

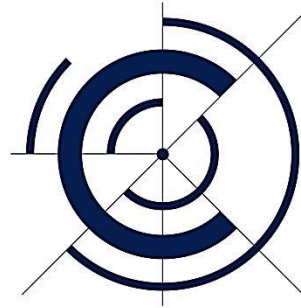


State of Iowa Outcomes Monitoring System

THE IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION

**Year 19
Annual Outcome Evaluation Report
September 2017**

With Funds Provided By:
Iowa Department of Public Health,
Division of Behavioral Health,
Bureau of Substance Abuse



**THE IOWA
CONSORTIUM**
FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION

**State of Iowa
Outcomes Monitoring System
Year 19 Annual Evaluation Report
September 2017**

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<http://iconsortium.subst-abuse.uiowa.edu/>

EXECUTIVE SUMMARY

The Outcomes Monitoring System (OMS) was established to systematically gather data on substance use disorder treatment outcomes in Iowa. Randomly selected clients from up to 22 treatment agencies receiving funding from the Iowa Department of Public Health were contacted for follow-up interviews. The interviews occur approximately six months after discharge from treatment. This report examines outcomes for clients admitted in calendar year 2016. Outcomes are presented for 373 of the clients who completed the follow-up interview.

Client Characteristics of 2016 OMS Sample

Sex and Age: Approximately 72% of clients were male and 28% were female. Clients had a median age of 31 years old at treatment admission.

Race and Ethnicity: Caucasian/White was reported as the primary race at admission by approximately 85% of clients, nearly 9% reported African American/Black, and 6% reported another race or data were missing. Over 6% of the clients reported Hispanic or Latino ethnicity at admission.

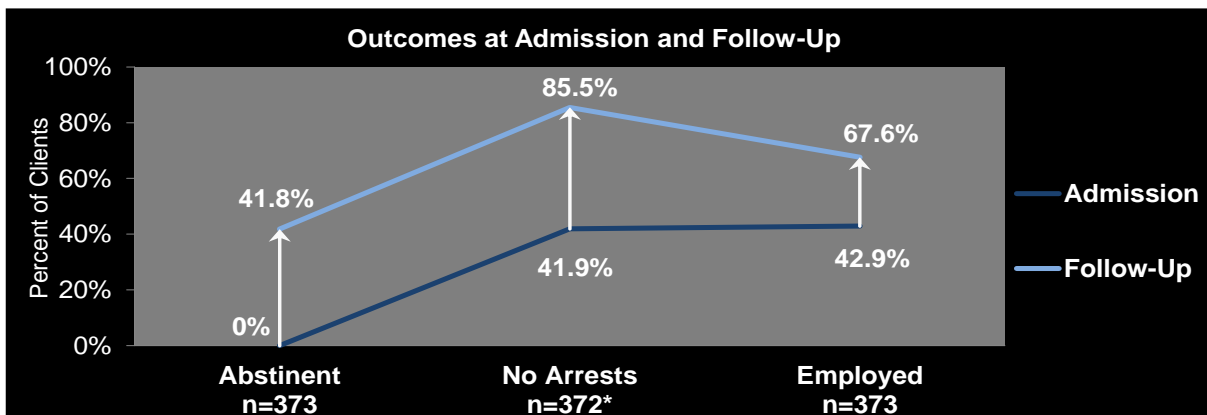
Substance Use at Admission: Nearly all clients (99.9%) indicated a primary substance of use at admission. Alcohol was the most common primary substance reported by 33.1% of the clients, closely followed by methamphetamine (32.4%), and marijuana (27%).

Outcomes for 373 Clients with Completed Follow-Up Interviews

The following data describe outcomes at admission and follow-up for clients who have completed the follow-up interview.

Substance Use: Abstinence (based on the primary substance reported) increased by 41.8 percentage points from admission to follow-up (from zero clients at admission to 156 clients at follow-up). From admission to follow-up, there was nearly a five-fold decrease for methamphetamine, from 26% to 5.4%. There was over a two-fold decrease in clients reporting marijuana as their primary substance compared to admission, from 25.7% to 11.8%.

Arrests and Employment: Over 58% of the clients reported arrests at admission, whereas less than 15% reported arrests at follow-up; it is important to note the admission response for the question about arrests refers to the 12 months prior to admission and the follow-up response refers to the six months following discharge. Fewer than half of the clients (42.9%) were employed at admission; however over two-thirds (67.6%) of clients indicated employment at follow-up.



*One client who completed the follow-up interview declined to answer the question about arrests, therefore data are excluded.



Outcomes by Sex: Analyses conducted on outcomes by sex indicate there are statistically significant differences between males and females and attendance at voluntary recovery support meetings during the six-month post-discharge period. More females (53.9%) than males (36.8%) reported they attended voluntary recovery support meetings during the follow-up period (Chi Square Test, $p < 0.01$).

Outcomes by Age: There are statistically significant differences between age groups and primary substances reported at admission and follow-up (Chi Square Test, $p < 0.0001$). Clients age 35 and older more often identified alcohol as the primary substance at admission and marijuana was more often reported by younger clients. Methamphetamine as the primary substance at admission is concentrated among clients older than 24 years of age.

At follow-up, there are statistically significant differences between age groups for abstinence and the primary substance reported (Chi Square Test, $p < 0.01$). A lower percentage of clients 24 and younger reported abstinence compared to clients 25 and older. Similar to admission, a higher percentage of clients age 24 and younger reported marijuana as the primary substance at follow-up.

Harm Reduction: In addition to reporting on abstinence, changes in frequency of use of substances provide information regarding client outcomes following treatment. Harm reduction seeks to *reduce* negative consequences related to substance use rather than focusing on abstaining from all substances, to minimize adverse health, social, and economic consequences. One hundred twenty-three clients in the 2016 OMS sample reported using the same primary substance at both admission and follow-up. This subgroup most commonly reported using their primary substance with less frequency at follow-up than indicated at admission.

Change in Frequency of Use	OMS Sample with Completed Follow-up Interviews Clients Reporting Same Primary Substance at Admission and Follow-Up percent (n=123)
Increased Use	37.4 (46)
Maintained Same Use	18.7 (23)
Decreased Use	43.9 (54)

Analyses unveiled an interesting finding: more clients (48.1%) who reported decreased use attended voluntary recovery support meetings during the follow-up period than clients maintaining or increasing use of the same primary substance from admission to follow-up (21.7% and 28.3% respectively), Chi Square Test, $p < 0.05$.

Discharge Status by Outcomes Variables at Follow-Up: There are statistically significant associations between discharge status and abstinence at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.01$), discharge status and no arrests at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.01$), and discharge status and employment at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.05$). Clients who were successfully discharged were more likely to be abstinent and arrest-free in the six-month post-discharge period and employed at follow-up.

Discharge Status by Outcome Variables at Follow-Up N=373				
Discharge Status	n	Abstinence at Follow-Up* percent (n)	No Arrests at Follow-Up* percent (n)	Employed at Follow-Up** percent (n)
Successful Completion	209	46.9 (98)	89.5 (187)	72.2 (151)
Terminated	138	31.9 (44)	81.9 (113)	60.9 (84)
Neutral Discharge	26	53.8 (14)	69.2 (18)	65.4 (17)

*Statistically significant (Cochran-Mantel-Haenszel Test, $p < 0.01$). **Statistically significant (Cochran-Mantel-Haenszel Test, $p < 0.05$).



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BACKGROUND

In July 1998, at the request of the Iowa Department of Public Health (IDPH), the Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) designed and tested an Outcomes Monitoring System (OMS) to report substance use disorder treatment outcomes in Iowa. Implementation of the OMS project provided an independent evaluation regarding client outcomes and relieved treatment agencies from the responsibility of tracking and interviewing clients following discharge. The Consortium has provided ongoing client sampling, recruitment, tracking, data collection, data analyses, and reporting since January 1999.

The Consortium conducts follow-up interviews with randomly selected clients from the 22 substance use disorder treatment agencies receiving IDPH funding. The interviews occur approximately six months after discharge from the treatment program and provide follow-up data to determine outcomes as well as analyze changes between admission and follow-up. This report examines outcomes for clients admitted to substance use disorder treatment in 2016. Outcomes are presented for 373 clients who completed the follow-up interview through August 30, 2017.

EVALUATION PROCESS AND METHODS

Data Collection

Substance use disorder treatment agencies in Iowa use a standardized client data collection instrument developed by IDPH. Data are collected by treatment agency staff on each client at admission and at discharge and transmitted to IDPH. The Consortium's follow-up data collection instrument integrates with client data recorded at admission. The follow-up instrument contains additional questions about mental health, how clients feel their treatment ended, if their substance use has caused stress and reduction in important activities, and a self-rating of physical and mental health six months following treatment discharge. Admission data, as well as follow-up data collected by Consortium staff, are client self-reported.

Sampling Procedure

OMS samples are drawn from the population of publicly funded clients admitted to substance use disorder treatment. This population includes clients who receive IDPH-funded drug or alcohol treatment in outpatient or residential treatment environments including for example, medically monitored residential, clinically managed residential, intensive outpatient, or outpatient. The Consortium utilizes IDPH's Central Data Repository (CDR) to obtain datasets and randomly select clients from the available admission records. The number of admissions vary each month; each sample is 15% or 120 clients, whichever is greater. Due to rounding, percentages in this report may not add up to exactly 100%.

Recruitment

When clients are admitted to substance use disorder treatment, the treatment agency provides information to the client that includes a letter from IDPH describing the follow-up project and the possibility of being selected for a follow-up interview. Immediately after the monthly OMS



sample is selected, Consortium research assistants attempt to contact clients to invite them to participate in the follow-up telephone interview. The Consortium's recruitment and tracking procedures are designed to enhance the level of participation in the evaluation process. The follow-up interview takes place approximately six months after discharge from treatment. Before mid-October 2016, a twenty-dollar gift card was provided to the client upon completion of the follow-up interview; a thirty-dollar gift card is currently sent to clients completing interviews.

When Consortium staff reach a potential participant via telephone, they explain they are calling on behalf of the Health Research Network (HRN) to talk about participation in a follow-up study. HRN is a pseudonym the Consortium utilizes to assist in protecting client confidentiality. Procedures are established so phone calls and mail from the Health Research Network may in no way be connected to substance use issues. Staff members confirm the identity of the client before describing the project in detail. The confirmation process includes matching the client's date of birth and last four digits of their social security number. If the information matches, the staff member reads the "Information Summary and Consent Document" that describes the OMS project and attempts to recruit the client by securing a verbal agreement to participate in the follow-up interview. Participants are informed they will receive periodic update calls or letters, approximately every six weeks, in an attempt to keep contact information current.

The Consortium has a toll-free number which is given to clients along with information regarding the confidential voice mail system. Clients without phone contact information or who do not have telephone service are sent letters asking them to call the Health Research Network's toll-free number regarding a follow-up study.

Clients may decline or withdraw participation in the OMS project at any time during recruitment or at any point during the follow-up interview process. There are no penalties for withdrawing participation in the study. Once a client declines participation, the case is officially closed unless the client later contacts the HRN and indicates a desire to participate. No future attempts are made to contact clients who choose not to participate in the follow-up interview.

Tracking

A secure web-based password-protected tracking system was developed by the Consortium to assist research assistants in managing individual client data. The system maintains updated tracking and detailed case status information for each client. This tracking information consists of the successful and attempted contacts made during efforts to communicate with the client. Detailed tracking information regarding the status of the 2016 OMS sample is displayed in the Appendix on pages 54 through 59.

Follow-Up Interview

In order to participate in the follow-up interview, clients must have a treatment discharge date confirmed by IDPH records. The follow-up interview is conducted by telephone six months after the client is discharged from treatment. It is not always possible to obtain the follow-up interview exactly six months after discharge; therefore, the project design allows staff to interview participants anywhere from two weeks prior to eight weeks after the six month post-discharge date. Clients currently receive a thirty-dollar gift card upon completion of the follow-up interview.



CLIENTS

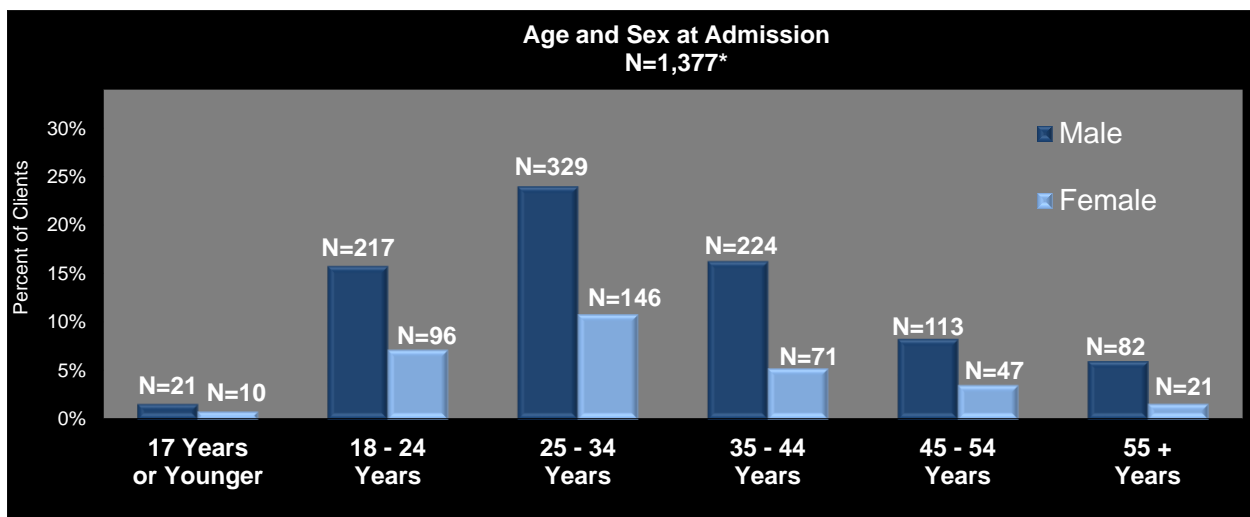
Description of Clients in OMS Sample

One thousand three hundred seventy-nine clients with 2016 admission dates were selected to participate in the OMS project. This group of randomly selected clients had substance use disorder treatment admission dates from January 1, 2016 through December 29, 2016.

Of the 1,379 clients, 1,348 (97.8%) were adults and 31 (2.2%) were adolescents (age 17 and younger). Nine hundred eighty-six clients (71.5%) were male and 391 (28.4%) were female; data for sex were missing or reported as “unknown” for two clients (0.1%) at admission. At treatment admission clients had a median age of 31 years.

Figure 1 presents the number of males and females in six age categories. The highest numbers of males and females at admission were between 25 and 34 years of age. For all age categories, there were more males than females.

Figure 1. Age and Sex at Admission



*Data for two clients are not included in Figure 1 due to sex reported as “unknown” or missing data at admission.

Figure 2. Race

Figure 2 presents race reported at admission for clients in the OMS sample. Caucasian/White was the primary race reported by 1,179 (85.5%) of clients; 122 clients (8.8%) indicated African American/Black, 27 clients (2%) reported American Indian, and 17 clients (1.2%) reported “other race”. The “other race” category includes clients who reported Asian, Hawaiian or Pacific Islander, or Alaskan Native as their primary race. Additionally, 34 clients (2.5%) clients responded “unknown” when asked about their race or the data are missing or reported as “not collected”.

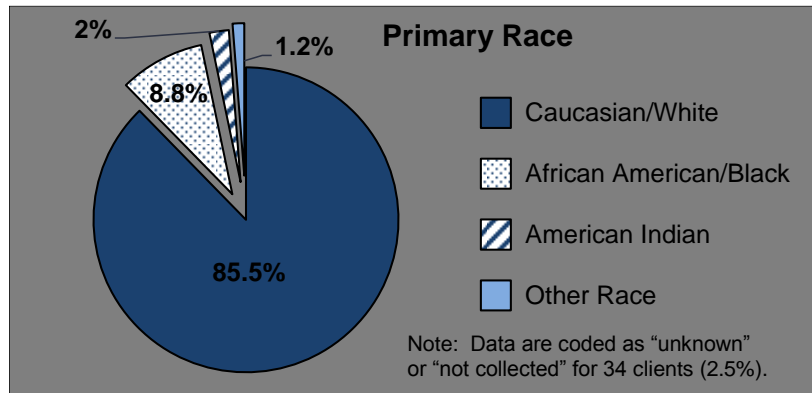
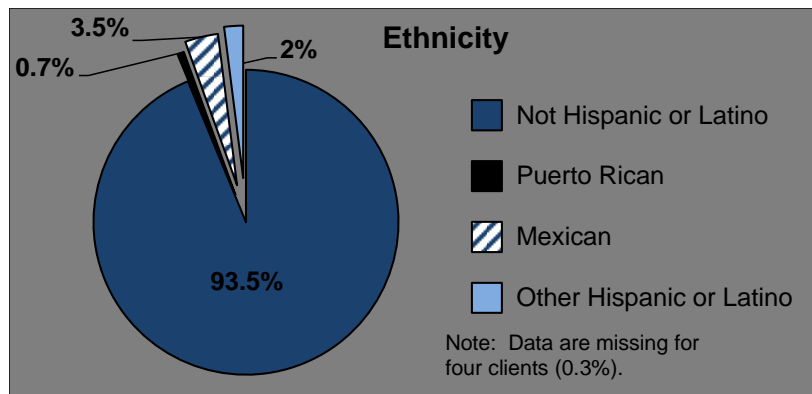


Figure 3. Ethnicity

Figure 3 shows ethnicity reported at admission for the clients in the OMS sample. Hispanic or Latino ethnicity was reported by 85 clients (6.2%) of the clients at admission.



Clients in the evaluation project most commonly were referred to substance use disorder treatment by state probation as shown in Table 1.

Table 1. Referral Source

Source of Referral	OMS Sample at Admission percent (n=1,379)
State Probation	22.0 (304)
Other Criminal Justice/Court	21.2 (293)
Self	11.5 (159)
OWI	11.3 (156)
Alcohol/Drug Abuse Provider	8.0 (111)
Health Care Provider	5.6 (77)
Other Community	3.4 (47)
DHS (Other)	3.3 (45)
Parole Board	2.4 (33)
DHS Drug Endangered Child	2.2 (31)
Drug Court	2.1 (29)
DHS Child Welfare	1.7 (24)
Civil Commitment	1.3 (18)
Other Individual	0.9 (13)
Community Mental Health	0.9 (12)
Employer/Employee Assistance Program	0.7 (9)
Federal Probation	0.6 (8)
School	0.5 (7)
DHS Child Abuse	0.2 (3)

The actual treatment environments staff recorded in the admission record are displayed in Table 2. The majority of clients in the 2016 OMS sample were admitted to extended outpatient treatment (864 clients, 62.7%). Admission records can be revised by treatment agency staff following the OMS sample pull. For example, the record in Table 2 identified as day treatment/partial hospitalization was originally recorded as intensive outpatient, which qualified the client for the OMS sample.

Table 2. Treatment Environment (Revised)

Actual Treatment Environment	OMS Sample at Admission % (n=1,379)
Extended Outpatient	62.7 (864)
Clinically Managed High Intensity Residential	17.3 (238)
Intensive Outpatient	13.4 (185)
Continuing Care	5.7 (78)
Clinically Managed Low Intensity Residential	0.8 (11)
Clinically Managed Medium Intensity Residential	0.1 (2)
Day Treatment/Partial Hospitalization	0.1 (1)

Treatment agency staff record if clients have a mental health problem in addition to a substance use disorder at admission. As shown in Table 3, staff indicated just under half of the clients (45.5%) in the OMS sample had a mental health problem at treatment admission.

Table 3. Co-Occurring Mental Health

Mental Health Problem	OMS Sample at Admission % (n=1,379)
Yes	45.5 (627)
No	54.5 (752)

The treatment admission record contains the number of prior substance use disorder treatment admissions the client has had during the last ten years. More than half the clients (56.6%) in the 2016 OMS sample had previously been admitted to substance use disorder treatment as shown in Table 4.

Table 4. Prior Treatment Admissions

Number of Prior Treatment Admissions	OMS Sample at Admission % (n=1,379)
Zero	43.4 (598)
One	24.0 (331)
Two	13.7 (189)
Three to Five	14.8 (204)
Six to Ten	3.6 (49)
More than Ten	0.6 (8)

Recruitment, Tracking, and Follow-Up Efforts

As of August 30, 2017, of the 1,379 clients who were selected to participate in the OMS project, 718 individuals had been contacted by Consortium staff and consented to participate in the follow-up interview; 125 clients declined to participate in the project.

Of the 1,379 selected clients, 992 clients had reached their window of eligibility for the six-month post-discharge interview. Of these, 373 clients completed a follow-up interview. There were 127 recruited individuals who could not be located for the interview after numerous phone calls, letters, and internet searches. Forty-three recruited clients were incarcerated at the time of their interview; Consortium staff do not interview incarcerated individuals. Eighteen clients chose to withdraw from the project after previously agreeing to participate, interview due dates had already passed for 13 recruited clients when the Consortium received notification of their discharge dates, and two recruited clients were deceased when the interview was due. An additional 416 clients were not able to be recruited for various reasons including: 308 clients could not be located; 72 clients were incarcerated; treatment agency staff submitted discharge dates late for 35 non-recruited clients, resulting in the follow-up interview date having already passed when the Consortium received notification; and one client was deceased.

Efforts are underway to locate and attempt to recruit the 120 clients who are still not eligible for an interview. The remaining 142 individuals who have been recruited and are not yet eligible for an interview are receiving regular update calls from Consortium staff as their interview date nears.

The recruitment rate consists of clients who were successfully recruited (718), those who declined to participate (125), and non-recruited clients whom staff were not able to locate (308). This calculation results in a recruitment rate of 62.4%. Of recruited clients due for a follow-up interview, 72% received an interview (373 of 518 clients). This excludes recruited clients who were incarcerated, deceased, and clients whose interview date had already passed when the Consortium received notification. This calculation includes all clients who completed the follow-



up interview (373), recruited clients who could not be located when their interview was due (127), and those who decided not to take part in the interview after initially agreeing to do so (18). Detailed tracking information regarding the OMS sample is provided in the Appendix on pages 54 through 59.

Description of Clients Completing Follow-Up Interviews

Of the 373 clients completing a follow-up interview, 269 clients (72.1%) were male and 104 clients (27.9%) were female. This subset of clients had a median age of 33 years and included clients up to 72 years old. Three hundred twenty-five clients (87.1%) reported their race as Caucasian/White at admission, 35 clients (9.4%) indicated African American/Black, four clients (1.1%) reported American Indian, and three clients (0.8%) reported “other race”. Six clients (1.6%) clients responded “unknown” when asked their race, data are missing, or reported as “not collected”. Sixteen clients (4.3%) reported Hispanic or Latino ethnicity at admission.

OUTCOMES

Admission and Follow-Up Data

Tables 5 through 16 present admission responses from the 1,379 clients in the 2016 in OMS sample and admission and follow-up responses from clients who have completed follow-up interviews (373 clients). The first column presents responses for the question. The second column presents the admission responses for the 1,379 clients in the sample. The third and fourth columns describe the responses for clients who answered the particular item both at admission and at follow-up (373 clients). Admission data are not included in Table 16, which displays education status at follow-up for adults and adolescents who completed the follow-up interview. Some of the more interesting findings are reported below.

- **Primary Substance:** At admission, nearly all clients indicated a primary substance of use. Alcohol and methamphetamine were the most common primary substances at admission with each of these substances reported by approximately one-third of the 1,379 clients in the OMS sample (33.1% and 32.4% respectively). At follow-up, 156 of the 373 clients (41.8%) reported abstinence in the six months following treatment discharge. Alcohol was the most common primary substance reported at follow-up (38.9%), followed by marijuana (11.8%).
- **Secondary Substance:** A secondary substance was reported by 64.1% of clients in the OMS sample at admission. Marijuana was the most commonly used secondary substance at admission, indicated by over one-quarter of clients (27%) in the OMS sample. Few clients (15.8%) reported using more than one substance at follow-up. Among the 373 clients who completed a follow-up interview, clients reporting “no secondary substance” more than doubled, increasing from 38.6% at admission to 84.2% at follow-up. At follow-up, alcohol was the most frequently reported secondary substance, followed by marijuana.
- **Arrests:** At admission, over half of the clients (56.9%) in the OMS sample reported one or more arrests in the previous twelve months, less than 15% of the clients reported arrests in the six months following treatment discharge.
- **Employment:** At admission, fewer than half of the clients (43.4%) in the OMS sample indicated full or part-time employment. At follow-up, over two-thirds (67.6%) reported they



were employed full or part-time. Among the 373 clients completing the follow-up interview, clients indicating full-time employment increased by over 20 percentage points (80 clients) from admission to follow-up.

- **Taxable Income:** Of clients who reported an income category at both admission and follow-up, there were increases in the number of clients reporting the two highest monthly income categories (\$1001 to \$2000 and over \$2000) at follow-up. There was a decrease (13.1 percentage points) in clients who indicated they had no monthly income: 45.1% of clients reported this at admission and less than one-third (32%) reported this at follow-up.
- **Hospitalizations Due to a Substance Use Related Problem:** The number of clients who were hospitalized at follow-up compared to admission was reduced by over half. At admission, 45 clients (12.1%) who completed a follow-up interview reported one or more hospitalizations due to substance use related problems in the six months prior to treatment admission. At follow-up 19 clients (5.1%) indicated reported substance use related hospitalizations during the six-month post-discharge time period.
- **Attendance at Voluntary Recovery Support Meetings:** Clients reporting attending Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or similar recovery support meetings more than doubled from admission to follow-up (from 64 clients to 155 clients). Over 40% of clients reported attending voluntary recovery support meetings during the six months following discharge from treatment.



As shown in Table 5, at admission all but one client (99.9%) indicated a primary substance of use. Of clients in the OMS sample, there were similar percentages reporting alcohol and methamphetamine at admission. Nearly one-third of clients (457 clients, 33.1%) reported alcohol and 447 clients (32.4%) reported methamphetamine as the primary substances at admission. Marijuana was the third most common substance at admission, reported by just over one-quarter of clients (372 clients, 27%).

Of the 373 clients who completed a follow-up interview, 156 clients (41.8%) reported abstinence during the six months following treatment discharge, thus no primary substance was indicated. Of clients with completed interviews, alcohol was the most commonly indicated primary substance at admission and follow-up with similar percentages of clients reporting this: 155 clients (41.6%) at admission and 145 clients (38.9%) at follow-up. Marijuana was the second most commonly reported primary substance at follow-up, followed by methamphetamine. From admission to follow-up, there was nearly a five-fold decrease for methamphetamine; the percentage of clients reporting methamphetamine as their primary substance decreased by 20.6 percentage points (from 26% to 5.4%). At follow-up, there was over a two-fold decrease in clients reporting marijuana as their primary substance compared to admission, from 96 clients (25.7%) to 44 clients (11.8%).

Table 5. Primary Substance

Primary Substance	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews	
		Admission percent (n=373)	Follow-Up percent (n=373)
None	0.1 (1)	0.0 (0)	41.8 (156)
Alcohol	33.1 (457)	41.6 (155)	38.9 (145)
Methamphetamine	32.4 (447)	26.0 (97)	5.4 (20)
Marijuana/Hashish	27.0 (372)	25.7 (96)	11.8 (44)
Heroin	1.6 (22)	1.3 (5)	0.5 (2)
Opiates and Synthetics other than Heroin*	3.3 (46)	2.7 (10)	0.5 (2)
Cocaine/Crack	1.3 (18)	1.9 (7)	0.8 (3)
Benzodiazepines	0.5 (7)	0.5 (2)	0.0 (0)
Other Amphetamines and Stimulants	0.2 (3)	0.3 (1)	0.0 (0)
Other Hallucinogens	0.1 (2)	0.0 (0)	0.0 (0)
Other Sedatives and Hypnotics	0.1 (1)	0.0 (0)	0.0 (0)
Inhalants	0.1 (1)	0.0 (0)	0.0 (0)
Over the Counter	0.0 (0)	0.0 (0)	0.3 (1)
Other	0.1 (2)	0.0 (0)	0.0 (0)

A client's primary substance may change from admission to follow-up.

*Opiates other than heroin include the following response categories: other opiates and synthetics, non-prescription Methadone, and OxyContin.



Fifty-nine clients (15.8%) reported using more than one substance six-months post-discharge as shown in Table 6. Of the 373 clients completing a follow-up interview, clients reporting no secondary substance more than doubled, increasing by 45.6 percentage points from 38.6% at admission to 84.2% at follow-up (a difference of 170 clients). Marijuana was the most common secondary substance reported by over one-quarter of clients at admission, followed by alcohol. However, alcohol was the most commonly reported secondary substance at follow-up, followed by marijuana.

There were decreases between admission and follow-up for clients reporting the two most commonly used secondary substances, marijuana and alcohol. There was over a five-fold decrease for marijuana from 94 clients (25.2%) to 15 clients (4%). There was over a two-fold decrease in clients reporting alcohol as their primary substance compared to admission, from 68 clients (18.2%) to 31 clients (8.3%).

Table 6. Secondary Substance

Secondary Substance	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews	
		Admission percent (n=373)	Follow-Up percent (n=373)
None	35.9 (495)	38.6 (144)	84.2 (314)
Alcohol	18.1 (249)	18.2 (68)	8.3 (31)
Cocaine/Crack	2.8 (38)	2.9 (11)	0.0 (0)
Marijuana/Hashish	27.0 (373)	25.2 (94)	4.0 (15)
Methamphetamine	10.3 (142)	10.2 (38)	2.7 (10)
Heroin	0.7 (9)	0.3 (1)	0.0 (0)
Opiates other than Heroin*	2.8 (39)	2.4 (9)	0.5 (2)
PCP	0.1 (1)	0.0 (0)	0.0 (0)
Other Hallucinogens	0.1 (1)	0.0 (0)	0.0 (0)
Other Amphetamines and Stimulants	0.1 (1)	0.0 (0)	0.3 (1)
Benzodiazepines	1.6 (22)	1.3 (5)	0.0 (0)
Steroids	0.1 (1)	0.3 (1)	0.0 (0)
Ecstasy	0.1 (2)	0.0 (0)	0.0 (0)
Other	0.4 (6)	0.5 (2)	0.0 (0)

A client's secondary substance may change from admission to follow-up.

*Opiates other than heroin include the following response categories: other opiates and synthetics, non-prescription Methadone, and OxyContin.



For the question regarding arrests, the admission response refers to the 12 months prior to admission and the follow-up response refers to the six months following discharge. Table 7 shows among clients with completed follow-up interviews, over half of clients (58.1%) reported arrests at admission, whereas fewer than 15% reported arrests at follow-up.

Table 7. Arrests

Number of Arrests	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews	
		Admission percent (n=372)*	Follow-Up percent (n=372)*
None	43.1 (594)	41.9 (156)	85.5 (318)
1 to 3 Times	51.9 (716)	54.3 (202)	14.5 (54)
4 or More Times	5.0 (69)	3.8 (14)	0.0 (0)

Note: Since the admission and follow-up questions cover different periods (12 months and six months respectively), a direct comparison between the two is not recommended.

*One client who completed the follow-up interview declined to answer the question about arrests, therefore admission and follow-up data are excluded.

Fewer than half the clients indicated they were employed full or part-time at admission as shown in Table 8. At follow-up, over two-thirds of the clients (252 clients, 67.6%) reported they were employed full or part-time. Among clients with completed follow-up interviews, full-time employment increased from 112 clients at admission to 192 clients at follow-up (by over 20 percentage points). There was over a two-fold decrease in the number of clients reporting they were unemployed (looking for work in the past 30 days) from admission to follow-up, from 150 clients to 62 clients. Individuals categorized as not being in the labor force are clients who are not employed and not seeking employment; the category includes, but is not limited to, homemakers, students, and retired or disabled clients.

Table 8. Employment Status

Employment Status	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
Employed Full-Time (≥35 hrs/wk)	32.1 (443)	30.0 (112)	51.5 (192)	+21.5
Employed Part-Time (<35 hrs/wk)	11.3 (156)	12.9 (48)	16.1 (60)	+3.2
Unemployed (Looking For Work in the Past 30 Days)	40.1 (553)	40.2 (150)	16.6 (62)	-23.6
Not in Labor Force	16.5 (227)	16.9 (63)	15.8 (59)	-1.1



At follow-up, nearly two-thirds of the clients (63.5%) reported employment of four months or more in the past six months. Clients reporting no employment in the previous six months decreased by over half, from 153 clients at admission to 65 clients at follow-up.

Table 9. Months Employed

Months Employed	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
None	42.3 (583)	41.0 (153)	17.4 (65)	-23.6
Three Months or Less	19.1 (264)	14.5 (54)	19.0 (71)	+4.5
Four or More Months	38.6 (532)	44.5 (166)	63.5 (237)	+19.0

There were increases in the number of clients reporting monthly income in the two highest income categories (\$1001 to \$2000 and over \$2000) at follow-up. Nearly half of the clients (49.9%) at follow-up indicated their taxable monthly income at follow-up was over \$1000. There was a decrease of 47 clients (13.1 percentage points) who indicated they had no monthly income from admission to follow-up, likely corresponding to the previous findings (Table 8 on previous page) that more clients were employed at follow-up.

Table 10. Taxable Monthly Income

Taxable Monthly Income	OMS Sample at Admission percent (n=1,358)*	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=359)*	Follow-Up percent (n=359)*	Percentage Point Change
None	47.9 (650)	45.1 (162)	32.0 (115)	-13.1
\$500 or Less	7.7 (104)	8.9 (32)	4.5 (16)	-4.4
\$501 to \$1000	14.8 (201)	16.7 (60)	13.6 (49)	-3.1
\$1001 to \$2000	21.9 (297)	20.1 (72)	29.5 (106)	+9.4
Over \$2000	7.8 (106)	9.2 (33)	20.3 (73)	+11.1

*Data for 21 clients in the "OMS Sample at Admission" column are excluded from this table due to records coded as not applicable, disabled, retired, or client declines to disclose income. Data from 14 clients in the "OMS Sample with Completed Follow-Up Interviews" columns are excluded due to admission record coded as not applicable, disabled, retired, or client declines to disclose income or clients at follow-up reporting variability of income (due to contractual or seasonal work or commission-based pay) or declining to disclose their income.

At both admission and follow-up, the “wages/salary” category was the most common primary source of support. From admission to follow-up, clients reporting “wages/salary” as their primary means of support increased by nearly 14 percentage points (by 51 clients). Only one client (0.3%) reported “none” as their primary source of support at follow-up compared to nearly one-fifth of clients (73 clients, 19.6%) reporting this at admission.

Table 11. Primary Source of Support

Primary Source of Support	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
None	26.0 (358)	19.6 (73)	0.3 (1)	-19.3
Wages/Salary	47.1 (650)	48.3 (180)	61.9 (231)	+13.6
Family/ Friends	16.3 (225)	20.1 (75)	19.6 (73)	-0.5
Public Assistance	0.8 (11)	0.8 (3)	4.3 (16)	+3.5
Retirement/ Pension	0.1 (2)	0.3 (1)	1.3 (5)	+1.1
Disability	2.8 (39)	2.7 (10)	6.4 (24)	+3.7
SSI or SSDI	2.1 (29)	3.8 (14)	1.1 (4)	-2.7
Other	4.7 (65)	4.6 (17)	5.1 (19)	+0.5

The admission dataset does not provide a response category for “not applicable” for the question regarding days missed of school or work due to substance use for clients who indicate they are not in the labor force or enrolled in school in the six months preceding admission. At follow-up, records for clients reporting no employment or school enrollment in the six-month post-discharge period are coded as “not applicable.” Therefore, both admission and follow-up data for clients completing follow-up interviews are excluded in the third and fourth columns of Table 12 for clients who indicated they were not in the labor force or enrolled in school in the last six months at the follow-up interview. Of clients with completed follow-up interviews, similar percentages of clients reported missing one or more days of work or school due to a substance use-related problem in the six months prior to admission and follow-up (12.3% and 9.7% respectively).

Table 12. Days Missed of Work or School Due to Substance Use

Days Missed	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=310)*	Follow-Up percent (n=310)*	Percentage Point Change
Zero Days	90.6 (1,250)	87.7 (272)	90.3 (280)	+2.6
1 to 5 Days	4.9 (67)	7.1 (22)	6.8 (21)	-0.3
6 or More Days	4.5 (62)	5.2 (16)	2.9 (9)	-2.3

*Data from 63 clients in the “OMS Sample with Completed Follow-Up Interviews” columns are excluded for clients who indicated no employment or school enrollment at follow-up. The admission dataset does not provide a response category for “not applicable” for clients who indicate they are not in the labor force or enrolled in school in the six months preceding admission.



Overall, fewer clients reported substance use related hospitalizations at follow-up compared to admission. Over 12% of interviewed clients (45 clients) indicated substance use related hospitalizations in the six months prior to treatment admission, whereas at follow-up, 19 clients (5.1%) reported hospitalizations for substance use related problems since discharge.

Table 13. Hospitalizations Due to a Substance Use Related Problem

Number of Hospitalizations	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
None	89.5 (1,234)	87.9 (328)	94.9 (354)	+7.0
1 to 3 Times	9.8 (135)	11.3 (42)	4.6 (17)	-6.7
4 or More Times	0.7 (10)	0.8 (3)	0.5 (2)	-0.3

Table 14 shows of clients with completed follow-up interviews, 91 more clients reported attendance at Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or similar voluntary meetings for recovery at follow-up than at admission. Voluntary recovery support meeting attendance increased nearly two and a half times from admission to follow-up with over 40% of clients reporting they attended meetings during the six months following discharge from treatment.

Table 14. Attendance at Voluntary Recovery Support Meetings

Average Number of Meetings Attended Per Month	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
None	84.2 (1,161)	82.8 (309)	58.4 (218)	-24.4
1 to 10 Meetings	13.1 (180)	14.2 (53)	29.5 (110)	+15.3
11 or More Meetings	2.8 (38)	2.9 (11)	12.1 (45)	+9.2

The most common living arrangement reported by all clients in the OMS sample at admission was living with their parents, with approximately one fifth of clients (20.5%) reporting this. Among clients with completed follow-up interviews, living with parents (19.3%) and living with other adults (18.2%) were the two most common living arrangements at admission. At follow-up, living alone was the most common living arrangement (19%), followed by living with parents (16.1%).

Table 15. Living Arrangements

Living Arrangements	OMS Sample at Admission percent (n=1,379)	OMS Sample with Completed Follow-Up Interviews		
		Admission percent (n=373)	Follow-Up percent (n=373)	Percentage Point Change
Alone	13.8 (190)	14.2 (53)	19.0 (71)	+4.8
Parents	20.5 (283)	19.3 (72)	16.1 (60)	-3.2
Significant Other Only	10.2 (141)	13.4 (50)	15.3 (57)	+1.9
Significant Other and Child(ren)	9.4 (130)	12.3 (46)	15.3 (57)	+3.0
Child(ren) Only	3.3 (45)	3.5 (13)	5.6 (21)	+2.1
Other Adults	18.3 (252)	18.2 (68)	15.8 (59)	-2.4
Other Adults and Child(ren)	3.3 (45)	3.8 (14)	4.3 (16)	+0.5
Jail, Correctional Facility, Juvenile Detention	5.0 (69)	3.2 (12)	0.0 (0)	-3.2
Halfway House, Group Home, Transitional Housing*	10.2 (141)	7.5 (28)	5.9 (22)	-1.6
Shelter, Homeless	5.9 (82)	4.6 (17)	2.4 (9)	-2.2
Hospital	0.1 (1)	0.0 (0)	0.3 (1)	+0.3

*Included in the halfway house category are clients living in substance use disorder halfway houses, correctional halfway houses, and transitional housing facilities.



Admission data are not included in Table 16. The admission dataset does not provide a response category for a General Education Degree (GED), therefore admission and follow-up comparison cannot be made because the GED question is specifically asked at follow-up. Table 16 provides education status at follow-up by age indicated at admission. Age is separated into two groups: adults (18 and older) and adolescents (17 and younger). Approximately 50% of adults have an education level of high school only at follow-up (either a high school diploma or GED). Over one-third of adults (38.5%) reported an education level beyond high school. Fewer than 13% of adults reported they did not graduate high school.

Table 16. Education at Follow-Up

Level of Education	OMS Sample with Completed Follow-Up Interviews n=373	
	Adults percent (n=369)	Adolescents percent (n=4)
Did Not Graduate High School	12.5 (46)	75.0 (3)
General Education Degree (GED)	14.9 (55)	0.0 (0)
High School Diploma	34.1 (126)	25.0 (1)
1 to 3 Years Post-Secondary Education	28.2 (104)	0.0 (0)
4 or More Years Post-Secondary Education	10.3 (38)	Not Applicable

HARM REDUCTION

In addition to reporting on abstinence, changes in frequency of use provide information regarding client outcomes following treatment. Some clients using alcohol and illegal substances are unable or unwilling to stop using alcohol and drugs. Harm reduction seeks to *reduce* negative consequences related to substance use rather than focusing on abstaining from all substances, to minimize adverse health, social, and economic consequences.

Since a client's primary substance may change from admission to follow-up, a simple comparison of frequency may not provide a good representation (e.g. having one drink three to six times per week versus smoking methamphetamine three to six times per week). Therefore, Table 17 on the following page presents data for a subset of the total group of clients who completed the follow-up interview who report using the same primary substance at both admission and follow-up. For example, a client may report using alcohol daily at admission and at follow-up report they used alcohol one to three times in the past month, representing a decrease in their frequency of use. Of the 217 clients reporting substance use during the six-month post-discharge time period, over half (123 clients, 56.7%) reported the same primary substance at both admission and follow-up and 94 clients (43.3%) reported a different primary substance at follow-up than the primary substance reported at admission.



Table 17 presents the change in frequency of use from admission to follow-up for individuals who reported the same primary substance at both admission and follow-up. “Increased Use” category presents the percentage of clients who indicated using their primary substance with more frequency at follow-up than reported at admission. “Maintained Same Use” represents clients reporting the same frequency of use of their primary substance at admission and follow-up. “Decreased Use” presents the percentage of clients who reported using their primary substance with less frequency at follow-up than indicated at admission. This subgroup of 123 clients most commonly reported using their primary substance less frequently at follow-up compared to admission (43.9%); 37.4% reported an increase in use of their primary substance at follow-up; and 18.7% of clients in this group indicated the same use pattern of their primary substance at both admission and follow-up.

Table 17. Frequency of Use of Primary Substance: Clients Indicating Use of Same Primary Substance at Both Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-up Interviews
	Clients Reporting Same Primary Substance at Admission and Follow-Up percent (n=123)
Increased Use	37.4 (46)
Maintained Same Use	18.7 (23)
Decreased Use	43.9 (54)

Table 18 presents the primary substances at admission and follow-up for a subgroup of 121 clients who reported the same substance at admission and follow-up. Similar percentages of clients reporting alcohol as the primary substance increased their use (39.5%) as decreased their use from admission to follow-up (38.3%). Clients (75%) indicating methamphetamine as the primary substance were more likely to decrease their use from admission to follow-up than increase their use (McNemar Exact Test, $p < 0.04$). Nearly half the clients (45.8%) reporting marijuana as the primary substance increased their use from admission to follow-up.

Table 18. Primary Substance of Use: Clients Indicating Use of Same Primary Substance at Both Admission and Follow-Up

Primary Substance	OMS Sample with Completed Follow-up Interviews			
	Clients Reporting Same Primary Substance at Admission and Follow-Up percent (n=121*)			
	n	Increased Use	Maintained Same Use	Decreased Use
Alcohol	81	39.5 (32)	22.2 (18)	38.3 (31)
Methamphetamine	16	18.8 (3)	6.3 (1)	75.0 (12)
Marijuana	24	45.8 (11)	16.7 (4)	37.5 (9)

Note: Two clients who decreased their use from admission to follow-up are excluded; one client reported heroin and one client reported cocaine as their primary substances at admission and follow-up.

In addition to the 123 clients represented in Tables 17 and 18 on the previous page, 94 of the interviewed clients reported using a different primary substance at follow-up than the primary substance they reported at admission (therefore they are not included in Tables 17 and 18). Half of the 94 clients (47 clients, 50%) identified their primary substance at follow-up was the substance they originally reported as their secondary substance at admission. Table 19 presents the change in primary substance from admission to follow-up for the 94 clients. The first column in Table 19 presents the primary substance reported at admission; the second column provides the percent and number of clients reporting each primary substance. The third column presents the primary substance reported by the clients at the six-month post-discharge follow-up interview; the fourth column provides the percent and number of clients in each subgroup (based on the primary substance reported at admission).

The majority of clients in this subgroup reported marijuana or methamphetamine as the primary substances at admission (40.4% and 35.1 respectively). Of the 38 clients who reported marijuana as the primary substance admission, nearly all (35 clients, 92.1%) indicated alcohol as their primary substance at follow-up. Similarly, of the 33 clients reporting methamphetamine as the primary substance at admission, over three-quarters (26 clients, 78.8%) indicated alcohol was the primary substance at follow-up.

Table 19. Change in Primary Substance from Admission to Follow-Up

OMS Sample with Completed Follow-Up Interviews Change in Primary Substance from Admission to Follow-Up			
Primary Substance Reported at Admission	% (n=94)	Primary Substance Reported at Follow-Up	subgroup % (n)
Alcohol	13.8 (13)	Methamphetamine	7.7 (1)
		Marijuana/Hashish	69.2 (9)
		Other Opiates and Synthetics	7.7 (1)
		Cocaine/Crack	7.7 (1)
		Over the Counter	7.7 (1)
Methamphetamine	35.1 (33)	Alcohol	78.8 (26)
		Marijuana/Hashish	21.2 (7)
Marijuana/Hashish	40.4 (38)	Alcohol	92.1 (35)
		Methamphetamine	5.3 (2)
		Cocaine/Crack	2.6 (1)
Heroin	3.2 (3)	Marijuana	100.0 (3)
Other Opiates and Synthetics	4.3 (4)	Alcohol	50.0 (2)
		Methamphetamine	25.0 (1)
		Heroin	25.0 (1)
Benzodiazepine	2.1 (2)	Alcohol	50.0 (1)
		Other Opiates and Synthetics	50.0 (1)
Cocaine/Crack	1.1 (1)	Marijuana	100.0 (1)



Tables 20 through 24 on the following pages present selected outcome variables at follow-up and discharge status for the three change in frequency of use categories (increased use, maintained same use, and decreased use from admission to follow-up) for the 123 individuals who reported the same primary substance at both admission and six-months post-discharge. The top portion of the table includes *only* clients who reported use at follow-up (therefore excludes clients who reported abstinence at follow-up). As a comparison, the bottom portion of the tables present the same information for the 156 clients who reported abstinence at follow-up.

Table 20 displays the arrest status during the six-month post-discharge follow-up period for each subgroup. As a comparison, the bottom portion of Table 20 presents arrest status at follow-up for the 156 clients reporting abstinence in the six-month post-discharge period. There is no evidence for a relationship between arrests at follow-up and change in frequency of use from admission to follow-up (Chi Square Test, $p > 0.05$).

Table 20. Arrests at Follow-Up: Clients Indicating Use of Same Primary Substance at Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-Up Interviews		
	% (n=123)	Arrests During Follow-Up Period	subgroup % (n)
Increased Use	37.4 (46)	No Arrests	76.1 (35)
		One or More Arrests	23.9 (11)
Maintained Same Use	18.7 (23)	No Arrests	87.0 (20)
		One or More Arrests	13.0 (3)
Decreased Use	43.9 (54)	No Arrests	79.6 (43)
		One or More Arrests	20.4 (11)
Clients with Completed Follow-Up Interviews		Arrests During Follow-Up Period	subgroup % (n=156)
Abstinent at Follow-Up		No Arrests	89.7 (140)
		One or More Arrests	10.3 (16)



Table 21 displays the employment status reported by clients at the six-month post-discharge interview for each subgroup. As a comparison, the bottom portion of Table 21 presents employment status at follow-up for the 156 clients reporting abstinence in the six-month post-discharge period. There is no evidence for a relationship between employment status at follow-up and change in frequency of use from admission to follow-up (Chi Square Test, $p > 0.05$).

Table 21. Employment Status at Follow-Up: Clients Indicating Use of Same Primary Substance at Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-Up Interviews		
	% (n=123)	Employment Status at Follow-Up	subgroup % (n)
Increased Use	37.4 (46)	Employed Full or Part-Time	60.9 (28)
		Not Employed	39.1 (18)
Maintained Same Use	18.7 (23)	Employed Full or Part-Time	56.5 (13)
		Not Employed	43.5 (10)
Decreased Use	43.9 (54)	Employed Full or Part-Time	57.4 (31)
		Not Employed	42.6 (23)
Clients with Completed Follow-Up Interviews		Employment Status at Follow-Up	subgroup % (n=156)
Abstinent at Follow-Up		Employed Full or Part-Time	67.9 (106)
		Not Employed	32.1 (50)

Table 22 presents substance use related hospitalizations during the six-month post-discharge follow-up period for each subgroup. As a comparison, the bottom portion of Table 22 presents substance use related hospitalizations at follow-up for the 156 clients reporting abstinence in the six-month post-discharge period. There is no evidence for a relationship between substance use related hospitalizations at follow-up and change in frequency of use from admission to follow-up (Chi Square Test, $p > 0.05$).

Table 22. Substance Use Related Hospitalizations at Follow-Up: Clients Indicating Use of Same Primary Substance at Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-Up Interviews		
	% (n=123)	Substance Use Related Hospitalizations During Follow-Up Period	subgroup % (n)
Increased Use	37.4 (46)	No Hospitalizations	93.5 (43)
		One or More Hospitalizations	6.5 (3)
Maintained Same Use	18.7 (23)	No Hospitalizations	95.7 (22)
		One or More Hospitalizations	4.3 (1)
Decreased Use	43.9 (54)	No Hospitalizations	85.2 (46)
		One or More Hospitalizations	14.8 (8)
Clients with Completed Follow-Up Interviews		Substance Use Related Hospitalizations During Follow-Up Period	subgroup % (n=156)
Abstinent at Follow-Up		No Hospitalizations	100.0 (156)
		One or More Hospitalizations	0.0 (0)

Table 23 displays attendance at voluntary recovery support meetings during the six-month post-discharge follow-up period for each subgroup. As a comparison, the bottom portion of Table 23 presents voluntary recovery support meeting attendance for the 156 clients reporting abstinence in the six-month post-discharge period. There was a significant association between attendance at voluntary recovery support meetings during the six-month post-discharge follow-up period and the change in frequency of use from admission to follow-up (Chi Square Test, $p < 0.05$). More clients (48.1%) who reported a decrease in use of their primary substance from admission to follow-up attended voluntary recovery support meetings during the follow-up period than clients maintaining the same frequency of use or increasing use of the same primary substance from admission to follow-up (21.7% and 28.3% respectively).

Table 23. Attendance at Voluntary Recovery Support Meetings at Follow-Up: Clients Indicating Use of Same Primary Substance at Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-Up Interviews		
	% (n=123)	Attended Voluntary Recovery Support Meetings During Follow-Up Period	subgroup % (n)
Increased Use	37.4 (46)	No Meeting Attendance	71.7 (33)
		One or More Meetings per Month	28.3 (13)
Maintained Same Use	18.7 (23)	No Meeting Attendance	78.3 (18)
		One or More Meetings per Month	21.7 (5)
Decreased Use	43.9 (54)	No Meeting Attendance	51.9 (28)
		One or More Meetings per Month	48.1 (26)
Clients with Completed Follow-Up Interviews		Attended Voluntary Recovery Support Meetings During Follow-Up Period	subgroup % (n=156)
Abstinent at Follow-Up		No Meeting Attendance	53.8 (84)
		One or More Meetings per Month	46.2 (72)

Table 24 presents the discharge status recorded by treatment agency staff for each subgroup. There are three discharge categories: successful completion; terminated (clients discharged from the program due to noncompliance, lack of treatment progress, or client leaving); and neutral (this category includes, but is not limited to, managed care decision, referral to another program, incarceration, or death). As a comparison, the bottom portion of Table 24 presents discharge status for the 156 clients reporting abstinence in the six-month post-discharge period. There was a significant association between discharge status and the change in frequency of use from admission to follow-up (Chi Square Test, $p < 0.05$). Fewer clients (37%) who reported a decrease in use of their primary substance from admission to follow-up were successfully discharged from treatment than clients maintaining the same frequency of use or increasing use of the same primary substance from admission to follow-up (65.2% and 58.7% respectively).

Table 24. Frequency of Use of Primary Substance and Discharge Status: Clients Indicating Use of Same Primary Substance at Admission and Follow-Up

Change in Frequency of Use	OMS Sample with Completed Follow-Up Interviews		
	% (n=123)	Discharge Status	subgroup % (n)
Increased Use	37.4 (46)	Successful Completion	58.7 (27)
		Terminated	39.1 (18)
		Neutral Discharge	2.2 (1)
Maintained Same Use	18.7 (23)	Successful Completion	65.2 (15)
		Terminated	34.8 (8)
		Neutral Discharge	0.0 (0)
Decreased Use	43.9 (54)	Successful Completion	37.0 (20)
		Terminated	55.6 (30)
		Neutral Discharge	7.4 (4)
Clients with Completed Follow-Up Interviews		Discharge Status	subgroup % (n=156)
Abstinent at Follow-Up		Successful Completion	62.8 (98)
		Terminated	28.2 (44)
		Neutral Discharge	9.0 (14)

PRIMARY SUBSTANCE AT ADMISSION BY OUTCOMES

Tables 25 through 27 on the following pages examine abstinence, arrests, and employment at follow-up in relation to the primary substance reported at admission. The follow-up interviews occur approximately six months after the client was discharged from treatment; therefore, the follow-up period refers to the six months between the client's discharge from treatment and the follow-up interview. In Tables 25 through 27, it is important to note the variability in the percentages of clients abstaining from certain substances can be due to varying numbers of clients participating in the follow-up interview who reported these substances at admission. For example, only one person who completed the follow-up interview reported other amphetamines and stimulants as a primary substance, compared to 155 people who reported alcohol.

Table 25 presents the percentages of clients who had no substance use during the follow-up period for each primary substance reported at admission. The numbers in parentheses represent the number of clients who were abstinent out of the number of total clients who indicated each primary substance at admission. For example, 61 of the 155 clients (percent = 39.4) who reported alcohol as the primary substance at admission were abstinent at follow-up.

Of the 97 clients who reported methamphetamine as their primary substance at admission, nearly half (48 clients, 49.5%) were abstinent at follow-up. Sixty-one of the 155 clients (39.4%) who indicated alcohol as their primary substance at admission abstained during the follow-up period and 34 of the 96 clients (35.4%) who indicated marijuana as their primary substance at admission were abstinent during the follow-up period. There is not a statistically significant association between primary substance at admission and abstinence at follow-up (Cochran-Mantel-Haenszel Test, $p > 0.05$).

Table 25. Primary Substance at Admission by Abstinence at Follow-Up

Primary Substance at Admission	OMS Sample Abstinence at Follow-Up percent (n=373)
Alcohol	39.4 (61/155)
Methamphetamine	49.5 (48/97)
Marijuana/Hashish	35.4 (34/96)
Heroin	20.0 (1/5)
Opiates, other than Heroin*	60.0 (6/10)
Cocaine/Crack	71.4 (5/7)
Benzodiazepines	0.0 (0/2)
Other Amphetamines and Stimulants	100.0 (1/1)

*Opiates other than Heroin includes the following response categories: other opiates and synthetics, non-prescription Methadone, and OxyContin.



Table 26 examines arrests at follow-up in relation to primary substance at admission. For this table, clients were categorized as having no arrests since discharge or having one or more arrests since discharge from treatment. The percentages of clients who reported no arrest during the follow-up period for each primary substance reported at admission are presented. The numbers in parentheses represent the number of clients who indicated they were not arrested at follow-up out of the number of total clients who indicated that substance at admission.

Of the 96 clients who reported marijuana as the primary substance at admission, 87 clients (90.6%) were arrest-free at follow-up. Additionally, 133 of the 155 clients (85.8%) indicating alcohol as the primary substance at admission and 75 of the 97 clients (77.3%) reporting methamphetamine as the primary substance at admission were arrest-free. There is not a statistically significant association between primary substance at admission and no arrests at follow-up (Cochran-Mantel-Haenszel Test, $p > 0.05$).

Table 26. Primary Substance at Admission by No Arrests at Follow-Up

Primary Substance at Admission	OMS Sample No Arrests at Follow-Up percent (n=373)
Alcohol	85.8 (133/155)
Methamphetamine	77.3 (75/97)
Marijuana/Hashish	90.6 (87/96)
Heroin	100.0 (5/5)
Opiates, other than Heroin*	90.0 (9/10)
Cocaine/Crack	100.0 (7/7)
Benzodiazepines	100.0 (2/2)
Other Amphetamines and Stimulants	0.0 (0/1)

*Opiates other than Heroin includes the following response categories: other opiates and synthetics, non-prescription Methadone, and OxyContin.

Table 27 examines employment status at follow-up in relation to primary substance reported at admission. For this table, clients were categorized as being employed (full or part-time) at follow-up, or not being employed at follow-up. The percentages of clients who reported they were employed at follow-up for each primary substance are presented. The numbers in parentheses represent the number of clients who were employed at follow-up out of the number of total clients who indicated that substance at admission.

Six months following discharge, 68 of the 96 clients (70.8%) reporting marijuana as the primary substance at admission were employed. In addition, 108 of the 155 clients (69.7%) indicating alcohol and 61 of the 97 clients (62.9%) reporting methamphetamine were employed at follow-up. There is not a significant difference between employment at follow-up and primary substance reported at admission (Cochran-Mantel-Haenszel Test, $p > 0.05$).

Table 27. Primary Substance at Admission by Employment at Follow-Up

Primary Substance at Admission	OMS Sample Employed at Follow-Up percent (n=373)
Alcohol	69.7 (108/155)
Methamphetamine	62.9 (61/97)
Marijuana/Hashish	70.8 (68/96)
Heroin	100.0 (5/5)
Opiates, other than Heroin*	50.0 (5/10)
Cocaine/Crack	42.9 (3/7)
Benzodiazepines	100.0 (2/2)
Other Amphetamines and Stimulants	0.0 (0/1)

*Opiates other than Heroin includes the following response categories: other opiates and synthetics, non-prescription Methadone, and OxyContin.

OUTCOMES BY ABSTINENCE AT FOLLOW-UP

Tables 28 through 35 examine abstinence at follow-up in relation to selected variables at admission and follow-up. Abstinence refers to abstinence from all substances in the previous six months (follow-up period). In Tables 28 through 35 on the following pages, the percentages and the N for each response in the “Abstinent” column represent the number of clients responding out of the total number of abstinent clients; the percentages and N in the “Non-Abstinent” column represent the number of clients responding out of the total number of non-abstinent clients. Of the 373 clients who completed a follow-up interview, 156 clients (41.8%) were abstinent and 217 clients (58.2%) were not abstinent.



Table 28 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by arrests reported during the six-month post-discharge period. There is a statistically significant difference between abstinence and arrest categories at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.05$). The percentage of abstinent clients who reported no arrests during the follow-up period (89.7%) was higher than the percentage of non-abstinent clients who reported no arrests (82.4%). The number of non-abstinent clients who reported one or more arrests at follow-up (38 clients) was over two times higher than the number of the abstinent clients (16 clients) reporting arrests.

Table 28. Arrests at Follow-Up by Abstinence at Follow-Up

Arrests*	OMS Sample at Follow-Up n=372**	
	Abstinent percent (n=156)	Non-Abstinent percent (n=216)**
None	89.7 (140)	82.4 (178)
1 to 3 Times	10.3 (16)	17.6 (38)
4 or More Times	0.0 (0)	0.0 (0)

*Statistically significant (Cochran-Mantel-Haenszel Test, $p < 0.05$).

**One client who completed the follow-up interview declined to answer the question about arrests, therefore data are excluded.

Table 29 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by employment status reported at follow-up. There is no statistically significant association between abstinence and employment at follow-up (Cochran-Mantel-Haenszel Correlation Test, $p > 0.05$).

Table 29. Employment at Follow-Up by Abstinence at Follow-Up

Employment Status	OMS Sample at Follow-Up n=373	
	Abstinent percent (n=156)	Non-Abstinent percent (n=217)
Employed Full-Time (≥ 35 hrs/wk)	51.9 (81)	51.2 (111)
Employed Part-Time (< 35 hrs/wk)	16.0 (25)	16.1 (35)
Unemployed (looking for work in the past 30 days)	14.1 (22)	18.4 (40)
Not in Labor Force	17.9 (28)	14.3 (31)

Table 30 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by the change in employment status from admission to follow-up. Increased employment includes clients who changed from not being in the labor force or were unemployed at admission to having any employment at follow-up, or those who changed from being employed part-time at admission to full-time at follow-up. Decreased employment includes clients who changed from having any employment at admission to being unemployed or not in the labor force at follow-up, or those who changed from being employed full-time at admission to part-time at follow-up. There is no statistically significant association between abstinence and change in employment status at follow-up (Chi Square Test, $p > 0.05$).

Table 30. Change in Employment Status from Admission to Follow-Up by Abstinence at Follow-Up

Change in Employment Status	OMS Sample at Follow-Up n=373	
	Abstinent percent (n=156)	Non-Abstinent percent (n=217)
Increased Employment	44.9 (70)	37.3 (81)
Maintained Full-Time Employment	19.9 (31)	25.3 (55)
Maintained Part-Time Employment	4.5 (7)	4.1 (9)
Remained Unemployed	8.3 (13)	11.1 (24)
Remained Not in the Labor Force	10.9 (17)	7.8 (17)
Decreased Employment	11.5 (18)	14.3 (31)

Table 31 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by monthly income reported at follow-up. There is not a statistically significant association between abstinence and monthly income at follow-up (Jonckheere-Terpstra Test, $p > 0.05$).

Table 31. Monthly Income at Follow-Up by Abstinence at Follow-Up

Monthly Income	OMS Sample at Follow-Up n=361	
	Abstinent percent (n=152)	Non-Abstinent percent (n=209)
None	33.6 (51)	31.1 (65)
\$500 or less	3.3 (5)	5.3 (11)
\$501 to \$1000	14.5 (22)	12.9 (27)
\$1001 to \$2000	32.2 (49)	27.8 (58)
Over \$2000	16.4 (25)	23.0 (48)

Note: Data from 12 clients who completed a follow-up interview are excluded due to clients at follow-up reporting variability of income (due to contractual/seasonal work or commission based pay) or declining to disclose their income.

Table 32 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by the change in income from admission to follow-up. “Increased Monthly Income” indicates clients have moved from a smaller income category at admission to a larger income category at follow-up. “Decreased Monthly Income” represents clients who have moved from a larger income category at admission to a smaller income category at follow-up. There is not a statistically significant association between abstinence and change in income level at follow-up (Chi Square Test, $p > 0.05$).

Table 32. Change in Income from Admission to Follow-Up by Abstinence at Follow-Up

Change in Monthly Income	OMS Sample at Follow-Up n=359	
	Abstinent percent (n=152)	Non-Abstinent percent (n=207)
Increased Monthly Income	50.0 (76)	44.4 (92)
Maintained Over \$2000	2.6 (4)	6.3 (13)
Maintained \$1001 to \$2000	5.3 (8)	6.3 (13)
Maintained \$501 to \$1000	2.0 (3)	3.4 (7)
Maintained \$500 or Less	0.0 (0)	1.0 (2)
Maintained No Income	19.1 (29)	15.0 (31)
Decreased Monthly Income	21.1 (32)	23.7 (49)

Note: Data from 14 clients who completed a follow-up interview are excluded due to clients at follow-up reporting variability of income (due to contractual/seasonal work or commission based pay) or declining to disclose their income.

Table 33 presents responses for primary income source at both admission and follow-up for clients who completed the follow-up interview. The second and third columns list the percentage of abstinent and non-abstinent clients at follow-up by income source at admission. The fourth and fifth columns list the percentage of abstinent and non-abstinent clients at follow-up by income source at follow-up. At both admission and follow-up, the most common income source reported by abstinent and non-abstinent clients was “wages/salary.” There are no statistically significant associations between abstinence and primary income source at both admission and follow-up (Likelihood Ratio Chi-Square Test, $p > 0.05$).

Table 33. Primary Income Source at Admission and Follow-Up by Abstinence at Follow-Up

Primary Income Source	OMS Sample at Follow-Up n=373			
	Primary Income Source at Admission		Primary Income Source at Follow-Up	
	Abstinent percent (n=156)	Non-Abstinent percent (n=217)	Abstinent percent (n=156)	Non-Abstinent percent (n=217)
None	25.6 (40)	15.2 (33)	0.0 (0)	0.5 (1)
Wages/Salary	41.0 (64)	53.5 (116)	62.2 (97)	61.8 (134)
Family/Friends	19.9 (31)	20.3 (44)	19.2 (30)	19.8 (43)
Public Assistance	0.6 (1)	0.9 (2)	3.8 (6)	4.6 (10)
Retirement/Pension	0.0 (0)	0.5 (1)	1.9 (3)	0.9 (2)
Disability	1.9 (3)	3.2 (7)	7.1 (11)	6.0 (13)
SSI and SSDI	3.8 (6)	3.7 (8)	0.6 (1)	1.4 (3)
Other	7.1 (11)	2.8 (6)	5.1 (8)	5.1 (11)

Table 34 presents a comparison of clients who were abstinent versus clients who were not abstinent at follow-up by living arrangements reported at follow-up. There is a statistically significant association between abstinence and living arrangements at follow-up (Likelihood Ratio Chi-Square Test, $p < 0.05$). The percentage of non-abstinent clients who reported living with their parents (20.3%) was nearly two times higher than the percentage of abstinent clients who reported living with their parents (10.3%). A higher percentage of abstinent clients (9%) were living in halfway houses, group homes, or transitional housing facilities at follow-up than non-abstinent clients (3.7%).

Table 34. Living Arrangements at Follow-Up by Abstinence at Follow-Up

Living Arrangements	OMS Sample at Follow-Up n=373	
	Abstinent percent (n=156)	Non-Abstinent percent (n=217)
Alone	21.2 (33)	17.5 (38)
Parents	10.3 (16)	20.3 (44)
Significant Other Only	15.4 (24)	15.2 (33)
Significant Other and Child(ren)	14.7 (23)	15.7 (34)
Child(ren) Only	7.1 (11)	4.6 (10)
Other Adults	12.2 (19)	18.4 (40)
Other Adults and Child(ren)	6.4 (10)	2.8 (6)
Halfway House, Group Home, Transitional Housing*	9.0 (14)	3.7 (8)
Homeless, Shelter	3.8 (6)	1.4 (3)
Hospital	0.0 (0)	0.5 (1)

*Included in the halfway house category are clients living in substance use disorder halfway houses, correctional halfway houses, and transitional housing facilities.

Of the 373 clients who completed a follow-up interview, 155 clients (41.6%) reported attendance at Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or similar voluntary meetings for recovery in the six months following discharge. There is no statistically significant association between meeting attendance and abstinence at follow-up (Cochran-Mantel-Haenszel Test, $p > 0.05$).

Table 35. Voluntary Recovery Support Meetings Attended at Follow-Up by Abstinence at Follow-Up

Average Number of Meetings Attended Per Month	OMS Sample at Follow-Up N=373	
	Abstinent percent (n=156)	Non-Abstinent percent (n=217)
None	53.8 (84)	61.8 (134)
One or More Meetings	46.2 (72)	38.2 (83)

OUTCOMES BY DEMOGRAPHICS

Outcomes by sex and outcomes by age are presented. Analyses were also conducted on outcomes by race and ethnicity and there were no marked differences between groups. Statistical significance tests were not performed for race and ethnicity analyses due to the small numbers in some categories.

Outcomes by Sex

Figures 4 through 10 present selected outcome variables at admission and follow-up presented by sex. Of the 373 clients who completed the follow-up interview, nearly three-quarters were male (269 clients, 72.1%) and 104 were females (27.9%).

The three primary substances clients reported most often at admission and follow-up were alcohol, methamphetamine, and marijuana. Figures 4 and 5 show the percentage of males and females reporting these three substances at admission and follow-up. The following primary substances are grouped together in the “other substances” category due to the low number of clients with completed interviews reporting these at admission and follow-up (refer to Table 5 on page 11): heroin, opiates and synthetics other than heroin, cocaine/crack, benzodiazepines, and other amphetamines and stimulants.

The pattern of primary substance use at admission differs between males and females (Wald Chi Square, $p < 0.04$). As shown in Figure 4, at admission, a higher percentage of males than females indicated alcohol as their primary substance (46.8% and 27.9% respectively). A higher percentage of females than males reported methamphetamine as the primary substance at admission (43.3% and 19.3% respectively). Similar percentages of males and females indicated marijuana as the primary substance at admission (26.8% and 23.1% respectively).

Figure 4. Primary Substance at Admission by Sex

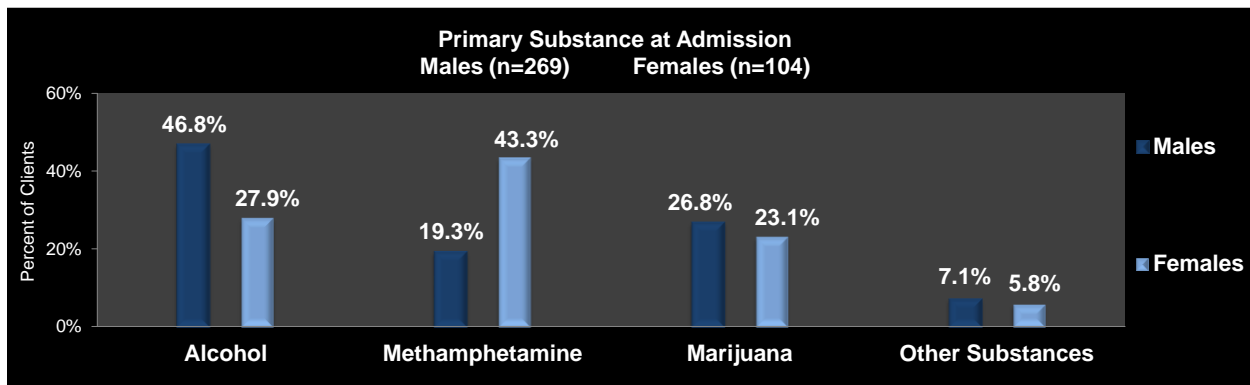


Figure 5 shows abstinence and primary substances reported at follow-up for males and females. There are no significant differences between males and females for abstinence or for the primary substances reported at follow-up (Chi Square Test, $p > 0.05$).

Figure 5. Primary Substance at Follow-Up by Sex

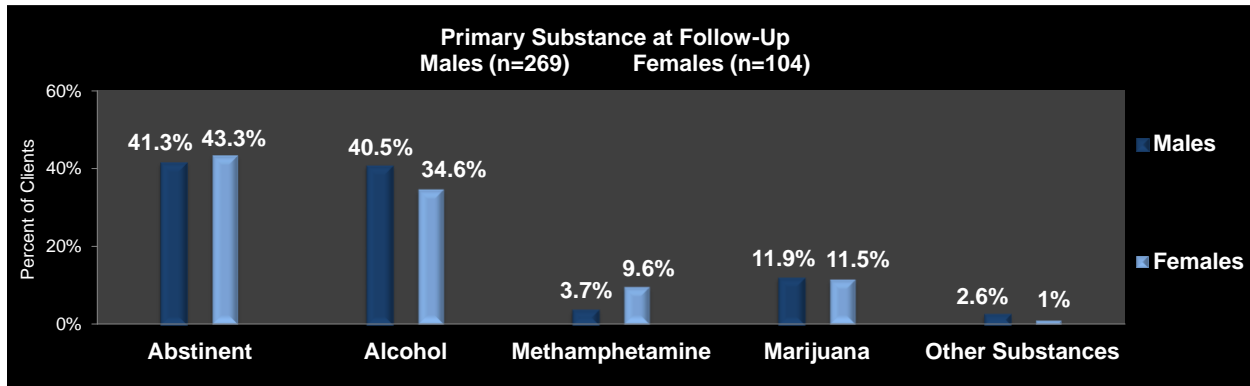


Figure 6 is a subset of the total group of clients who completed the follow-up interview and presents frequency of use data for individuals who reported using the same primary substance at both admission and follow-up by sex; the figure includes *only* clients who reported use at follow-up. Figure 6 presents the change in frequency of use from admission to follow-up for this subgroup of 123 clients. Of the 123 individuals, 89 clients (72.4%) were male and 34 clients (27.6%) were female. There are no significant differences between males and females and change in frequency of use from admission to follow-up for those reporting the same primary substance at admission and follow-up (Chi Square, $p > 0.05$).

Figure 6. Frequency of Use of Primary Substance by Sex: Clients Indicating Use of Same Primary Substance at Both Admission and Follow-Up

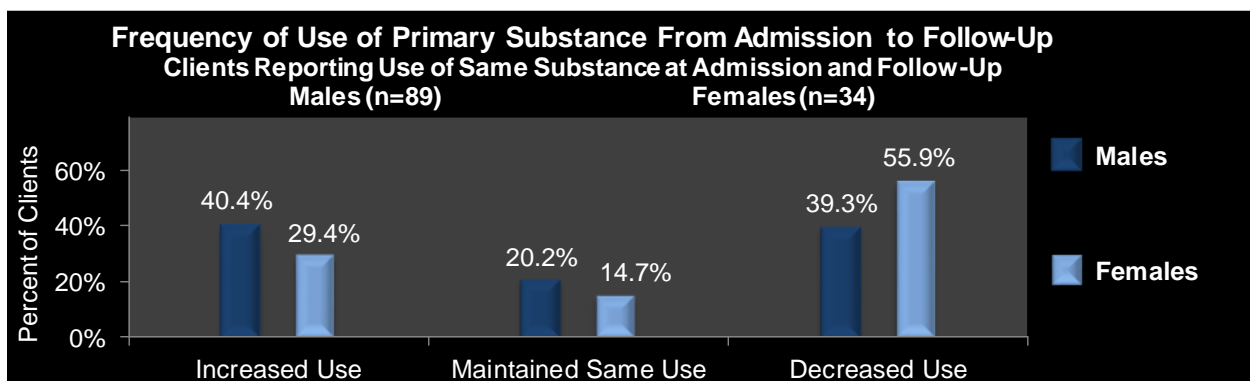
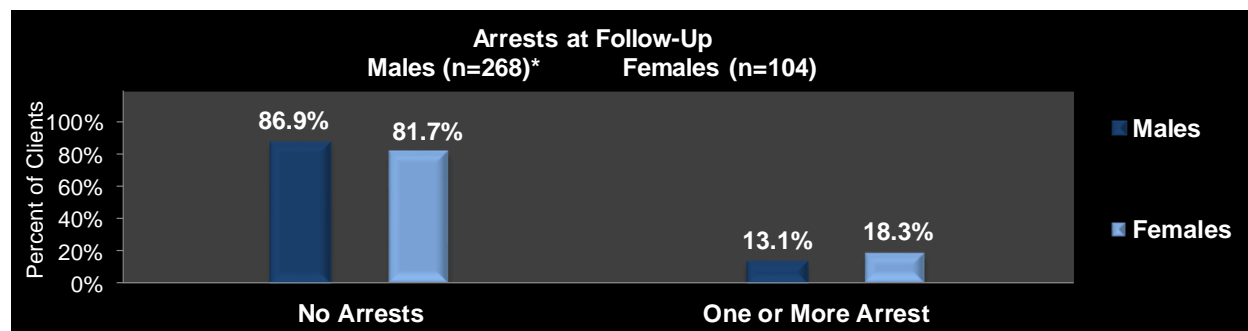


Figure 7 shows arrests during the follow-up period for males and females. There are no significant differences between males and females and arrests at follow-up (Chi Square Test, $p > 0.05$).

Figure 7. Arrests at Follow-Up by Sex



*One male client who completed the follow-up interview declined to answer the question about arrests, therefore data are excluded.

Employment status reported at follow-up for males and females is shown in Figure 8. There are no significant differences between males and females and employment at follow-up (Chi Square Test, $p > 0.05$).

Figure 8. Employment at Follow-Up by Sex

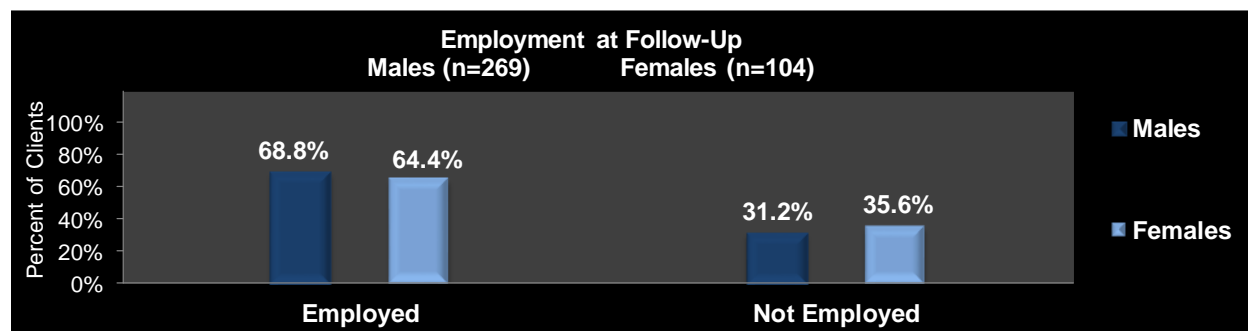
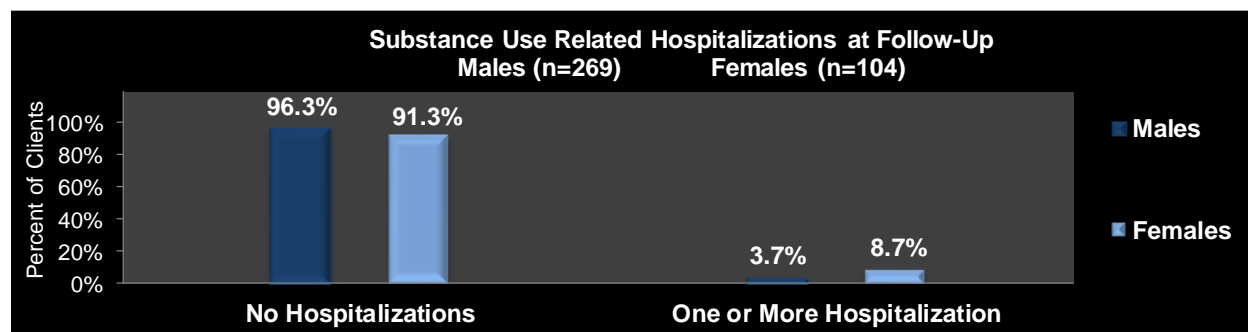


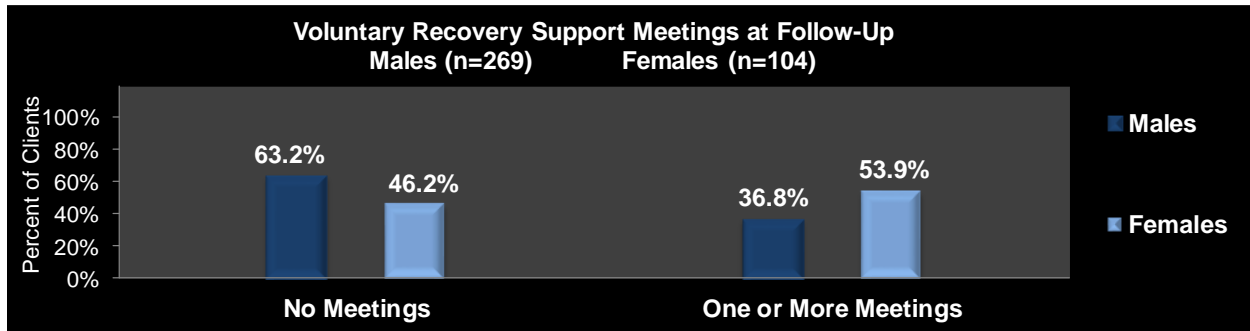
Figure 9 displays substance use related hospitalizations during the follow-up period for males and females. There are no significant differences between males and females and hospitalizations for substance use related problems during the follow-up period (Chi Square Test, $p > 0.05$).

Figure 9. Substance Use Related Hospitalizations at Follow-Up by Sex



Attendance at voluntary recovery support meetings during the follow-up period for males and females is shown in Figure 10. There are significant differences between males and females and attendance at voluntary meetings during the follow-up periods (Chi Square Test, $p < 0.01$). More females (53.9%) than males (36.8%) indicated they attended voluntary recovery support meetings during the follow-up period.

Figure 10. Attendance at Voluntary Recovery Support Meetings at Follow-Up by Sex

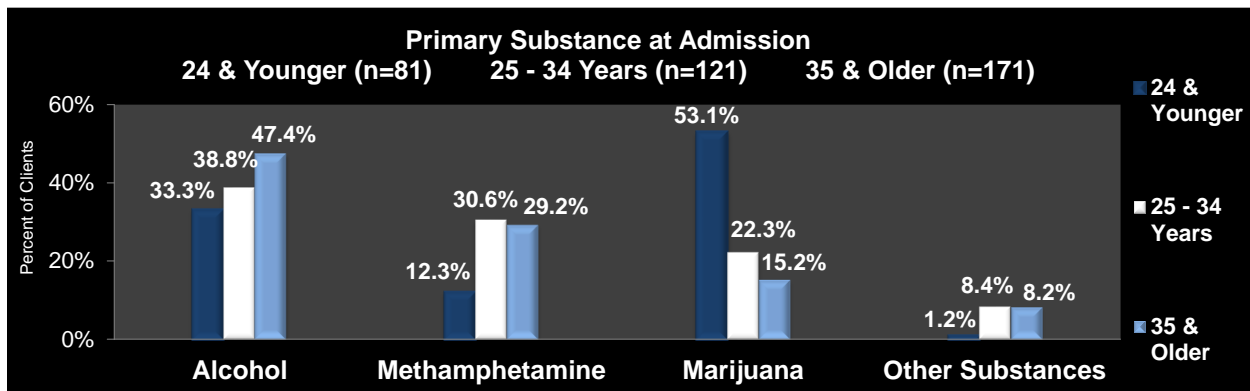


Outcomes by Age

Figures 11 through 17 present selected variables at admission and follow-up presented by age recorded at admission. Three age groups are presented: 24 years old or younger, 25 to 34 years old, and 35 years or older. Of the 373 clients who completed the follow-up interview, 81 clients (21.7%) were 24 and younger, 121 clients (32.4%) were between the ages of 25 and 34, and 171 clients (45.8%) were 35 years or older at admission.

There are significant differences between the three age groups for the primary substances reported at admission (Chi Square Test, $p < 0.0001$). As shown in Figure 11, alcohol was more often identified as the primary substance at admission by older clients and marijuana was more often reported by younger clients. Methamphetamine as the primary substance at admission seems concentrated among clients older than 24 years of age.

Figure 11. Primary Substance at Admission by Age Group



There are significant differences between the three age groups for abstinence and the primary substances reported at follow-up (Chi Square Test, $p < 0.01$). Similar percentages of clients age 25 to 34 and 35 and older reported abstinence during the six months following discharge from treatment (45.5% and 46.2% respectively), while a lower percentage of clients 24 and younger indicated abstinence (27.2%) as shown in Figure 12. Similar to admission, a higher percentage of clients age 24 and younger (23.5%) than clients in other age groups reported marijuana as the primary substance at follow-up.

Figure 12. Primary Substance at Follow-Up by Age Group

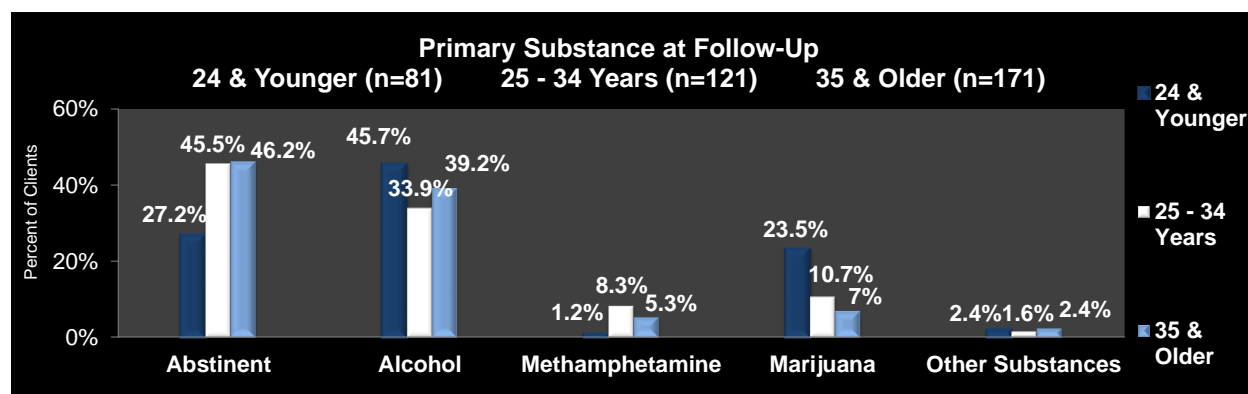
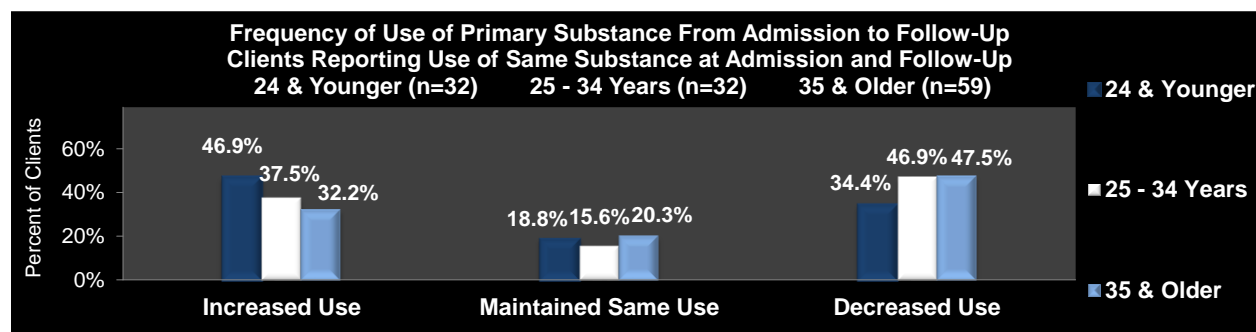


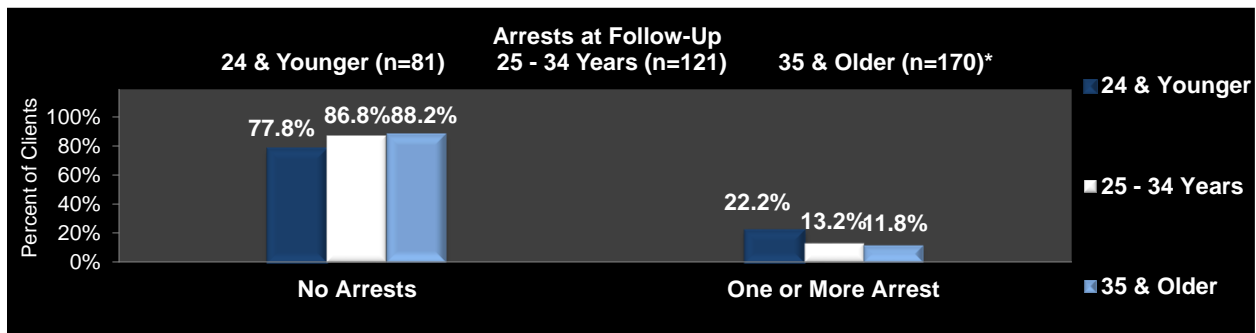
Figure 13 is a subset of the total group of clients who completed the follow-up interview and presents frequency of use data for individuals who reported using the same primary substance at both admission and follow-up by age group; the figure includes *only* clients who reported use at follow-up. Figure 13 presents the change in frequency of use from admission to follow-up for this subgroup of 123 clients. Of the 123 individuals, 32 clients (26%) were 24 and younger, 32 clients (26%) were 25 to 34 years of age, and 59 clients (48%) were 35 and older. There are no significant differences between age groups and change in frequency of use from admission to follow-up for those reporting the same primary substance at admission and follow-up (Chi Square Test, $p > 0.05$).

Figure 13. Frequency of Use of Primary Substance by Age Group: Clients Indicating Use of Same Primary Substance at Both Admission and Follow-Up



Arrests during the follow-up period for the three age categories are shown in Figure 14. There are no significant differences between age categories and arrests at follow-up (Chi Square Test, $p > 0.05$).

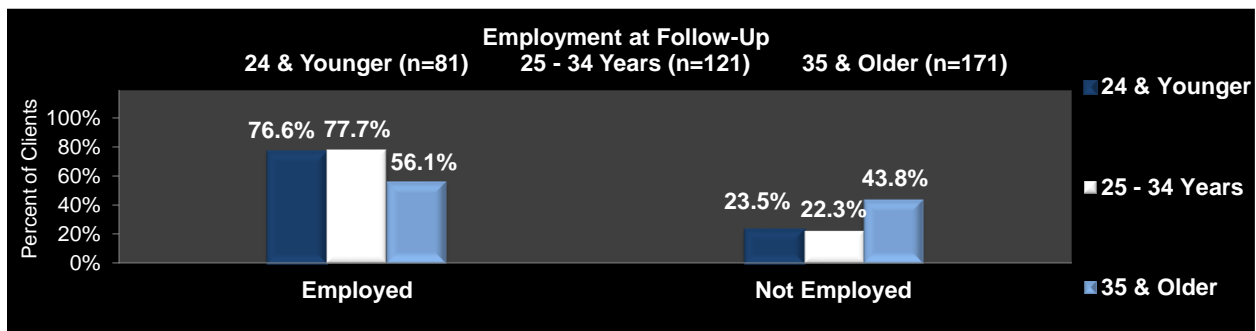
Figure 14. Arrests at Follow-Up by Age Group



*One client in the 35 and older age group who completed the follow-up interview declined to answer the question about arrests, therefore data are excluded.

Figure 15 shows employment status reported at follow-up for the three age categories. There are significant differences between the age groups and employment at follow-up (Chi Square Test, $p < 0.001$). Clients in the 35 and older age group were less likely to be employed at follow-up.

Figure 15. Employment at Follow-Up by Age Group



Substance use related hospitalizations during the follow-up period for the three age categories are displayed in Figure 16. There are no significant differences between age groups and hospitalizations for substance use related problems during the follow-up period (Chi Square Test, $p > 0.05$).

Figure 16. Substance Use Related Hospitalizations at Follow-Up by Age Group

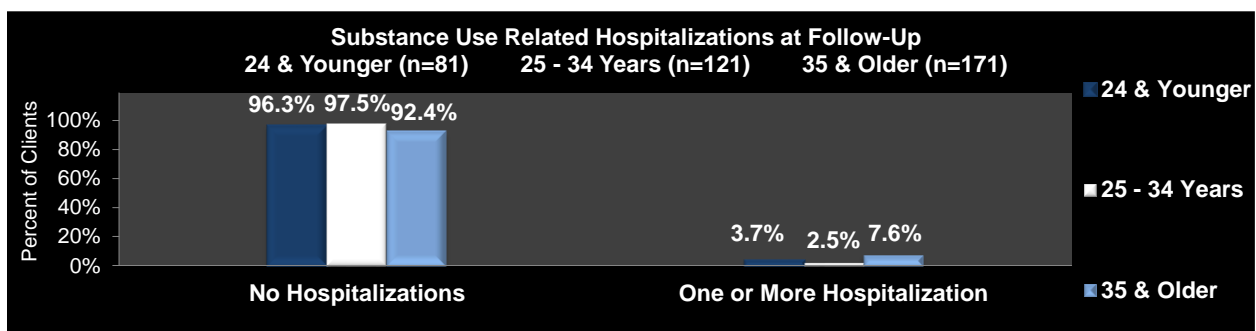
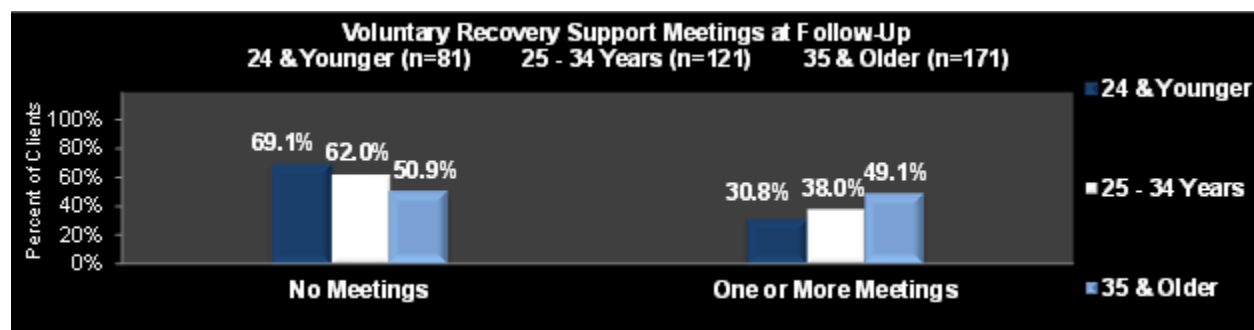


Figure 17 displays attendance at voluntary recovery support meetings during the follow-up period for the three age categories. There are significant differences between age categories and attendance at voluntary meetings during the follow-up period (Chi Square Test, $p < 0.05$). Nearly half the clients (49.1%) in the 35 and older age group attended voluntary recovery support meetings during the follow-up period.

Figure 17. Attendance at Voluntary Recovery Support Meetings at Follow-Up by Age Group



DISCHARGE AND LENGTH OF STAY IN TREATMENT

Discharge Status

As of August 30th, 2017, of the 1,379 clients in the 2016 OMS sample, discharge information was received for 1,276 clients and 103 clients were still receiving treatment services. There are three discharge categories: successful completion; terminated (clients discharged from the program due to noncompliance, lack of treatment progress, or client leaving); and neutral (this category includes, but is not limited to, managed care decision, referral to another program, incarceration, or death). Table 36 shows the discharge status for the 1,276 discharged clients in the OMS sample and for the 373 clients who completed the follow-up interview. Clients who were successfully discharged comprise the majority of the clients completing the follow-up interview (56%).

Table 36. Discharge Status

Discharge Status				
	n	Successful Completion % (n)	Terminated % (n)	Neutral Discharge % (n)
Clients in OMS Sample	1,276	49.7 (634)	42.4 (541)	7.9 (101)
Clients with Completed Follow-Up Interview	373	56.0 (209)	37.0 (138)	7.0 (26)

Table 37 shows the three outcome variables for the follow-up interview (abstinence, no arrests, employment) by treatment discharge status. The first column presents the discharge categories. The second column presents the number of clients with completed follow-up interviews in each discharge category. The third column presents the percentage and number of clients who reported abstinence at follow-up (had no substance use during the follow-up period) for each discharge category. For example, 98 of the 209 clients (46.9%) who were successfully discharged were abstinent at follow-up. Data in the “no arrests” and “employed” columns are presented in the same manner as the “abstinent” column. It is important to note clients who were successfully discharged comprise the majority of the clients interviewed: 56% of the clients in Table 37.

The 373 clients who completed a follow-up interview are represented in Table 37. Two hundred nine clients (56%) were discharged as successful cases and 164 clients (44%) did not successfully complete the treatment program. Of the 164 clients who did not complete treatment, 138 were terminated and 26 were neutral discharges. There are statistically significant associations between discharge status and abstinence at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.01$), discharge status and no arrests at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.01$), and discharge status and employment at follow-up (Cochran-Mantel-Haenszel Test, $p < 0.05$). Clients who were discharged as successful or neutral were more likely to be abstinent in the six-month post-discharge period than clients who were terminated. Clients who were successfully discharged were more likely to be arrest-free during the six-month post-discharge period. Clients who were successfully discharged were more likely to be employed at follow-up.

Table 37. Discharge Status by Outcome Variables at Follow-Up

OMS Sample at Follow-Up n=373				
Discharge Status	n	Abstinent* percent (n)	No Arrests* percent (n)	Employed** percent (n)
Successful Completion	209	46.9 (98)	89.5 (187)	72.2 (151)
Terminated	138	31.9 (44)	81.9 (113)	60.9 (84)
Neutral Discharge	26	53.8 (14)	69.2 (18)	65.4 (17)
All Clients at Follow-Up		41.8 (156)	85.3 (318)	67.6 (252)

*Statistically significant (Cochran-Mantel-Haenszel Test, $p < 0.01$).

**Statistically significant (Cochran-Mantel-Haenszel Test, $p < 0.05$).



When completing the follow-up interview, clients are asked how they feel their substance use treatment at the treatment agency ended. In Table 38, each row presents the discharge status recorded by the treatment agency. Clients' perception of their discharge status is provided in the columns. Thus, of the 209 clients successfully discharged by the treatment agency, 191 clients (91.4%) felt their treatment ended successfully. Of the 138 clients who were terminated by the agency, over half (81 clients, 58.7%) felt their treatment ended successfully. Only 37% of those terminated by agency staff, indicated their treatment ended unsuccessfully (51 of 138 clients). Overall, there was little agreement (except for those successfully discharged) between treatment agencies and client perceptions of discharge status (Cohen's Kappa = 0.28).

Table 38. Discharge Status: Comparison of Recorded Discharge Status and Clients' Perceptions of How Treatment Ended

Comparison of Recorded Discharge Status and Clients' Perceptions of How Treatment Ended n=208				
Discharge Reason Reported by Treatment Agency Staff	Clients' Perception of How Treatment Ended			
	n	Successful Completion % (n)	Unsuccessful Completion % (n)	Neutral, Unsure, or No Opinion % (n)
Successful Completion	209	91.4 (191)	8.1 (17)	0.5 (1)
Terminated	138	58.7 (81)	37.0 (51)	4.3 (6)
Neutral Discharge	26	80.8 (21)	19.2 (5)	0.0 (0)

Note: Green shaded cells represent the clients' perception agreed with the discharge reason in the discharge record.

Length of Stay

Length of stay is defined as the number of days from admission through discharge. This section examines length of stay related to three outcome variables at follow-up (abstinence, arrests, and employment), discharge status by the three outcome variables, and length of stay by primary substance at admission.

In Table 39 on the following page, the first column presents the length of stay categories and the second column presents the number of clients with completed follow-up interviews in each length of stay category. The third column presents the percentage and number of clients who had no substance use during the follow-up period for each length of stay range. For example, nine of the 31 clients (29%) who were in treatment less than seven days were abstinent at follow-up. Data in the "no arrests" and "employed" columns are presented in the same manner as the "abstinent" column.

The two most common length of stay categories for clients who completed the follow-up interview were 7 - 30 days (82 clients, 22%) and 31 – 60 days (79 clients, 21.2%). There are no statistically significant associations between length of stay and abstinence at follow-up, length of stay and arrests at follow-up, or length of stay and employment at follow-up (Jonckheere-Terpstra Tests, $p > 0.05$).

Table 39. Length of Stay by Outcome Variables at Follow-Up

OMS Sample at Follow-Up n=373				
Length of Stay	n	Abstinent percent (n)	No Arrests percent (n)	Employed percent (n)
Less Than 7 Days	31	29.0 (9)	77.4 (24)	71.0 (22)
7 - 30 Days	82	40.2 (33)	82.9 (68)	57.3 (47)
31 - 60 Days	79	45.6 (36)	86.1 (68)	72.2 (57)
61 - 90 Days	67	38.8 (26)	83.6 (56)	67.2 (45)
91 - 120 Days	46	45.7 (21)	87.0 (40)	69.6 (32)
More Than 120 Days	68	45.6 (31)	91.2 (62)	72.1 (49)

Unlike previous tables in this section that include data only from clients who completed follow-up interviews, data in Figures 18 and 19 and Table 40 are drawn from all discharged clients who were in the 2016 OMS sample. As previously stated, of the 1,379 clients in the OMS sample, discharge information was received for 1,276 clients and 103 clients were still receiving treatment services.

Figure 18 presents the median length of stay for clients in the OMS sample by the three discharge categories. Clients who successfully completed treatment had a median length of stay of 89 days. Clients who were terminated had a median length of stay of 41 days in the treatment program.

Figure 18. Median Length of Stay by Discharge Status

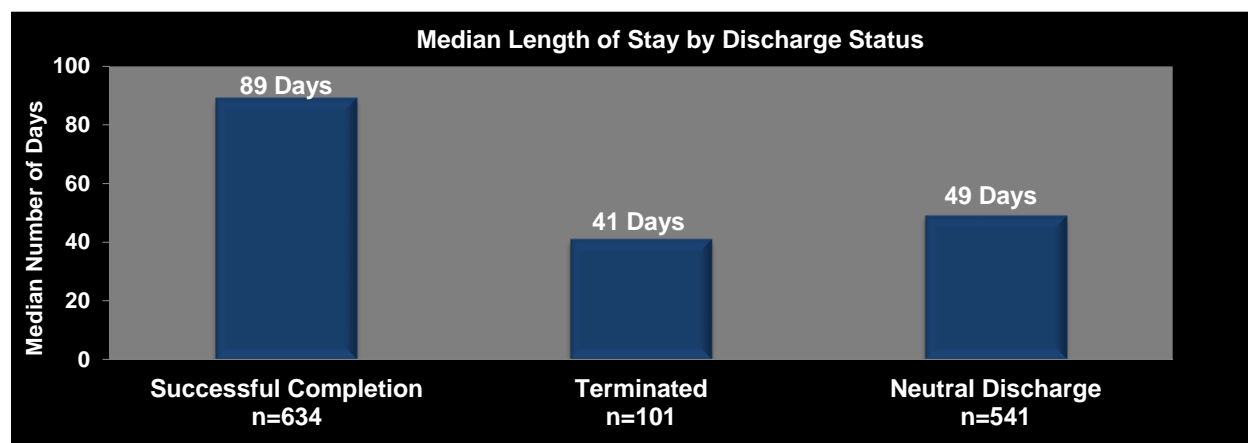
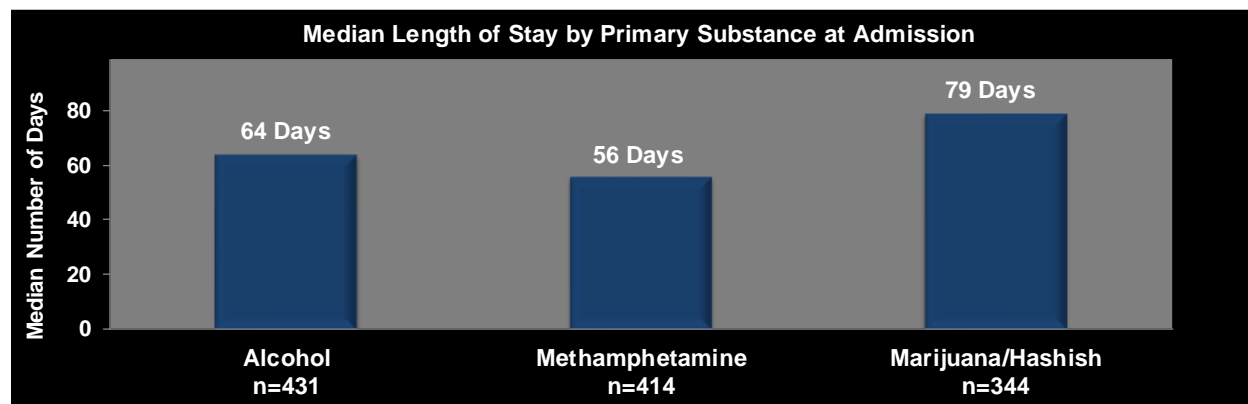


Figure 19 presents the median length of stay for discharged clients for each of the three primary substances reported at admission. Clients whose primary substance at admission was marijuana had a median length of stay of 79 days. Clients who indicated alcohol as the primary substance at admission had a median length of stay of 64 days. Clients whose primary substance at admission was methamphetamine had a median length of stay of 56 days.

Figure 19. Median Length of Stay by Primary Substance at Admission



The most often reported primary substances at admission are alcohol, methamphetamine, and marijuana. Table 40 presents the percentage of clients in each length of stay category for the three substances. There are statistically significant trends between length of stay and methamphetamine as the primary substance reported at admission (Jonckheere-Terpstra Test, $p < 0.001$) as well as length of stay and marijuana as the primary substance at admission (Jonckheere-Terpstra Test, $p < 0.0001$). Just under one-quarter of clients (22.5%) indicating methamphetamine as the primary substance at admission were in treatment for seven to 30 days and more than 120 days. Over one-quarter of clients (29.7%) reporting marijuana as the primary substance at admission had a length of stay of more than 120 days. There is no statistically significant trend between length of stay and alcohol as the primary substance reported at admission (Jonckheere-Terpstra Test, $p > 0.05$).

Table 40. Length of Stay by Primary Substance at Admission

Primary Substance at Admission	n	Length of Stay					
		Less Than 7 Days percent (n)	7 – 30 Days percent (n)	31 – 60 Days percent (n)	61 – 90 Days percent (n)	91 – 120 Days percent (n)	More than 120 Days percent (n)
Alcohol	431	6.7 (29)	20.6 (89)	19.7 (85)	15.5 (67)	15.1 (65)	22.3 (96)
Methamphetamine*	414	15.0 (62)	22.5 (93)	15.0 (62)	14.7 (61)	10.4 (43)	22.5 (93)
Marijuana/Hashish*	344	6.1 (21)	13.7 (47)	17.4 (60)	18.6 (64)	14.5 (50)	29.7 (102)

*Statistically significant (Jonckheere-Terpstra Test, $p < 0.01$).

CLIENTS' PERCEIVED BENEFITS OF TREATMENT

Table 41 presents client responses at the follow-up interview when asked their opinions of the various types of treatment received in the substance use disorder treatment programs. Results from follow-up interviews completed with clients at six months post-discharge indicate that 323 of 373 clients (86.6%) felt the substance use treatment they received was either very beneficial or beneficial overall. "Beneficial" was the response indicated most often for nearly all the various types of counseling. Clients who responded "did not receive" for a certain type of counseling could have done so for various reasons including the type of counseling was not recommended, the type of counseling was not offered, or the type of counseling was offered but the client chose not to participate.

Table 41. Clients' Perceived Benefits

OMS Sample at Follow-Up					
Perceived Benefit of Counseling	Individual Counseling percent (n=373)	Family Counseling percent (n=373)	Group Counseling percent (n=373)	Educational Counseling percent (n=373)	Overall Rating of Treatment Program percent (n=373)
Very Beneficial	34.6 (129)	4.3 (16)	22.8 (85)	22.5 (84)	43.4 (162)
Beneficial	42.6 (159)	3.8 (14)	39.1 (146)	33.5 (125)	43.2 (161)
Not Beneficial	13.7 (51)	2.7 (10)	17.7 (66)	13.1 (49)	13.4 (50)
Did Not Receive	9.1 (34)	89.3 (333)	20.4 (76)	30.8 (115)	Not Applicable

Table 42 presents discharge status recorded by treatment agency staff and client opinions of the overall rating of the treatment program. There is no evidence that clients' overall rating of the treatment program was associated with discharge status (Chi Square Test, $p > 0.05$).

Table 42. Discharge Status by Clients' Perceived Benefit of Overall Rating of Treatment Program

OMS Sample at Follow-Up		
Discharge Status percent (n)	Perceived Benefit of Counseling	Overall Rating of Treatment Program subgroup percent (n=373)
Successful Completion 56.0 (209)	Very Beneficial	44.5 (93)
	Beneficial	43.5 (91)
	Not Beneficial	12.0 (25)
Terminated 37.0 (138)	Very Beneficial	39.1 (54)
	Beneficial	44.2 (61)
	Not Beneficial	16.7 (23)
Neutral Discharge 7.0 (26)	Very Beneficial	57.7 (15)
	Beneficial	34.6 (9)
	Not Beneficial	7.7 (2)

ADDITIONAL FOLLOW-UP DATA

Mental Health

Clients are asked additional questions during the follow-up interview to collect information regarding mental health assessments conducted by treatment agencies, referrals for mental health services while receiving substance use disorder treatment, and medications prescribed for psychological/emotional issues. Clients are also asked questions about their substance use causing stress and reduction in important activities, asked to rate both their physical health and emotional health six months following treatment discharge, and how they feel their substance use treatment at the treatment agency ended. Tables 43 through 49 and Figures 20 through 23 on the following pages present responses from the 373 clients in the 2016 OMS sample who completed follow-up interviews; data collected by Consortium staff are client self-reported.

At follow-up, clients are asked if they were offered a mental health assessment by treatment agency staff while receiving substance use treatment; if they were referred for any mental health services; and if they received any mental health services while in substance use treatment. As shown in Table 43, over half the clients (59%) who completed a follow-up interview indicated they had been offered a mental health assessment by the treatment agency while receiving substance use services. Fifty-six clients (15%) reported they were referred for mental health services by the substance use disorder treatment agency.

Table 43. Mental Health Assessments and Referrals

OMS Sample at Follow-Up n=373		
	Treatment Agency Offered Client Mental Health Assessment percent (n=373)	Treatment Agency Referred Client For Mental Health Services percent (n=373)
Yes	59.0 (220)	15.0 (56)
No	40.8 (152)	75.1 (280)
Already Receiving Mental Health Services	Not a Response Option	9.4 (35)
Does Not Know or Remember	0.3 (1)	0.5 (2)

At treatment admission, treatment agency staff indicate if clients have a psychiatric problem in addition to an alcohol or drug problem. Table 44 on the following page utilizes this variable and provides additional information regarding clients offered mental health assessment and referrals for mental health services during substance use disorder treatment. Of the 373 clients who completed a follow-up interview, treatment agency staff indicated 167 clients (44.8%) had a psychiatric problem in addition to an alcohol or drug problem at admission.



Nearly two-thirds of the clients (65.6%) who had a psychiatric problem identified by treatment agency staff at treatment admission indicated they were offered a mental health assessment during substance use disorder treatment. Forty of the 167 clients (24%) indicated they were referred for mental health services and 29 (17.4%) were already receiving mental health services.

Table 44. Psychiatric Problem Reported at Admission by Mental Health Assessments and Referrals During Substance Use Disorder Treatment

OMS Sample at Follow-Up n=373				
Psychiatric Problem at Admission	Treatment Agency Offered Client Mental Health Assessment		Treatment Agency Referred Client for Mental Health Services	
percent (n=373)	percent (n=167)		percent (n=91)	
Yes 44.8 (167)	Yes	54.5 (91)	Yes	37.4 (34)
			No	48.4 (44)
			Already Receiving MH Services	13.2 (12)
			Does Not Know or Remember	1.1 (1)
	No	45.5 (76)	percent (n=76)	
			Yes	7.9 (6)
			No	69.7 (53)
			Already Receiving MH Services	22.4 (17)
No 55.2 (206)	percent (n=206)		percent (n=129)	
	Yes	62.6 (129)	Yes	11.6 (15)
			No	86.8 (112)
			Already Receiving MH Services	0.8 (1)
			Does Not Know or Remember	0.8 (1)
	No	36.9 (76)	percent (n=76)	
			Yes	1.3 (1)
			No	93.4 (71)
			Already Receiving MH Services	5.3 (4)
	Does Not Know or Remember	0.5 (1)	percent (n=1)	
			Already Receiving MH Services	100.0 (1)

Table 45 is a subset of clients who completed the follow-up interview and includes the 56 clients who responded “yes” when asked if they received a referral for mental health services while in substance use disorder treatment. Of clients who reported they had been referred for mental health services, just over half (29 clients, 51.8%) indicated they received mental health services.

Table 45. Clients Referred for Mental Health Services by Treatment Agency: Receiving Mental Health Services While in Substance Use Disorder Treatment

Clients Referred for Mental Health Services by Treatment Agency	
Receiving Mental Health Services During Substance Use Disorder Treatment	
	percent (n=56)
Yes	51.8 (29)
No	48.2 (27)

Clients are asked if the mental health services they received were provided on-site at the treatment agency or by an agency or individual not affiliated with the treatment agency. Fewer than one-third of the clients (31%) indicated they received mental health services on-site at the treatment agency.

Table 46. Location of Mental Health Services

Received Mental Health Services at Treatment Agency or by Agency/Individual Not Affiliated with Treatment Agency	
	percent (n=29)
On-Site at Treatment Agency	31.0 (9)
Other Agency or Individual	69.0 (20)

Clients who indicate they received mental health services while receiving substance use treatment (either as a result of being referred during substance use treatment or already receiving mental health services) are asked two questions about their opinion of mental health services:

- How beneficial do you feel the mental health services were?
- Do you feel the mental health services helped you with your substance use treatment?

Of 29 clients who received mental health services while in substance use disorder treatment, 21 clients (72.4%) indicated the mental health services they received were either very beneficial or beneficial. All clients (100%) reported receiving mental health services while in substance use disorder treatment was either very beneficial or beneficial.

Table 47. Perceived Benefit of Mental Health Services Received During Substance Use Disorder Treatment

Clients Receiving Mental Health Services While in Substance Use Disorder Treatment		
	Perceived Benefit of Mental Health Services percent (n=29)	Perceived Benefit of Mental Health Services Helping with Substance Use Disorder Treatment percent (n=29)
Very Beneficial	34.5 (10)	69.0 (20)
Beneficial	37.9 (11)	31.0 (9)
Not Beneficial	27.6 (8)	0.0 (0)

At follow-up, clients are asked if they were prescribed any medications for psychological or emotional problems while in substance use treatment. Over one quarter (98 clients, 26.3%) reported taking medication for psychological or emotional problems while in treatment: 52 (13.9%) indicated they were prescribed the medication while in treatment and 46 clients (12.3%) reported they were already taking medication when they began substance use treatment.

Table 48. Medications for Psychological or Emotional Problems While in Treatment

Clients Prescribed Medications for Psychological or Emotional Problems While in Substance Use Disorder Treatment	
	percent (n=373)
Yes	13.9 (52)
No	73.7 (275)
Already Taking Medication	12.3 (46)



Clients who reported taking medications for psychological or emotional problems while in substance use treatment are asked if they are still taking the medications at the follow-up interview. Of the 98 clients indicating they took medications for psychological or emotional problems while in substance use treatment, approximately two-thirds (66.3%) reported they were still taking the medication at the follow-up interview.

Table 49. Clients Still Taking Medications for Psychological or Emotional Problems Six Months Following Treatment Discharge

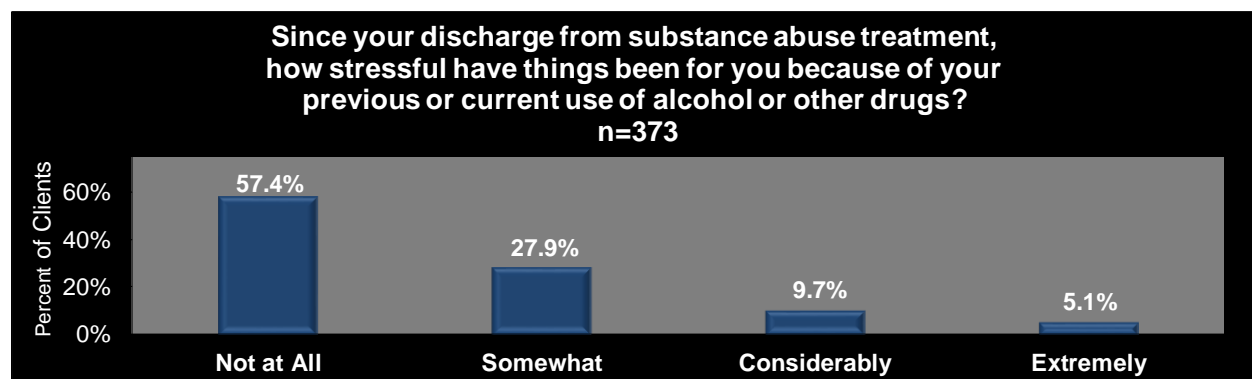
Clients Still Taking Prescribed Medications for Psychological or Emotional Problems at Follow-Up	
	percent (n=98)
Yes	66.3 (65)
No	33.7 (33)

Stress, Important Activities, and Health

Figures 20 through 23 present client responses at the follow-up interview when asked questions regarding stress and reduction of important activities as a result of previous or current use of alcohol or other drugs, as well as questions regarding the client’s physical and emotional health.

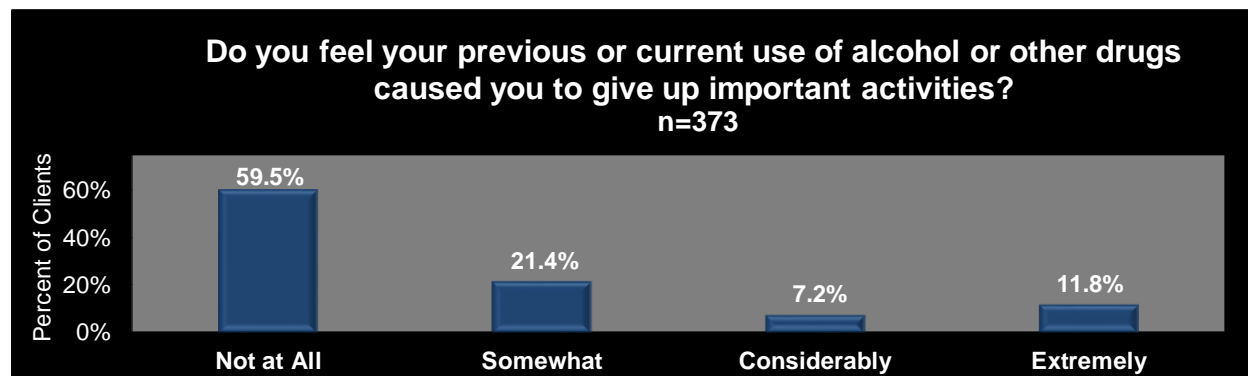
Results from follow-up interviews completed with clients approximately six-months after discharge indicate fewer than half the clients (42.6%) indicate feeling some amount of stress due to previous or current use of alcohol or other drugs.

Figure 20. Stress



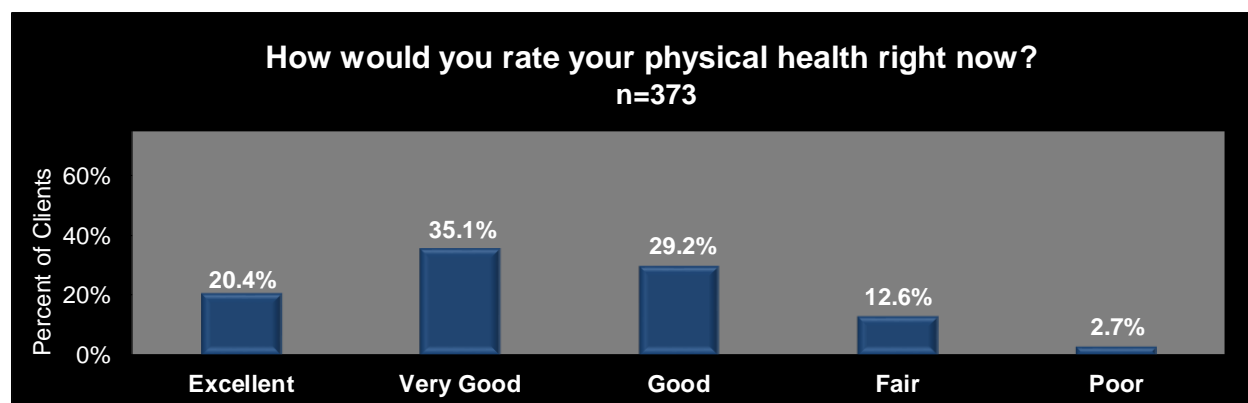
Under half of clients (40.5%) at follow-up reported previous or current use of alcohol or other drugs has caused them to give up activities that are important to them.

Figure 21. Reduction in Activities



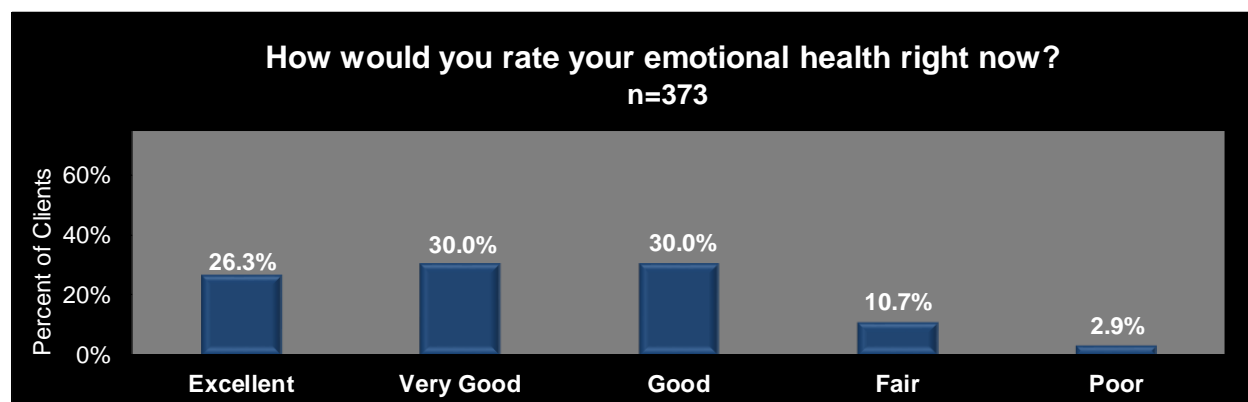
Clients most often reported “very good” physical health six-months after treatment discharge.

Figure 22. Physical Health



At the follow-up interview, “very good” or “good” were the responses clients most commonly indicated when asked about their emotional health.

Figure 23. Emotional Health



APPENDIX: PRESENTATION OF TRACKING DATA

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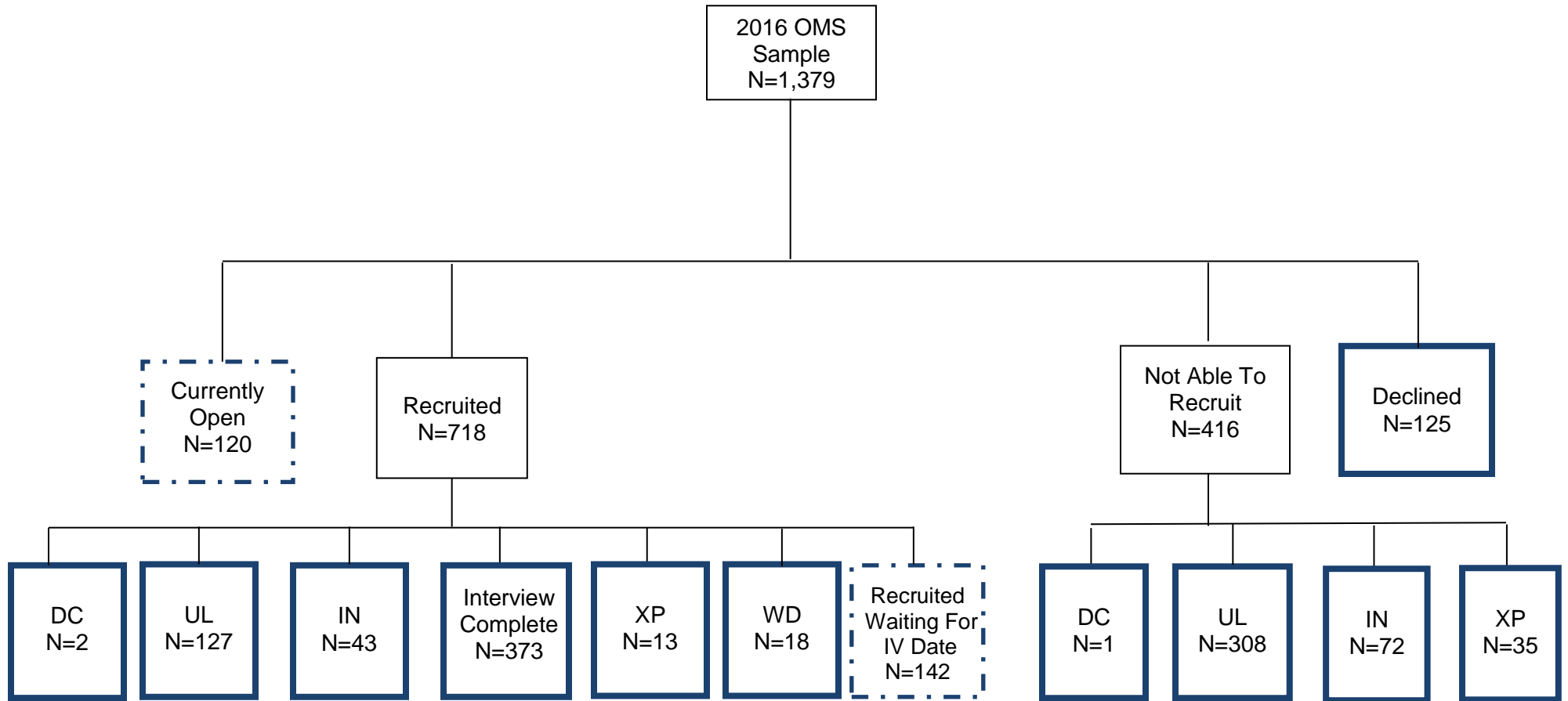
Table A1. Client Classifications

Sample Size	The total number of clients who have been randomly selected for inclusion in the OMS project.
Currently Open	Clients who staff are actively trying to locate and recruit, however have not made contact with. Included are clients who have been left messages and/or sent letters, and have not yet responded to repeated contact attempts.
Recruited	Clients who at some point agreed to participate in the follow-up interview.
Not Able to Recruit	Clients that staff have never been able to successfully contact.
Interview Completed	Interview has been successfully completed. Case is closed.
Declined	Client declined participation in the follow-up interview. Case is closed.
Deceased	Client was deceased. Case is closed.
Withdrew	Client initially agreed to participate in the study but then decided not to participate in the project. Case is closed.
Expired	When Consortium received discharge date, the subsequent interview date had already past (expired). Client may or may not have been successfully recruited. Case is closed.
Unable to Locate	Staff were not able to make contact with the client either via the telephone or mail at time interview was due to take place. The client may or may not have been successfully recruited. Case is closed.
Incarcerated	Client incarcerated at the time interview was due to take place. The client may or may not have been successfully recruited. Case is closed.
Recruited Waiting for IV Date	Client agreed to take part in the follow-up interview. Client is receiving update calls and/or letters until the interview date nears.

8



Figure A1. Classification of 2016 OMS Sample



Key: DC= Deceased, UL=Unable to Locate, IN=Incarcerated, XP=Expired, WD= Withdrew

Note: Bolded boxes represent clients with a closed status. Dashed boxes represent clients with an open status (staff are attempting to locate, recruit, and/or interview the client.)



Tracking Report: 2016 OMS Sample

Table A2. Case Status – All Clients

Status	Number of Clients
Open Cases	262
Closed Cases	1,117
Total	1,379

Table A3. Closed Clients by Category

Category	Number of Clients	Percentage of Clients
Follow-Up Interview Complete	373	33.4
Unable to Locate	435	38.9
Declined or Withdrew Participation	143	12.8
Incarcerated	115	10.3
Expired*	48	4.3
Deceased	3	0.3
Total	1,117	100.0

*When Consortium received discharge date, interview date had already past.

Table A4. Recruitment and Follow-Up Rates*

Category	Percentage
Recruitment	62.4 (718/1,151)
Follow-Up	72.0 (373/518)

*Refer to page 7 for additional information on rate calculations.



Client Contacts: 2016 OMS Sample

Table A5. Type and Number of Client Contacts through August 30, 2017.

Type of Contact	Clients in OMS Sample n=1,379
An outgoing phone call attempting to recruit client.	11,362
An outgoing phone call in which recruitment has actually taken place and the client has agreed to participate.	567
An incoming phone call in which recruitment has actually taken place and the client agreed to participate.	151
An outgoing phone call attempting to update/check-in with client.	5,534
An incoming or outgoing phone call in which a successful update occurs with client.	1,134
An incoming phone call from client or collateral contact.	368
An outgoing phone call attempting to reach client for the six month follow-up interview.	3,755
An outgoing phone call completing the six month follow-up interview.	294
An incoming phone call in which the six month follow-up interview is completed.	79
An outgoing phone call attempting to track client through collateral contacts.	547
Any incoming and outgoing attempts (phone call/letter/fax/email) to track client through their substance use disorder treatment agency.	73
Other - usually an internet search, but includes any call/contact that doesn't fall under any other category.	5,279
A letter sent to contact client; includes letters that have been returned and notification of address changes from post office; outgoing or incoming.	6,298
All Client Contacts	35,441

Table A6. Contacts for Clients with Closed Cases*

Status	Clients	All Contacts	Contacts (Mean)	Number of Letters Mailed
Interviews Completed	373	8,941	24.0	1,528
Unable to Locate	435	14,292	32.9	2,707
Declined	125	918	7.3	142
Incarcerated	115	2,541	22.1	428
Expired	48	961	20.0	166
Withdrew	18	492	27.3	60
Deceased	3	44	14.7	5
Grand Total	1,117	28,189	22.2	5,036

*Information in Table A6 represents only closed cases. Cases are closed for 1,117 of the 1,379 clients (81%) in the 2016 OMS sample.