

ADDICTION TREATMENT PROVIDER OUTCOMES

PILOT PROGRAM FINAL REPORT

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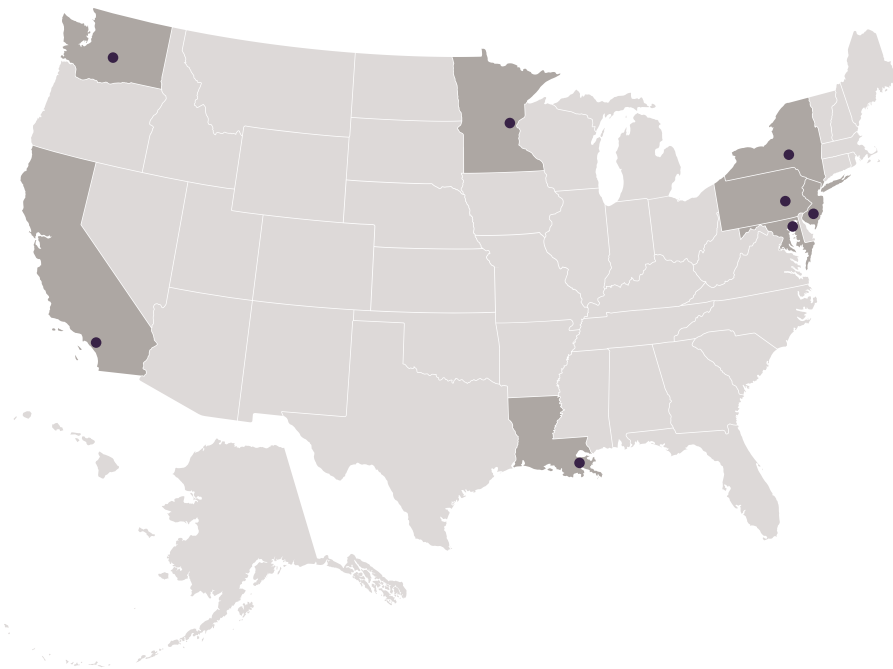
INTRODUCTION

The National Association of Addiction Treatment Providers (NAATP or The National Association) is a national professional organization of addiction treatment service providers and supporters. The mission of The National Association is to provide leadership, advocacy, training, and member support services to assure the availability and highest quality of addiction treatment.

The OMNI Institute accelerates positive social change by supporting the public, nonprofit, and philanthropic sectors around the country with integrated research and evaluation, capacity building, and data utilization solutions. For over 20 years, OMNI has partnered with stakeholders and providers across the spectrum of substance use prevention, treatment, and recovery, to conduct research and support implementation of best practices. ▶

In 2016, NAATP, in partnership with Jessica Swan, NAATP Outcomes Project Manager and OMNI, launched the Outcomes Pilot Program (OPP), a nationwide assessment designed to measure long-term outcomes for patients who receive inpatient substance use disorder services. ■

EIGHT OF NAATP'S MEMBER ORGANIZATIONS PARTICIPATED IN THE OPP



Outcomes Pilot Program Sites

Ashley Addiction Treatment
Havre De Grace, MD

Avenues Recovery
Metairie, LA

Caron Treatment Centers
Wernersville, PA

Hazelden Betty Ford Foundation
Center City, MN

New Directions for Women
Costa Mesa, CA

Seabrook
Bridgeton, NJ

Sundown M Ranch
Yakima, WA

**Tully Hill Chemical Dependency
Treatment Center**
Tully, NY

FINAL REPORT

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Study Objective

The primary objective of the OPP was to conduct a pilot study of treatment outcomes using rigorous and replicable social science methods to serve as a foundation for cultivating best practices in outcomes research for substance use treatment. This goal was met and both a process and a measurement tool were piloted that the treatment field can utilize to engage in uniform data collection and reporting of patient outcome data. A secondary goal of the OPP was to examine the relationship between treatment and short- and long-term outcomes for patients using the data collected through the OPP. The results of this data exploration are presented in this report.

OMNI worked collaboratively with NAATP staff to define research questions and associated data collection measures. Data collection began in September 2016. The longitudinal pilot assessed data collected from participants at multiple time points between intake and one-year post-intake to treatment. To protect the welfare of the study participants, all study materials were reviewed and approved by Advarra, an Institutional Review Board (IRB). In addition, a Certificate of Confidentiality (CoC) was issued by the National Institute on Drug Abuse (NIDA) to further protect participant data from forced disclosure.

This report complements the NAATP Addiction Treatment Outcomes Measurement Toolkit (The Toolkit) outlining best practices for outcomes data collection. If you would like to learn more about OMNI's role in developing this report or are interested in the Toolkit and how you can use it at your facility, please contact OMNI at 800-279-2070 or omni@omni.org.

The OPP is the first project of its kind conducted by NAATP. Having successfully completed the project and using lessons learned, NAATP intends to follow this work with additional studies to address the larger continuum of addiction treatment services, including interventions such as outpatient care and interventions that address various components of the biological, psychological, social, and spiritual facets of addiction. ▶

METHODS



Approach

At discharge, staff should remind participants The OPP tracked data collected from 748 participants at eight treatment facilities from intake through the year following their intake to residential treatment. Data were collected via self-report surveys that were adapted from the National Outcomes Recording and Monitoring System (NORMS) surveys developed by Norman G. Hoffmann. Three different surveys (intake, follow-up, and service summary) were administered over six different time points. All participants consented to participating in the study and provided contact information during intake. Intake surveys were administered in-person by facility staff and entered into an online database. Follow-up surveys were administered over the phone by facility staff or OMNI staff at 1-month, 3-months, 6-months, 9-months, and 12-months post-intake. The service summary was administered over the phone by facility staff or OMNI staff at 3-months post-intake.

The intake survey collected information about patient demographics, substance use history, treatment history, family support, mental health concerns and legal issues. The follow-up surveys collected information about continued care, substance use, and psychological well-being. The service summary asked specific questions about the treatment experience. Because the longest program participating in the pilot was 90-days¹, it was expected that all participants be discharged by the 3-month follow-up. The service summary was included as part of the 3-month survey and collected information about treatment ratings, treatment status, funding, program components, family support, medications, continuing services, and mental health concerns. Across all surveys, participants could skip questions. Because of this, percentages may not sum to 100% in this report due to missing data.

For additional information about the OPP surveys please reference the Toolkit. ▶

1. The program length at each facility varied. Because of this, all follow-up windows were calculated from intake to be consistent across all study sites.

METHODS

Statistical Significance

Tests of statistical significance were used in the analyses reported below. Statistical significance is indicated by the probability (p-value) that the patterns of observed findings are due to chance alone. The range of p-values is from 0 to 1; the smaller the p-value, the smaller the likelihood that the observed change is due to chance alone.

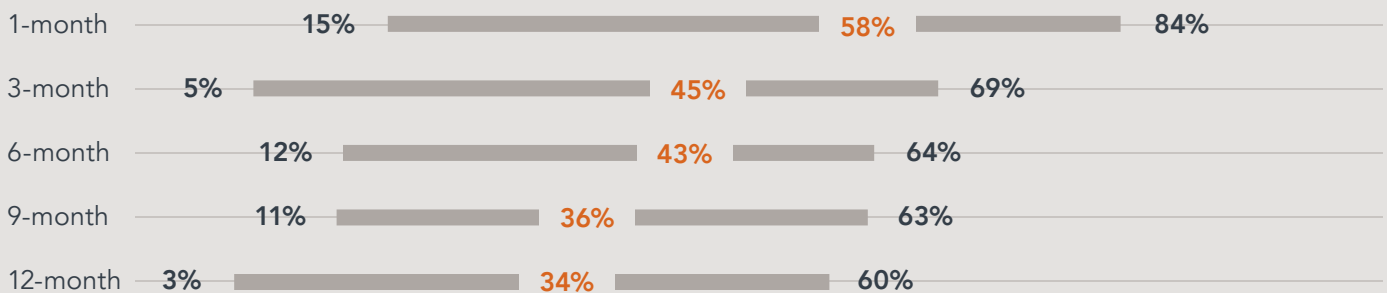
The standard benchmark for statistical significance in social science is a p-value of less than .05, indicating that the probability that an observed change is due to chance alone is less than 5%. When a test of statistical significance was conducted for this report, the corresponding p-value is noted in the text (for example, $p < .05$).

Participation in the Study Over Time

Follow-up rates for survey completion at each timepoint are presented below. Follow-up rates were calculated based on the number of participants enrolled in the OPP study. The grey bars represent the range of follow-up rates across facilities.

One-third (34%) of evaluation participants completed the 12-month follow-up survey.

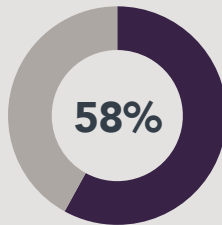
There was a wide range of follow-up rates across treatment facilities at each time point.



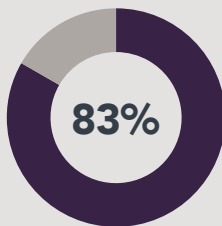
The results presented in this report include only data from individuals who participated in each follow-up. Therefore, results may not be generalizable to the participants who were not reached. For example, at the 12-month follow-up point, 66% of participants could not be reached, and conclusions about these participants cannot be drawn. An assessment of differences in characteristics between participants who were reached for follow-up assessment and participants who could not be reached indicated that participants who were younger and participants with less formal education (those with no high school diploma or a high school diploma/GED) were less likely to be reached for follow-up ($p < .05$). This suggests that the results of the OPP may be less generalizable to these specific populations. ■

PARTICIPANT DEMOGRAPHICS

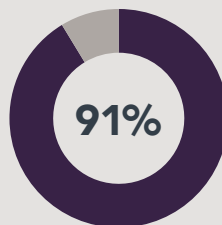
Study participants ranged in age from 18 to 74, with a mean age of 37 years.



of participants identified as male



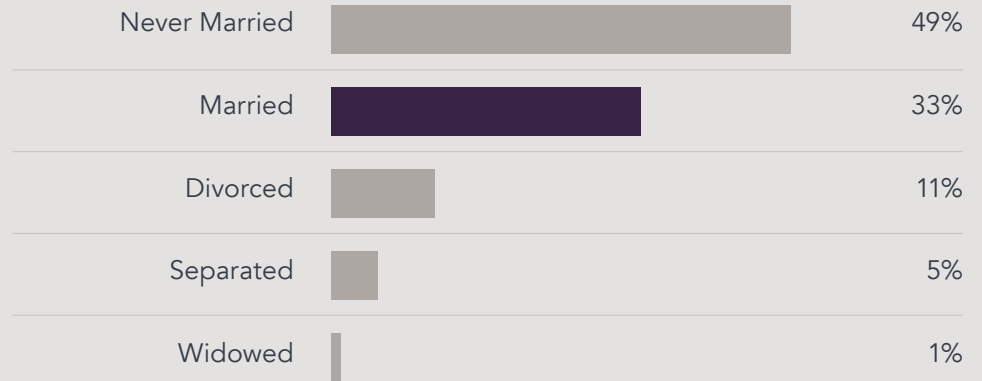
of participants identified as non-Hispanic



of participants identified as White

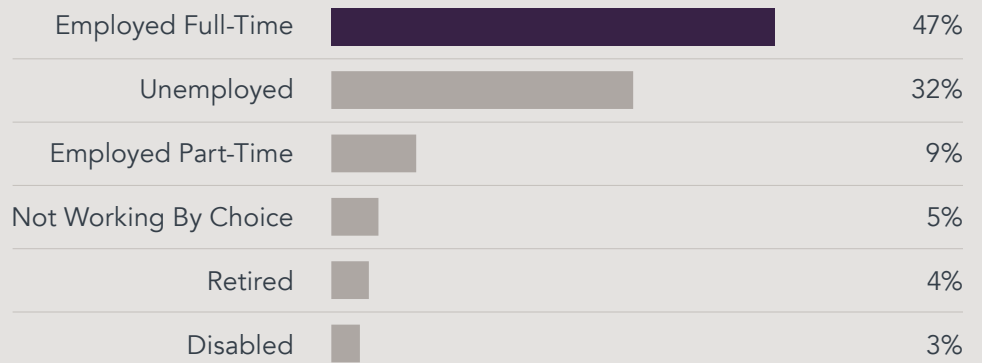
PARTICIPANT DEMOGRAPHICS

One out of three participants was married at intake to treatment



Nearly half of participants were employed at intake to treatment.

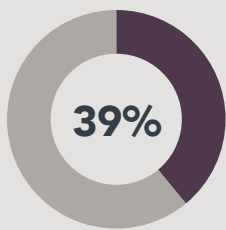
Close to one third of participants (32%) were unemployed.



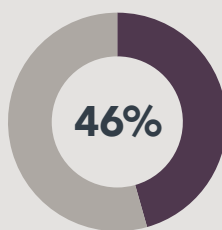
PARTICIPANT CHARACTERISTICS

Mental Health

At intake, participants were asked if they had experienced any mental health concerns in the last 30 days. Participants also indicated if they were seeing a mental health professional or taking medication for a mental health condition prior to intake.



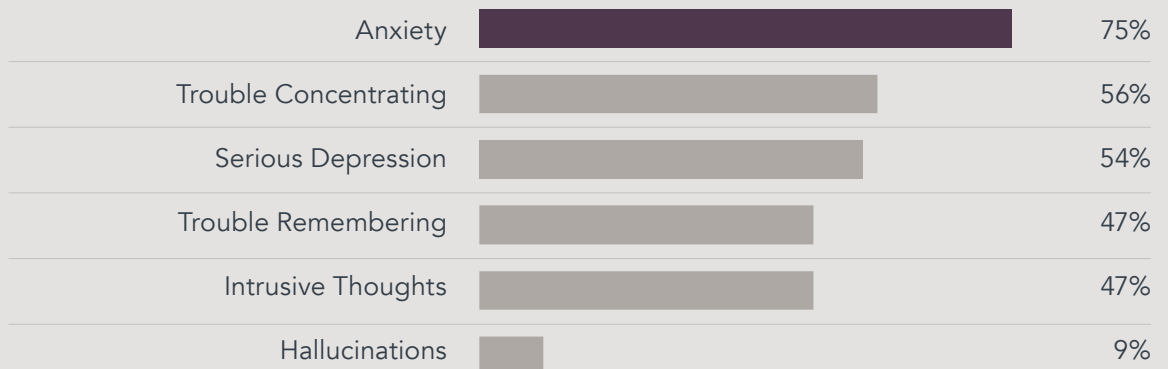
39% of participants were seeing a mental health professional



46% of participants were taking medication for a mental health condition

Three quarters of participants reported experiencing anxiety in the past 30 days.

Over half of participants reported experiencing serious depression (54%).



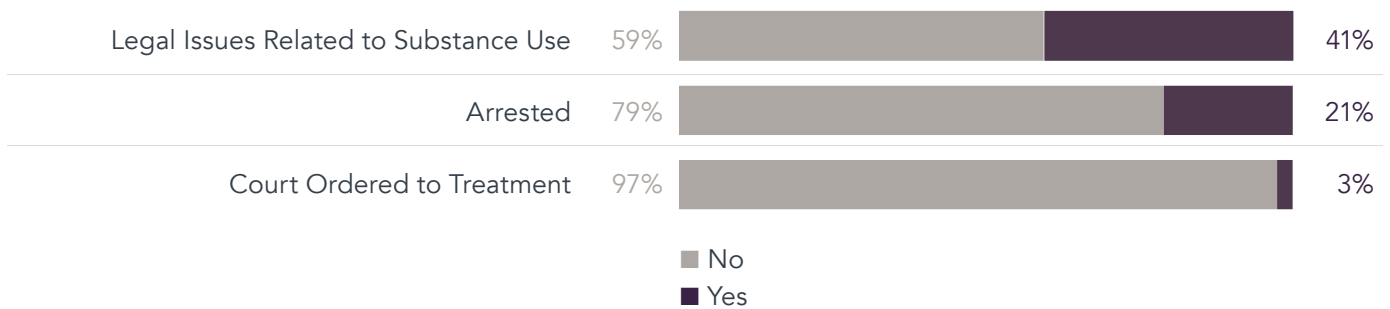
PARTICIPANT CHARACTERISTICS

Legal Issues

At intake, participants answered several questions about legal issues. For each substance they had used in the previous year, participants indicated if they had experienced legal problems as a result of using that substance. In addition, participants disclosed if they had been arrested or were mandated to seek treatment from a court or correctional system.

One out of five participants had been arrested in the past 12 months.

Only 19 participants (3%) were mandated to treatment by a court or correctional system.

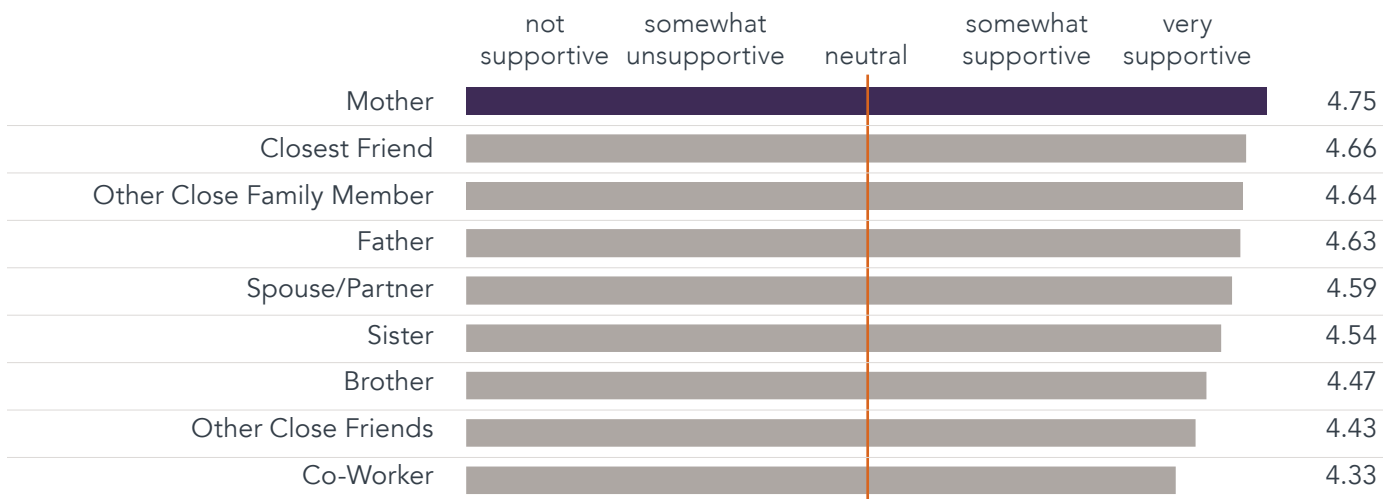


Family Support

As part of the intake survey, participants were asked about the extent to which their friends and family were supportive of their treatment on a five-point scale (1 = not supportive, 2 = somewhat unsupportive, 3 = neutral, 4 = somewhat supportive, 5 = very supportive). Responses were averaged to create a mean response value. Participants could also indicate that they had no contact with a particular friend or family member; these responses were not included in the mean value.

Participants felt their friends and family were highly supportive of their treatment, with mothers being rated as most supportive.

All ratings of family support were significantly above the scale midpoint ($p < .05$).



PARTICIPANT CHARACTERISTICS

Substance Use and Treatment History

At intake to treatment, participants were asked about their substance use and treatment history. Sixty-two percent of participants had received treatment for a substance use disorder prior to admission. The amount of time since treatment ranged between 0 months and 30 years. The average time since treatment was 2 years and 5 months and the median was 10 months.

Three quarters of participants had used alcohol in the past month at intake to treatment.

Among participants who used heroin or prescription opioids, eight percent reported using both substances in the month prior to intake.

Alcohol		77%
Marijuana		37%
Benzodiazepines		34%
Cocaine		24%
Heroin		23%
Prescription Opioids		23%
Amphetamines		12%
Methamphetamine		11%
Designer Drugs		6%
Other Drugs		6%
Other Opioids		1%

For any substance they had used in the previous year, participants answered eleven additional questions to determine if they met the DSM 5 criteria for a mild, moderate, or severe substance use disorder. The graph below displays the percentage of participants who met the criteria for a severe substance use.

The majority of participants who used opiates met the DSM 5 criteria for a severe substance use disorder.

More than half of participants who used alcohol or methamphetamine also met the DSM 5 criteria for a severe substance use disorder.

Heroin		86%
Other Opioids		73%
Alcohol		69%
Methamphetamine		67%
Prescription Opioids		57%
Cocaine		50%
Benzodiazepines		35%
Amphetamines		29%
Marijuana		25%
Designer Drugs		20%
Other Drugs		16%

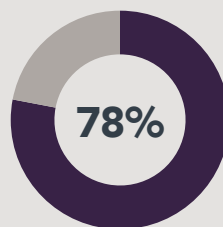
TREATMENT EXPERIENCE

Funding

On the service summary, administered at the 3-month follow-up, participants were asked the source of their treatment funding. Additionally, participants indicated if they felt that the funding for their treatment was sufficient for all required services.

Close to half of participants funded their treatment through insurance.

A similar percentage of participants funded their treatment via a combination of insurance and self pay.



of participants felt the funding for treatment was sufficient for all required services

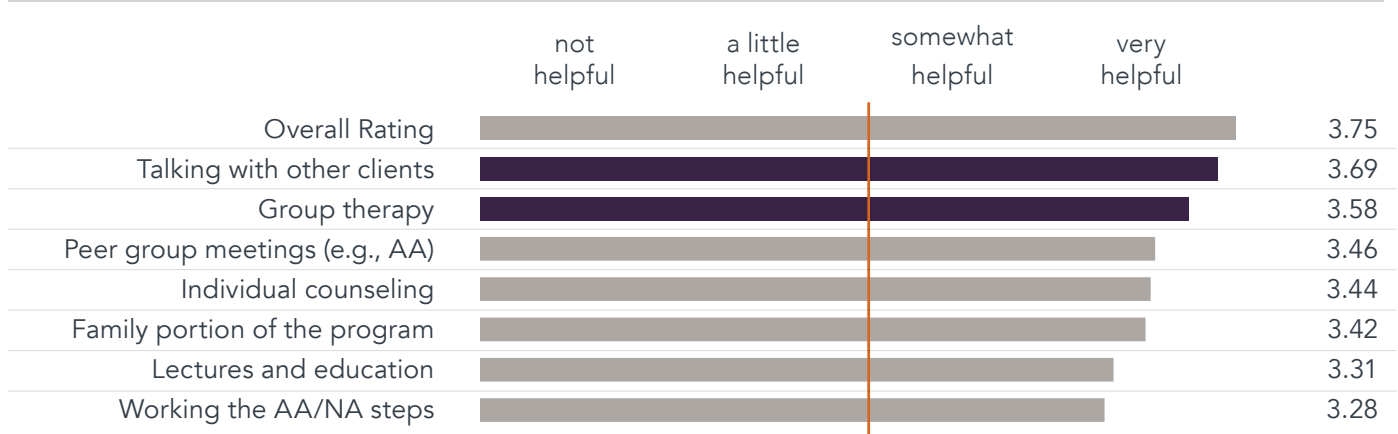


Helpfulness of Treatment

On the service summary, participants were asked to rate the helpfulness of eight treatment components. For each item, participants were asked to rate the helpfulness on a four-point scale (1 = not helpful, 2 = a little helpful, 3 = somewhat helpful, 4 = very helpful). Responses were averaged to create a mean response value shown below. Participants who indicated the treatment component was not applicable were not included in the mean value.

Participants found treatment to be highly helpful, talking with other clients and group therapy were rated as most helpful.

All ratings of treatment helpfulness were significantly above the scale midpoint ($p < .05$).

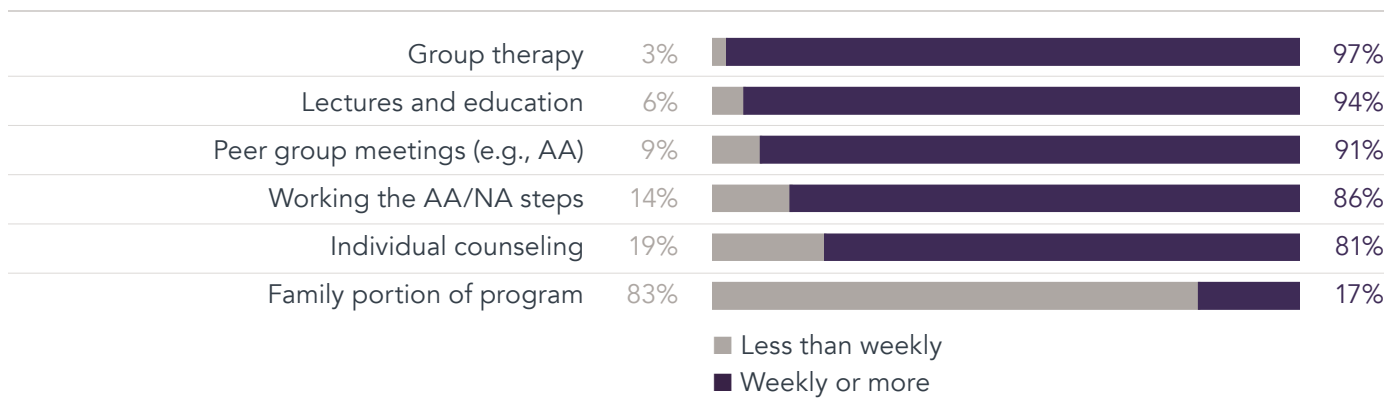


TREATMENT EXPERIENCE

Treatment Components

On the service summary, participants were asked about the frequency with which they utilized each program component – once or twice, more than once or twice, weekly, or several times per week.

More than 90% of participants attended group therapy, lectures, and peer group meetings weekly or several times per week.

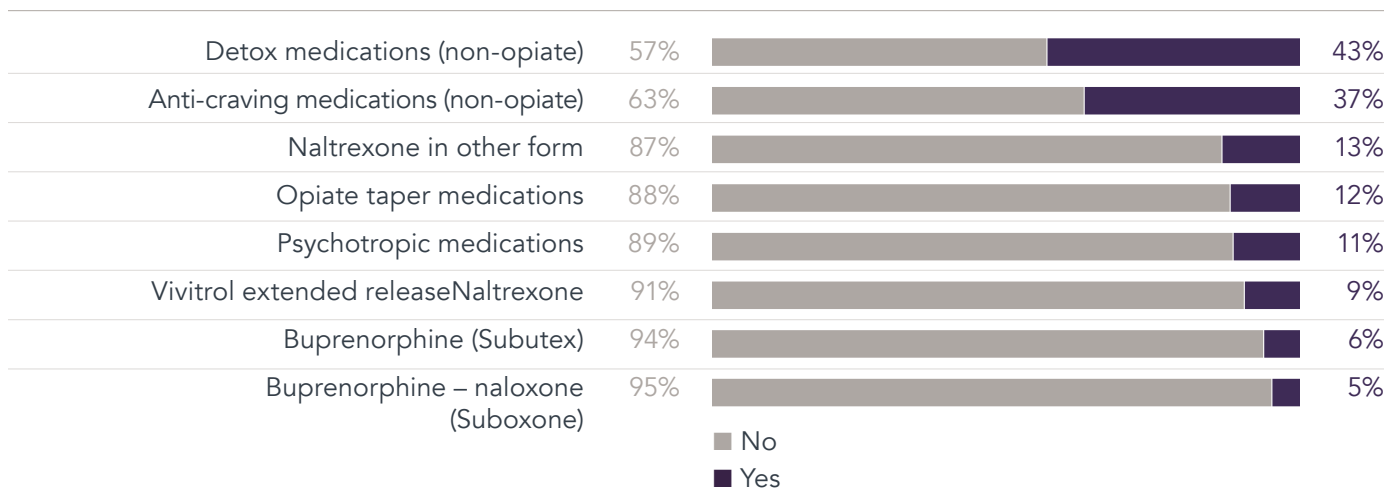


Medication During Treatment

On the service summary, participants reported medication that was administered or prescribed including opiate replacement maintenance medication. No participants reported being prescribed methadone or LAAM (opioid agonist) during treatment. Participants who were older and participants who used alcohol in the month prior to intake were more likely to report receiving medication during treatment ($p < .05$). Individuals who used alcohol were most likely to reporting taking detox medications (non-opiate) and anti-craving medications (non-opiate). Opiate use in the month prior to intake was not significantly associated with receiving medication during treatment.

Two out of five participants reported taking non-opiate detox medications during treatment.

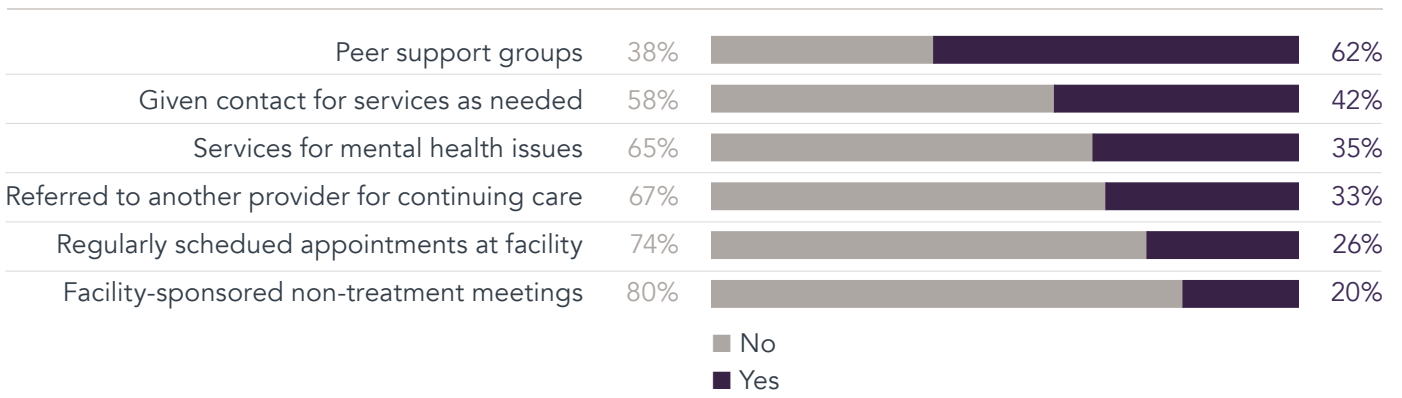
Participants were less likely to report taking opiate replacement maintenance medications.



Continuing Services

On the service summary, participants were asked about the arrangements they had made for continuing services.

Over half of participants had arranged to attend peer support groups as part of their plan for continuing care.



Status Upon Leaving Treatment

On the service summary, participants indicated their status upon leaving treatment. Among participants who successfully completed treatment, forty-two percent planned to engage in continuing care with the facility where they received treatment. Participants who did not complete treatment gave several reasons, including that they did not engage in treatment, were discharged for noncompliance, or left against staff advice.



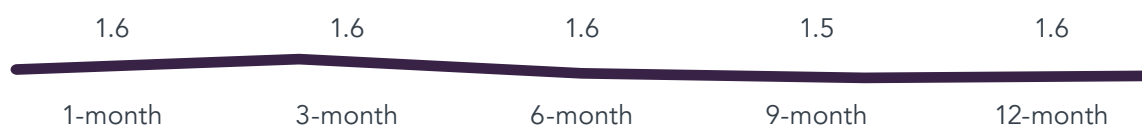
TREATMENT OUTCOMES



Negative Feelings and Cravings

On each follow-up survey, participants indicated the extent to which they experienced the following feelings – being bored, being under stress, being anxious, being nervous, feeling uncomfortable, feeling restless, craving alcohol, and craving drugs. Each item was rated on a three-point scale 1 = not troubled at all, 2 = somewhat troubled, 3 = very troubled. A reliability analysis to assess consistency across the eight items resulted in a Cronbach’s alpha score above 0.70, indicating that the items could be combined into a single scale. The aggregate single score is presented in the following graph.

Participants' negative feelings and cravings for drugs and alcohol remained consistently low across the five follow-up time points.



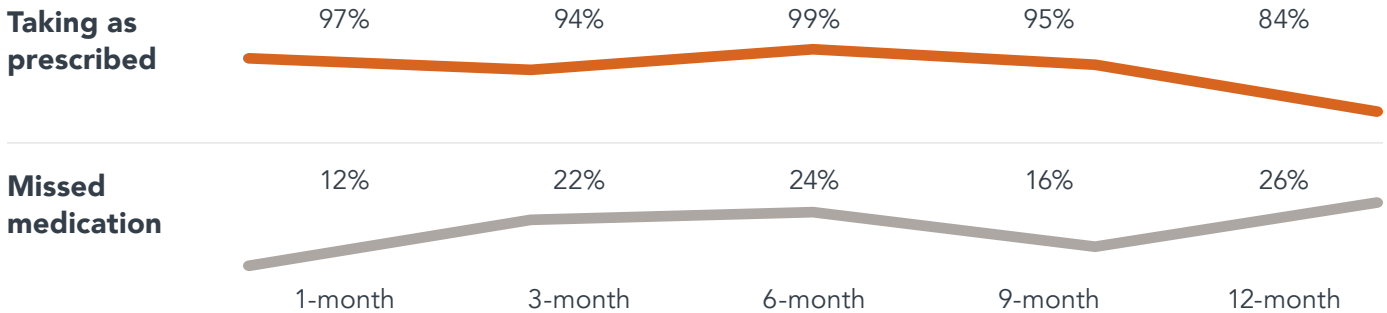
Medication

Most participants did not take medication for their substance use disorder during the year following their intake to treatment. The number of participants taking medication for their substance use disorder declined from 26% at the 1-month follow-up to 7% at the 12-month follow-up. On each follow-up survey, participants who were taking medication were asked if they were taking it as prescribed. Additionally, participants indicated if they had missed taking their medication more than once or twice in a week. The following graph only includes data from participants who report taking medication at each time point.

TREATMENT OUTCOMES

At the 12-month follow-up one quarter of participants reported that they missed taking their medication more than once or twice a week.

Participants who reported taking their medication as prescribed were less likely to report missing medication. ($p < .05$)



Abstinence

For each follow-up survey, participants indicated if they abstained from substance use for the time period since they had last completed a survey. Participants were asked about substance use in the past month on the one-month survey, the past two months on the three-month survey, and the past three months on the six-month, nine-month, and twelve-month survey.

Participants were asked about their abstinence from eleven substances. The “Other Drugs” category included use of prescribed drugs and a positive indication on this variable could indicate use of prescription drugs that are not being abused (for example, blood pressure medication). Abstinence rates are calculated two ways: (1) abstinence from all substances and (2) abstinence from all substances, excluding responses to the “Other Drugs” category.¹

Abstinence rates² were calculated based on the number of people who responded to each follow-up survey. The data do not reflect individuals who did not complete follow-up surveys.

Follow-up Survey	Number of Survey Respondents	Abstinence from All Substances	Abstinence Excluding “Other Drug” Usage
1-month	435	70% (304)	85% (368)
3-month	338	55% (186)	65% (219)
6-month	319	54% (172)	65% (207)
9-month	270	62% (168)	71% (191)
12-month	251	65% (164)	66% (166)

There were 118 participants who were reached for all five follow-up surveys.

Among this group, 46% reported being continuously abstinent for the year following their intake to treatment.

1. Survey revisions were made based on this learning from the OPP. This question was modified in the surveys produced for the Toolkit so that future data collection using the survey tools provides clearer distinction between illicit drug use and drug use, as prescribed.

2. Relapse rates in the data collected for the OPP are similar to rates for other chronic diseases such as hypertension and diabetes. See the Conclusion section of this report for additional information.



FACTORS PREDICTING ABSTINENCE

NAATP is interested in understanding what factors contribute to success in recovery. To explore this question, logistic regression was used to determine the factors that predict abstinence at 12 months. Multiple participant characteristics and their relationship to abstinence were assessed. **These factors included:**

- Demographic Characteristics (Age, Gender, Relationship Status, Education Level, Employment Status, Income)
- Mental Health Symptoms
- Prior Substance Use Disorder Treatment
- Number of Substances Used in Past 30 days at Intake
- Family Support
- Treatment Status
- Program Components
- Aftercare and Support Group Attendance
- Using of Medication Assisted Treatment (MAT)
- Duration of Services

Among all of the characteristics assessed, there were six characteristics that predicted abstinence at the twelve-month follow-up:

- Age
- Relationship Status
- Number of Substances Used in Past 30 days at Intake
- Successfully Completing Treatment
- Attending AA meetings
- Days Spent in Clinically Managed Residential Treatment



First, participant age was a predictor of abstinence. Participants who were older were more likely to be abstinent than participants who were younger ($p < .05$). This result should be interpreted cautiously, because younger participants were also less likely to be reached for the 12-month follow-up. It is possible that younger participants who were not reached for the 12-month survey were also abstinent. Alternatively, if younger participants were less likely to be abstinent, this may explain why they were less likely to participate in follow-up interviews.

Next, participants who were married when they entered treatment were more likely to be abstinent than those who were not married ($p < .05$). The number of substances used in the 30 days prior to intake was also a predictor of abstinence. Participants who report using fewer substances in the 30 days prior to intake to treatment were more likely to be abstinent at the 12-month follow-up ($p < .05$). Additionally, participants who successfully completed treatment were more likely to be abstinent ($p < .05$).

There was a significant relationship between attending AA meetings and abstinence such that the more frequently participants attended AA meetings after discharge from treatment, the more likely they were to be abstinent at the 12-month follow-up ($p < .05$). Finally, there was a significant relationship between the number of days spent in clinically managed residential treatment and abstinence such that the more days participants spent in clinically managed residential treatment, the more likely they were to be abstinent at the 12-month follow-up ($p < .05$). The other predictors outlined above were not related to abstinence.

As a final step, the six significant predictor variables were included in a logistic regression model. This approach provides information about the relative impact of each predictor, controlling for all other predictors. In other words, this model considers all of the predictors together, and determines which of them remain most significant. The results from this model showed that attending AA meetings was the strongest predictor of abstinence at the 12-month follow-up ($p < .05$). ■

CONCLUSION

NAATP engaged in a longitudinal pilot study, in collaboration with eight treatment sites and OMNI. The goals of the pilot were to cultivate best practices for conducting outcomes research for substance use treatment; to explore common outcomes measures for the field; and to examine the relationship between treatment and short- and long-term outcomes for patients. The OPP studied 748 participants across eight participating pilot sites and collected data from participants at intake, one, three, six, nine, and twelve months from intake to treatment. There was a wide range of follow-up rates across sites; on average follow-up rates ranged from 34% to 58% at each time point. At the twelve-month follow up, 34% of participants were reached for a follow-up survey.

Summary of Findings

The majority of study participants were single men who were employed at the time of their intake to treatment. Participants reported a high level of support from their friends and family to seek treatment. Alcohol was the most widely used substance in the 30 days prior to intake. Marijuana and benzodiazepines were also commonly used substances among participants. Participants found treatment to be very helpful and a majority of participants successfully completed treatment. Most participants reached for surveys reported that they were abstinent at each follow-up with 65% reporting that they were abstinent from all substances at 12-months post-intake. Among participants who were reached for all follow-up surveys (n = 118) 46% reported being continuously abstinent for the year following their intake to treatment. Attending AA meetings was found to be the strongest predictor of abstinence at the 12-month follow-up.

Research by The National Institute on Alcohol Abuse and Alcoholism (NIAAA) National Epidemiologic Survey on Alcohol and Related Conditions¹ found that drug use disorders were more common among men, individuals who identify as White or Native American, and those who are single or not married. The NIAAA study also found that younger individuals and those with lower income and education levels were also more likely to have a drug use disorder. The participants in the OPP shared some common demographic characteristics with the NIAAA study population – being majority male, White, and single. However, OPP participants had higher educational attainment and many were employed and had access to insurance to cover substance use treatment. These differences highlight the treatment gap between individuals who need and receive treatment. The 2017 National Survey on Drug Use and Health found that only 12.2% of individuals who need treatment for substance use disorders receive treatment². Individuals who receive treatment are likely to have more resources (for example, financial, job flexibility, and family support) that allow them to seek treatment.

Addiction treatment poses unique research challenges. Relapse rates for addiction are similar to those for other chronic diseases such as diabetes, hypertension, and asthma³. However, when relapse occurs after addiction treatment it is often viewed in our culture as a failure of treatment. The chronic nature of addiction means that relapse is likely to occur. When relapse occurs, this indicates that additional treatment or alternate treatment is necessary not that treatment has failed. ▶

CONCLUSION

Considerations for Implementation

A primary goal of the OPP was to cultivate best practices for conducting outcomes research for substance use treatment, resulting in the Toolkit. The guidance provided in the Toolkit draws on lessons learned from the OPP. Key lessons learned from implementation include the following:

- **Planning and Resource Allocation:** Careful planning and dedicated resources to outcomes research are critical for success. Organizations should consider staff time, data management systems, and systems for maintaining organizational knowledge in the event of staff turnover to sustain long-term, consistent data collection. Organizations that do not have in-house capacity for data collection or data management should consider partner research organizations.
- **Staff Training:** Staff who are responsible for data collection should be thoroughly trained in the purpose of outcomes data collection, how to talk with patients about outcomes data collection, best practices and ethical considerations for collecting data from human subjects, and best practices and practical tips for collecting data.
- **Participant Engagement and Follow-up:** Long-term retention of participants in research is imperative for the quality of data collected (in other words, it is important that follow-up rates remain as high as possible). Organizations should consider strategies for keeping participants engaged in outcomes research in the period after they leave treatment. Participant incentives, the way that research is explained to patients (for example, that it is confidential and important to organizational learnings to improve treatment), and alumni engagement/outreach are strategies for keeping patients engaged.

Limitations

There are several limitations to this study. Not all participants were reached for follow-up and conclusions about their outcomes cannot be made. An analysis of missing data revealed that participants who were younger and participants who had relatively less formal education (those whose highest level of education was a high school diploma or GED) were significantly less likely to be reached for follow-up. The results of this study may be less generalizable to these specific populations. Additionally, the sample in this study is a convenience sample and may not be representative of all individuals who seek treatment. ■

1. Grant BF, Saha TD, Ruan WJ, et al. Epidemiology of DSM-5 Drug Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions—III. *JAMA Psychiatry*. 2016;73(1):39–47. doi:10.1001/jamapsychiatry.2015.2132
2. NSDUH Annual National Report (2017) Retrieved from <https://www.samhsa.gov/data/report/2017-nsduh-annual-national-report> 6 National Institute on Drug Abuse (2018) How effective is drug addiction treatment? Retrieved from <https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/how-effective-drug-addiction-treatment>
3. National Institute on Drug Abuse (2018) How effective is drug addiction treatment? Retrieved from <https://www.drugabuse.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/how-effective-drug-addiction-treatment>



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