Kentucky Opiate Replacement Treatment Outcome Study

2013 Annual Report

Executive Summary

In Kentucky, rates of prescription drug misuse continue to rise with 4.5% of persons 12 and older reporting opiate misuse (SAMHSA, 2013). In addition, over one-third of adults who seek treatment primarily report abusing prescription opioids (SAMHSA, 2011). Federally licensed opiate treatment programs (OTP) provide evidence-based, clinically monitored medication-assisted opiate addiction treatment with methadone or buprenorphine (NIDA, 2011). All 11 Kentucky licensed OTPs participate in the Kentucky Opiate Replacement Treatment Outcome Study (KORTOS)[1]. This KORTOS report examines client satisfaction with the OTP and quality of life ratings before and during OTP participation for 208 clients. Changes from intake (at OTP entry) to follow-up (6 months after intake) are described for selected targeted factors including: (1) illegal drug, alcohol, and tobacco use; (2) mental health, stress, and physical health status; (3) socioeconomic status; and (4) criminal justice system involvement. The KORTOS report also examines changes in recovery supports over time for OTP clients.

PROGRAM SATISFACTION AND QUALITY OF LIFE. Clients in the 2013 KORTOS sample overwhelmingly reported satisfaction with OTP services and increased quality of life during OTP participation.

- Clients rated their overall level of satisfaction with the OTP as 8.1 with 10 being the best possible experience.
- Most clients appreciated every single aspect of the OTP they were asked about with over 90% of clients reporting getting needed services, feeling better about themselves, and feeling they were treated with respect at the OTP.
- Clients reported that some of the most positive outcomes about their OTP participation were the interactions and relationships with other people, improved financial situation, improved mental health and feeling better about themselves, and reductions in substance use.

Clients rated their satisfaction with treatment, on average, as 8.1 out of 10.

- Data from quality of life indices showed significant improvements from before OTP participation to the 6-month follow-up. For example, clients rated their quality of life at 2.5 before program participation and an 8.3 during participation in the OTP, which was a significant shift (1='Worst imaginable' to 5='Good and bad parts were about equal' to 10='Best imaginable').

CHANGES IN TARGETED FACTORS. Clients showed substantial improvements in all of the targeted factors.

[1] This report includes results from 208 clients at Kentucky OTPs who completed both an intake interview which asked about current status as well as behaviors the 30 days or 12-months before entering the program between January 1, 2011 and December 31, 2011 and a follow-up interview 6-months after the intake was targeted to be completed between July 1, 2011 and June 30, 2012. The report follow-up rate was 83.9%.

Illegal drug and alcohol use

- There was a 62% decrease in the percentage of clients reporting any illegal drug use in the 12 months before entering the OTP to 6 months before follow-up (96.6% to 36.5%, respectively).
  - The number of clients reporting the misuse of prescription opiates decreased by 78%, non-prescribed methadone use decreased by 20.2%, non-prescribed use of buprenorphine decreased by 89.1%, and heroin use decreased by 93.9%.
  - Other illegal drug use (i.e., marijuana, cocaine, methamphetamines, stimulants, tranquilizers, inhalants) decreased from 68.3% at intake to 26.9% at follow-up; a significant decline of 60.6%.

There was a 62% decrease in the percentage of clients reporting any illegal drug use at follow-up.

- Addiction Severity Index (ASI) composite score (CS) can be used to estimate the number of clients who are likely to meet criteria for active alcohol or drug dependence. The percentage of KORTOS clients who met the ASI CS for drug dependence decreased by 79.5% from 100% at intake to 20.5% at follow-up.
- Alcohol use was low at intake for these clients with only about 1 in 4 reporting any alcohol use in the preceding 12 months (27.4%).
- However, not only did fewer clients report using alcohol at follow-up (20.2%), there was a significant decline (52.8%) in the number of clients reporting using alcohol to intoxication and a significant decline (48.1%) in the number of clients reporting binge drinking.
- Almost 40% of clients reported injection drug use either in their lifetime and/or in the 30 days before follow-up.
- Among clients reporting injection drug use, over one-quarter were infected with hepatitis C.

Mental health symptoms

- Clients reported significant declines in depression, co-morbid depression and anxiety, and suicide ideation and attempts.
  - About 57% of clients met self-reported DSM-IV criteria for depression at intake and by follow-up only 29% of clients met depression criteria, representing a 49% significant decrease.

Depression decreased by 49% and co-morbid depression and generalized anxiety decreased by 37%.

  - The percentage of clients self-reporting criteria for generalized anxiety decreased slightly, but not significantly, with 47.3% of clients at intake and 43.5% of clients at follow-up meeting generalized anxiety criteria.
  - There was a 37% decrease in the number of clients self-reporting criteria for co-morbid depression and generalized anxiety from 39.9% at intake to 25.0% at follow-up.
  - The percentage of clients reporting suicide ideation and/or attempts decreased from 10.6% at intake to 4.3% at follow-up which represents a decrease of 59%.
- The Stress Index suggests clients experienced significant reductions in stress during program participation. Stress Index scores decreased by 67% from 41.2 at intake to 13.5 at follow-up.

Changes in physical health

- Body mass index (BMI) values were unchanged for women from intake to follow-up; however, the average BMI for men increased significantly from 27.1 at intake to 27.7 at follow-up.

Socioeconomic status

- The number of clients living in their own home or apartment increased from intake

(62.5%) to follow-up (74%).
- Education levels were slightly increased at follow-up while employment rates remained stable during OTP participation.
- Further, fewer clients indicated difficulty in meeting basic living needs (i.e., food, shelter, utilities) at follow-up (40.9%) compared to intake (61.5%).

Involvement with the criminal justice system

- The number of clients who reported being arrested decreased by 65% from 17.8% in the 12 months before entering the OTP to 6.2% in the 6 months before follow-up.
- Likewise, the percentage of clients reporting spending at least one day in jail or prison decreased by 71% from 16.3% at intake to 4.8% at follow-up.
- Among incarcerated individuals, clients spent 45.3 days incarcerated in the 12 months before entering the OTP, and 11.6 days incarcerated in the projected follow-up period.

The percentage of clients reporting an arrest decreased by 65%.

RECOVERY SUPPORTS. Overall, clients indicated significant improvements in recovery supports.
- There was a significant increase in the number of clients reporting they had gone to mutual help recovery group meetings in the past 30-days from 16.9% at intake to 40.6% at follow-up.
- Clients reported that the opiate replacement medication (methadone/buprenorphine), support of friends and family, and their parenting role were most helpful in keeping them off of illegal drugs.

CONCLUSION

Overall, findings from the 2013 KORTOS indicate Kentucky OTPs help clients achieve positive life changes. Results did indicate there were a few areas that programs want to consider addressing further.

For instance, tobacco use and smoking did not significantly change from intake to follow-up for the overall sample. While tobacco use is legal for adults, it can lead to some potentially serious health problems.

Findings from the 2013 KORTOS report indicate Kentucky OTPs help clients achieve positive life changes.

Second, there were a few gender differences that need to be highlighted. Men's BMI increased significantly from intake to follow-up but women's remained stable over the study period. More women had anxiety and co-morbid depression and anxiety at both intake and follow-up. In addition, more women (53.2%) than men (39.4%) reported increased technical school or college education at follow-up, but fewer women compared to men reported employment. Also, employed women reported significantly lower hourly wages then employed men at intake and follow-up. These gender differences may indicate a need for gender-specific treatment or support groups.

This 2013 follow-up report for KORTOS provides a valuable look at the outcomes of maintenance treatment in a state that has high rates of prescription opioid abuse. The significant increases in abstinence across all substances (except tobacco), improved mental health, more stable housing, increased use of recovery supports, and decreased rates of criminal justice system involvement indicate successful achievement of the overall treatment goals for the clients and OTPs in Kentucky.

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KENTUCKY OPIATE REPLACEMENT TREATMENT OUTCOME STUDY 2013 ANNUAL REPORT

Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities
Division of Behavioral Health
100 Fair Oaks Lane, 4E-D
Frankfort, KY 40621-0001
(502) 564-4448

Presented by:

Jeff Jamar, M.S.W.
Acting Director
Mark Fisher, M.S.
State Opioid Treatment Authority

The 2013 KORTOS report includes data from 208 clients at Kentucky opiate treatment programs (OTPs) who completed both an intake interview between January 1, 2011 and December 31, 2011 and a six month follow-up interview targeted between July 2011 and June 2012.

Suggested citation: Stevenson, E., Cole, J., Scrivner, A., & Logan, TK. (2013). Kentucky Opiate Replacement Treatment Outcome Study 2013 Annual Report. Lexington, KY: University of Kentucky, Center on Drug & Alcohol Research.

UK UNIVERSITY OF KENTUCKY
Center on Drug and Alcohol Research

Kentucky UNBRIDLED SPIRIT

Introduction

Prescription drug misuse and abuse continue to take top billing in the national and local news with 1.9 million new persons reporting prescription opiate misuse each year since 2002[2]. In Kentucky, rates of prescription drug misuse continue to rise with 4.5% of persons 12 years and older reporting opiate misuse[3] and over one-third of adults seeking treatment reported primarily abusing prescription opioids[4]. Federally licensed opiate treatment programs (OTPs) provide evidence-based, clinically monitored, medication-assisted treatment with methadone or buprenorphine to help individuals recover from opiate addiction[5].

In 2007, Kentucky OTPs began collecting outcome study data on medication-assisted treatment. The project has joint oversight of the Kentucky Division of Behavioral Health and Narcotic Treatment Authority and currently includes all 11 Kentucky licensed OTPs. The Kentucky Opiate Replacement Treatment Outcome Study (KORTOS) includes client-level intake data collected by OTPs as part of their licensure agreements. The data are submitted to the University of Kentucky Center on Drug and Alcohol Research (UK CDAR) through a contract with the Division of Behavioral Health where 6-month follow-up interviews are completed with consenting maintenance treatment clients. The KORTOS project includes clients at licensed OTPs since they follow clinical monitoring protocols; thus this report does not include data from independent physicians who prescribe buprenorphine outside of an OTP.

2013 KORTOS REPORT OVERVIEW

In this third annual KORTOS report, data are included on 208 clients from Kentucky OTPs who completed both an intake interview between January 1, 2011 and December 31, 2011 and a six month follow-up interview targeted between July 1, 2011 and June 30, 2012. A total of 633 clients had an intake survey. Of these clients, 248 agreed to be contacted for the follow-up survey 6 months later and were eligible based on follow-up study criteria[6] . Of these 248 clients, interviewers completed follow-up surveys with 208 clients representing a follow-up rate of 83.9%. To help facilitate the honest evaluation of client outcomes and evaluation of program services, the follow-up interviews were independently conducted over the telephone by a member of the UK CDAR staff and the program and responses were kept confidential (see Appendices A and B for detailed information about the methods and locating efforts).

Of the 208 clients described in this report, 52.4% were female and 47.6% were male (see Appendix C for detailed information about client characteristics). Most clients were White (97.1%) and were an average of 32.4 years old at the time of the intake interview. Half of the clients were married or cohabiting at intake and 26.4% had never been married. In addition, two-thirds (66.3%) had children who were under 18 years old.

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[2] Substance Abuse and Mental Health Services Administration. (2012). Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-44, HHS Publication No. (SMA) 12-4713. Rockville, MD: Substance Abuse and Mental Health Services Administration.

[3] Substance Abuse and Mental Health Services Administration. (2013). Center for Behavioral Health Statistics and Quality. The NSDUH Report: State Estimates of Nonmedical Use of Prescription Pain Relievers. Rockville, MD.

[4] Substance Abuse and Mental Health Services Administration. (2011). Office of Applied Studies. Treatment Episode Data Set -- Admissions (TEDS-A) -- Concatenated, 1992 to 2009 [Computer file]. ICPSR25221-v4. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2011-06-28. doi:10.3886/ICPSR25221.v4

[5] National Institute on Drug Abuse. (2011). Prescription drugs abuse and addiction: research report series. NIH Publication Number 05-4881. Retrieved from http://drugabuse.gov/publications/research-reports/prescription-drugs.

[6] In order to be eligible for the follow-up study, clients had to still be in OTP at the time of the follow-up interview, not in a controlled environment, agree to be contacted for follow-up, and provide contact information in the client locator data at the end of the intake interview.

When those with a follow-up interview were compared with those who did not have a follow-up interview on several intake variables, there were few significant differences for demographics, socioeconomic status indicators (education, employment, living situation), substance abuse, mental health, criminal justice involvement, and treatment history[7] (see Appendix C for detailed comparisons between those who completed a follow-up and those who did not).

This report will examine key outcomes in three main sections followed by a summary and recommendations.

Section 1: Client Satisfaction with OTP. Section 1 describes four aspects of client satisfaction: (1) overall client satisfaction; (2) client ratings of program experiences; (3) positive and negative aspects of OTP participation; and, (4) quality of life ratings before and during treatment.

Section 2: Changes in Targeted Factors. Section 2 examines changes from intake to follow-up for all clients and changes by gender on targeted factors including (a) illegal drug, alcohol and tobacco use; (b) self-reported mental health symptoms, stress, perceptions of mental and physical health, chronic pain, and body mass index; (c) socioeconomic status (living situation, education, employment, and difficulty meeting living and health care needs) and; (e) criminal justice system involvement.

Section 3: Recovery Supports. Section 3 focuses on clients' use of recovery supports before program entry and at 6-month follow-up.

Section 4: Summary and Conclusion. Section 4 summarizes report findings and provides recommendations for OTPs and clients based upon these findings.

Additional copies of the report are available for printing and distribution on the KORTOS web site at http://cdar.uky.edu/kortos

[7] There were significant differences between clients followed up and not followed up for marital status and inability to meet basic needs (see Appendix C).

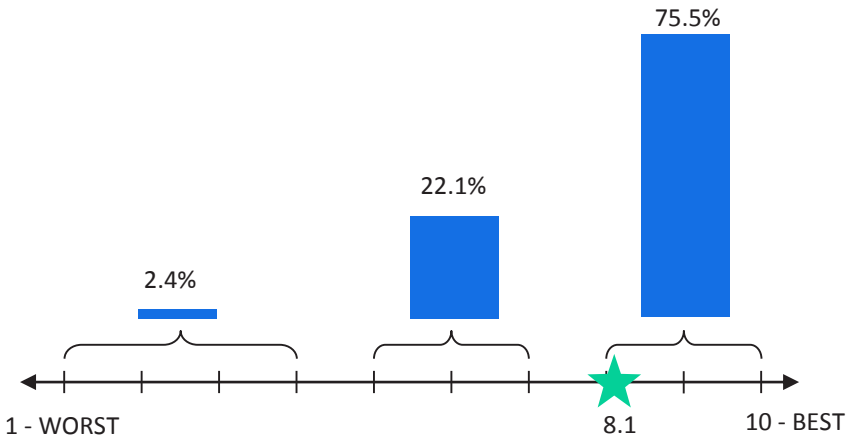
Client Satisfaction Ratings for Opiate Treatment Programs (OTPs)

At the beginning of the follow-up interview, clients are asked to give their opinion regarding their program experience using four different questions. The items measured in this report include: (1) overall client satisfaction rating, (2) client ratings of program experiences, (3) positive and negative aspects of OTP participation, and (4) quality of life ratings.

OVERALL CLIENT SATISFACTION

At the beginning of the follow-up interview, clients are asked to rate their experience at the OTP on a scale from 1 representing the worst possible experience to 10 representing the best possible experience. The mean rating given by clients in the follow-up sample was 8.1, with 75.5% of clients giving a rating of 8 through 10 (see Figure 1.1).

FIGURE 1.1. RATING OF EXPERIENCE AT THE OTP (n = 208)



CLIENT RATINGS OF PROGRAM EXPERIENCES

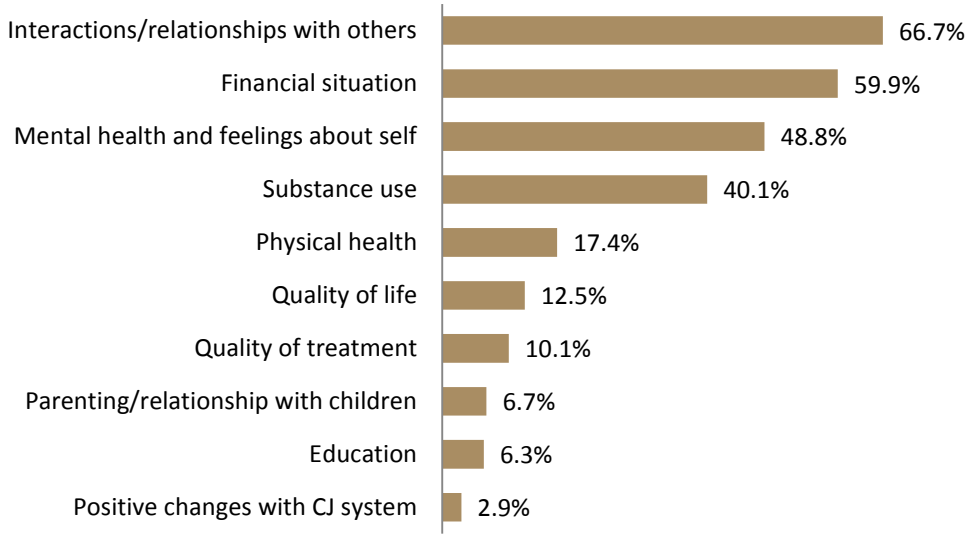
When asked a series of program satisfaction questions, the majority of clients indicated each aspect of their experiences were positive (see Figure 1.2). Clients overwhelmingly reported that they were treated with respect, understood the expectations of the program, felt better about themselves, and got the services needed to get better at the OTP.

FIGURE 1.2. PERCENTAGE OF CLIENTS THAT AGREED OR STRONGLY AGREED WITH STATEMENTS ABOUT THEIR OTP EXPERIENCE (n=208)

POSITIVE AND NEGATIVE ASPECTS OF OTP

Clients were asked to identify the three most positive aspects of their participation with the OTP[8]. Two in three (66.7%) clients reported that improved interactions and relationships with others was a positive aspect, and 59.9% of clients believed changes in their financial situation and employment were a positive outcome (Figure 1.3). Nearly half of clients (48.8%) stated that change in their mental health and how they felt about themselves was a positive outcome of their OTP experience. Two in five (40.1%) clients mentioned reductions in substance use as a positive OTP outcome. Other positive outcomes were physical health, quality of life, quality of treatment (e.g., greater stability and control over life, improved functioning), parenting and relationships with children (e.g., regaining custody of children, spending more time with children), education, and positive changes with the criminal justice system.

FIGURE 1.3. PERCENTAGE OF CLIENTS REPORTING POSITIVE ASPECTS OF THE OTP (n=207)



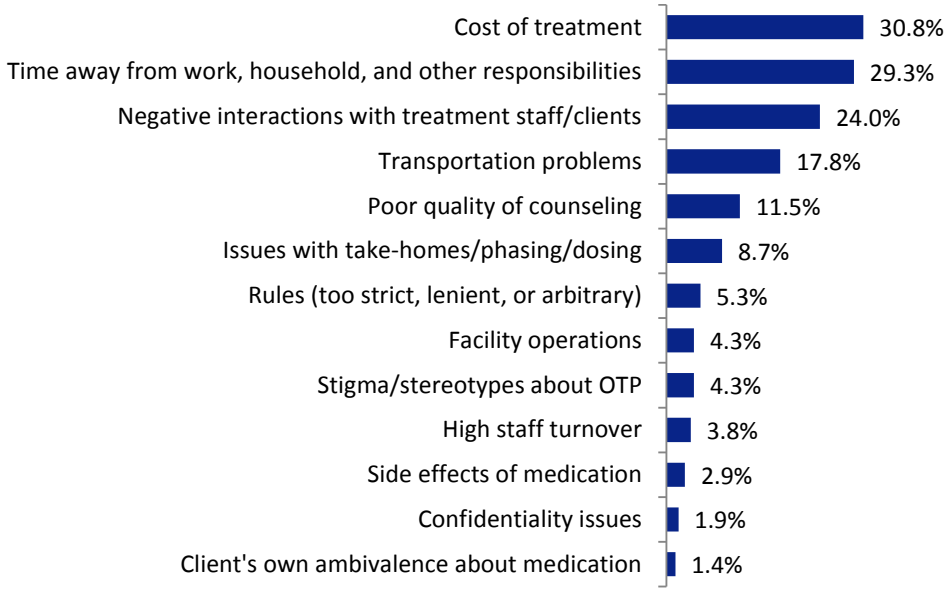
Aspects of treatment that clients identified as problematic or needing improvement are displayed in Figure 1.4. The negative aspects of the OTP program suggest barriers that clients must overcome to participate in the program including the cost and time investment. Specifically, cost of the OTP and time away from work, household, or other responsibilities were most frequently mentioned as negative aspects of OTP (30.8% and 29.3% respectively). Nearly one in four clients (24.0%) stated that interactions with OTP staff or clients were sometimes problematic. Other areas of difficulty included transportation problems (17.8%), the quality of counseling (e.g., not enough counseling), issues with take-home/phasing/dosing procedures, and rules being too strict, lenient, or arbitrary. Fewer than 5% of clients mentioned that facility operations, stigma/stereotypes about OTPs, high staff turnover, side effects of medication, confidentiality issues, and the client's own ambivalence about being on medication for opiate replacement therapy were negative aspects of their OTP experience.

"All the people that work there are very helpful. You can tell they care about you. It's like they are family."

-KORTOS client on why they chose their rating

[8] Missing data for one case.

FIGURE 1.4. PERCENTAGE OF CLIENTS REPORTING NEGATIVE ASPECTS OF THE OTP (n=208)



QUALITY OF LIFE

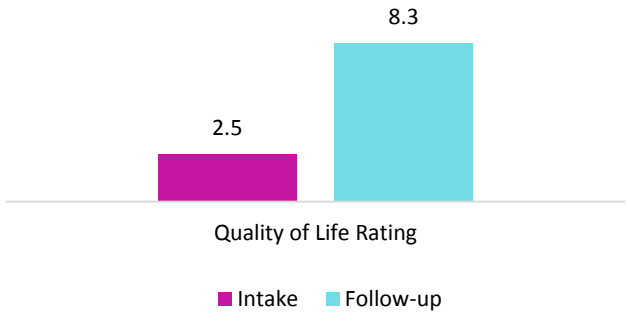
There were two main quality of life indexes that were used including: (1) quality of life rating, and (2) subjective social standing.

QUALITY OF LIFE RATINGS

At follow-up, clients were asked to rate their quality of life before entering the OTP and after participating in the program. Ratings were from 1='Worst imaginable' to 5='Good and bad parts were about equal' to 10='Best imaginable'. KORTOS clients rated their quality of life before entering the OTP as on average 2.5 (see Figure 1.5). The average rating of quality of life after participating in the OTP significantly increased to 8.3.

Average rating of quality of life after entering the OTP significantly increased from 2.5 before entering the OTP to 8.3 at follow-up

FIGURE 1.5. CHANGE IN PERCEPTION OF QUALITY OF LIFE BEFORE AND AFTER THE OTP (n = 208)

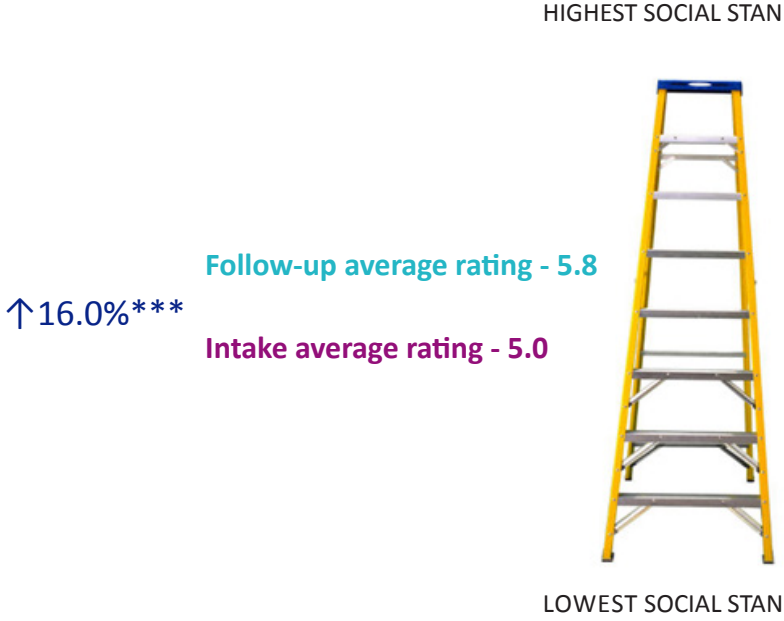


1, worst imaginable; 5, good and bad parts are equal;
10, best imaginable

SUBJECTIVE SOCIAL STANDING

As a second index of quality of life, clients were asked to place themselves on a ladder, representing their perception of their standing in society, Adler's Ladder[9]. The bottom rung, 1="people who are the worst off, those who have the least money, least education, and the worst jobs or no jobs" and the top rung, 10="people who are the best off, those who have the most money, most education, and the best jobs." Figure 1.6 shows client ratings of subjective social standing increased significantly by 16.0% from intake to follow-up: for the overall sample, from 5.0 at intake to 5.8 at follow-up[10].

FIGURE 1.6. CHANGE FROM INTAKE TO FOLLOW-UP IN CLIENT RATING OF SUBJECTIVE SOCIAL STANDING (n = 207)



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

[9] Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: preliminary data in healthy white women. *Health Psychology, 19*(6), 586-592.

[10] 1 case had a missing value on the measure at follow-up.

2 Change in Targeted Factors from Intake to Follow-up

This section describes change over time for clients in the follow-up study on four main targeted factors including: (1) illegal drug, alcohol and tobacco use, (2) self-reported mental health symptoms, perceptions of mental and physical health, chronic pain, and body mass index, (3) socioeconomic status (living situation, education, employment, and difficulty meeting living and health care needs), and (4) criminal justice system involvement. Results for each of the targeted factors are presented for the overall sample. Significant gender differences are noted as well.

CHANGES IN ILLEGAL DRUG, ALCOHOL AND TOBACCO USE

Changes in illegal drug, alcohol and tobacco use before entering the OTP and during the 6 month follow-up period are presented in this section. When examining illegal drug use several categories of illegal drugs were examined separately including: (a) prescription opiate misuse [i.e., opiates such as morphine, Percocet, Oxycontin, Lortab], (b) non-prescribed methadone, (c) non-prescribed buprenorphine, (d) heroin, and (e) illegal drugs other than those mentioned above [i.e., marijuana, cocaine, amphetamines, tranquilizers, hallucinogens, inhalants, and barbiturates]. The Addiction Severity Index (ASI) composite scores for overall illegal drug (n=190) and alcohol use (n=50) are also presented. The ASI composite score takes into consideration substance use as well as the impact of substance use on an individual's life and assesses addiction severity even among those reporting no substance use in the past 30-days. Any gender differences that were found at intake or follow-up are also noted.

Results are presented for overall illegal drug use as well as for specific substance categories (i.e., prescription opiates, non-prescribed methadone, non-prescribed buprenorphine, heroin, and other illegal drug use), alcohol use, and tobacco use in three main subsections:

1. **Change in past 12-month/6-month illegal drug, alcohol and tobacco use from intake to follow-up.** Comparisons of any illegal drugs, prescription opiates, non-prescribed methadone, non-prescribed buprenorphine, heroin, other illegal drug use, alcohol, and tobacco in the 12 months before the client entered the program and any illegal drug and alcohol use during the 6 month follow-up period (n=208) are presented[11].
2. **Mean number of months clients used illegal drugs, alcohol and tobacco.** For those who used any illegal drugs, alcohol, or tobacco, the average number of months of use before program entry (out of a 12 month period) and during the follow-up period (out of a projected 12 month period) are reported[12].
3. **Change in past 30-day illegal drug and alcohol use from intake to follow-up.** Comparisons of any illegal drugs, prescription opiates, non-prescribed methadone, non-prescribed buprenorphine, heroin, other illegal drug use, alcohol, and tobacco in the 30 days before entering the OTP and the 30 days before the follow-up interview (n=206) are presented[13,14] (see Appendix D for specific substances including marijuana, cocaine, amphetamines, tranquilizers, and different types of prescription opiate misuse).

ANY ILLEGAL DRUG USE

ANY ILLEGAL DRUG USE, PAST 12-MONTH/6-MONTH

At program entry, 96.6% of clients reported using any type of illegal drug in the prior 12 months (see Figure 2A.1). At follow-up, however, 36.5% reported any illegal drug use-- a 62.2% decrease in the percentage of clients reporting any illegal drug use.

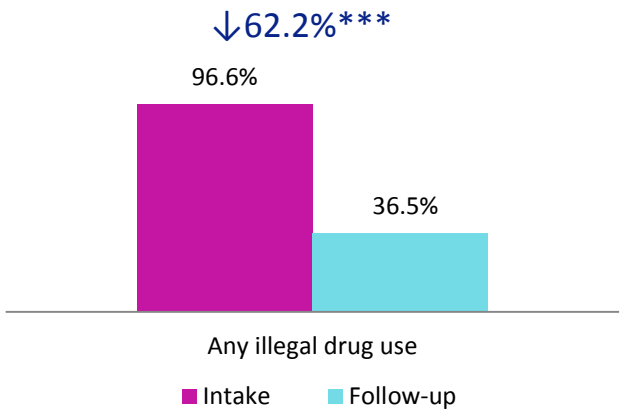
[11] The z test for proportion was used for significance testing of any substance use; Chi-square test of independence was used to test for significant differences for gender at intake and follow-up.

[12] Because the reference period before entering the OTP was 12 months and the reference period at follow-up was the past 6 months, the proportion of months clients reported using particular substances 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 6 months before follow-up, then the percent months of use was 100%; applied to a 12 month period, the value was 12 in the projected follow-up period.

[13] Analysis was conducted for clients in the sample that were not in a controlled environment all 30 days before entering the OTP.

[14] Questions adapted from the Addiction Severity Index (ASI; McLellan et al., 1992) were included in the intake and follow-up surveys to examine change in substance use. Analysis was conducted to compare changes in tobacco, alcohol, and illegal drug use by gender for the 99 men and 107 women in the sample that were not in a controlled environment all 30 days before entering the OTP. Rates of change in use are shown to indicate statistically significant increases or decreases in use for particular substances.

FIGURE 2A.1. CHANGE IN ANY PAST 12-MONTH/6-MONTH ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 208)

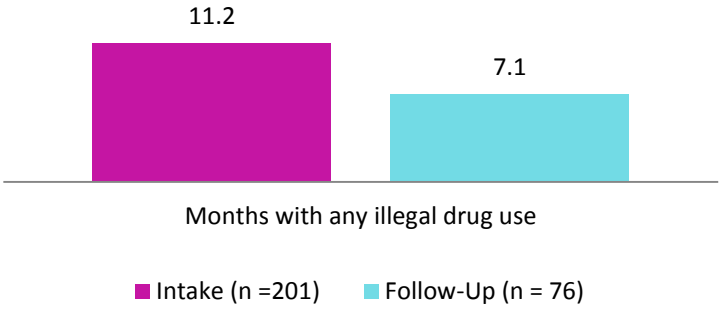


*p < .05, **p < .01, ***p < .001.

MEAN NUMBER OF MONTHS USED ANY ILLEGAL DRUGS

Clients who reported any illegal drug use at intake (n = 201) reported an average of 11.2 months of use in the 12 months before program entry. Among clients who reported any illegal drug use at follow-up (n = 76), they reported using, on average, 7.1 of the projected follow-up months (see Figure 2A.2).

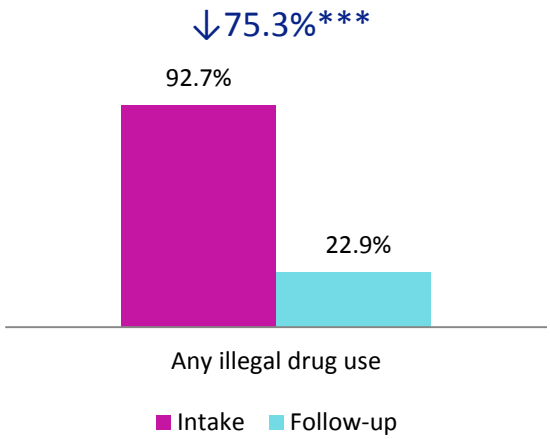
FIGURE 2A.2. MEAN NUMBER OF MONTHS CLIENTS USED ANY ILLEGAL DRUGS, AMONG CLIENTS WHO REPORTED ANY USE OF ILLEGAL DRUGS



ANY ILLEGAL DRUG USE, PAST 30-DAYS

There was a significant decrease in past-30-day illegal drug use from intake to follow-up (see Figure 2A.3). At intake, 92.7% of clients reported any illegal drug use in the 30 days before entering the OTP. At follow-up 22.9% of clients reported any illegal drug use in the past 30-days, which is a statistically significant decrease of 75.3%.

FIGURE 2A.3. CHANGE IN PAST 30-DAY ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 205)



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

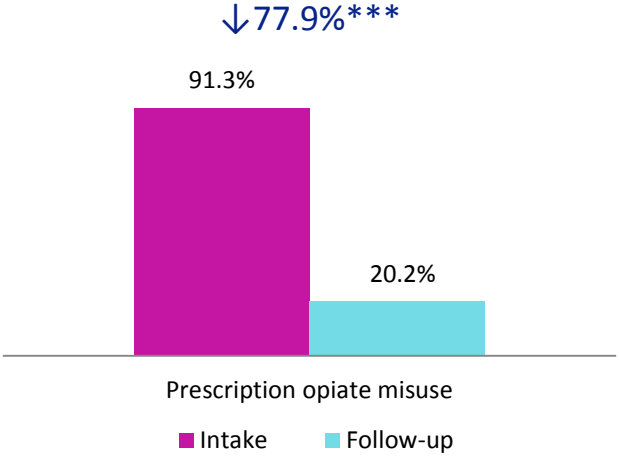
PRESCRIPTION OPIATE MISUSE

PRESCRIPTION OPIATE MISUSE, PAST 12-MONTH/6-MONTH

The number of clients reporting prescription opiate misuse decreased 78%

The majority of KORTOS clients (91.3%) reported prescription opiate misuse (such as morphine, Percocet, Oxycontin, Lortab) in the 12 months before OTP entry. At follow-up, 20.2% of clients reported misusing prescription opiates (see Figure 2A.4). This means there was a 77.9% significant decrease in the number of clients reporting prescription opiate misuse.

FIGURE 2A.4. CHANGE IN PAST 12-MONTH/6-MONTH PRESCRIPTION OPIATE MISUSE FROM INTAKE TO FOLLOW-UP
(n = 208)



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

What is prescription opiate misuse?

It is defined as nonmedical use of a prescription painkiller without a prescription or use that occurred simply for the experience or feeling caused by the drug.

(http://www.samhsa.gov/data/2k12/NSDUH115/sr115-nomedical-use-pain-relievers.pdf)

NATIONAL CONTEXT

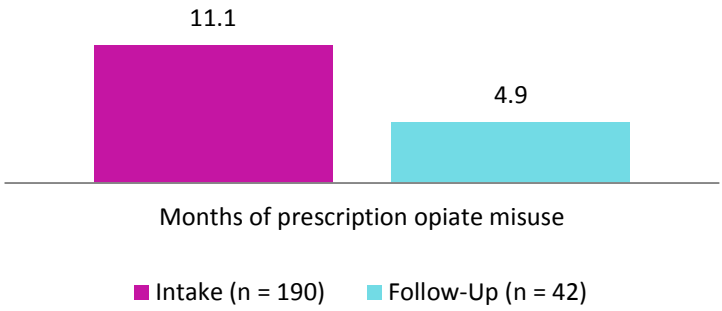
Non-medical use of prescription opiates were reported at treatment intake by 14.0% of U.S. adults

Source: http://wwwdasis.samhsa.gov/webt/quicklink/US10.htm

MEAN NUMBER OF MONTHS OF PRESCRIPTION OPIATE MISUSE

Figure 2A.5 shows the average number of months prescription opiate users reported misusing prescription opiates at intake and during the projected 12 month follow-up. Among the clients who reported using prescription opiates before entering the program (n = 190), clients reported using prescription opiates an average of 11.1 of the 12 months. Among clients who reported using opiates at follow-up (n = 42), clients reported using an average of 4.9 of the projected 12 follow-up months.

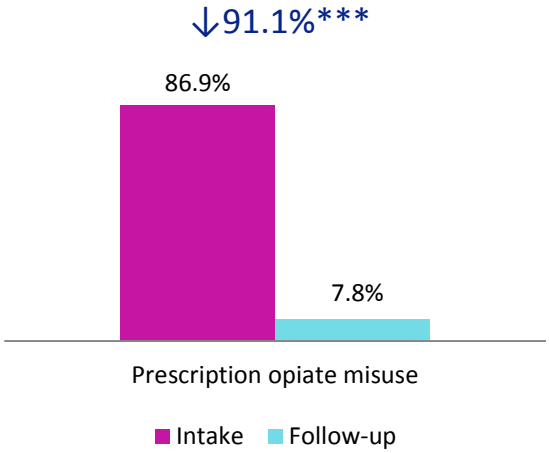
FIGURE 2A.5. MEAN NUMBER OF MONTHS CLIENTS MISUSED PRESCRIPTION OPIATES



PRESCRIPTION OPIATE MISUSE, PAST 30-DAYS

There was a decrease in the past-30-day misuse of prescription opiates from intake to follow-up for both men and women (Figure 2A.6). At intake, 86.9% of clients reported misuse of prescription opiates in the 30 days before entering OTP. At follow-up 7.8% of clients reported misuse of prescription opiates. This reflects a statistically significant decrease of 91.1% in the number of clients reporting misuse of prescription opiates.

FIGURE 2A.6. CHANGE IN PAST 30-DAY PRESCRIPTION OPIATE MISUSE FROM INTAKE TO FOLLOW-UP (n = 206)



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

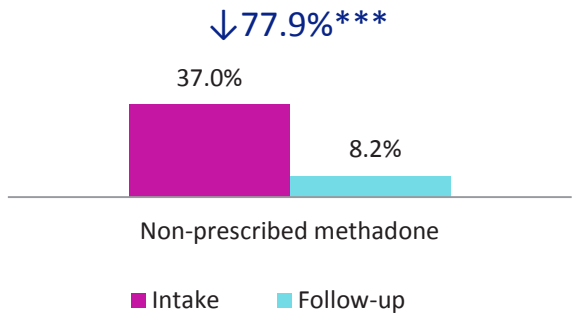
"Counselors are awesome. They have been in your shoes and are very hands on."

-KORTOS client on why they chose their rating

NON-PRESCRIBED METHADONE, PAST 12-MONTH/6-MONTH

More than one-third (37.0%) of KORTOS clients reported using non-prescribed methadone in the 12 months before intake and at follow-up, only 8.2% of clients reported non-prescribed use of methadone. This is a 77.9% significant decrease in the number of clients reporting non-prescribed use of methadone (see Figure 2A.7).

FIGURE 2A.7. CHANGE IN PAST 12-MONTH/6-MONTH NON-PRESCRIBED METHADONE USE FROM INTAKE TO FOLLOW-UP (n = 208)



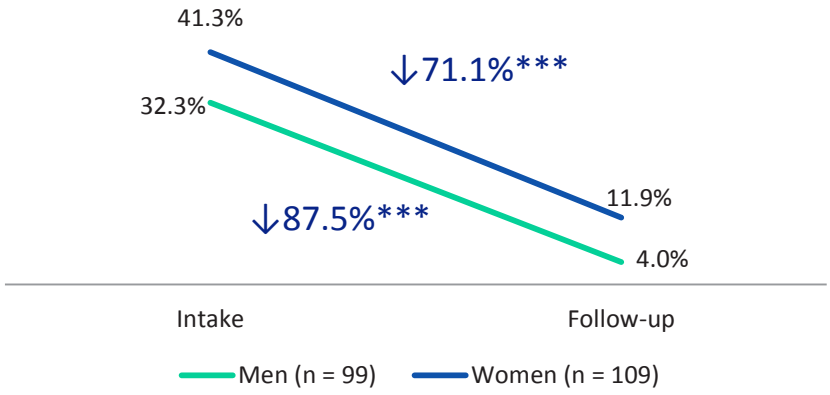
*p < .05, **p < .01, ***p < .001.

GENDER DIFFERENCES IN NON-PRESCRIBED METHADONE USE, PAST 12-MONTH/6-MONTH

In the 12 months before intake, there was no significant difference between men and women on the reported use of non-prescribed methadone (Figure 2A.8). The number of men and women who reported non-prescribed use of methadone significantly decreased from intake to follow-up by 87.5% and 71.1% respectively. At follow-up, however, significantly more women than men reported non-prescribed use of methadone (11.9% vs. 4.0%, respectively).

Significantly more women than men reported non-prescribed use of methadone at follow-up

FIGURE 2A.8. GENDER DIFFERENCES IN NON-PRESCRIBED METHADONE USE FROM INTAKE TO FOLLOW-UP[a]



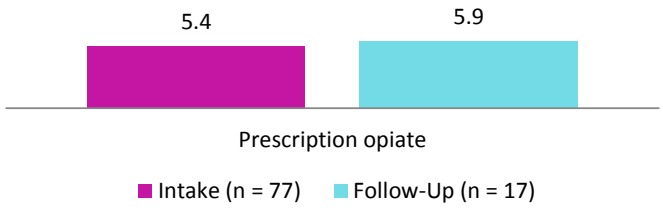
*p < .05, **p < .01, ***p < .001.

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

MEAN NUMBER OF MONTHS USED NON-PRESCRIBED METHADONE

Among the clients who reported non-prescribed use of methadone in the 12 months before entering the program (n = 77), they reported using, on average, 5.4 of the intake months (see Figure 2A.9). Among clients who reported non-prescribed use of methadone at follow-up (n = 17), they reported using, on average, 5.9 of the projected follow-up months.

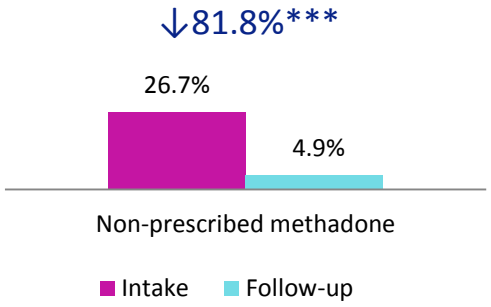
FIGURE 2A.9. MEAN NUMBER OF MONTHS CLIENTS USED NON-PRESCRIBED METHADONE



NON-PRESCRIBED METHADONE, PAST 30-DAYS

About one fourth of clients (26.7%) reported using non-prescription methadone in the 30 days before entering the OTP and at follow-up 4.9% of clients reported past-30 day use of non-prescription methadone (Figure 2A.10). There was an 81.8% significant decrease in the number of clients who reported past-30-day use of non-prescription methadone.

FIGURE 2A.10. CHANGE IN PAST 30-DAY NON-PRESCRIBED METHADONE USE FROM INTAKE TO FOLLOW-UP (n = 206)



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

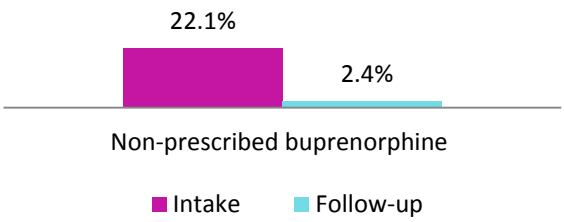
NON-PRESCRIBED USE OF BUPRENORPHINE

NON-PRESCRIBED USE OF BUPRENORPHINE, PAST 12-MONTH/6-MONTH

Figure 2A.11 shows that less than one quarter (22.1%) of KORTOS clients reported using non-prescribed buprenorphine in the 12 months before intake. At follow-up, only 2.4% of clients reported using non-prescribed buprenorphine--a significant decrease of 89.1%.

The number of clients reporting buprenorphine use decreased 89%

FIGURE 2A.11. CHANGE IN PAST 12-MONTH/6-MONTH NON-PRESCRIBED USE OF BUPRENORPHINE FROM INTAKE TO FOLLOW-UP (n = 208)



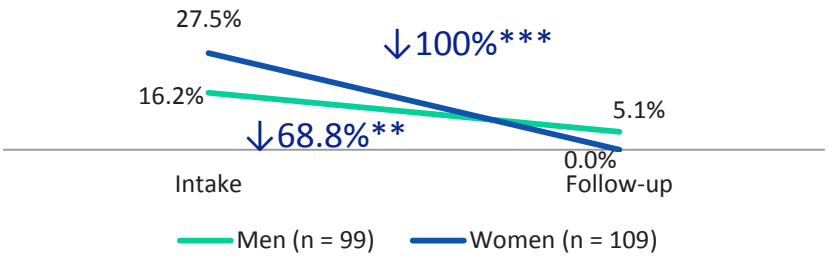
*p < .05, **p < .01, ***p < .001.

GENDER DIFFERENCES IN NON-PRESCRIBED USE OF BUPRENORPHINE, PAST 12-MONTH/6-MONTH

Significantly more women than men reported using non-prescribed buprenorphine in the 12 months before intake

Significantly more women (27.5%) than men (16.2%) reported using buprenorphine in the 12 months before intake (see Figure 2A.12). However, at follow-up, significantly fewer women (0.0%) than men (5.1%) reported non-prescribed use of buprenorphine. The number of men and women who reported non-prescribed use of buprenorphine significantly decreased from intake to follow-up by 68.8% and 100.0% respectively.

FIGURE 2A.12. GENDER DIFFERENCES IN NON-PRESCRIBED BUPRENORPHINE USE FROM INTAKE TO FOLLOW-UP[a, b]

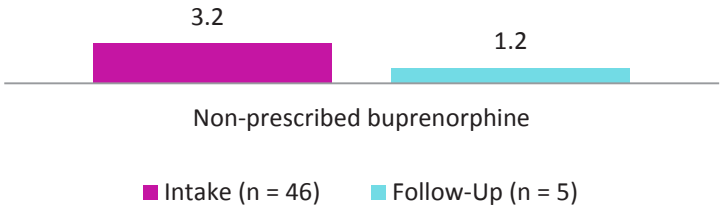


*p < .05, **p < .01, ***p < .001.
a—Significant difference by gender at intake; p < .05.
b—Significant difference by gender at follow-up; p < .05.

MEAN NUMBER OF MONTHS USED NON-PRESCRIBED BUPRENORPHINE

Among the clients who reported non-prescribed use of buprenorphine in the 12 months before entering the program (n = 46), they reported using non-prescribed buprenorphine, on average, 3.2 of the intake months (see Figure 2A.13). Among clients who reported non-prescribed use of buprenorphine at follow-up (n = 5), they reported using, on average, 1.2 of the projected follow-up months.

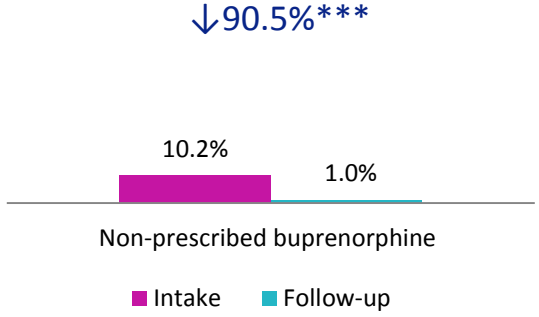
FIGURE 2A.13. MEAN NUMBER OF MONTHS CLIENTS USED NON-PRESCRIBED BUPRENORPHINE



NON-PRESCRIBED BUPRENORPHINE, PAST 30-DAYS

At intake, about 1 in 10 clients reported using non-prescribed buprenorphine in the 30 days before entering the OTP (see Figure 2A.14). At follow-up, only 1.0% of clients reported past 30 day use of non-prescribed buprenorphine--a significant decrease of 90.5%.

FIGURE 2A.14. CHANGE IN PAST 30-DAY NON-PRESCRIBED BUPRENORPHINE USE FROM INTAKE TO FOLLOW-UP (n = 206)



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

HEROIN

NATIONAL CONTEXT

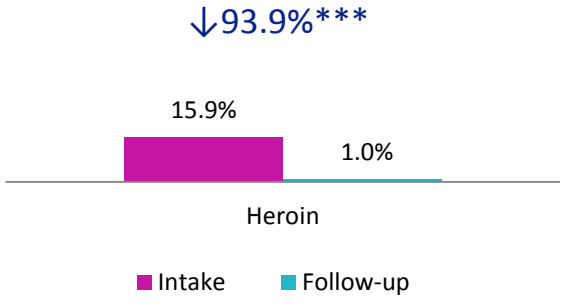
Heroin use was reported by 19% of U.S. adults at treatment intake.

Source: http://wwwdasis.samhsa.gov/webt/quicklink/US10.htm

HEROIN, PAST 12-MONTH/6-MONTH

About 16% of KORTOS clients at intake and 1.0% at follow-up reported using heroin[15]. The number of clients who reported heroin use significantly decreased from intake to follow-up by 93.9% (see Figure 2A.15).

FIGURE 2A.15. CHANGE IN PAST 12-MONTH/6-MONTH REPORTED USE OF HEROIN FROM INTAKE TO FOLLOW-UP (n = 207)

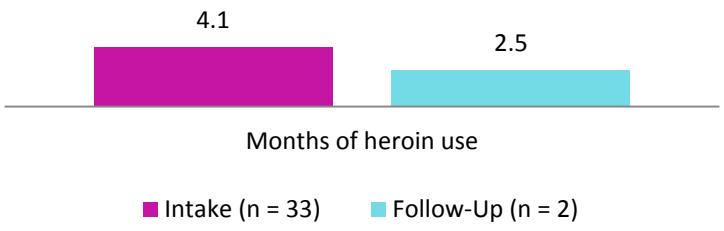


*p < .05, **p < .01, ***p < .001.

MEAN NUMBER OF MONTHS USED HEROIN

Among the clients who reported heroin use in the 12 months before entering the program (n = 33), clients reported using heroin an average of 4.1 months (see Figure 2A.16). Among clients who reported heroin use at follow-up (n = 2), clients used on average 2.5 of the projected follow-up months.

FIGURE 2A.16. MEAN NUMBER OF MONTHS CLIENTS USED HEROIN

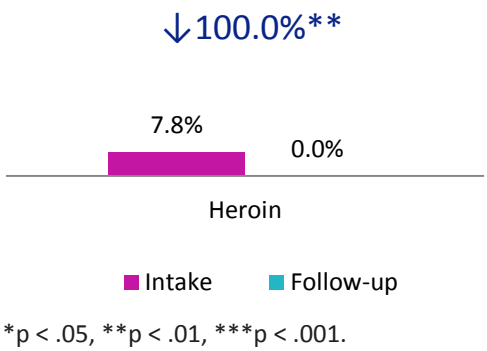


[15] One case had missing data for heroin use at follow-up

HEROIN, PAST 30-DAYS

As shown in the figure below, 7.8% of clients reported past 30 day use of heroin at intake (see Figure 2A.17). By follow-up, no clients in the sample reported heroin use (a significant 100% decrease in heroin use).

FIGURE 2A.17. CHANGE IN PAST 30-DAY HEROIN USE FROM INTAKE TO FOLLOW-UP (n = 206)



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

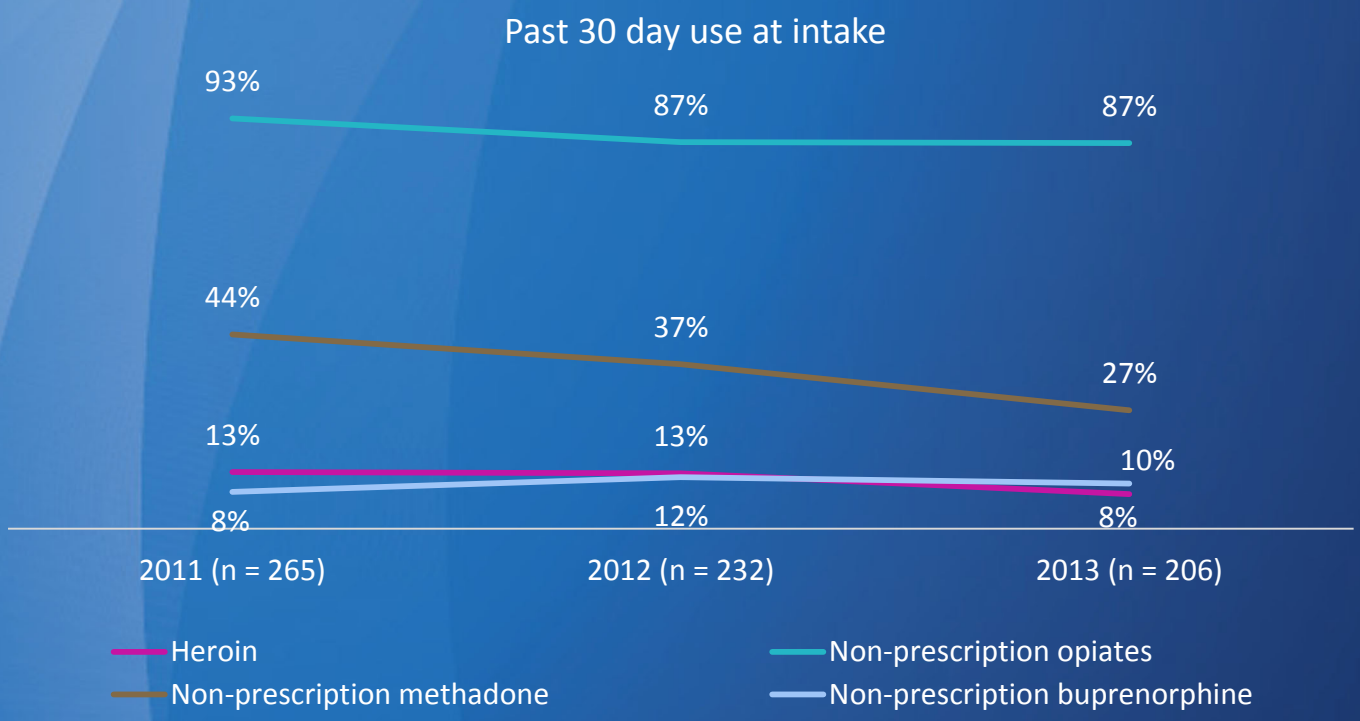
"It's completely changed my whole life. I'm a better person than I was. I had nothing before."

-KORTOS client on why they chose their rating

TREND ALERT

Has the use of opiates in Kentucky changed?

The percentage of clients reporting past 30 day use of heroin, non-prescription opiates and non-prescription methadone among KORTOS clients has declined in the past 3 years. In 2011, 13% of clients reported heroin use in the past 30 days at intake and in 2013, 8% of clients reported heroin use. Non-prescription methadone steadily decreased from 44% in 2011 to 37% in 2012, to 27% in the past 30 days at intake in 2013. Non-prescription buprenorphine use increased from 8% in 2011 to 12% in 2012, but declined in 2013 to 10%.

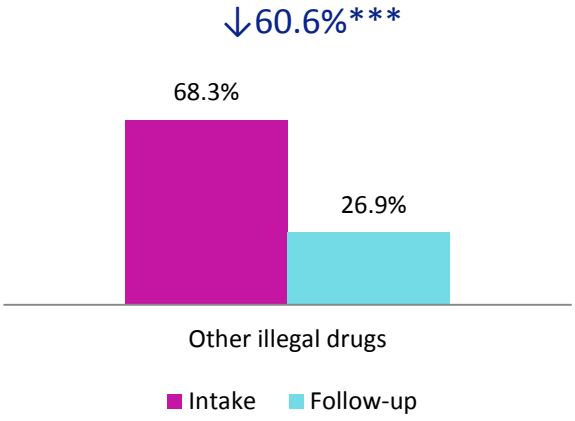


OTHER ILLEGAL DRUG USE

OTHER ILLEGAL DRUGS, PAST 12-MONTH/6-MONTH

A little more than two thirds of clients (68.3%) used illegal drugs other than prescription opiates, non-prescribed methadone, non-prescribed buprenorphine, or heroin in the 12 months before entering the program (see Figure 2A.18). Drugs in this category include marijuana, cocaine, amphetamines, tranquilizers, hallucinogens, inhalants, and barbiturates. The number of clients who reported use of other illegal drugs decreased to 26.9% at follow-up (a significant decrease of 60.6%).

FIGURE 2A.18. CHANGE IN PAST 12-MONTH/6-MONTH OTHER ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 208)

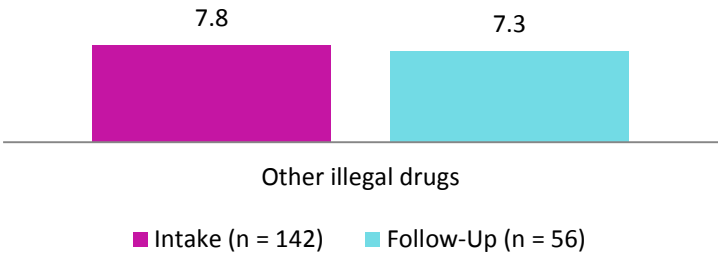


*p < .05, **p < .01, ***p < .001.

MEAN NUMBER OF MONTHS USED OTHER ILLEGAL DRUGS

Figure 2A.19 shows the maximum number of months clients that used other illegal drugs reported using these illegal drugs (e.g., marijuana, cocaine, amphetamine, tranquilizers, barbiturates, inhalants, hallucinogens)[16]. Among the clients who reported using other illegal drugs in the 12 months before entering the program (n = 142), clients reported using these substances an average of 7.8 months. Among clients who reported using other illegal drugs at follow-up (n = 56), clients reported using an average of 7.3 of the projected follow-up months.

FIGURE 2A.19. MEAN MAXIMUM NUMBER OF MONTHS CLIENTS USED OTHER ILLEGAL DRUGS

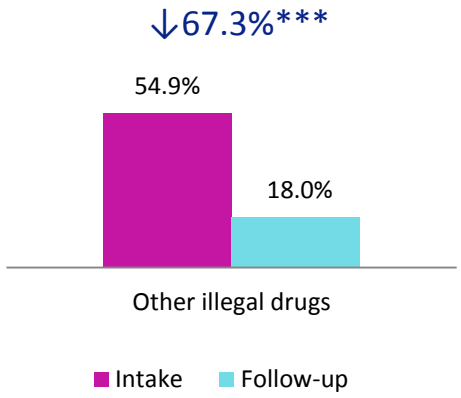


[16] Because number of months of use of each class of substance was measured separately (e.g., marijuana, cocaine, amphetamines, tranquilizers, barbiturates, hallucinogens, inhalants), the value is a calculation of the maximum number of months clients used any substance class.

OTHER ILLEGAL DRUGS, PAST 30-DAYS

Over half of clients (54.9%) reported using other illegal drugs in the 30 days before intake (see Figure 2A.20). At follow-up 18.0% of clients reported other illegal drug use, which is a 67.3% significant decrease.

FIGURE 2A.20. CHANGE IN PAST 30-DAY OTHER ILLEGAL DRUG USE FROM INTAKE TO FOLLOW-UP (n = 206)



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

ALCOHOL

ALCOHOL USE, PAST 12-MONTH/6-MONTH

There were three measures of alcohol use including: (1) any alcohol use; (2) alcohol use to intoxication; and (3) binge drinking. Binge drinking was defined as having 5 or more (4 or more if the client was female) alcoholic drinks in a period of about 2 hours.

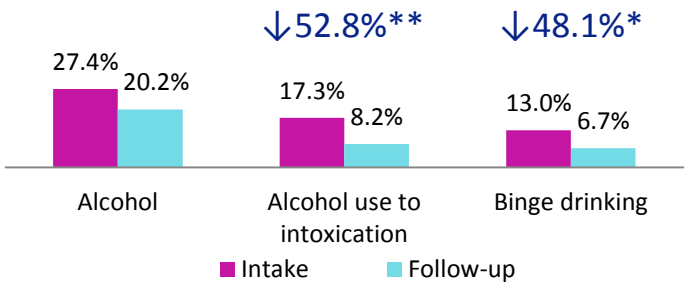
A little more than one quarter of clients reported using any alcohol in the 12 months before intake (27.4%) and one-fifth of clients (20.2%) reported alcohol use at follow-up (see Figure 2A.21). Although change in any alcohol use was not significant, there were significant decreases in the number of clients who reported using alcohol to intoxication and binge drinking at follow-up. Specifically, at intake, 17.3% of clients used alcohol to intoxication and at follow-up, 8.2% of clients reported alcohol to intoxication--a significant decrease of 52.8%. Thirteen percent of clients reported binge drinking at intake and at follow-up 6.7% of clients reported binge drinking in the past 6 months--a significant decrease of 48.1%.

NATIONAL CONTEXT

Alcohol problem use was reported by 22% of U.S. adults entering substance abuse treatment.

http://wwwdasis.samhsa.gov/webt/quicklink/US10.htm

FIGURE 2A.21. CHANGE IN PAST 12-MONTH/6-MONTH ALCOHOL USE, ALCOHOL TO INTOXICATION, AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP (n = 208)



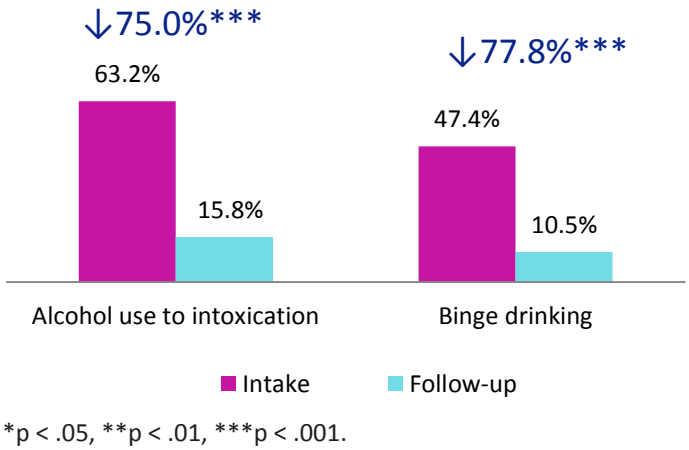
*p < .05, **p < .01, ***p < .001.

ALCOHOL USE TO INTOXICATION AND BINGE DRINKING AMONG THOSE WHO REPORTED ANY ALCOHOL USE, PAST 12 MONTH/6 MONTH

Among the clients who reported any alcohol use in the 12 months before intake (n = 57), 63.2% reported using alcohol to intoxication, with a significant decrease of 75.0% to 15.8% at follow-up (see Figure 2A.22). Also, among the clients who reported any alcohol use in the 12 months before intake, 47.4% reported binge drinking at intake and 10.5% reported binge drinking at follow-up—a significant decrease of 77.8%.

Among clients who used alcohol at intake, there was a 75% significant decrease in clients who reported using alcohol to intoxication and a 78% decrease in clients who reported binge drinking at follow-up

FIGURE 2A.22. AMONG CLIENTS WHO USED ALCOHOL AT INTAKE, CHANGE IN ALCOHOL USE TO INTOXICATION AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP (n = 57)

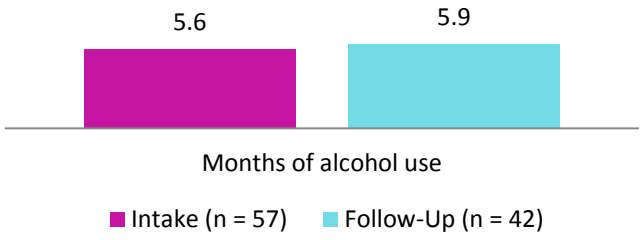


*p < .05, **p < .01, ***p < .001.

MEAN NUMBER OF MONTHS USED ALCOHOL

Figure 2A.23 shows the number of months alcohol users reported using alcohol at intake and follow-up. Among the clients who reported using alcohol in the 12 months before entering the program (n = 57), they reported using alcohol, on average, 5.6 months. Among clients who reported using alcohol at follow-up (n = 42), they reported using, on average, 5.9 of the projected 12 months.

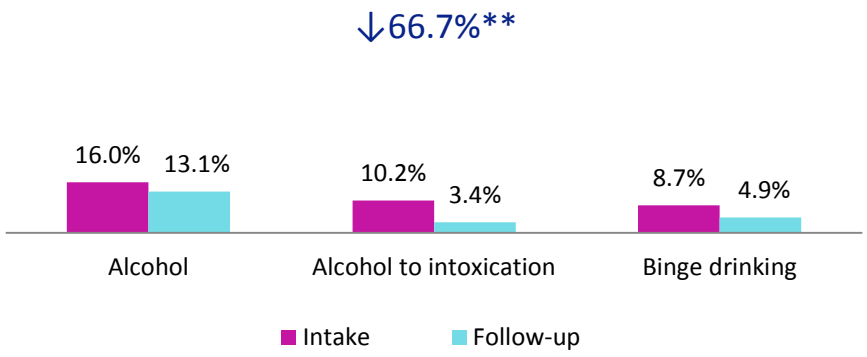
FIGURE 2A.23. MEAN NUMBER OF MONTHS CLIENTS USED ALCOHOL



ALCOHOL, ALCOHOL USE TO INTOXICATION, AND BINGE DRINKING, PAST 30-DAY USE

At intake, only a minority of clients used alcohol in the 30 days before entering the OTP, with no significant change at follow-up (see Figure 2A.24). The number of clients who reported using alcohol to intoxication in the 30 days prior to the intake and the follow-up decreased from 10.2% at intake to 3.4% at follow-up--a significant decrease of 66.7%. The number of clients who reported binge drinking in the past 30-days did not change significantly from intake (8.7%) to follow-up (4.9%).

FIGURE 2A.24 CHANGE IN PAST 30-DAY ALCOHOL USE, ALCOHOL USE TO INTOXICATION, AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP (n = 206)

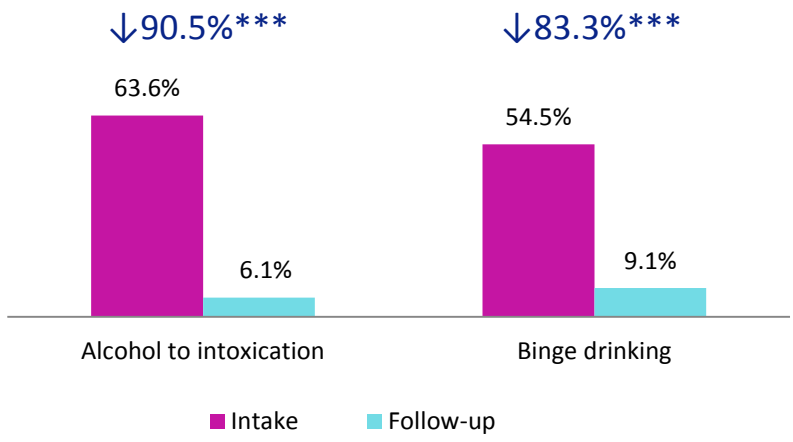


*p < .05, **p < .01, ***p < .001.

ALCOHOL USE TO INTOXICATION AND BINGE DRINKING AMONG THOSE WHO REPORTED ANY ALCOHOL USE, PAST 30-DAYS

Among the clients who reported any alcohol use in the 30 days before intake (n = 33), 63.6% reported using alcohol to intoxication at intake, with a significant decrease of 90.5% to 6.1% at follow-up (see Figure 2A.25). Among the clients who reported any alcohol use in the 30 days before intake, 54.5% reported binge drinking at intake, with a significant decrease of 83.3% to 9.1% at follow-up.

FIGURE 2A.25. AMONG CLIENTS WHO USED ALCOHOL AT INTAKE, CHANGE IN CHANGE IN PAST 30-DAY ALCOHOL USE TO INTOXICATION AND BINGE DRINKING FROM INTAKE TO FOLLOW-UP (n = 33)



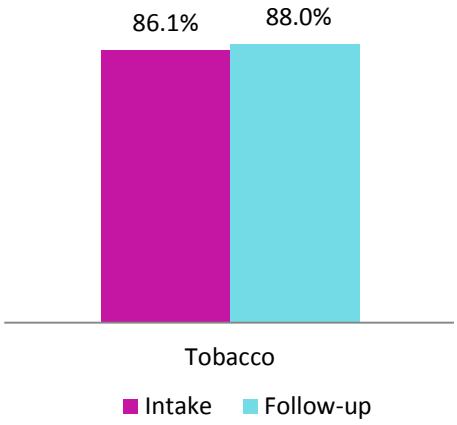
*p < .05, **p < .01, ***p < .001.

TOBACCO

TOBACCO USE, PAST 12-MONTH/6-MONTH

The majority of clients reported using tobacco (smoking and smokeless) in the 12 months before intake (86.1%) and in the 6 months before follow-up (88.0%), with a non-significant increase (see Figure 2A.26).

FIGURE 2A.26. CHANGE IN PAST 12-MONTH/6-MONTH TOBACCO USE FROM INTAKE TO FOLLOW-UP (n = 208)



NATIONAL CONTEXT

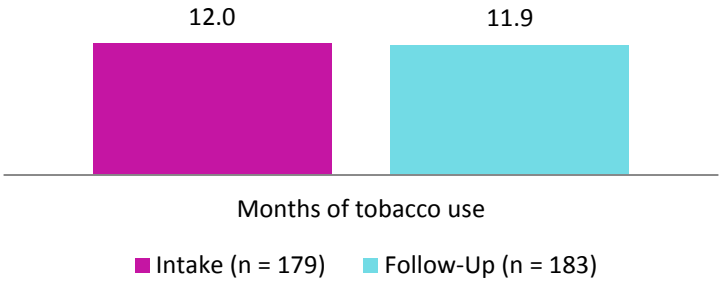
According to the Centers for Disease Control, regular use of tobacco products (smoking and smokeless) is reported by 21% of adults in the U.S. and 29% of Kentucky adults[1].

[1] http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2012/states/kentucky/index.htm

MEAN NUMBER OF MONTHS USED TOBACCO

Figure 2A.27 shows the average number of months tobacco users reported using tobacco for each period. Among clients who reported using tobacco in the 12 months before entering the program (n = 179), clients reported using tobacco an average of 12.0 of the projected months. Tobacco users at follow-up (n = 183) reported using an average of 11.9 of the projected follow-up months.

FIGURE 2A.27. MEAN NUMBER OF MONTHS CLIENTS USED TOBACCO

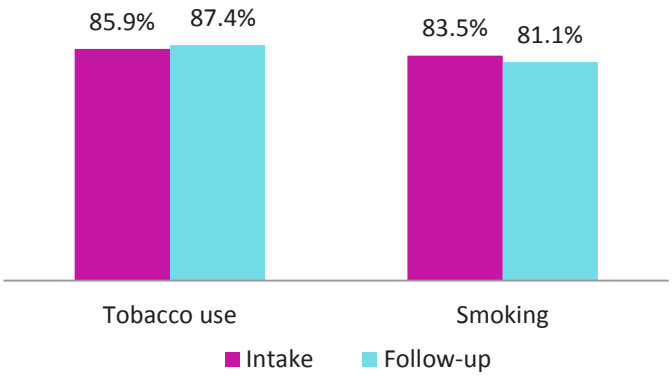


TOBACCO USE AND SPECIFICALLY SMOKING, PAST 30-DAYS

There was no significant change from intake to follow-up for clients who reported tobacco use, including smoking and smokeless tobacco (see Figure 2A.28). The majority of clients reported tobacco use at intake (85.9%) and follow-up (87.4%).

The vast majority of tobacco users smoked tobacco. The lack of change in tobacco use was also reflected in the lack of change in smoking as there was no significant change from intake to follow-up with 83.5% of clients reported smoking tobacco at intake and 81.1% of clients reported smoking at follow-up.

FIGURE 2A.28. OVERALL CHANGE IN PAST 30-DAY TOBACCO USE AND SPECIFICALLY SMOKING

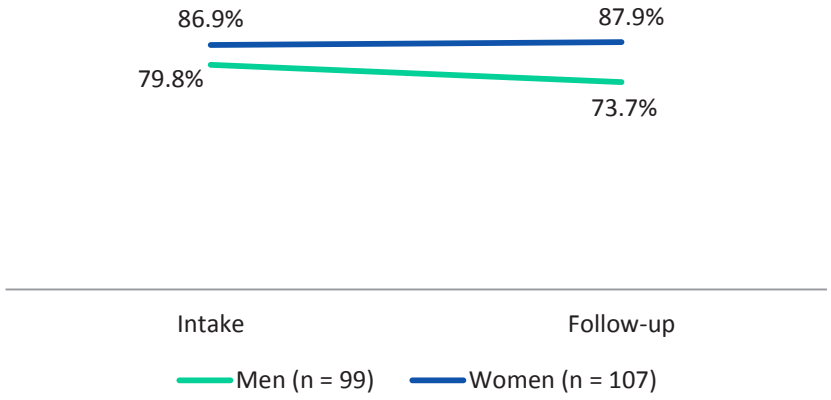


GENDER DIFFERENCES IN SMOKING TOBACCO IN THE PAST 30-DAYS

All of the women who reported tobacco use reported smoking and 99 (94%) of the men who reported tobacco use reported smoking in the 30 days before entering OTP. Overall, four in five men (79.8%) and 86.9% of women reported smoking tobacco at intake. Figure 2A.29 shows at follow-up, 73.7% of men and 87.9% of women reported smoking tobacco. At follow-up, significantly more women smoked tobacco compared to men.

At follow-up, significantly more women smoked tobacco compared to men

FIGURE 2A.29. GENDER DIFFERENCES IN SMOKING TOBACCO FROM INTAKE TO FOLLOW-UP[a]



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

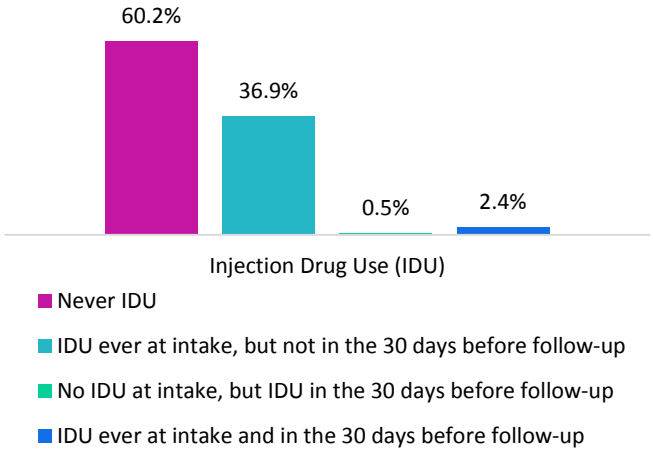
"Staff is professional, friendly, very efficient, and quick."

-KORTOS client on why they chose their rating

INJECTION DRUG USE

Figure 2A.30 shows the breakdown of clients reporting injection drug use (IDU) either at some point in their lifetime before intake and/or in the 30 days before follow-up. About 60% of OTP clients reported never injecting drugs either in their lifetime at intake or in the 30 days before follow-up. Over one-third of clients (36.9%) injected drugs at some point in their lifetime, but had not in the 30 days before follow-up. Only one client (0.5%) reported that they did not inject any drug prior to OTP entry, but did inject in the 30 days before follow-up. A little over 2% injected drugs both before intake and in the 30 days before follow-up.

FIGURE 2A.30. PERCENT OF CLIENTS REPORTING INJECTION DRUG USE (IDU) EVER AT INTAKE AND IN THE 30 DAYS BEFORE FOLLOW-UP (N = 206)

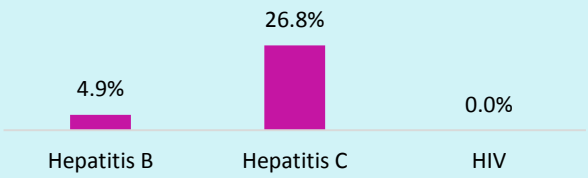


INJECTION DRUG USE AND DISEASE

Injection drug users are at a greater risk of contracting blood borne infections such as HIV, hepatitis B and hepatitis C than non-injection drug users. While efforts to reduce the incidence of HIV through the needle-exchange programs have been successful, these measures have not been as successful in lowering the prevalence of hepatitis C infections[17,18]. In fact, it is estimated that the risk of infection from hepatitis C is 10 times greater through injection compared to HIV[19].

Of OTP clients who reported injection drug use in their lifetime (n = 82), 4.9% reported having hepatitis B, 26.8% reported contracting hepatitis C, and no clients reported that they were infected with HIV.

FIGURE 2A.31. PERCENTAGE OF INJECTION DRUG USERS WHO REPORTED BLOOD BORNE INFECTIONS (N = 82)



[17] Wright, N. & Tompkins, C. (2006). A review of the evidence for the effectiveness of primary prevention interventions for hepatitis C among injecting drug users. Harm Reduction Journal, 3-27.

[18] Palmateer, N., Kimber, J., Hickman, M., Hutchinson, S., Rhodes, T. & Goldberg, D. (2010). Evidence for the effectiveness of sterile injecting equipment provision in preventing hepatitis C and human immunodeficiency virus transmission among injecting drug users: A review of reviews. Addiction 105,860-861.

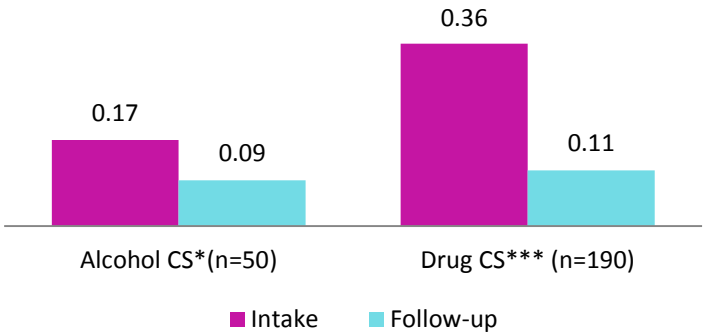
[19] Sulkowski, M., Ray, S. & Thomas, D. (2002). Needlestick transmission of hepatitis C. JAMA, 287, 2406-2413.

ADDICTION SEVERITY INDEX SCORES

Another way to examine overall change in severity of substance use is to use the Addiction Severity Index (ASI) composite score (CS). This can be used to estimate the prevalence of clients who are likely to meet criteria for active alcohol or drug dependence. It is also used to show overall mean reductions in severity scores for substance using clients. Change in the mean ASI CS for alcohol[20] and drugs[21] was examined for clients who were not in a controlled environment all 30 days before intake. Clients 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.32 displays the change in mean scores for clients who reported using alcohol or drugs at least one of the periods (i.e., intake or follow-up) and were not in a controlled environment in the 30 days before entering OTP. The mean score for the Alcohol CS significantly decreased from 0.17 at intake to 0.09 at follow-up. The mean score for the Drug CS significantly decreased from 0.36 at intake to 0.11 at follow-up.

FIGURE 2A.32 MEAN ASI ALCOHOL AND DRUG COMPOSITE SCORES AT INTAKE AND FOLLOW-UP

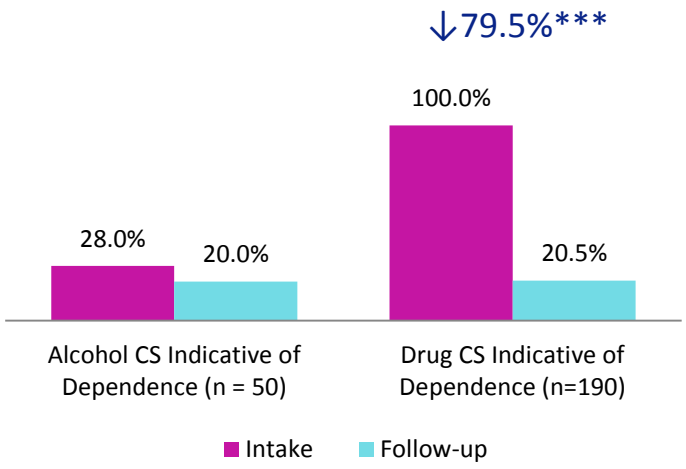


Among the clients who were not in a controlled environment all 30 days before entering the OTP and who did not report abstinence from the substance (alcohol, drugs) both at intake and follow-up, the percentage of clients who had an ASI CS that met the cutoff for dependence decreased significantly from intake to follow-up (see Figure 2A.33). Of the 50 clients who reported using alcohol at least one of the periods and who were not in a controlled environment all 30 days before entering the OTP, only 28% (n = 14) had an Alcohol CS that met the cutoff for dependence at intake, with no significant change at follow-up, 20.0% (n = 10). However, of the 190 clients who reported using illegal drugs at least one of the periods, 100% had a Drug CS that met the cutoff for dependence at intake. The number of clients who had a Drug CS that met the cutoff for dependence decreased significantly by 79.5% to 20.5% at follow-up.

[20] The following numbers of cases were not included in the analysis of change in alcohol CS for the following reasons: 2 clients were in a controlled environment all 30 days before entering OTP, 156 clients reported abstaining from alcohol all 30 days before entering OTP and follow-up.

[21] The following numbers of cases were not included in the analysis of change in drug CS for the following reasons: 2 clients were in a controlled environment all 30 days before entering OTP, 14 clients reported abstaining from drugs all 30 days before entering OTP and follow-up, and two clients had missing data from items included in the calculation of the drug CS at follow-up.

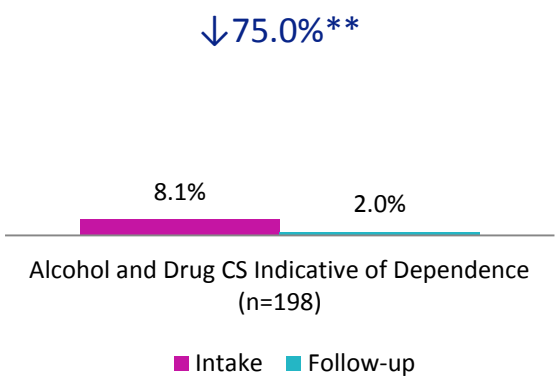
FIGURE 2A.33. PERCENTAGE OF CLIENTS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR ALCOHOL OR DRUG DEPENDENCE AT INTAKE AND FOLLOW-UP



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

Among clients who were not in a controlled environment all 30 days before entering the OTP, and who did not report abstinence from drugs or alcohol both at intake and follow-up, the percentage of clients 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.34). About 8% of clients 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 2.0% at follow-up.

FIGURE 2A.34 PERCENTAGE OF CLIENTS WITH ASI COMPOSITE SCORES MEETING THE CUTOFF FOR BOTH ALCOHOL AND DRUG DEPENDENCE AT INTAKE AND FOLLOW-UP



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

"I was headed down the wrong path. It saved my life. Life is slowly coming back together."

-KORTOS client on why they chose their rating

CHANGE FROM INTAKE TO FOLLOW-UP FOR SELF-REPORTED MENTAL HEALTH SYMPTOMS, STRESS, AND PHYSICAL HEALTH ISSUES

This subsection examines changes in mental and physical health[22] as well as stress symptoms from intake to follow-up. Specifically, this subsection examines: (1) self-reported DSM-IV criteria for depression, (2) self-reported DSM-IV criteria for generalized anxiety, (3) co-morbid anxiety and depression, (4) suicide ideation and attempts, (5) physiological stress symptoms, (6) number of days clients reported their physical and mental health was not good, and (7) physical health issues (e.g., chronic pain and body mass index). Questions for this section were self-reported measures.

SELF-REPORTED DEPRESSION SYMPTOMS

In order to determine if clients met self-reported DSM-IV criteria for depression, they were first asked two screening questions:

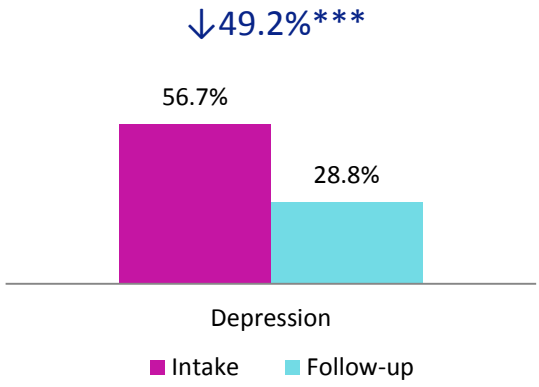
(1) "Did you have a two-week period when you were consistently depressed or down, most of the day, nearly every day?" and
(2) "Did you have a two-week period when you were much less interested in most things or much less able to enjoy the things you used to enjoy most of the time?"

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 criteria for depression, clients had to say "yes" to at least 5 of the items, including at least one of the screening questions.

There was a 49% decrease in the number of clients who met self-reported DSM-IV criteria for depression at follow-up

More than half of clients in the follow-up sample (56.7%) met self-reported DSM-IV criteria for depression in the 12 months before they entered the OTP (see Figure 2B.1). By follow-up, only 28.8% met criteria for depression, representing a 49.2% significant decrease.

FIGURE 2B.1. CHANGE IN PERCENTAGE OF CLIENTS MEETING SELF-REPORTED DSM-IV CRITERIA FOR DEPRESSION AT INTAKE AND FOLLOW-UP (n = 208)



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

[22] The mental health questions included in the KORTOS intake and follow-up surveys are not clinical measures, but instead are research measures.

SELF-REPORTED GENERALIZED ANXIETY SYMPTOMS

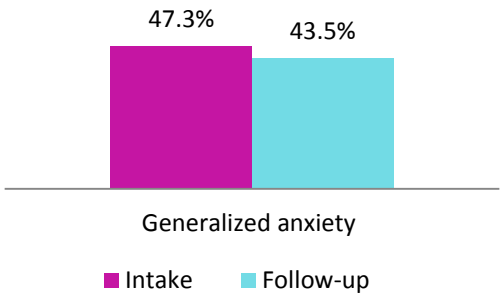
To determine if clients met self-reported DSM-IV criteria for generalized anxiety, clients were asked the following question:

(1) In the 12 months before you entered this OTP program, were you worried excessively or were anxious about multiple things on more days than not (like family, health, finances, school, or work difficulties)?

Participants who answered "yes" were then asked 6 additional questions about anxiety symptoms (e.g., felt restless, keyed up or on edge, have difficulty concentrating, feel irritable). To meet criteria for generalized anxiety, clients had to answer "yes" to the screening question and to at least 3 of the specific symptom questions.

In the 12 months before entering the OTP, 47.3% of clients met criteria for generalized anxiety[23]. Unlike with depression, there was no significant decrease in the number of clients who met self-reported DSM-IV criteria for generalized anxiety at follow-up compared to intake (see Figure 2B.2).

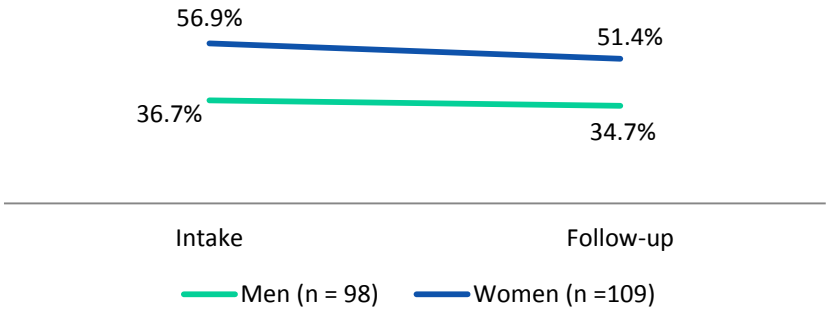
FIGURE 2B.2. CHANGE IN PERCENTAGE OF CLIENTS MEETING SELF-REPORTED DSM-IV CRITERIA FOR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP (n = 208)



GENDER DIFFERENCES IN GENERALIZED ANXIETY SYMPTOMS

In the 12 months before entering the OTP, 36.7% of men and 56.9% of women met criteria for generalized anxiety (see Figure 2B.3). Significantly more women than men met criteria for generalized anxiety at both intake and follow-up[24].

FIGURE 2B.3. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS MEETING CRITERIA FOR GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP[a,b]



a—Statistical difference by gender at intake; $p < .01$.
b—Statistical difference by gender at follow-up; $p < .05$.

[23] One case had missing data for anxiety questions at follow-up.

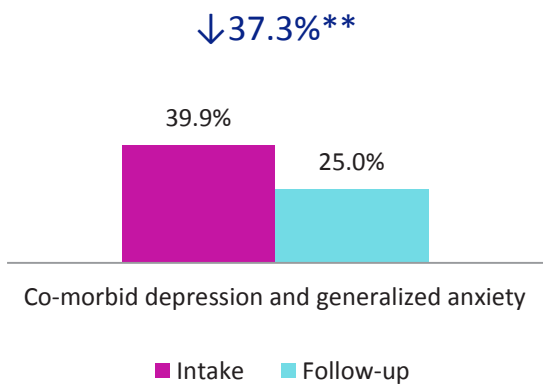
[24] One case had missing data for anxiety questions at follow-up.

SELF-REPORTED CO-MORBID DEPRESSION AND GENERALIZED ANXIETY

Almost 40% of clients met self-reported DSM-IV criteria for both depression and generalized anxiety in the 12 months before entering the OTP. At follow-up, 25.0% of clients reported symptoms meeting criteria for co-morbid depression and generalized anxiety, which was a 37.3% decrease (see Figure 2B.4).

The number of clients meeting self-reported DSM-IV criteria for both depression and generalized anxiety decreased significantly by 37%

FIGURE 2B.4. CHANGE IN PERCENTAGE OF CLIENTS MEETING SELF-REPORTED DSM-IV CRITERIA FOR CO-MORBID DEPRESSION AND GENERALIZED ANXIETY AT INTAKE AND FOLLOW-UP (n = 208)



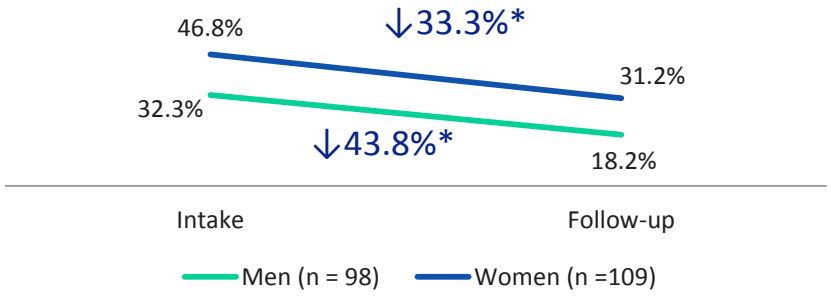
*p < .05, **p < .01, ***p < .001.

GENDER DIFFERENCES IN CO-MORBID DEPRESSION AND GENERALIZED ANXIETY

Significantly more women than men met criteria for both depression and generalized anxiety at intake and follow-up

About one third of men (32.3%) and a little less than one half of women (46.8%) had symptoms of co-morbid depression and generalized anxiety in the 12 months before entering the OTP (see Figure 2B.5). The number of men and women with co-morbid depression and generalized anxiety decreased significantly from intake to follow-up. At follow-up, 18.2% of men reported symptoms meeting criteria for co-morbid depression and generalized anxiety, which was a 43.8% decrease. At follow-up, 31.2% of women reported symptoms that met criteria for co-morbid depression and generalized anxiety, which was a 33.3% decrease.

FIGURE 2B.5. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS MEETING CRITERIA FOR CO-MORBID DEPRESSION AND GENERALIZED ANXIETY FROM INTAKE TO FOLLOW-UP[a,b]



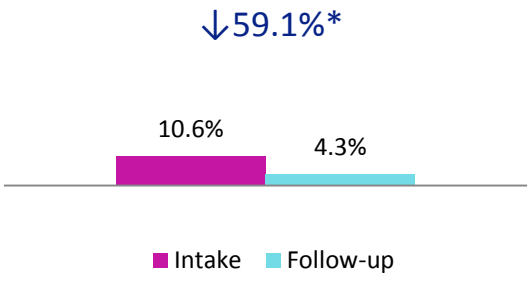
a—Statistical difference by gender at intake; p < .01.
b—Statistical difference by gender at follow-up; p < .05.
*p < .05, **p < .01, ***p < .001.

SUICIDE IDEATION AND/OR ATTEMPTS

The number of clients who reported suicide ideation or attempts decreased 59%

Suicidal ideation and attempts were measured with several self-reported questions regarding thoughts of suicide, specific plans, and attempts to commit suicide[25]. There was a significant decrease in the number of clients who reported having suicide ideation or attempts: from 10.6% at intake to 4.3% at follow-up a decrease of 59.1% (see Figure 2B.6).

FIGURE 2B.6. CHANGE IN PERCENTAGE OF CLIENTS REPORTING SUICIDAL IDEATION AND/OR ATTEMPTS IN THE 12 MONTHS BEFORE ENTERING THE OTP TO THE 6 MONTHS BEFORE FOLLOW-UP (n = 208)

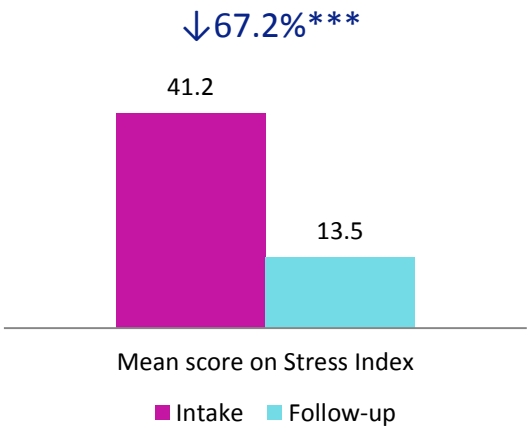


*p < .05, **p < .01, ***p < .001.

PHYSIOLOGICAL SYMPTOMS ASSOCIATED WITH STRESS

Clients were also asked about their physiological symptoms often associated with higher stress. The Stress Index[26] contains 15 symptoms and clients indicate how often they have experienced these symptoms in the past 7 days (e.g., experienced unexplained aches and pains, slept poorly, experienced an increased heart rate). Higher scores on the scale of 0 (minimum) to 75 (maximum) indicate higher stress and greater physiological indicators of stress. For the overall sample, Stress Index scores decreased significantly from 41.2 at intake to 13.5 at follow-up, representing a decrease of 67.2% (see Figure 2B.7).

FIGURE 2B.7. CHANGE IN MEAN SCORES ON THE STRESS INDEX IN THE 7 DAYS BEFORE ENTERING THE OTP TO THE 7 DAYS BEFORE FOLLOW-UP



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

[25] Due to a faulty skip pattern on the intake survey, clients were not asked specific questions about plans or attempts to commit suicide if they answered "no" to the question about whether they had thoughts of committing suicide in the 12 months before entering the OTP. At follow-up, all clients were asked the question about attempts to commit suicide, even if they answered "no" to the question about having thoughts of suicide. This may sound counterintuitive, but clients can make attempts to commit suicide without first having suicide ideation.

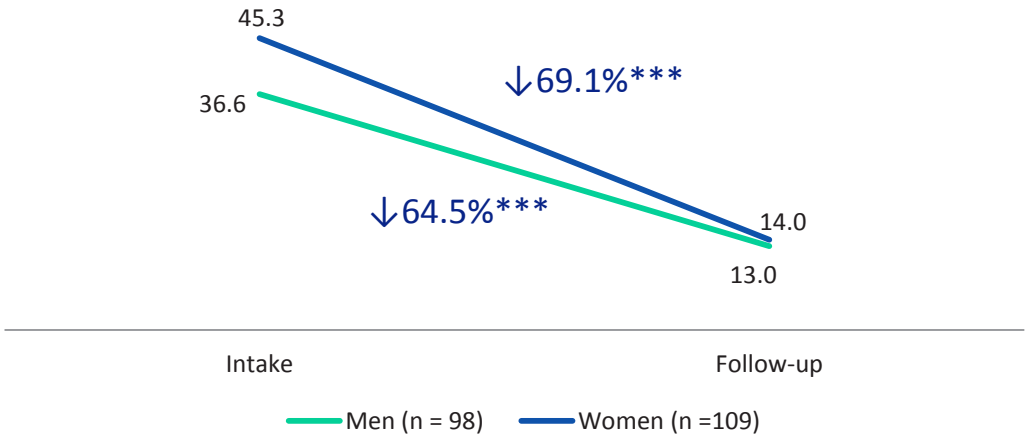
[26] Stress Index measure created by Logan, TK. and Walker, R. Stress and Allostatic Load.

GENDER DIFFERENCES IN PHYSIOLOGICAL SYMPTOMS ASSOCIATED WITH STRESS

Figure 2B.8 shows that Stress Index scores for men decreased significantly by 64.5% and women's Stress Index scores decreased significantly by 69.1%. At intake, women's average scores were significantly higher than men's scores (45.3 compared to 36.6); however, by follow-up, there was no significant difference in average scores by gender.

At intake, women's average Stress Index scores were significantly greater than men's scores

FIGURE 2B.8. GENDER DIFFERENCES IN STRESS INDEX SCORES IN THE 7 DAYS BEFORE ENTERING THE OTP TO THE 7 DAYS BEFORE FOLLOW-UP

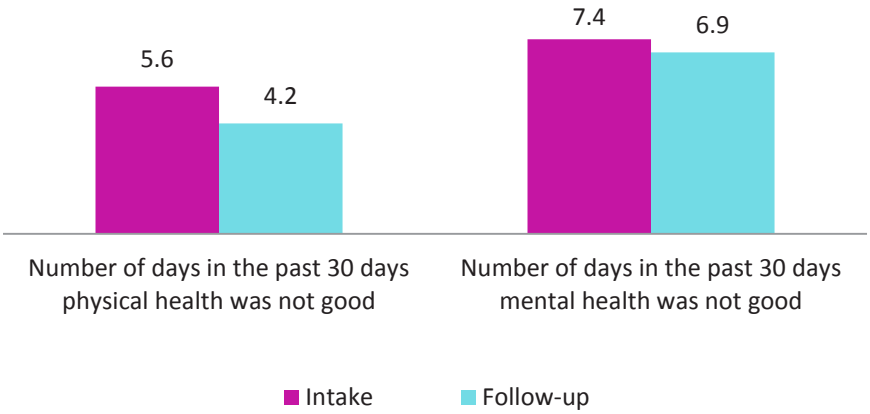


a—Statistical difference by gender at intake; p < .001
*p < .05, **p < .01, ***p < .001.

PERCEPTIONS OF PHYSICAL AND MENTAL HEALTH

Clients 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.9). For the overall sample, the number of days physical health was not good[27] at intake was 5.6 and at follow-up, 4.2. There were also no significant changes in number of days mental health was not good[28] with clients reporting 7.4 days at intake and 6.9 days at follow-up.

FIGURE 2B.9. CHANGE IN PERCEPTIONS OF POOR PHYSICAL HEALTH AND MENTAL HEALTH IN THE PAST 30 DAYS FROM INTAKE TO FOLLOW-UP (n = 207)

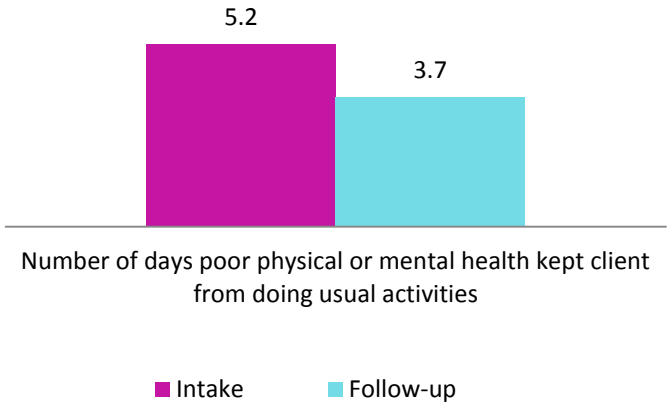


[27] One case had missing data at follow-up for these questions.

[28] Two cases had missing data at follow-up for this question.

Clients were also asked to report the number of days in the past 30 days poor physical or mental health had kept them from doing their usual activities (see Figure 2B.10). The mean number of days decreased, but not significantly, from 5.2 days at intake to 3.7 days at follow-up.

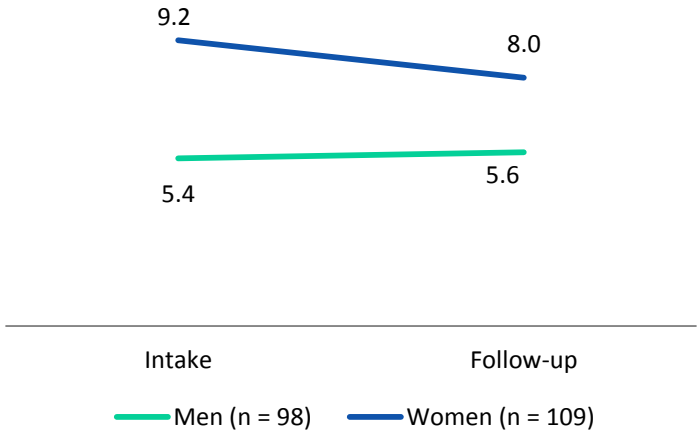
FIGURE 2B.10. CHANGE IN THE NUMBER OF DAYS POOR PHYSICAL OR MENTAL HEALTH KEPT THE CLIENT FROM DOING THEIR USUAL ACTIVITIES IN THE PAST 30 DAYS (n = 206)



GENDER DIFFERENCES IN PERCEPTIONS OF MENTAL HEALTH

The number of days women reported their mental health was not good was higher at intake compared to men (9.2 and 5.4, respectively). There was no difference, however, in the number of days mental health was not good at follow-up between men and women (see Figure 2B.11).

FIGURE 2B.11. NUMBER OF DAYS IN THE PAST 30 DAYS MENTAL HEALTH WAS NOT GOOD[a]



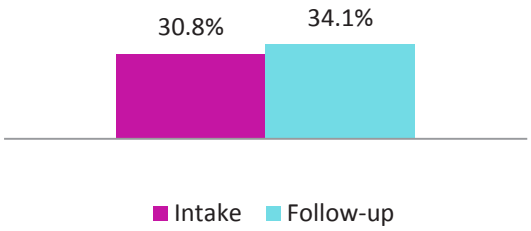
a—Statistical difference by gender at intake; p < .01.

PHYSICAL HEALTH ISSUES

CHRONIC PAIN

There was no significant change in the percentage of clients who reported chronic pain that is persistent and lasts at least 3 months from intake to follow-up (see Figure 2B.12). At intake, 30.8% of clients reported chronic pain and 34.1% of clients reported chronic pain at follow-up.

FIGURE 2B.12. CHANGE IN PERCENTAGE OF CLIENTS REPORTING CHRONIC PAIN AT INTAKE AND FOLLOW-UP (N = 208)

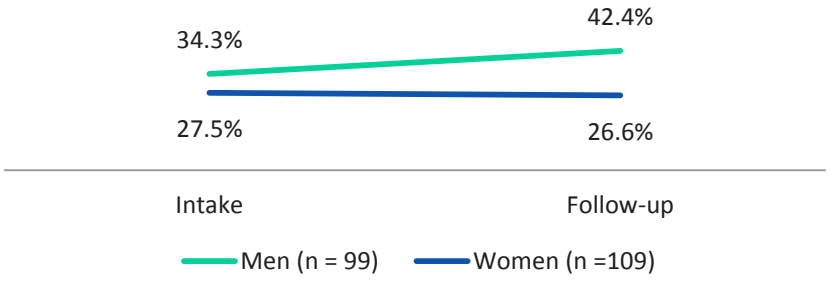


GENDER DIFFERENCES IN CHRONIC PAIN

Significantly more men reported chronic pain at follow-up compared to women

Figure 2B.13 shows that at intake, there were no significant differences between men and women on chronic pain; however, by follow-up, significantly more men reported chronic pain compared to women (42.4% compared to 26.6%).

FIGURE 2B.13 GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS REPORTING CHRONIC PAIN FROM INTAKE TO FOLLOW-UP[a]

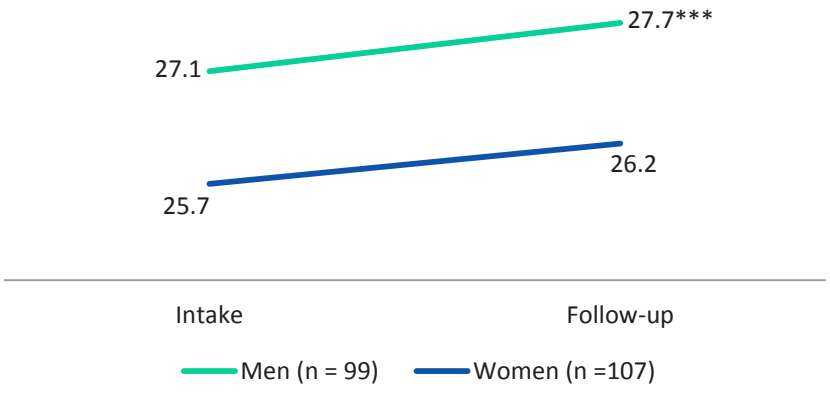


a—Statistical difference by gender at follow-up; p < .05.

BODY MASS INDEX

Body mass index (BMI) was calculated from clients' self-reported height and weight at intake and follow-up (see Figure 2B.14)[29]. Because their overall body size is larger, the BMI for men were calculated separately from women so as to get a more accurate picture of the BMI of KORTOS clients. There was no significant change in BMI for women; however, the average BMI for men increased significantly from 27.1 at intake to 27.7 at follow-up.

FIGURE 2B.14. CHANGE IN BODY MASS INDEX BASED ON SELF-REPORTED HEIGHT AND WEIGHT FROM INTAKE TO FOLLOW-UP (n = 206)



[29] 1 case had missing weight at intake and 1 case had missing weight at follow-up.

CHANGE FROM INTAKE TO FOLLOW-UP IN SOCIOECONOMIC STATUS

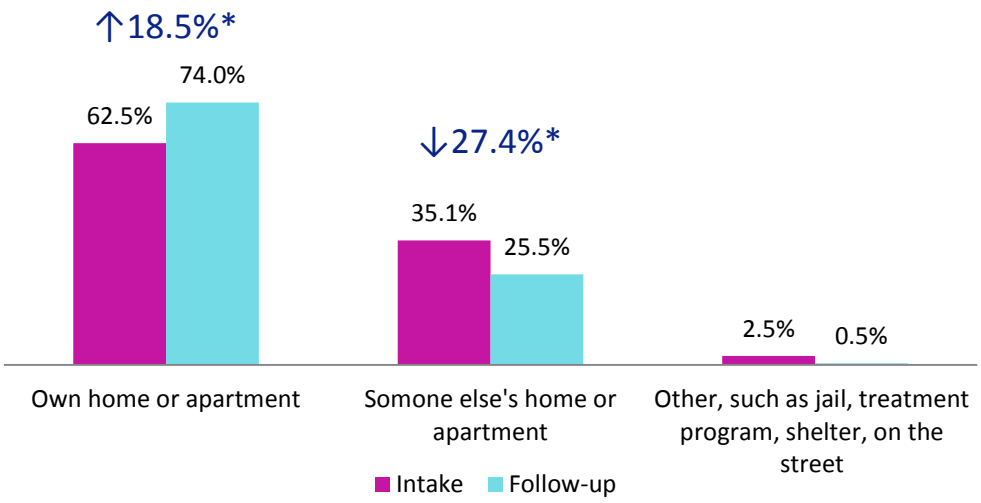
This subsection examines changes in clients' socioeconomic status including living situation, education, employment, and access to basic living and health care needs from intake to follow-up. Specifically, this subsection examines: (1) living situation (i.e., own home or someone else's home, residential program, shelter), (2) highest level of education completed, (3) the number of months employed full-time or part-time in the 12 months before they entered the OTP and 6 months before follow-up, (4) current employment status, (5) current hourly wage for client employed at intake and follow-up, and (6) difficulty meeting living and health care needs.

LIVING SITUATION

The number of clients who reported living in their own home or apartment increased at follow-up (see Figure 2C.1). Significantly more clients reported they were living in their own home or apartment in the past 6 months at follow-up than the 12 months before OTP intake (74.0% vs. 62.5%). Furthermore, the number of clients in the sample who reported living in someone else's home or apartment decreased significantly from intake (35.1%) to follow-up (25.5%).

Significantly more clients reported they were living in their own home or apartment at follow-up

FIGURE 2C.1. CHANGE IN LIVING SITUATION FROM INTAKE TO FOLLOW-UP (n = 208)

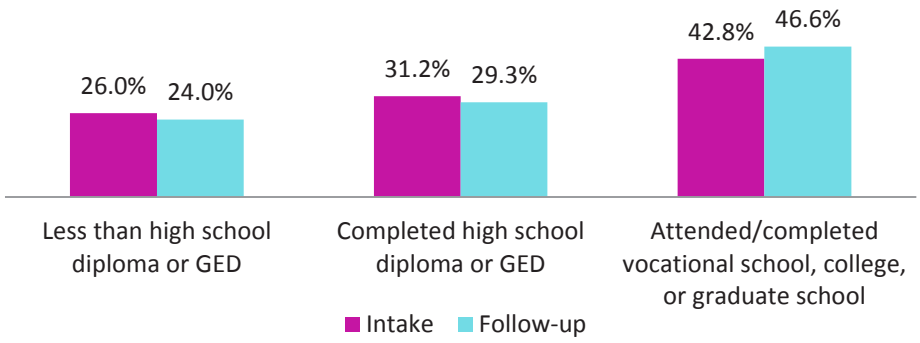


*p < .05, **p < .01, ***p < .001.

EDUCATION

While there was no significant change in education from intake to follow-up for any category (see Figure 2C.2), the percentage of clients who reported vocational school or college increased therefore making the other categories decrease. Approximately three-quarters of clients at both intake and follow-up had completed at least a high school diploma/GED or higher.

FIGURE 2C.2. CHANGE IN HIGHEST LEVEL OF EDUCATION FROM INTAKE TO FOLLOW-UP (n = 208)

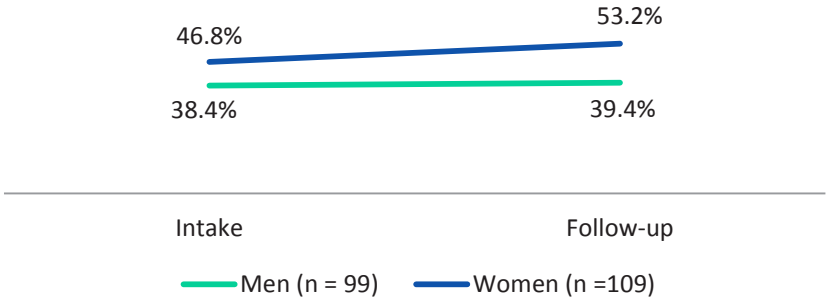


GENDER DIFFERENCES IN EDUCATION

Figure 2C.3 shows that, at follow-up, significantly more women had attended/completed vocational school or college compared to men (53.2% vs. 39.4%).

Significantly more women had attended/completed vocational school or college compared to men at follow-up

FIGURE 2C.3. GENDER DIFFERENCES IN PERCENTAGE OF CLIENTS WHO ATTENDED/COMPLETED VOCATIONAL SCHOOL FROM INTAKE TO FOLLOW-UP[a]



a—There was a significant difference by gender at follow-up ($p < .05$).

EMPLOYMENT

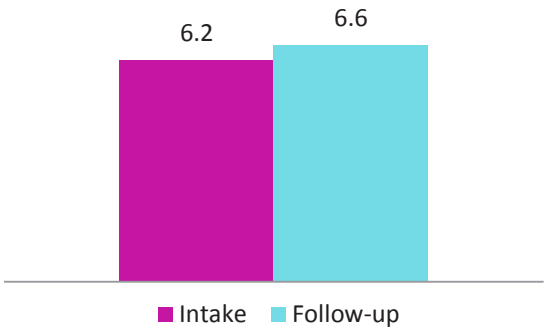
Employment was measured in three ways: (1) the number of months employed in the 12 months before entering the OTP and in the past 6 months at follow-up, (2) current employment status at intake and follow-up, and (3) current hourly wage.

NUMBER OF MONTHS EMPLOYED

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 OTP. 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[30]. Figure 2C.4 shows there was no significant increase in the number of months clients were employed from intake (6.2 months) to follow-up (6.6 projected months).

[30] 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 was computed for each period 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.4 which shows the number of months clients reported working in 12 months before entering OTP in the OTP and the projected number of months clients worked in the projected 12-month follow-up.

FIGURE 2C.4. CHANGE FROM INTAKE TO FOLLOW-UP IN MONTHS EMPLOYED (n = 208)

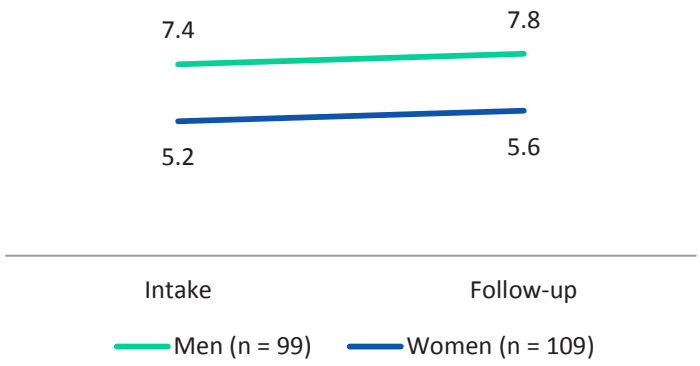


GENDER DIFFERENCES IN THE NUMBER OF MONTHS EMPLOYED

At both intake and follow-up, men reported significantly more months of employment compared to women. There were no significant increases in the number of months employed from intake to follow-up for men or women (see Figure 2C.5).

At both intake and follow-up, men reported significantly more months of employment compared to women

FIGURE 2C.5 GENDER DIFFERENCES IN NUMBER OF MONTHS EMPLOYED[a]



a—Significant difference in proportion of months worked at intake and follow-up by gender; $p < .01$.

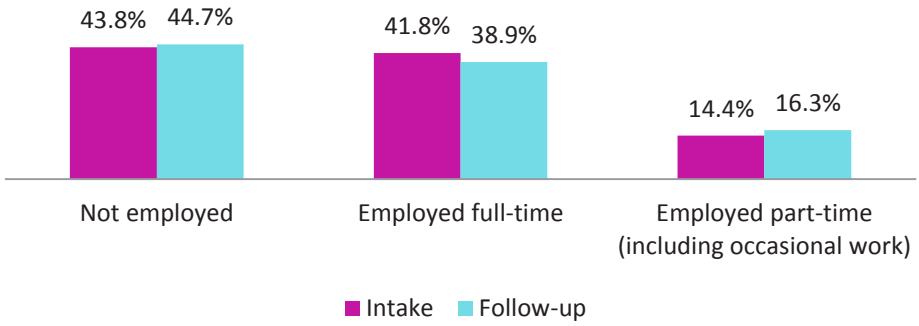
CURRENT EMPLOYMENT STATUS

There were no significant changes from intake to follow-up in current employment status (see Figure 2C.6). The percentage of clients reporting they were not employed at the time of follow-up increased slightly from intake, but not significantly.

"It's helped me with my addiction more than everything else I have tried. [It] really improved quality of life for me and my family."

-KORTOS client on why they chose their rating

FIGURE 2C.6. CHANGE IN CURRENT EMPLOYMENT FROM INTAKE TO FOLLOW-UP (n = 208)

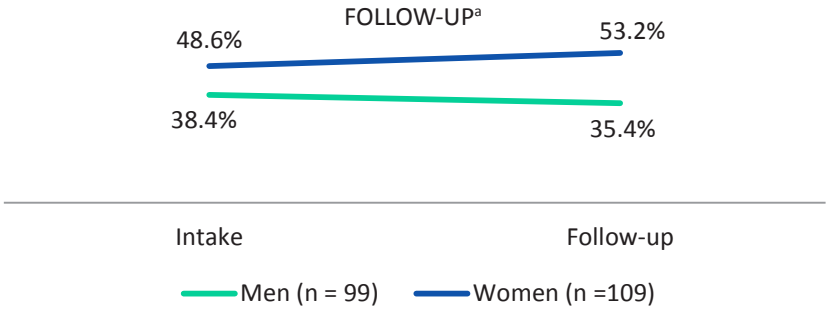


GENDER DIFFERENCES IN CURRENT EMPLOYMENT STATUS

Significantly more women were unemployed at follow-up compared to men

There were no significant differences in current employment by gender at intake (see Figure 2C.7); however, at follow-up, significantly more women were currently unemployed compared to men (53.2% vs. 35.4%).

FIGURE 2C.7 GENDER DIFFERENCES IN THE PERCENTAGE OF CLIENTS NOT CURRENTLY EMPLOYED FROM INTAKE TO FOLLOW-UP[a]

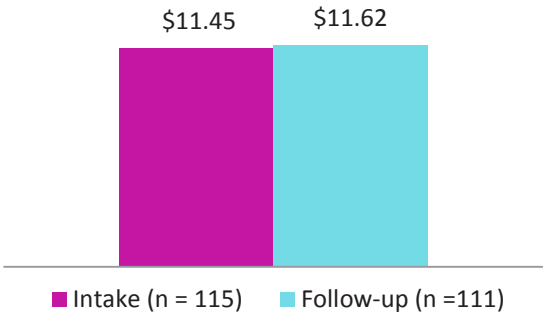


a—There was a significant difference by gender at follow-up ($p < .05$).

CURRENT HOURLY WAGE

Current hourly wage at intake and follow-up was compared for those clients who were employed at each period (see Figure 2C.8). There was no change. At intake, clients who were currently employed earned an average of $11.45/hour and at follow-up client who were currently employed earned $11.62/hour.

FIGURE 2C.8. CHANGE IN CURRENT HOURLY WAGE AMONG CLIENTS WHO WERE EMPLOYED AT EACH PERIOD

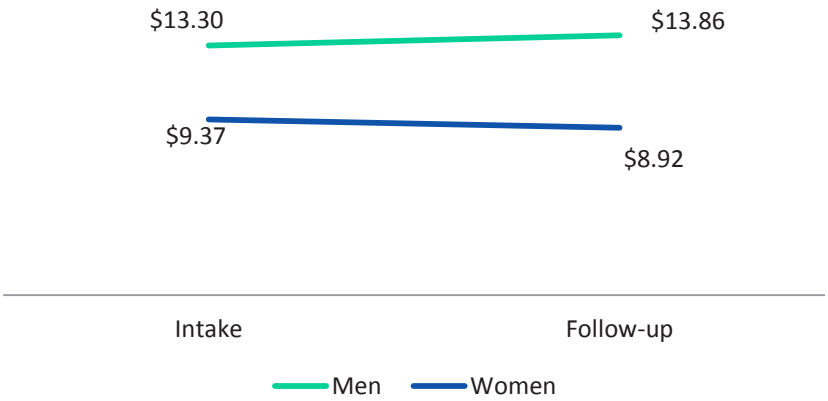


GENDER DIFFERENCES IN CURRENT HOURLY WAGE

Figure 2C.9 shows that men had significantly higher wages than women at both intake ($13.30 vs. $9.37) and follow-up ($13.86 vs. $8.92). The average higher wage for men may in part be due to differences in types of occupations by gender. Significantly more men had jobs in the natural resources, construction, and maintenance category than women (49.2% vs. 3.6%), and significantly more women than men had jobs in the service (51.8% vs. 19.7%) and sales and office (25.0% vs. 14.8%) categories.

Men had significantly higher wages than women at both intake and follow-up

FIGURE 2C.9 GENDER DIFFERENCES IN HOURLY WAGE FROM INTAKE TO FOLLOW-UP AMONG CLIENTS WHO WERE EMPLOYED AT EACH PERIOD[a,b]



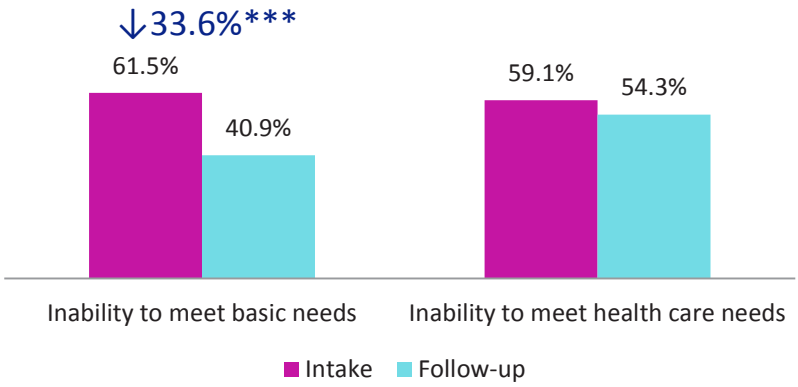
a—There was a significant difference by gender at intake ($p < .05$).
b—There was a significant difference by gender at follow-up ($p < .05$).

CHANGE IN DIFFICULTY MEETING LIVING AND HEALTH CARE NEEDS

Clients were asked eight items, five of which asked about the clients' inability to meet basic living needs such as food, shelter, utilities, and telephone, while three items asked about the clients' inability to receive medical care for financial reasons.

The number of clients who reported having difficulty meeting basic living needs such as food, shelter, telephone, and utilities decreased significantly from intake to follow-up (see Figure 2D.10). At intake 61.5% of clients reported they were unable to meet at least one of the basic living needs for financial reasons. At follow-up, 40.9% of clients were unable to meet at least one of the basic living needs, which was a significant decrease of 33.6%. However, in the 12 months before OTP entry, over half of clients (59.1%) reported they had difficulty meeting health care needs and similarly, at follow-up, 54.3% of clients reported having difficulty meeting health care needs.

FIGURE 2C.10. CHANGE IN INABILITY TO MEET BASIC NEEDS AND HEALTH CARE NEEDS FOR FINANCIAL REASONS (N = 208)



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

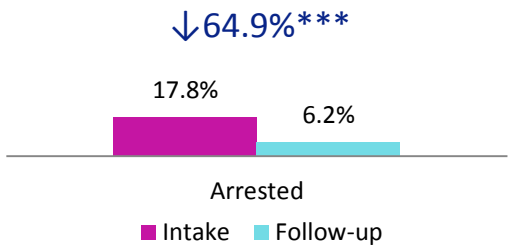
CHANGE FROM INTAKE TO FOLLOW-UP FOR CRIMINAL JUSTICE SYSTEM INVOLVEMENT

This subsection describes change in client involvement with the criminal justice system from intake to follow-up. Specifically, clients are asked: (1) number of times arrested in the 12 months before entering the OTP and in the 6 months before follow-up, and (2) number of times incarcerated in the 12 months before entering the OTP and in the 6 months before follow-up[31].

ARRESTS

Only 17.8% of clients reported they were arrested in the 12 months before they entered the OTP, and as Figure 2D.1 shows, this percentage had decreased to 6.2% at follow-up--a significant decrease of 64.9%.

FIGURE 2D.1. PERCENTAGE OF CLIENTS REPORTING ARRESTS IN THE 12 MONTHS BEFORE ENTERING THE OTP AND IN THE 6 MONTHS BEFORE FOLLOW-UP (n = 208)

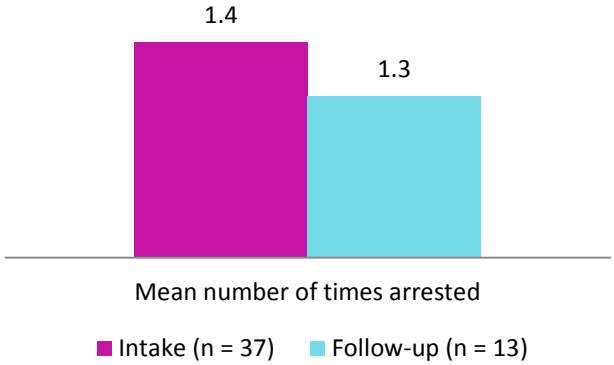


*p < .05, **p < .01, ***p < .001.

CHANGE IN MEAN NUMBER OF ARRESTS, AMONG CLIENTS REPORTING AN ARREST

Of those who reported at least one arrest at intake, the mean number of times clients reported being arrested in the past 12-months was 1.4 (See Figure 2D.2). In the 6 months before follow-up, the mean number of times arrested was 1.3.

FIGURE 2D.2. CHANGE IN MEAN NUMBER OF TIMES ARRESTED, AMONG CLIENTS REPORTING AN ARREST



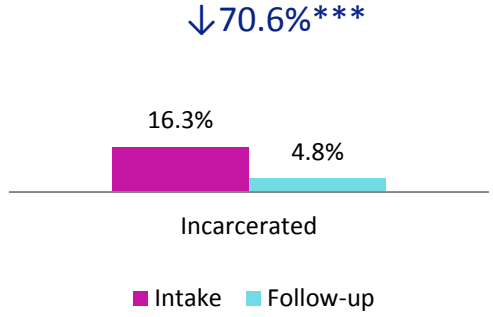
[31] It is important to note that clients are discharged from the OTP if they become incarcerated during the program because the criminal justice system requires abstinence from alcohol and drugs, including prescribed methadone or buprenorphine although they can be allowed back in when they are not incarcerated and meet other requirements. Therefore, the number of clients involved in the criminal justice system is low due to these system constraints and requirements.

INCARCERATION

The percentage of clients reporting any jail time decreased significantly by 71%

At intake, 16.3% of clients reported they had spent at least one night in jail or prison in the 12 months before they entered the OTP. At follow-up, only 4.8% of clients reported they had spent at least one night in jail or prison in the 6 months before follow-up. The percentage of clients reporting any jail time decreased significantly by 70.6% (see Figure 2D.3).

FIGURE 2D.3. PERCENTAGE OF CLIENTS REPORTING INCARCERATION IN THE 12 MONTHS BEFORE ENTERING THE OTP AND THE 6 MONTHS BEFORE FOLLOW-UP (N = 208)

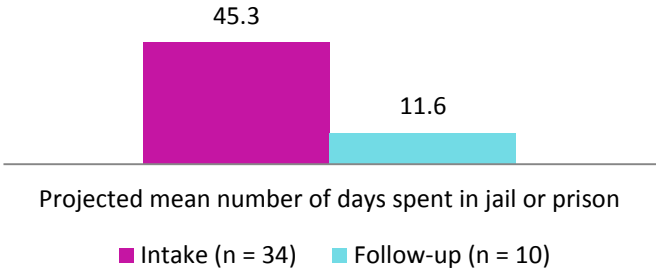


*p < .05, **p < .01, ***p < .001.

CHANGE IN MEAN NUMBER OF DAYS SPENT INCARCERATED, AMONG CLIENTS WHO REPORTED INCARCERATION

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 a decrease from intake to follow-up. Overall, clients spent 45.3 days incarcerated in the 12 months before entering the OTP, and 11.6 days in the projected follow-up period (see Figure 2D.4).

FIGURE 2D.4. CHANGE IN NUMBER OF DAYS INCARCERATED IN THE 12 MONTHS BEFORE ENTERING THE OTP AND THE PROJECTED FOLLOW-UP PERIOD



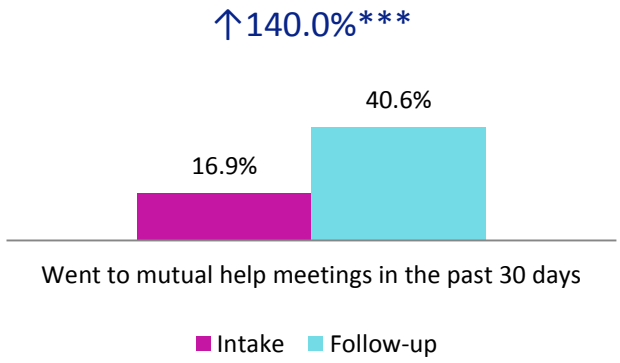
3 Change in Recovery Support from Intake to Follow-up

This section focuses on the development of OTP client's recovery supports which help to maintain sobriety and engage in the community. Two main areas are examined: (1) attendance at mutual help recovery group meetings, and (2) identifying what type of support is most helpful to clients in staying off illegal drugs and alcohol.

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

Changes in clients' recovery supports are important to examine for participants in substance abuse programs. At intake, only 16.9% of clients reported going to mutual help recovery group meetings (e.g., AA, NA, MA, or faith-based) in the past 30-days (see Figure 3.1). At follow-up[32], there was a significant increase of 140.0%, with 40.6% of clients reporting they had gone to mutual help recovery group meetings in the past 30-days.

FIGURE 3.1. CHANGE IN PERCENTAGE OF CLIENTS ATTENDING MUTUAL HELP RECOVERY MEETINGS IN THE Past 30-days FROM INTAKE TO FOLLOW-UP (N=207)

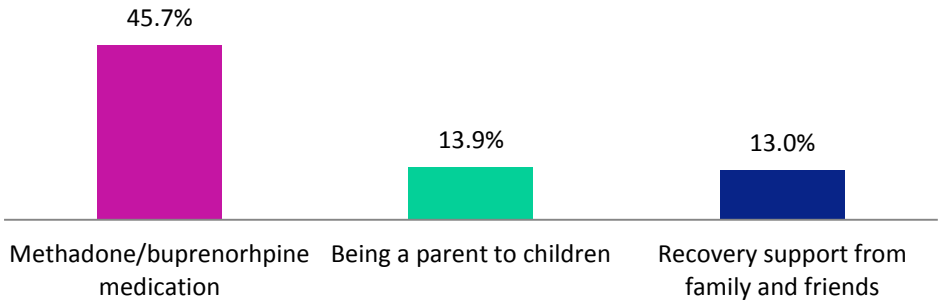


*p < .05, **p < .01, ***p < .001.

RECOVERY SUPPORT THAT IS MOST HELPFUL IN STAYING OFF ILLEGAL DRUGS AND ALCOHOL

At the end of the follow-up interview, interviewers asked clients to choose from a list of things that would be most helpful to them in staying off drugs and alcohol (see Figure 3.2). The most frequently mentioned supports were the OTP medication such as methadone or buprenorphine (45.7%), being a parent (13.9%), and getting support from family and friends (13.0%).

FIGURE 3.2. IDENTIFICATION OF MOST HELPFUL RECOVERY SUPPORTS (N=208)



[32] One case had missing data on participation in mutual-help group meetings at follow-up.

4 Report Summary and Conclusion

The 2013 KORTOS annual follow-up report provides a solid snapshot of the many steps clients have taken towards opiate addiction recovery. Results show that clients make substantial improvements through decreased use of illegal drugs and alcohol, improved mental health symptoms, stress, and quality of life, stable socioeconomic status, and decreased involvement in the criminal justice system. Further, clients showed significant increases in recovery support which is critical for successful abstinence. Abstinence from illicit substance use is the primary goal for these clients and according to the data at follow-up, this goal is being achieved. Clients also indicated they were highly satisfied with the OTP and appreciate the services and the treatment they receive from program staff.

Results here also suggest that participation in OTPs requires substantial time and cost investment by clients. Research has linked positive perception of treatment experiences with longer treatment stays as well as better outcomes over time[33]. Clients particularly acknowledged their improved financial status, employment, and decreased substance use at follow-up which they attributed to their participation in the OTP services. Continued focus on client satisfaction to encourage program engagement is critical. Focus on relationship building, financial management courses, and continued substance use and co-occurring disorders counseling may be important to include in OTP curriculum.

Programs may want to consider a couple areas of concern. First, the percentage of clients reporting tobacco use was high at intake and remained high at follow-up. Although not illegal for adults, the use of tobacco has serious negative health consequences. The continued high rates of use among clients in the OTPs may be an area of needed improvement for future OTP protocols. In fact, recent literature points to the benefits of tobacco cessation for not only client health, but also for alcohol and illicit drug use abstinence[34,35]. Further, results indicated a slight decline in smoking for men (79.8% at intake and 73.7% at follow-up), but women's rates of smoking remained stable (86.9% at intake and 87.9% at follow-up). This may indicate a need for gender-specific cessation treatment groups to highlight the particular effects of smoking on women's health issues such as increased risk of stroke, breast or cervical cancer, decreased fertility[36] and links to asthma among children of women who smoke[37].

Second, several additional gender differences were evident.

- Men's BMI increased significantly from intake to follow-up but women's remained stable over the study period.
- More women had anxiety and co-morbid depression and anxiety at both intake and follow-up.
- Further, women reported significantly more days their mental health was not good and higher stress (stress index scores) at intake compared to men but by follow-up there were no gender differences.
- There were also some important socioeconomic differences by gender with more women (53.2%) than men (39.4%) reporting technical school or college education at follow-up, but fewer women compared to men reported employment and, of those employed, women reported significantly lower hourly wages then men at intake and follow-up.

Early and continued focus on mental health and coping may be important to engage and support women

[33] Vinagre, M. H., & Neves, J. (2008). The influence of service quality and patients' emotions on satisfaction. I*nternational Journal of Health Care Quality Assurance, 21*(1), 87–103.

[34] Burling, T. A., Burling, A. S., & Latini, D. (2001). A controlled smoking cessation trial for substance-dependent inpatients. *Journal of Counseling and Clinical Psychology, 69*, 295-304.

[35] United States Department of Health and Human Services. (2004). The Health Consequences of Smoking: What it means to you. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

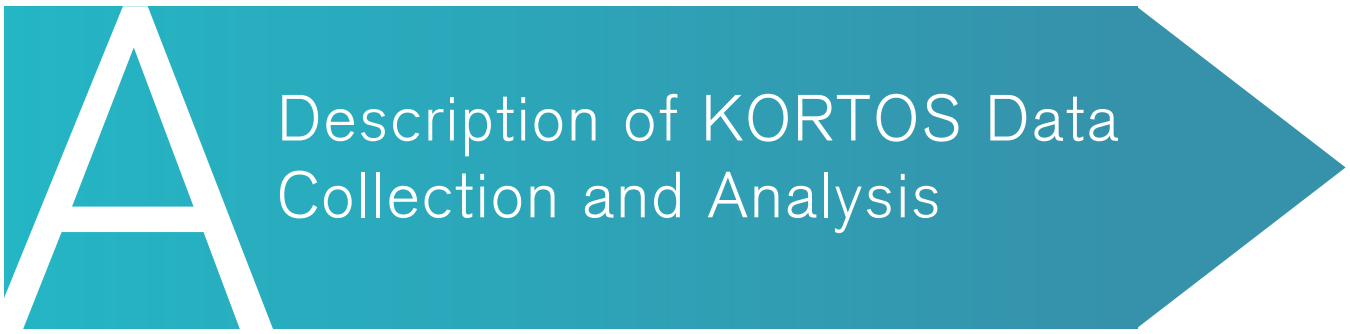
[36] http://womenshealth.about.com/cs/azhealthtopics/a/smokingeffects_2.htm

[37] http://www.epa.gov/asthma/shs.html

in the OTP who report mental health problems. The finding that women in this sample are more likely to have poorer mental health compared to men may indicate a need for gender-specific mental health care. Support groups at treatment entry could prove beneficial, particularly to women[38]. Also, by focusing not only on drug use reduction, but also socioeconomic status factors such as education and employment, the outcomes for clients in maintenance OTP services may lead to significantly improved outcomes, particularly for women who are struggling with employment in this sample. Further, addressing health issues such as BMI may be important especially for men in the OTP as an engagement factor.

Kentucky is the only state known to date that collects annual outcome data from all of its federally licensed OTPs, both public and private agencies. This 2013 follow-up report for KORTOS provides a valuable look at the outcomes of maintenance treatment in a state that has high rates of prescription opioid abuse. The significant increases in abstinence across all substances except tobacco, improved mental health, more stable housing, increased use of recovery supports, and decreased rates of criminal justice system involvement indicate successful achievement of the overall treatment goals for the clients and OTPs in Kentucky.

[38] Wu, L., Ling, W., Burchett, B., Blazer, D., Shostak, J., & Woody, G. (2010). Gender and racial/ethnic differences in addiction severity, HIV risk, and quality of life among adults in opioid detoxification: Results from the National Drug Abuse Treatment Clinical Trials Network. Substance Abuse Rehabilitation, 1, 13–22. doi: 10.2147/SAR.S15151.



Description of KORTOS Data Collection and Analysis

Appendix A describes the method for collecting intake and follow-up data for the KORTOS report.

The KORTOS project collects data from clients in Kentucky who attend medication-assisted treatment with methadone and buprenorphine at a licensed OTP. No data are collected from independent buprenorphine prescribing physicians at this time. Data collection occurs in two segments: intake at program entry and 6-month follow-up interviews among OTP clients who consented to be followed.

INTAKE DATA

Data are collected by clinic staff during the initial intake and clinical assessment phase of the OTP using a web-based data collection program. Responses at intake are based on client self-report of circumstances prior to entry into the OTP, unless otherwise specified (i.e., current events). Intake data are considered part of the OTP intake process and collection of these data are covered under the consent to treatment provided by the clinical program staff.

At the end of the intake interview, clients are told about the opportunity to participate in a follow-up telephone interview about 6 months after intake that is conducted independently by UK CDAR. Clients who volunteer to participate in the follow-up interview provide locator information including phone numbers of two relatives or friends who could help UK CDAR locate the client for the interview.

CONFIDENTIALITY OF DATA

Data is stored with encryption and password protection on secure servers at UK CDAR. A Federal Certificate of Confidentiality for KORTOS protects identifying data and identifiers of study participants may not be released even under a subpoena or court order. All data are stored electronically with identifiers separate from the client responses and only aggregate information on clients is included in this report.

FOLLOW-UP DATA

Follow-up data are collected for the sample of clients who are still active in OTP services and who volunteered at intake to participate in the 6 month follow-up telephone interview. Clients give informed consent at intake for UK CDAR to contact them for a telephone follow-up interview. Follow-up interviews are conducted by the UK CDAR research team and are independent of the OTP agency in order to confidentially examine client progress. The follow-up interviews examine program satisfaction, current substance use, employment, criminal justice involvement, physical health, and mental health status, and recovery supports. Follow-up data help track the ongoing progress of clients receiving medication-assisted treatment at an OTP.

B Locating Efforts

Appendix B describes the sampling strategy for the KORTOS follow-up surveys. The goal of this plan is to target clients for a follow-up survey 6 months after an intake survey is submitted.

For the KORTOS 2013 report, clients were included in the sample if they had a follow-up interview targeted for July 2011 through June 2012. Clients with a target follow-up survey in this fiscal year had an intake survey submitted from January 1, 2011 through December 31, 2011. 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 633 clients had an intake survey submitted from January 1, 2011 through December 31, 2011. Of these 633 clients, 316 (49.9%) agreed to be contacted for the follow-up survey 6 months later. Of the 316 clients who agreed to be contacted for the follow-up survey, 311 were selected into the follow-up sample. Clients who did not provided any contact information in the client locator data at the end of the intake survey were not selected into the follow-up sample (n = 5).

A total of 311 clients were included in the sample of clients to be followed up between July 2011 and June 2012. Clients were considered ineligible for follow-up if they were no longer in at the OTP or they were in a controlled environment (i.e., jail or prison, residential treatment, hospital) during the follow-up period (see Table B.1). A total of 63 clients were ineligible for follow-up. Specifically, 51 clients were ineligible for the follow-up survey because they were no longer in treatment at the OTP. Ten clients were ineligible for the follow-up survey because they were incarcerated, one individual was in residential treatment, and one individual was deceased (see Table B.2).

Of the remaining 248 clients, interviewers completed follow-up surveys with 208 clients, representing a follow-up rate of 83.9% (see Table B.1). Of the eligible clients, 38 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: we refer to these cases as expired. Of the eligible clients, 15.3% were expired cases. Only two clients refused to complete the follow-up survey when the interviewer contacted him/her. The refusal rate was 0.8%. The project interviewers' efforts accounted for 273 cases included in the follow up sample. The only cases not considered accounted for are those clients who are classified as expired. Thus, the percent of cases that were accounted for out of the total 311 was 87.8%.

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

	Number of Records (n = 311)	Percent
Ineligible for follow-up survey	63	20.3%
	Number of cases eligible for follow-up (n = 248)	
Completed follow-up surveys	208	
Follow-up rate is calculated by dividing the number of completed surveys by the number of eligible cases and multiplying by 100		83.9%
Expired cases (i.e., never contacted, did not complete the survey during the follow up period)	38	
Expired rate ((the number of expired cases/eligible cases)*100)		15.3%
Refusal	2	
Refusal rate (the number of refusal cases/eligible cases)*100)		0.8%
Cases accounted for (i.e., records ineligible for follow-up + completed surveys + refusals)	273	
Percent of cases accounted for ((# of cases accounted for/total number of records in the follow-up sample)*100		87.8%

Of the 63 clients ineligible for follow-up, the majority (80.9%) were ineligible because they were no longer in the OTP at the time of follow-up (see Table B.2). Ten clients were ineligible because they incarcerated at the time of follow-up. One person was in residential treatment and one person was deceased at follow-up.

TABLE B.2. REASONS CLIENTS WERE INELIGIBLE FOR FOLLOW-UP (n = 63)

	Number	Percent
No longer in treatment at OTP	51	80.9%
Incarcerated	10	15.9%
Residential treatment program	1	1.6%
Deceased	1	1.6%

C Sociodemographics at OTP Intake

Data on socio-demographics collected from OTP clients at intake are described in detail in Appendix C. Socio-demographic characteristics of the sample of clients as they entered the OTP are compared in two groups by follow-up status: those who either did not agree to be contacted for follow-up, or those who agreed to be contacted but did not complete a follow-up survey* (NO, n=425) and those who did complete a follow-up survey (YES, n=208).

* Clients who did not complete a follow-up survey due to study criteria ineligibility, refusal, or unsuccessful contact attempts.

About half of the clients were male and the vast majority of clients were White (see Table C.1). The average client age was 31.2 for those who were not followed up and 32.4 for those who were followed up, with no significant difference by group. Significantly more clients who were followed up were separated or divorced at intake compared to clients who were not followed up. Clients had an average of 1.3-1.4 children in their lifetime. Of the women, 13.5% who were not followed up and 9.2% who were followed up were pregnant at intake to the OTP.

TABLE C.1. SOCIO-DEMOGRAPHICS AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO (n = 425)	YES (n = 208)
Gender		
Male	50.8%	47.6%
Female	48.9%	52.4%
Race		
White	97.4%	97.1%
Black	0.7%	1.4%
Other Race Or Multiracial (American Indian, Hispanic)	1.9%	1.4%
Average Age[a]	31.2	32.4
Marital Status*		
Never Married	27.5%	26.4%
Married Or Cohabiting	55.8%	50.0%
Separated Or Divorced	15.3%	23.6%
Widowed	1.4%	0.0%
Children		
Average number of children had in lifetime	1.3	1.4
Have children under 18 years old	67.5%	66.3%
Of the women (n = 317), percent that were pregnant	13.5%	9.2%

a—Two cases had missing data on age.
*p < .05, ** p < .01, ***p < .001.

The majority of clients reported that their usual living situation in the 12 months before they entered OTP was living in their own home or apartment (see Table C.2). About one third of clients were living in someone else's home or apartment. The majority of clients reported they lived with partners (e.g., spouses, boy/girlfriends) most of the time in the 12 months before entering OTP. There were no differences by follow-up status in living situation.

TABLE C.2. LIVING SITUATION AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO (N = 425)	YES (N = 208)
Where client lived most of the time in the 12 months before entering the OTP		
Own home or apartment	66.6%	62.5%
Someone else's home or apartment	32.2%	35.1%
Prison or jail	0.5%	1.0%
Shelter or on the street	0.7%	1.0%
Military base	0.0%	0.5%
Persons with whom client lived most of the time in the 12 months before entering the OTP		
Partner	63.5%	61.1%
Children or partner's children	27.1%	29.8%
Parents	19.1%	21.2%
Other family members	6.8%	9.1%
Alone	7.8%	8.2%
Friends	5.4%	7.7%
With other clients or inmates in an institution	0.5%	1.9%

Table C.3 presents the percentage of clients who reported an inability to meet any of their basic needs (e.g., food, shelter, utilities, telephone), and any of their health care needs. The majority of clients reported they were unable to meet at least one of their basic needs for financial reasons. Additionally, significantly more clients who were followed-up reported their household had difficulty meeting the basic needs of food, shelter, utilities, or telephone because of financial reasons in the 12 months before they entered the OTP compared to clients who were not followed up (61.5% vs. 52.0%). Significantly more followed up clients than clients who were not followed up reported they had difficulty paying the full amount of rent or mortgage (51.9% vs. 41.2%). Inability to meet health care needs was common in the sample, with no significant difference by follow-up status. One half of both groups of clients reported someone in their household needed to go to the dentist but could not for financial reasons.

TABLE C.3. INABILITY TO MEET BASIC NEEDS IN THE 12 MONTHS BEFORE ENTERING THE OTP BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO	**YES**
	n =425	n =208
Had inability to meet any of the basic needs listed below	**65.4%**	**73.1%**
Was unable to meet basic needs (e.g. shelter, utilities, phone, food)	*52.0%*	*61.5%**
Had difficulty paying the full amount of rent or mortgage	41.2%	51.9%*
Evicted from home/apartment for not paying the rent or mortgage	14.8%	20.2%
Unable to pay the gas or electric bill	36.9%	41.3%
Had telephone service disconnected because of non-payment	35.3%	34.6%
There was a time when there was not enough food in the household	22.1%	29.3%
Was unable to receive needed health care for financial reasons	*56.2%*	*59.1%*
Needed to see a doctor or go to the hospital but wasn't able to because of financial reasons	40.0%	38.9%
Needed to see a dentist but wasn't able to because of financial reasons	51.3%	51.9%
Needed to fill a prescription but wasn't able to because of financial reasons	38.4%	39.9%

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

Clients were asked to place themselves on a ladder, representing their perception of their standing in society, Adler's Ladder (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." The majority of KORTOS clients placed themselves on the bottom half of the ladder (see Figure C.1): 57.8% of clients placed themselves on the 1st through 5th rungs. Clients who completed a follow-up survey gave significantly lower ratings of subjective social standing at intake compared to clients who were not followed up (5.0 vs. 5.4).

FIGURE C.1. SUBJECTIVE SOCIAL STANDING BEFORE ENTERING THE OTP BY FOLLOW-UP STATUS

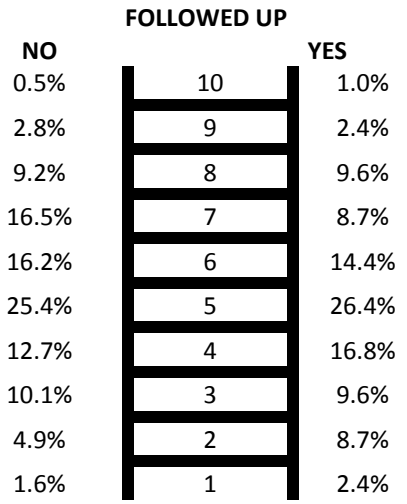


Table C.4 presents information on education at intake. The majority of clients reported having at least a high school education or GED, with no statistically significant difference by follow-up status: (81.9% of clients who were not followed up and 74% of clients who were followed up).

TABLE C.4. EDUCATION AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO (n = 425)	YES (n = 208)
Highest Level of Education Completed		
Less than a high school diploma or GED	18.1%	26.0%
High school diploma or GED	36.9%	31.3%
Some post-secondary education	44.9%	42.8%

Similar percentages of clients reported being unemployed or employed full-time at intake, with no significant difference by follow-up status (see Table C.5). A minority of clients in both groups was employed part-time or had occasional employment, such as seasonal work or odd jobs, at intake. Employed clients were asked what type of business they worked for on the intake survey. To make this data easier to understand we classified the type of business to type of occupation in which the client worked, using Department of Labor categories. In doing so, some responses could not be categorized into occupation because not enough information was given to know how to correctly categorize a person's work. In general, the greatest percentage of clients were employed in service occupations, followed by natural resources, construction, maintenance, and sales and office occupations. Significantly more clients who were followed up reported working in a sales or office job. Employed clients' mean hourly wage was

$11.46 for clients who completed a follow-up survey and $12.28 for clients who did not complete a follow-up survey.

Of the clients who were unemployed at intake, half of the followed up clients (49.5%) and nearly half of the clients who were not followed up (45.1%) were unemployed but looking for work. Similar percentages of clients in the follow-up groups were on disability or had applied for disability (18.5% and 18.7%), and in school/training (5.1% and 5.5%).

TABLE C.5. EMPLOYMENT AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO n = 425	**YES n = 208**
Current employment status		
Not employed	45.9%	43.8%
Employed full-time	41.4%	41.8%
Employed part-time	10.1%	12.5%
Occasional employment (e.g., irregular, seasonal)	2.6%	1.9%
Of those employed (e.g., full-time, part-time, occasional)	n = 230	n = 117
Type of occupation*		
Professional	0.9%	2.6%
Service	40.0%	35.0%
Sales and office	10.0%	21.4%
Natural resources, construction, maintenance	37.0%	27.4%
Production, transportation, and material moving	7.4%	7.7%
Could not be categorized	4.8%	6.0%
	n =224	n = 115
Hourly wage[a]	$12.28	$11.46
Of those who are unemployed:	n = 195	n = 91
Unemployed, looking for work	45.1%	49.5%
On disability/applied for disability	18.5%	18.7%
Keeping house or caring for children/relative full-time	27.2%	17.6%
In school/training	5.1%	5.5%
On furlough or temporarily laid off	1.5%	3.3%
Retired	1.5%	2.2%
In a controlled environment	0.5%	1.1%
Other reason	0.5%	2.2%

a—Eight cases had missing data for hourly wage at intake
*p < .05, ** p < .01, ***p < .001

Only a minority of KORTOS clients were involved with the criminal justice system at intake to OTP, with no significant differences by follow-up status. Fewer than 10% were under supervision by the criminal justice system (e.g., drug court, probation, or parole; see Table C.6). A little more than 1 in 6 clients reported they had been arrested and charged with a criminal offense in the 12 months before they entered OTP. Similar percentages of clients reported they had been incarcerated at least one night in the 12 months before entering the OTP. Of the clients who were incarcerated at least one night, the mean number of nights incarcerated was 35.2 for clients who did not complete a follow-up survey and 45.3 for clients who did complete a follow-up survey, with no difference by follow-up status.

TABLE C.6. INVOLVEMENT WITH THE CRIMINAL JUSTICE SYSTEM AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO n = 425	YES n = 208
Under supervision by the criminal justice system (e.g., drug court, probation, or parole)	9.6%	7.7%
In the 12 months before entering the OTP		
Arrested and charged with a criminal offense	18.6%	17.8%
Among those who were arrested,	n = 79	n = 37
Mean number of arrests	1.8	1.4
Incarcerated in jail or prison	17.6%	16.3%
Among those who were incarcerated,	n = 75	n = 34
Mean number of days incarcerated	35.2	45.3

There were no significant differences in health indicators at intake by follow-up status (see Table C.7). Three in ten followed-up clients (30.8%) and 27.8% of clients who were not followed up reported chronic pain (lasting at least 3 months) at intake. A little under one fourth of clients reported they had ever had a traumatic brain injury in their lifetime. A list of 12 chronic medical problems was presented to clients in the intake survey. About 3 in 10 clients reported they had ever been told by a doctor they had one of the 12 chronic medical problems, with Hepatitis C being the most common.

TABLE C.7. PHYSICAL HEALTH OF SAMPLE AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO n = 425	YES n = 208
Had chronic pain (lasting 3 months)	27.8%	30.8%
Ever in lifetime had a head injury that resulted in loss of consciousness or hospitalization	24.2%	23.1%
Ever told by a doctor had one of the following chronic medical problems:	30.6%	31.2%
Hepatitis C	14.6%	12.0%
Arthritis	7.5%	9.1%
Asthma	4.0%	5.8%
Severe dental problems	6.6%	4.3%
Diabetes	3.3%	4.3%
Cancer	0.9%	1.9%
Chronic obstructive pulmonary disease (e.g., emphysema, chronic bronchitis)	0.7%	1.4%
Hepatitis B	0.7%	1.9%
Sexually transmitted infections	0.9%	1.4%
Cardiovascular problems	0.7%	0.5%
HIV	0.2%	0.0%

The mental health questions included in the KORTOS 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 at least one of the two leading 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?" Significantly more clients who completed a follow-up interview than clients who did not complete a follow-up interview reported symptoms that met criteria for depression at intake: 56.7% vs. 48.0% (see Table C.8).

A total of 7 questions were asked to determine if clients met criteria for generalized anxiety, including the leading question: "In the 12 months before you entered this OTP, were 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 OTP, nearly half of clients who completed a follow-up survey and 35.3% of clients who did not complete a follow-up survey met criteria for generalized anxiety (see Table C.8).

Two questions were included in the intake survey that asked about thoughts of suicide and attempted suicide in the 12 months before clients entered OTP. About 1 in 10 clients, regardless of follow-up status, reported suicidality at intake (see Table C.8).

TABLE C.8. MENTAL HEALTH STATUS AT OTP INTAKE BY FOLLOW-UP STATUS

	FOLLOWED UP	
	NO	YES
	n = 425	n = 208
Depression	48.0%	56.7%*
Generalized Anxiety	35.3%	47.1%**
Suicidality (e.g., thoughts of suicide or suicide attempts)	11.1%	10.6%

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

Change in Past 30 Day Other Specific Illegal Drug Use

Appendix D provides specific information on past 30 day change in use of drugs that were analyzed as a group called "Other Illegal Drug Use". The tables compares past 30 day changes from intake to follow-up by gender on marijuana, cocaine, stimulant, and tranquilizer use among the KORTOS sample*.

* Changes in use from hallucinogens and inhalants were not examined because no clients reported using these substances in the 30 days before entering OTP.

MARIJUANA USE, PAST 30 DAY

There was a significant decrease in marijuana use from intake to follow-up for both men and women (see Table D.1). The number of clients who reported past 30 day use of marijuana decreased significantly by 51.3% for men and by 74.4% for women. At follow-up, 19.2% of men and 9.3% of women reported marijuana use.

TABLE D.1. PERCENTAGE OF CLIENTS REPORTING MARIJUANA USE IN THE 30 DAYS BEFORE ENTERING THE OTP AND THE 30 DAYS BEFORE FOLLOW-UP BY GENDER

	INTAKE	FOLLOW-UP	PERCENT CHANGE
MARIJUANA USE			
Men (n = 99)	39.4%	19.2%	↓51.3%***
Women (n = 107)	36.4%	9.3%	↓74.4%***
Total (n = 206)	37.9%	14.1%	↓62.8%***

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

COCAINE USE, PAST 30 DAY

Table D.2 shows a minority of clients (11.2%) reported using cocaine in the 30 days before entering the OTP. At follow-up, only 1.5% of clients reported cocaine use, reflecting an 87.0% decrease in use. The number of women that reported use decreased by 86.7% and the number of men that reported use decreased by 87.5%.

TABLE D.2. PERCENTAGE OF CLIENTS REPORTING COCAINE USE IN THE 30 DAYS BEFORE ENTERING THE OTP AND THE 30 DAYS BEFORE FOLLOW-UP BY GENDER

	INTAKE	FOLLOW-UP	PERCENT CHANGE
COCAINE USE			
Men (n = 99)	8.1%	1.0%	↓87.5%*
Women (n = 107)	14.0%	1.9%	↓86.7%**
Total (n = 206)	11.2%	1.5%	↓87.0%***

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

STIMULANT USE, PAST 30 DAY

Only a small percentage of clients reported using stimulants (e.g., amphetamines, methamphetamine, Ritalin) in the 30 days before entering the OTP; therefore, there was little room for improvement in stimulant use at follow-up and the decreases in the number of clients who reported stimulant use were not statistically significant (see Table D.3). At follow-up, 1.0% of men and 1.9% of women reported stimulant use in the past 30-days.

TABLE D.3. PERCENTAGE OF CLIENTS REPORTING STIMULANT USE IN THE 30 DAYS BEFORE ENTERING THE OTP AND THE 30 DAYS BEFORE FOLLOW-UP BY GENDER

STIMULANT USE	INTAKE	FOLLOW-UP	PERCENT CHANGE
Men (n = 99)	4.0%	1.0%	↓75.0%
Women (n = 107)	4.7%	1.9%	↓60.0%
Total (n = 206)	4.4%	1.5%	↓66.7%

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

TRANQUILIZER USE, PAST 30 DAY

Significantly more women than men reported using tranquilizers (e.g., tranquilizers, benzodiazepines, sedatives, or hypnotics) at intake (32.7% vs. 18.2%). Tranquilizer use decreased significantly for both men and women: by 94.4% and by 85.7% respectively (see Table D.4). At follow-up, only 1.0% of men and 4.7% of women reported tranquilizer use.

TABLE D.4. PERCENTAGE OF CLIENTS REPORTING TRANQUILIZER USE IN THE 30 DAYS BEFORE ENTERING THE OTP AND THE 30 DAYS BEFORE FOLLOW-UP BY GENDER

TRANQUILIZER USE	INTAKE	FOLLOW-UP	PERCENT CHANGE
Men (n = 99)	18.2%	1.0%	↓94.4%***
Women (n = 107)	32.7%	4.7%	↓85.7%***
Total (n = 206)	25.7%	2.9%	↓88.7%***

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