



RESOURCE DOCUMENT

A Review of the Center for Substance Abuse Treatment Learning Collaborative:

*Improving Data Collection
and Reporting*

SAMHSA

Substance Abuse and Mental Health
Services Administration

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Acknowledgements

This resource document entitled, *A Review of the Center for Substance Abuse Treatment Learning Collaborative: Improving Data Collection and Reporting*, was prepared for the Substance Abuse and Mental Health Services Administration (SAMHSA) under contract number HHSS283201700019I_75S20322F42003 (Ref. No. 283-17-1903) with SAMHSA, U.S. Department of Health and Human Services (HHS). Michelle Gleason served as contracting officer representative. SAMHSA coauthors/contributors include Erica McCoy, MPA (Public Health Advisor, Center for Substance Abuse Treatment, Office of Performance Analysis and Management), Talisha Searcy, MPA, MA (Director, Center for Substance Abuse Treatment, Office of Performance Analysis and Management) and LCDR Dantrell Simmons, DrPH, MBA, MA (Lead Public Health Advisor, Center for Substance Abuse Treatment, Office of Performance Analysis and Management).

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Recommended Citation

Substance Abuse and Mental Health Services Administration: *A Review of the Center for Substance Abuse Treatment Learning Collaborative: Improving Data Collection and Reporting*. MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 2023.

Originating Office

Office of Performance Analysis and Management, Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Rockville, MD 20857. Published 2023.

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Publication No. PEP24-02-002

Released 2024

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Foreword

High-quality data is imperative to assess how programs are achieving behavioral healthcare goals, including maintaining funding, meeting grant requirements, program planning, quality improvement processes, and public communication. Poor data quality can undermine decision making, lead to ineffectual or unsafe processes, hinder monitoring of long-term trends, and produce significant adverse effects for entire populations as well as healthcare organizations and systems.^{1,2,3} Alternately, high-quality data can potentially inform patient treatment and service delivery, public health outcomes, policymaking, and organizational and system-wide quality improvement efforts.^{3,4} (For more information about SAMHSA's 2023–2026 data strategy to ensure the robust collection, analysis, and dissemination of high-quality data, see [here](#).)

In 2021, the U.S. Government Accountability Office⁵ (GAO) advised the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Treatment (CSAT) to “identify and implement changes to the **Substance Use Prevention, Treatment, and Recovery Services Block Grant (SUPTRS BG)** program's data collection efforts to improve two elements of reliability—the consistency and relevance—of data collected on individuals served.” Among the findings from the report were that:

- **SUPTRS BG data are inconsistently reported.** Across the SUPTRS BG programs, grantee data submitted in states' annual progress reports on the number of individuals served and services provided are defined and reported differently depending on the state. This makes the data inconsistent for calculating individuals served nationwide. For example, some states submit to SAMHSA in their annual progress report data on the aggregate number of individuals served by the grant program as collected through the [Treatment Episode Data Set \(TEDS\)](#).⁶ However, according to SAMHSA's annual TEDS reports, TEDS data collection practices vary by state.
- **SUPTRS BG data are not relevant.** For the SUPTRS BG program, the GAO found state-reported data on the number of individuals receiving treatment services include broader counts of individuals served through all public funding, not just by the SUPTRS BG grant program. Therefore, these broader counts do not allow for a calculation of the number of individuals served by only the SUPTRS BG program.

In an effort to address these data quality gaps, this resource document was developed to assist **Single State Agencies (SSAs)** adopt data collection and reporting practices designed to lead to high-quality data collection and reporting. For the purposes of this document, high-quality data refers to data that are accurate, complete, consistent, integrated, relevant, and timely.



Creation of this document was largely informed by a CSAT learning collaborative (LC)— multi-session meetings interspersed with practical work and collaborative learning—among 14 states. The LC was convened to identify and share information about successful data management practices in use among states reporting to SAMHSA’s Web-based Block Grant Application System (WebBGAS). To learn more about the LC, see Appendix C. However, the practices described here will support data quality efforts in most data systems.

Finally, Appendix D includes a self-assessment based on the recommended strategies and best practices discussed in this document. This tool is designed to help programs assess areas of strengths and weaknesses. However, implementation of the recommendations and best practices will depend on each state’s unique data environment and culture.

Summary

Data collection and reporting is integral to the success of a state’s behavioral healthcare programs and organizations. States can leverage data on individuals with substance use disorders for a wide variety of benefits, including but not limited to:

- Updating grant priorities
- Monitoring the appropriate use and distribution of services across the state
- Pinpointing program needs, unmet needs, and gaps in care
- Identifying marginalized or underserved populations
- Redirecting resources to and from under- and over-resourced areas
- Improving quality of care (e.g., through process measures and performance measures)
- Correcting billing errors
- Depicting trends and patterns useful for policymaking
- Increasing community outreach (e.g., data from medication mobile units, harm reduction programs, syringe services programs).

High-quality data collection and reporting is characterized by six key features: accuracy, completeness, consistency, integration, relevance, and timeliness (Table 1). Grantees can use these characteristics as a framework to assess and monitor the quality of data. Data quality characteristics are interrelated, wherein efforts to improve a single data characteristic could affect other characteristics in positive or negative ways. For example, attempts to improve the timeliness of data may lead to degradation of accuracy and completeness.

Table 1. State-level high-quality data characteristics

Data Characteristic/ Definition	Potential Measures	State Considerations
ACCURATE Reflects reality	<ul style="list-style-type: none"> • Percent of required fields that match original records • Percent of contradictory responses to identified fields • Percent of records matching extant data collection • Percent of data errors (i.e., substance use history, medication history) 	<p>“Accuracy” is difficult to measure, but data transparency—reporting data to providers, advocacy groups, and decision makers—is the best way to improve accuracy.</p>
COMPLETE Includes all required information and populations	<ul style="list-style-type: none"> • Percent of required fields included in an SSA’s primary database • Percent of required records included in an SSA’s primary database • Percent of missing data in required fields in the data system 	<p>Complete data include all necessary data fields as well as all necessary people.</p>
CONSISTENT Interpreted uniformly by the state and its partners	<p>Percent of clients that can be identified consistently across state systems</p>	<p>If data are accurate, they will also be consistent, but inaccurate data can also be consistent. Ensuring accuracy should ensure consistency.</p>
INTEGRATED Can be linked and analyzed using extant data	<ul style="list-style-type: none"> • Percent of clients who can be identified in extant data sets with minimum accuracy level • Number of vital extant data sets agency data can link to 	<p>Data verified through extant sources are credible to decision makers. The purpose of data integration should dictate the methodology used. Data used only for analysis can tolerate higher error rates than data used to serve clients.</p>
RELEVANT Answers the most important questions	<ul style="list-style-type: none"> • Partner ratings/assessments • Internal ratings/assessments • Inquiry tracking system or database 	<p>Relevance is difficult to measure. Different things are relevant to different people. The relevance measure must include the agency’s most vital partners, such as legislators, parent agency leadership, advisory groups, staff, providers, and advocacy groups.</p>
TIMELY There when needed	<p>Percent of data records successfully added to main database on or before deadline</p>	<p>Timely does not mean rushed; fast is not always better.</p>

This resource document describes recommended strategies and best practices to help SSAs address each data quality characteristic. **Strategies** (Table 2) are actionable goals states can use to generate and disseminate data with high-quality characteristics. **Best practices** (Table 3) are the methods to achieve those strategies. Some of the best practices described here pertain to more than one strategy, and some strategies and best practices apply to more than one quality data characteristic. For instance, the strategy of developing buy-in from providers, other staff, and external partners applies to the best practice of setting clear expectations for data collection and reporting as well as the best practice of eliminating silos by partnering collaboratively with external agencies.

This document is organized by recommended strategy, with each section offering in-depth details about the strategy's importance, challenges, and best practices. Each section also provides links to additional external resources (e.g., websites, online reports) to guide readers in better understanding and executing best practices.

Note that state systems vary considerably from one another. What works in one state system might not work in another. The strategies and best practices recommended here can succeed only within a state's unique data environment and culture. Thus, best practices should be implemented (and adapted) in a way that is most appropriate and meets a state's specific needs.

Table 2. Recommended strategies to help SSAs meet quality data characteristics

1. Ensure internal and external communications effectively convey data needs, processes, and outcomes
2. Develop buy-in from providers, other staff, and external partners to ensure that everyone works collaboratively and effectively
3. Get feedback to ensure data collection processes are effective and efficient
4. Maximize the variety of data available by developing integrated or shared datasets
5. Offer skills training to build data literacy and ensure understanding of data collection, entry, and reporting
6. Be transparent with stakeholders (e.g., providers, program leadership, state legislature) about data outcomes, processes, and how data are being used



Table 3. Best practices to achieve recommended strategies for high-quality data

1. Communicate with providers and other staff about how and why they are being asked to collect and report data, emphasizing how doing so can positively affect patient, program, and system outcomes
2. When disseminating outcomes and processes, communicate clearly, incorporate plain language, and tailor resources to audiences appropriately
3. Ensure contract language about data collection and reporting requirements is explicit and shared with everyone involved
4. Use a collaborative approach when working with providers, external partners, and expert groups (e.g., advisory councils)
5. Set clear expectations for data collection and reporting (e.g., develop a roadmap of goals and deliverables)
6. Actively involve providers in the data collection and reporting planning processes and seek their feedback on the appropriateness of measures, processes, and outcomes
7. Eliminate silos by seeking collaborative partnerships with external agencies (e.g., criminal justice system, child welfare system, community housing programs) for the purpose of sharing data
8. Ensure any data sharing and integration efforts are implemented under the guidance of state and federal confidentiality and privacy regulations
9. If possible, centralize data in one location (e.g., a data warehouse, a data ecosystem) and in a way that combines data from various sources (e.g., state vital statistics, Medicaid data, justice system data)
10. Standardize data collection instructions, processes, and tools for consistency across staff and, if sharing data with external agencies, across agencies (where possible and appropriate)
11. Develop data dictionaries, codebooks, and question guides to ensure accurate and consistent understanding of data points (e.g., What is an admission versus an intake? What is an assessment versus a service request?)
12. Provide continuous technical assistance and training opportunities to providers and other staff to ensure data literacy and understanding of what needs to be collected, how, when, where, and why
13. Utilize report cards, peer-to-peer models, and other feedback loops to help providers identify and correct lags in data collection and entry
14. Use incentives to motivate and reward providers and other staff for performing data collection, rather than punishments to penalize them for failing to do so
15. Implement dashboards, generate performance reports and scorecards, and use visual representations of data to inform and solicit feedback from providers, leadership, and other stakeholders (e.g., program performance, quality of care)

Communicating Effectively



STRATEGY:

Ensure internal and external communications effectively convey data needs, processes, and outcomes.

Best practices applicable to this strategy:

1. Communicate with providers and other staff about how and why you are collecting and reporting data, emphasizing how doing so can positively affect program and patient outcomes
2. When sharing outcomes, results, and/or processes, ensure plain language is used, communication is clear, and language is customized for the intended audience
3. Ensure contract language about data collection and reporting requirements is explicit and communicated to everyone involved
4. Set clear expectations for data collection and reporting (e.g., develop a roadmap of goals and deliverables)
5. Standardize data collection instructions, processes, and tools for consistency across staff and, if sharing data with external agencies, across agencies (where possible and appropriate)
6. Develop data dictionaries to ensure accurate and consistent understanding of data points (e.g., What is an admission versus an intake? What is an assessment? What is a service request?)
7. Provide continuous technical assistance and training opportunities to providers and other staff to ensure data literacy and understanding of what needs to be collected, how, when, where, and the like

Good communication is one of the foundations of quality care.^{7,8,9,10} Similarly, clear and effective communication is crucial for successfully gathering, analyzing, and ultimately using high-quality data. States often face challenges in developing and delivering effective communications about data collection and reporting. For example, ambiguity in contracts can lead to misunderstanding about data requirements and goals. Inconsistent workflows, manuals, and training tools hinder staff and can create undue burden and challenges with leveraging the data and ultimately using the information for program improvement. Miscommunication between levels of staff (e.g., supervisors, clinicians, managers, administrative staff) can create unclear expectations and reduce productivity.

Effective data collection and reporting requires that internal communications are clear, constant, and shared with the correct parties. For instance,

- **Contracts and related agreements** (e.g., memorandum of understanding, business associate agreements, data use agreements) need to be written with language that clearly describes expectations and requirements for data collection and reporting, including who is gathering data, what is being collected, who will have access to data, and to whom will it be reported.

- Program managers and other leadership need to **use consistent language across levels of staff** and **in accordance with the language in contracts** to ensure that everyone complies with the contract. Similarly, messaging needs to be consistent across levels of leadership (e.g., contract offices, budget offices, policy offices).
- **Technical assistance (TA) and training** are vital for communicating staff expectations and procedures (e.g., coding procedures, how to perform a quarterly check of data quality).
- **Developing a roadmap for goals and deliverables**, with input from providers and other staff, can help communicate objectives and benchmarks. Similarly, **key performance indicators** help convey the goals everyone should be working toward collectively and consistently.
- **Manuals and workflows** need to be understandable, consistent with one another, and consistent across programs. Relatedly, staff need training and education to ensure that everyone understands how to implement manuals and workflows correctly.
- **Standardized forms, templates, and data dictionaries** help make certain that communications are uniform across providers, programs, and agencies. For instance, what is considered an admission versus an intake? What is an assessment versus a request for service? Failure to align on terms and definitions can result in inconsistent and inaccurate data collection.

Internal communications should not just address the “how” aspect of data collection and reporting but also the “why.” It is critical to educate providers and other staff on the purpose of data activities as well as the consequences of generating and reporting low-quality data. Specifically, linking the role of data to improvements in program and outcomes can help demonstrate the urgency of ensuring data are accurate, complete, consistent, and timely. The most effective way to communicate the importance of data

collection and reporting is to help staff understand how data can improve the quality of care within a program and across the behavioral healthcare system. Further, communication among staff should be ongoing. Staff benefit from opportunities to ask questions, receive updates on how data activities are faring, get feedback on their strengths and weaknesses, and improve.

External communications about data are also important. Data cannot successfully inform policies, programs, and practices without effective outside dissemination. Dissemination is also essential for advancing transparency and accountability.^{3,11} Thus, efforts to ensure communications are accurate, understandable, and consistent are just as important for external audiences as for internal audiences.

Clear and coherent communication can accelerate the uptake of information, such as through clinical decision making or policymaking, and increases the chances that information will be used appropriately and as intended. Tips to help further improve internal and external communications include:

- **Use plain language.** Not all disseminated information about data collection processes and findings will be scholarly. Programs and SSAs will need to develop communications for informed lay and general audiences, many of whom may not have a background in data collection and reporting topics (e.g., epidemiology, methodologies, statistics). Most states require public documents to be written in plain language that makes content accessible and usable to non-experts.
- **Keep it simple.** Related to using plain language, effective communication requires understanding when to offer details and nuance versus when to use restraint. Preferably, communications should be simple and focused on the core messages with only necessary details. Keeping communications simple also means offering readers definitions (e.g., for acronyms), explanations, and contextual information as needed to ensure understanding.

Public documents should generally be written at a sixth-grade reading level, which most word-processing software can check.

- **Avoid jargon.** Jargon is highly common in the healthcare and behavioral healthcare fields. Although jargon can convey a degree of professionalism, overuse of jargon can alienate readers and prevent audiences from understanding and utilizing the information offered.
- **Write in active voice rather than passive voice.** Passive voice is generally difficult for readers to understand due to a lack of clarity about who the subject is or the intended meaning of the sentence. Thus, writers should use active voice whenever possible.
- **Be pointed and direct.** Wordiness can create confusion and makes it harder for readers to receive intended messages. Communications are more effective when they are direct and to the point.
- **Tailor messages to the intended audience.** Effective communications are adapted to the needs and background of the reader. For instance, the message that high-quality data are needed to maintain program funding will likely be articulated slightly differently to a clinician versus an administrator versus a data manager. Tailored information can be more effective at engaging audiences and producing behavior change than vague, generic messaging.¹² Failing to tailor communications increases the risk that readers will not understand or respond to information in the way the writer intended.

Resources

- SAMHSA has several resources focused on communication during public health crises and emergencies, such as their [Principles and Techniques of Effective Media Communication](#) website and a publication on [risk communication guidelines for public officials](#). Both resources offer guidance on basic communication tenets, such as tailoring messages to an audience and translating complex scientific information into understandable content for lay persons.
- The U.S. General Services Administration offers guidelines from the [Plain Language Action and Information Network \(PLAIN\)](#)¹³, which are used in developing public communication documents in the Federal Government.
- The National Cancer Institute's [Making Data Talk: A Workbook](#) shares practical guidance on developing clear and coherent communications about data and data analysis. The workbook includes advice on writing for lay audiences, tips for developing communications for the media, strategies on utilizing visuals to enhance data communication, guidance on leveraging communications for public health advocacy, and learning exercises to practice these communication skills. Although the National Cancer Institute's primary focus is not substance use or behavioral health, the recommendations and strategies described in the workbook are not specific to oncology and are generalizable to any organization needing to disseminate quantitative data.
- HHS offers resources and guidance (e.g., contract polices and regulations, required steps, tips) for organizations seeking to enter a professional contract with the federal government. To learn more, see [here](#).

Developing Buy-In



STRATEGY:

Develop buy-in from providers, other staff, and external partners to ensure everyone works collaboratively and effectively.



Best practices applicable to this strategy:

1. Communicate with providers and other staff about how and why you are collecting and reporting data, emphasizing how doing so can positively affect program and patient outcomes
2. Use a collaborative approach when working with providers, external partners, and expert groups (e.g., advisory councils)
3. Set clear expectations for data collection and reporting (e.g., develop a roadmap of goals and deliverables)
4. Actively involve providers in the data collection and reporting planning processes and seek their feedback on the appropriateness of measures, processes, and outcomes
5. Provide continuous technical assistance and training opportunities to providers and other staff to ensure data literacy and understanding of what needs to be collected, how, when, where, and why
6. Utilize report cards, peer-to-peer models, and other feedback loops to help providers identify and correct lags in data collection and entry
7. Use incentives to motivate and reward providers and other staff for performing data collection, rather than punishments to penalize them for failing to do so

A major challenge to large-scale data projects is staff feeling unmotivated to participate and adhere to procedures. This can result from individuals feeling excluded from processes or being uncertain about the purpose of their participation. Buy-in is a necessary and valuable aspect of producing high-quality data because it enhances motivation and fosters a culture of teamwork that leads to improved data collection. Consider these approaches to generating buy-in:

- **Build rapport.** When partnering with external agencies, building rapport is important for creating successful, collaborative relationships.

- Communicate regularly with external partners about their data goals, problems, and needs. When integrating datasets, take time to find out how the partner agency wants to use the data, what concerns they have, and how sharing data can be mutually beneficial. Make it clear that data are not being shared just for the sake of data sharing but rather because both partners can benefit from doing so. This can go a long way in establishing trust and helps everyone see the value in participating.
- Meet with data sharing partners regularly, not just when a problem or need arises. Some states set up data sharing workgroups that convene routinely. This helps keep the lines of communication open, facilitate early identification of problems, and foster a sense of teamwork.
- As output is generated (e.g., peer-reviewed manuscripts, white papers, legislative reports), involve providers, program managers, and external partners in developing and reviewing materials. Not only does sharing outputs generated from these data help these individuals feel involved, but it also gives providers, managers, and partners an opportunity to ensure data are being interpreted correctly.
- **Be curious.** Working collaboratively means being inquisitive and taking the perspective of others to learn about their needs, concerns, and goals. Conversations about data sharing with outside agencies should address what both groups bring to the table and how both can benefit from the partnership. Programs should be willing to consider new ideas and processes, even if they deviate from how things have historically been done. Regular meetings help keep the lines of communication open and facilitate collaboration.
- **Motivate and reward.** Incentives can play a powerful role in producing organizational change. In the field of substance use treatment and prevention, program-level financial

incentives (e.g., performance contracts) have been used to improve quality of care.¹⁴ States can consider implementing data incentive programs to providers and other staff to improve adherence to quality data procedures. For instance, a two percent bonus could be given to programs that provide timely, accurate, and complete data. Note that incentives are typically more effective than implementing penalties for failing to adhere to quality data standards. Further, states must adhere to SAMHSA policies regarding using SAMHSA funds for incentives.

- **Be inclusive.** Involving providers and intermediaries in planning and implementation is a useful way to foster a sense of ownership in data endeavors and enhance feelings of trust. It also increases the odds of generating quality data. Provider input can help ensure successful data collection but also is central for conveying the importance of their experiences and opinions in developing and implementing procedures. This inclusiveness can contribute directly to gaining their buy-in.

Resources

- In an article from 2022, the *American Journal of Managed Care* discusses [incentivizing data sharing among healthcare plans, hospitals and providers](#).
- The California Health and Human Services Agency's Data Exchange Framework Stakeholder Advisory Group released a [set of recommendations](#) to serve as a blueprint for implementing a statewide health information exchange system. Among the recommendations is guidance on establishing incentive programs in healthcare organizations for the collection and use of data on social determinants of health. This information could help behavioral health programs develop similar incentives.
- SAMHSA offers guidance regarding standard funding restrictions. This information can be found [here](#).

Gathering Feedback



STRATEGY:

Get feedback to ensure data collection processes are effective and efficient.

Best practices applicable to this strategy:

1. Use a collaborative approach when working with providers, external partners, and expert groups (e.g., advisory councils)
2. Actively involve providers in the data collection and reporting planning processes and seek their feedback on the appropriateness of measures, processes, and outcomes

Gathering feedback from providers and other staff can reveal whether data procedures are feasible. Providers have firsthand experience and understand how to realistically incorporate data collection into busy clinical schedules. Provider input should also be solicited on aspects of data collection and reporting such as:

- The design of databases, data portals, data warehouses, and the rationale for the design
- The selection of measures and assessment tools
- Which data to capture (informed by the overarching goals that providers and the program as a whole are trying to achieve)
- Any data needs or concerns providers have (e.g., how burdensome data collection will be, why data collection is needed). Keep in mind that these will likely differ across individuals. To the extent possible, try to adapt procedures to providers' unique barriers or concerns while still maintaining adherence to protocols and standard operating procedures.

Provider feedback is especially pivotal for behavioral health processes and outcomes that are not easily quantifiable. For instance, recovery is a foundational concept in substance use treatment and is vitally important for states to assess and monitor. However, recovery can be challenging to measure. Which parameters define recovery? How can data be used to capture a patient's recovery journey? How does one track individuals in recovery who have left the formal treatment system? What are the best tools to use to assess recovery? Input from providers can help address these and similar questions, leading to more accurate and relevant data.



Consulting with key opinion leaders—especially those with experience in behavioral health data collection and reporting—can also strengthen data quality. For instance, advisory groups are formal, collaborative gatherings of external experts who provide insight and guidance to an organization’s leadership and shareholders. Advisory groups can play a critical role in states’ data quality improvement efforts by providing diverse perspectives, recommending policy improvements, and guiding planning for data collection and use. By sharing their experience and expertise, advisory groups also can help advance policymaking, program development and evaluation, and community relationships.¹⁵

Input derived from advisory groups can translate into meaningful outcomes. A systematic literature review found advisory councils, committees, and other similar expert groups can help improve patient engagement and health outcomes, increase provider and staff awareness of patient experiences, streamline healthcare processes (e.g., patient discharge procedures), and reduce healthcare errors, among other benefits.¹⁶ From a data quality perspective, advisory groups can help organizations and systems identify useful datasets and data resources as well as offer perspectives on the strengths and weaknesses of one’s data collection and reporting processes.¹³

Finally, consumer-based committees can offer unique viewpoints on how data initiatives might affect individuals and their self-reported outcomes. For instance, the Kansas Citizen’s Committee on Alcohol and Other Drug Abuse confers, advises, and consults with the Kansas Department for Aging and Disability Services Behavioral Health.¹⁷ Members include consumers, substance use treatment providers, professionals in related agencies (e.g., Department of Corrections), and state agency staff. The committee serves as an advisory and advocacy group that provides input on substance use treatment, prevention, and recovery. Members have also made recommendations to the Kansas Legislature to help improve statewide substance use treatment and services.

Resources

- SAMHSA’s [Advisory Councils](#) website provides a list of councils and committees convened to help SAMHSA advance its mission and meet organizational goals.
- SAMHSA’s [Community Engagement: An Essential Component of an Effective and Equitable Substance Use Prevention System](#) and [Tips for Working With Your Partners](#) also provide useful guidelines for working with partners and advisory groups.
- The following websites demonstrate how states have successfully developed and engaged with substance use and behavioral health advisory groups and include information on their formation, objectives, and generated output (e.g., committee reports).
 - [District of Columbia Behavioral Health Planning Council](#)
 - [Delaware Behavioral Health Consortium](#)
 - [Kansas Governor’s Behavioral Health Planning Council](#)
 - [Minnesota Governor’s Advisory Council on Opioids, Substance Use, and Addiction](#)
 - [Missouri Mental Health Commission](#)
 - [New Jersey Citizens Advisory Council](#)
 - [New York Behavioral Health Services Advisory Council](#)
 - [Oregon Alcohol and Drug Policy Commission](#)
 - [Pennsylvania Mental Health Planning Council](#)
 - [Rhode Island Governor’s Council on Behavioral Health](#)
 - [Texas Behavioral Health Advisory Committee](#)
 - [Utah Substance Use and Mental Health Advisory Council](#)
 - [Washington State Behavioral Health Advisory Council](#)
 - [Wyoming Behavioral Health Advisory Council](#)

Integrating Datasets



STRATEGY:

Maximize the variety of data available by developing integrated or shared datasets.

Best practices applicable to this strategy:

1. Eliminate silos by seeking collaborative partnerships with external agencies (e.g., criminal justice system, child welfare system, community housing programs) for the purpose of sharing data
2. If possible, centralize data in one location (e.g., a data warehouse, a data ecosystem) and in a way that combines data from various sources (e.g., state vital statistics, Medicaid data, justice system data)
3. Implement any data sharing and integration efforts under the guidance of state and federal confidentiality and privacy regulations (e.g., 42 CFR part 2)
4. Standardize data collection instructions, processes, and tools for consistency across providers and, if sharing data with external agencies, across agencies (where possible and appropriate)
5. Develop data dictionaries to ensure accurate and consistent understanding of data points (e.g., What is an admission versus an intake? What is an assessment versus a service request?)
6. Provide continuous technical assistance and training opportunities to providers and other staff to ensure data literacy and understanding of what needs to be collected, how, when, where, and the like

Data integration and sharing allows stakeholders with mutual interests in substance use service delivery and outcomes to meaningfully coordinate with one another. Integrated data helps states, SSAs, policymakers, and others monitor trends and track outcomes across agencies. Data sharing also helps paint a more complete picture of the community and demonstrates how substance use disorder treatment and service delivery affects multiple state programs, services, and systems. Table 4 shows examples of partnerships and types of shared data relevant to behavioral health programs.



Table 4. Examples of data sharing and potential data-sharing partners

Types of Partner Agencies	Examples of Specific Partners	Examples of Data to Be Shared
Education	<ul style="list-style-type: none"> • K–12 schools, community colleges, technical colleges, 4-year colleges and universities 	<ul style="list-style-type: none"> • Individual academic and disciplinary records; aggregate school environment records, such as safety and performance
Employment	<ul style="list-style-type: none"> • Benefits departments, revenues departments, training and education departments 	<ul style="list-style-type: none"> • Individual employment, job status, and training records; aggregate labor and market records, such as unemployment
Health care	<ul style="list-style-type: none"> • Medicaid, special state programs 	<ul style="list-style-type: none"> • Individual and aggregate health, health status, and use of service records
Housing	<ul style="list-style-type: none"> • Housing programs 	<ul style="list-style-type: none"> • Aggregate housing availability records
Human/social services	<ul style="list-style-type: none"> • Disability programs, supplemental nutrition assistance programs, Temporary Assistance for Needy Families 	<ul style="list-style-type: none"> • Individual and aggregate use of self-sufficiency and other state services, such as vocational rehabilitation and disability records
Local governments	<ul style="list-style-type: none"> • Local jails, juvenile centers, law enforcement agencies 	<ul style="list-style-type: none"> • Individual and aggregate records of arrests and incarcerations (data sharing may depend on state structure)
Protective services	<ul style="list-style-type: none"> • Child welfare departments, programs and services for people with disabilities and older adults 	<ul style="list-style-type: none"> • Individual involvement in system and use of services, such as protection and foster care records; aggregate environmental factors records
Public safety	<ul style="list-style-type: none"> • State law enforcement, corrections departments, courts 	<ul style="list-style-type: none"> • Individual arrest, incarceration, and sentencing records; aggregate patterns of crime and substance use arrest records
Public health	<ul style="list-style-type: none"> • Risk surveillance programs, vital statistics programs 	<ul style="list-style-type: none"> • Individual birth and death records, aggregate risk and protection records

Although data integration is a powerful tool for developing high-quality datasets, it can be fraught with challenges. For instance, sometimes the quality of a partner database is low. In these cases, SSA staff and data manager need to be able to readily identify problems in the partner database, address them where possible, and acknowledge these challenges during reporting. Other difficulties include the time and effort needed to establish a trusting, collaborative relationship with a data partner; a lack of direction about how to share, utilize, and store data, and potential partners' unwillingness to share data.

Successful data integration cannot occur without data sharing agreements, but these too are also a very common source of frustration. Data sharing agreements can be complicated and time-consuming to negotiate, depending on factors such as the history of collaboration between the agencies, the rapport between partners, and the individual data needs and concerns of each partner. Data sharing agreements must include the

rationale for data sharing; a description of the data to be shared, including a data dictionary, data maps, and metadata; and language specifying who “owns” the shared data, including who will have access to it. The agreement must specify a clear end date or end “event” as well as a mechanism to resolve disputes. Importantly, all data sharing agreements must comply with state laws as well as federal [confidentiality](#) and [privacy and security](#) requirements, laws, and regulations.

Pertinent questions to consider before launching partnerships to share data include:

- Who will have access to the dataset?
- What identifiers should be used in the dataset (e.g., patient names, initials)? Once stripped from the final database, where will identifiers be stored and who will have access to them?
- What data structure should be used?
- What type of information needs to be included in the dataset?
- What type of data match process will be used?
- What level of mismatch between datasets will be considered acceptable?
- What kind of support will the partnering agency provide? What kind of support will the behavioral health program provide to the partner?
- How should programs notify their providers and staff about these partnerships? How does the partnership affect providers and staff?

When working with integrated data, states should be aware that linking and matching data can be difficult due to partner differences in data variables and formats. For instance, providers often work on different electronic health records systems or do not have access to electronic health records systems at all¹⁸, making combining data across providers potentially complicated. Data scrubbing (or cleaning) is also recommended to remove duplicates and address missing data.

Finally, as mentioned previously, building trust and rapport is essential to a successful data partnership. All parties should agree on what the combined data should look like, what the expectations are of the dataset, how it will be used, and any goals and deliverables the dataset should produce. In short, everyone involved should understand the value of sharing their respective datasets.

Resources

- SAMHSA’s recorded webinar [GAINS: Addressing Data Sharing Agreements & Confidentiality Concerns](#) discusses data sharing between criminal justice and behavioral health partners and provides insight into drafting data sharing agreements appropriately.
- SAMHSA’s [Substance Abuse Confidentiality Regulations](#) and [Center of Excellence for Protected Health Information](#) webpages includes Frequently Asked Questions and fact sheets regarding privacy and confidentiality concerns related to substance use disorders.
- Integrated Behavioral Health Partners has a [behavioral health data sharing toolkit](#) to guide data sharing among partners in California. It includes legal information, templates, and example forms. (Information may not apply to other states but may still be informative.)
- The Legal Action Center’s website on [Fundamentals of 42 CFR Part 2 and SUD Treatment Privacy](#) discusses what these regulations mean for the privacy and protection of individuals with substance use disorders.
- The Massachusetts Institute for Technology offers a lengthy [practical guide to developing data use agreements](#), including negotiation and compliance.

Training on Data Literacy and Related Skills



STRATEGY:

Ensure staff possess data literacy and understanding of data collection, entry, and reporting.

Best practices applicable to this strategy:

1. Standardize data collection instructions, processes, and tools for consistency across providers and, if sharing data with external agencies, across agencies (where possible and appropriate)
2. Develop data dictionaries to ensure accurate and consistent understanding of data points (e.g., What is an admission versus an intake? What is an assessment versus a service request?)
3. Provide ongoing technical assistance and training opportunities to providers and other staff to ensure data literacy and understanding of what needs to be collected, how, when, where, and the like
4. Utilize report cards, peer-to-peer models, and other feedback loops to help providers identify and correct lags in data collection and entry

Data quality depends on the skills of the personnel who collect, enter, analyze, and report it. The importance of training and education that maximizes data literacy and related proficiencies among staff should not be understated.

Data training can be in-person, virtual, or a combination of both. Evidence suggests web-based training—such as virtual classrooms and self-directed instruction—can be effective at helping behavioral healthcare providers gain knowledge, acquire skills, and improve self-efficacy.¹⁹ Research on the quality of learning via web-based training, specifically for courses predicated on data science, suggest fully online formats may be better than blended approaches due in part to the 24/7 availability of learning resources (e.g., on-demand recordings of lectures)²⁰. Further, online training in substance use treatment delivery also may be more cost-effective than in-person learning.²¹ However, knowledge acquisition and learner satisfaction may be better with in-person rather than virtual training methods.^{22,23} Programs should consider their unique staff and environment and weigh the pros and cons of these formats when deciding how to structure their training opportunities.

Because data collection and reporting encompass a wide range of activities, training should be thorough and should include topics such as:

- What data need to be collected and who is collecting it
- How data will be collected (e.g., what overarching procedures need to be followed)
- Which measures and how to administer them
- Where data will be stored
- Why data are going to be collected and how they affect the program

- As needed, basic data analytic skills, like calculating sums and means
- How to restructure and transform data so it can be efficiently analyzed and effectively displayed
- How to clean data and check for errors (e.g., running validation checks)
- How missing or incorrectly entered data will be resolved
- Who is responsible for maintaining the data (e.g., updating data, cleaning data)
- How data will be reported and who is responsible for that
- Who staff can go to with questions.

Some states send data and analytic staff on training site visits to facilitate shared data understanding. Giving analytic staff access to development entry portals and “sandboxes” also can help improve their data skills.

Because behavioral healthcare programs often have high staff turnover, training needs to be ongoing to account for new staff entering the program with varying levels of data knowledge and experience. Frequent trainings helps ensure that everyone understands their role and what is expected of them. It also conveys to staff the message that data endeavors are valuable to the long-term success of the program.

Data skill-building can occur outside of formal training and TA sessions. For instance:

- **Standardized forms and templates** help staff adhere to processes and procedures uniformly. Data collection requirements can be written into templates to remind users how to proceed.
- **Data dictionaries** help ensure consistency and accuracy by articulating how data points and outcomes are to be defined.

- **Protocols, standard operating procedures, and manuals** help communicate required steps. Documentation also gives staff a resource to refer to when questions or problems arise.
- **Feedback mechanisms** facilitate communication between staff and data managers, help build engagement, and provide an opportunity for dialogue. Consider the following approaches:
- **Provider or program report cards or scorecards** help evaluate performance and outcomes. Yearly audits of providers are another way to continuously perform quality assurance checks. Data can be assessed via a cross-sectional or longitudinal approach. Cross-sectional approaches account for different variables (e.g., providers, programs, focus populations, etc.) at any given time and can be useful for comparing performance or outcomes across providers. Longitudinal approaches allow for the same individual sample to be measured over a certain period of time which can be helpful for measuring change at the provider or program level.
- **Peer-to-peer feedback** is an effective way for staff to learn from one another and work jointly to overcome challenges.
- **Following up with providers individually** when a data error is discovered can enhance problem-solving and help individuals improve. It also conveys to providers the importance of having timely and accurate data.

Note that states' training capacities vary greatly. A staff training program that succeeds in one state's environment might fail in another. Training must be developed and implemented in a way that meets staff needs and capacities.

Resources

- SAMHSA has published an [example data dictionary](#) using data from the National Survey on Drug Use and Health.
- SAMHSA has published [resources](#) for the Treatment Episode Data Set (TEDS) to aid with reporting and the use of TEDS data including data reports.
- Washington State Health Care Authority's Division of Behavioral Health and Recovery created a training guide specific to their Healthy Youth Survey called [Using Your Healthy Youth Survey Results](#). Although the training guide is specific to their survey, states may find the information useful for informing their own training guides (e.g., fundamentals of statistics, how to communicate survey results).
- The American Health Information Management Association offers [multiple resources on healthcare data analytics](#), including the online course Introduction to Health Data Literacy and webinars about healthcare data.
- Washington State Health Care Authority's Division of Behavioral Health and Recovery uses [Athena](#) to provide training for substance use and mental health professionals.

Demonstrating Transparency



STRATEGY:

Be transparent with stakeholders (e.g., providers, program leadership, state legislature) about data outcomes and how data are being used.

Best practices applicable to this strategy:

1. Use a collaborative approach when working with providers, external partners, and expert groups (e.g., advisory councils)
2. Actively involve providers in the data collection and reporting planning processes and seek their feedback on the appropriateness of measures, processes, and outcomes
3. Implement dashboards, generate performance reports and scorecards, and use visual representations of data to inform and solicit feedback from providers, leadership, and other stakeholders (e.g., program performance, quality of care)

Transparency is paramount to successfully leveraging data for decision making, program improvement, and accountability. Because it requires sharing data outcomes with others, transparency motivates programs to ensure data are complete and consistent. Transparency is also one of the most effective ways to improve data accuracy.

Transparency involves the sharing of data findings with relevant stakeholders, including providers and other staff, state leadership, policymakers, consumers, and the general public. This can be accomplished through performance reports (e.g., annual, quarterly), scorecards, and dashboards. These and similar tools are vital for communicating with staff about performance and outcomes, making them crucial for improvement efforts and oversight. For instance, hospitals can use performance reports and measures to assess quality of care, including effectiveness, safety, patient-centeredness, and health equity.²⁴

Data transparency benefits multiple parties. Giving providers, program managers, and other staff access to dashboards allows them to continuously monitor progress and respond to problems in a timely fashion. This is also a method of keeping staff motivated and invested in data activities by continually sharing with them the results of their hard work. Performance reports and dashboards are an important way to compare a state's or program's substance use treatment and service outcomes (e.g.,



admissions, discharges, repeat admissions) and characteristics (e.g., levels of care/care settings, client demographics and clinical characteristics, workforce characteristics) to those from across the state or country. Further, provider performance reports, outcome reports, and quality care reports can be useful for policymakers.

Online reports and dashboards available to consumers and/or the general public should be easy to navigate and written in plain language. When audiences cannot understand what they are reading, transparency suffers. Tools that are interactive and feature visual representations of data tend to be more appealing and useful for readers than pages of static, lengthy text.

Transparency refers not just to the sharing of data outcomes but of data processes as well. Ways to accomplish transparency about collection and reporting processes include:

- Educating providers and other staff about why data are being gathered and how it will be used
- Making shared decisions with providers when designing data collection, entry, and reporting efforts; for instance, soliciting provider input on which measures to use
- Notifying staff about how ongoing data efforts are progressing (e.g., successes and struggles to date)
- Generating regular reports on errors (e.g., monthly, quarterly) to alert staff to problems with data collection and entry and to monitor compliance with metrics and performance measures
- Maintaining open lines of communication with external partners about integrated datasets, clarifying how integrated datasets will be used and identifying any difficulties encountered in integrating them.

- Seeking input from advisory groups and similar external experts to streamline processes and troubleshoot challenges

The sharing of data outcomes and processes with stakeholders should occur as soon as possible (e.g., not just at the end of a contract year) to improve data accuracy and reduce errors.

Resources

- Examples of how states have structured performance reports and dashboards include the following:
- The [Missouri Department of Mental Health](#) has an online dashboard featuring data on substance use among Missouri residents.
- The District of Columbia Department of Behavioral Health publishes an annual [performance and accountability report](#) that includes yearly accomplishments, objectives, operations, strategic initiatives, and performance indicators and workload measures.
- The District of Columbia Department of Behavioral Health also provides an annual report on [measurements of provider performance](#), such as performance outcomes across key performance indicators and efforts to improve provider performance.
- The [New Jersey Division of Mental Health and Addiction Services](#) publishes annual substance use treatment provider performance reports, calendar year state performance reports, and fiscal year state performance reports.

Appendix A. Acronyms

CSAT	<i>Center for Substance Abuse Treatment</i>
GAO	<i>U.S. Government Accounting Office</i>
HHS	<i>U.S. Department of Health and Human Services</i>
LC	<i>Learning collaborative</i>
SAMHSA	<i>Substance Abuse and Mental Health Services Administration</i>
SSA	<i>Single State Agency</i>
SUPTRS	<i>Substance Use Prevention, Treatment, and Recovery Services</i>
SUPTRS BG	<i>Substance Use Prevention, Treatment, and Recovery Services Block Grant</i>
TA	<i>Technical assistance</i>
TEDS	<i>Treatment Episode Data Set</i>

Appendix B. Key Terminology

- **Accurate:** A characteristic of high-quality data that refers to data that reflects reality
- **Complete:** A characteristic of high-quality data that refers to data that contain required information about required people (or records)
- **Consistent:** A characteristic of high-quality data that refers to data that are uniformly interpreted
- **Data dictionary:** An agreed-upon set of definitions describing all aspects of the data structure and data elements. It includes information such as definitions of all data variables (names and definitions), missing data and other quality indicators, and properties of data elements (e.g., data type and size)
- **Data literacy:** The ability to collect, manage, evaluate, use, and communicate about data appropriately and effectively²⁵
- **Integrated:** A characteristic of high-quality data that refers to data that are linked to extant datasets
- **Relevant:** A characteristic of high-quality data that refers to data that are pertinent and answer the important questions
- **Timely:** A characteristic of high-quality data that refers to data that are available when needed

Appendix C. Learning Collaborative Background

CSAT selected 14 states/district with diverse management and cultural environments to participate in six data quality improvement LCs: [District of Columbia](#), [Delaware](#), [Kansas](#), [Minnesota](#), [Missouri](#), [New Jersey](#), [New York](#), [Oregon](#), [Pennsylvania](#), [Rhode Island](#), [Texas](#), [Utah](#), [Washington](#), and [Wyoming](#).

The purpose of the meetings was to identify and share information about successful data management practices in use among states reporting to Web Block Grant Application System (WebBGAS). The meetings focused on six issues: examining state data systems, setting clear expectations for substance use disorder treatment providers, working with data partners, improving data from the bottom up, capturing the client's recovery journey, and telling a story with our data.

Description of LCs

LCs are multi-session meetings interspersed with practical work and collaborative learning. There is emphasis on grantees' skill-building in the use of quality improvement techniques and learning best practices used by one state that can be shared and tried by another. LC objectives included:

- Identifying barriers to collecting SAMHSA substance use disorder data that prevent timely, accurate, consistent, and high-quality reporting.
- Sharing case studies, best practices, and successful processes with other grantees for collecting SAMHSA substance use disorder data that is timely, accurate, consistent, and high quality.
- Sharing case studies, best practices, and successful processes for integrating SAMHSA substance use disorder data with other types of data reporting, such as Medicaid, private funding, and discretionary spending.
- Sharing case studies, best practices, and successful processes for providing training and TA to subrecipients to improve data collection.
- Identifying other resources available to grantees to improve data collection.
- Determining ways to expand LC information, including a webinar, and determining which resources to include in a resource guide.

Appendix D. Self-Assessment

This tool can be used to implement a data improvement strategy. Reassess responses at 6-month intervals to track progress.

The data that concerns me the most is _____

Think about this data: Why does it concern you the most?

ACCURACY. My data reflect reality.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

COMPLETE I: My data include all the information I need.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

COMPLETE II: My data represent all the populations that need to be represented.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

CONSISTENT: My data are interpreted uniformly by all who use them.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

INTEGRATED: My data can be analyzed with data from independent data systems.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

RELEVANT: My data answer the questions I most need answered.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

TIMELY: My data are available when I need them.

Strongly agree *Agree* *Neutral* *Disagree* *Strongly disagree*

For any items answered other than “strongly agree,” refer back to the recommended strategies and best practices designed to address that data characteristic.

Using this assessment, I’m going to implement the following strategies:

Endnotes

- 1 Adane, K., Gizachew, M., & Kendie, S. (2019). The role of medical data in efficient patient care delivery: A review. *Risk Management and Healthcare Policy*, 2019(12), 67–73. <https://doi.org/10.2147/RMHP.S1792593>.
- 2 Reuterskiold, C. (2023, March 28). Data's role—or lack thereof—in mental and behavioral health diagnoses. *Forbes*. <https://www.forbes.com/sites/forbestechcouncil/2023/03/28/datas-role-or-lack-of-mental-and-behavioral-health-diagnoses/>
- 3 Substance Abuse and Mental Health Services Administration (SAMHSA). (2023). *SAMHSA's 2023-2026 data strategy*. U.S. Department of Health and Human Services (HHS). <https://www.samhsa.gov/about-us/data-strategy>
- 4 Pew Charitable Trusts. (2022, October). *States should measure opioid use disorder treatment to improve outcomes*. <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2022/10/states-should-measure-opioid-use-disorder-treatment-to-improve-outcomes>
- 5 U.S. Government Accountability Office. (2020). *Substance use disorder: Reliable data needed for substance abuse prevention and treatment block grant program* (GAO Publication No. 21-58). <https://www.gao.gov/assets/gao-21-58.pdf>
- 6 SAMHSA. (n.d.). *Treatment Episode Data Set (TEDS)*. HHS. <https://www.samhsa.gov/data/data-we-collect/teds-treatment-episode-data-set>
- 7 Vermeir, P., Vandijck, D., Degroote, S., Peleman, R., Verhaeghe, R., Mortier, E., Hallaert, G., Van Daele, S., Buylaert, W., & Vogelaers, D. (2015). Communication in healthcare: A narrative review of the literature and practical recommendations. *International Journal of Clinical Practice*, 69(11), 1257–1267. <https://doi.org/10.1111/ijcp.12686>
- 8 Guttman, O. T., Lazzara, E. H., Keebler, J. R., Webster, K. L., Gisick, L. M., & Baker, A. L. (2021, December). Dissecting communication barriers in healthcare: A path to enhancing communication resiliency, reliability, and patient safety. *Journal of Patient Safety*, 17(8), e1465–e1471. <https://doi.org/10.1097/PTS.0000000000000541>
- 9 Chichirez, C. M., & Purcărea, V. L. (2018). Interpersonal communication in healthcare. *Journal of Medicine and Life*, 11(2), 119–122. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6101690>
- 10 Schnipper, J. L., Fitall, E., Hall, K. K., & Gale, B. (2021, March 10). *Approach to improving patient safety: Communication*. Agency for Healthcare Research and Quality, Patient Safety Network., HHS. <https://psnet.ahrq.gov/perspective/approach-improving-patient-safety-communication>
- 11 Nadkarni, A., Levy-Carrick, N. C., Kroll, D. S., Gitlin, D., & Silbersweig, D. (2021, March 1). *Communication and transparency as a means to strengthening workplace culture during COVID-19* [Commentary]. National Academy of Medicine. NAM Perspectives. <https://doi.org/10.31478/202103a>
- 12 Bol, N., Smit, E. S., & Lustria, M. L. A. (2020). Tailored health communication: Opportunities and challenges in the digital era. *Digital Health*, 6. <https://doi.org/10.1177/205520762095891>
- 13 U.S. General Services Administration. (2022). *Plain language makes it easier for the public to read, understand, and use government communications*. <https://www.plainlanguage.gov/>
- 14 Stewart, M. T., Horgan, C. M., Garnick, D. W., Ritter, G., & McLellan, A. T. (2013). Performance contracting and quality improvement in outpatient treatment: Effects on waiting time and length of stay. *Journal of Substance Abuse Treatment*, 44(1), 27–33. <https://doi.org/10.1016/j.jsat.2012.02.001>
- 15 Minnesota Department of Health. (2022, October 3). *Working with advisory committees*. <https://www.health.state.mn.us/communities/practice/resources/chsadmin/community-advcommittees.html>
- 16 Sharma, A. E., Knox, M., Mleczko, V. L., & Olayiwola, J. N. (2017). The impact of patient advisors on healthcare outcomes: A systematic review. *BMC Health Services Research*, 17, 1–14. <https://doi.org/10.1186/s12913-017-2630-4>
- 17 Kansas Citizen's Committee on Alcohol and Other Drug Abuse. (2019). *Governor's Behavioral Health Services Planning Council, Kansas Citizen's Committee on Alcohol and Other Drug Abuse (KCC) Annual Report, 2019*. <https://www.kslegresearch.org/KLRD-web/Publications/Resources/Documents/MH-Modernization/2019-kcc-subcommittee-annual-report.pdf>
- 18 Medicaid and CHIP Payment and Access Commission. (2021, June). *Report to Congress on Medicaid and CHIP*. HHS. <https://www.macpac.gov/publication/june-2021-report-to-congress-on-medicaid-and-chip/>

- 19 Jackson, C. B., Quetsch, L. B., Brabson, L. A., & Herschell, A. D. (2018, January 19). Web-based training methods for behavioral health providers: A systematic review. *Administration and Policy in Mental Health and Mental Health Services Research*, 45, 587–610. <https://doi.org/10.1007/s10488-018-0847-0>
- 20 Whitelock, D., Herodotou, C., Cross, S., & Scanlon, E. (2021). Open voices on COVID-19: Covid challenges and opportunities driving the research agenda. *Open Learning: The Journal of Open, Distance and e-Learning*, 36(3), 201–211. <https://oro.open.ac.uk/82049/1/82049.pdf>
- 21 Hartzler, B., Hinde, J., Lang, S., Correia, N., Yermash, J., Yap, K., Murphy, C. M., Ruwala, R., Rash, C. J., Becker, S. J., & Garner, B. R. (2023). Virtual training is more cost-effective than in-person training for preparing staff to implement contingency management. *Journal of Technology in Behavioral Science*, 8(3), 255–264. <https://doi.org/10.1007/s41347-022-00283-1>
- 22 Reavley, N. J., Morgan, A. J., Fischer, J. A., Kitchener, B., Bovopoulos, N., & Jorm, A. F. (2018). Effectiveness of eLearning and blended modes of delivery of Mental Health First Aid training in the workplace: Randomised controlled trial. *BMC Psychiatry*, 18, 1–14. <https://doi.org/10.1186/s12888-018-1888-3>
- 23 Gross, G., Ling, R., & Richardson, B. (2023). In-person of virtual training? Comparing the effectiveness of community-based training. *American Journal of Distance Education*, 37(1), 66–77. <https://www.tandfonline.com/doi/full/10.1080/08923647.2022.2029090>
- 24 Thomas Craig, K. J., McKillop, M. M., Huang, H. T., George, J., Punwani, E. S., & Rhee, K. B. (2020). U.S. hospital performance methodologies: A scoping review to identify opportunities for crossing the quality chasm. *BMC Health Services Research*, 20(1), 640. <https://doi.org/10.1186/s12913-020-05503-z>
- 25 Hoffmann, I., Behrends, M., Highmeducation Consortium, & Marschollek, M. (2022). Data literacy in medical education—An expedition into the world of medical data. *Studies in Health Technology and Informatics*, 295, 257–260. <https://doi.org/10.3233/SHTI220711>

SAMHSA

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Publication No. PEP24-02-002 • Released 2024

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