Selecting Outcome Measures to Evaluate Substance Misuse Prevention, Education, Treatment, and Recovery Support Programs

This tip sheet is designed to provide guidance to organizations that are interested in evaluating their opioid and substance misuse prevention, education, treatment, and recovery programs. It discusses:

- The importance of evaluation and measuring outcomes.
- Identifying outcome measures.
- Selecting outcome measures.
- Examples of outcome measures for prevention, education, treatment, and recovery support programs.
- Additional considerations for choosing the best measures for your evaluation.

Why Conduct an Evaluation?

Evaluations are important because they allow programs to track program implementation and fidelity, demonstrate program outcomes, identify areas for improvement, and gather support for future funding or next steps for the program. There are different kinds of evaluations, each with its own specific focus. Examples include process evaluations that assess whether a program is being implemented as intended and outcome evaluations that assess the results of a program or intervention.

A successful outcome evaluation depends on collecting and analyzing outcome measures that align with the program model. The right outcome measures allow organizations to assess meaningful change due to the program, intervention, or service; measure progress toward goals; identify program strengths and weaknesses; determine whether a program is working as intended for the targeted population in an equitable manner; and benchmark against other services, programs, or organizations.

Useful Terms

Outcome: Short-term, intermediate, and long-term goals that the program seeks to achieve.

Outcome Evaluation: Assesses the extent to which a program achieves its outcome-oriented objectives to measure program effectiveness.[1]

Performance Measures: The data—specific values or characteristics—that measure the output or outcome of programs' activities and services and demonstrate accomplishment of the goals and objectives of programs.[2]

Process Evaluation: Measures program implementation and examines program activities to assess whether the program is being offered as intended and to identify areas for program improvement.[1]

Reliability: Degree of consistency of results when the same instrument is administered at different times, or different but equivalent instruments are administered at the same time.[3]

Validity: How well a test measures what it is intended to measure.[3]

Identifying Outcome Measures

A good first step in identifying the right evaluation outcomes is to develop a logic model, ideally in partnership with researchers or evaluators. A logic model helps to align a program, initiative, or intervention with the organization or community's mission, goals, and resources. It articulates the program's structure and the required inputs and activities to reach specified outcomes. Logic models include identification of short-, intermediate-, and long-term goals that the program seeks to achieve and point to the resources needed to measure, collect, and analyze outcome data. This Logic Model Tip Sheet and Template resource provides more information on using a logic model to identify outcome measures.

Selecting Outcome Measures: Key Considerations

There are several key considerations that can help you select outcome measures that are appropriate for the program, participants, and evaluation. Key considerations in the selection of outcome measures are as follows:

1. What outcomes do you want to measure?
2. How many outcomes do you want to measure?
3. How will you measure each outcome?
4. Do you already collect the data?
5. Are there recommended or established measures for your outcome and population (e.g., a validated scale to assess depression among adults)?
6. Is it possible to collect the outcome measure data with limited burden to participants and program staff members?
7. What are the logistics involved in collecting the outcome data?
8. Is the outcome measure accepted by or meaningful to program participants and/or people with similar lived experience?
9. Does the outcome measure have validity (i.e., does it accurately capture what is intended)?
10. Does the outcome measure have reliability (i.e., does it produce consistent measurement results across time, space, staff, and program populations)?

> **Selecting Outcomes Measures**
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> PRO TIP!
> *If your program or organization receives grant funding, consult with the program officer, funding announcement, or statement of work to identify outcome measures that align with the funding agency's priorities and required performance measures to be reported.*

Important Consideration—Cultural Appropriateness

Consider whether data are, or will be, collected in a way that is responsive to culturally and linguistically diverse individuals, being sensitive and responsive to the context in which data are being collected and the individuals from whom data are collected. If a program goal is to address disparities, have the data monitored and evaluated at the subpopulation level to ensure that this goal is achieved.[4, 5, 6]

To help you select the best outcomes from an identified list of options, it is useful to develop an evaluation action plan to clearly articulate the problem a program aims to address, the data that identify the problem, a preliminary plan to evaluate program impact and/or implementation, and a preliminary plan to collect and analyze the outcome measure data. An evaluation action plan can be a tool to think through the feasibility and logistics of conducting an actual evaluation, to include collecting data to measure outcomes.

Selecting Outcome Measures: Availability and Feasibility of Collecting Outcome Data

It can sometimes be difficult and time-consuming to collect data on a desired metric, so we recommend you start by thinking about what data you already collect, whether they are being collected in the most appropriate way, and how feasible it is to collect new data.

Reflect on whether the data currently collected for the outcome of interest (e.g., enrollment in a treatment recovery program) are the best measure for the evaluation at hand. For example, let's say a program is interested in annual enrollment in a treatment recovery program as an outcome, but the data capture the number of people enrolled in the program as of December 31 and not how many people were enrolled during the calendar year. This program might then want to consider changing how enrollment data are collected or add an additional measure such as the number of people enrolled each month or year.

Below are examples of questions that can help you determine the right outcome measure by assessing availability of data.

Evaluation and Outcome Measure Feasibility

PRO TIP!
Unsure what is feasible or want to know about best practices in evaluations and outcome measures? Request technical assistance through BJA's Training and Technical Assistance - COSSUP Resource Center

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Short-Term, Intermediate, and Long-Term Outcomes

Program results are often considered from the perspective of short-term (< 3 months), intermediate (3–6 months), or long-term (>6 months) outcomes.[i]

Evaluation Action Plans

PRO TIP!
Want more information on evaluation action plans? Go to Evaluation Action Plan: Template and Tips

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[i] Short-term, intermediate, and long-term outcomes at the organizational or system level may measure areas of program implementation. Short-, intermediate, and long-term outcomes for program participants may focus on different aspects of program participation and completion.

DO YOU CURRENTLY COLLECT DATA TO MEASURE A SELECTED OUTCOME?

If yes . . .

- What information is already collected, by whom, and how is it stored?
- Are there any ways that the current data collection process needs to be modified to be more useful?
- Who will maintain the data, check for quality, and support analysis of data?
- Do the data match the time frame needed (e.g., a 1-day count vs. a 6-month average)?
- Are data sharing or data use agreements necessary?

If no . . .

- Are the data already available from another source? Can you readily access the data?
- How would you collect the data? What resources are needed (e.g., data collection software)? How time-intensive is data collection?
- Who will collect the data? When will they collect the data? How often are data needed?
- Who will maintain data, check for quality, and support analysis of data?
- Could a partner agency collect and share the data?

Examples of Outcome Measures

Below are examples of substance use interventions or programs, along with potential outcomes and data sources that can be used to measure the outcomes (Table 1). The list of potential outcomes and data sources is not meant to be exhaustive but to demonstrate the range of possibilities and opportunities.

Table 1. Examples of Substance Use Interventions and Potential Outcomes

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
Law enforcement (LE) and other first-responder deflection programs	- Increased number of individuals engaging in substance misuse deflected from arrest - Decreased number of arrests - Increased number of LE agency and/or first-responder partners - Increased number of LE officers or first responders trained on the model/approach - Decreased time LE officers spend on a scene	- LE data, arrest data - Health records data, hospital data - Insurance/Medicaid claims data - Treatment program referral, enrollment, and completion data - Training data (number of trainings and attendees, length, pre-/post-surveys, etc.) from prevention or education programs - Case management data - Service recipient surveys - Staff/participant surveys

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
	- Increased number of referrals to a treatment or recovery program - Increased enrollment in the referred treatment or recovery program - Increased number of completions from the referred treatment or recovery program - Increased ratings of quality/effectiveness of services	
Programs that embed social workers within LE agencies to rapidly respond to opioid overdoses where children are impacted	- Increased number of participating LE agencies - Increased number of social workers assigned to the program - Increased number of social workers and LE officers trained on the approach - Decreased fatal overdoses in a particular geographic area - Increased number of children referred to support services after a parent overdose - Increased number of children who receive social services after a parent overdose - Increased number in the types of supports and services available to children after a parent overdose - Decreased number of children removed from home and placed in foster care - Decreased repeat overdoses among parents who received services	- Roster of participating LE agencies - Roster of social workers in the program - LE officer and social worker training data (i.e.,, number of trainings and attendees, length) - Overdose prevalence and incidence data - Referral and utilization data from participating/relevant social services agencies - Foster care placement data - Case management data

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
Substance use prevention and education programs for students K-12	- Increased number of participating schools overall - Increased number of participating students in the program overall - Increased number of participating schools (e.g., elementary schools, schools in a particular county) - Increased number of specified students who attend the program (e.g., students identified as high risk) - Increased number of students who complete the program - Increased knowledge or awareness among participants - Increased number of trainers - Increased number of trainings for trainers	- Roster of participating schools - Participant enrollment and completion data - Participant change of knowledge data (i.e., pre-/post-program surveys) - Roster of trainers - Training data (i.e., number of trainings and attendees, length, pre-/post-surveys)
Pre-booking or post-booking treatment alternative-to-incarceration programs (TAIP) for individuals engaging in substance misuse or at high risk for overdose	- Increased number of TAIPs available for individuals engaging in substance misuse or at high risk for overdose - Increased number of prosecutors and/or courts who participate in the program - Increased number of individuals assessed for TAIP eligibility - Increased number of court, jail and/or legal staff who are trained to conduct substance misuse screenings or assessments - Increased number of referrals to TAIP - Increased enrollment in TAIP - Increased completion from TAIP	- Roster of participating sites or partners - TAIP participant-level referral, enrollment, and completion data - Court data, sentencing data - Substance misuse/overdose risk assessment or other program screening data - TAIP training data (i.e., number of trainings and attendees, length, pre-/post-surveys) - Case management data - Satisfaction or feedback surveys for TAIP enrollees and completers

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
	- Decreased overdoses among TAIP participants - Decreased jail time and sentence length among TAIP participants - Increased program satisfaction among TAIP participants	
Identifiable and accessible prescription drug take-back programs for unused controlled substances found in the home and used by hospitals, long-term care facilities, and other facilities	- Increased educational material about prescription drug abuse risks and take-back programs - Increased number of prescription drug take-back events - Increased number of participants who attend events - Increased number of drugs that are returned - Increased number of long-term care facilities that partner with the take-back program - Increased satisfaction in take-back programs and events	- Data on created and disseminated materials - Take-back program and event tracking records - Data on prescription drugs returned - Data on program partners involved in take-back programs - Staff surveys
Naloxone use by law enforcement officers, first responders, jail staff members, and other justice system practitioners	- Increased use of naloxone during an overdose event among individuals in the program or who received naloxone from a justice agency - Increased availability of naloxone and/or testing strips in community locations and among justice agencies - Increased number of people trained in naloxone and/or testing strips - Increased number of naloxone trainings offered - Increased number of justice agencies that provide or offer naloxone for staff to use during an event	- Law enforcement and first-responder data - Court and/or correctional facility data - Hospital or emergency department data - Naloxone supply monitoring data - Test strip supply monitoring data - Community health provider records (i.e., on distribution of naloxone) - Insurance/Medicaid claims data - Naloxone and/or test strips training data (i.e., number of trainings and attendees, length, pre-/post-surveys) - Service recipient surveys - Staff surveys

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
	- Increased number of justice agencies that provide or offer naloxone or testing strips to individuals at risk for overdose - Decreased overdose fatalities among a targeted population or geographic location	
Evidence-based substance misuse treatment, with pre-trial and post-trial populations in and reentering the community from local or regional jails or secure residential treatment facilities	- Increased percentage of population screened and assessed for substance misuse - Increased number of individuals receiving treatment in jail or secure residential treatment facilities - Increased knowledge of substance misuse treatment and harm reduction services among the target populations/potential clients - Increased number of individuals referred to community-based substance misuse treatment - Increased number of individuals referred to community-based recovery support services - Increased number of individuals referred who enroll in community-based substance misuse treatment within 30 days of returning to the community - Increased number of opioid overdose survivors who are referred to and receive substance misuse treatment services - Increased coordination and collaboration within jurisdictions - Increased capacity at the local level to support	- Jail booking data - Case management data - Correctional health and behavioral health records - Community health treatment provider records and registry data - Community recovery support services program data - Insurance/Medicaid claims data - Substance misuse training data (number of trainings and attendees, length, pre-/post-surveys, etc.) - Staff surveys - Service recipient surveys

Interventions	Potential Outcomes	Potential Data Sources for Outcomes
	substance misuse treatment and recovery service engagement - Decreased relapse among program completers	
Transitional or recovery housing, recovery support services (RSS), and/or other peer support services (PSS) for those reentering the community from jails or secure residential treatment facilities	- Increased number of individuals who are referred to housing, RSS, or PSS - Increased number of individuals who receive housing/enrolled in RSS or PSS within 30 days of returning to the community - Increased number of peer support staff members hired and trained - Increased number of transitional or recovery housing units - Increased capacity at the local level to support treatment and recovery service engagement - Decreased rearrests among program completers	- Transitional and recovery housing records and registry data - Case management data - Community health provider records and registry data - Insurance/Medicaid claims data - Training data (number of trainings and attendees, length, pre-/post-surveys, etc.) for RSS and PSS - Service recipient surveys - Staff surveys - Arrest data
Embedding social workers and/or peers with lived experience in the justice system to assist justice-involved persons with engaging in treatment and RSS	- Increased number of participating agencies that have at least one embedded social worker or peer - Increased number of embedded social workers or peers in the program overall - Increased number of people who enroll in community-based treatment or RSS - Increased number of treatment program graduates - Increased number of program graduates who become program peers - Increased capacity at the local level to support treatment and recovery service engagement - Decreased rearrests among program completers	- Roster of agencies with social workers and peers supporting justice-involved persons - Case management data - Community health provider records and registry data - Insurance/Medicaid claims data - Training data (number of trainings and attendees, length, pre-/post-surveys, etc.) for treatment and RSS - Law enforcement, correctional, arrest data - Service recipient surveys - Staff surveys

Additional Resources on Outcome Measures

[Measuring Progress in Connecting Criminal Justice to Health](#)

[NAATP Outcomes Measurement Toolkit](#)

[Performance-Measures-for-Medication-Assisted-Treatment-in-Correctional-Settings.pdf (legislativeanalysis.org)](#)

[State Measures for Improving Opioid Use Disorder Treatment](#)

COSSUP Training and Technical Assistance (TTA) Services

If you have questions or need support, TTA related to any of the topics below is available through the COSSUP Resource Center by submitting a request to [Training and Technical Assistance - COSSUP Resource Center](#)

- Developing logic models for your program(s)
- Developing or enhancing data collection and tracking systems
- Finding and selecting an evaluator
- Completing an evaluation planning matrix
- Developing data sharing agreements
- Reviewing data collection instruments and informed consent procedures
- Connecting you with peers and subject-matter experts

COSSUP has seven TTA providers available to support grantees in meeting specific program needs and goals across a range of strategies including overdose prevention, cross-site coordination, strategic planning, prescription drug monitoring programs, treatment and others. The COSSUP Data & Evaluation TTA Center provides TTA to help organizations:

- Assess and adapt activities to ensure they are as effective as they can be.
- Demonstrate a program's success and the way to communicate impact to others.
- Identify programmatic or policy changes that should be made based on information gathered.
- Collect information that can be used when applying for future funding.

References

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