National Association of State Mental Health Program Directors
66 Canal Center Plaza, Suite 302
Alexandria, Virginia 22314

Assessment #4

State Behavioral Health Authorities' Use of Performance Measurement Systems

September 2016

Alexandria, Virginia

Fourth in a Series of Eight Briefs on the Use of Technology in Behavioral Health

This work was developed under Task 2.1.1 of NASMHPD's Technical Assistance Coalition contract/task order, HHSS28342001T and funded by the Center for Mental Health Services/Substance Abuse and Mental Health Services Administration of the Department of Health and Human Services through the National Association of State Mental Health Program Directors.

State Behavioral Health Authorities' Use of Performance Measurement Systems

Technical Writer:
Kristin Neylon, M.A.
Research Associate, NRI
Robert Shaw, M.A.
Senior Research Analyst, NRI
3141 Fairview Park Drive, Suite 650
Falls Church, Virginia 22042

National Association of State Mental Health Program Directors
66 Canal Center Plaza, Suite 302, Alexandria, VA 22314
703-739-9333 FAX: 703-548-9517
www.nasmhpd.org

September 2016

This working paper was supported by the Center for Mental Health Services/Substance Abuse and Mental Health Services Administration of the Department of Health and Human Services.

Table of Contents

Executive Summary

The evolution of technology has enhanced the abilities of state behavioral health authorities (SBHAs) to collect and analyze data for performance measurement. Improvements in technology have reduced the lag between the submission of data and the receipt of reports, allowing providers to more quickly address the needs of individual clients. While not there yet, the hope is that these performance measurement systems will evolve to ultimately allow for the implementation of performance medicine, which is "the tailoring of medical treatment to the individual characteristics of each patient." This paper explains how SBHAs use performance measurement systems to inform policy and improve practice. The findings are based on responses to a questionnaire completed by 41 SBHAs, and six follow-up interviews with staff from SBHAs with current and past performance measurement systems.

The majority of SBHAs (31) have current performance measurement systems, with three additional SBHAs planning to implement a new system. The primary impetus for developing these systems is the need to collect data for federal reporting requirements; followed closely by a need to monitor quality improvement; and to respond to questions, demonstrate success, and show cost effectiveness of services to stakeholders. Having strong leadership from the SBHA and state government is critical to ensuring sustainability of these systems.

SBHAs may choose to build performance measurement systems internally, or outsource the development to a third-party vendor. The greatest benefit to building a system internally is having the ability to make changes to measures as needed; however, there are many factors to consider when making this decision. SBHAs should consider that there are many ways the SBHA can be organized, including their relationship with the state Medicaid authority and the providers; how broadly or narrowly the client population is defined; and the purposes for which the system will be used, including which outcomes should be measured. Because of these variations, there is likely to be no "off the shelf" system perfectly suited to any given SBHA, which implies that creating or purchasing a system, which may require extensive modification, can be a major expense. Twenty-six SBHAs developed their systems in-house, though four did so in conjunction with a commercial vendor. All six SBHAs interviewed for this report elected to build their systems internally.

Performance measurement systems implemented by SBHAs collect data for a variety of settings and populations. Thirty SBHAs focus their performance measurement system on services provided in the community, 20 focus their performance measurement systems on services provided in state hospitals, and seven SBHAs focus their performance measurement systems on managed care settings. The majority of SBHAs collect data about all clients served (19 SBHAs collect data about all adults, and 18 collect data about all children). Fewer SBHAs collect data about adults with a severe mental illness (eight SBHAs) and children with a severe emotional disturbance (seven SBHAs).

SBHAs include a variety of outcomes in their performance measurement systems. The most common measures SBHAs collect data about are consumer perception of care (24 SBHAs), change in employment (23 SBHAs), and change in living situation (21 SBHAs).

Based on the interviews with the six states, SBHAs use data for a variety of reasons, including quality improvement monitoring (5 SBHAs), federal reporting (4 SBHAs), management oversight (3 SBHAs), pay for performance (2 SBHAs), planning (2 SBHAs), informing planning council (2 SBHAs), and to meet accreditation requirements (1 SBHA). SBHAs make data available to a wide variety of audiences, including the public, state policy makers, SBHA staff and leadership, and providers.

SBHAs may face resistance from providers and clinicians who have been unaccustomed to submitting such a large amount of data, who find the burden overwhelming and the increased oversight annoying, especially when they do not yet see the benefit. In order for performance measurement to be accepted by providers as meaningful, the burden on providers to administer structured assessments must be outweighed by the perceived benefit. The following strategies may encourage provider support of outcome evaluation[1]:
Improved feasibility of measures and simplified interpretation of scores, particularly instruments that are brief to administer and have simpler language. Including simpler graphics and narrative interpretations of the data is beneficial. It is also imperative that data analysis and reports be returned to providers and clinicians in a timely manner so that they can use the information to enhance care. Additional information from policy makers about why performance measurement is important and applicable to behavioral health services. Including clinicians in the development of the outcome assessment protocol from the beginning is one way to ensure the importance is conveyed, and provider feedback is appreciated.

With functioning performance measurement systems in place, and provider buy-in, SBHAs can promote SBHA activities to funders and other stakeholders. But more importantly, they can develop robust systems that improve the quality of care consumers receive, and maybe one day get to the point of offering precision medicine to all consumers in a way that is cost effective and meaningful at improving consumers' lives.

[1] Garland, A.F., Kruse, M., and Aarons, G.A. (2003). *Clinicians and outcome measurement.* From the Journal of Behavioral Health Services and Research, 2003, 30(4), 393-405.

Introduction

Performance measurement "is the regular collection of data to assess whether the correct processes are being performed and desired results are being achieved."[2] State behavioral health authorities (SBHAs) have been implementing performance measurement processes since at least the late 1970s; however, the advancements in computer and communications technology has greatly enhanced the ability of states collect timely data and use the information to monitor outcomes.

SBHAs may implement performance measurement systems to "document the treatment effects for both consumers and the public mental health system."[3] Performance measurement offers SBHAs, and the providers they contract with, the following opportunities[4]:

- To determine whether services are successful at mitigating illness and improving consumers' lives; and how well providers work to achieve goals, including those established by the SBHA, and those established by the provider.
- To increase understanding of the processes of care; to confirm ideas, reveal unknown factors, and to identify issues with service delivery.
- To present well-documented data to policy makers and potential funders to encourage continued or additional support for a given service.
- To highlight areas for improvement.
- To reveal problems that bias, emotion, and longevity may conceal.
- To compare outcomes across providers to identify outliers, to address issues and identify best practices.

The purpose of this report is to serve as a guide for SBHAs interested in implementing a new performance measurement system or enhancing an existing system. This report provides information about the evolution of performance measurement in public behavioral health systems; a national overview of SBHAs' uses of performance measurement systems, and includes lessons learned from six states that have implemented performance measurement systems, while addressing the potential benefits and challenges of implementing such a system. To achieve these ends, project staff requested information from the SBHA in all 50 states and the District of Columbia about their use of performance measurement systems. Based on the results of the questionnaire, project staff selected six states to extensively interview to learn more about successes and challenges when implementing a performance measurement system.

---

[2] HRSA. (2011, April). *Performance Management and Measurement.* Retrieved from http://www.hrsa.gov/quality/toolbox/508pdfs/performancemanagementandmeasurement.pdf.
[3] NASMHPD Research Institute. (Pre-publication). *Information Guide: Performance Measures in Early Intervention Programs.*
[4] Ibid.

Methodology

To determine which SBHAs have performance measurement systems, and what these systems include, project staff developed and distributed a questionnaire to all 50 states and the District of Columbia in February 2016. The questionnaire (Appendix A) requested states provide information about the following:

- If the SBHA has had, has, or is planning to implement a performance measurement system
- Which settings and populations are covered by the performance measurement system
- If provider payments are tied to performance
- Which outcome domains are included in the performance measurement system (e.g., strength-based, recovery/resilience, consumer perception of care, family involvement, client symptoms, client functioning, change in employment, and change in living situation)
- If the SBHA would be willing to talk further with NRI staff about their performance measurement system

In addition to the questions listed above, the questionnaire also requested SBHAs verify information about their performance measurement systems. Information for this section of the questionnaire was derived from NRI's 2012 State Profiling System ("Profiles"). Forty-one SBHAs responded to the questionnaire. Based on these results, NRI selected five states to participate in a semi-structured follow-up interview to share experiences and lessons learned: Indiana, Maryland, Ohio, Oklahoma, and Oregon. In selecting the states for follow-up interviews, NRI attempted to find states with diverse geographic locations, strategies, and experiences. In addition to these states with current performance measurement systems, NRI conducted interviews with former staff in two states that had implemented now-discontinued performance measurement systems to understand lessons learned from some of the earlier performance measurement initiatives that were not continued. The interviewees from the two states with the discontinued systems were promised anonymity to encourage transparency in sharing experiences and lessons learned. See table 1.

Table 1: Characteristics of States Selected for Follow-Up Interviews

State	Region	Status of System	Settings	Populations	Pay for Performance
Indiana	Midwest	Current and discontinued	Community	Adults with SMI and children with SED	Yes
Maryland	Mid-Atlantic	Current	Community	All persons, ages 6-64, receiving outpatient services funded by the SBHA	No (pay for data)
Ohio	Midwest	Current and discontinued	Community and State Hospitals	All adults and children	No
Oklahoma	Southwest	Current	Community	All adults and children	Yes
Oregon	Northwest	Current	Community and Managed Care	All adults and children	No (pay for data)
Anonymous	N/A	Discontinued	N/A	N/A	No
Anonymous	N/A	Discontinued and planning new	N/A	N/A	No

The follow-up interviews were held in April 2016, and followed a semi-structured format (Appendix B). Each interview lasted approximately one hour per state.

To provide context, and better understand the history, use, and implications of the use of performance measurement systems in SBHAs, project staff conducted a brief review of the literature during the spring and summer of 2016. Sources were identified through Internet and database searches. Keywords and phrases used in the searches include:

- Performance measurement
- What is a performance measurement system
- History of performance measurement
    - and mental health
    - and behavioral health
    - and substance use

List of Acronyms

The following is a list of acronyms used throughout this report:

- **ANSA** – Adult Needs and Strengths Assessment
- **ASO** – Administrative Services Organization
- **BASIS-24** – Behavior and Symptom Identification Scale
- **CAFAS** – Child and Adolescent Functional Assessment Scale
- **CANS** – Child and Adolescent Needs and Strengths Assessment
- **CAR** – Client Assessment Record
- **CCO** – Coordinated Care Organization
- **CMHC** – Community Mental Health Center
- **CMS** – Centers for Medicare and Medicaid Services
- **CPMS** – Client Process Monitoring System (Oregon)
- **DARMHA** – Data Assessment Registry Mental Health and Addiction (Indiana)
- **DLA** – Daily Living Activities Functional Assessment
- **EHR** – Electronic Health Record
- **ETPS** – Enhanced Tiered Payment System (Oklahoma)
- **GAF** – Global Assessment of Functioning

- **HBIPS** – Hospital-Based Inpatient Psychiatric Services
- **HEDIS** – Healthcare Effectiveness Data and Information Set
- **IBHS** – Inventory of Behavioral Health Services
- **MARS** – Maryland Assessment of Recovery Scale
- **MCAS** – Multnomah Community Ability Scale
- **MHBG** – Mental Health Block Grant
- **MHSIP** – Mental Health Statistics Improvement Program
- **MIRECC-GAF** – Mental Illness Research, Education and Clinical Centers Global Assessment of Functioning
- **MOTS** – Measurement and Outcome Tracking System (Oregon)
- **NOMs** – National Outcome Measures
- **OMS** – Outcome Measurement System (Maryland)
- **OQ** – Outcome Questionnaire
- **POMS** – Performance/Outcome Measurement Systems
- **PPMR** – Provider Performance Measurement Report (Oklahoma)
- **SAMHSA** – Substance Abuse and Mental Health Services Administration
- **SBHA** – State Behavioral Health Authority
- **SMHA** – State Mental Health Authority
- **SED** – Serious Emotional Disturbance
- **SMI** – Severe Mental Illness
- **SSA** – Single State Agency for Substance Abuse Services
- **TEDS** – Treatment Episode Data Set
- **YSS-F** – Youth Services Survey for Families

Evolution of Performance Measurement in Public Behavioral Health Systems

Public behavioral health systems have been collecting data and evaluating performance for quality improvement since at least the early 1980s. In this pre-internet era, many SBHAs, including those from Pennsylvania and New Jersey, developed performance measurement systems that relied on paper forms, manual data entry, and mainframe computers. Because of the manual entry required, there was a significant lag between a clinician completing a form and the SBHA receiving, coding, processing, and generating reports. This delay greatly reduced the utility that performance reports may have had to SBHA managers and behavioral health providers, and resulted in providers feeling overly burdened without experiencing any benefit from participating in performance measurement.

During the late 1980s and 1990s, SBHAs began to establish more sophisticated performance measurement systems, and utilized personal computers, fax machines, and modems to reduce the time between data submission and report generation. However, there was still a significant delay in SBHAs receiving, cleaning, processing, and providing information back to managers and clinicians. Because of this, SBHAs focused their performance measurement systems more on process measures related to enrollment, consumer satisfaction, expenditures, and service provision, rather than on client outcomes.

The availability of the Internet, data warehouses, and new database systems have allowed states to much more quickly receive, process, and disseminate information to managers, providers, and clinicians. The recent widespread implementation of Electronic Health Records (EHRs) by behavioral health providers and increased access to integrated data sets and data warehouses (including Medicaid claims and enrollment records), allows SBHAs to develop performance measurement systems that utilize new levels of clinical service information. The advancement of Internet applications allows for the near instant development of reports. This advancement of these systems is leading to a renewed effort by SBHAs to document performance measures and focus on outcomes (rather than process measures) that can be used by providers and individual clinicians to improve direct client care. The increasing use of technology in behavioral health performance measurement is allowing the field to move toward precision, or personalized, medicine.

Precision medicine is defined by the National Research Council as "the tailoring of medical treatment to the individual characteristics of each patient."[5] This approach allows behavioral health clinicians to develop a risk profile for each client "that includes life experiences, neurodevelopment, and social and cultural factors."[6] To develop these risk profiles, a performance measurement system must collect the following types of

[5] Bickman, L., Lyon, A. R., & Wolpert, M. (2016, Feb 18). *Achieving precision mental health through effective assessment, monitoring, and feedback processes.* Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4832000/pdf/10488_2016_Article_718.pdf
[6] Ibid

data: personal, aims and risks, services preference, intervention, progress, mechanisms, and contextual. Each of these data types is described in table 2 on the following page.

Table 2: Types of Data Relevant to Precision Behavioral Health[7]

Data Type	Description
Personal Data	Individual-level information that may inform intervention choice/selection (e.g., demographics, diagnoses, cultural variables, motivation to change)
Aims & Risks Data	The focus and expected outcomes of treatment as well as potential risks
Services Preference Data	Client choices/selections at key decision points regarding services
Intervention Data	Aspects of the services delivered over the course of treatment (e.g., intervention integrity, dose/intensity, duration, timing)
Progress Data	Movement toward the intended and agreed aims of any intervention, and against identified benchmarks
Mechanisms Data	The hypothesized link between intervention and outcomes. May be mediators of treatment (e.g., skills development or use, therapeutic alliance, etc.)
Contextual Data	Factors external to the individual/intervention that moderate or mediate outcomes (e.g., quality and amount of service available, family functioning data)

The use of precision medicine in behavioral health moves beyond the current best practices in outcome monitoring in that it involves "careful, ongoing consideration of the seven data elements [described] above over the full course of any intervention."[8] Additionally, precision medicine relies on "technology to manage [reliable and accurate] information, and support continuous monitoring and feedback."[9] The application of precision medicine will remain elusive in the field of behavioral health until data sources and collection methods become more accurate and reliable.

One of the biggest challenges to precision medicine is the traditional reliance on data collected through self-report. Although information collected through self-report provides valuable information about the clients' perceptions of care, it is rarely validated through other sources. New technologies, such as smart phones and wearable sensors, are providing researchers and clinicians opportunities to collect similar, more reliable information.[10] Another challenge to precision medicine is the lack of fidelity to the model for evidence-based practices, making it difficult to determine if a practice is truly effective. Better data collection methods, and frameworks to guide care, will help promote fidelity, and ultimately, precision medicine in behavioral health. Additionally, encouraging providers to adopt a culture of performance measurement is necessary to make precision medicine possible.

SBHA Performance Measurement Systems

Of the 41 responding SBHAs, 31 have current performance measurement systems, with three SBHAs planning to implement a new system (D.C., Virginia, and Ohio – which will

[7] Ibid
[8] Bickman, L., Lyon, A. R., & Wolpert, M. (2016, Feb 18). *Achieving precision mental health through effective assessment, monitoring, and feedback processes.* Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4832000/pdf/10488_2016_Article_718.pdf
[9] Ibid
[10] Ibid

phase out its current system when the new system is implemented). Thirteen SBHAs, including 10 that have current systems, indicated having had a system that has since been discontinued. Eight SBHAs do not have a performance measurement system; of these, three had prior systems, and three are planning to implement a new system. Table 1 indicates which SBHAs have discontinued systems, current systems, and which are planning to implement new systems (cells left blank mean the state did not provide a response to that question; "No Response" refers to states that did not complete the questionnaire).

Table 3: Status of SBHA Performance Measurement Systems

State	Discontinued?	Current?	Planning New?
Alabama	No Response	No Response	No Response
Alaska	No	Yes	
Arizona	No Response	No Response	No Response
Arkansas	Yes	Yes	
California	No	Yes	
Colorado	No	Yes	
Connecticut	Yes	Yes	
Delaware		Yes	
District of Columbia	No	No	Yes
Florida	No Response	No Response	No Response
Georgia		Yes	
Hawai'i	No	Yes	
Idaho	No	No	No
Illinois	Yes	Yes	
Indiana	Yes	Yes	
Iowa	Yes	No	Yes
Kansas	No	Yes	
Kentucky	No Response	No Response	No Response
Louisiana	Yes	Yes	
Maine	No Response	No Response	No Response
Maryland	No	Yes	
Massachusetts		Yes	
Michigan	No Response	No Response	No Response
Minnesota	No Response	No Response	No Response
Mississippi	No Response	No Response	No Response
Missouri	Yes	Yes	
Montana	Yes	Yes	
Nebraska	Yes	Yes	
Nevada	No Response	No Response	No Response
New Hampshire	Yes	No	
New Jersey	No Response	No Response	No Response
New Mexico		No	
New York		No	
North Carolina	No	Yes	
North Dakota	No Response	No Response	No Response
Ohio	Yes	Yes	Yes
Oklahoma	No	Yes	
Oregon	No	Yes	
Pennsylvania	Yes	Yes	
Rhode Island	No	Yes	
South Carolina	No	No	
South Dakota	No	Yes	No
Tennessee	No	Yes	
Texas	No	Yes	
Utah	No	Yes	
Vermont	Yes	Yes	
Virginia	Yes	No	Yes
Washington		Yes	

State	Discontinued?	Current?	Planning New?
West Virginia		No	
Wisconsin	No	Yes	
Wyoming	No	Yes	
Total:	**14**	**31**	**4**

Impetus for Establishing a Performance Measurement System

Interviews with the SBHAs revealed a variety of catalysts for initiating a performance measurement system. Among the catalysts cited were meeting federal reporting requirements, an identified need by SBHA leadership for quality improvement monitoring and to provide a means to demonstrate successes and respond to stakeholder questions, requirements from the state legislature.

Two states (Ohio and Oklahoma) indicated that federal reporting requirements for the Mental Health Block Grant (MHBG) had some influence on the decision to start a performance measurement system. Oklahoma even used some of the Data Infrastructure Grant funds from 1994 to establish their initial system.

Five of the states interviewed (Indiana, Maryland, Ohio, Oklahoma, and the anonymous state with a former performance measurement system) cited leadership from within the SBHA as an important catalyst to launching or expanding a performance measurement system. Two examples from these states are:

- Maryland indicated that there was a constant need to present the state legislature and governor's office with evidence that the State General Funds were being used effectively.
- In an effort to address budget cuts to community mental health centers (CMHC), Oklahoma's SBHA wanted to find a way to pay providers for performance. To do this, the state enhanced its existing system to include measures that would determine how much funds a CMHC would receive of the final 10 percent of its contracted award.
- The anonymous state's SBHA realized a need to establish quality improvement processes and began the steps to implement a performance measurement system. This internal activity had a significant unplanned benefit: the SBHA attracted the attention of the state legislature, which eventually allocated substantial funding to ensure the project got off the ground (as will be discussed later, significant state budget cuts and a change in leadership ultimately derailed the project).

Although many SBHAs use data from their performance measurement systems to inform the state legislature, only Oregon's SBHA (of the six interviewed states) was required by the legislature to develop and implement a performance measurement system.

Building a Performance Measurement System

States that build a performance measurement system have a number of decisions to carefully consider before beginning. One of these decisions is whether or not to build the system internally or to outsource development to a third party. SBHAS should consider that there are many ways that the SBHA can be organized, including their relationship with the state Medicaid authority and the SBHA's providers; how broadly or narrowly the client population is defined; and the purposes for which the system will be used, including which outcomes should be measured. Because of these variations, there is likely to be no "off the shelf" system perfectly suited to any given SBHA, which implies that creating or purchasing a system, which may require extensive modification, can be a major expense. Twenty-six SBHAS developed their systems in-house, though four did so in conjunction with a commercial vendor, or by incorporating commercial performance measures into an internally built system (e.g., BASIS-24). Three SBHAs purchased systems from third-party vendors; two of which use a system from Telesage.

For all states interviewed, the decision to build a system internally or outsource development to a third party primarily relied on associated costs and available IT (information technology) resources. Because of the perception of cost savings, many of the states interviewed elected to build their systems internally. This process also allowed for greater stakeholder involvement in determining which measures should be included. All six SBHAs interviewed for this report built their systems internally. Several cited the importance of learning from other states' experiences. Experiences from the SBHA interviews include:

- Indiana's SBHA built their current performance measurement system internally. The SBHA's prior system was developed through a third-party vendor, which made it difficult for SBHA staff to request changes to the system. In designing the new system, the SBHA though it would be faster, more flexible, and less expensive to design a system in-house. Thus far, these benefits have been realized, particularly related to flexibility. The SBHA has staff available that can easily address issues and make changes to the database as needed.
- Maryland's SBHA built their system internally, with full collaboration of the Administrative Services Organization (ASO). To design the system, the SBHA convened a stakeholder group of consumers, providers, and state employees to determine which domains and measures should be included in the system. Experts from the University of Maryland's System Evaluation Center guided the process. While this process took several years to complete, the burden to providers and consumers is relatively low because they had input from the beginning. Incorporated within the performance measurement system are commercial performance measures (including BASIS-24).
- Ohio's SBHA is building its system internally, and will include data from the state Medicaid agency.
- Oklahoma's SBHA built its system internally based on measures it was already collecting. The SBHA is combined with the state Medicaid authority, giving it access to Medicaid claims data. This made it easier to establish the performance system, since the reporting capacity was all that needed to be enhanced and

refined. Having the system in-house also makes it easier to make changes to the system.

- Oregon's SBHA decided to build its system internally after reviewing its budget and determining it had adequate staffing to complete the design. The SBHA convened a steering committee, outlined the project, and established a timeline for completion. The decision to build the system internally proved to be a challenge because unexpected events (e.g., staff and leadership turnover) and competing priorities forced the reallocation of resources (including staff time and funds). This has led to delays and challenges in data reliability and the development of reports.
- Both of the anonymous SBHAs with former performance measurement systems designed their systems internally, and did not consider outsourcing the project. To develop their systems, they looked to other states for examples and lessons learned, sought guidance from national organizations such as NASADAD and NASMHPD, and reviewed the available literature for best practices. Both states described using workgroups consisting of central office staff, community providers, and consumers to guide the process and determine what should be measured.

Settings Covered in SBHA Performance Measurement Systems

Data for the performance measurement systems are collected in community settings (30 SBHAs), state hospital settings (20), and through managed care organizations (7), with some SBHAs collecting data across all three settings. Table 3 identifies which states collect data across which settings (only responding states with current performance measurement systems are included).

Table 4: Settings for Data Collection, Current Performance Measurement Systems, by State

State	Community	State Hospital	Managed Care
Alaska	Yes	Yes	
Arkansas	Yes	Yes	
California	Yes		
Colorado	Yes	Yes	
Connecticut	Yes	Yes	
Delaware	Yes	Yes	Yes
Hawai'i	Yes	Yes	
Illinois	Yes	Yes	
Indiana	Yes		
Kansas	Yes	Yes	Yes
Louisiana	Yes	Yes	Yes
Maryland	Yes		
Massachusetts	Yes	Yes	
Missouri	Yes	Yes	
Montana	Yes		

State	Community	State Hospital	Managed Care
Nebraska	Yes	Yes	
New York	Yes	Yes	Yes
North Carolina	Yes	Yes	Yes
Ohio	Yes	Yes	
Oklahoma	Yes		
Oregon	Yes		Yes
Pennsylvania	Yes	Yes	Yes
Rhode Island	Yes		
South Dakota	Yes		
Tennessee	Yes	Yes	
Texas	Yes	Yes	
Utah	Yes	Yes	
Vermont	Yes	Yes	
Wisconsin	Yes		
Wyoming	Yes		
Total:	**30**	**20**	**7**

Populations Included in SBHA Performance Measurement Systems

In addition to settings, SBHAs also determine which populations should be included. Most SBHAs collect data about all adults (20 SBHAs) and all children (18) served. Fewer states collect data exclusively on adults with serious mental illnesses (SMI; 8 SBHAs) and children with serious emotional disturbances (SED; 7). Table 3 indicates which populations each SBHA includes in its performance measurement system.

Table 5: Populations Included in Current Performance Measurement Systems, by State

State	All Adults Served	Only SMI Adults	All Children Served	Only SED Children	Other
Alaska	Yes		Yes		Including individuals receiving substance use services.
Arkansas	Yes		Yes		
California				Yes	
Colorado		Yes		Yes	Any individual receiving publicly funded behavioral health services.
Connecticut	Yes				
Delaware		Yes			
Hawai'i		Yes		Yes	
Illinois	Yes		Yes		
Indiana		Yes		Yes	
Kansas	Yes		Yes		
Louisiana	Yes		Yes		
Maryland					Individuals aged 6-64 receiving outpatient behavioral health treatment services from an OHMC, FQHC, or OMHC within a hospital setting, including substance use.
Massachusetts		Yes		Yes	
Missouri	Yes		Yes		

State	All Adults Served	Only SMI Adults	All Children Served	Only SED Children	Other
Nebraska	Yes		Yes		
New York	Yes		Yes		
Ohio	Yes		Yes		
Oklahoma	Yes		Yes		Including all persons being treated for substance use and co-occurring disorders; data about administrative staff for program monitoring.
Oregon	Yes		Yes		
Pennsylvania	Yes		Yes		
Rhode Island		Yes			
South Dakota	Yes		Yes		
Tennessee	Yes		Yes		
Texas	Yes		Yes		
Utah	Yes		Yes		
Vermont	Yes		Yes		Some hospitals are designed to provide care to involuntarily committed patients.
Washington		Yes		Yes	
Wisconsin		Yes		Yes	
Wyoming	Yes		Yes		
Total:	**19**	**8**	**18**	**7**	

Elements of State Behavioral Health Performance Measurement Systems

SBHAs include a variety of outcomes in their performance measurement systems. Thirty-one states provided information about which measures are included. The most common measures included in performance measurement systems are consumer perception of care (24 SBHAs), change in employment (23), and change in living situation (21), all at the community level. Table 6 lists the number of SBHAs collecting specific measures by setting.

Table 6: Number of SBHAs Using Specific Performance Measures, by Setting

Measure	Community Mental Health	State Psychiatric Hospital
Consumer Perception of Care	24	9
Change in Employment	23	3
Change in Living Situation	21	3
Client Functioning	19	7
Family Involvement/Satisfaction	19	3
Client Symptoms	12	4
Recovery/Resilience	8	5
Strength-Based Measures	8	4

SBHAs use a variety of instruments to collect these measures; however, the most cited instrument used is the MHSIP Consumer Survey. SBHAs indicated using the MHSIP Consumer Survey to collect six of the eight measures listed in the table above (excluding recovery/resilience and strength-based measures). The following sub-sections highlight the standardized instruments used to collect data about symptoms, functioning, recovery, and strength-based measures. Note that states may use more than one instrument to collect measures in each domain. Many states rely on state-developed instruments to collect these data, which are lumped together into one category for the sake of brevity.

Instruments Used to Measure Change in Symptoms:
Fourteen SBHAs measure changes in symptoms. Instruments used to collect this measure include:

- State-Developed Instruments – Six SBHAs
- CANS/ANSA – Two SBHAs
- BASIS-24 – One SBHA
- Colorado Symptom Index with Distress Assessment – One SBHA
- Hospital-Based Inpatient Services (HBIPS) – One SBHA
- MHSIP – 1 SBHA
- MIRECC GAF (Expanded) – One SBHA
- Ohio Scales – One SBHA
- Outcome Questionnaire (OQ) – One SBHA
- Quality of Life Intervention – One SBHA
- Youth Short Symptom Index – One SBHA
- Not Specified – Two SBHAs

Instruments Used to Measure Change in Functioning:
Twenty-two SBHAs measure change in functioning. Instruments to collect measures in this domain include:

- State-Developed Instruments – Nine SBHAs
- MHSIP – Five SBHAs
- CANS/ANSA – Three SBHAs
- CAFAS – Two SBHAs
- Daily Living Activities (DLA) Functional Assessment – Two SBHAs
- Global Assessment of Functioning (GAF) – Two SBHAs
- HBIPS – One SBHA
- OQ – One SBHA
- YSS-F – One SBHA

Instruments Used to Measure Recovery:
Seven SBHAs measure recovery. Instruments used to collect measures in this domain include:

- State-Developed Instruments – Four SBHAs
- Abbreviated Maryland Assessment of Recovery (MARS) – One SBHA
- Milestones of Recovery – One SBHA
- OQ – One SBHA

Instruments Used to Collect Strength-Based Measures:
Eight SBHAs collect strength-based measures. Instruments used to collect measures in this domain include:

- State-Developed Instruments – Three SBHAs
- CANS/ANSA – Three SBHAs
- HBIPS – One SBHA
- OQ – One SBHA

Using and Sharing the Data

SBHAs use, or plan to use, data collected from their performance measurement systems to meet a variety of needs. The primary uses of data, as indicated by the SBHA interviews, are for quality improvement (5 SBHAs), and for meeting federal reporting requirements (4 SBHAs). Table 7 below shows how each of the SBHAs interviewed use performance measurement data.

Table 7: Use of Performance Measurement Data

Purpose	States
Quality Improvement	5: Indiana, Maryland, Ohio, Oklahoma, Oregon*
Federal Reporting	4: Indiana, Ohio, Oklahoma, Oregon
Management Oversight	3: Indiana, Ohio, Oklahoma
Pay for Performance	2: Indiana, Oklahoma
Planning	2: Indiana, Oklahoma
Inform Planning Council	2: Indiana, Oregon
Meet Accreditation Requirements	1: Oklahoma

**Once the system is better established, Oregon will use data from the MOTS for quality improvement purposes.*

To facilitate quality improvement among providers, SBHAs often share data with providers through regular reports and/or the availability of data dashboards. These tools display provider performance for a specified time, and some are even capable of showing trends over time.

Indiana produces standard scorecards of performance measures for providers that are distributed monthly. Quality improvement staff review data for each of the providers, and make site visits to the outliers to better understand what is happening in the field, and where efforts can be targeted for improvement. At this time, the SBHA is only capable of developing scorecards that show individual provider results, rather than how a provider compares to other providers at the regional or state level. Also, trend data are not available on these scorecards. The SBHA is working on improving the information that is contained in the scorecards, so that it is more useful for quality improvement purposes.

Maryland's SBHA provides an online dashboard, referred to as the "Datamart" that is updated monthly. These data are made available to the public, and to providers. The level of detail available depends on category of stakeholder; for instance, providers and

the SBHA are able to access provider-level detail, whereas the public and state policy makers are only able to view data at the state and regional levels. Examples of how Maryland displays data through the dashboard are included in the state summary section of this report.

Ohio is in the process of redesigning its system, and plans to develop comprehensive reports through an online dashboard for providers and its 51 county boards once the redesign is complete. These reports will be used to inform strategic planning processes and quality improvement efforts. Currently, utilization reports are available to providers.

Oklahoma has a very robust reporting system for the PPMR that analyzes each performance measure from a variety of different perspectives, including client-detail, provider comparison, clinician report, demographic report, and trends over time. These data reports are updated for providers on a monthly basis via an online database. Summary data for the PPMR measures are also made available to the public via the online portal; however, the availability of this information is not advertised, so the data are rarely accessed. ETPS data for the most recent three years are also made available to providers so they can review trends over time. Examples of these data systems are included in Oklahoma's state summary.

Similar to Ohio, Oregon is also in the process of redesigning its performance measurement system. Because the revised system is in its infancy, the SBHA has not yet developed comprehensive reports, but intends to once the system is better established. Ideally, these reports will be developed monthly, and would measure a provider's progress for the past 12 months. The information contained in the reports would be available to a wide audience of stakeholders. The SBHA anticipates that once reports are available to providers, and providers have training in how to interpret the data, there will be more buy-in to the system from the providers and clinicians.

SBHAs make data available to a wide variety of audiences, including the public, state policy makers, SBHA staff and leadership, and providers. Table 8 below shows which states make the data available to different stakeholder groups.

Table 8: Availability of Data to Different Stakeholder Groups

	Data	Reports
Public		
Indiana	No	No
Maryland	Yes	Yes
Ohio	No	No
Oklahoma	Yes	Yes
Oregon	No	No
State Policy Makers		
Indiana	Yes (ad hoc basis)	Yes (ad hoc basis)
Maryland	Yes	Yes
Ohio	No	No
Oklahoma	Yes	Yes
Oregon	No	Yes
SBHA		
Indiana	Yes	Yes

	Data	Reports
SBHA		
Maryland	Yes	Yes
Ohio	Yes	Yes
Oklahoma	Yes	Yes
Oregon	Yes	Yes
Providers		
Indiana	Yes	Yes
Maryland	Yes	Yes
Ohio	Yes	Yes
Oklahoma	Yes	Yes
Oregon	Yes	Yes

State Behavioral Health Performance Measurement Systems and Pay for Performance

Seven SBHAs (Alaska, Colorado, Delaware, Indiana, Oklahoma, Rhode Island, and Texas) rely on their performance measurement systems to determine payments for providers based on performance. Two additional states, Washington and Wyoming, are moving toward pay-for-performance for providers, but need to establish infrastructure to do so.

Two SBHAs interviewed, Indiana and Oklahoma, rely on their performance measurement systems to pay providers for performance. Maryland does provide financial incentives to providers for submitting data, but does not tie payments to performance based on outcomes. Oregon and Ohio do not implement pay for performance strategies.

Each provider that contracts with Indiana's SBHA is guaranteed 90 percent of their base award. The remaining 10 percent of funds are awarded based on how well each provider meets its goals for a given quarter; for each goal met, a certain percentage of the remaining 10 percent is allocated. The SBHA also offers bonus incentives for providers with good performance during the quarter. Because payments are based on outcomes, providers are the biggest users of the state's performance measurement system, Data Assessment Registry Mental Health and Addiction System (DARMHA). These incentive payments drive some providers to evaluate quality and strive for improvement; however, some providers are not motivated by the remaining 10 percent of funding. Whether a provider is motivated by these funds largely depends on their access to other funding sources.

Oklahoma's SBHA requires providers to request authorization for service prior to payment. This ensures that the state has high levels of participation from providers. The SBHA also ties payments to provider performance on how well they meet a handful of outcome measures. The SBHA would like to increase the number of measures it uses for incentive payments to ensure that providers focus on improving their services overall, rather than limiting their focus to a few areas based on payment. The SBHA allows providers to review other providers' outcomes. In the past, the SBHA has received calls from providers wanting to know why other providers have done so well in certain areas,

which leads to a review of the data. This transparency helps ensure that none of the providers are gaming the system.

Although Maryland's SBHA does not tie payments to performance, providers will not be reimbursed for services funded by the agency if they do not request authorization to bill. This requirement has led to increased and sustained participation from providers in submitting data to the performance measurement system.

Ohio and Oregon do not currently implement pay for performance strategies. Ohio's SBHA, thus far, has elected not to pursue pay for performance, and has felt no pressure to do so. While the SBHA would like to see data used to inform and improve service provision, it is exploring other methods. The first step in this process is to determine what other quality control methods the providers and state boards already have in place. Oregon may consider implementing pay for performance once their data infrastructure is better established.

Reducing the Burden and Promoting a Culture of Performance Measurement

As mentioned in the introduction, the lag between receiving reports, and the focus on process measures in the 1980s created a disconnect with clinicians and providers, who still were not receiving any meaningful information that could inform service delivery and address the immediate need of individual clients. The perceived provider burden remained high, and contributed to a culture of resistance among providers about performance measurement systems.

With the new and prominent focus on evidence-based practices in the late 1990s and early 2000s, providers were increasingly encouraged to "collect standardized outcome data on clients served."[11] These standardized measures are often associated with structured instruments that require clinician training, which increases the burden on providers. However, as technology improved, and reports could be generated closer to real-time, it was expected that clinician's perceived utility of participating in performance measurement would increase. A 1997 study of 50 clinicians found that this was not the case. The primary reason for this is that the majority of clinicians never reviewed the results of their standardized measures because they did not feel their work could be reasonably quantified.[12] Additional barriers cited by providers included feasibility concerns, and challenges in interpreting the outcomes. According to the study, "unless mandated, most clinicians are not likely to use standardized measures to assess clients, nor to empirically evaluate progress in treatment."[13]

---

[11] Garland, A.F., Kruse, M., and Aarons, G.A. (2003). *Clinicians and outcome measurement.* From the Journal of Behavioral Health Services and Research, 2003, 30(4), 393-405.
[12] Ibid
[13] Ibid

In order for performance measurement to be accepted by providers as meaningful, the burden on providers to administer structured assessments must be outweighed by the perceived benefit. In the 1997 study, clinicians suggested the following strategies to encourage provider support of outcome evaluation[14]:

- Improved feasibility of measures and simplified interpretation of scores, particularly instruments that are brief to administer and have simpler language. Including simpler graphics and narrative interpretations of the data was also requested.
- Additional information from policy makers about why performance measurement is important and applicable to behavioral health services. Including clinicians in the development of the outcome assessment protocol from the beginning is one way to ensure the importance is conveyed, and provider feedback is appreciated.

States interviewed experience varied reception from providers, and have put in place processes to mitigate the burden and increase utility of the system for providers:

- Indiana has thus far not experienced any pushback from providers for data collection. In order to minimize burden to the providers the SBHA only makes changes to the database once per year, at most.
- Maryland has high participation from providers because data submission is required for service authorization. However, this does not mean that all providers use the information to improve practice. A core group of early adopters does use the information, but this is limited to 15 or so providers. In order to encourage more providers to use the information in the reports, the SBHA provides technical assistance about how the information will be used at the state level, and how it can be used at the core service level to evaluate performance and improve practice. Providers are also encouraged to review the information to see how well they are meeting benchmarks, and where they align with other providers in their counties.
- Once Ohio's new system is launched, the SBHA will undertake a massive training initiative to address any barriers providers might face related to data collection and submission. The SBHA will also train providers how to use the to-be-developed dashboard to help them review and understand data reports to demonstrate the utility of the system at improving quality of care.
- Oklahoma has experienced little resistance from providers. The SBHA involved providers in the development of measures, and seeks their guidance on any changes the SBHA plans to make to the system. Providers are primarily concerned that measures will be collected for which they have little control of the outcomes.
- Oregon has experienced quite a bit of pushback from providers. Contributing to this resistance is the challenge the state is having in developing reliable and meaningful reports. Once providers are able to review their outcomes, and compare their efforts with others, the perceived utility of participating in the

[14] Garland, A.F., Kruse, M., and Aarons, G.A. (2003). *Clinicians and outcome measurement.* From the Journal of Behavioral Health Services and Research, 2003, 30(4), 393-405.

performance measurement system should increase, hopefully making the burden worthwhile.

- At the inception of the performance measurement system, one anonymous state with a now discontinued system allocated funds to hire part time liaisons to manage the performance measurement system at each regional entity. These liaisons were responsible for ensuring that data were collected and submitted to the SBHA, and for communicating about any challenges or barriers providers had with the system. The goal of this employee was to reduce the reporting burden on providers. Although the liaisons were helpful, the burden of rigid, standardized reporting instruments remained, and led to resistance from providers. This SBHA recommends reducing the requirement for standardized instruments to encourage buy-in from providers.

Narratives of State Experiences Implementing Performance Measurement Systems

The following sub-sections provide summaries of each of the six SBHA interviews that were used to inform the bulk of this report.

Indiana

Indiana's performance measurement system, Data Assessment Registry Mental Health and Addiction (DARMHA), collects data from mental health and substance use providers. DARMHA began in 2008. The system collects data to satisfy federal reporting requirements, outcome-based payments, monitor performance improvement, inform planning, and allow for management oversight.

DARMHA collects and has the ability to analyze data at the following levels: client, provider, zip code, city, county, regional, and state. There are 25 CMHCs in Indiana, and nine contracted providers, who are required to provide data to DARMHA. Providers that are solely certified or licensed by the SBHA and do not contract with the SBHA are not required to provide data.

DARMHA was built internally because it was thought at the time that it would be faster, more flexible, and less expensive to do so than contract out to a third party. Based on prior experiences with vendors, the SBHA found it difficult to make changes through a third party.

DARMHA was built in two parts. The first part collects Child and Adolescent Needs and Strengths Assessment (CANS) and Adults Needs and Strengths Assessment (ANSA) data. The CANS and ANSA collect data on life functioning, strengths, acculturation; behavioral health needs, risk behaviors, and family/caregiver strengths and needs. CANS also collects data on school engagement, developmental needs, trauma, and violence.

When CANS or ANSA data are submitted, providers receive a response that includes the individual's level of need and recommends a level of care. All child welfare family case managers are required to conduct a CANS assessment on children they see. CANS and ANSA data are used to determine eligibility for a variety of programs under Indiana's 1915(i) waivers. The second part collects data for federal reporting requirements and for state-level assessments. The system primarily collects data for federal reporting requirements, with the exception of the CANS and ANSA data. Data are collected daily, weekly, and monthly, depending on the record type and provider. Providers have until the end of the month to provide data for the previous month. The SBHA does not receive data from the Medicaid system; however, they hope to have access to Medicaid data through the development of a data warehouse in the future.

Table 9: Measures Used by Indiana[15]

Measure	Measurement Tool
Improvement in One Domain for Open and Closed Episodes of Care	ANSA, CANS
Community Integration	ANSA, CANS
Strength Development	ANSA, CANS

Data are used for performance contracting, though only 10 percent of payments may be revoked due to poor performance. The SBHA also uses bonus payments for providers who meet certain criteria for good performance. Providers automatically get 90 percent of their payment, with the remaining 10 percent paid out if the provider meets performance goals. This is assessed quarterly. Some providers are driven to meet performance goals in order to assure their receipt of the maximum payment amount while others are not. The SBHA has a quality improvement team that evaluates providers that perform poorly; however, it is difficult for the system to evaluate data across providers.

Data Collection Technology: DARMHA was designed for simplicity and understanding. Providers are offered the flexibility of reporting data via manual data entry, web-services (a direct link between the provider's database and the state's), and through file transfers. Providers have not indicated that reporting to the state is a burden; the SBHA has not heard any complaints. When the SBHA makes improvements to the system, they do so only once per year and try to be mindful of any burdens the changes might impose upon the providers. One of the most recent changes was to add the locations of provider services in response to data demands from SAMHSA for their service locator to match IBHS and TEDS data.

Based on data collected through DARMHA, the SBHA produces monthly report cards containing performance measurement data intended for the providers. These report cards can only capture one provider at a time. There is no pre-programmed ability to evaluate data across providers, though such reports have been produced upon request. Providers are the primary audience for the data. To a lesser degree, data are used by senior management and the state's mental health planning council. With the exception of the

[15] Source: https://dmha.fssa.in.gov/DARMHA/Documents/PerformanceMeasuresDefinitionsSFY2017.pdf

Department of Child Services (which regularly receives the CANS data), in order for other state agencies to access the data, they would need to make a specific request.

Lessons Learned in Indiana: Indiana focused on building a system that was easy for providers to submit information to rather than designing the system for analysis. Consequently, the SBHA later realized that pulling DARMHA data for analysis is difficult, which makes programmatic planning more challenging. It is difficult for the SBHA to combine items of data since there is no standardized point in time in their system. Data are collected on events rather than for periods. For example, a diagnosis record may be submitted at a different point in time than a NOMS record, making combining of these data more challenging. The SBHA is looking to create a data warehouse so that they will be better able to view data, develop reports, and incorporate Medicaid data. The SBHA would like to use this new capability to do more performance management.

DARMHA does not allow users to easily evaluate results across providers; rather, reports are generated for individual providers to review their own results. These individual report cards include how many people had positive or negative outcomes for particular measures. In the future, once standardized reports are developed, the SBHA would like to be able to look at information in a way that allows outliers to be identified and shows how consumers are doing across multiple providers. The SBHA is working with a vendor to develop reports that identify trends on a regular (rather than ad hoc) basis, and to look at assessment data. The SBHA realizes that when an assessment tool is tied to funding, there may be an unfortunate tendency to look at it not as a tool to improve treatment, but rather as merely paper that needs to be filled out and submitted. By offering providers reports based on the assessment data, the SBHA hopes to encourage them to use data to improve outcomes.

Maryland

Maryland's Outcomes Measurement System (OMS) started in 2006 and is limited to outpatient behavioral health clients whose care is supported by Medicaid or state funds. Care supported by Medicare and private insurance are not included. Initially, only mental health services were included; however, after the mental health and substance abuse agencies merged, the data system was expanded to include substance use services. Prior to the merger, the state's substance abuse agency used SAMHSA's Treatment Episode Data Set (TEDS), which collects the demographic characteristics and substance abuse problems of individuals admitted to treatment facilities at admission and discharge. However, the SBHA (State Behavioral Health Administration) felt that the TEDS is limiting because it only collects at admission and discharge. This limitation is especially important to address as substance abuse services move from a treatment model based on episodic care to a treatment model based on chronic disease.

The impetus for the development of the system began in 1997 with support from the governor's office and the state legislature. The system was everything but required by

the legislature, which frequently requested data to show what outcomes were being realized from the funds allocated to the agency. Dr. Hepburn, the former commissioner, was also very interested in developing a system.

The performance measurement system is a mix of formal scales and items created internally and implemented in conjunction with the state's Administrative Services Organization (ASO), which manages the provision of behavioral health services. BHA selected the BASIS-24 for adult mental health, which is a diagnostic tool used to identify symptoms and problems; the CRAFFT screening tool for children receiving substance use treatment, which is used to assess frequency of use and other risks and consequences of alcohol and drug use; and the Maryland Assessment Recovery Scale (MARS), which is a recovery tool that measures attitudes and beliefs about health and wellness. These are programmed into the ASO's authorization system. As part of the planning process, the SBHA received input from a stakeholder group, and used the expertise of the University of Maryland's System Evaluation Center, on what domains and measures to select. One of the SBHA's goals was that the system not be too burdensome to providers. The SBHA looked for measures that did not require intensive training, that were intuitive, and came with tools to help providers train their staff. The measures were designed to be clinically relevant while also providing the legislature with the information it wanted. The SBHA also wanted the measures to be meaningful to consumers.

A lot of effort went into creating a variety of training manuals. The SBHA created an interview guide on how to implement the questionnaires and documents about how to interpret and use the results. When the mental health and substance abuse systems merged, the SBHA revised the various manuals and documents to add substance use-specific information and examples.

Table 10: Measures Used by Maryland

Measure	Measurement Tool
Recovery/Resilience	Abbreviated Maryland Assessment of Recovery Scale (MARS)
Client Symptoms	BASIS-24 for Adults; Youth Short Symptom Index (University of Maryland)
Client Functioning	MHSIP
Change in Employment	Employed now or in the past six months (initial interview v. most recent)
Legal Involvement	Arrests in past six months (initial interview v. most recent)
Substance Use	BASIS-24 Substance Abuse Subscale for Adults; CRAFFT for children and adolescents (initial interview v. most recent)

The OMS questionnaires are administered at intake and at six-month intervals thereafter. Providers collect data daily as they see consumers, and may enter it directly as it is administered or after the interview has been completed. The ASO gives BHA an extract file monthly. An on-line Datamart is refreshed on a quarterly basis. Data are validated before they are reported.

Aggregated data are available through two data marts: one for the providers and state and county administrators, which requires a log-in and allows providers to see their specific data and county and state administrators to see data for areas under their jurisdiction; and one for the public that reports data aggregated at the state and county levels only. The SBHA makes the most use of the data, followed by providers (although some providers

use the data more than others). The 19 regional Core Service Agencies, known in other states as local/community mental health authorities, include OMS data (e.g. homeless rates over time) in county level annual plans. Smoking and other forms of tobacco use data are used as part of a statewide initiative. The SBHA also does ad hoc analyses, some of which are made public. The reports can be found online at http://maryland.valueoptions.com/services/OMS_Welcome.html.

Figure 1: Maryland's OMS Dashboard – Living Situation Screenshot

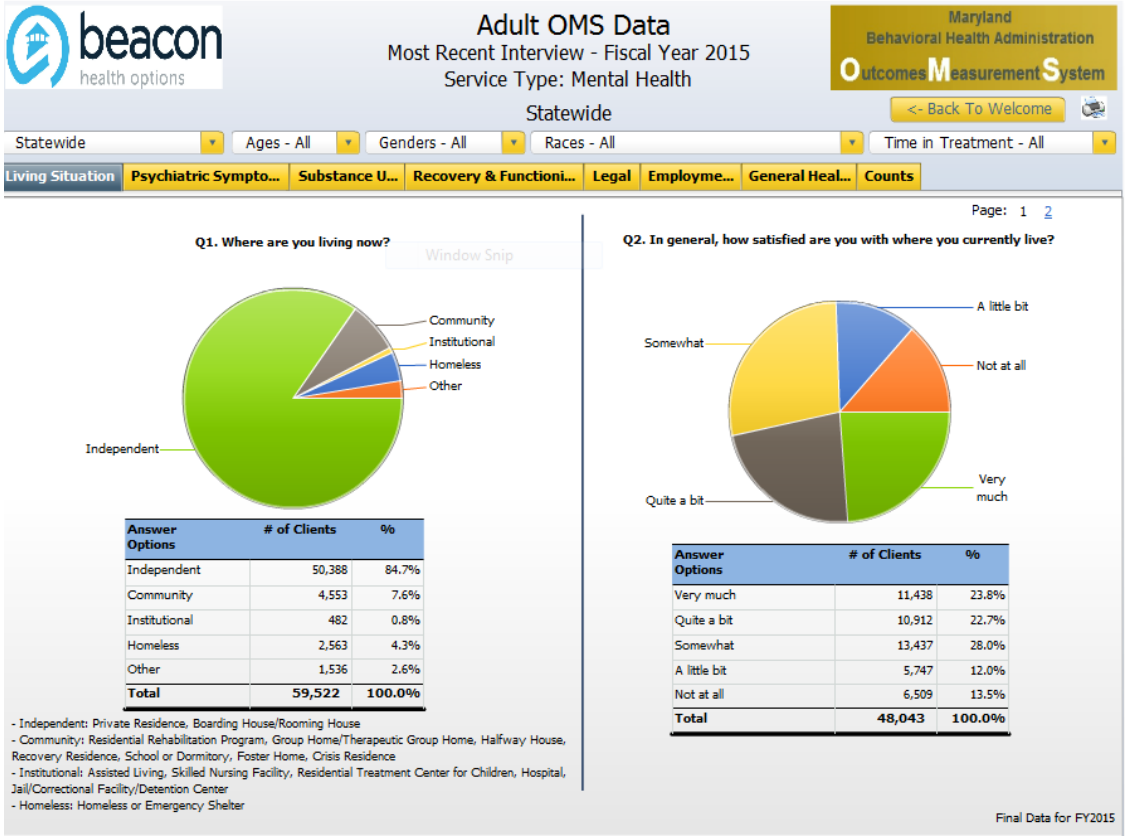
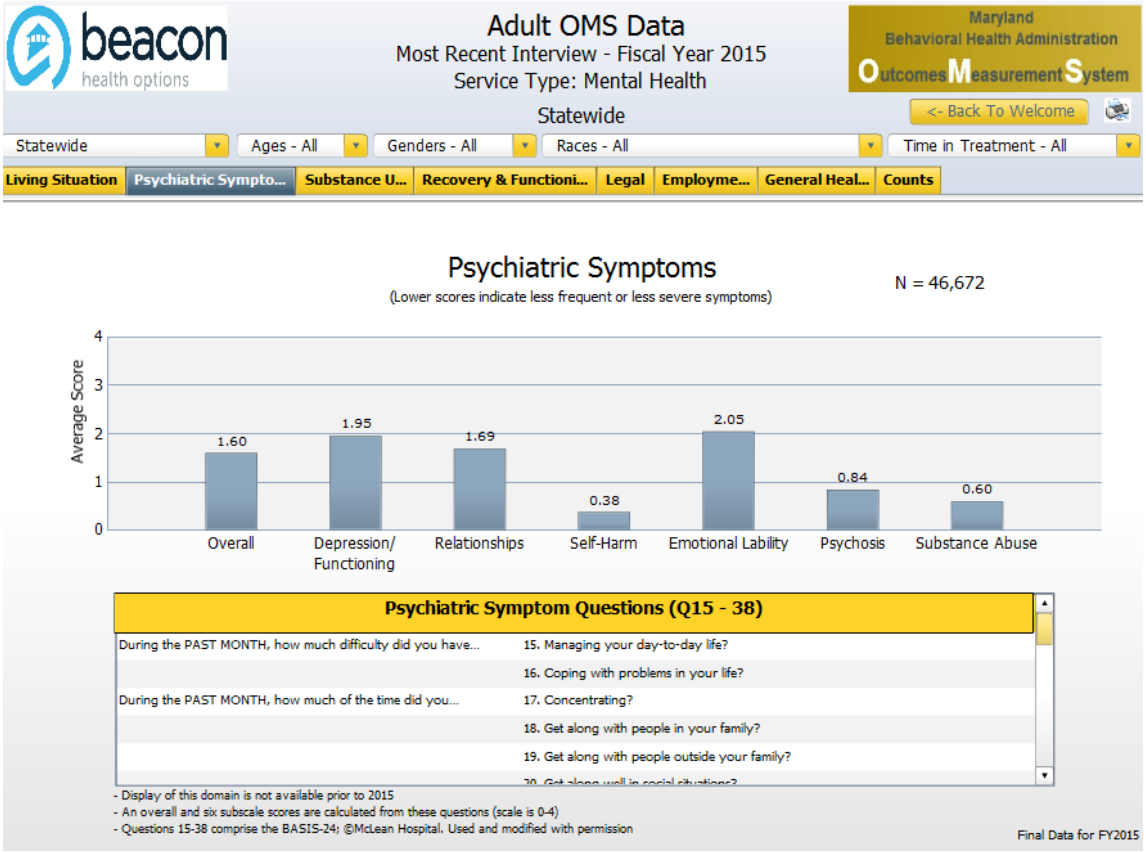


Figure 2: Maryland's OMS Dashboard - Psychiatric Symptoms Screenshot



Data are used for clinical decision-making, allocating funds, monitoring and improving client outcomes, and planning at the state level. The Behavioral Health Planning Council also uses the data to inform its efforts. Payments are not tied to performance or specific results; rather, service authorization is tied to participation in the collection of data. Providers receive authorization to bill for services by submitting data; otherwise, they will not be paid.

Most of the measures have been useful, especially those related to symptoms, functioning, recovery, arrests, employment, homelessness, and smoking. Measures that have not proven useful are taken out. For example, the SBHA removed some substance abuse measures that did not end up measuring what they were designed to measure. The SBHA removed questions on whether their employment was sheltered, how many times a client moved, and a set of police encounter questions. The police encounter questions were removed because the SBHA could not make sense of the data, and the definition of "encounter" was often not clear. The decisions to remove these measures were reached with provider input. When a change is made to the system, it goes through a three-to-six month decision process before modifications are made. Changes to the system are implemented quarterly, and staggered so as not to overburden providers. Making changes to the system is complex and can result in unintended consequences. The system has been revised three times since its inception, usually as part of an ASO contract change.

Maryland's performance measurement system gives the SBHA concrete proof that the system is working well and the services are working to improve the lives of the people it serves. The SBHA now has more information about the population accessing services than they previously had. It knows more than it would if its system solely collected claims data. The SBHA now has access to millions of data points that can be observed over time to identify trends.

Although providers sometimes confuse the completion of the OMS with reporting required for the performance measurement system with other reporting requirements (such as those for SAMHSA's Block Grants), there is agreement that the system is not overly burdensome.

Currently, Maryland's system is pay for data, rather than pay for performance. While no funding decisions are made based on the data, providers cannot be paid for services without submitting data.

As the integration of behavioral health services evolves, it is unclear to the SBHA how the performance measurement system will change. Changes to external regulations and service provision and reimbursement could have a significant impact on the system.

Lessons Learned in Maryland: Maryland's SBHA had large expectations for its system. It has not been as widely adopted and used as was intended. Local agencies look at the results for their counties, but they may see data reporting as more of a requirement to be fulfilled as expeditiously as possible rather than as a useful tool. The SBHA has provided a lot of training and technical assistance on how the information can be used, but is unsure how successful these efforts have been. Some providers are very interested in the information, especially those whose accreditation is under review. There is one group of providers that uses information from the performance measurement system as part of a benchmarking project. Another has looked at the results over time for individuals who have remained in that provider's care. Unfortunately, the SBHA does not have a reliable method for getting feedback from providers beyond individual anecdotes.

Ohio

The Ohio Department of Mental Health and Addiction Services is in the process of rebuilding its OHBH component of its client information system in order strengthen its ability to produce performance management data for the publicly funded behavioral health system and improve required block grant reporting to the Substance Abuse and Mental Health Services Administration (SAMHSA).

The rebuild, known as the Ohio Behavioral Health Information System (OBHIS) will include required reporting elements for both mental health and substance abuse treatment agencies. The system is expected to be fully implemented by the end of calendar year 2017.

Prior to the formation of OhioMHAS, the Ohio Department of Mental Health relied on the Ohio Scales to provide performance measurement data. Described as a premier system, the Ohio Scales became too expensive to maintain at the state and local levels, especially following the 2009 recession budget cuts. Under that system, consumers and providers completed clinical outcome measure instruments. This legacy performance management system ceased in 2009. Following the formation of OhioMHAS, the Department adopted the performance measurement approach utilized by the former Department of Alcohol and Drug Addiction Services which relied on the required admission/discharge data collected through the OHBH component of the client information system. This portion of the client information system includes treatment National Outcome Measures (NOMs) and elements of the Treatment Episode Data Set (TEDS) which are reporting requirements of the Substance Abuse Prevention and Treatment Block Grant.

The rebuild of OBHIS will include new required data elements for clients receiving mental health services. The move to expand OBHIS for both substance abuse and mental health treatment is consistent with the direction that SAMHSA is moving the states. SAMHSA's goal is to have client level data reported for both substance abuse and mental health treatment agencies. OBHIS is meant to align with future SAMHSA reporting requirements.

Although providers certified for both mental health and substance abuse treatment services serve 50 to 60 percent of consumers, the current reporting requirement for OHBH is limited to clients receiving substance abuse treatment services paid in whole or in part by public funds. OBHIS will improve reporting capabilities to meet block grant requirements. OBHIS data, in conjunction with Medicaid and non-Medicaid claims data will enable the Department to produce performance management reports at state, board, region and agency levels. The new data collection and performance management system will be rolled out in 2017.

Table 11: Measures Used by Ohio

Measure	Measurement Tool
Consumer Perception of Care	MHSIP, YSS-F
Family Involvement/ Satisfaction	YSS-F
Client Functioning	MHSIP, YSS-F
Change in Employment	MH-TEDS: MDS13/Moving to behavioral health client match with state tax records
Change in Living Situation	MH-TEDS, SUDS8
Seclusion and Restraint	(Number of restraints / Number of resident days) * 1,000
Disposition at Discharge	Percent of successful substance use treatment episodes
Retention in Substance Use Treatment	Variant of the Washington Circle measure
Follow-up After Psychiatric Hospitalization	HEDIS (under development)
Psychiatric Hospital Readmission Rate	Percent readmitted within 30, 90, and 180 days

Having a performance measurement system is necessary to meet block grant reporting requirements, and not a requirement by the state legislature. At the time the two behavioral health systems merged, the SBHA was having conversations with providers about the development of performance measures. Meanwhile, the substance use

performance measurement system stopped working, in part because of changes to the Medicaid claims system and the interaction of the new Medicaid claims system with the data collection system.

The new system is being built internally, and is based in part on a weekly extract of data from Medicaid. Non-Medicaid data that are hosted in the data warehouse will also be included, along with behavioral health or Mental Health-TEDS data in the reporting of performance measures. The data will be collected at the provider level and be related to admission/discharge records and claims. No functioning measures are included. The SBHA does want to have the ability to drill down into clinical outcomes for the purposes of program evaluation, but system-wide clinical outcome evaluation is too burdensome and of questionable validity. The SBHA will drill down to client-level clinical outcome data on evaluation projects.

The new system will be used for performance improvement, planning, management oversight, and block grant reporting. Previously, the SBHA held regular meetings with providers to review their substance-use related data, but now the SBHA does not have enough field staff to continue to do so. Satisfying the state's SAMHSA reporting requirements is one of the SBHA's top priorities. The SBHA currently has data integrity issues with substance use data, and until those are resolved, the SBHA will wait to issue substance-use specific reports. With mental health, the SBHA has data integrity issues with two measures: employment and 30-day follow-up in the community after hospitalization. The SBHA plans to create a web-based dashboard and release standardized reports on substance use and mental health service utilization. Local providers among the 51 boards in Ohio will be the audience for the reports. The state's 51 boards have a legal responsibility for planning, evaluation, and the allocation of funding for behavioral health services and are required to do needs assessments in their plans.

The reports will be influenced by discussions with stakeholders. The SBHA did not originally intend to publish reports immediately. Moving forward, the SBHA would like to publish reports, but is still deciding what the reports will cover. At minimum, the reports will cover all clients served by the system and will include monitoring and improving treatment episode outcomes, as well as planning measures. The reports will also serve to inform the behavioral health planning council.

When the new system is implemented, the SBHA will begin a massive training initiative. The SBHA does not yet have a nice interface for the data warehouse; everything is still in progress. The SBHA is patching things together with the research and IT staff.

Data are generally collected quarterly, though some data are submitted daily and weekly. It is not easy to modify the system. It can take the IT staff anywhere from six months to one year to make changes to the system. Every time a change is made, the cost to make this change is passed down to providers, which each have their own data systems. If the change to data collection is required at the local level, it could take three years to fully implement.

The SBHA believes that they will continue to collect and report data regardless of SBHA leadership. However, if performance measurement is not important to leadership, aspects of the system may falter. With data demands from various funding sources, there may be different reporting needs from each of the various funding streams. Medicaid is the largest payer, and thus driver of data priorities related to mental health and substance use treatment. If the various funding streams coordinated their data needs, it would make data collection reporting easier.

The SBHA has felt no pressure in their department to move towards pay for performance; however, it would like to see data used to improve service provision. The SBHA expects to see outliers to target efforts for improvement; however, these issues can be addressed in different ways. The SBHA is considering doing a study to better understand the quality improvement activities that providers are already pursuing.

Lessons Learned in Ohio: It is important for providers to submit data before determining how to improve their services. However, this requires having the right measures in place at the beginning. Making changes to the system is time consuming and expensive.

Oklahoma

Oklahoma's SBHA has set up a data reporting system that collects data for both mental health and substance use because it is a combined system. Oklahoma has two distinct performance measurement systems: Provider Performance Measurement Report (PPMR) and the Enhanced Tier Payment System (ETPS).

The PPMR, established in 1994 with DIG funds, covers a wider variety of measures. At the beginning, there was a lot of pushback from providers because the system tried to collect too many measures. Since then, the system has evolved along the lines of SAMHSA's National Outcome Measures (NOMs) and other national measures. The SBHA has worked to refine the measures and reduce the reporting burden on providers.

The SBHA evaluates measures across providers. The SBHA's field representatives use the PPMR information to inform site visits. The system analyzes outcomes at many levels, including funding source, client, and level of care. The SBHA operationally defines each measure so providers can replicate each measure generated, and most reports allow the user to drill down to the client level. The intent of this is for providers to identify areas of achievement or needs for improvement by comparing themselves to state averages, other providers, and to their previous performance.

Oklahoma's SBHA built the system internally based on data it was already collecting through the claims database and through the demographic (admission/discharge) database, with the exceptions of the access measure completed through secret shopper calls. Many of the measures come from the claims database, which combines data from the SBHA and Medicaid. All behavioral health providers that receive payment from

either the SBHA or Medicaid are included in the claims system and an integrated separate system that collects demographic data, which is part of the SBHA's prior authorization system.

Providers need to enter data in order to receive treatment authorization. Without authorization, providers will not be paid. Providers receive training on the system from the SBHA. Demographic data are collected as clients enter treatment. Claims data are received within 30 days, and summary reports are updated weekly. The systems are used to calculate payments, improve the performance providers, provide management oversight, and to determine accreditation of providers. The SBHA is able to identify struggling providers and target assistance for improvement.

PPMR provides easy access to empirically based data that have been used to make the case to legislators for funding in a tight budget environment. For example, Oklahoma's SBHA successfully got funding increased for drug courts because it was able to demonstrate cost savings to legislators. The SBHA was also able to show the legislature that the agency makes a difference in the lives of the people they serve. The SBHA benefits from having access to databases from other state agencies, which allows it to demonstrate what happens to clients in a broader way, beyond improved behavioral health. The SBHA also provides data to other agencies. The Department of Corrections has found it valuable to see the diagnoses and treatment plans of clients entering its system. Reports for the PPMR system are available online at http://www.odmhsas.org/eda/ppmr/index_4.html.

The systems produce a variety of reports, including provider report cards, a web-based dashboard, an executive information system for the agency's management, and demographic data on the county level.

Table 12 shows some of the measures and data sources for those measures on the PPMR.

Table 12: Measures Used by Oklahoma

Measure	Measurement Tool
Consumer Perception of Care	MSHIP Consumer Survey
Family Involvement/ Satisfaction	MHSIP Caregiver Survey
Client Functioning	Client Assessment Record (CAR)
Change in Employment	Administrative Data
Change in Living Situation	Administrative Data
Change in CAR Domains, Time in DHS or OJA for Youth	Administrative Data
Reduction in Substance Use, Tobacco Use	Administrative Data

For each PPMR measure, there are different ways it can be evaluated, including trends over time, client-detailed, provider comparison, clinician report and demographics. An example of how these data can be evaluated is determining if meth users perform better in treatment as compared to alcohol users. The PPMR produces summary reports quarterly and annually, though the measures are collected monthly so providers are able

to review monthly comparisons to other providers. Examples of how these data are visually depicted are provided on the next page.

The SBHA and providers are the primary users of the systems. The SBHA maintains a website that allows each provider to look at a measure for up to three years. Data and reports are available to the public and stakeholders, though not promoted. Data and reports are available to state policy makers, the SBHA, and other state agencies. The Washington Circle outpatient substance abuse measure and the NOMs have been the most useful. The "access" measures have resulted in improved access to services. Oklahoma does not have a large homeless population so measuring homelessness is not helpful.

Measures are reviewed each quarter. As providers improve outcomes and the state average improves, the SBHA changes the benchmarks to reflect improvements. The SBHA meets with providers that fall into the bottom quartile of a measure to identify ways to improve; if improvements are not made, these providers risk losing their contracts with the SBHA. The SBHA also engages with providers that are doing well so that experiences and best practices can be shared with other providers. During quarterly meetings, measures are also reviewed for effectiveness.

The ETPS is a performance incentive payment system for community mental health centers. ETPS was launched in January 2009, and is a pay-for-performance process for the community mental health centers (CMHC). At the time of implementation, there were plans in place to reduce funding to the state's CMHCs. This resulted in the SBHA seeking for alternative ways to fund the CMHCs, and began tying performance-to-payment through a Medicaid State Plan Amendment. Benchmarks were established based on the prior six months of performance data; one standard deviation was used to establish the upper and lower performance levels. If, for example, a CMHC saw 10 percent of clients during a set amount of time, the CMHC was allocated 10 percent of the total maximum funding for each measure, with the payment for each measure allocated as follows:

- More than one standard deviation below the benchmark: 0%
- Below benchmark, but not more than one standard deviation: 50%
- Above the benchmark, but not more than one standard deviation: 100%
- One standard deviation above the benchmark: 100%, plus the allocation of the providers who were below the benchmark, distributed based on the percent of clients served during the reporting period

The SBHA has distributed approximately $32 million in performance pay during FY16, which includes all payments (not limited to bonuses).

Improving access to care was the highest priority, so measures were selected, in part, to serve this purpose. The SBHA worked with providers to select the measures to be used in the performance measurement system. The SBHA was concerned about limiting the data collection burden, and chose to use existing data whenever possible. The SBHA also wanted to have benchmarks that the providers thought attainable. Claims are

downloaded from Medicaid weekly, and reports are updated several days later. For the "access to treatment" measure, the SBHA implemented a "secret shopper" method, whereby each month the SBHA develops a scenario representing a hypothetical person seeking treatment, and then assesses how well each provider meets the established access criteria. This approach has resulted in wait times for outpatient services reduced to nearly zero.
For the ETPS, SBHA personnel meet with providers monthly and respond to questions daily to facilitate the process.

Reports for the ETPS system can be found online at http://www.odmhsas.org/etps/index.html. The following are two examples of the reports which providers can use to monitor and track payment and performance. Figure 1 show how much funding each provider will receive for the months of October, November and December 2015. Figure 2 shows how an individual provider performs on a single measure compare to the state average, the benchmark and the lower and upper limits.

Figure 3: Multiple Month Funding Calculations

Report Description | Measure | Agency | **Summary**

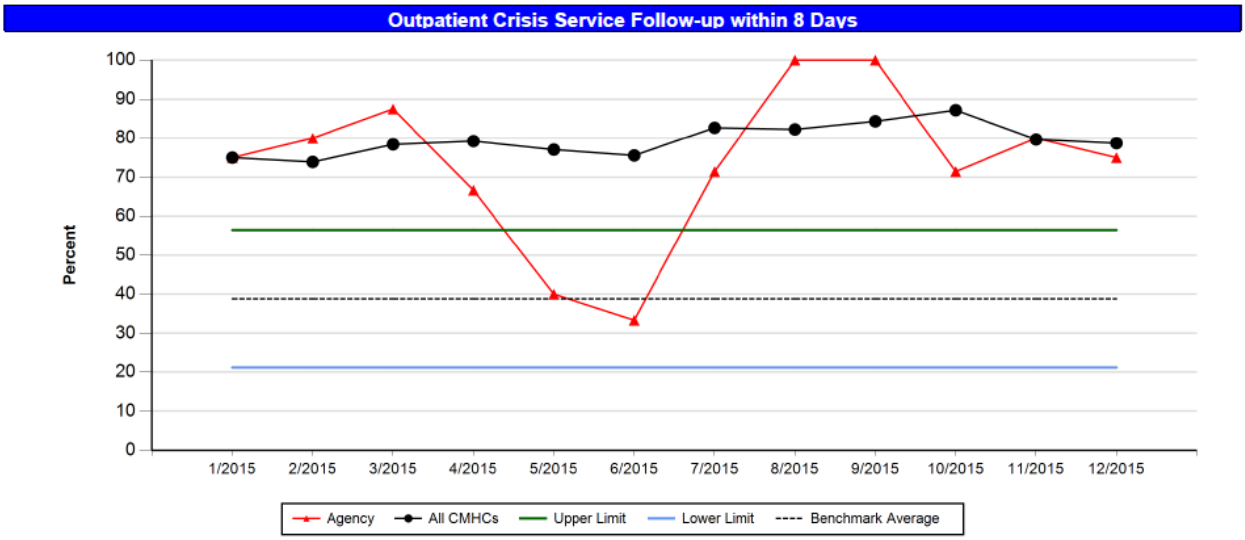
Printed 5/9/2016

Multiple Month Funding Summary Funding Calculation (ETPS)

Oct-15 through Dec-15

	Allocation			Funds Earned		Statewide Percent		
	Possible	Earned	Left Over	Bonus	Total	Clients Served	Funds Earned	Overall Performance
CARL ALBERT CMHC	458,593.05	458,593.05	0.00	50,397.31	508,990.36	4.66	5.17	☺
CENTRAL OKLA CMHC	476,891.02	333,823.71	143,067.30	1,985.41	335,809.12	4.84	3.41	☹
COUNSELING & RECOVERY SERVICES OF OKLAHOMA INC.	508,288.67	508,288.67	0.00	5,833.22	514,121.90	5.16	5.22	☺
CREOKS MENTAL HEALTH	667,668.20	667,668.20	0.00	18,071.11	685,739.32	6.78	6.96	☺
EDWIN FAIR CMHC	212,298.11	201,683.20	10,614.91	24,504.67	226,187.87	2.16	2.30	☺
FAMILY & CHILDRENS SVCS	2,049,581.25	1,947,102.19	102,479.06	55,474.00	2,002,576.19	20.81	20.33	☹
GRAND LAKE MENTAL HEALTH CENTER	646,875.08	646,875.08	0.00	81,584.69	728,459.77	6.57	7.39	☺
GREEN COUNTRY MENTAL HLTH	285,697.97	285,697.97	0.00	6,684.55	292,382.52	2.90	2.97	☺
HOPE COMMUNITY SVCS INC	1,121,062.97	1,121,062.97	0.00	16,657.57	1,137,720.54	11.38	11.55	☺
JIM TALIAFERRO CMHC	418,774.14	418,774.14	0.00	6,222.45	424,996.60	4.25	4.31	☺
MENTAL HLTH SVC SO OK	393,718.40	354,346.56	39,371.84	35,973.27	390,319.83	4.00	3.96	☹
NORTH CARE CENTER	841,498.98	799,424.04	42,074.95	9,972.16	809,396.19	8.54	8.22	☹
NORTHWEST CENTER FOR BEHAVIORAL HEALTH	601,026.17	570,974.86	30,051.31	13,680.14	584,655.01	6.10	5.94	☹
RED ROCK CMHC	1,168,783.28	1,168,783.28	0.00	40,619.01	1,209,402.29	11.86	12.28	☺
Statewide Total	**9,850,757.29**	**9,483,097.92**	**367,659.37**	**367,659.58**	**9,850,757.50**			

Figure 4: Outpatient Crisis Services Follow-up within Eight Days



Agency	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Followed Up	3	4	7	2	4	1	10	6	11	10	8	6
Total Possible	4	5	8	3	10	3	14	6	11	14	10	8
Percent	75.0%	80.0%	87.5%	66.7%	40.0%	33.3%	71.4%	100.0%	100.0%	71.4%	80.0%	75.0%

All CMHCs	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Followed Up	432	399	461	546	534	578	663	719	792	701	541	451
Total Possible	576	540	588	689	693	765	802	874	939	804	679	573
Percent	75.0%	73.9%	78.4%	79.2%	77.1%	75.6%	82.7%	82.3%	84.3%	87.2%	79.7%	78.7%

Providers have expressed concern about measures they perceived having limited control over, such as "access to psychiatry," and "follow-up post discharge from an inpatient or crisis unit." Measures such as these may be considered for modification or elimination. Changing or adding measures is relatively easy since data collection methods are not typically changed. Adding data elements that are not already collected is challenging because they have to plan six months to one year in advance. The SBHA is judicious in what it changes, because there are 14 vendors that would also have to make changes to their systems.

The SBHA would like to include more measures for incentive-based payments. There are quite a few providers, especially substance abuse, that fail to improve for a variety of reasons. To better understand why, the SBHA would like to increase the number of measures. Another challenge is that the SBHA contracts with a large number of providers, including 75 or more for substance abuse services. There is often a group of providers that lack focus, or do not have the resources to collect and report reliable data. One major challenge the SBHA faces is the lack of available staff to train providers on data collection and reporting.

Both the ETPS and PPMR systems are financially, politically, and technically sustainable. The challenge, however, lies with training new providers and providers with poor performance. The system is well established. There is a long-term challenge to ensure that all people who use the system can do so in a positive way. Leadership is

invested in having a good data system, and relies on data to better understand issues as they arise. Because of this, the SBHA places data collection and reporting as a top priority.

The systems are constantly evolving. As the healthcare system changes in response to new requirements from the Centers for Medicare and Medicaid Services (CMS) and others, so do the SBHA's performance measures. Priority changes lead to changes in the data system. The SBHA is setting up a separate reporting system for Health Homes. Once the SBHA begins collecting Health Homes data, benchmarks will be established.

When Oklahoma built its system, it borrowed ideas from other states through networking. This was a very positive experience, and benefitted Oklahoma's process very much. Because of this, Oklahoma's SBHA is happy to share its knowledge with others; a process that could be facilitated through continued national face-to-face meetings, which are especially helpful for networking.

Lessons Learned in Oklahoma: SBHAs must trust providers to report good data. To establish trust with providers, the SBHA must also be transparent. Providers can see the data from other providers, making it obvious if data are tampered with to reflect better outcomes.

It is important to determine whether a measure is effective at achieving its intended goals. As results improve, measures should change, otherwise, there will be no incentive for providers to make improvements.

Having support from leadership is critical to the sustainability of the performance measurement system. If data are shared with leadership in a meaningful way (i.e., through reports), policy and financial decisions can be made to address weaknesses in the system and identify cost savings.

Oregon

Established in 2014, Oregon's performance measurement system, Measurement and Outcome Tracking System (MOTS), includes both mental health and substance use measures. MOTS's intended use is to track detailed information on non-Medicaid funded behavioral health services, outcomes for Medicaid and non-Medicaid funded services, and for performance improvement. MOTS is primarily designed for the needs of the SBHA, which includes providing information to the legislature and satisfying federal reporting requirements.

When designing the system, the SBHA considered the concerns of providers and the counties, and so developed the system and its tools in a way that would be useful to these shareholders. The system is not intended to be used by clinical management.

MOTS collects data on services funded by state general funds, Medicaid, and the Mental Health Block Grant. Data are collected at 90-day intervals. MOTS collects outcome

measures, including criminal justice contacts, housing, and employment. The system will eventually have the ability to produce reports; however, technical issues have delayed their release.

Since the 1980s, just prior to MOTS, Oregon's SBHA operated the Client Process Monitoring System (CPMS). CPMS collected episodic data, and allowed Oregon to meet the minimum state and federal data requirements. The SBHA wanted to improve its data collection processes, and decided to develop a new system that would be built internally by state staff. Data collection is required by the state legislature; however, no additional funding to build or maintain a data collection system has been provided.

Designing MOTS was a detailed process. Initially, the SBHA assessed their legacy system, noting its attributes and deficits. This assessment informed the initial set of requirements. MOT was designed to collect episodic data and services, filling in the gaps between service episodes. Thereafter, additional requirements were added. The SBHA considered using a vendor, but after evaluating potential vendors, it determined that it would be cost prohibitive to outsource the work. Based on the SBHA's budget, and the availability of staff, the SBHA decided to build the system internally. A project committee was formed, the project was outline, and a timeline was established. SBHA has faced challenges during development and implementation. The original requirements for MOTS ended up being whittled down as resources that were initially allocated to building the project were redirected to other priorities. Changes in personnel also created delays. The limited availability of resources restricts what the SBHA can do to address these issues.

MOTS collects data at the client, provider, city, county, regional, and state levels. Data are tied to funding streams, and contractual arrangements that support services. Leading up to the implementation of the system, the project team worked extensively with counties and providers touring the state. In Oregon, counties may provide services directly, whereas in others the counties contract with providers to provide services. Providers have several data submission options. Data can be entered directly into MOTS, or data files can be submitted directly from the providers' electronic health records (EHR). The larger provider organizations generally submit data through their EHRs. Service-level data are submitted monthly, while client profile data are updated quarterly (at minimum), or when the information changes. The table below indicates which measurement tool is used to collect certain measures.

Table 13: Measures Used by Oregon

Measure	Measurement Tool
Strength-based Measures	Administrative Data
Consumer Perception of Care	MHSIP
Family Involvement/ Satisfaction	MHSIP
Client Functioning	MHSIP
Change in Employment	MHSIP
Change in Living Situation	MHSIP

Making modifications to indicators in the new system is not difficult. With the legacy system changes were nearly impossible to make. When making any changes, the SBHA

considers the impact it might have on providers, as these changes would likely require modifications to the providers' data collection systems. Ideally, any changes or additions would include provider input through a committee. The committee would review measures annually. Utility measures would be added, revised, discontinued, or incentivized based on feedback from state staff, counties, and providers.

MOTS is sustainable in the long-run because the SBHA needs such a system to identify and address strengths and weaknesses in the system. Data from MOTS is currently being used to improve the state's understanding of Olmstead, and to inform the Behavioral Health Planning and Advisory Council about the availability and adequacy of services across the state.

One of the biggest challenges with MOTS is its inability to produce the types of reports that were initially intended. Ideally, a monthly report card would be produced that would measure a provider's progress over the prior 12 months. These reports would be modeled on the reports currently produced for Oregon's Coordinated Care Organizations (CCOs), which serve Oregonians receiving Medicaid. The CCO's reports include Healthcare Effectiveness Data and Information Set (HEDIS) measures, which address a broad range of health issues. The reports would be monthly and be on a comparable schedule to what is produced for the state's broader healthcare programs. The reports they have are available to state policy makers, providers, and counties.

The SBHA is still working to make the system useful to providers and the counties. In designing MOTS, the SBHA tried to add functionality to make the system useful to providers, but with the lack of ability to produce meaningful reports, providers are still waiting to reap these benefits. Once the system works as intended, and is able to develop meaningful reports, the SBHA anticipates greater buy-in from providers.

The performance measurement reports were also going to be used to measure the performance of county systems. Performance measures were included in the state's contracts with the counties with the idea that incentive-based payments could be instituted in the future; however, thus far, the SBHA has not been able to produce reports with any degree of confidence due to the technological challenges the system is experiencing related to how data are collected and structured. The SBHA thinks it is vital that the MOTS system be able to produce reports that are reliable, and that all stakeholders find value in.

Once MOTS is functioning at full scale, it will be very beneficial to the state. It could be used to reduce costs, improve service quality, and improve access to care. It would also allow the SBHA to address socially oriented concerns specific to behavioral health. The SBHA would have a standard set of metrics, and possible an incentive system. None of this was possible with the legacy CPMS system; however, none of this is currently possible with the MOTS until the problems are addressed. The dearth of resources has been the project's core problem. The SBHA needs the system to work, so they are making the business case to get the funds necessary to get the system running as

intended. There have been discussions on how to proceed, with one option to rebuild the system on a new platform and operating system.

Lessons Learned in Oregon: States should fully consider the benefits and costs associated with building a system internally before making the decision whether to outsource. Systems must show tangible benefits to the stakeholders so that it remains sustainable, and states have buy-in from providers, legislators, and consumers for data collection and performance measurement.

Previous State Performance Measurement Initiatives

SMHAs have been building and operating mental health performance measurement systems for many years. In the early 1980s, Colorado, New Jersey, Pennsylvania, and other states developed performance measurement systems that were highlighted at the annual National Conference on Mental Health Statistics (first sponsored by the National Institute of Mental Health, then by SAMHSA's Center for Mental Health Services until 2010). These initial state systems were built long before the advent of the Internet, or even personal computers. Because of the lack of technology, these systems relied heavily on paper records, and were cumbersome and burdensome to states and providers. None of these original systems continue today.

Over the past 30 years, many states have initiated performance measurement efforts, but many of these efforts have not been sustained. To understand some of the lessons learned from some of the SBHA performance measurement systems that are no longer being used, former staff from two SBHAs who had worked on the development and implementation of these systems were interviewed.

The best of intentions and early successes do not mean that a performance measurement system is sustainable.

State One

Staff from a state that created a performance measurement system in the 1990s was interviewed about the history of this system. The performance measurement system collected data about the entire service delivery system, including mental health, substance abuse, and developmental disabilities. When the system was being planned, the SBHA rigorously sought input from all stakeholders, including providers. The goal was to improve the quality of the services provided, and to be accountable to the taxpayers. The SBHA did not tie payments to performance, through there was some discussion regarding this option. During the initial building of the system, the state legislature began paying attention to the project, and liked it enough to appropriate a fair amount of money to the system's development and implementation. The SBHA decided to build the system in-house without considering any commercial systems. However, the SBHA did look to what other state agencies and similar organizations for examples, and it reviewed the literature to identify best practices in developing a performance measurement system.

Multiple stakeholders were brought together to determine the best measures for the system; one of the measures identified as useful was the MHSIP Consumer Survey.

This SBHA's performance measurement system collected client-level data on a monthly basis. It was the first time the state required providers to submit data at such a granular level. There were concerns among providers about submitting such data, which the SBHA tried to assuage in two ways: 1) the providers were to own the data, and at the state level, clients could only be identified by provider, rather than clinician; and 2) providers could either collect data using the system provided by the SBHA, or providers could program their own data collection and submission systems to provide a data file that met the SBHA's requirements. The providers were given extensive training on the system, including training on how to administer specific instruments, including the Child and Adolescent Functional Assessment Scale (CAFAS), and the Multnomah Community Ability Scale (MCAS). Providers were also given money to hire one half-time employee to manage local data collection efforts.

The SBHA created reports for providers and for the state, including a client profile. The providers could receive information about all data collected on an individual client. A report was also generated on overall provider outcomes, which also allowed providers to compare their performance to others. Providers generally liked the MHSIP Consumer Survey data, and found it useful enough that they wanted to administer the instrument more than once per year.

At the point where the system had developed enough that the SBHA was ready to do some analysis for quality improvement, about six months after beginning to produce reports, funding was cut and the system ceased to exist beyond the collection of the MHSIP Consumer Survey data. The timing was unfortunate, because the system was just starting to get off the ground. A continuous quality improvement manual had been developed, and a performance measurement review group had begun to meet. The SBHA had gotten far enough along in the implementation process to realize that the standardized instruments like the CAFAS and the MCAS were not proving to be cost effective. These instruments were expensive to maintain and burdensome to providers, as they required constant training of new and existing staff to maintain fidelity. Even though these two instruments were designed to be beneficial to clinicians, many clinicians resisted using them because of the associated burden.

The system was shut down due to a combination of factors, the most important of which was a reduction in funding. The agency experienced substantial budget cuts at the same time SBHA leadership changed to a new commissioner that was less supportive of research and evaluation efforts. Because of this new lack of political support, the performance measurement system was an easy target for cutting costs. At the same time, the burden of the standardized instruments was becoming apparent, and the system had not been operational long enough to prove its value.

State Two

A former SBHA staff member that also initiated a statewide performance measurement system during the 1990s described spending a number of years working with local providers, clinicians, consumers, and family members to identify a set of reliable and valid measures for mental health performance measurement. This state implemented this system with extensive training and guidance to providers, and offered free software to automate reporting and transmission of data from providers to the state.

The state's performance measurement system was being used by the state to monitor provider performance, but not all agencies in the state were using the system, and several providers balked at the external accountability. After only a few years of operation, the combination of a severe budget shortage and a change in SBHA leadership led to the decision to eliminate the performance measurement system. The justification for eliminating the performance measurement system was that with a required significant mental health budget reduction, that rather than reducing direct services to mental health consumers, the state would eliminate what was described as "an administrative expense (burden) to providers." Similar to the other state with a cancelled performance measurement system, staff attributed some of the lack of support for this system to many direct service clinicians not using the reports to assist in their care delivery. Thus, the system was seen as a state-required burden, rather than a clinical tool to help assure quality of care.

Lessons Learned from the States with the Cancelled Systems: Lengthy consideration about which instruments, and how many, should be administered for data collection is necessary, as many of these instruments are associated with high provider burden, leading to resistance from clinicians. The ability to produce reports, and provider training in how to interpret these reports are also critical to show that performance measurement systems are beneficial to improving the quality of care, and understanding the efficiency with which services are rendered. Additionally, it is important that performance measurement systems have buy-in from SBHA leadership and the state legislature to ensure continued political and financial support.

Performance Measurement System Sustainability

Each of the five states selected for interviews felt their systems were sustainable and helped to improve service delivery. However, there are some concerns that could affect each system's sustainability long-term.

Systems are designed to reflect existing priorities, structures, and funding streams. For instance, if Maryland's service system is restructured to move all activities under the MCO, the performance measurement system would not continue since the SBHA would no longer be able to require the submission of data as a requirement for service

authorization. Oklahoma's SBHA has demonstrated the value of its system to leadership and the state legislature, but continues to have problems training providers and getting provider buy-in. For one of the states that no longer has a functioning system, its failure was due not having enough time to establish its worth in a politically and financially unfriendly environment.

Challenges and Success in Establishing a Performance Measurement System

The principal barriers to establishing a successful performance measurement system are inadequate resources, goals that are too modest, limited influence on providers, and organizational or funding restructuring.

Indiana chose to build a simple and readily understandable system primarily to collect data to satisfy federal reporting requirements. Their system satisfies these requirements and is used for performance contracting; however, with limited data elements and too little focus at the system's inception on reporting and analysis, the system is not as useful as it could be.

Indiana purposefully chose a narrow set of initial measures relating to performance issues that they wanted to change, but made the mistake of choosing measures that were beyond the control of their providers to improve. Learning from that mistake, the SBHA subsequently moved away from those measures toward evaluating their providers with measures that are in their control to improve upon.

Oregon decided to build a performance measurement system in-house. The SBHA had to whittle down its initial requirement, as its limited resources were redirected elsewhere in their agency, the state's Medicaid system changed and personnel changes slowed the process. Nothing went as smoothly as it could have, and the SBHA lacked the resources to overcome these problems. As a result, the SBHA has a system that can collect data but has difficulty developing reports. Without a working system, the SBHA cannot create metrics or build a provider incentive system.

Ohio once had a premier performance measurement system. That system was unsustainable because it was too expensive to maintain and the merger of substance abuse and mental health services created a new data environment. While building the new system there was turnover and reductions in the IT staff. In Ohio, the state does not have much of a direct relationship with the providers, who contract with the county systems. As yet, the new system is still under construction.

The state that had their system discontinued felt that it had done many things right when building the system. The SBHA engaged stakeholders at all levels, and had gained buy-in, including funding, from the Legislature. The SBHA did not report any technical issues with their system. The SBHA was open to adapting the system, by rethinking some of their measures, when they encountered problems. The system was washed away by forces beyond the SBHA's control, the biggest of which was the need for their system to cut their budget.

Although there are challenges with implementing a performance measurement system, there are also successes.

The success of performance measurement systems can be assessed on two levels, the specific and the ideal. Did the system meet the agency's goals? Did the system enable informed decisions to be made and actions taken that create performance improvements? Indiana's system is a success based upon its initial conceptualization, to collect data to satisfy federal reporting requirements, but its limited ability to produce reports has hindered its usefulness in improving performance. Maryland's system is a success because the SBHA is able to use the data to concretely prove how well their service system is performing and improving; however, the SBHA would like the system to be more broadly used by their providers to improve care. Oklahoma's system is a success in that the SBHA has used it to improve performance in a number of ways, such as wait times, and are able to demonstrate their successes to their leadership and legislature. Oregon's system is not yet successful, largely because while it collects data its reporting capabilities are still being built and thus cannot be used to influence decisions. Ohio and Oregon's systems are not yet operational. Even in the state whose system was discontinued the entire endeavor created some positive change by shifting the system's emphasis towards client outcomes.

Conclusions

Performance measurement systems have come a long way since the 1980s, with their evolution largely facilitated by advances in, and access to, technology. This continued growth allows the field to move from process improvement towards precision medicine, which allows clinicians to use data to tailor treatment to meet the individual needs of each client. While the field and the data infrastructure that supports it are not yet implementing performance measurement, public behavioral health has progressed from monitoring processes to evaluating performance to improve the quality of care.

Thirty-one SBHAs currently implement performance measurement systems, with three more in the planning stages of implementation. These systems collect data about the provision of community-based services (30 SBHAs), and services provided at the state hospitals (20 SBHAs). They collect information about a variety of outcomes, including consumers' perception of care, changes in employment, changes in living situation, client functioning, family involvement, symptoms, recovery, and strength-based measures. The primary purpose of these data is to improve provider performance. Secondary benefits of data collection for performance measurement include: meeting federal reporting requirements, planning, informing behavioral health planning and advisory councils, and to meet accreditation requirements.

SBHAs may decide to operate a performance measurement system for a variety of reasons, including a need identified by agency leadership or the state legislature to demonstrate responsible use of state funds, and how these funds are being used to improve citizens' quality of life.

Once an SBHA decides to develop a performance measurement system, it has the option to design one internally, or outsource the development to a third-party vendor. In making this decision, SBHAs should keep in mind that no two agencies and service delivery

systems are alike; therefore, it is unlikely that there is one system already designed that meets all of the agency's needs. However, developing a system internally requires a great deal of human and financial resources that may not be realized from the start. If an SBHA decides to build a system internally, consulting first with other states that have done so is a useful step in the process.

SBHAs may face resistance from providers and clinicians who have been unaccustomed to submitting such great amounts of data, which find the burden overwhelming and the increased oversight annoying, especially when they do not yet see the benefit. Because of this perceived burden, it is critical that SBHAs seek input from providers from the beginning. Providers can share information about the level of burden associated with administering specific instruments, and can give feedback about what types of data would be meaningful to include in provider reports. Basing provider payments on outcome measures is also another way SBHAs can encourage provider participation and engagement.

With functioning performance measurement systems in place, and provider buy-in, SBHAs can promote SBHA activities to funders and other stakeholders. But more importantly, they can develop robust systems that improve the quality of care consumers receive, and maybe one day get to the point of offering precision medicine to all consumers in a way that is cost effective and meaningful at improving consumers' lives.

Appendix A: Preliminary Questionnaire to States

Performance Measurement System Questionnaire

Questions

1. Does your agency have a performance measurement system (*defined as the regular measurement of outcomes and results used to measure the effectiveness of programs*)?

☐ Yes

- **If yes,** did your agency have a performance measurement system, prior to your present system, which was discontinued? ☐ Yes ☐ No
- **If yes,** what settings use the system? Please check all that apply:
  - ☐ Community
  - ☐ State Hospitals
  - ☐ Managed Care
  - ☐ Others, please specify:
- **If yes,** what populations are covered? Please check all that apply:
  - ☐ All Children
  - ☐ Only Children with SED
  - ☐ All Adults
  - ☐ Only Adults with SMI
  - ☐ Other, please specify:
- **If yes,** are provider payments tied to performance? ☐ Yes ☐ No
- **If yes,** please indicate which measures are used in your system, and in what setting they are used (please check all that apply):

	State Hospitals	Community Mental Health	Measures Used (What instruments/measures are you using for this outcome?)
Strength-Based	☐	☐	
Recovery/Resilience	☐	☐	
Consumer Perception of Care	☐	☐	
Family Involvement/ Satisfaction	☐	☐	
Client Symptoms	☐	☐	
Client Functioning	☐	☐	
Change in Employment	☐	☐	
Change in Living Situation	☐	☐	
Other, specify:	☐	☐	
Other, specify:	☐	☐	

☐ No

- **If no,** did your agency once have such a system? ☐ Yes ☐ No

If no, is your agency planning to create such a system? ☐ Yes ☐ No

2. Would you, or members of your agency, be available to answer questions about your agency in relationship to performance measurement systems?
   ☐ Yes
   - **If yes,** who is the best person in your agency to provide this information?
     Name: _____
     Email: _____
     Phone: _____

   ☐ No

3. Please verify or complete the information we have on your agency related to performance measurement systems (*Source: 2012 State Profiles*):

   - **State:**
   - **Name of System:**
   - **Developed by:**
   - **Does the System Provide Real-Time Information about Consumers' Functioning and/or Symptoms Scales?**
   - **Description of System:**
   - **Additional Information:**

Please Return to Kristin Neylon (kneylon@nri-inc.org) by Friday, March 11.

Thank you!

Appendix B: Semi-Structured Interview Protocol

Performance/Outcome Measurement Systems (POMS)

Purpose:
These questions will help NASMHPD understand how state mental/behavioral health authorities (SMHA/SBHAs) use performance/outcome measurement systems to inform clinical and administrative practices. We want to discuss how your state uses its performance/outcome system to monitor and reward services. Your responses will inform a paper on the characteristics of an effective and efficient performance/outcome measurement system, lessons learned from states using these systems, and how other states might benefit from implementing a performance/outcome system.

Audiences:
The audiences of this paper are those SMHA/SBHAs who would like to improve existing performance measurement systems, as well as those SMHA/SBHAs considering implementing or enhancing a performance measurement system.

Interview Questions:

1. Does this performance/outcome measurement system (POMS) focus on only mental health or does it cover both mental health and substance use? If only mental health, does the SSA have its own POMS?
2. Why and when did your state decide to establish this POMS?
    - Required by the legislature
    - The SMHA/SBHA decided it would be good to do? Court mandate from legal action
    - Other
3. What do you use the system for?
    - Payments
    - Performance Improvement
    - Planning
    - Management oversight
4. How well is the system meeting these goals?
5. Do you use a commercial system or did you build your own in-house?
        - If Commercial:
            - Which system
            - How did you select this system?
            - Did you consider multiple systems?
            - What attracted you to this system?
            - What has your experience with this system?
        - If built internally:
            - Why did you decide to build this system internally?
            - What was the process for designing this system?
6. Upon what basis was the selection decision made?

7. What are the training requirements at the following levels:
    - SMHA/SBHA staff
    - Providers
    - Clinical staff
    - Others, such as MCOs/Counties/Other
8. What are the benefits of your system?
9. What are the challenges of your system?
10. At what scale are the data collected and available to the agency?
    - Client-level
    - Provider-level
    - City/County/Regional level
    - State-level only
11. What types of standard reports are produced from the POMS? How frequently are they updated?
    - Report Card of Providers
    - Web-based dashboard of POMS results (by provider, consumer group, other?)
    - Executive Information System (EIS) for SMHA/SBHA management
    - Reports for court monitors (if applicable)?
    - Other reports (describe):
12. Who makes the most use of the POMS? Please describe how it is used (e.g., is it used by senior SMHA/SBHA management accessing data via EIS or Dashboards, SMHA/SBHA Planners, Planning Council, QA office, SMHA/SBHA fiscal office, legal/court monitors (if applicable), local providers, consumers, family members, advocates? Etc.
13. What types of data or reports are (publicly) available?

	Data (describe level of data available)	Reports (describe types of reports available)
Public		
Stakeholders		
State policy-makers		
SMHA/SBHA		
State agencies (other than the SMHA/SBHA)		
Providers		
Others		

    - Which SMHA/SBHA clients are included and excluded in the system and why?
    - Which providers are included and excluded in the system and why?
14. Please share with us a) a list of the measures collected and their definitions, and b) examples of public reports generated
15. For which of the following purposes are the measures collected?
    - Clinical decision-making?

- Funding allocation
- Monitoring/improving client outcomes
- Planning, including informing behavioral health planning councils?
- Performance Contracting or financial rewards/penalties (if yes, please describe)
- Other (please describe):

16. How frequently are data collected by the system to the SMHA/SBHA?
17. What data are collected (can restate what they submitted, or we can ask if we don't have an original list)?
18. Which measures have been the most useful?
19. Which measures have been the least useful?
20. How often are measures reviewed for effectiveness?
21. Can you easily make modifications to the system (e.g., add, remove, or modify data indicators)? Please describe.
22. What is the perceived burden to the providers in implementing the system and does this effect decision-making on the management of the system?

23. Does the SMHA/SBHA follow-up with providers with poor performance? If yes, what is the timeline for improvement?
24. Did your agency have a performance measurement system in the past that was discontinued or transformed into your current system?
    - **If yes**, how was it different from your current system?
    - **If yes**, why was it discontinued?
25. **If yes**, is there anything that could have been done differently that would have allowed the system to continue?
26. Do you think that your system is sustainable in the following ways:
    - Financially
    - Politically
    - Technically (e.g., the difficulty in keeping up with the required technology)
27. How will the POMS change with new requirements from CMS (Medicaid and Medicare measures, Health Home Measures, etc.), SAMHSA (CCBHC measures), insurers or accreditors?
28. With a national focus on "Pay for Performance" in healthcare, are you planning any changes to your POMS to increase pay for performance of your SMHA/SBHA system?