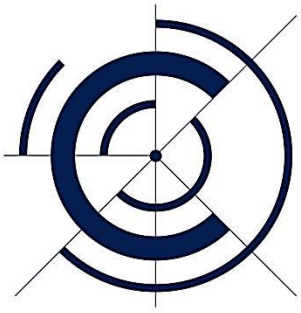
State of Iowa
Outcomes Monitoring System

THE IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION

Year 16
Annual Outcome Evaluation Trend Report
November 2014

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 16 Annual Evaluation Trend Report
November 2014

Suzy Hedden, BS
Evaluation Coordinator

Julie Palmer, BA
Associate Director

Stephan Arndt, PhD
Director

Citation of references related to this report is appreciated. Suggested Citation:

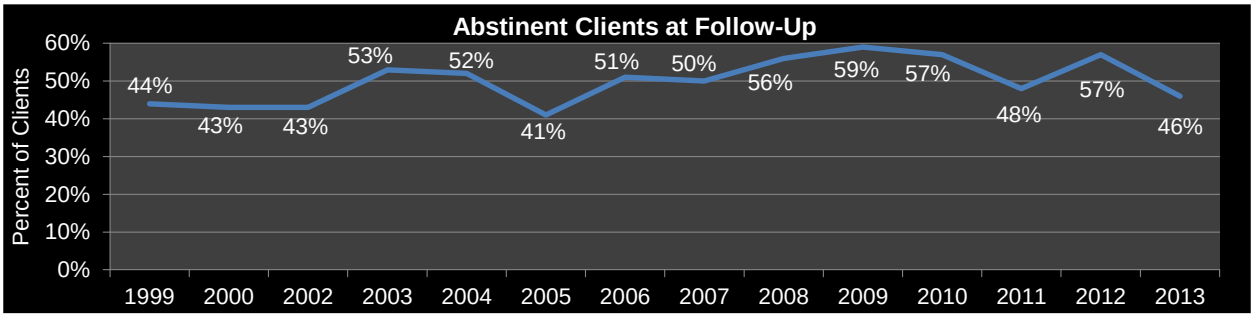
Hedden, S., Palmer, J., & Arndt, S. (2014). State of Iowa Outcomes Monitoring System: Year 16 Annual Outcome Evaluation Trend Report. (Iowa Department of Public Health contract #5884YM50). Iowa City, IA: Iowa Consortium for Substance Abuse Research and Evaluation.
http://iconsortium.subst-abuse.uiowa.edu/

EXECUTIVE SUMMARY

The Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) is under contract with the Iowa Department of Public Health (IDPH) for the Outcomes Monitoring System (OMS) project. The OMS project provides an independent evaluation regarding substance abuse treatment outcomes in Iowa. The Consortium conducts follow-up interviews with randomly selected clients from IDPH-funded substance abuse treatment agencies. The interviews occur approximately six months after discharge from the substance abuse treatment program and provide follow-up data to determine outcomes as well as analyze changes between admission and follow-up. The Consortium has provided ongoing client sampling, recruitment, tracking, data collection, data analysis, and reporting since 1999. This Year 16 OMS trend report examines outcomes for clients admitted to substance abuse treatment between July 1, 1999 and December 31, 2013. Data from the 2001 sample year are omitted due to the weighting mechanism that was applied to the data resulting in numbers with limited usefulness for reporting trends. Data for the most recent years, particularly 2013, have the potential to change as more follow-up interviews are completed.

Abstinence

Abstinence at follow-up has ranged from 41% to 59% over all years and has shown a highly significant positive trend from 1999 to 2013 (Kendall's Tau_b Test, $p < 0.0001$).

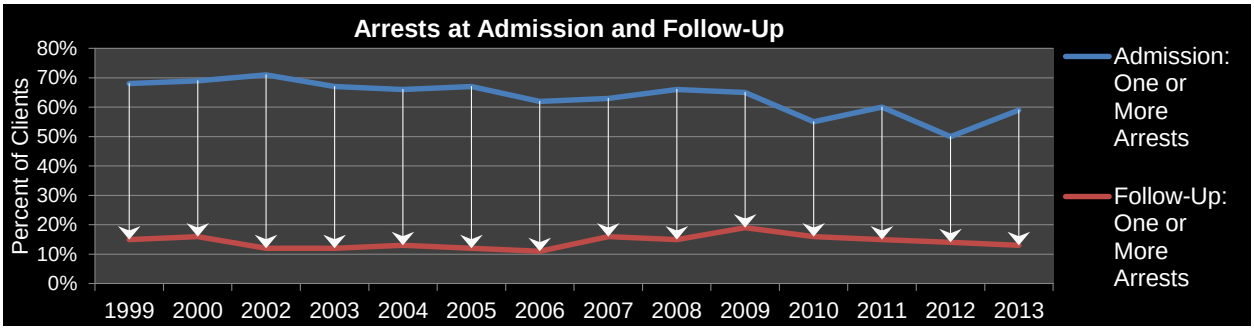


Primary Substance

The most often reported primary substance at admission and follow-up through all years was alcohol. Marijuana is the second most common primary substance reported at follow-up in all years except 2012 and 2013, when a higher percentage of clients reported methamphetamine as the primary substance compared to marijuana.

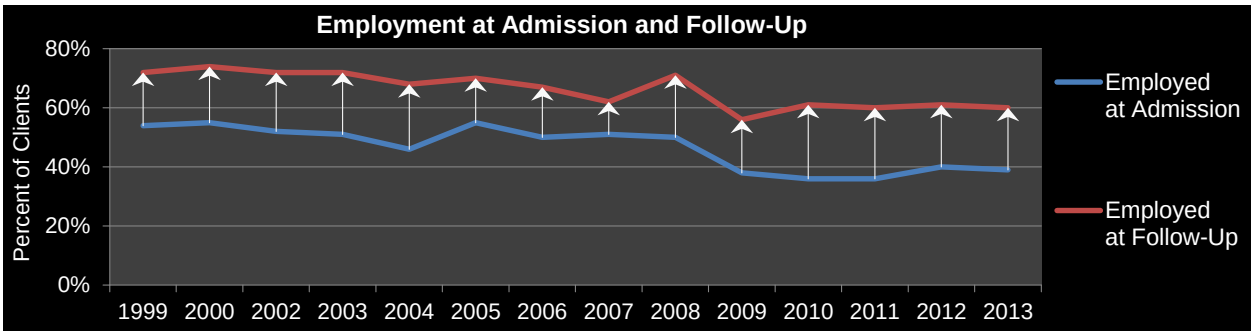
Arrests

The majority of clients reported arrests at admission each year, ranging from 50% in 2012 to 71% in 2002. However, over all years, fewer than 20% of clients report arrests six months following treatment discharge.



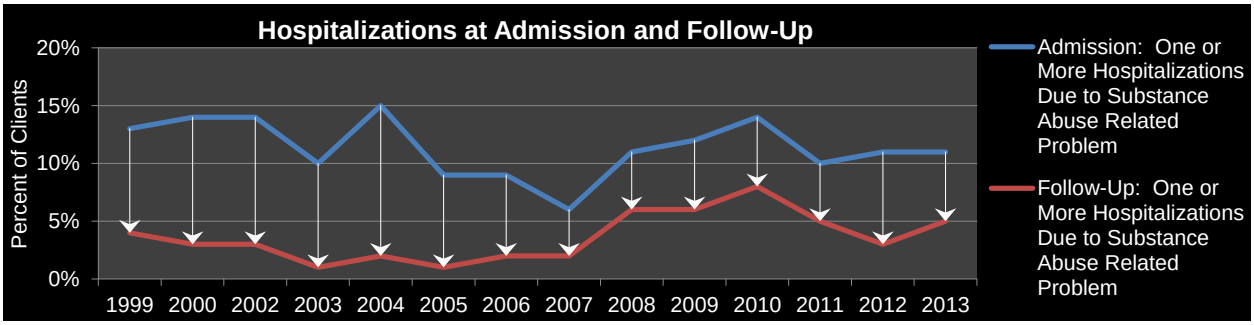
Employment

Compared to admission, more clients are employed (full or part-time) six months following discharge from treatment. Over all years, an average of 66% of clients reported employment at follow-up compared to an average of 47% indicating employment at admission.



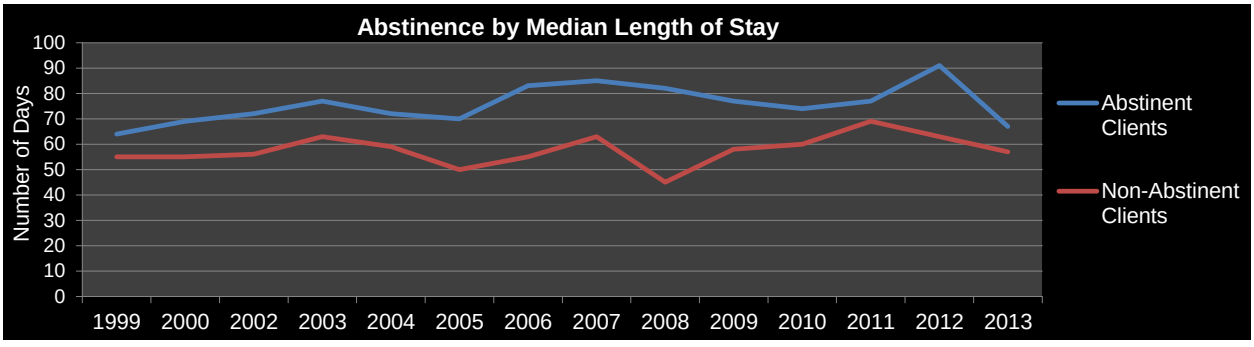
Hospitalizations Due to Substance Abuse Related Problems

Hospitalizations after treatment due to substance abuse related problems are reduced to nearly one third (4%) of the pre-treatment hospitalization rate (11%).



Length of Stay

In 1999 through 2009 and in 2012 there were significant associations between length of stay and abstinence at follow-up (Jonckheere-Terpstra Tests, $p < 0.05$). Results for clients admitted in 2013 may change as more discharge information is received and more interviews are conducted with these clients.



Discharge Status

In most years, there were significant associations between discharge status and abstinence, no arrests, and employment at follow-up: clients who successfully completed substance abuse treatment were more likely to be abstinent, had not been arrested, and were employed six months following treatment discharge than clients who did not successfully complete treatment (Cochran-Mantel-Haenszel Tests, $p < 0.05$).

TABLE OF CONTENTS

BACKGROUND

The Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) is under contract with the Iowa Department of Public Health (IDPH) for the Outcomes Monitoring System (OMS) project. The OMS project provides an independent evaluation regarding substance abuse treatment outcomes in Iowa. The Consortium conducts follow-up interviews with randomly selected clients from IDPH-funded substance abuse treatment agencies. The interviews occur approximately six months after discharge from the substance abuse treatment program and provide follow-up data to determine outcomes as well as analyze changes between admission and follow-up. The Consortium has provided ongoing client sampling, recruitment, tracking, data collection, data analysis, and reporting since January 1999.

OMS samples are drawn from the population of publicly funded clients admitted to substance abuse treatment. When comparing changes between project years, it is important to note that from 1999 through 2003, the sample size was approximately 5% of the population of clients who receive IDPH-funded drug or alcohol treatment in one of the following environments: medically managed inpatient, medically monitored residential, clinically managed residential, intensive outpatient, extended outpatient, or continuing care. Beginning in 2004, the sample size grew to approximately 8%. In January 2013, the sample size was increased from approximately 8% to 10% of the available admission records for the adult and adolescent client population admitted to treatment in a month. Data collected prior to September 2013 were obtained through stratified random sampling procedures and are weighted to adjust for this process. In September 2013, the sample size was increased from 10% to 15% and the sampling process changed to a completely random sample (not stratified). Records pulled through completely random sampling scheme and are not weighted. Additionally, when comparing changes between project years, conservative analyses were performed and it was determined that a change of 8 percentage points or greater for the weighted OMS data should be considered a significant change. Due to rounding, percentages may not add up to exactly 100%.

This trend report examines outcomes for clients admitted to substance abuse treatment between July 1, 1999 and December 31, 2013, however data from the 2001 sample year are omitted due to the weighting mechanism that was applied to the data resulting in numbers with limited usefulness for reporting trends. Data are reported by year of treatment admission, rather than year sampled or date the follow-up interview was completed. Data in trend reports are updated yearly and may differ from previous annual and trend reports. Factors contributing to differences include the collection of additional follow-up data (particularly for recent years), weighting adjustments, and changes and updates to IDPH data collection systems. Additional information about the OMS project including an overview of sampling procedures, client participation data, recruitment, tracking, and follow-up information can be found in annual reports for each respective year.

DESCRIPTION OF CLIENTS

Tables 1 through 4 on the following pages present demographic information for clients in the OMS sample by year of admission. In any given year, the sample is weighted to approximate the overall Iowa population of IDPH-funded clients admitted into substance abuse treatment. Data represent clients who provided answers to the questions. The actual number of clients

may vary from question to question because some clients may not have responded to the question, data are missing, or coded as not collected or unknown.

Table 1. Age at Admission

Over all years, the median age of clients in the OMS sample has ranged from 27 to 33 years of age. Analyses suggest that the median age of clients in the OMS sample is increasing (Spearman's Correlation, $p < 0.003$). The percent of adolescent clients in the OMS sample has ranged from 1% in 2013 to 10% in 2000.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Median Age (years)	27	29	29	27	27	27	30	28	28	29	30	32	32	33
Adult	92%	90%	92%	92%	91%	93%	94%	94%	94%	94%	97%	97%	98%	99%
Adolescent	8%	10%	8%	8%	9%	7%	6%	6%	6%	6%	3%	3%	2%	1%

Table 2. Sex

Over all years, an average of 72% of clients in the OMS sample were male and 28% were female.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	76%	77%	73%	69%	70%	69%	68%	71%	75%	73%	71%	73%	70%	70%
Female	24%	23%	27%	31%	30%	31%	32%	29%	25%	27%	29%	27%	30%	30%

Table 3. Race

Table 3 presents race reported at admission for clients in the OMS sample. The "other race" category includes clients who report Alaskan Native, Asian, Hawaiian or Pacific Islander, or anyone who indicates they are multi-racial.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Caucasian/ White	91%	90%	92%	94%	93%	91%	91%	87%	89%	88%	88%	86%	88%	89%
African American/ Black	7%	8%	7%	5%	5%	5%	5%	10%	8%	9%	7%	8%	9%	8%
American Indian	1%	1%	1%	0%	1%	2%	1%	2%	0%	1%	1%	2%	1%	1%
Other Race	0%	1%	0%	0%	1%	1%	2%	1%	1%	0%	0%	1%	1%	1%

Note: Due to rounding and coding variations, percentages may not add up to exactly 100%.

Table 4. Ethnicity

Table 4 presents ethnicity reported at admission for clients in the OMS sample.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Not Hispanic or Latino	96%	96%	95%	94%	95%	95%	93%	96%	96%	96%	95%	95%	96%	94%
Puerto Rican	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mexican	2%	2%	2%	3%	3%	3%	4%	2%	3%	2%	3%	4%	1%	4%
Cuban	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other Hispanic or Latino	1%	1%	2%	2%	1%	1%	2%	2%	1%	2%	1%	1%	3%	2%

Note: Due to rounding and coding variations, percentages may not add up to exactly 100%.

RECRUITMENT AND FOLLOW-UP

Table 5. Recruitment

The recruitment rate is calculated using a denominator consisting of those individuals who were recruited, those who declined, and non-recruited clients whom staff were unable to locate. Over all years, recruitment averages 72%. Clients declining participation in the OMS project averages 11% over all years.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Recruited Clients	55%	65%	73%	75%	74%	76%	71%	75%	76%	77%	70%	74%	67%	61%

Table 6. Follow-Up

The number of follow-up interviews completed with clients range from 334 to 945 over all years. The follow-up rate is based on recruited clients and consists of all clients who completed the follow-up interview, recruited clients who could not be located when their interview was due, and those who decided not to take part in the interview after initially agreeing to do so. The follow-up rate averages 83% over all years.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Follow-Up Interviews Completed	572	945	420	450	547	645	452	466	500	441	429	456	378	334
Follow-Up Rate	86%	88%	89%	84%	85%	82%	82%	83%	87%	84%	84%	78%	77%	70%

Table 7. Incarceration

The percentage of clients who are incarcerated at the time their follow-up interviews are due averages 8% over all years. Consortium staff do not interview incarcerated clients.

	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Incarcerated Clients	5%	7%	10%	11%	12%	6%	8%	8%	8%	6%	8%	6%	8%	6%

CHANGES FROM ADMISSION TO FOLLOW-UP

The figures in this section present admission and follow-up responses from clients who completed the follow-up interview. Admission and follow-up data are client self-reported data. Variables at admission and follow-up are compared only for those clients who had a response at both admission and follow-up. The actual number of clients may vary from question to question because some clients may not have responded to the question or the question may not have been applicable to their situation.

Figure 1. Primary Substance at Admission

During all years, alcohol has been the most commonly used primary substance at admission. Marijuana is the second most commonly reported primary substance at admission in all years except 2013, when a higher percentage of clients (25%) reported methamphetamine compared to marijuana (16%). The percentage of clients reporting alcohol as the primary substance at admission ranges from 43% in 2006 to 58% in 2000. The percentage of clients reporting marijuana as the primary substance ranges from a high of 30% in 2007 to a low of 16% in 2013. Since 2008 the percentage of clients reporting methamphetamine as the primary substance at admission has increased, ranging from a low of 11% in 2008 to a high of 25% of clients in 2013. Cocaine as the primary substance at admission ranges from a low of 2% in 2005, 2011, and 2013 to 8% in 2006.

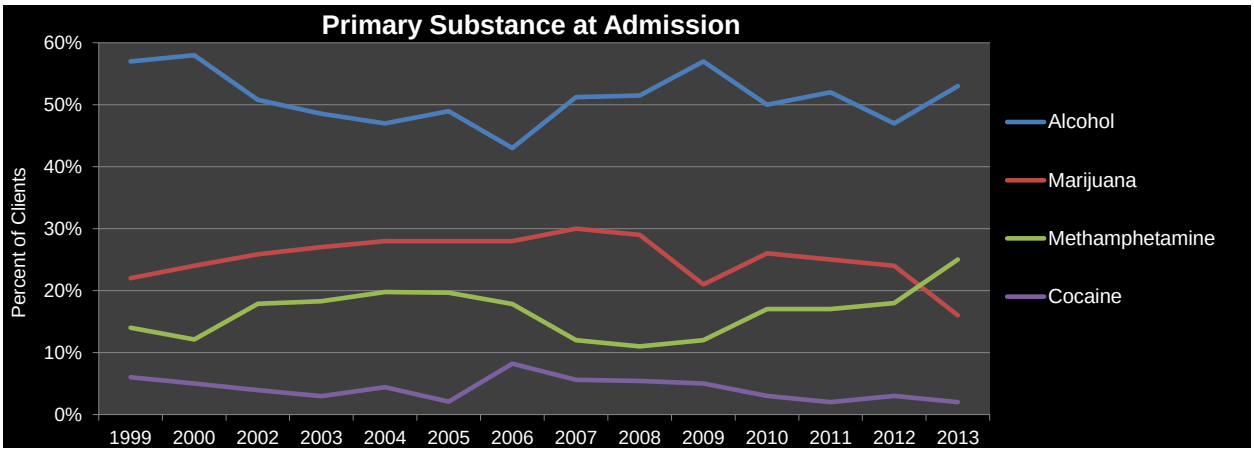


Figure 2. Primary Substance at Follow-Up

Of clients reporting substance use at follow-up, alcohol is the most common primary substance reported in all years. In three of the fourteen years (2000, 2002, and 2005) the percentage of clients reporting alcohol as the primary substance at follow-up (45%, 44%, and 51% respectively) was higher than the percentage of clients reporting abstinence. In nearly all of the remaining years, clients most often reported abstinence at follow-up. Marijuana is the second most common primary substance reported at follow-up in all years except 2012 and 2013, when a higher percentage of clients reported methamphetamine as the primary substance compared to marijuana. In all years, less than 10% of clients reported marijuana as their primary substance at follow-up and fewer than 3% reported cocaine. In all years except 2012 and 2013, less than 4% reported methamphetamine as the primary substance.

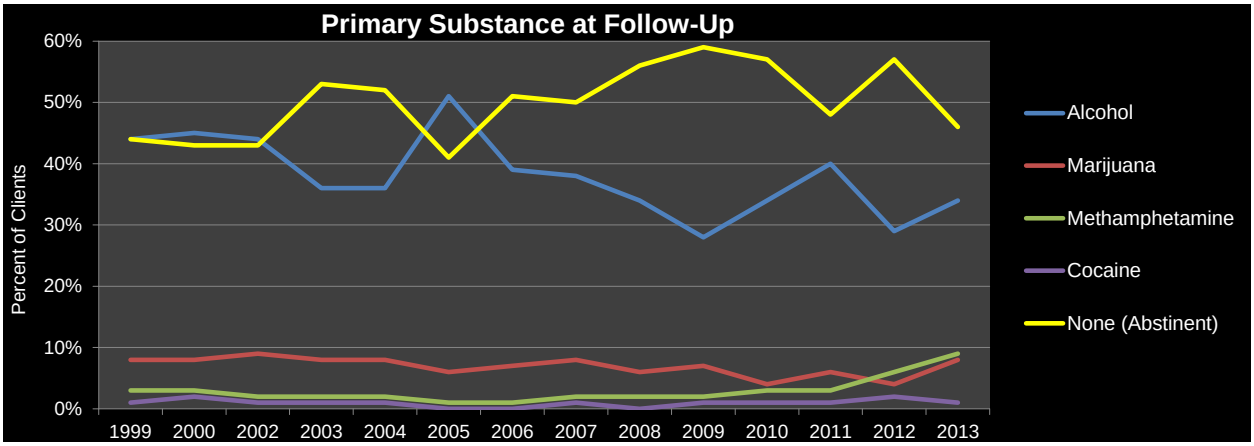


Figure 3. Secondary Substance at Admission

During all years, a secondary substance was reported at admission by more than half of clients (ranging from 52% in 2011 to 66% in 2007). Marijuana was the most commonly used secondary substance, with use at admission ranging from a low of 22% in 2006 and 2011 to a high of 29% in 2009 and 2010. This was closely followed by alcohol, which fluctuated from 13% in 2009 to 25% in 2007. The percentage of clients reporting methamphetamine and cocaine as secondary substances at admission remained under 10% each year.

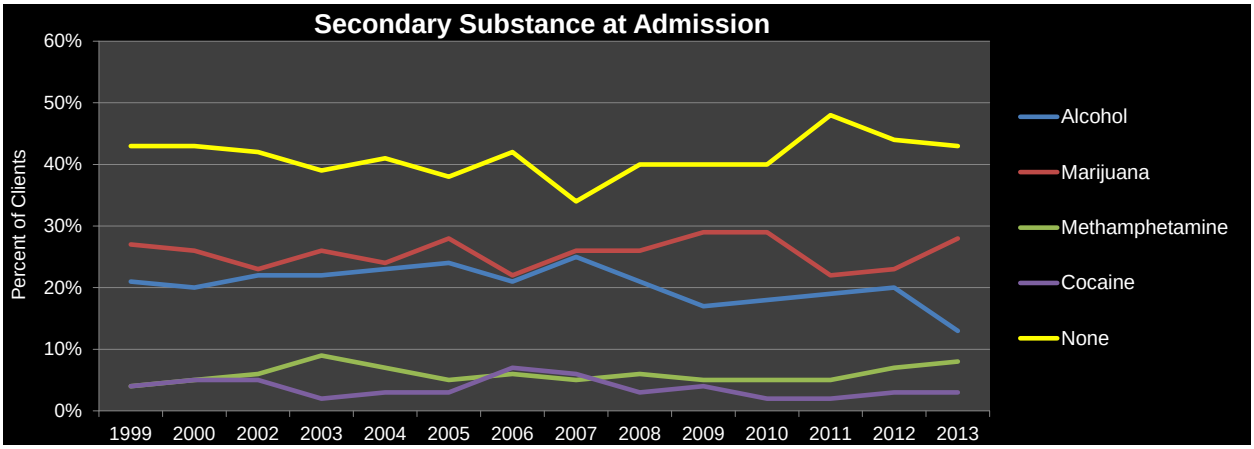
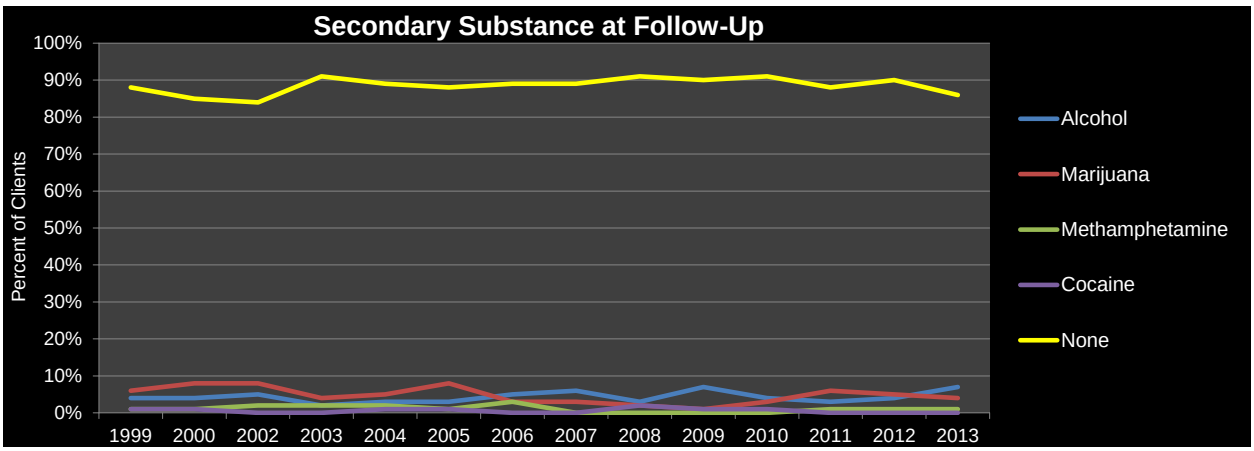


Figure 4. Secondary Substance at Follow-Up

Clients reporting use of a secondary substance at follow-up ranged from a high of 16% in 2002 to lows of 9% in 2003, 2008, and 2010. Of clients who indicated use of a secondary substance at follow-up, marijuana was most commonly reported in 1999 through 2005, and in 2011 and 2012. However from 2006 to 2010 and more recently in 2013, alcohol was the secondary substance most often indicated by clients. The percentage of clients reporting methamphetamine and cocaine as a secondary substance at follow-up remained under 4% each year.



Changes in frequency of use provide additional information regarding client outcomes following treatment. Since a client's primary substance may change from admission to follow-up, a simple comparison of frequency may not be comparable (e.g. having one drink three to six times per week versus smoking methamphetamine three to six times per week). Therefore, Figure 5 presents the change in frequency of use from admission to follow-up for a subset of individuals who reported the same primary substance at both admission and follow-up, and include *only* clients who reported use at follow-up (therefore excluding clients who reported abstinence at follow-up). The "Increased Use" category presents the percentage of clients who indicated using their primary substance with more frequency at follow-up than reported at admission. For example, a client may report using alcohol one to three times in the past month at admission and at follow-up report daily use, representing an increase in their frequency of use. "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.

Figure 5. Change in Frequency of Use of Primary Substance: Clients Indicating Use of Same Primary Substance at Both Admission and Follow-Up

In 1999 through 2006, 2008, and more recently in 2013, clients who reported use of the same primary substance at admission and follow-up most commonly indicated an increase in use of their primary substance at follow-up compared to admission. In 2009, 2011, and 2012, clients reported using their primary substance less frequently at follow-up compared to admission. In 2007 and 2010, clients most commonly reported the same frequency of use of their primary substance at both admission and follow-up. There is a greater proportion of people who reduce their frequency of use compared to those who maintain same use or increase frequency of use (Wald Chi-Square Test, $p < 0.04$).

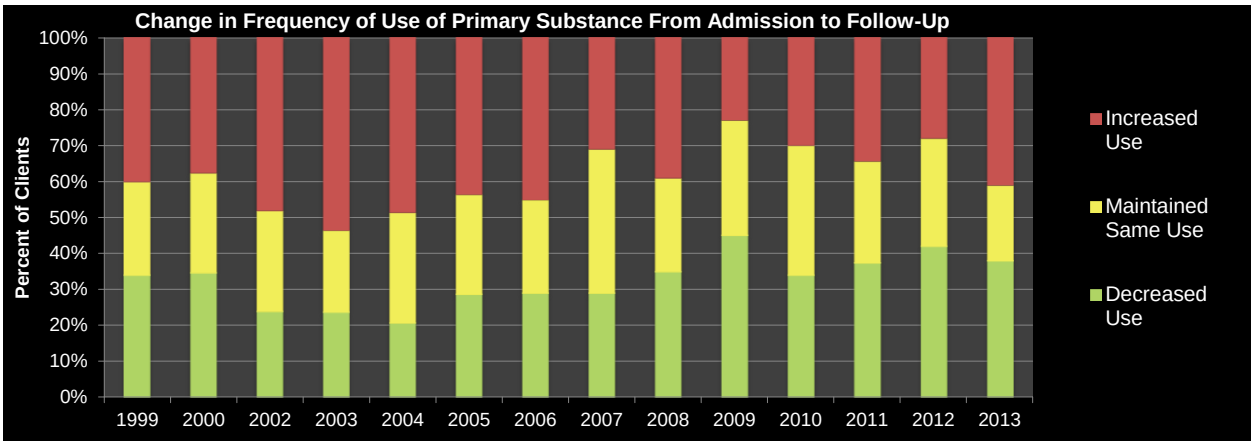


Figure 6. Arrests at Admission and Follow-Up

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. Each year, the majority of clients reported arrests at admission, ranging from 50% of clients in 2012 to 71% in 2002. Fewer than 20% of clients reported arrests at follow-up each year.

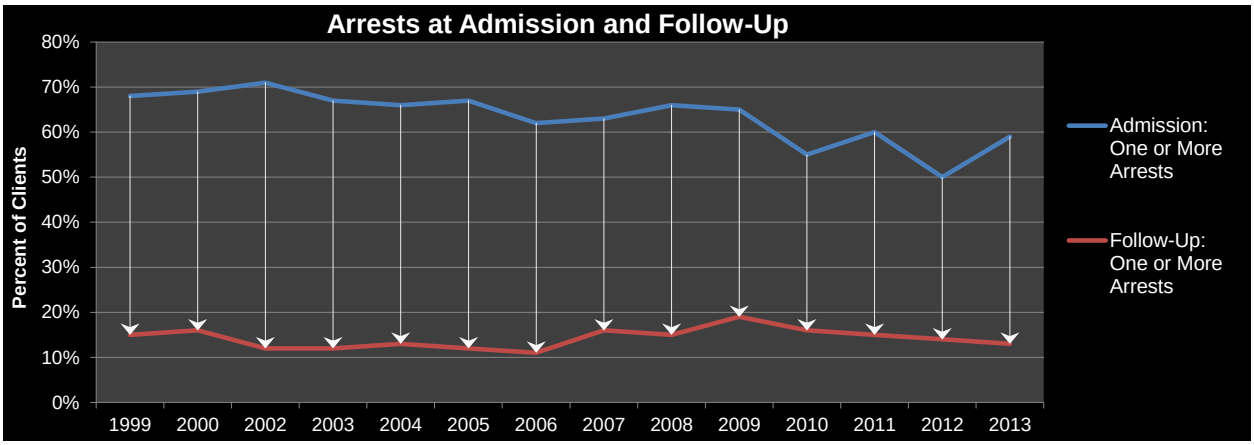


Figure 7. Hospitalizations Due to a Substance Abuse Related Problem at Admission and Follow-Up

Approximately one third fewer clients reported substance abuse related hospitalizations at follow-up compared to admission. The percentage of clients reporting substance abuse related hospitalizations at admission ranged from 6% in 2007 to 15% in 2004. The percentage of clients who indicated in follow-up interviews that they had been hospitalized for a substance abuse related problem during the six month period from discharge to follow-up ranged from 1% in 2003 and 2005 to 8% in 2010.

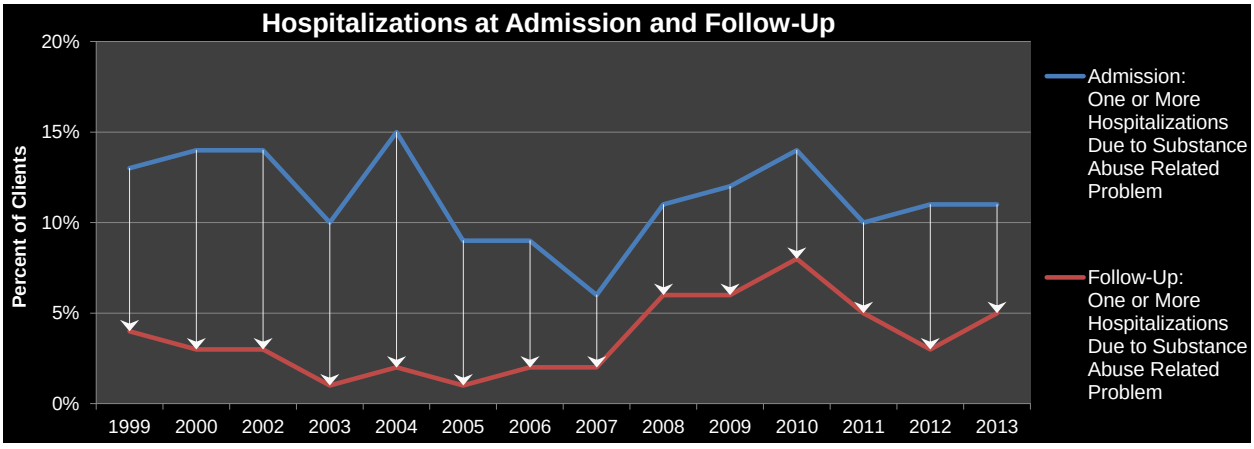


Figure 8. Employment (Full or Part-Time) at Admission and Follow-Up

In all years, compared to admission, more clients are employed full or part-time six months following discharge from treatment. Fewer than 56% of clients reported employment at admission, ranging from 36% in 2010 and 2011 to 55% in 2000 and 2005. Over all years, an average of 66% of clients indicated employment at follow-up. In recent years (2010 to 2013) employment rates at follow-up have been consistently hovering around 60%.

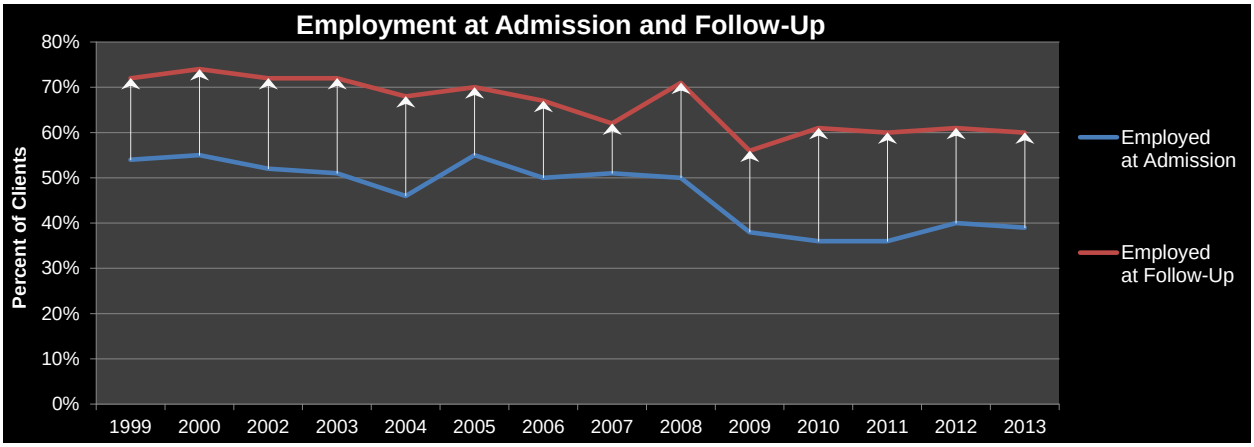


Figure 9. Unemployment at Admission and Follow-Up

Figure 9 includes clients who report they are unemployed and looking for work, as well as clients reporting they are not in the labor force (which could include students, homemakers, disabled, or retired clients). The percentage of clients reporting they are unemployed at follow-up is lower compared to those who indicated they were unemployed at admission. The percentage of clients who indicated they are unemployed at follow-up has remained steady (approximately 40%) in recent years.

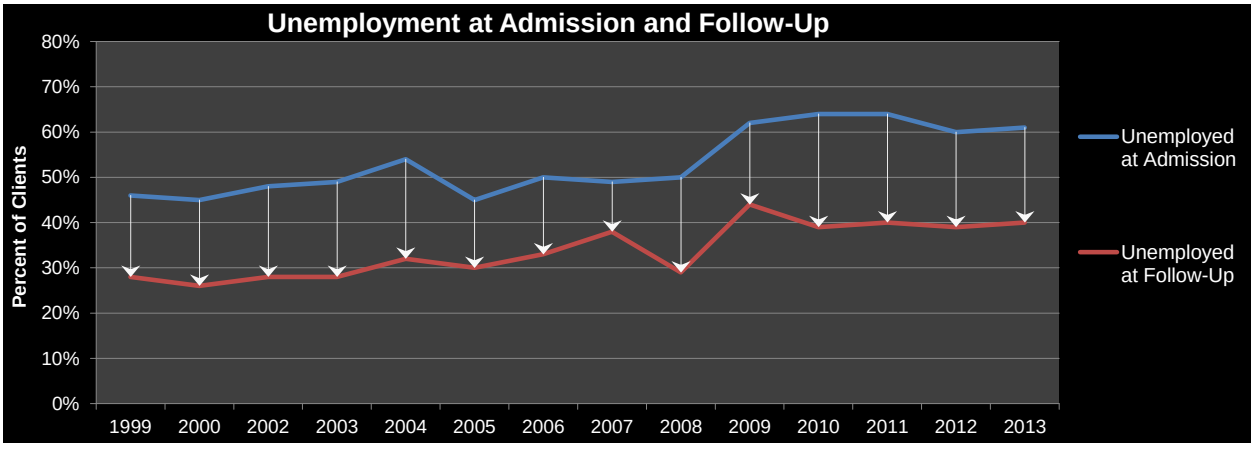


Figure 10. Change in Employment Status from Admission to Follow-Up

Figure 10 presents 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. Over all years, an average of 46% maintained the same employment status, an average of 15% decreased their employment status, and an average of 39% increased their employment status.

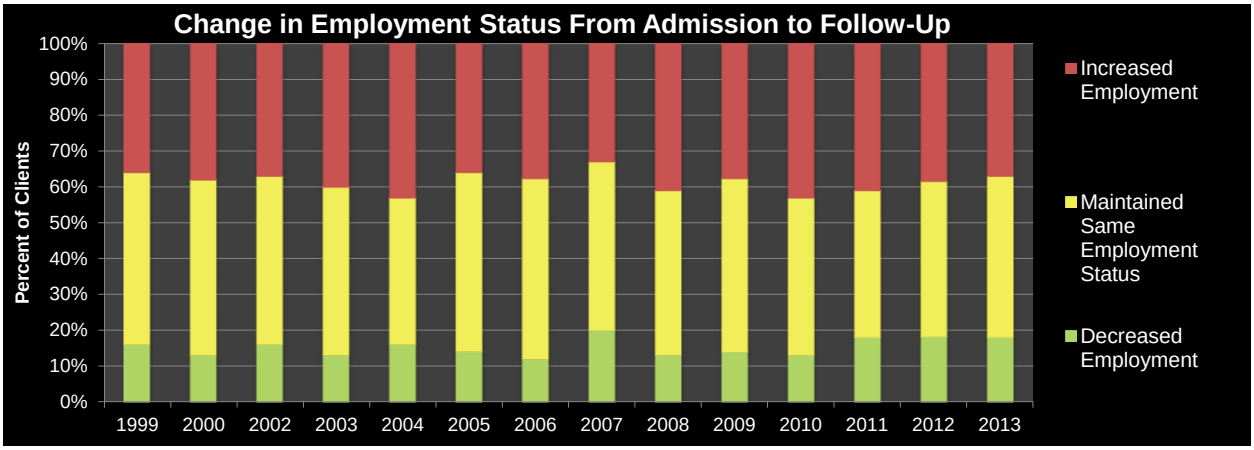


Figure 11. Months Employed at Admission and Follow-Up

During all years, more clients indicate they were employed four months or more at follow-up compared to admission. In 1999 through 2006, an average of nearly three-quarters of clients reported employment of four or more months at follow-up; however, in 2007 through 2012 the average was 55%. There is a slight increase in the percentage of clients indicating employment of four or more months at follow-up from 2009 to 2012, however in 2013 it dropped five percentage points from 2012. An average of 36% of clients indicated they had not been employed in the six months prior to treatment admission over all years, with a high of 48% in 2010. At follow-up, an average of 18% reported not being employed since treatment discharge over all years, with a high of 37% in 2009.

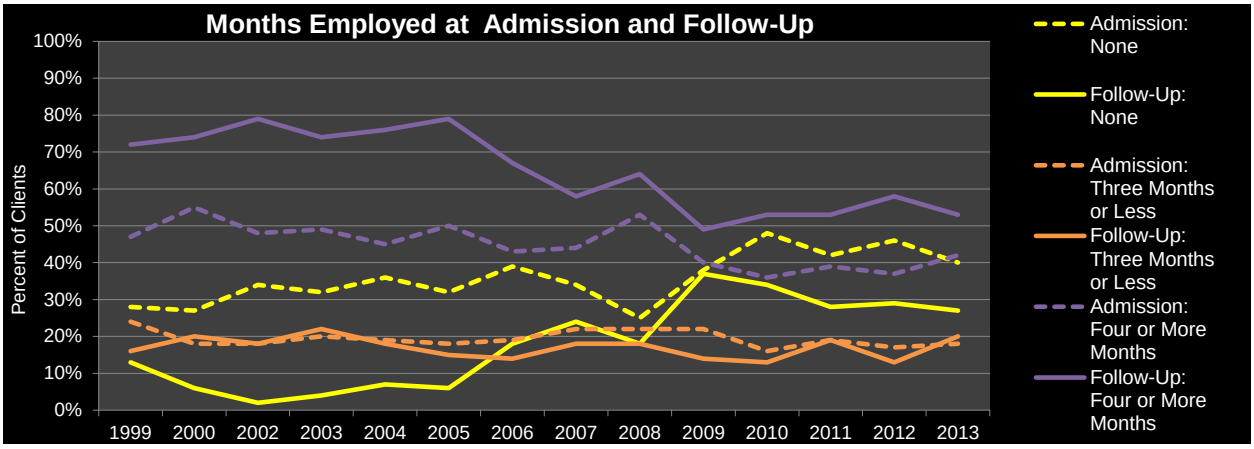


Figure 12. Change in Income from Admission to Follow-Up

Figure 12 presents 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. In most years, nearly half of the clients who completed follow-up interviews increased their income from admission to six months post-treatment discharge, while an average of 15% decreased their monthly income.

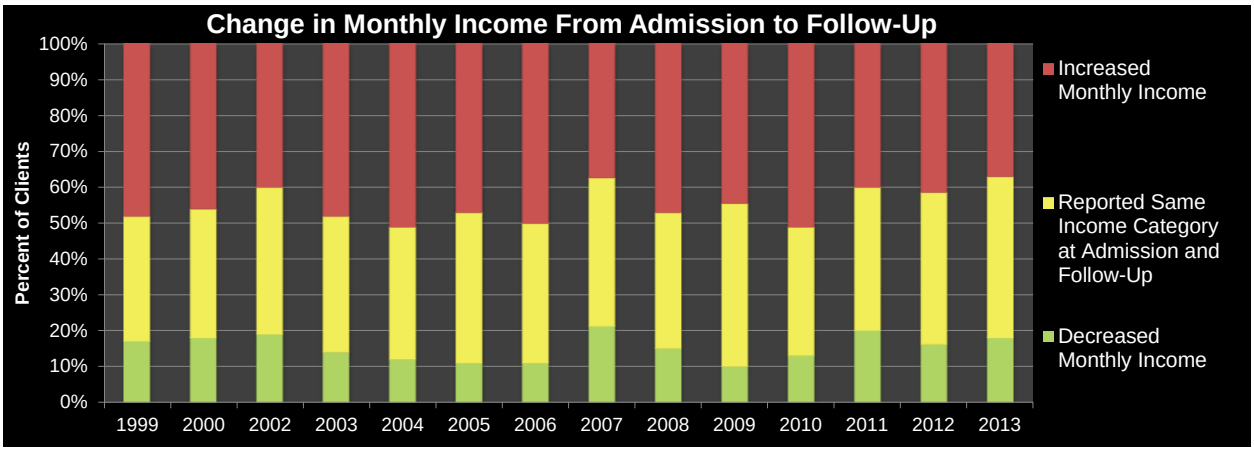


Figure 13. AA, NA, or Similar Meetings Attended at Admission and Follow-Up

During all years, more clients reported attending voluntary recovery support meetings in the six months following treatment discharge compared to the six months prior to treatment admission. An average of 21% of clients over all years indicated they had attended at least one Alcoholics Anonymous (AA), Narcotics Anonymous (NA), or similar voluntary meeting per month in the six months prior to admission. At follow-up over all years, an average of 44% of clients reported attending meetings during the six months following discharge from treatment.

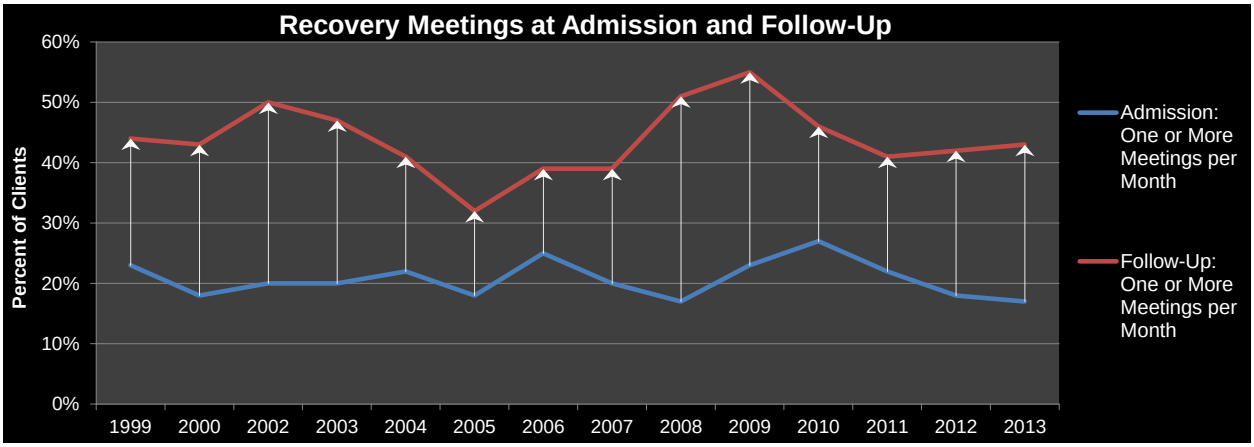


Figure 14. Days of Work or School Missed Due to a Substance Abuse Problem

Fewer clients reported missing days of work or school due to substance use issues at follow-up compared to admission in all years except 2003 through 2005. The percentage of clients reporting missed days of work or school for substance abuse related problems at admission ranged from 8% in 2010 to 19% in 1999, 2000, and 2002; the range at follow-up was 1% in 2009 and 2010 to a high of 20% in 2004. The variability may be due to differences in employment rates through the years.

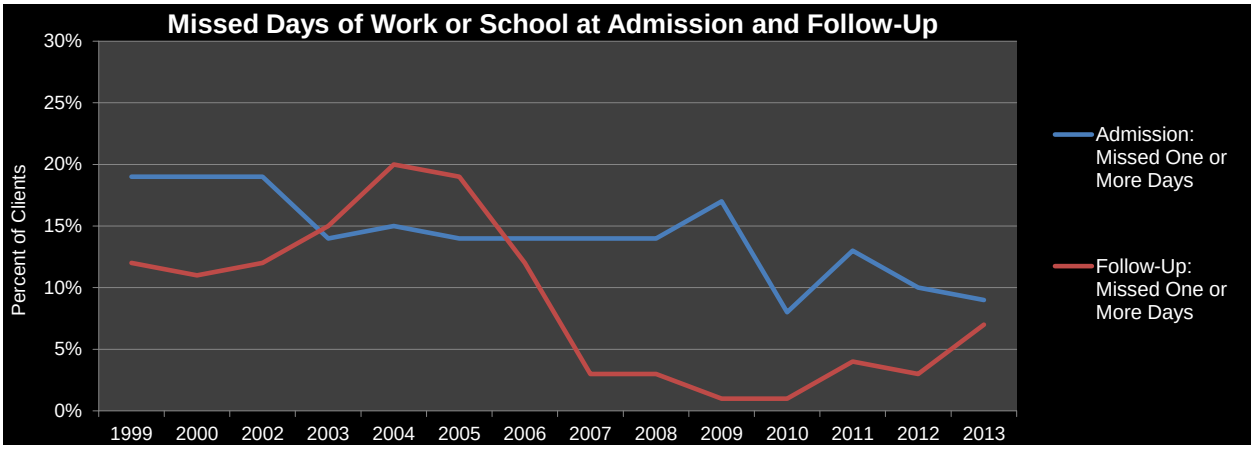


Figure 15. Primary Source of Support at Admission and Follow-Up

Figure 15 presents the three most commonly reported primary source of support categories indicated by clients at admission: none, wages or salary, and family and friends. At admission and follow-up, clients most often reported wages or salary as the primary source of support, indicated by an average of 46% of clients at admission and an average of 59% of clients at follow-up over all years. Over all years an average of 24% of clients reported relying on family and friends at admission and an average of 28% report this at follow-up. There is a six percentage point drop in clients reporting no income source at admission from 2010 to 2013 (from 28% to 22%). The percentage of clients who indicated no income source at follow-up has remained at 3% or below.

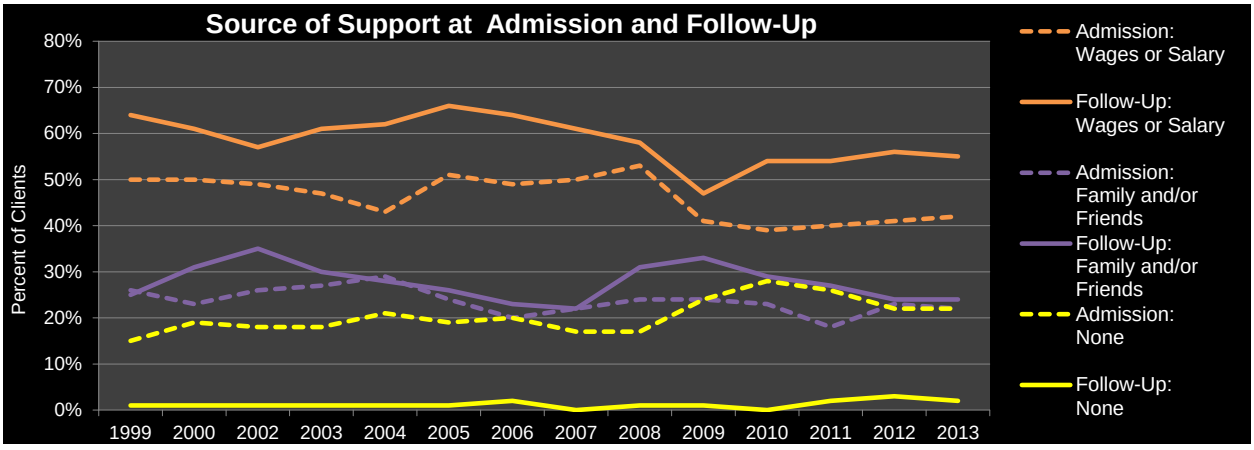


Figure 16. Relationship Status at Admission and Follow-Up

Figure 16 presents the four most common relationship statuses reported by clients at admission and follow-up: single, married, divorced, and cohabitating. Each year, single was the most common relationship status reported at admission and follow-up. During all years, clients indicating they were married at admission ranged from a low of 8% in 2011 to 18% in 2006; results for clients reporting marriage at follow-up were similar ranging from 10% in 2008 and 2011 to 19% in 2006. Clients reporting divorce at admission fluctuated between 11% in 2002 to a high recently in 2013 of 22%; clients indicating divorce at follow-up ranged from 12% in 2000 and 2007 to a high of 23% in 2008. Over all years, the percentage of clients reporting cohabitation has averaged 9% at admission and 13% at follow-up.

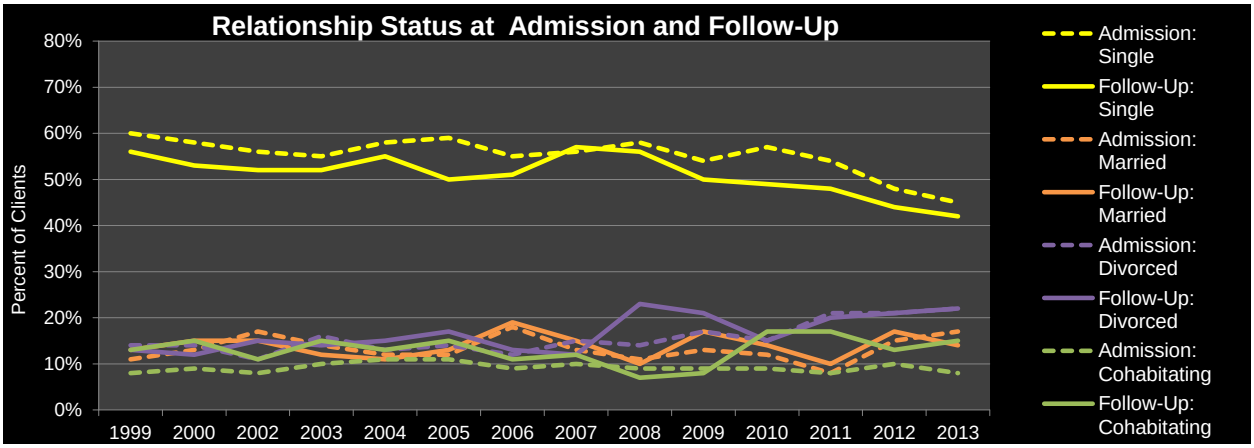
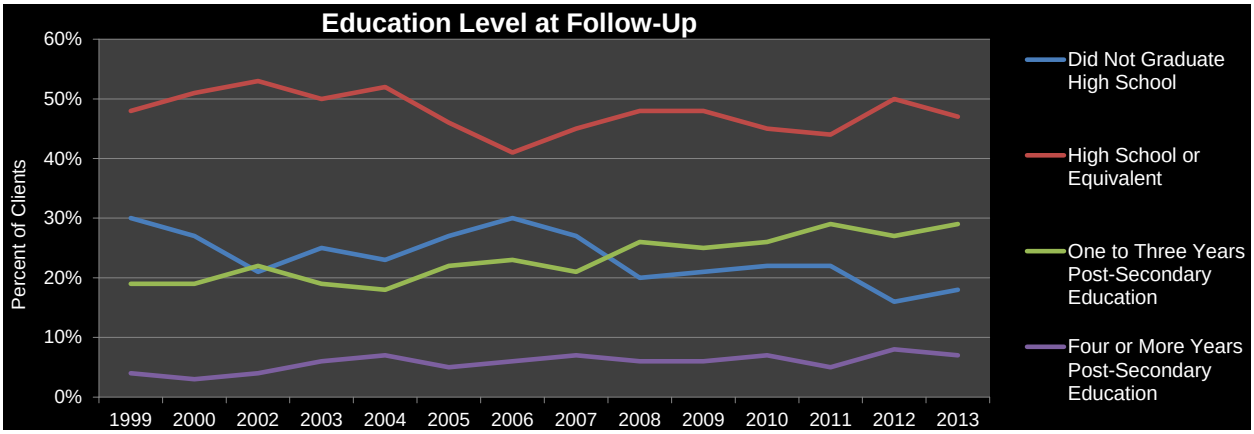


Figure 17. Education Level at Follow-Up

Admission data are not included in Figure 17 since not all admission datasets provide a response category for a General Education Degree (GED). Therefore, admission and follow-up comparisons cannot be made because the GED question is specifically asked at follow-up. At follow-up each year, between 41% and 53% of clients reported a high school or equivalent level of education. The percentage of clients who indicated they had not graduated from high school ranged from a high of 30% in 1999 and 2006 to a low of 16% in 2012. Over all years, 22% to 36% reported an education level beyond high school at follow-up; during the six most recent years (2008-2013), over 30% of clients indicated they had one or more years of post-secondary education with a high recently in 2013 when 36% of clients reported this level of education.

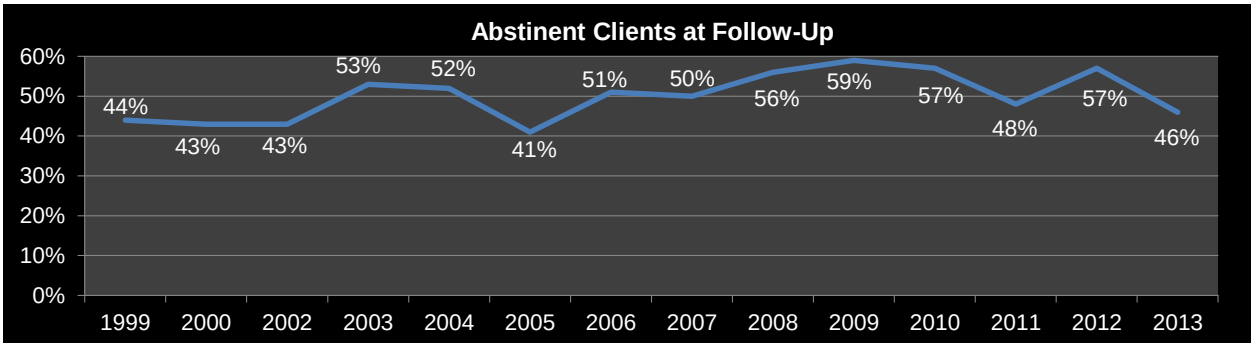


OUTCOMES: ABSTINENCE

The follow-up interviews occur approximately six months after the client is 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. Abstinence refers to abstinence from all substances in the previous six months (follow-up period).

Figure 18. Abstinence at Follow-Up

Abstinence at follow-up has ranged from 41% to 59% over all years and has shown a highly significant positive trend from 1999 to 2013 (Kendall's Tau_b Test, $p < 0.0001$).



Figures 19 through 22 on the following pages examine abstinence at follow-up in relation to other variables at admission and follow-up.

Figure 19. Primary Substance at Admission by Abstinence at Follow-Up

The three primary substances that clients reported most often at admission were alcohol, marijuana, and methamphetamine. In Figure 19, the percentages represent the number of abstinent clients at follow-up out of the number of total clients who indicated that primary substance at admission. There are statistically significant associations between primary substance at admission and abstinence at follow-up in seven of the fourteen years: 1999, 2002 through 2006, and 2010 (Cochran-Mantel-Haenszel Tests, $p < 0.05$). Cocaine is excluded from this figure due to the low numbers of clients with completed interviews that reported cocaine as the primary substance at admission during all years.

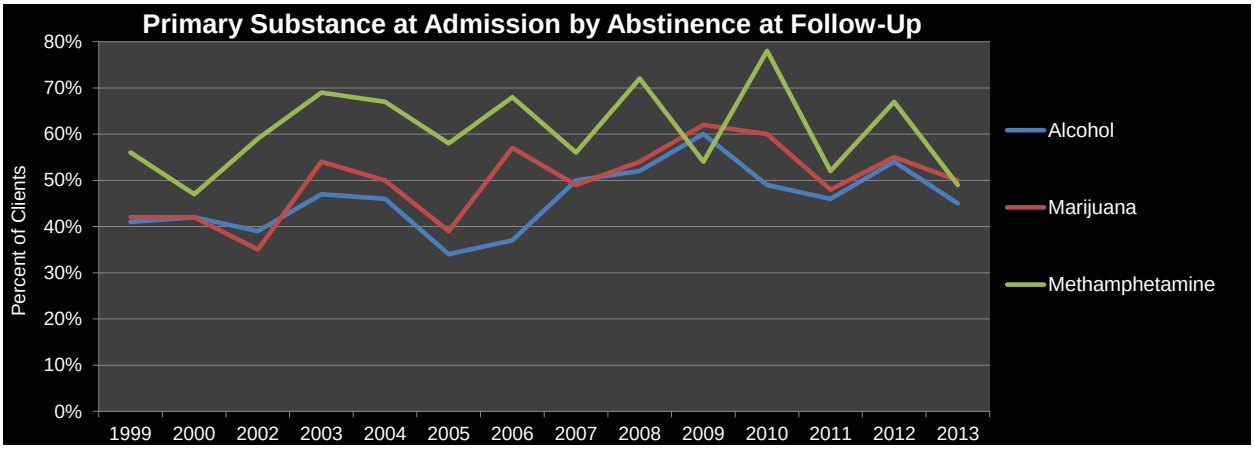


Figure 20. Arrests at Follow-Up by Abstinence at Follow-Up

In Figure 20, the percentages represent abstinent clients at follow-up who indicated they had been arrested since treatment discharge out of the total number of abstinent clients; and non-abstinent clients who reported arrests at follow-up out of the total number of non-abstinent clients. There are statistically significant associations between arrests and abstinence at follow-up in twelve of the fourteen years: 1999, 2000, and 2004 through 2013 (Cochran-Mantel-Haenszel Tests, $p < 0.05$).

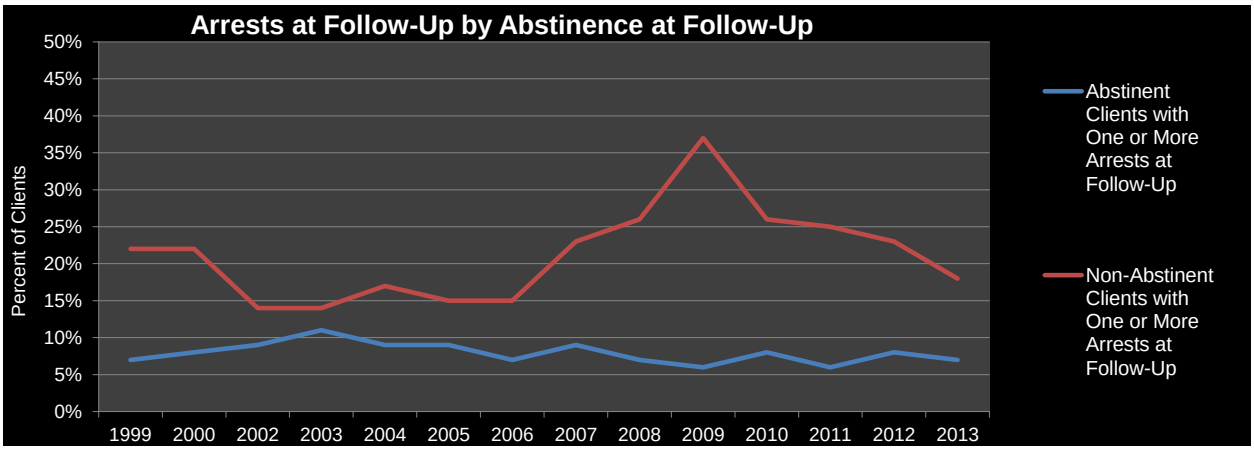


Figure 21. Employment at Follow-Up by Abstinence at Follow-Up

In Figure 21, the percentages represent abstinent clients reporting employment (full or part-time) at follow-up out of the total number of abstinent clients at follow-up; and non-abstinent clients reporting employment out of the total number of non-abstinent clients. There are statistically significant associations between employment at follow-up and abstinence at follow-up in four of the fourteen years: 1999, 2000, 2009, and 2012 (Cochran-Mantel-Haenszel Tests, $p < 0.05$).

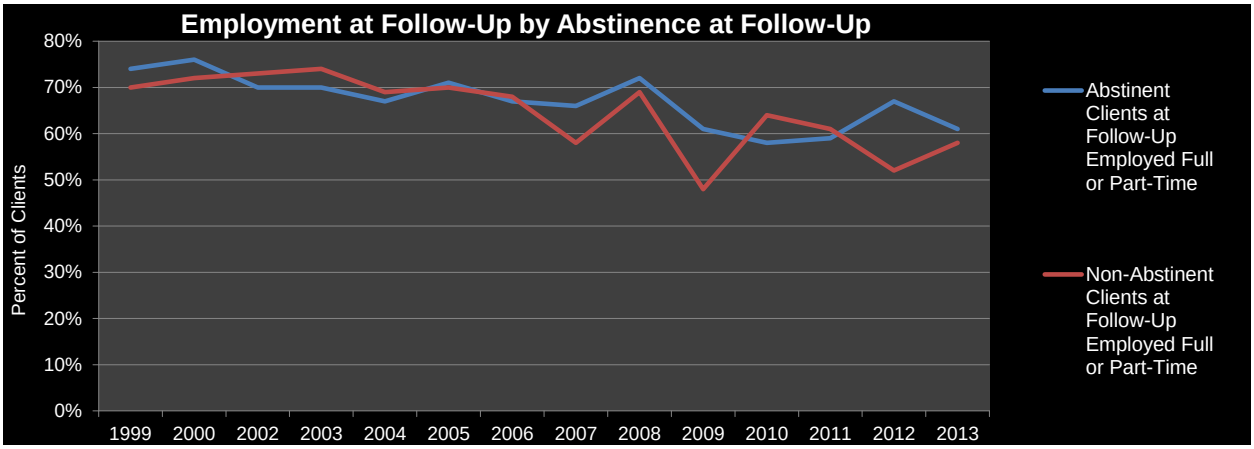
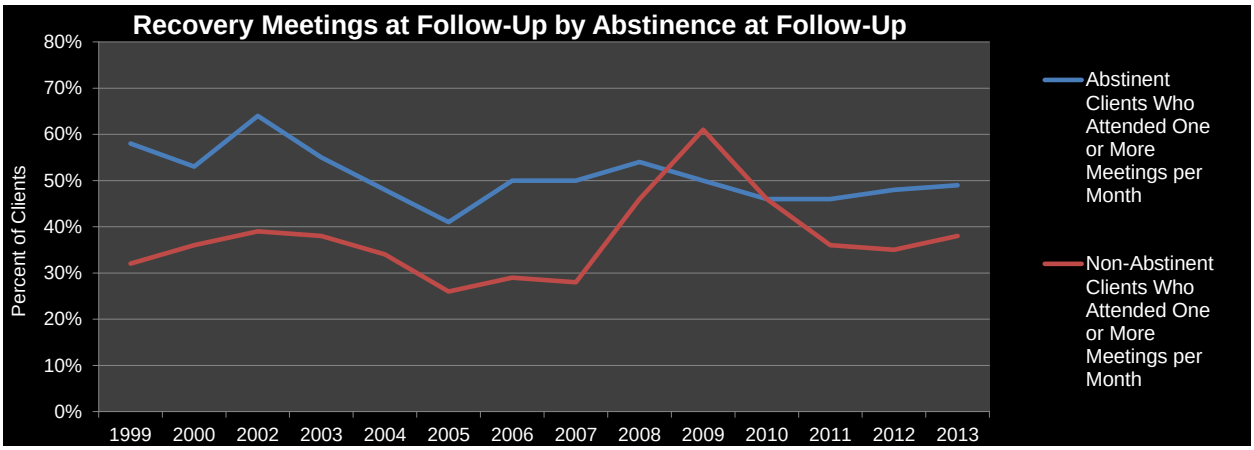


Figure 22. AA, NA, or Similar Meetings Attended at Follow-Up by Abstinence at Follow-Up

In Figure 22, the percentages represent abstinent clients at follow-up who indicated they had attended at least one voluntary recovery support meeting per month since discharge out of the total number of abstinent clients; and non-abstinent clients at follow-up who indicated they had attended at least one recovery support meeting since discharge out of the total number of non-abstinent clients. There are statistically significant associations between meeting attendance and abstinence at follow-up in twelve of the fourteen years: 1999, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2009, 2011, 2012, and 2013 (Chi Square Tests, $p < 0.05$).



OUTCOMES: SEX

Figures 23 and 24 present the primary substance reported at admission and abstinence at follow-up by sex.

Figure 23. Primary Substance at Admission by Sex

The three primary substances that clients reported most often were alcohol, marijuana, and methamphetamine. Figure 23 shows the percentage of males and females reporting these three substances at admission each year. Over all years, males reported alcohol as the primary substance at admission more often than any other substance, ranging from 49% in 2004 to 61% in 1999. Females indicating alcohol as the primary substance at admission fluctuated between 32% in 2006 to 56% in 2009. Marijuana as the primary substance at admission ranged from 16% to 33% for males and 14% to 34% for females. There were steady increases in the percentage of males reporting methamphetamine as their primary substance at admission from 2000 to 2005, from 2007 to 2011, and more recently from 2012 to 2013. Although there was a decrease in females reporting methamphetamine as their primary substance from 2006 to 2008, since 2011 there is an increase in females indicating their primary substance at admission was methamphetamine, with 32% of females reporting this in 2013.

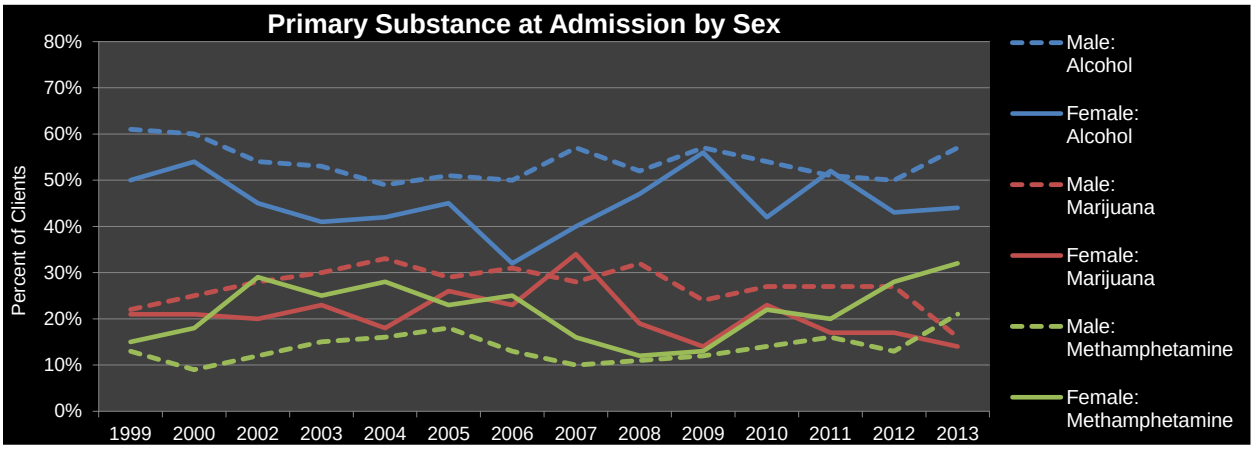
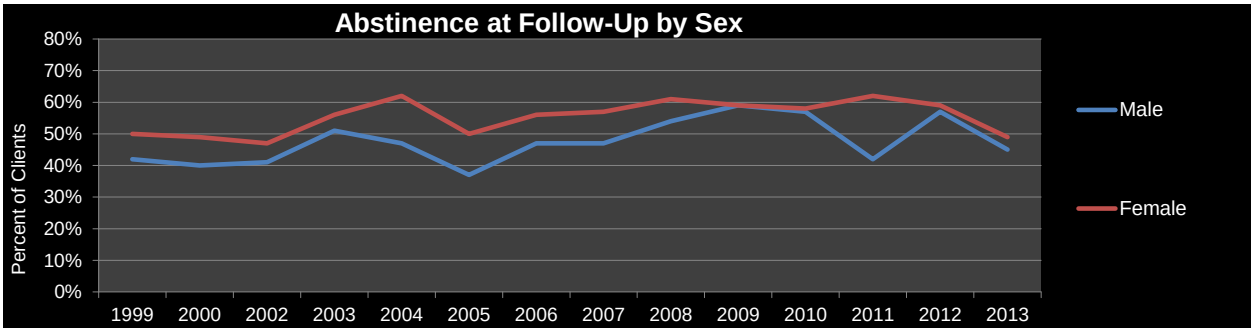


Figure 24. Abstinence at Follow-Up by Sex

Abstinence for males at follow-up ranged from 37% in 2005 to 59% in 2009. Females reporting abstinence at follow-up fluctuated between 47% in 2002 to 62% in 2004 and 2011. The largest disparity between males and females occurred in 2011 when there is a 20 percentage point difference with 42% of males and 62% of females reporting abstinence at follow-up.

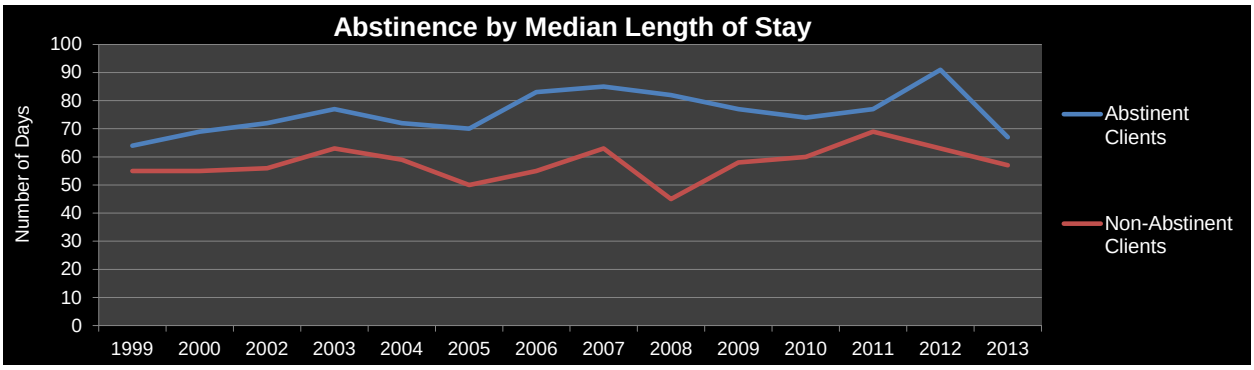


OUTCOMES: LENGTH OF STAY AND DISCHARGE STATUS

Length of stay is defined as the number of days from admission to treatment through discharge. Figure 25 examines length of stay related to abstinence at follow-up.

Figure 25. Abstinence by Median Length of Stay

In 1999 through 2009 and in 2012 there were significant differences between length of stay and abstinence at follow-up (Jonckheere-Terpstra Tests, $p < 0.05$). Results for clients admitted in 2013 may change as more interviews are conducted with these clients.



Unlike the previous figure in this section that includes data only from clients who completed follow-up interviews, data in Table 8 and Figures 26 through 29 on the following pages are drawn from all discharged clients who were in the OMS sample for whom discharge data have been received.

Table 8. Primary Substance at Admission by Median Length of Stay

Table 8 presents the median length of stay (in days) for all discharged clients in the OMS sample, as well as for the most often reported primary substances at admission by year. Results for recent years, particularly 2013, may change as more clients are discharged from treatment.

Median Length of Stay (Number of Days)														
	1999	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
All Clients in OMS Sample	56	51	57	59	63	56	62	58	53	63	64	68	77	63
Alcohol	56	50	57	59	61	50	59	56	49	51	60	63	74	68
Marijuana/Hashish	59	59	56	63	62	60	65	59	58	76	70	65	86	63
Methamphetamine	43	57	64	56	84	70	69	79	57	77	75	85	77	56
Cocaine/Crack	33	29	46	56	60	28	64	45	57	70	44	57	57	39

Figures 26 through 29 present the percentage of clients in each length of stay category for the four most frequently reported substances at admission. It is important to note that as more clients who were admitted in 2013 are discharged from treatment, the length of stay results for 2013 may change.

Figure 26. Length of Stay: Alcohol as Primary Substance at Admission

There are statistically significant associations between length of stay for clients who reported alcohol as the primary substance at admission compared to clients who reported other primary substances at admission in two of the fourteen years: 2005 and 2009 (Jonckheere-Terpstra Tests, $p < 0.05$).

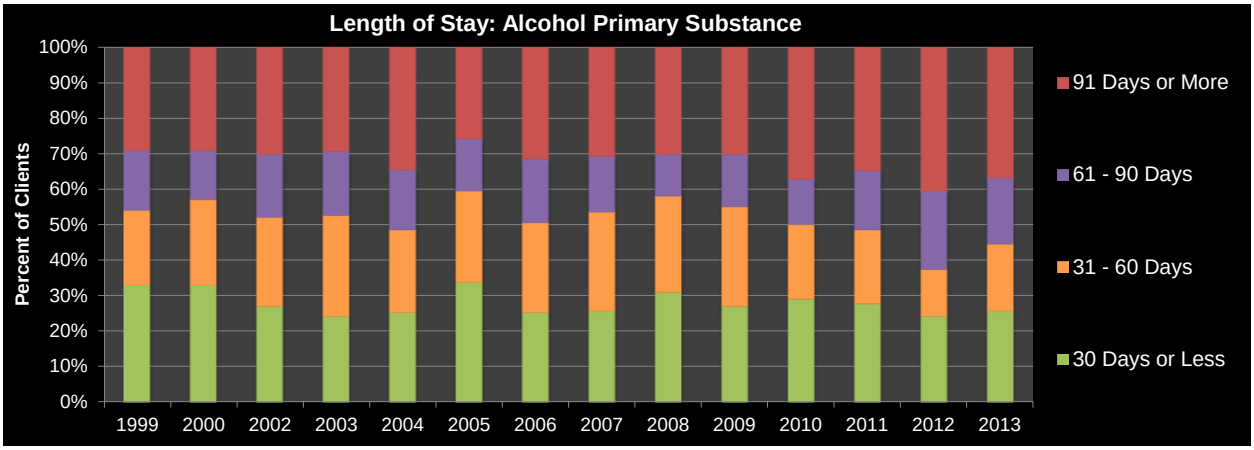


Figure 27. Length of Stay: Marijuana as Primary Substance at Admission

There are statistically significant associations between length of stay for clients who reported marijuana as the primary substance at admission compared to clients who reported other primary substances at admission in two of the fourteen years: 2000 and 2009 (Jonckheere-Terpstra Tests, $p < 0.05$).

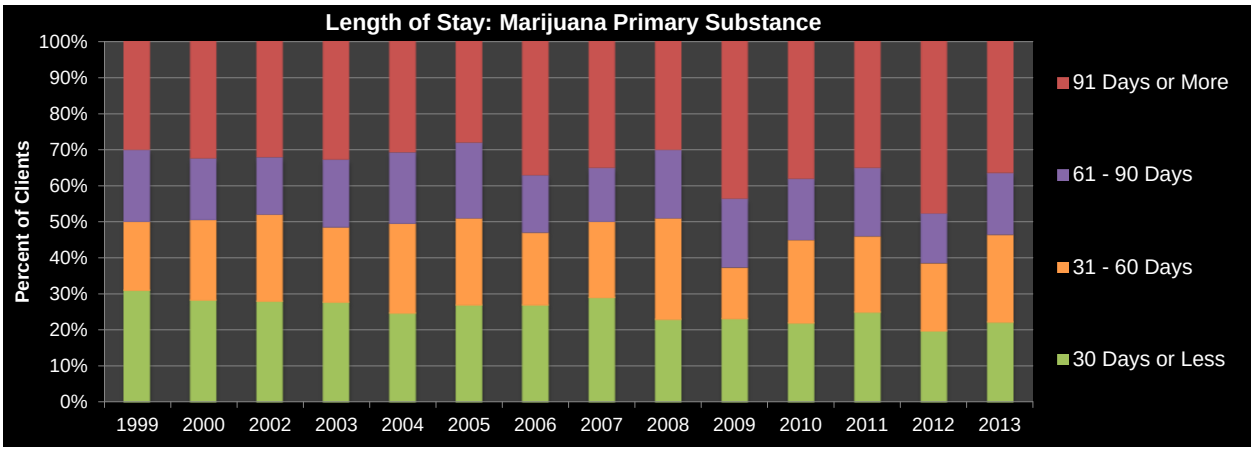


Figure 28. Length of Stay: Methamphetamine as Primary Substance at Admission

There are statistically significant associations between length of stay for clients who reported methamphetamine as the primary substance at admission compared to clients who reported other primary substances at admission in four of the fourteen years: 1999, 2004, 2005 and 2007, (Jonckheere-Terpstra Tests, $p < 0.05$).

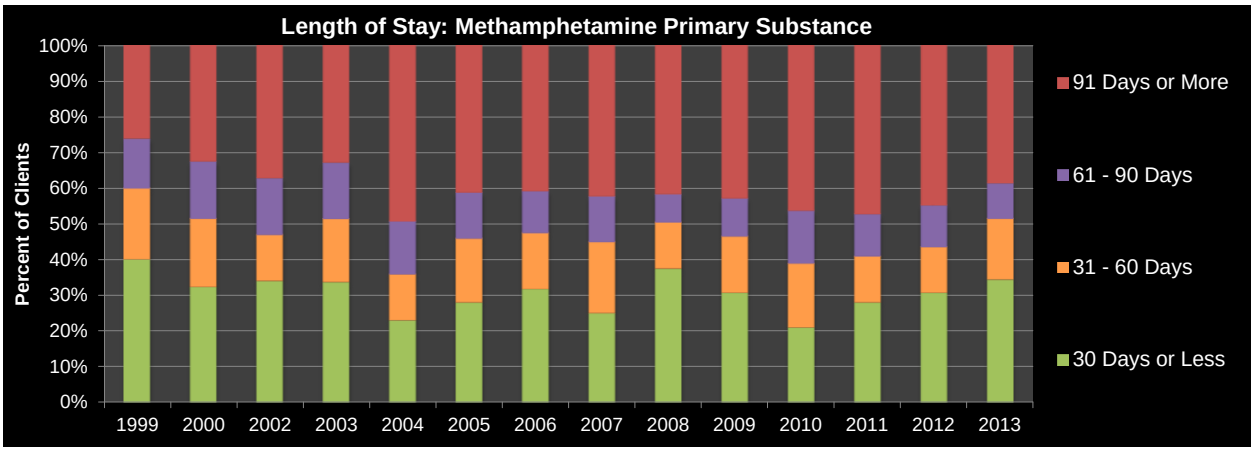
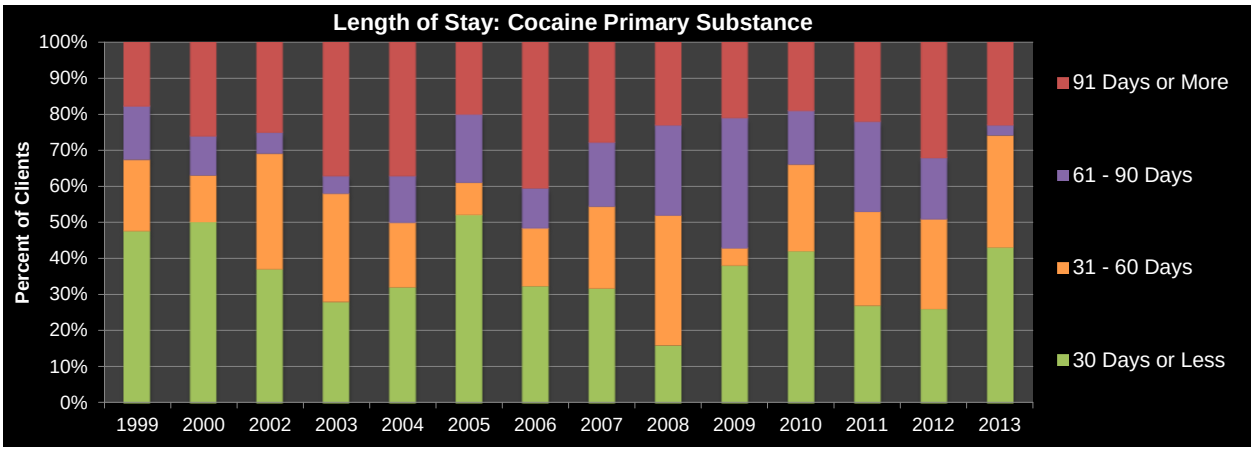


Figure 29. Length of Stay: Cocaine as Primary Substance at Admission

There are statistically significant associations between length of stay for clients who reported cocaine as the primary substance at admission compared to clients who reported other primary substances at admission in four of the fourteen years: 1999, 2000, 2005, 2010 (Jonckheere-Terpstra Tests, $p < 0.05$). The variability in length of stay for clients reporting cocaine as the primary substance at admission may be due to the lower number of clients in the OMS sample reporting cocaine as the primary substance at admission; numbers range from a high of 108 in 2000 to a low of 17 in 2013. Caution is advised when interpreting these results.



Figures 30 through 32 on the following pages show three outcome variables for the follow-up interview (abstinence, no arrests, and employment) by treatment discharge status. 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, referral to another program, incarceration, or death). Data for neutral discharges are not included in the figures due to the low number of clients

(fewer than 9% of clients each year) in the neutral discharge category with completed interviews. It is important to note that clients who were successfully discharged comprise the majority of the clients interviewed in all years.

Figure 30. Abstinence at Follow-Up by Discharge Status

There are statistically significant associations between abstinence at follow-up and discharge status in eight of the fourteen years: 2000, 2003, 2004, 2005, 2007, 2009, 2012, and 2013 (Cochran-Mantel-Haenszel Tests, $p < 0.05$).

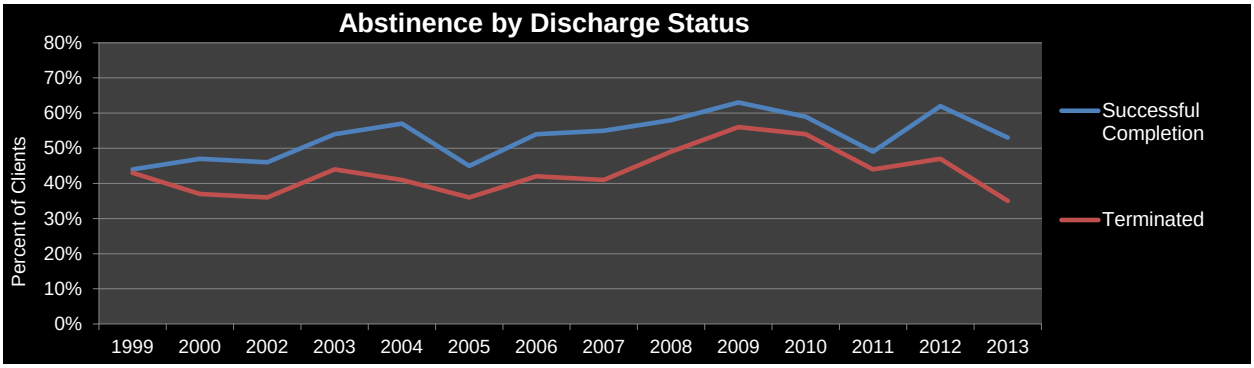


Figure 31. No Arrests at Follow-Up by Discharge Status

There are statistically significant associations between no arrests at follow-up and discharge status in eleven of the fourteen years: 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2010, 2011, 2012, and 2013 (Cochran-Mantel-Haenszel Tests, $p < 0.05$).

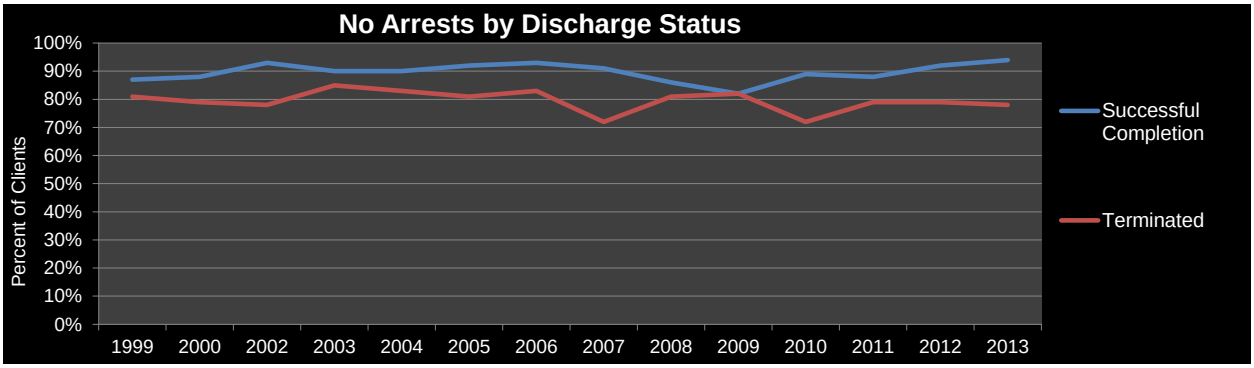


Figure 32. Employment at Follow-Up by Discharge Status

There are statistically significant associations between employment (full or part-time) at follow-up and discharge status in ten of the fourteen years: 1999, 2000, 2002, 2004, 2006, 2008, 2010, 2011, 2012, and 2013 (Cochran-Mantel-Haenszel Tests, $p < 0.05$).