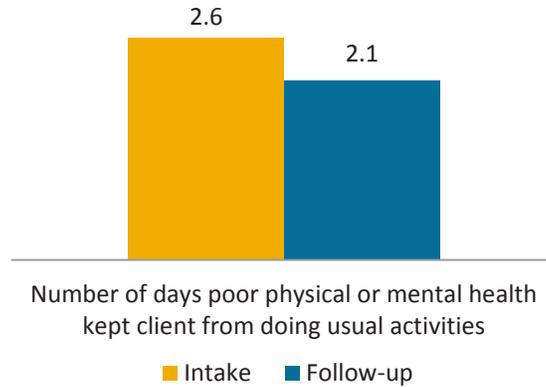
FIGURE 2B.6. CHANGE IN PERCEPTIONS OF POOR PHYSICAL HEALTH AND MENTAL HEALTH IN THE PAST 30 DAYS (n = 308)



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

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. The number of days clients reported their physical or mental health kept them from doing their usual activities decreased slightly, but not significantly.

FIGURE 2B.7. CHANGE IN PERCEPTIONS OF POOR PHYSICAL HEALTH AND MENTAL HEALTH IN THE PAST 30 DAYS (n = 308)



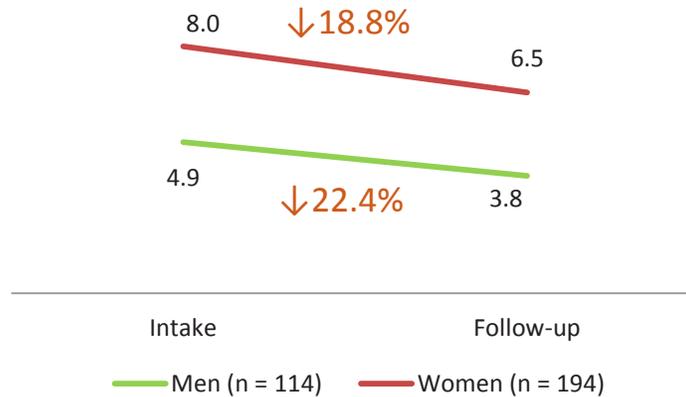
GENDER DIFFERENCES IN PERCEPTIONS OF PHYSICAL AND MENTAL HEALTH

In addition, women’s reported number of days mental health was not good was higher at intake and follow-up compared to men.



Women’s reported number of days mental health was not good was higher at intake and follow-up compared to men

FIGURE 2B.8. GENDER DIFFERENCES IN NUMBER OF DAYS IN THE PAST 30 DAYS MENTAL HEALTH WAS NOT GOOD^{a,b}



a—Statistical difference by gender at intake; p < .01.
 b—Statistical difference by gender at follow-up; p < .01.

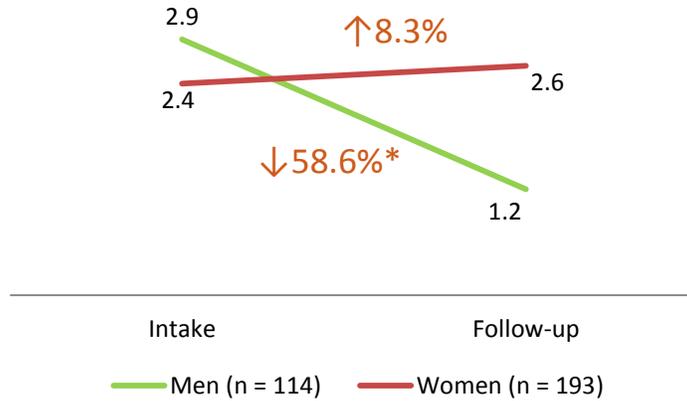
“My life is worth living and my kids need a sober mom.”

-RCOS client on the most important thing they learned from the Recovery Center program



The mean number of days clients indicated their poor physical or mental health had kept them from doing their usual activities decreased significantly from intake to follow-up for men (2.9 vs. 1.2). The number of days poor physical or mental health limited activities for women, on the other hand, increased slightly, but not significantly.

FIGURE 2B.9. GENDER DIFFERENCES IN THE NUMBER OF DAYS POOR PHYSICAL OR MENTAL HEALTH KEPT CLIENT FROM DOING USUAL ACTIVITIES^a



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

a—Statistical difference by gender at follow-up p < .01.

2C. CHANGE IN EDUCATION AND EMPLOYMENT FROM INTAKE TO FOLLOW-UP

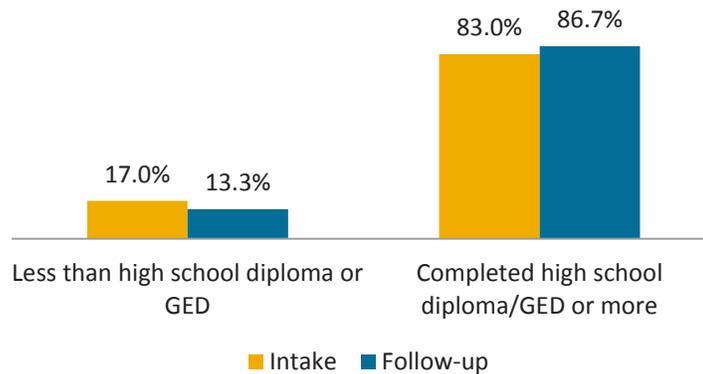
This subsection examines changes in education and employment from intake to follow-up. Specifically, this subsection examines: (1) highest level of education completed; (2) the percentage of clients who worked full-time or part-time, (3) the number of months clients were employed full-time or part-time; and, (3) expectations to be employed in the next 12 months.

CHANGE IN EDUCATION FROM INTAKE TO FOLLOW-UP

Overall, the highest number of years of education completed increased significantly from 12.9 at intake to 13.1 at follow-up²⁴.

Another way to examine change in education was to categorize individuals into one of two categories, based on their highest level of education completed: (1) less than a high school diploma or GED, or (2) a high school diploma or GED or higher (see Figure 2C.1). At intake, 17.0% of the follow-up sample reported that they had less than a high school diploma or GED. At follow-up, 13.3% reported that they had completed less than a high school diploma or GED. At intake, 83.0% of the follow-up sample had attended school beyond a high school diploma or GED and at follow-up the percent had increased (non-significantly) to 86.7%.

FIGURE 2C.1. CHANGE IN HIGHEST LEVEL OF EDUCATION COMPLETED (n = 323)



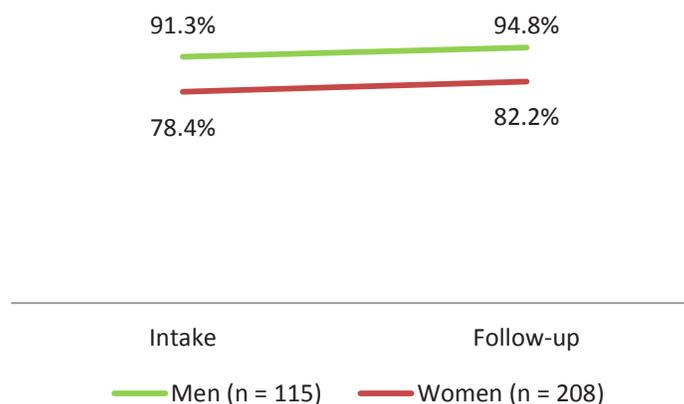
GENDER DIFFERENCES IN EDUCATION

Comparisons between men and women on level of education were examined at intake and follow-up (see Figure 2C.2). Significantly more men had completed at least a high school diploma or GED compared to women at both intake and follow-up.



Significantly more men had completed at least a high school diploma or GED compared to women at both intake and follow-up

FIGURE 2C.2. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS WHO HAD COMPLETED A HIGH SCHOOL DIPLOMA/GED OR MORE (n = 323)^a



a—Significant difference in highest level of education by gender at intake and follow-up; $p < .01$.

²⁴ Two cases had education missing at intake or follow-up.

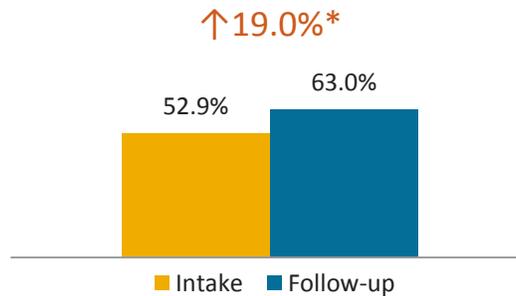
CHANGE IN EMPLOYMENT FROM INTAKE TO FOLLOW-UP

Employment was examined in three ways: (1) the percentage who worked full-time or part-time in the year prior to program entry; (2) the number of months employed at intake and at follow-up, among those who were employed the year prior to program entry; and (3) future employment expectations.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING EMPLOYMENT

Clients were asked in the intake survey to report the number of months they were employed full-time or part-time in the 12 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. Of the 308 individuals who indicated the number of months they were employed at intake and follow-up²⁵, 52.9% worked part-time or full-time at least one month, while nearly half (47.1%) reported being unemployed the 12 months before entering the Recovery Center. At follow-up, 63.0% reported working part-time or full-time at least one month in the 6 months before follow-up, while 37.0% reported being unemployed all 6 months at follow-up, which was a significant increase of 19.0%.

FIGURE 2C.3. CHANGE IN PERCENTAGE OF CLIENTS REPORTING EMPLOYMENT FROM INTAKE TO FOLLOW-UP (n = 306)



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

GENDER DIFFERENCES IN THE PERCENTAGE OF INDIVIDUALS EMPLOYED

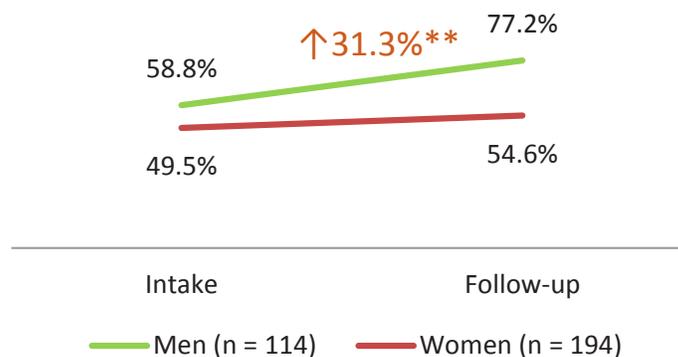
Men attained greater improvements in employment than women



Similar percentages of men and women were employed part-time or full-time at least one month in the 12 months before entering the program (see Figure 2C.4). However, the number of men who reported being employed at least one month in the follow-up period increased significantly by 31.3%, whereas the number of women who reported being employed at follow-up

did not change. At follow-up, significantly more men than women reported they were employed at least one month in the past 6 months.

FIGURE 2C.4 GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING EMPLOYMENT (n = 308)^a



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

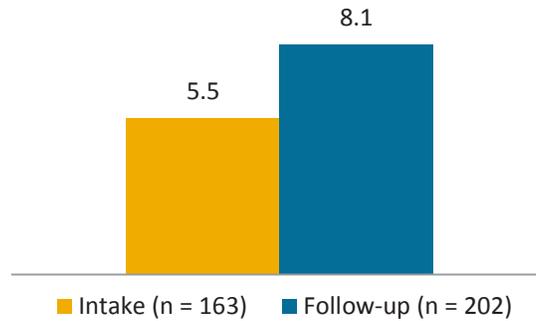
a—Significant difference in the percentage of individuals who were employed part-time or full-time in at least one month at follow-up by gender; p < .001.

²⁵ 17 cases used a different version of the baseline survey and had no data on number of months worked at baseline.

NUMBER OF MONTHS EMPLOYED

As seen in Figure 2C.5, among individuals who reported being employed part-time or full-time at all in the 12 months before entering the program (n = 163), the mean number of months worked was 5.5²⁶. Among the 202 individuals who worked at all at follow-up, the projected number of months they worked was 8.1.

FIGURE 2C.5. CHANGE IN NUMBER OF MONTHS EMPLOYED AMONG THOSE WHO REPORTED EMPLOYMENT (n = 308)



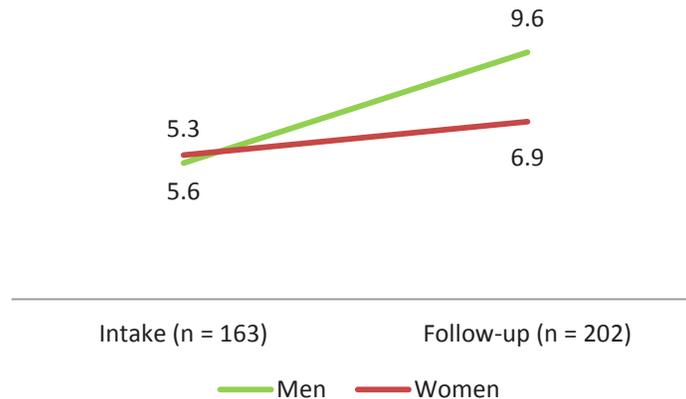
GENDER DIFFERENCES IN THE NUMBER OF MONTHS EMPLOYED

Among those individuals who reported any employment at intake and follow-up, there were no differences at intake in the number of months employed by gender. However, at follow-up, men reported more months of employment compared to women (see Figure 2C.6).



Men reported significantly more months of employment at follow-up compared to women

FIGURE 2C6 GENDER DIFFERENCES IN NUMBER OF MONTHS EMPLOYED, AMONG THOSE WHO REPORTED EMPLOYMENT (n = 308)^a



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

a—Significant difference in proportion of months worked at follow-up by gender; p < .001.

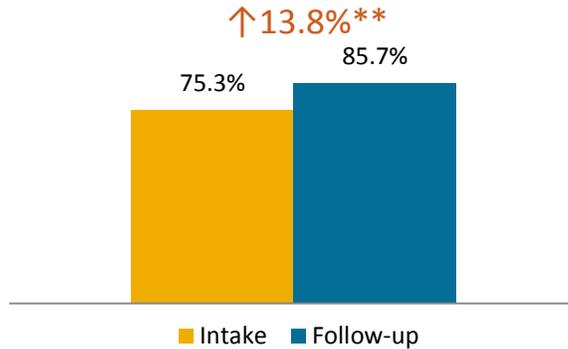
²⁶ Because the reference period was not the same at intake (i.e., 12 months) and follow-up (i.e., 6 months) the proportion of months the client reported working full-time or part-time for each period was computed to allow for comparison of employment at intake and follow-up. The change in proportion was analyzed to determine if the change was statistically significant. To facilitate interpretation of the results, the mean proportion found for the follow-up was projected to a 12-month period and presented in Figure 2C.5 shows the number of months clients reported working in 12 months before entering the Recovery Center and the projected number of months clients worked in the projected 12-month follow-up. 17 cases used a different version of the intake survey and had no data on number of months worked at intake.

EXPECTATIONS OF FUTURE EMPLOYMENT

Clients were asked at intake if they expected to be employed in the next 12 months and at follow-up if they expected to be employed in the next 6 months (see Figure 2C.7). When entering the Recovery Center, 75.3% of clients expected to be employed in the next 12 months. At follow-up, over 85% of clients expected to be employed in the next 6 months which is a 13.8% significant increase.

At follow-up, over 85% of clients expected to be employed in the next 6 months

FIGURE 2C.7. CHANGE IN EXPECTATIONS TO BE EMPLOYED IN THE NEXT 12 (OR 6) MONTHS (n = 308)

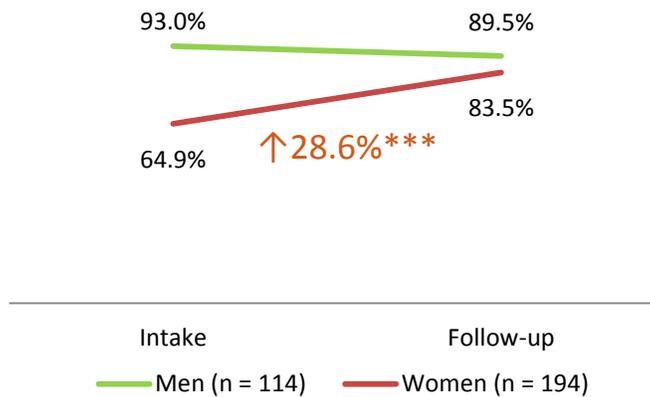


*p < .05, **p < .01, ***p < .001.

GENDER DIFFERENCES IN EXPECTATIONS OF FUTURE EMPLOYMENT

When entering the Recovery Center significantly more men than women said they expected to be employed in the next 12 months (93.0% vs. 64.9%). There was no significant change in the number of men who reported they expected to be employed in the next 6 months at follow-up. However, there was a significant increase by 28.6% in the number of women who said at follow-up they expected to be employed in the next 6 months.

FIGURE 2C.8. GENDER DIFFERENCES IN EXPECTATIONS TO BE EMPLOYED IN THE NEXT 12 (OR 6) MONTHS (n = 308)^a



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

a—Significant difference in expectation to be employed at intake by gender; p < .001.

“I learned how to respect myself and nothing is ever so hard that I should just give everything to drugs and alcohol.”

-RCOS client on the most important thing they learned from the Recovery Center program



2D. CHANGE IN HOMELESSNESS AND LIVING SITUATION FROM INTAKE TO FOLLOW-UP

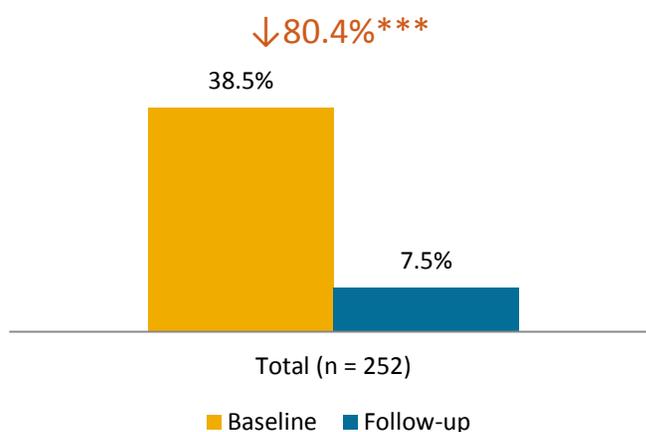
This subsection of target factors examines the clients' living situation at both intake and follow-up. Specifically, clients are asked at both points: (1) if they consider themselves currently homeless; and (2) in what type of situation (i.e., own home or someone else's home, residential program, shelter) they have lived for most of the period.

CHANGE IN HOMELESSNESS FROM INTAKE TO FOLLOW-UP

80% decrease in homelessness at follow-up

Clients were asked if they considered themselves currently homeless at intake and at follow-up. A sizeable minority of clients (38.5%) reported being homeless when they entered the Recovery Center, and 7.5% reported being homeless at follow-up²⁷. This is a significant decrease of 80.4% in the number of clients who reported they were currently homeless (see Figure 2D.1).

FIGURE 2D.1. CHANGE IN CURRENT HOMELESSNESS (n=252)



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

CHANGE IN USUAL LIVING SITUATION FROM INTAKE TO FOLLOW-UP



Change in living situation from intake to follow-up was examined for the RCOS follow-up sample (see Figure 2D.2)²⁸. At intake, individuals were asked about where they lived for the majority of the time in the 12 months before entering the Recovery Center and at follow-up, individuals were asked where they lived for the majority of the time in the 6 months before follow-up.

The percentage of individuals reporting living in their own home or someone else's home for most of the time period decreased significantly by 18.8%. There was also a significant decrease in the number of clients who reported their usual living situation was incarceration in jail or prison (from 23.6% at intake to 1.0% at follow-up).

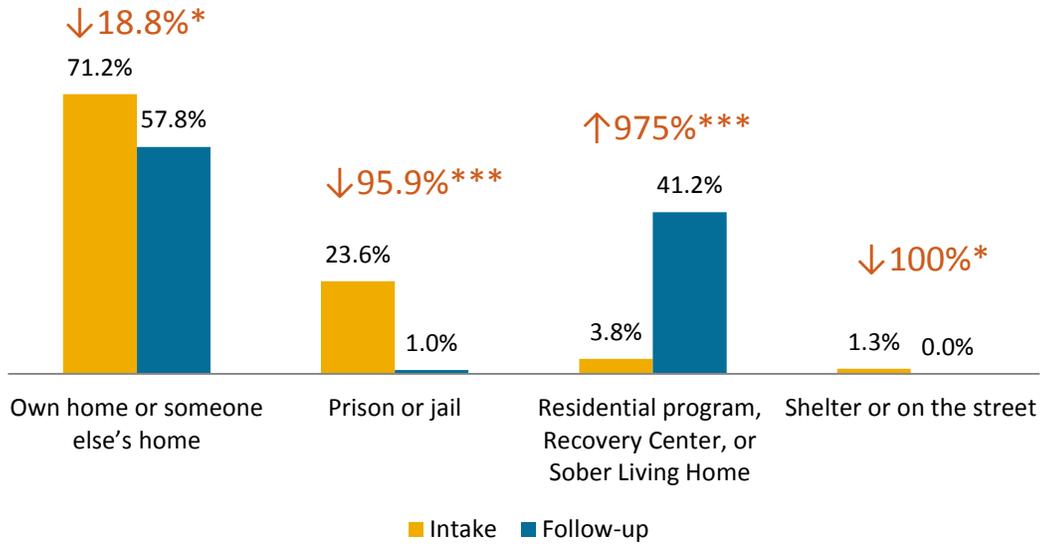
Even though individuals were targeted for the follow-up survey 12 months after they completed their intake survey and entry into Phase 1, 41.2% reported that their usual living situation in the 6 months before follow-up was in a Recovery Center, residential program, or Sober Living home. Thus, the change in number of

²⁷ 17 cases had a different version of the intake survey that did not include a question about homelessness and 56 cases were in the Recovery Center at follow-up and thus were not asked the current homelessness question at follow-up.

²⁸ 12 cases had missing information on usual living situation in the 12 months before entering the Recovery Center

individuals in a Recovery Center, residential program, or Sober Living home increased significantly. Only a small number of individuals reported living in a shelter or on the street at intake and by follow-up, and no individuals reported this as their usual living situation.

FIGURE 2D.2. CHANGE IN USUAL LIVING SITUATION (n=313)



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

2E. CHANGE IN CRIMINAL JUSTICE SYSTEM INVOLVEMENT FROM INTAKE TO FOLLOW-UP

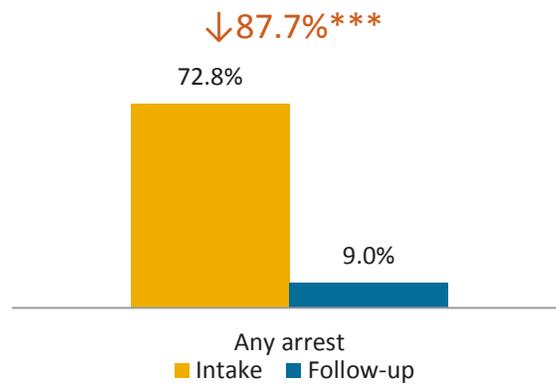
This subsection describes change in client involvement with the criminal justice system from intake to follow-up²⁹. Specifically, information about: (1) arrests; (2) incarceration; and, (3) criminal justice supervision at intake and at follow-up are presented below.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING ARRESTS FROM INTAKE TO FOLLOW-UP

At intake individuals were asked about their arrests in the 12 months before they entered the Recovery Center³⁰. At follow-up the period shifted to focus on the months between Phase 1 discharge and follow-up, thus individuals were asked about their arrests in the past 6 months. A little less than three fourths of individuals (72.8%) reported an arrest in the 12 months before entering the Recovery Center (see Figure 2E.1). At follow-up, this percentage had decreased significantly by 87.7% to 9.0%.

Percentage of clients reporting any arrest significantly decreased 88% at follow-up

FIGURE 2E.1. CHANGE IN PERCENTAGE OF CLIENTS REPORTING ANY ARRESTS (n = 324)^a



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

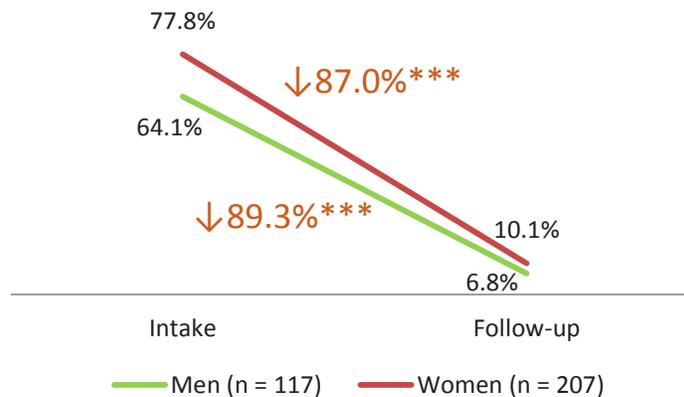
GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING ANY ARRESTS

Significantly more women than men reported being arrested at intake



Figure 2E.2 shows significantly more women than men reported being arrested at intake (77.8% compared to 64.1% for men). At follow-up, there was no difference in the percentage of men and women who reported an arrest.

FIGURE 2E.2. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING ANY ARRESTS (n = 324)^a



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

a— Significant difference by gender at intake; p < .01

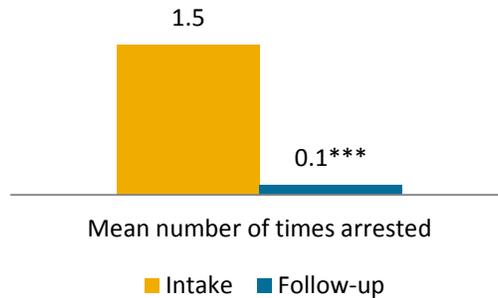
²⁹ The period examined at intake was 12 months and at follow-up it was 6 months which means there was a greater opportunity for more arrests and more days of incarceration at intake.

³⁰ One case had missing data on arrests in the 6 months before follow-up.

CHANGE IN MEAN NUMBER OF ARRESTS

At intake, the mean number of times individuals reported being arrested in the past 12 months was 1.5 (See Figure 2E.3). In the 6 months before follow-up³¹, the mean number of times arrested was 0.1, which was a statistically significant decrease.

FIGURE 2E.3. CHANGE IN MEAN NUMBER OF TIMES ARRESTED (n = 324)

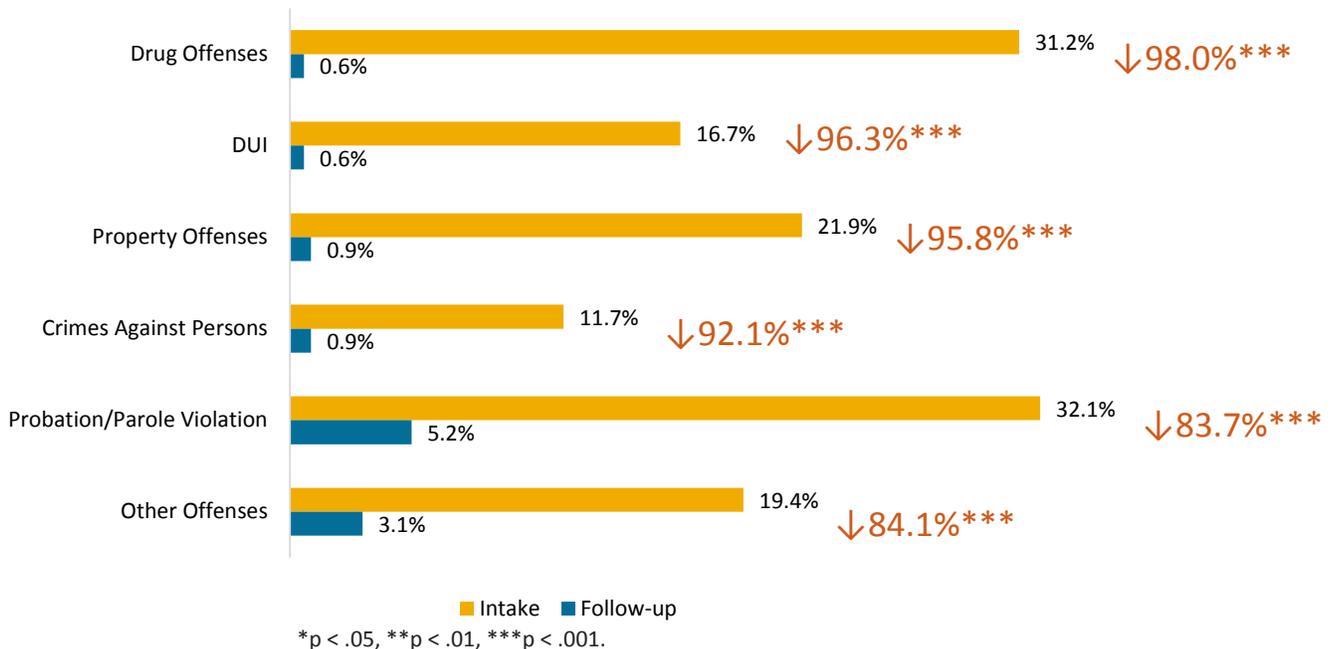


*p < .05, **p < .01, ***p < .001.

CHANGES IN ARRESTS BY OFFENSE TYPE

As shown in Figure 2E.4, the percentage of individuals who reported having been arrested for drug offenses decreased by 98.0% from 31.2% at intake to 0.6% at follow-up³². The percentage of individuals who reported an arrest for a DUI offense decreased by 96.3% from 16.7% at intake to 0.6% at follow-up. Individuals reporting arrests for property offenses decreased by 95.8%, from 21.9% at intake to 0.9% at follow-up. There was a decrease by 92.1% in arrests for crimes against persons, including domestic violence offenses, from 11.7% at intake to 0.9% at follow-up. The number of individuals reporting an arrest for a probation/parole violation decreased by 83.7%, from 32.1% at intake to 5.2% at follow-up. Arrests for other offenses decreased from 19.4% at intake to 3.1% at follow-up, which was a decrease by 84.1%. The decreases in number of individuals reporting arrests for all the categories of criminal offenses were statistically significant.

FIGURE 2E.4. CHANGE IN PERCENTAGE OF INDIVIDUALS REPORTING ARRESTS FOR SPECIFIC TYPES OF CRIMINAL OFFENSES FROM THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP (N = 324)



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

³¹ One case had missing data for number of arrests in the 6 months before follow-up.

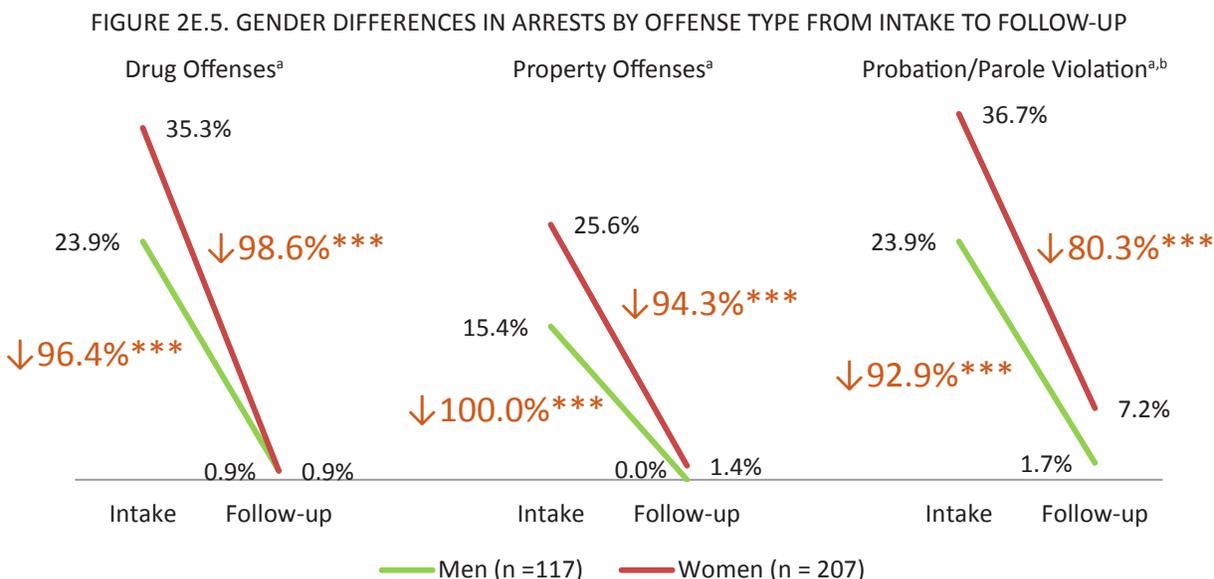
³² One case had missing data on arrests in the 6 months before follow-up.

GENDER DIFFERENCES IN ARRESTS BY OFFENSE TYPE

Compared to men more women reported arrests for drug offenses, property crimes, and probation or parole violations in the 12 months before entering the Recovery Center (see Figure 2E.5). In addition, more women than men reported arrests for probation or parole violations in the 6 months before follow-up.



Compared to men, women reported more arrests for drug offenses, property crimes and probation/parole violations



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

a—Significant difference by gender at intake, p < .05.

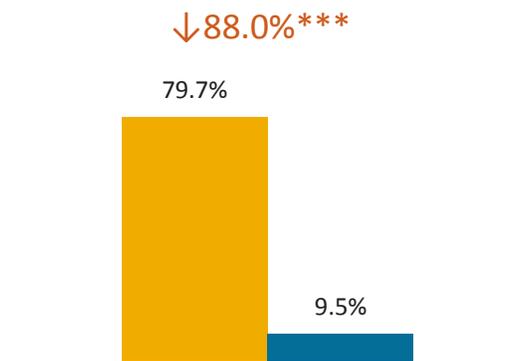
b—Significant difference by gender at follow-up, p < .05.

CHANGE IN INCARCERATION FROM INTAKE TO FOLLOW-UP

Fewer than 1 in 10 clients reported spending at least one day incarcerated at follow-up

About four in five individuals (79.7%) reported spending at least one day in jail or prison in the 12 months prior to entering the Recovery Center (See Figure 2E.6). At follow-up, only 9.5% of individuals reported spending at least one day incarcerated in the past 6 months; a significant decrease of 88.0%.

FIGURE 2E.6. CHANGE IN PERCENTAGE OF CLIENTS REPORTING INCARCERATION (n = 325)



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

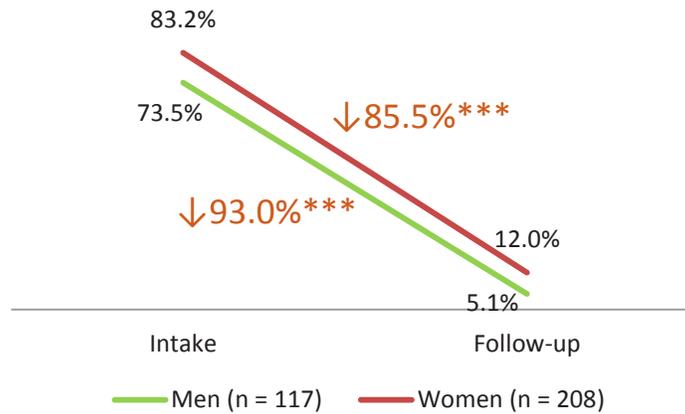
GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING INCARCERATION

Significantly more women than men reported being incarcerated in the 12 months before entering the Recovery Center and in the 6 months before the follow-up survey (See Figure 2E.7).



Significantly more women than men reported being incarcerated before intake and before follow-up

FIGURE 2E.7. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING INCARCERATION (n = 325)^a



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

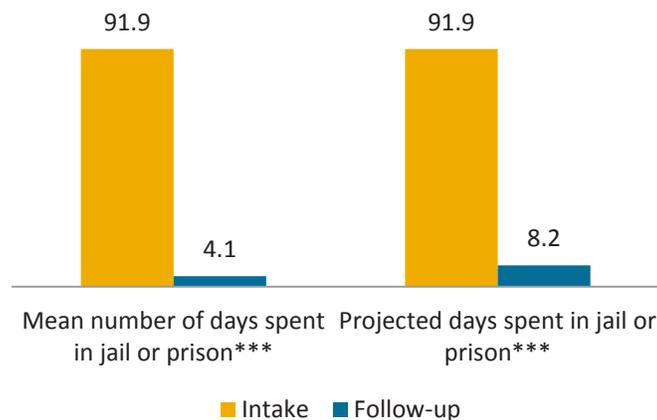
a— Significant difference by gender at intake; p < .05.

CHANGE IN MEAN NUMBER OF DAYS SPENT INCARCERATED

There was a significant decrease in the mean number of days spent in jail or prison from 91.9 days at intake to 4.1 days at follow-up (see Figure 2E.8).

To take into account the different periods measured at intake (i.e., 12 months) and follow-up (i.e., 6 months) the proportion of days in each period clients reported being incarcerated in jail or prison was calculated. Comparisons of those proportions showed significant decreases from intake to follow-up. Overall, individuals spent a quarter (0.25) of their time in the 12 months before entering the Recovery Center incarcerated, whereas they spent only 0.02 days in the 6 months before follow-up incarcerated. To make interpretation easier, these proportions were applied to a 12 month period (e.g., the 12 month period before entering the Recovery Center and the projected 12-month period for follow-up).

FIGURE 2E.8. CHANGE IN MEAN NUMBER OF DAYS INCARCERATED IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER AND 6 MONTHS BEFORE FOLLOW-UP (n = 325)

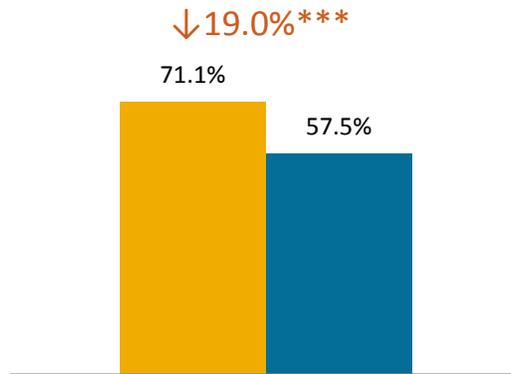


*p < .05, **p < .01, ***p < .001.

CHANGE IN PERCENTAGE OF CLIENTS UNDER SELF-REPORTED CRIMINAL JUSTICE SYSTEM SUPERVISION FROM INTAKE TO FOLLOW-UP

The number of individuals that self-reported they were under criminal justice system supervision (e.g., drug court, probation, or parole) decreased significantly by 19.0% (see Figure 2E.9). The majority of clients were under criminal justice system supervision when they entered the Recovery Center.

FIGURE 2E.9. CHANGE IN PERCENTAGE OF CLIENTS REPORTING SUPERVISION BY THE CRIMINAL JUSTICE SYSTEM (n = 325)



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

“To walk through my fears, not run on emotion”

-RCOS client on the most important thing they learned from the Recovery Center program



SECTION 3

CHANGE IN RECOVERY SUPPORTS FROM INTAKE TO FOLLOW-UP

This section focuses on three main changes in recovery supports:

- (1) percentage of clients attending mutual help recovery group meetings,
- (2) recovery supportive interactions with family/friends in the past 30 days, and
- (3) the number of people the individual said they could count on for recovery support.

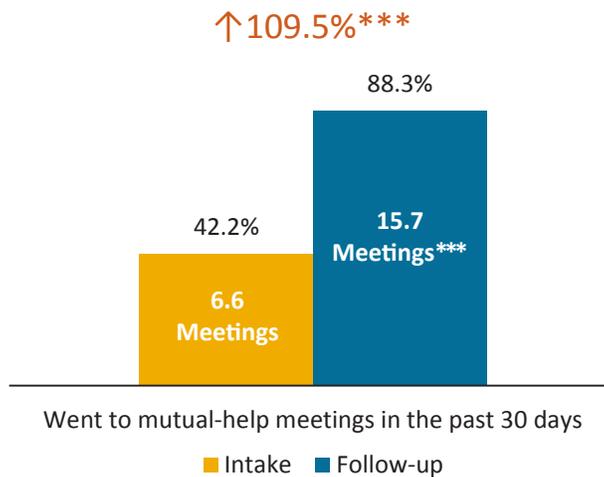
CHANGE IN PERCENTAGE OF CLIENTS ATTENDING MUTUAL HELP RECOVERY GROUP MEETINGS FROM INTAKE TO FOLLOW-UP

Before entering the Recovery Center, only 42.2% of individuals reported going to mutual help recovery group meetings (e.g., AA, NA, or faith-based) in the past 30 days (see Figure 3.1). At follow-up, there was a significant increase of 109.5%, with 88.3% of individuals reporting they had gone to mutual help recovery group meetings in the past 30 days.

110% increase in the percentage of clients reporting attending mutual help recovery groups

To have a better idea how often individuals attended mutual-help recovery group meetings before entering the Recovery Center and follow-up, the mean number of meetings attended was examined. The number of meetings attended increased significantly from 6.6 at intake to 15.7 at follow-up; a 137.9% increase for the overall sample (see Figure 3.1).

FIGURE 3.1. CHANGE IN RECOVERY SUPPORTS (n=325)

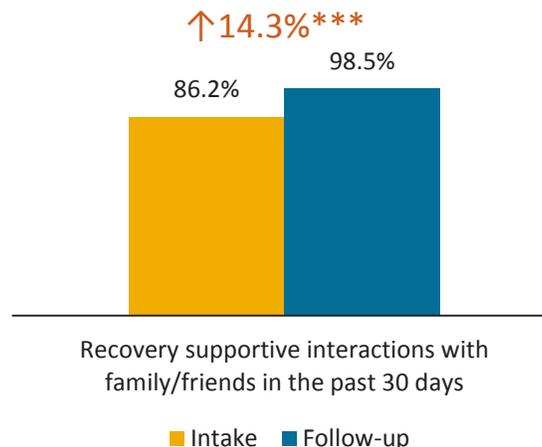


*p < .05, **p < .01, ***p < .001.

CHANGE IN PERCENTAGE OF CLIENTS REPORTING RECOVERY SUPPORTIVE INTERACTIONS WITH FAMILY/FRIENDS FROM INTAKE TO FOLLOW-UP

At follow-up, significantly more individuals (98.5%) reported that they had interactions with family and friends who were supportive of their recovery in the past 30 days compared to intake (86.2%).

FIGURE 3.2. CHANGE IN RECOVERY SUPPORTIVE INTERACTIONS WITH FAMILY/FRIENDS IN THE PAST 30 DAYS (n=325)

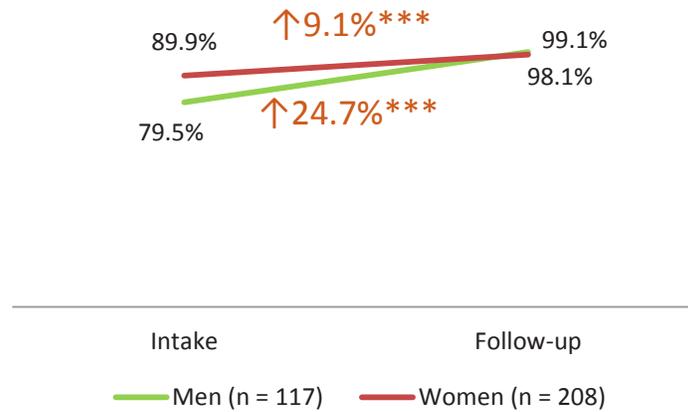


*p < .05, **p < .01, ***p < .001.

GENDER DIFFERENCES IN THE PERCENTAGE OF CLIENTS REPORTING RECOVERY SUPPORTIVE INTERACTIONS WITH FAMILY AND FRIENDS

A significantly greater percentage of women than men had interactions with family and friends who were supportive of their recovery in the past 30 days (89.9% compared to 79.5%). The number of men who reported having recent interactions with family and friends who were supportive of their recovery increased by 24.7% from intake to follow-up. The number of women reporting having recent interactions with family and friends who were supportive of their recovery increased by 9.1% from intake to follow-up (see Figure 3.3).

FIGURE 3.3 GENDER DIFFERENCES IN RECOVERY SUPPORTIVE INTERACTIONS WITH FAMILY/FRIENDS IN THE PAST 30 DAYS (n = 325)^a

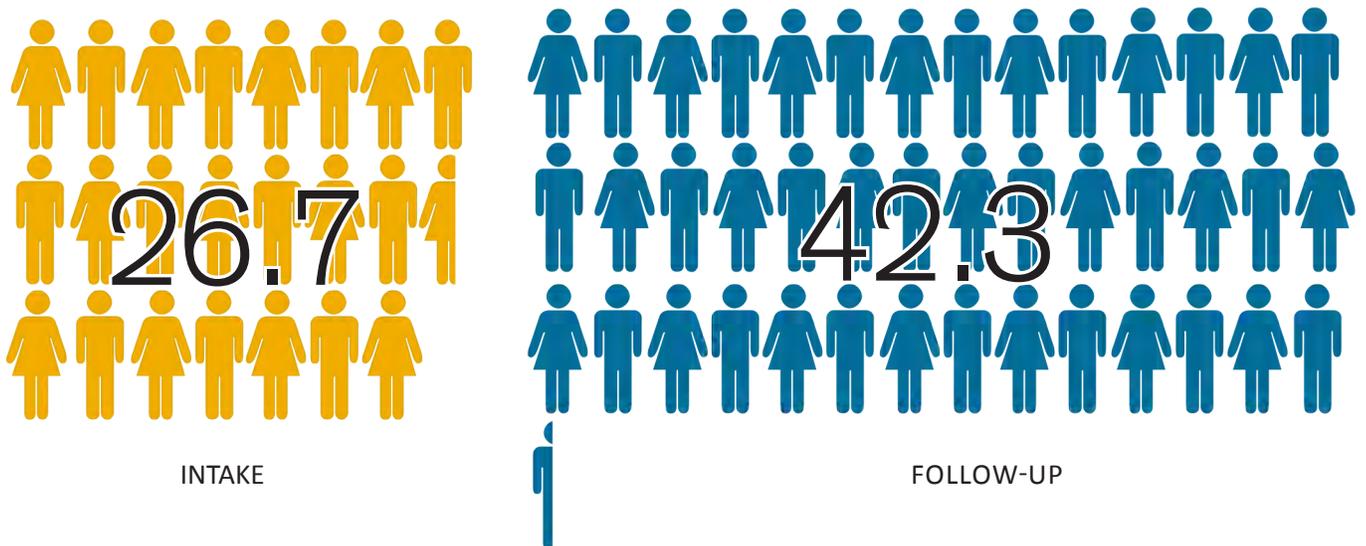


*p < .05, **p < .01, ***p < .001.
 a—Significant difference by gender at intake, p < .01.

CHANGE IN THE MEAN NUMBER OF PEOPLE THE PARTICIPANT COULD COUNT ON FOR RECOVERY SUPPORT FROM INTAKE TO FOLLOW-UP

The mean number of people individuals reported that they could count on for support increased significantly by 58.4%, from 26.7 people at intake to 42.3 people at follow-up (See Figure 3.4)³³.

FIGURE 3.4. CHANGE IN THE NUMBER OF PEOPLE CLIENTS SAID THEY COULD COUNT ON FOR RECOVERY SUPPORT (n = 313)



³³ 12 cases had missing data on the intake survey

SECTION 4

COST AND IMPLICATIONS FOR KENTUCKY

This section examines cost reductions or avoided costs to society after Recovery Center 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 for the year before individuals were in recovery and then for the same individuals during the period after leaving Phase I.

COST SAVINGS FROM RECOVERY CENTERS

There is great policy interest in examining cost reductions or avoided costs to society after Recovery Center participation. 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 was published in 1998 to estimate separate annual costs of alcohol abuse and drug abuse in the United States (Harwood et al., 1998). In 2000 the estimated costs of alcohol abuse in the United States was updated (Harwood et al., 2000) and in 2004 the U.S. Office of Drug Control Policy updated the estimates of drug abuse in the United States (U.S. Office of National Drug Control Policy, 2004). 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 abuse focus on savings in various forms after substance abuse treatment participation. 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. In addition, 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 of time and these two factors mark Recovery Center services as very different from treatment programs where residential stays average less than 20 days statewide.

METHOD

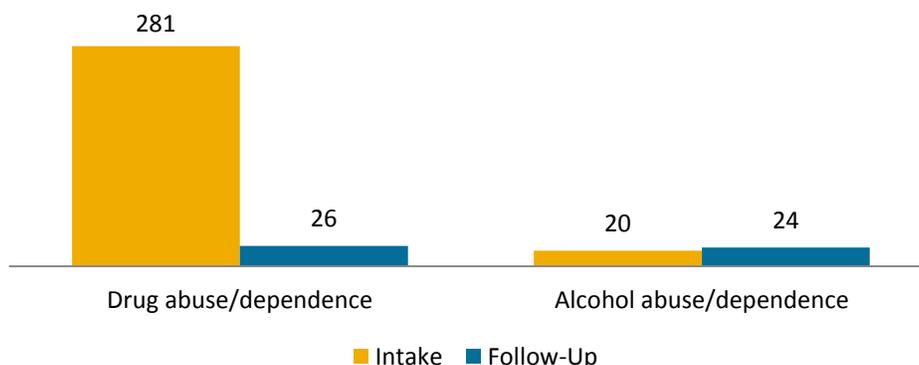
The national cost reports factored in many explicit and implicit costs of alcohol and drug abuse to the nation, such as the costs of lost labor due to illness, accidents, the costs of crime to victims, costs of incarceration, hospital and other medical treatment, social services, motor accidents, and other costs (Harwood et al., 1998; 2000; U.S. Office of National Drug Control Policy, 2004). Thus, these reports consider both the hidden and obvious costs of substance abuse. For this analysis, the national estimates of the costs of drug and alcohol abuse/dependence were converted to 2011 dollars using a CPI indexing from a federal reserve bank (<http://www.minneapolisfed.org>).

In order to calculate the estimate of the cost per alcohol or drug user, the updated national costs were divided by the 2011 federally derived estimates of the number of individuals with alcohol abuse/dependence (14.1 million) and drug abuse/dependence (3.9 million) and 2.6 million individuals who had abuse/dependence on alcohol and drugs in the nation (SAMHSA, 2012). Because the national costs of substance abuse are estimated separately for alcohol abuse/dependence and drug abuse/dependence, the 2.6 million individuals who were alcohol and drug misusers were assigned to either the alcohol abuse/dependent category or the drug abuse/dependent category to figure out the estimated cost of alcohol abuse/dependence and drug abuse/dependence per person³⁴. 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 and then for the same individuals during the period after leaving Phase 1. Given the high prevalence of very severe substance abuse among the individuals entering Recovery Centers, analyses hinged on estimating the differences in cost to society between persons who are in active addiction 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.

Figure 4.1 shows the change in the number of individuals who used illegal drugs and the number of individuals who used alcohol but not illegal drugs at intake and follow-up. Individuals who reported any illegal drug use in the corresponding period were classified in the drug abuse/dependent category. Individuals who reported using alcohol but not using illegal drugs were classified in the alcohol abuse/dependent category. The change from intake to follow-up is very dramatic. At intake 281 of the 325 RCOS clients was classified in the drug abuse/dependent category and 26 in the alcohol abuse/dependent category. At follow-up, only 26 individuals were classified in the drug abuse/dependent category and 24 individuals in the alcohol abuse/dependent category.

³⁴ To reclassify the cross addicted individuals, the proportion of individuals who were not in the alcohol and drug abuse/dependent category who were in the alcohol category (0.78) and the drug category (0.22) was extracted. Then the 2.6 million cross-addicted individuals were assigned to the appropriate categories based on the above proportions.

FIGURE 4.1 CHANGE IN THE NUMBER OF INDIVIDUALS WHO WERE ACTIVE DRUG ABUSERS OR ALCOHOL ABUSERS FROM INTAKE TO FOLLOW-UP (n = 325)



The average annual cost to society of an active drug user in 2011 dollars was \$50,677. The average annual cost to society of an active alcohol user was \$15,786. Thus, when this average annual cost per individual drug user was applied to the 281 individuals who were active drug users at intake, the annual estimated cost to society for the RCOS study individuals 12 months before entry into the Recovery Center was \$14,240,206. When the average annual cost per individual alcohol user was applied to the 20 individuals who were active alcohol users at intake, the estimated cost to society was \$315,724. The total estimated cost of drug and alcohol abuse applied to the sample of individuals in RCOS in the 12 months before intake was \$14,555,931. By follow-up, the estimated cost of the 26 individuals who were still active drug abusers was \$1,317,599 and the estimated cost of the 24 individuals who were active alcohol abusers was \$378,869, for a total of \$1,696,468. Thus, as shown in Figure 4.2, after participation in a Recovery Center, the aggregate cost to society for these 206 individuals was reduced by \$12,859,462.

FIGURE 4.2. CHANGE IN COST TO SOCIETY AT INTAKE AND FOLLOW-UP (AMOUNTS IN MILLIONS OF DOLLARS) (n=325)



For every dollar spent on recovery, there was a **\$3.73** return in avoided costs

The daily cost of participation in a Recovery Center is \$30.49 per person (Kentucky Housing Corporation communication). The total number of days clients in the follow-up sample participated in Recovery Center services was obtained for each individual. The number of days of participation was multiplied by the daily cost of \$30.49 for a total cost of \$3,446,742 for the 325 individuals included in this report³⁵. Funding sources for the per diem cost includes the Kentucky Department of Corrections, Supplemental Nutrition Assistance Program (SNAP), Section 8 Housing Assistance, and the Community Development Block Grant (CDBG). When the cost of Recovery Center services is subtracted from the cost savings from increased alcohol and drug abstinence, there is a net savings to society of \$9,412,720 for serving this sample of 325 individuals. Examining the total avoided costs in relation to expenditures on recovery services, these figures suggest that for every dollar spent on recovery, there was a \$3.73 return in avoided costs.

³⁵ There were some outliers for number of days of service. To keep the outliers from having too large of an effect on the calculation of cost of services, the value at the 94.9 percentile of the distribution for days of service was applied to the top 5% of cases (i.e., outliers). Once this was done the mean number of days of service was 348. Also, there were 35 cases with missing data on days of service. The mean value of days of service was input for these 35 cases.

CONCLUSIONS



OVERVIEW

This report describes outcomes for 325 men and women who participated in a Recovery Center program and who completed an intake interview at entry to Phase 1 and a follow-up telephone interview about 12 months after the intake survey was submitted to UK CDAR. Evaluation results indicate that Recovery Center programs have been successful in facilitating positive changes in clients.

First, clients overwhelmingly reported satisfaction with Recovery Center services with the majority indicating that the services helped them get better and feel better about themselves. They also reported more positive interactions and relationships with other people, improved mental health and reductions in substance use. Client ratings on quality of their lives increased remarkably after entering the Recovery Center. No doubt helping with this increased satisfaction with life was the fact that there was an increase in the percent of clients who felt they had people in their lives who were supportive of their recovery.

Second, Recovery Center clients reported significant reductions in substance use after entering the program. While reported substance use was high in the 12 months prior to entry, by follow-up a small minority of clients reported any substance use. Clients also made dramatic improvements in reported mental health problems and stress. Before entering the program, the majority of clients had reported depression and/or anxiety; however, at follow-up, only about a quarter of clients reported symptoms of these mental health problems. Also, clients self-reported physiological consequences of stress decreased by 71% from intake to follow-up.

Third, Recovery Center clients had more success with employment at follow-up with a significant increase in the number of months clients were employed. In fact, the majority of clients expected to be employed in the next six months after follow-up. Not only were clients employed for more months and expected to work in the future, but fewer clients considered themselves homeless at follow-up as well.

Fourth, evaluation results show that clients were less involved with the criminal justice system at follow-up. The number of clients reporting being arrested greatly diminished as did the number of clients who reported spending any time in jail or prison.



Thus overall, the Recovery Center clients made significant strides in all of the targeted areas, were extremely satisfied and appreciative of the services they received through the Recovery Centers, and the Recovery Centers 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 finding of reductions in costs related to increased abstinence suggest 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.

These preliminary findings suggest that both the behavioral outcomes and cost savings from recovery services are parallel to the outcomes from substance abuse treatment. The fact that Recovery Centers focus on individuals needing longer term residential support means that they add an important new component to the array of publicly supported substance abuse interventions. State-funded treatment programs typically focus on shorter residential stays and a wide array of outpatient services. Recovery Centers complement these services with longer term residential care.

There were a couple of issues that the data results suggest additional services may be needed. Specifically,

- Tobacco use, in particular, smoking is very high among Recovery Center clients at intake (91%) and follow-up (87%).
- Compared to men, women had lower levels of education and employment both at intake and follow-up.
- Women reported more days in the past 30 their mental health was not good, compared to men, at intake and follow-up.
- Also, although women and men had similar rates of stress-related consequences and days that mental or physical health impacted daily activities, women were worse off than men at follow-up on both of those factors.
- Men had higher rates of alcohol use, alcohol to intoxication, and binge drinking than women before entry into the Recovery Center program.

The study findings must be considered within the context of the project's limitations. First, the data included in this write-up were self-reported by Recovery Center participants. There is reason to question the validity and reliability of self-reported data, particularly with regard to sensitive topics, such as illegal behavior and stigmatizing issues such as mental health and substance use. However, recent research has supported findings about the reliability and accuracy of individuals' reports of their substance use (Del Boca & Noll, 2000; Harrison, Marin, Enev, & Harrington, 2007; Rutherford, Cacciola, Alterman, McKay, & Cook, 2000; Shannon, Mathias, Marsh, Dougherty, & Liguori, 2007). Earlier studies found that the context of the interview influences reliability (Babor, Stephens, & Marlatt, 1987). During the informed consent process at the beginning of the follow-up survey, interviewers tell participants that the research team operates independently from the Recovery Centers and individuals' responses will be reported in group format and will not be identifiable at the individual level. These assurances of confidentiality and lack of affiliation with the data collectors may minimize individuals' concern about reporting stigmatizing behavior or conditions.

Recovery Centers did not begin data collection at the same time, therefore some programs are over-represented, and some programs are under-represented in this annual report.

Also, this preliminary study will need replication over several years to ascertain whether these successes are sustainable. However, these preliminary findings are encouraging and form the first systematic evaluation of long-term residential recovery supports in the nation. Further study will lead to more research to validate the continuing value of Recovery Services as a key part of state commitment to intervening with the growing problem of substance abuse in Kentucky.

“Drug and alcohol were just a cover up for the real issues.”

-RCOS client on the most important thing they learned from the Recovery Center program



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APPENDIX A

METHODS



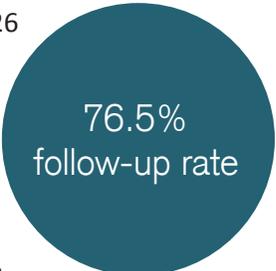
The sampling strategy for the first six months of the 2013 RCOS follow-up report was based on selecting individuals who had a Phase 1 intake survey and a Phase 1 discharge record approximately 6 months before the target month for follow-up survey. Because of the complexity of selecting individuals to be followed up based on a wide range of number of days between intake survey completion dates and discharge dates, the decision was made to change the sampling strategy for the 2013 RCOS follow-up report, beginning with the January 2012 monthly sample. Individuals were selected to be followed up 12 months after the date of the intake survey submission. Thus, two sampling strategies were used to select individuals to be followed up between July 1, 2011 and June 30, 2012.

A total of 892 cases had a Phase 1 intake survey submitted from July 1, 2010 through June 30, 2011. Of these 892 cases, 81 intake surveys were already included in the 2012 follow-up report, which was possible because of the different follow-up sampling strategy between the 2012 and 2013 follow-up reports (based on discharge date vs. based on intake date). Therefore, these 81 cases that were included in the 2012 follow-up report analysis were excluded from the intake surveys to be examined for comparisons between those who were followed up and those who were not followed up, leaving 811 intake surveys submitted in FY 2011. Furthermore, there were 17 cases included in the 2013 follow-up report that had an intake survey before July 1, 2010 but were targeted for a follow-up survey from July 2012 through December 2012, because these were cases that were selected into the follow-up sample based on discharge date. There were 830 intake surveys that met the above criteria and that were not duplicate entries or multiple entries for the same person. Only one intake survey was included in the sample if more than one intake survey was completed for an individual.

Regardless of the follow-up sampling strategy used, the follow-up period 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, then the interviewers would attempt to complete the follow-up survey for this individual from April to the end of July.

A total of 649 individuals were included in the sample of individuals to be followed up from July 2011 to June 2012. However, in the midst of conducting follow-up surveys for March through May the annual funding amount allotted for follow-up survey completion activities had been used and the follow-up sample was complete. Thus, interviewers were unable to thoroughly work on locating, contacting, and conducting follow-up surveys with individuals included in the March through May samples. Therefore, the follow-up rates for these months were lower than the monthly follow-up rates for the monthly samples of July 2011 through February 2012: 14.3%-55.2% vs. 70.8% vs. 100%. Additionally, interviewers had not worked on locating and contacting any of the individuals included in the June sample (n = 65), therefore these records are not included in the calculations for follow-up rate (see Table AA.1).

Of the remaining 466 individuals, interviewers completed follow-up surveys with 326 individuals, representing a follow-up rate of 70.0% (see Table AA.1). Of the eligible individuals, 137 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. Of the eligible individuals, 29.4% were expired cases: much higher than the first RCOS report, because three months were not fully worked to complete follow-up surveys: March, April, and May. Three individuals refused to complete the follow-up survey when the interviewer contacted him/her. The refusal rate was 0.6%. The project interviewers' efforts accounted for 447 cases included in the follow-up sample. The only cases not considered accounted for are those individuals who are classified as expired. Thus, the percent of cases that were accounted for out of the total 584 was 76.5%.



76.5%
follow-up rate

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

	Number of Records (n = 584)	Percent
Ineligible for follow-up survey	118	20.2%
	Number of cases eligible for follow-up (n = 466)	
Completed follow-up surveys	326	
Follow-up rate is calculated by dividing the number of completed surveys by the number of eligible cases and multiplying by 100		70.0%
Expired cases (i.e., never contacted, did not complete the survey during the follow-up period)	137	
Expired rate ((the number of expired cases/eligible cases)*100)		29.4%
Refusal	3	
Refusal rate ((the number of refusal cases/eligible cases)*100)		0.6%
Cases accounted for (i.e., records ineligible for follow-up + completed surveys + refusals)	447	
Percent of cases accounted for ((# of cases accounted for/total number of records in the follow-up sample)*100)		76.5%

Individuals were considered ineligible for follow-up if they were living in a controlled environment during the follow-up period (see Table AA.2). Of the 118 cases that were ineligible for follow-up, the majority (89.0%) were ineligible because they were incarcerated during the follow-up period. Eight individuals were ineligible because they were in residential treatment at the time of follow-up. Other reasons a small number of individuals were ineligible for follow-up were because of health conditions, re-entry into the Safe Off the Street (SOS) phase of the Recovery Center program, and hospitalization.

TABLE AA.2. REASONS CLIENTS WERE INELIGIBLE FOR FOLLOW-UP (n = 118)

	Number	Percent
Incarcerated	105	89.0%
In residential treatment	8	6.8%
Health condition	2	1.7%
In SOS at the Recovery Center	2	1.7%
Hospitalized	1	0.8%

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 reason³⁶ (e.g., not selected into the follow-up sample, ineligible for follow-up, unable to be located for the follow-up, locating efforts were suspended because of budgetary constraints).

DEMOGRAPHIC CHARACTERISTICS

The majority of the sample for this annual report was female and White (see Table AB.1). One in ten clients was African American. The average client age was in the early 30s, with individuals who completed a follow-up interview being significantly older than individuals who did not complete a follow-up interview. Fewer clients were married or cohabiting than clients reporting they were never married or divorced. There were no significant differences on demographics between clients who completed a follow-up survey and those who did not.

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

	FOLLOWED UP	
	NO n = 505	YES n = 325
AGE	31.7 years	33.2 years
GENDER		
Female	59.2%	64.0%
RACE		
White	86.3%	88.0%
African American	11.1%	10.2%
Other or multiracial	2.6%	1.9%
MARITAL STATUS		
Never married	41.4%	41.2%
Married or cohabiting	23.8%	21.2%
Separated or divorced	34.1%	34.8%
Widowed	0.8%	2.8%

a—26 cases had missing data because a different version of the intake survey was used.

SOCIOECONOMIC STATUS INDICATORS

Table AB.2 describes clients' level of education when entering the Recovery Center. A minority of individuals had less than a high school diploma or GED. A little over 2 in 5 clients in both groups had a GED or high school diploma, 43.7% had a high school diploma or GED, and 39.4% had higher levels of education at intake to Phase I.

TABLE AB.2. CLIENTS' HIGHEST LEVEL OF EDUCATION COMPLETED AT INTAKE

	FOLLOWED UP	
	NO n =504	YES n =325
HIGHEST LEVEL OF EDUCATION COMPLETED		
Less than GED or high school diploma	25.1%	16.9%
GED or high school diploma	42.2%	43.7%
Some vocational/technical school to graduate studies	32.7%	39.4%

³⁶ Significance is reported for $p < .01$.

A little over half of clients who did not complete a follow-up interview and a little less than one half of clients who completed a follow-up interview reported working 0 months in the 12 months before entering the Recovery Center. About one fourth of clients reported working 1 to 5 months and about one fourth reported working 6 months or more (see Table AB.3). Of the individuals who reported working at least part-time in the 12 months before entering the Recovery Center, the mean number of months worked was 5.7 and 5.5 for clients not followed up and for clients followed up respectively.

TABLE AB.3. EMPLOYMENT IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n =496	YES n =308
EMPLOYMENT		
Percentage of individuals who reported working for:		
0 months	52.8%	47.1%
1 to 5 months	24.4%	27.9%
6 months or more	22.8%	25.0%
Among those who were employed:	n = 234	n = 163
Mean # of months employed in the past 12 months	5.7 months	5.5 months

a—26 cases were submitted with a different version of the intake survey and were missing data

About one third of individuals reported that their usual living arrangement in the 12 months before entering the Recovery Center was living in their own home or apartment (see Table AB.4). Similarly, about one third were living in someone else's home or apartment. About one in four individuals were living in a controlled environment (such as jail, prison, or residential treatment) before entering the Recovery Center. Small numbers of individuals reported their usual living situation was in a sober living home, in a shelter or on the streets. At the time individuals entered Recovery Centers, about two in five considered themselves to be homeless, with the majority of those individuals stating that they had no home to go to after leaving the Recovery Center (see Table AB.4). There were no significant differences in living situation at intake between individuals who completed a follow-up interview and individuals who did not.

TABLE AB.4 LIVING SITUATION OF CLIENTS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n =496	YES n =308
USUAL LIVING ARRANGEMENT IN THE 12 MONTHS BEFORE ENTERING THE PROGRAM^a		
Own home or apartment	35.3%	37.3%
Someone else's home or apartment	37.9%	35.1%
In a controlled environment (jail, prison, residential treatment)	25.6%	26.0%
Sober living home	0.2%	0.6%
Shelter or on the street	1.0%	1.0%
CONSIDERS SELF TO BE CURRENTLY HOMELESS^a		
Why the individual considers himself/herself to be homeless	(n = 212)	(n = 129)
Staying in a shelter	30.2%	20.2%
Staying temporarily with friends or family	16.0%	15.5%
Have no home to go to after leaving the Recovery Center	53.3%	64.3%

a—26 cases were submitted with a different version of the intake survey and were missing data

SUBSTANCE USE AT INTAKE

Use of illegal drugs in the 12 months before entering the Recovery Center is presented by follow-up status in Table AB.5. There were no significant differences in the percentage of individuals who reported using different types of illegal drugs by follow-up status. The majority of the clients reported illegal use of prescription opiates, marijuana, and tranquilizers, sedatives, or benzodiazepines in the 12 months before entering the program. Fewer than half of clients reported cocaine use. A little over one-third reported using amphetamines. One third of clients who did not complete a follow-up interview and 29.7% of clients who completed a follow-up interview reported using buprenorphine in a non-prescribed way. A little more than one fourth (28.5%) of individuals who did not complete a follow-up interview and 23.1% of clients who completed a follow-up interview reported use of methadone in a non-prescribed manner. Even smaller percentages of individuals used heroin, barbiturates, hallucinogens, and inhalants in the 12 months before entering the Recovery Center.

TABLE AB.5. PERCENTAGE OF INDIVIDUALS REPORTING ILLEGAL DRUG USE IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

SUBSTANCES	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Prescription opiates (illegal use)	64.0%	63.1%
Marijuana	55.0%	58.5%
Tranquilizers, sedatives, benzodiazepines	49.5%	55.7%
Cocaine	43.0%	43.1%
Amphetamines	36.6%	36.0%
Non-prescribed buprenorphine (Suboxone, Subutex) ^a	33.3%	29.7%
Non-prescribed methadone	28.5%	23.1%
Heroin	19.0%	18.8%
Barbiturates	10.3%	9.5%
Hallucinogens	9.7%	8.6%
Inhalants	5.9%	4.6%

a—12 cases had missing data for this item because data was collected with a different version of the intake survey.

Similar patterns were found in the past 30 day substance use measure with fewer individuals reporting use of each substance (not depicted in a Table or Figure).

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 take into account 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.6 separately for those individuals who were in a controlled environment all 30 days before entering the Recovery Center and individuals who were not 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 dependence, with no difference by follow-up status (88.7% for not followed up and 89.9% for followed up; see Table AB.6). Among individuals who were not in a controlled environment all 30 days before entering the program, the mean score on the alcohol severity composite score was .38 and .43 for individuals who were not followed up and individuals who were followed up. Among clients who were not in a controlled environment all 30 days before entering the program, the mean score for the drug severity composite score was .31 for individuals who did not complete

a follow-up interview and .29 for clients who did complete a follow-up interview. 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, the majority met or surpassed the cutoff for the ASI CS for alcohol and/or drug dependence, with no difference by follow-up status (see Table AB.6). Among individuals who were in a controlled environment all 30 days before entering the program, the mean scores for the alcohol severity composite score for the two groups were .25 and .26. Of clients who were in a controlled environment all 30 days, the means for the drug severity composite scores were .21 and .17 for those who were not followed up and those who were followed up respectively. The percentage of individuals who met or surpassed the cutoff for the ASI CS for drug dependence did not differ significantly by follow-up status.

TABLE AB.6. SUBSTANCE ABUSE AND DEPENDENCE PROBLEMS AT INTAKE

Recent substance use problems among individuals who were....	<u>Not</u> 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 = 248)	YES (n = 179)	NO (n = 257)	YES(n = 146)
Percent of Individuals with ASI CS equal to or greater than cutoff score for ...				
alcohol <u>or</u> drug dependence	88.7%	89.9%	57.2%	54.8%
alcohol dependence	64.5%	70.4%	41.2%	37.0%
drug dependence	75.0%	71.5%	43.5%	38.4%
Mean Addiction Severity Index composite score for alcohol use ^{-a}	.38	.43	.25	.25
Mean Addiction Severity Index composite score for drug use ^{-b}	.31	.29	.21	.17

-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.

The majority of individuals (68.3%) reported alcohol use in the 12 months before entering the Recovery Center. The majority of clients in both groups reported alcohol use to intoxication binge drinking in the 12 months before entering the Recovery Center, with no significant difference by follow-up status (see Table AB.7).

TABLE AB.7. PERCENTAGE OF INDIVIDUALS REPORTING ALCOHOL USE IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Alcohol	60.2%	68.3%
Alcohol to intoxication	57.2%	63.7%
Binge drank alcohol (i.e., drank 5 or more (4 for women) drinks in 2 hours ^a)	51.3%	57.2%

a—12 cases had missing data for this item because data was collected with a different version of the intake survey.

In the 12 months before entering the Recovery Center, the vast majority of the RCOS clients reported use of tobacco products, including smoke and smokeless tobacco, with no difference between those who completed a follow-up interview and those who did not (see Table AB.8). Furthermore, the vast majority of clients reported they had smoked tobacco products in the 12 months before entering the Recovery Center.

TABLE AB.8. PERCENTAGE OF INDIVIDUALS REPORTING TOBACCO USE IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Tobacco (smoke and smokeless)	87.5%	90.2%
Smoked tobacco (e.g., cigarettes, pipes, cigarillos, bidis)	86.7%	88.1%

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 DSM-IV 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 who were followed up and who were not followed up reported symptoms that met criteria for depression, with no significant difference by follow-up status (see Table AB.9).

A total of 7 questions were asked to determine if individuals met criteria for Generalized Anxiety, including the screening question: “In the 12 months before you entered this Recovery Center, did you have a period lasting 3 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?” In the 12 months before entering the Recovery Center, about 7 in 10 individuals reported symptoms that met the criteria for Generalized Anxiety, with no significant difference by follow-up status.

Two questions were included in the intake survey that asked about thoughts of suicide and attempted suicide in the 12 months before clients entered Recovery Centers. One third of individuals who did not complete a follow-up interview (33.7%) and 30.5% of individuals who did complete a follow-up interview reported suicide ideation and/or attempts, with no difference by follow-up status (see Table AB.9).

TABLE AB.9. PERCENTAGE OF INDIVIDUALS REPORTING MENTAL HEALTH PROBLEMS IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Depression	69.3%	76.3%
Generalized Anxiety	71.0%	70.1%
Suicidality (e.g., thoughts of suicide or suicide attempts)	33.7%	30.5%

CRIMINAL JUSTICE SYSTEM INVOLVEMENT AT INTAKE

The majority of individuals in the sample reported being referred to the Recovery Center by the criminal justice system, with no difference between those who were followed up and those who were not (73.5% vs. 71.1% respectively; not depicted in a Table or Figure). Not all of those referred by the criminal justice system were considered DOC cases whose costs were covered by the Department of Corrections.

A little less than three-fourths of individuals (73.9% of those not followed up and 72.9% of those followed up) reported they had been arrested in the 12 months before entering the Recovery Center (see Table AB.10). Of the individuals who reported being arrested, they reported an average of 2.1-2.5 arrests in the 12 months before entering the Recovery Center. The majority of clients who were not followed up and clients who were followed up were under supervision by the criminal justice system (e.g., in Drug Court, on probation or parole) when they entered the Recovery Center. There were no significant differences by follow-up status.

TABLE AB.10. CRIMINAL JUSTICE SYSTEM INVOLVEMENT WHEN ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO n =505	YES n =325
Arrested for any charge in the 12 months before entering the Recovery Center	73.9%	72.9%
Of those with an arrest,	n = 373	n = 237
Mean number of arrests	2.5 arrests	2.1 arrests
Currently under supervision by the criminal justice system	73.3%	71.1%
In Drug Court	9.5%	9.5%
On probation	44.4%	46.2%
On parole	30.3%	25.2%

Table AB.11 displays the percentage of individuals arrested and charged with different types of criminal charges among those who reported being arrested in the 12 months before entering the Recovery Center (n = 610). There were no significant differences in the percentage of individuals arrested for different types of criminal charges between those who were followed up and those who were not followed up. The criminal offense reported by the largest percentage of clients was drug charges (e.g., trafficking, possession). The category of criminal offense with the second highest percentage of clients was probation or parole violations. Property crime arrests were reported by a little more than one-third of individuals who did not complete a follow-up interview and a little less than one third of individuals who did complete a follow-up interview. About 1 in 5 RCOS clients reported an arrest for a DUI offense. The criminal offense category reported by the smallest number of clients in both groups was crimes against persons. Other criminal offenses were reported by 31.9% of individuals who were not followed up and 26.6% of individuals who were followed up.

TABLE AB.11. AMONG THOSE WHO REPORTED BEING ARRESTED IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER, PERCENTAGE OF INDIVIDUALS ARRESTED AND CHARGED WITH TYPES OF CRIMINAL OFFENSES

TYPES OF CRIMINAL CHARGES	FOLLOWED UP	
	NO (n = 373)	YES (n = 237)
Drug charge	45.6%	42.6%
Probation or parole violation	41.6%	44.3%
Property crime	35.1%	30.0%
DUI	20.1%	22.8%
Crimes against a person	12.6%	16.0%
Other crimes (e.g. contempt, criminal mischief, disorderly conduct, endangering minor, failure to pay child support, failure to comply with court order, moving violations, public intoxication, trespassing, resisting arrest)	31.9%	26.6%

About four-fifths of the followed up individuals (79.7%) and significantly more individuals who were not followed up (85.3%) reported being incarcerated for at least one day in the past 12 months before entering the program (See Table AB.12). Among the individuals who were incarcerated at least one night, the average incarceration time in the 12 months before entering the Recovery Center was 125.5 days for individuals who were not followed up and 115.3 days for individuals who were followed up, with no significant difference by follow-up status.

TABLE AB.12. INCARCERATION HISTORY IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Incarcerated at least one day	85.3%	79.7%
Of those incarcerated	(n = 431)	(n = 259)
Mean # of days incarcerated in the past 12 months	125.5	115.3

SUBSTANCE ABUSE TREATMENT

The majority of RCOS clients reported ever having been in substance abuse treatment in their lifetime, with no difference by follow-up status (see Table AB.13). Among clients who reported a history of substance abuse treatment, the mean number of lifetime treatment episodes was 3.1 for individuals who did not complete a follow-up interview and 3.4 for individuals who did complete a follow-up interview.

TABLE AB.13. HISTORY OF SUBSTANCE ABUSE TREATMENT IN LIFETIME

	FOLLOWED UP	
	NO (n = 505)	YES (n = 325)
Ever been in substance abuse treatment in lifetime	62.4%	67.7%
Among those who had ever been in substance abuse treatment in lifetime,	(n = 315)	(n = 220)
Mean number of times in treatment	3.1	3.4

APPENDIX C

CHANGE IN 30 DAY SUBSTANCE USE FOR SPECIFIC SUBSTANCES FROM INTAKE TO FOLLOW-UP



CHANGE IN 30 DAY SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR INDIVIDUALS NOT IN A CONTROLLED ENVIRONMENT AT INTAKE

MARIJUANA, PAST 30 DAY USE

A little less than one half of individuals (48.6%) reported they had used marijuana in the 30 days before entering the Recovery Center (see Table AC.1). By follow-up, 1.7% of individuals reported they had used marijuana, which represents a 96.6% significant decrease. A little more than one half of men reported using marijuana in the 30 days before entering the Recovery Center and by follow-up, only 2.6% of men reported marijuana use—a significant decrease of 95.2%. Less than one half of women reported 30 day use of marijuana before entering the program, and by follow-up, only 1.0% reported marijuana use—a significant decrease of 97.8%.

TABLE AC.1. CHANGE IN MARIJUANA USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
MARIJUANA					
Men (n =78)	42	53.8%	2	2.6%	-95.2%***
Women (n = 101)	45	44.6%	1	1.0%	-97.8%***
Total (n = 179)	87	48.6%	3	1.7%	-96.6%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

PRESCRIPTION OPIATES, PAST 30 DAY USE

Prescription opiate use decreased significantly from intake to follow-up (see Table AC.2). Overall, 49.2% of clients reported using prescription opiates in a non-prescribed way in the 30 days before entering the Recovery Center and by follow-up 2.8% had used prescription opiates, representing a 94.3% decrease in prescription opiate use. Similar decreases in prescription opiate use were found for men (by 91.7%) and women (by 96.2%).

TABLE AC.2. CHANGE IN PRESCRIPTION OPIATE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
PRESCRIPTION OPIATES					
Men (n =78)	36	46.2%	3	3.8%	-91.7%***
Women (n = 101)	52	51.5%	2	2.0%	-96.2%***
Total (n = 179)	88	49.2%	5	2.8%	-94.3%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

HEROIN, PAST 30 DAY USE

A little less than 10% of individuals reported using heroin in the 30 days before they entered the Recovery Center (see Table AC.3). At follow-up, only one of the individuals reported heroin use in the past 30 days—a significant decrease of 94.1% for the overall sample. There was a decrease of 100% for men and 90.0% for women in prescription opiate use.

TABLE AC.3. CHANGE IN HEROIN USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
HEROIN					
Men (n =78)	7	9.0%	0	0.0%	-100%**
Women (n = 101)	10	9.9%	1	1.0%	-90.0%**
Total (n = 179)	17	9.5%	1	0.6%	-94.1%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

NON-PRESCRIBED METHADONE, PAST 30 DAY USE

A minority of individuals who were not in a controlled environment all 30 days before entering the Recovery Center reported had used non-prescribed methadone at intake (see Table AC.4). By follow-up, only one individual reported using non-prescribed methadone, representing a significant decrease of 95.8%.

TABLE AC.4. CHANGE IN NON-PRESCRIBED METHADONE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
NON-PRESCRIBED METHADONE					
Men (n =78)	12	15.4%	0	0.0%	-100%***
Women (n = 101)	12	11.9%	1	1.0%	-91.7%**
Total (n = 179)	24	13.4%	1	0.6%	-95.8%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

NON-PRESCRIBED BUPRENORPHINE, PAST 30 DAY USE

A minority of individuals (15.3%) who were not in a controlled environment all 30 days before entering the Recovery Center reported they had used non-prescribed buprenorphine at intake (see Table AC.5). At follow-up, only 1.2% of individuals reported non-prescribed use of buprenorphine—a significant decrease of 92.3%. Similar decreases were found for men and women separately.

TABLE AC.5. CHANGE IN NON-PRESCRIBED BUPRENORPHINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
NON-PRESCRIBED BUPRENORPHINE ^b					
Men (n =77)	9	11.7%	1	1.3%	-88.9%**
Women (n = 93)	17	18.3%	1	1.1%	-94.1%***
Total (n = 170)	26	15.3%	2	1.2%	-92.3%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

COCAINE, PAST 30 DAY USE

A little more than one fourth individuals who were not in a controlled environment all 30 days had used cocaine in the 30 days before entering the Recovery Center, with significant decreases in the number of men and women who reported using cocaine at follow-up (see Table AC.6). The number of men women who used cocaine decreased significantly by 95.5% and by 100% respectively.

TABLE AC.6. CHANGE IN COCAINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
COCAINE					
Men (n =78)	22	28.2%	1	1.3%	-95.5%***
Women (n = 101)	25	24.8%	0	0.0%	-100.0%***
Total (n = 179)	47	26.3%	1	0.6%	-97.9%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

AMPHETAMINES, PAST 30 DAY USE

One fourth of men (25.6%) and 15.8% of women reported using amphetamines (e.g., speed, methamphetamine, Ritalin) in the 30 days before they entered the Recovery Center with a significant decrease of 100% at follow-up (see Table AC.7).

TABLE AC.7. CHANGE IN AMPHETAMINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
AMPHETAMINE					
Men (n =78)	20	25.6%	0	0.0%	-100%***
Women (n = 101)	16	15.8%	0	0.0%	-100%***
Total (n = 179)	36	20.1%	0	0.0%	-100%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

BARBITURATES, PAST 30 DAY USE

A small percentage of individuals reported using barbiturates in the 30 days before entering the Recovery Center, and at follow-up, no individuals reported barbiturate use, representing a significant decrease of 100% (See Table AC.8).

TABLE AC.8. CHANGE IN BARBITURATE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
BARBITURATE					
Men (n =78)	6	7.7%	0	0.0%	-100%*
Women (n = 101)	5	5.0%	0	0.0%	-100%*
Total (n = 179)	11	6.1%	0	0.0%	-100%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

TRANQUILIZERS/SEDATIVES/BENZODIAZEPINES, PAST 30 DAY USE

About two in five individuals (39.1%) who were not in a controlled environment all 30 days reported they had used tranquilizers, sedatives, benzodiazepines in the 30 days before they entered the Recovery Center (see Table AC.9). At follow-up, only 2.2% reported they had used tranquilizers, sedatives, or benzodiazepines, which was a significant decrease of 94.3%. Similar decreases were found for men and women.

TABLE AC.9. CHANGE IN TRANQUILIZER, SEDATIVE, BENZODIAZEPINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
TRANQUILIZERS, SEDATIVE, BENZODIAZEPINES					
Men (n =78)	29	37.2%	2	2.6%	-93.1%***
Women (n = 101)	41	40.6%	2	2.0%	-95.1%***
Total (n = 179)	70	39.1%	4	2.2%	-94.3%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

CHANGE IN 30 DAY SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT AT INTAKE

Changes in alcohol and drug 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 because being in a controlled environment inhibits opportunities for alcohol and drug use.

MARIJUANA, PAST 30 DAY USE

Among the individuals who were in a controlled environment all 30 days 13.0% reported marijuana use in the 30 days before entering the Recovery Center (see Table AC.10). At follow-up, 0.0% of men and 2.8% of women (2.1% overall) reported using marijuana. There were significant decreases in marijuana use for men and women—by 100% and 75.0% respectively.

TABLE AC.10. CHANGE IN MARIJUANA USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
MARIJUANA					
Men (n =39)	7	17.9%	0	0.0%	-100%**
Women (n = 107)	12	11.2%	3	2.8%	-75.0%*
Total (n = 146)	19	13.0%	3	2.1%	-84.2%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

PRESCRIPTION OPIATES, PAST 30 DAY USE

Of the individuals who were in a controlled environment all 30 days 17.8% reported they had used prescription opiates in the 30 days before entering the Recovery Center (see Table AC.11). The number of men and women who reported prescription opiate use decreased significantly by 100% and 94.7% respectively from intake to follow-up. At follow-up, 0.0% of men, 0.9% of women reported prescription opiate use.

TABLE AC.11. CHANGE IN PRESCRIPTION OPIATE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
PRESCRIPTION OPIATES					
Men (n =39)	7	17.9%	0	0.0%	-100%**
Women (n = 107)	19	17.8%	1	0.9%	-94.7%***
Total (n = 146)	26	17.8%	1	0.7%	-96.2%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

HEROIN, PAST 30 DAY USE

Of the individuals in a controlled environment all 30 days, 7.7% of men and 1.9% of women reported they had used heroin in the 30 days before they entered the Recovery Center (see Table AC.12). Because almost all the individuals were heroin abstinent there was a non-significant change in the number of individuals reporting heroin use at follow-up. At follow-up, 0.0% of the men and 1.9% of the women reported using heroin.

TABLE AC.12. CHANGE IN HEROIN USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
HEROIN					
Men (n =39)	3	7.7%	0	0.0%	-100%
Women (n = 107)	2	1.9%	2	1.9%	0.0%
Total (n = 146)	5	3.4%	2	1.4%	-60.0%

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

NON-PRESCRIBED METHADONE, PAST 30 DAY USE

Only a small percentage of individuals in a controlled environment all 30 days reported using non-prescribed methadone in the 30 days before entering the Recovery Center and the 30 days before follow-up (see Table AC.13). For men, 5.1% reported using non-prescribed methadone at intake, and at follow-up, no men used non-prescribed methadone, which was a non-significant decrease. There was a significant decrease in the number of women who reported non-prescribed methadone use, by 85.7%.

TABLE AC.13. CHANGE IN NON-PRESCRIBED METHADONE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
METHADONE					
Men (n =39)	2	5.1%	0	0.0%	-100%
Women (n = 107)	7	6.5%	1	0.9%	-85.7%*
Total (n = 146)	9	6.2%	1	0.7%	-88.9%*

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

COCAINE, PAST 30 DAY USE

Among the individuals who were in a controlled environment all 30 days, only a small minority used cocaine in the 30 days before they entered the Recovery Center (see Table AC.14). There was also a statistically significant decrease from intake to follow-up in the number of women who used cocaine—by 88.9%. Even though there was a 100% decrease in cocaine use for men, this change was non-significant because so few men used cocaine at intake.

TABLE AC.14. CHANGE IN COCAINE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
COCAINE					
Men (n =39)	2	5.1%	0	0.0%	-100%
Women (n = 107)	9	8.4%	1	0.9%	-88.9%**
Total (n = 146)	11	7.5%	1	0.7%	-90.9%**

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

AMPHETAMINES, PAST 30 DAY USE

Of the individuals who were in a controlled environment all 30 days, 1 in 10 men (10.3%) and only 2.8% of women reported amphetamine use in the 30 days before they entered the Recovery Center at intake (see Table AC.15). Because so few individuals used amphetamines at intake, there was little room for improvement in the numbers of individuals reporting amphetamine use at follow-up. Overall, the number of individuals who used amphetamine decreased significantly by 85.7%.

TABLE AC.15. CHANGE IN AMPHETAMINE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
AMPHETAMINE					
Men (n =39)	4	10.3%	0	0.0%	-100%*
Women (n = 107)	3	2.8%	1	0.9%	-66.7%
Total (n = 146)	7	4.8%	1	0.7%	-85.7%*

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

BARBITURATES, PAST 30 DAY USE

Of the 146 individuals who were in a controlled environment all 30 days, only five individuals reported they had used barbiturates in the 30 days before they entered the Recovery Center (3.4%). At follow-up, no individuals reported used barbiturates in the past 30 days, which was a significant decrease of 100% (see Table AC.16).

TABLE AC.16. CHANGE IN BARBITURATE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
BARBITURATE					
Men (n =39)	2	5.1%	0	0.0%	-100%
Women (n = 107)	3	2.8%	0	0.0%	-100%
Total (n = 146)	5	3.4%	0	0.0%	-100%*

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

TRANQUILIZERS, SEDATIVES, BENZODIAZEPINES, PAST 30 DAY USE

In the 30 days before entering the Recovery Center, 15.1% of individuals (12.8% for men and 15.9% for women) who were in a controlled environment all 30 days used tranquilizers, sedatives, benzodiazepines (see Table AC.17). At follow-up, 1.4% of individuals reported using tranquilizers, sedatives, benzodiazepines, which was a significant increase by 90.9%. Decreases in tranquilizer use were significant for men (by 100%) and women (by 88.2%).

TABLE AC.17. CHANGE IN TRANQUILIZER, SEDATIVE, BENZODIAZEPINE USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
TRANQUILIZERS, SEDATIVE, BENZODIAZEPINES					
Men (n =39)	5	12.8%	0	0.0%	-100%*
Women (n = 107)	17	15.9%	2	1.9%	-88.2%***
Total (n = 146)	22	15.1%	2	1.4%	-90.9%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

APPENDIX D

DETAILED TABLES REGARDING CHANGES FROM INTAKE TO FOLLOW-UP ON TARGETED FACTORS



SUBSTANCE USE

CHANGE IN 12-MONTH/6-MONTH SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR INDIVIDUALS NOT IN A CONTROLLED ENVIRONMENT ALL 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER

OPIATES AND TRANQUILIZERS/SEDATIVES/BENZODIAZEPINES, PAST 12-MONTH/6-MONTH USE

TABLE AD.1. CHANGE IN OPIATES, TRANQUILIZER, SEDATIVES, BENZODIAZEPINE USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 365 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
OPIATE, TRANQUILIZER, SEDATIVE, BENZODIAZEPINE ^b					
Men (n =104)	68	65.4%	7	6.7%	-89.7%***
Women (n = 193)	152	78.8%	9	4.7%	-94.1%***
Total (n = 297)	220	74.1%	16	5.4%	-92.7%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Significant difference by gender at intake; tested with chi square test of independence; *p < .05.

DRUGS OTHER THAN OPIATES AND TRANQUILIZERS/SEDATIVES/BENZODIAZEPINES, PAST 12-MONTH/6-MONTH USE

TABLE AD.2. CHANGE IN USE OF DRUGS OTHER THAN OPIATES OR TRANQUILIZERS FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 365 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
DRUGS OTHER THAN OPIATES AND TRANQUILIZERS					
Men (n =104)	94	90.4%	8	7.7%	-91.5%***
Women (n = 193)	164	85.0%	14	7.3%	-91.5%***
Total (n = 297)	258	86.9%	22	7.4%	-91.5%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

ALCOHOL, PAST 12-MONTH/6-MONTH USE

TABLE AD.3. CHANGE IN ALCOHOL USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 365 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
ALCOHOL ^b					
Men (n =104)	85	81.7%	18	17.3%	-78.8%***
Women (n = 193)	131	67.9%	20	10.4%	-84.7%***
Total (n = 297)	216	72.7%	38	12.8%	-82.4%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Significant difference by gender at intake; tested with chi square test of independence; *p < .05.

TOBACCO, PAST 12-MONTH/6-MONTH USE

TABLE AD.4. CHANGE IN TOBACCO USE AND SMOKING FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 365 DAYS BEFORE ENTERING THE RECOVERY CENTER^b

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
TOBACCO					
Men (n =104)	96	92.3%	93	89.4%	-3.1%
Women (n = 193)	177	91.7%	174	90.2%	-1.7%
Total (n = 297)	273	91.9%	267	89.9%	-2.2%
SMOKING TOBACCO					
Men (n =102)	91	89.2%	83	81.4%	-8.8%
Women (n = 181)	164	90.6%	160	88.4%	-2.4%
Total (n = 283)	255	90.1%	243	85.9%	-4.7%

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Missing data on smoking tobacco at intake for 14 cases.

CHANGE IN 30 DAY SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR CLIENTS NOT IN A CONTROLLED ENVIRONMENT

PRESCRIPTION AND OTHER ILLEGAL DRUGS, PAST 30 DAY USE

TABLE AD.5. CHANGE IN ILLEGAL DRUG USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
ILLEGAL DRUGS					
Men (n =78)	62	79.5%	6	7.7%	-90.3%***
Women (n = 101)	74	73.3%	4	4.0%	-94.6%***
Total (n = 179)	136	76.0%	10	5.6%	-92.6%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

ALCOHOL, PAST 30 DAY USE

TABLE AD.6. CHANGE IN ALCOHOL, ALCOHOL TO INTOXICATION, AND BINGE DRINKING USE FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
ALCOHOL^b					
Men (n = 78)	58	74.4%	10	12.8%	-82.8%***
Women (n = 101)	53	52.5%	9	8.9%	-83.0%***
Total (n = 179)	111	62.0%	19	10.6%	-82.9%***
ALCOHOL TO INTOXICATION^b					
Men (n = 78)	55	70.5%	4	5.1%	-92.7%***
Women (n = 101)	50	49.5%	5	5.0%	-90.0%***
Total (n = 179)	105	58.7%	9	5.0%	-91.4%***
BINGE DRINKING^b					
Men (n = 77)	53	68.8%	2	2.6%	-96.2%***
Women (n = 96)	43	44.8%	6	6.2%	-86.0%***
Total (n = 173)	96	55.5%	8	4.6%	-91.7%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Significant difference by gender at intake; tested with chi square test of independence, p < .01.

TOBACCO, PAST 30 DAY USE

TABLE AD.7. CHANGE IN TOBACCO USE AND SMOKING FOR INDIVIDUALS WHO WERE NOT IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
TOBACCO					
Men (n = 78)	72	92.3%	71	91.0%	-1.4%
Women (n = 101)	91	90.1%	92	91.1%	1.1%
Total (n = 179)	163	91.1%	163	91.1%	0.0%
SMOKING TOBACCO^b					
Men (n = 77)	68	88.3%	65	84.4%	-4.4%
Women (n = 94)	84	89.4%	83	88.3%	-1.2%
Total (n = 171)	152	88.9%	148	86.5%	-2.6%

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

CHANGE IN 30 DAY SUBSTANCE USE FROM INTAKE TO FOLLOW-UP FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT AT INTAKE

PRESCRIPTION AND OTHER ILLEGAL DRUGS, PAST 30 DAY USE

TABLE AD.8. CHANGE IN ILLEGAL DRUG USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
ILLEGAL DRUGS					
Men (n =39)	13	33.3%	0	0.0%	-100%***
Women (n = 107)	30	28.0%	4	3.7%	-86.7%***
Total (n = 146)	43	29.5%	4	2.7%	-90.7%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

ALCOHOL, PAST 30 DAY USE

TABLE AD.9. CHANGE IN ALCOHOL, ALCOHOL TO INTOXICATION, AND BINGE DRINKING USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
ALCOHOL					
Men (n =39)	6	15.4%	0	0.0%	-100%*
Women (n = 107)	19	17.8%	6	5.6%	-68.4%**
Total (n = 146)	25	17.1%	6	4.1%	-76.0%***
ALCOHOL TO INTOXICATION					
Men (n =39)	5	12.8%	0	0.0%	-100%*
Women (n = 107)	17	15.9%	3	2.8%	-82.4%**
Total (n = 146)	22	15.1%	3	2.1%	-86.4%***
BINGE DRINKING^b					
Men (n =38)	4	10.5%	0	0.0%	-100%*
Women (n = 105)	14	13.3%	3	2.9%	-78.6%**
Total (n = 143)	18	12.6%	3	2.1%	-83.3%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Missing data for 3 cases that used a different version of the intake survey.

TOBACCO, PAST 30 DAY USE

TABLE AD.10. CHANGE IN TOBACCO USE FOR INDIVIDUALS WHO WERE IN A CONTROLLED ENVIRONMENT ALL 30 DAYS BEFORE ENTERING THE RECOVERY CENTER

	USE		USE		PERCENT CHANGE ^a
	AT INTAKE		AT FOLLOW-UP		
	n	Valid %	n	Valid %	
TOBACCO					
Men (n =39)	29	74.4%	31	79.5%	6.9%
Women (n = 107)	65	60.7%	96	89.7%	47.7%***
Total (n = 146)	94	64.4%	127	87.0%	35.1%***
SMOKING					
Men (n =37)	26	70.3%	26	70.3%	0.0%
Women (n = 102)	61	59.2%	91	88.3%	49.2%***
Total (n = 139)	87	62.1%	117	83.6%	34.5%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

MENTAL HEALTH

DEPRESSION, GENERALIZED ANXIETY AND COMORBID DEPRESSION AND GENERALIZED ANXIETY

TABLE AD.11. CHANGE IN PERCENTAGE OF INDIVIDUALS MEETING CRITERIA FOR MENTAL HEALTH PROBLEMS IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP

		Intake	Follow-Up	Percent change ^b
Depression ^{a,d}	Men (n = 114)	66.7%	9.6%	-85.5%***
	Women (n =194)	82.0%	15.5%	-81.1%***
	Total (n =308)	76.3%	13.3%	-82.6%***
Generalized Anxiety ^a	Men (n = 114)	67.5%	28.9%	-57.1%***
	Women (n =194)	71.6%	34.5%	-51.8%***
	Total (n =308)	70.1%	32.5%	-53.7%***
Comorbid depression and Generalized Anxiety ^a	Men (n = 114)	56.1%	7.0%	-87.5%***
	Women (n =194)	65.5%	12.9%	-80.3%***
	Total (n =308)	62.0%	10.7%	-82.7%***

a—17 cases used a different intake survey and did not include these mental health questions.

b—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

c—Statistical difference by gender at intake; tested with chi square test of independence; p < .05.

SUICIDE IDEATION AND/OR ATTEMPTS

TABLE AD.12. CHANGE IN PERCENTAGE OF INDIVIDUALS REPORTING SUICIDE IDEATION AND/OR ATTEMPTS IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP

		INTAKE	FOLLOW-UP	PERCENT CHANGE ^b
Suicidal thoughts or attempts	Men (n = 117)	27.4%	1.7%	-93.8%***
	Women (n =208)	32.2%	4.3%	-86.6%***
	Total (n =325)	30.5%	3.4%	-88.9%***

a—17 cases used a different intake survey and did not include these mental health questions.

b—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

c—Statistical difference by gender at intake; tested with chi square test of independence; p < .05.

STRESS INDEX

TABLE AD.13. CHANGE IN SCORES ON THE STRESS INDEX IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP

		INTAKE	FOLLOW-UP	PERCENT CHANGE ^b
Mean score on	Men (n = 114)	34.3	8.1	-76.4%***
Allostatic Load Scale ^c	Women (n =194)	36.2	11.4	-68.5%***
	Total (n =308)	35.5	10.2	-71.3%***

a—17 cases used a different intake survey and did not include these questions.

b—Significance established using paired sample t-test; *p < .05, **p < .01, ***p < .001.

c—Statistical difference by gender at follow-up; tested with independent samples t test; p < .01.

PHYSICAL AND MENTAL HEALTH NOT GOOD

TABLE AD.14. CHANGE IN PERCEPTIONS OF POOR PHYSICAL HEALTH AND MENTAL HEALTH IN THE PAST 30 DAYS FROM INTAKE TO FOLLOW-UP (N = 308)^a

		INTAKE	FOLLOW-UP	PERCENT CHANGE ^b
Number of days in the past 30 days physical health was not good	Men (n = 114)	4.1	3.6	-12.2%
	Women (n =194)	2.6	4.1	57.7%*
	Total (n =308)	3.2	3.9	21.9%
Number of days in the past 30 days mental health was not good ^{c,d}	Men (n = 114)	4.9	3.8	-22.4%
	Women (n =194)	8.0	6.5	-18.8%
	Total (n =308)	6.9	5.5	-20.3%*
Number of days poor physical or mental health kept client from doing usual activities ^d	Men (n = 114)	2.9	1.2	-58.6%*
	Women (n =193)	2.4	2.6	8.3%
	Total (n =307)	2.6	2.1	-19.2%

a—17 cases used a different intake survey and did not include these questions.

b—Significance established using paired sample t-test; *p < .05, **p < .01, ***p < .001.

c—Statistical difference by gender at intake; tested with independent samples t test; p < .01.

d—Statistical difference by gender at follow-up; tested with independent samples t test, p < .01.

CHANGE IN EDUCATION AND EMPLOYMENT FROM INTAKE TO FOLLOW-UP

HIGHEST LEVEL OF EDUCATION COMPLETED

TABLE AD.15. CHANGE IN HIGHEST LEVEL OF EDUCATION COMPLETED FROM INTAKE TO FOLLOW-UP (N = 324)^a

		Intake	Follow-Up	Percent change ^b
Less than high school diploma or GED ^c	Men (n = 115)	8.7%	5.2%	-30.0%
	Women (n = 208)	21.6%	17.8%	-17.8%
	Total (n = 323)	17.0%	13.6%	-20.0%
Completed high school diploma or GED or higher	Men (n = 115)	91.3%	94.8%	3.8%
	Women (n = 208)	78.4%	82.2%	4.9%
	Total (n = 323)	83.0%	86.7%	4.5%

a—Two cases had education missing at follow-up.

b—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

c—Significant difference in highest level of education by gender at intake and follow-up; tested with chi square test of independence; p < .01.

EMPLOYMENT

TABLE AD.16. CHANGE FROM INTAKE TO FOLLOW-UP IN MONTHS EMPLOYED (N = 308)^a

		Intake	Follow-Up
Number of months	Men (n = 114)	3.1	7.4***
worked full-time or	Women (n = 194)	2.8	3.8*
part-time ^c	Total (n = 308)	2.9	5.1***

a—17 cases used a different version of the intake survey and had no data on number of months worked at intake.

b—Significance established using paired-test test; *p < .05, **p < .01, ***p < .001.

c—Significant difference in proportion of months worked at follow-up by gender; tested with independent samples t-test; p < .001.

TABLE AD.17. CHANGE FROM INTAKE TO FOLLOW-UP IN EXPECTATIONS TO BE EMPLOYED IN THE NEXT 12 (OR 6) MONTHS (N = 308)^a

		Intake	Follow-Up	PERCENT CHANGE ^b
Expect to be	Men (n = 114)	93.0%	89.5%	-3.8%
employed in the next	Women (n = 194)	64.9%	83.5%	28.6%***
6 months ^b	Total (n = 308)	75.3%	85.7%	13.8%**

a—17 cases used a different version of the intake survey and had no data on number of months worked at intake.

b—Significance tested with z test of proportions; *p < .05, **p < .01, ***p < .001.

c—Significant difference in expectation to be employed at intake by gender; tested with chi square test of independence; p < .001.

CHANGE IN INVOLVEMENT IN THE CRIMINAL JUSTICE SYSTEM FROM INTAKE TO FOLLOW-UP

ARRESTS

TABLE AD.18. CHANGE IN PERCENTAGE OF INDIVIDUALS REPORTING ARRESTS FROM THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP (N = 324)^a

		INTAKE	FOLLOW-UP	PERCENT CHANGE ^b
Any Arrests ^c	Men (n =117)	64.1%	6.8%	-89.3%***
	Women (n =207)	77.8%	10.1%	-87.0%***
	Total (n =324)	72.8%	9.0%	-87.7%***

a—One case had missing data on arrests in the 6 months before follow-up.

b—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

c—Significant difference by gender at intake; tested with chi square test of independence, p < .01.

INCARCERATIONTABLE AD.19. CHANGE IN PERCENTAGE OF INDIVIDUALS REPORTING INCARCERATION IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER TO THE 6 MONTHS BEFORE FOLLOW-UP (N = 325)^a

		INTAKE	FOLLOW- UP	PERCENT CHANGE ^B
Spent at least one day in jail or prison	Men (n =117)	73.5%	5.1%	-93.0%***
	Women (n =208)	83.2%	12.0%	-85.5%***
	Total (n =325) ^b	79.7%	9.5%	-88.0%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Significant difference by gender at intake and follow-up; tested with chi square test of independence, p < .05.

TABLE AD.20. CHANGE IN PERCENTAGE OF INDIVIDUALS REPORTING SUPERVISION BY THE CRIMINAL JUSTICE SYSTEM IN THE 12 MONTHS BEFORE ENTERING THE PROGRAM TO THE 6 MONTHS BEFORE FOLLOW-UP (N = 325)

		INTAKE	FOLLOW- UP	PERCENT CHANGE ^A
Under supervision	Men (n =117)	67.5%	57.3%	-15.2%
	Women (n =208)	73.1%	57.7%	-21.1%***
	Total (n =325)	71.1%	57.5%	-19.0%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

TABLE AD.21. CHANGE IN NUMBER OF TIMES ARRESTED AND DAYS INCARCERATED IN THE 12 MONTHS BEFORE ENTERING THE RECOVERY CENTER AND 6 MONTHS BEFORE FOLLOW-UP^a

		BASELINE	FOLLOW-UP
Mean number of times arrested	Men (n=117)	1.2	0.1***
	Women (n=207)	1.7	0.1***
	Total (n=324) ^b	1.5	0.1***
Mean number of days spent in jail or prison	Men (n=117)	83.4	0.6***
	Women (n=208)	96.7	6.1***
	Total (n=325)	91.9	4.1***
Projected days spent in jail or prison	Men (n=117)	83.4	1.1***
	Women (n=208)	96.7	12.2***
	Total (n=325)	91.9	8.2***

a—Significance established using paired t-test; *p < .05, **p < .01, ***p < .001.

b—One case had missing data for number of arrests in the 6 months before follow-up.

CHANGE IN RECOVERY SUPPORTS FROM INTAKE TO FOLLOW-UP

TABLE AD.22. CHANGE IN RECOVERY SUPPORTS FROM INTAKE TO FOLLOW-UP (N=325)

		INTAKE	FOLLOW-UP	PERCENT CHANGE ^a
Went to mutual-help meetings in the past 30 days	Men (n=117)	35.9%	90.6%	152.4%***
	Women(n=208)	45.7%	87.0%	90.5%***
	Total (n=325)	42.2%	88.3%	109.5%***
Mean number of mutual-help meetings attended in the past 30 days	Men (n=117)	7.6	16.4	115.8%***
	Women(n=208)	6.0	15.3	155.0%***
	Total (n=325)	6.6	15.7	137.9%***
Recovery supportive interactions with family/friends in the past 30 days ^b	Men (n=117)	79.5%	99.1%	24.7%***
	Women(n=208)	89.9%	98.1%	9.1%***
	Total (n=325)	86.2%	98.5%	14.3%***

a—Significance established using z test for proportions; *p < .05, **p < .01, ***p < .001.

b—Significant difference by gender at intake; tested with chi square test of independent, p < .01.

TABLE AD.23. CHANGE IN THE NUMBER OF PEOPLE INDIVIDUALS SAID THEY COULD COUNT ON FOR RECOVERY SUPPORT (N = 313)^a

		BASELINE	FOLLOW-UP	PERCENT CHANGE ^A
Mean number of people individual reported he/she can count on for recovery support	Men (n = 116)	26.3	47.3	79.8%**
	Women (n = 197)	26.9	39.4	46.5%*
	Total (n = 313)	26.7	42.3	58.4%***

a—12 cases had missing data on the baseline survey

b—Significance established using paired t-test; *p < .05, **p < .01, ***p < .001.