TAC
Treatment Advocacy Center

EVALUATING ASSISTED OUTPATIENT TREATMENT (AOT) PROGRAMS: GETTING STARTED

INTRODUCTION

This paper is a guide for assisted outpatient treatment (AOT) evaluators written by Treatment Advocacy Center (TAC) in collaboration with several experienced AOT evaluators across the United States.

Assisted outpatient treatment (AOT) is a form of involuntary outpatient commitment for individuals with severe mental illness (SMI) who have a history of hospitalizations, arrests, or significant difficulty staying well in community settings due to the severity of their symptoms. While in an AOT program, a participant is court ordered by a civil court judge to follow an individualized treatment plan in the community while the local mental health system monitors adherence to the treatment plan. Once a participant demonstrates voluntary engagement in treatment, the court may dismiss the AOT order or allow it to expire.

There is evidence that AOT is effective at decreasing hospitalizations, hospital length of stay, arrests, incarceration, homelessness, self-harm, violence, victimization, and substance use. AOT has also been shown to result in cost savings for counties, and participant satisfaction with the program is comparable to that of voluntary services. That being said, there are many critical gaps in AOT research, including how to optimize care in the program and the impact of AOT on the healthcare system. See Appendix A for additional sources and context on existing AOT research.

In addition to determining the program's impact on participants, AOT program evaluations are also necessary for the program's sustainability and continued improvement. This makes the AOT evaluator a critical member of the AOT team. We hope this guide serves you well as you begin planning your evaluation.

RECOMMENDED CITATION:

Silver, S., Botchway, A., Bunyer M., Duthie, E., Jones, A., Pelkey, L., Pomerville, J. (2024). Evaluating Assisted Outpatient Treatment (AOT) Programs: Getting Started. *Treatment Advocacy Center.* https://www.tac.org/

CONTRIBUTORS:

Shanti Silver, Treatment Advocacy Center
Albert Botchway, Southern Illinois University School of Medicine
Michelle Bunyer, University of Wisconsin-Milwaukee
Elizabeth Duthie, University of Wisconsin-Milwaukee
Aubrey Jones, University of Kentucky
Lisa Pelkey, Greenbush Education Service Center
Joseph Pomerville, Central Michigan University

EVALUATING AOT PARTICIPANT OUTCOMES

There are many outcomes that can be measured as part of an AOT evaluation. While AOT SAMHSA grantees are required to collect data from the National Outcome Measures (NOMs) and Government Performance and Results Act (GPRA) tool, a previous evaluation found that an AOT evaluation reporting based on only this required data "would be severely limited in its ability to comment on the effectiveness of AOT." Because AOT participants are often those with a history of hospitalizations or involvement with the criminal legal system, it may be crucial to measure the frequency of hospitalizations, days spent in the hospital, arrests, incarcerations, and days spent in jail.

Other outcomes that may be of interest include:

- Symptom severity
- Treatment adherence
- Appointment adherence
- Crisis contacts
- Housing stability
- Insight into illness
- Employment
- Mortality
- Physical and dental health
- Quality of life
- Substance use (alcohol, tobacco, illicit drugs)
- Suicidal ideation and self-harm
- Social connectedness
- Violent behaviors

TIMEFRAME FOR COLLECTING PARTICIPANT OUTCOME DATA

To obtain a complete picture of AOT's impact on participants, it may be helpful to compare the frequency of adverse events that occurred during AOT with those that occurred before entering the program. Comparing outcomes while in AOT with an extended period before admission, as opposed to comparing outcomes during AOT with only the 30 days before admission or at intake, can help to provide a more comprehensive picture of participant functioning before entering the program and the impact that AOT may have on

GETTING STARTED: A CHECKLIST FOR EVALUATORS

Before beginning data collection, we recommend undertaking the following steps to preemptively address challenges that often arise during the evaluation process:

☐ Review relevant literature for context on assisted outpatient treatment.

- See recommended reading in Appendix A for a list of studies and other materials that may be useful to review.

☐ Schedule an initial meeting with the AOT program monitor and other key collaborators to discuss expectations for data collection and the relevance of AOT program evaluation to their work.

- In this initial meeting, evaluators can work with the program team to determine relevant research questions, discuss a feasible data collection schedule, set up a schedule for regular meetings, and ask program staff their opinions on the data that would be most helpful for their work.

☐ Establish the purpose and goals of the evaluation.

- Determine the questions that you want the evaluation to answer before selecting data.
- Research questions should be informed by other team members and the availability of relevant resources — data and otherwise.
- Establishing the purpose and goals of the evaluation up-front can also be helpful in the event of staff turnover over the course of the evaluation.

☐ Develop a plan to source and monitor necessary data for the evaluation.

- Review suggested measures for evaluation in this paper and determine which are highest priority for your evaluation.
- Include multiple data sources for key outcomes in front-end planning to help address problems with missing data that may arise later.
- Determine the frequency of data collection (e.g., monthly, quarterly, etc.)
- Plan to conduct regular data audits to ensure that missing or incorrect data is caught before the problem grows.

participants accordingly. Data before entering the program can sometimes be obtained from the court system, local hospitals, Medicaid data, natural supports, or self-report. Community mental health centers may also have access to this data.

Comparing the frequency of adverse events that occur during the program with those that occur during the year after a participant is discharged from the program is also recommended. Through comparing events that occurred during the program with those that occur after, an evaluation can examine whether any gains are sustained over time, even after exiting the program. To collect data on adverse events and participant well-being following graduation, it may be helpful to ask participants to complete a release of information with their provider during exit interviews or the discharge process. If the AOT program requires case managers, peers, or other program staff to follow up with program participants after graduation, this may be another good opportunity to collect information on outcomes.

When considering changes in outcomes over time, some evaluations have found that improvements in outcomes are most pronounced for participants who have been on the court order for more than six months. A 2024 report using data from six former SAMHSA AOT grantees found that spending six months or more on an AOT court order was associated with greater decreases in homelessness, suicidal ideation, violence, and psychiatric inpatient nights.

IDENTIFYING DATA SOURCES FOR OUTCOMES DATA

Most AOT evaluators who contributed to this paper noted that objective, numerical data on adverse outcomes can be difficult to obtain reliably and consistently. This can be especially true if the AOT program does not have a pre-existing relationship with the court system, local hospitals, jails, or sheriff's offices. Multiple evaluators emphasized the importance of planning for missing data, establishing a data structure before collecting data, building relationships with other members of the AOT team, and utilizing multiple data sources accordingly (see Table 1 for ideas about data sources).

Self-report data can be used to source information about adverse outcomes when other data sources are unavailable. However, be prepared to encounter challenges in obtaining self-report data. Evaluators noted that self-report data was difficult to obtain as many AOT participants refused to participate in surveys or interviews. For these evaluators, gift-cards and other incentives did not improve response rates. Clients who do not have access to reliable transportation or internet may also be unable to participate in data collection.

Additionally, the validity of self-report data can be impacted by AOT participants' discomfort with sharing information about sensitive events such as violence, drug use, or interactions with the criminal legal system. This can be especially true when collecting data at intake before relationships have been built with the AOT team. Participants may also have difficulty accurately recalling prior events, especially if the period before entering AOT involved severe psychosis or mania. For these reasons, it is helpful to compare client self-report data with secondary data sources such as Medicaid data to examine the validity of the self-report data. If planning to utilize self-report data for the evaluation, it may be worth reviewing the AOT Client Interview Instruments developed by researchers from RTI International.

Case managers and AOT monitoring reports can also help fill in gaps when other data sources are unavailable. Program staff who interact often and directly with participants can provide important information about adverse events and participant functioning over time. However, evaluators must build relationships with case managers and other program staff to obtain this information. For the best chances of conducting a successful evaluation, everyone who will need to be involved in the evaluation process should also be involved in the planning process.

TABLE 1: DATA SOURCING FOR OUTCOMES DATA*

Variable	Sources
Arrests	Background checks, sheriff's department, court system
Crisis contacts	Medicaid data, crisis centers
Hospitalizations and days spent in the hospital	Local hospitals, Medicaid data, mental health authority
Housing stability	Case manager, AOT monitor
Incarcerations	Background checks, sheriff's department, court system
Insight into illness	Case manager, AOT monitor, treatment providers, standardized assessment tools
Jailings and days spent in jail	Sherrif's department, court system
Physical and dental health	Case manager, AOT monitor
Subjective quality of life	Case manager, AOT monitor, standardized assessment tools
Substance use	Case manager, AOT monitor
Suicidal ideation and self-harm	Case manager, Medicaid data (if medical treatment was needed for self-harm), treatment providers
Symptom severity	Case manager, treatment providers, standardized assessment tools (e.g., BPRS, DLA-20, etc.)
Treatment adherence	Medicaid data (medication possession), case manager
Violent behaviors	Case manager

*self-report and reports from natural supports such as family members can also be used to obtain this information. Case managers can help identify AOT participants with family members or close friends who may be willing to participate in interviews and surveys or assist with data collection.

When asking case managers or others for data, it is important to acknowledge the time and energy needed to gather and report the requested data. For example, providing case managers with an easy-to-use template for collecting data, conducting data audits to identify missing data, sending reminders, sharing results regularly, and expressing gratitude can all help to facilitate participant outcome data collection. Conducting data collection trainings

can also be helpful to facilitate the process. If possible, these data collection trainings should include information about data confidentiality, as well as key definitions to ensure everyone understands what data is needed.

To further build relationships with program staff and better understand the AOT program, evaluators should also consider regularly attending program team meetings to share updates on the evaluation and gain an understanding of the program's challenges and successes. In addition to facilitating the data collection process, meeting with collaborators can help set clear expectations for data collection and the frequency with which evaluation updates will be shared. Explaining the utility and importance of program evaluation in these meetings can help program staff be excited about the evaluation's results and increase their sense of commitment to the evaluation process. AOT evaluators should also consider attending AOT hearings when beginning the evaluation process to learn about the court's role in AOT and demonstrate engagement with the program.

DEMOGRAPHIC INFORMATION

Some demographic information may be helpful to collect for AOT participants. For example, it may be beneficial to compare proportions of participants from different demographic backgrounds to see if there are any disparities between the AOT population and the population of the county at large. This may be especially important for those from minoritized racial groups that have previously been shown to be overrepresented in coercive mental health treatments, including AOT. This demographic information can also help evaluate whether one group is impacted differently by the AOT program than another. Additional demographic variables for group comparisons include gender identity, age at enrollment, primary diagnosis, military status, sexual orientation, referral source, and payer source. Demographic information can be obtained from birth certificates, self-report, and program staff.

PROCESS EVALUATION

To determine whether observed outcomes reflect the effectiveness of AOT, it is first necessary to ensure that the program is enacting AOT and not a model of voluntary treatment services. Accordingly, when evaluating AOT programs, it is also important to evaluate the processes and programming offered. See Implementing Assisted Outpatient Treatment: Essential Elements, Building Blocks and Tips for Maximizing Results for a complete list of essential elements defining an AOT program.

Process evaluations are also essential for identifying areas of improvement for the program. As part of a process evaluation, evaluators may want to note the number of evidence-based practices and other services participants receive, as well as any fidelity assessment data available. The list of core services and support services listed in the 2022 Substance Abuse and Mental Health Services Administration's National Outcome Measures (NOMs) provides a good index of services that would be helpful to track. TAC's Program Review Tool (available upon request) contains other areas that may be useful to include in process evaluations for program improvement, including articulation of program philosophy, participant identification, staff training, and other program policies.

When evaluating the processes of an AOT program, it is important to hear directly from

program staff, participants, and natural supports on how the program is functioning and how it could be improved. Collecting feedback from people involved with and impacted by the program can take the form of satisfaction surveys, individual interviews, or focus groups.

COST-BENEFIT ANALYSES

It can also be helpful to explore the impact of AOT on cost savings. Several studies have found that AOT reduces costs, primarily through transferring costs from inpatient care and jailings to outpatient care. These savings are substantial, with some regions seeing cost reductions of 40%-50% per participant. A previous evaluation of SAMHSA grantees also found a return on investment of 8% due to cuts in psychiatric inpatient stays and emergency department visits. Cost savings enable care systems to reach more people and are also of great interest to legislators who often attempt to use state budgets efficiently. Accordingly, cost-benefit analyses are necessary for understanding the impact of AOT on system-level costs and can be critical for the sustainability of AOT programs.

Information about Medicaid claims can be used to obtain information on the costs of private hospitalizations, outpatient treatment, crisis contacts, and medication possession before, during, and after participation in AOT. However, it is important to note that it can take years to apply for and obtain access to Medicaid data, so it is important to start looking into this early if you would like to use Medicaid data for your evaluation. If Medicaid data is unavailable, other institutions like local hospitals, crisis centers, and jails may be able to provide estimates on the cost of treating or holding someone with SMI for a 24-hour period. For example, many community mental health centers (CMHCs) have court liaisons who may be able to assist with gathering information about arrests, length of jail time for AOT participants, and associated costs. Cost savings can be determined by multiplying these estimates with outcomes data.

COMMUNICATING FINDINGS

It is important to communicate key findings to partners in the AOT program, particularly with any collaborators who have been instrumental in getting access to the data used in the evaluation process. Key findings should be shared in easily understandable ways for people who do not have a background in data or technical research. Findings are best shared with general audiences through easily digestible charts and tables in interactive dashboards, infographics, presentations, and one- or two-page summaries.

CONCLUSION

The role of the AOT evaluator is to assess the effectiveness and processes of AOT programs. This document provides some tips for getting started in your AOT evaluation. For more resources and technical assistance for your AOT evaluation, please visit TAC's website or contact aot@tac.org.

APPENDIX A: RECOMMENDED READING

A.1: UNDERSTANDING ASSISTED OUTPATIENT TREATMENT

- Hancq, E.S., Munetz, M., Silver, S.C., Parker, H.A., Bonfine, N. (2024). Critical Gaps in AOT Research in the United States. *Administration and Policy in Mental Health and Mental Health Services Research.* https://www.treatmentadvocacycenter.org/reports_publications/critical-gaps-in-aot-research/
- Stettin, B., Lukes, A., Snook, J., Johnson, B., Munetz, M.R., Hrouda, D. (2019). White Paper: Implementing Assisted Outpatient Treatment: Essential Elements, Building Blocks and Tips for Maximizing Results. *American Psychiatric Association.* https://www.treatmentadvocacycenter.org/aot_resources/white-paper-implementing-assisted-outpatient-treatment-essential-elements-building-blocks-and-tips-for-maximizing-results/
- Treatment Advocacy Center. (2024). Dismiss Upon Civil Commitment with AOT: One Alternative to the Competency Restoration Crisis. https://www.treatmentadvocacycenter.org/wp-content/uploads/2024/03/Dismiss-Upon-Civil-Commitment-with-AOT-Handbook.pdf
- Treatment Advocacy Center. (2024). Assisted Outpatient Treatment Research Summary. *Treatment Advocacy Center.* https://www.treatmentadvocacycenter.org/aot_resources/tac-aot-research-summary/
- Treatment Advocacy Center. (2022). Excerpt from an interview with an AOT graduate [Video]. https://www.youtube.com/watch?v=4IM-60A7x4Q

A.2: AOT EVALUATION LITERATURE

- Azar, A. M., McCance-Katz, E. F., Everett, A., & Mathews-Younes, A. (2018). 2018 Report to Congress Section 224 of the 2014 Protecting Access to Medicare Act Assisted Outpatient Treatment Grant Program. Substance Abuse and Mental Health Services Administration Center for Mental Health Services.
- Busch, A. B., Wilder, C. M., Van Dorn, R. A., Swartz, M. S., & Swanson, J. W. (2010). Changes in guideline-recommended medication possession after implementing Kendra's Law in New York. Psychiatric Services, 61(10), 1000—1005. https://doi.org/10.1176/ps.2010.61.10.1000
- Esposito, R., Westhead, V., & Berko, J. (2008). Florida's outpatient commitment law: Effective but underused. Psychiatric Services, 59(3), 328—329. https://doi.org/10.1176/appi.ps.59.3.328
- Gilbert, A. R., Moser, L. L., Van Dorn, R. A., Swanson, J. W., Wilder, C. M., Robbins, P. C., Keator, K. J., Steadman, H. J., & Swartz, M. S. (2010). Reductions in arrest under assisted outpatient treatment in New York. Psychiatric Services, 61(10), 996—999. https://doi.org/10.1176/ps.2010.61.10.996
- Hancq., E.S., Silver, S. South, K. (2023). Measuring Experiences: An Evaluation of AOT Participant Satisfaction. *Treatment Advocacy Center.* https://www.treatmentadvocacycenter.org/reports_publications/measuring-experiences-an-evaluation-of-aot-participant-satisfaction/
- Hiday, V. A., Swartz, M. S., Swanson, J. W., Borum, R., & Wagner, H. R. (2002). Impact of outpatient commitment on victimization of people with severe mental illness. American Journal of Psychiatry, 159(8), 1403—1411. https://doi.org/10.1176/appi.ajp.159.8.1403

- Johnson, K.L., Parish, W.J., Theis, E., Wooten, C., Orme, S., Fujita, K., Callahan, L., Rogers, S., Swanson, J.W., Swartz, M.S. (2024). Evaluation of the Assisted Outpatient Treatment Grant Program for Individuals with Serious Mental Illness: Outcome Evaluation Report. *The Office of Behavioral Health, Disability, and Aging Policy and RTI International.* https://aspe.hhs.gov/reports/evaluation-aot-grant-program-individuals-smi
- Link, B. G., Epperson, M. W., Perron, B. E., Castille, D. M., & Yang, L. H. (2011). Arrest outcomes associated with outpatient commitment in New York State. Psychiatric Services, 62(5).
- Munetz, M. R., Ritter, C., Teller, J. L., & Bonfine, N. (2014). Mental health court and assisted outpatient treatment: Perceived coercion, procedural justice, and program impact. Psychiatric Services, 65(3), 352—358. https://doi.org/10.1176/appi.ps.002642012
- Office of Behavioral Health, Disability, and Aging Policy. (2024). Assessing Level of Judicial Involvement in Assisted Outpatient Treatment. https://aspe.hhs.gov/sites/default/files/documents/7d02387c7144228f04e0f975c9be2100/aot-judicial-involvement-issue-brief.pdf
- Phelan, J. C., Sinkewicz, M., Castille, D. M., Huz, S., & Link, B. G. (2010). Effectiveness and outcomes of assisted outpatient treatment in New York State. Psychiatric Services, 61(2), 137—143. https://doi.org/10.1176/ps.2010.61.2.137
- Swanson, J. W., Borum, R., Swartz, M. S., Hiday, V. A., Wagner, H. R., & Burns, B. J. (2001). Can involuntary outpatient commitment reduce arrests among persons with severe mental illness? Criminal Justice and Behavior, 28(2), 156—189. https://doi.org/10.1192/bjp.176.4.324
- Swanson, J. W., Swartz, M. S., Wagner, H. R., Burns, B. J., Borum, R., & Hiday, V. A. (2000). Involuntary out-patient commitment and reduction of violent behaviour in persons with severe mental illness. The British Journal of Psychiatry, 176(4), 324—331. https://doi.org/10.1192/bjp.176.4.324
- Swartz, M.S., Swanson, J.W., Steadman, H.J., Robbins, P.C., Monahan J. (2009). New York State Assisted Outpatient Treatment Program Evaluation. *Duke University School of Medicine.* Durham, NC. https://www.treatmentadvocacycenter.org/aot_resources/new-york-state-assisted-outpatient-treatment-program-evaluation/
- Swartz, M. S., Swanson, J. W., Wagner, H. R., Burns, B. J., Hiday, V. A., & Borum, R. (1999). Can involuntary outpatient commitment reduce hospital recidivism? findings from a randomized trial with severely mentally ill individuals. American Journal of Psychiatry, 156(12), 1968—1975. https://doi.org/10.1176/ajp.156.12.1968
- Van Dorn, R.A., Johnson, K.L., Stockdale, H.S., Case, B., Steadman, H.J., Swartz, M.S. (2024). Evaluation of the Assisted Outpatient Treatment Grant Program for Individuals with Serious Mental Illness: Implementation Report. https://aspe.hhs.gov/sites/default/files/documents/ad78bd55e998fcd8fbd93fb15496f2ad/aot-grant-program-smi-implementation-report.pdf
- Van Dorn, R. A., Swanson, J. W., Swartz, M. S., Wilder, C. M., Moser, L. L., Gilbert, A. R., Cislo, A. M., & Robbins, P. C. (2010). Continuing medication and hospitalization outcomes after assisted outpatient treatment in New York. Psychiatric Services, 61(10), 982—987. https://doi.org/10.1176/ps.2010.61.10.982