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# Promising Practices in Behavioral Health Quality Improvement:

## *Summary of Key Findings and Lessons Learned*

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*We would also like to thank the national experts we interviewed, which included Richard Dougherty, Vijay Ganju, Richard Hermann, Ron Manderscheid, and Robert Rosenheck. We would like to acknowledge James Callahan for his historical perspective on Massachusetts. The State Mental Health Authority (SMHA) commissioners and their Quality and Decision Support staff were invaluable, as were the administrators from the Veteran's Health Administration (VHA) and PacifiCare Behavioral Health (PBH).*

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*Finally, we would also like to thank the Massachusetts Executive Office of Health and Human Services and the Department of Mental Health for their permission to disseminate this report to others interested in behavioral health quality measurement and reporting systems.*

## **Executive Summary**

### **Background**

The Massachusetts Department of Mental Health (DMH) requested the University of Massachusetts Center for Health Policy and Research (CHPR) to conduct an analysis of national trends and best practices in behavioral health quality measurement and reporting systems (QMRS) in order to inform DMH's continued QMRS development. To conduct this project, CHPR worked closely with the DMH project team. CHPR took the initial work, conducted on behalf of DMH, one step further by developing a 5-10 year implementation plan or roadmap. It provides a generic blueprint that outlines next steps that an organization may take as they further their QMRS development.

### **Research Questions**

To guide this project, we used the following research questions developed by the project team. Further below we report on findings and lessons learned as they relate to each of these research questions.

1. What national initiatives, accreditation, and regulatory requirements should state mental health authorities (SMHAs) be aware of in developing a behavioral health quality measurement system?
2. What are the key management and infrastructure components a SMHA needs to build into a QMRS?
3. How are quality measures selected, and what measures should be used?
4. How do states implement and use their QMRS to improve quality?

### **Methodology**

This project used the following methods to gather information:

- Targeted behavioral and physical health quality literature review and web-based research.
- Comparative analysis of national mental health measure sets, and of the core quality measures used by the best practice states studied for this project.
- Interviews with five national experts in the field of behavioral health QMRS and/or government: James Callahan, Richard Dougherty, Vijay Ganju, Richard Hermann, Ron Manderscheid, and Robert Rosenheck. National experts were identified based on our literature review and recommendations from the DMH project team.
- Interviews with SMHA commissioners and/or their designees at four best practice states: Connecticut, Ohio, Oklahoma, and Washington; and, interviews with administrators at two best practice organizations—Veteran's Health Administration (VHA) and PacifiCare Behavioral Health (PBH).

Best practice states and organizations were selected based on national expert recommendations, a review of each recommended state's and organization's quality

reporting and measurement system capabilities, and the National Alliance for the Mentally Ill (NAMI) Annual Report Card results<sup>1</sup>.

## Project Findings and Lessons Learned

### 1. What national initiatives, accreditation, and regulatory requirements should State Mental Health Authorities (SMHAs) be aware of in developing a behavioral health quality measurement system?

As a first step in this project we set out to define a quality measurement and reporting system or “QMRS”. There currently is no one term and definition for what constitutes a system that measures the quality of behavioral services for the ultimate purpose of quality improvement. For the purposes of this project, we developed a working definition of a QMRS as a system that measures the quality of behavioral health care, inclusive of its structures, processes, and outcomes, which reports its results to consumers, providers, and oversight organizations with the goals of quality improvement, management, and decision support.

Our national experts told us that the majority of national behavioral health measurement systems and/or initiatives address macro-level performance issues and do not address care at the individual consumer/provider level. Our experts advised us that it is more important to develop a QMRS based on values, rather than relying on a specific framework. For example, while the Institute of Medicine provides a nationally recognized quality improvement framework, it does not address the issues of consumer outcomes in general and recovery outcomes in particular.

Our experts also advised us that of the national behavioral health initiatives, the Substance Abuse and Mental Health Services Administration (SAMHSA) National Outcomes Measures (NOMs) offers Massachusetts an opportunity to benchmark Massachusetts performance against its own historic performance as well as that of other states. This is important because as of 2007, NOMs reporting is required of all federal block grant recipients.

Our interviews with best practice State Mental Health Authorities (SMHAs) found that they used a values based approach when creating their QMRS and also incorporated specific QMRS goals and priorities into the system. These values specifically reflect a focus on consumer recovery. Cross-cutting goals included meeting state, federal, and funder accountability and reporting requirements, supporting consumer/client recovery, and supporting SMHA data-driven decision making. Of note, best practice SMHAs also report that a primary purpose of their QMRS is to support consumer recovery.

Three of the best practice SMHAs incorporated all or some of the Mental Health Statistics Improvement Program (MHSIP) framework into their QMRS. The MHSIP framework takes into consideration the IOM framework, and addresses issues of consumer recovery and provider performance.

### 2. What are the key management and infrastructure components a SMHA needs to build into a QMRS?

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<sup>1</sup> NAMI Report Card results apply to best practice states only.

Across all of our sources, we found that leadership is the most essential component of developing QMRS. Leadership is needed to provide vision, to champion the system, to engage stakeholders, and to promote an organizational culture, both within the SMHA and state government and externally with other stakeholders. Leadership must also understand the importance and results of using data for decision-making. Each of the best practice state SMHAs and organizations had leadership in key positions for five or more years that championed and developed their QMRS. Leaders in our best practice states also had lengthy experience with recovery focused care and/or the MHSIP quality framework. Best practice SMHAs also broadened their QMRS leadership to include consumers, providers, and other stakeholders through involvement in the QMRS development, planning, and oversight.

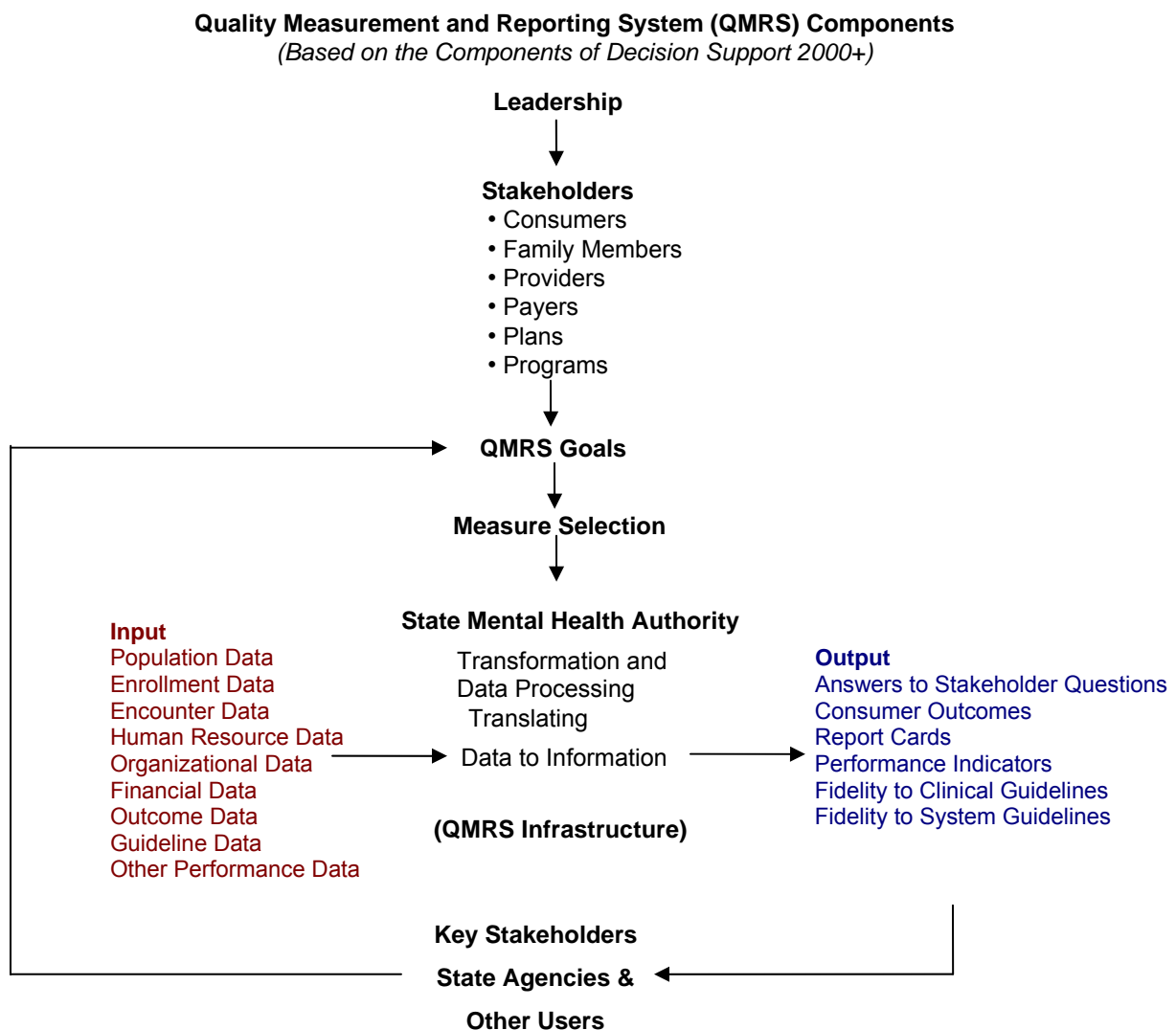
National experts told us that having enough staff for data collection, analysis, and evaluation is also needed for success. Each best practice state and best practice organization has dedicated quality staff and analysts, and the evaluation capacity (either internally or externally through academic or consultant relationships) to support the QMRS functions.

The most important QMRS information technology (IT) infrastructure component is the capacity to collect timely and reliable provider and client level encounter and other data<sup>2</sup>. Other integral infrastructure of a QMRS depends, to some degree, on the goals of a QMRS. If QMRS goals include clinical integration, and/or the ability to quantify consumer's recovery beyond clinical improvement and include, for example, housing status, criminal justice involvement, family services involvement, and use of transitional assistance, then a unique cross-agency client identifier and/or data-matching algorithm is required. Figure 1 below illustrates the components of the Decision Support (DS) 2000+ model which includes key information inputs (e.g., population, enrollment, encounter data, etc) and shows how they can be linked together and transformed into outputs to answer a range of critical questions. The graphic also summarizes the key components and processes critical for a successful QMRS that are stressed throughout the report.

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<sup>2</sup> Examples of other data include: survey data, human resource data, record review data, provider financial data

Figure 1: Inputs and Outputs for a Model QMRS



### 3. How are quality measures selected, and what measures should be used?

Our national experts recommended the following should be considered when selecting QMRS measures:

- How stakeholders will be involved in QMRS measure selection.
- Regulatory, accreditation, and reporting requirements, legislative and Commissioner's priorities, and/or the goals of the SMHA's strategic plan.
- SMHA and stakeholders values and their goals for the QMRS, e.g., support consumer recovery, access, cultural competency, use of evidence-based practices.
- Data reliability, availability, cost to collect, and provider data reporting burden.

We found that states and organizations chose measures that addressed these requirements. However, provider data burden was a significant challenge for each best practice SMHA. Our analysis of quality measures used by the best practice states

showed that although they selected measures that tap into very similar domains related to quality (e.g., access, appropriateness of care, and outcomes), each state selected somewhat different measures to assess specific aspects of each domain.

We also found variability in how states and organizations included stakeholders in the selection process. For the inclusion of stakeholders, Ohio was the most participatory and the VHA the least. Regardless of the level of stakeholder engagement, the most successful stakeholder engagement processes were those in which the QMRS decision-making processes were clearly articulated and transparent.

#### **4. How do states implement and use their QMRS to improve quality?**

National experts stressed the importance of stakeholder involvement and buy-in for the successful implementation of a QMRS. Each of the best practice states has active stakeholder involvement in their QMRS oversight. Each state and best practice organization uses multiple methods to communicate the results of their QMRS, typically using their websites, quality newsletters, and written and oral communications to promote the QMRS. This transparency, in turn, promotes stakeholder buy-in for the QMRS. States also noted that continued funding is influenced by the ability to use their QMRS to demonstrate the value of their programs to the legislature and other funders.

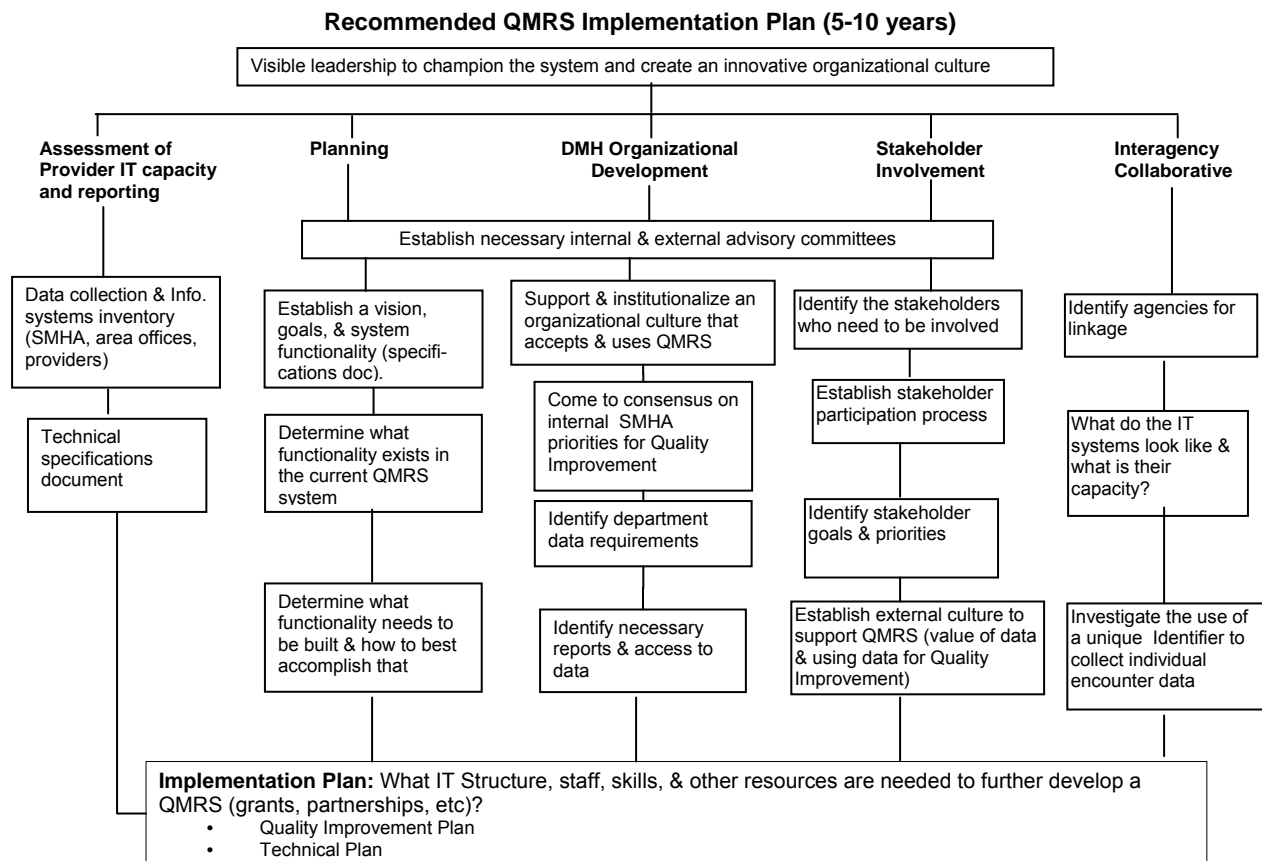
Our national experts advised us that the challenge of a QMRS is to move beyond measurement to improvement. We found that PacifiCare Behavioral Health (PBH) and the Veterans Health Administration (VHA) have been able to make this move, and that our best practice states are transitioning to this step. Technology capacities, the ability to link provider performance to consumer/patient outcomes, and the ability to influence provider behavior support the quality improvement efforts of these organizations.

The best practice SMHAs primarily use provider monitoring and public reporting of provider outcomes as a means to influence provider behavior and improve quality of care. Connecticut, Ohio, and Oklahoma are using and/or are developing regional provider performance centers or user groups as a means to improve provider ability to conduct quality improvement. Best practice SMHAs report that they are moving towards performance based contracting. Currently, SMHA contracts and/or regulations are currently used to require some aspects of their QMRS, e.g., administration of a consumer outcomes tool. Overall, we found that using QMRS for improvement requires training, IT capacity, and the ability to influence provider behavior.

#### **Recommended Next Steps**

To build upon the initial research commissioned by the Massachusetts Department of Mental Health, CHPR developed a 5-10 year implementation plan or roadmap. This plan provides a generic blueprint that outlines next steps that an organization may take to further their QMRS development. CHPR has tailored these recommendations to apply to State Mental Health Authorities across the country.

Figure 2: Recommended QMRS Implementation Plan (5-10 years)



1. **Conduct an assessment of SMHA and provider information technology (IT) capacity and reporting.** An assessment of current IT capabilities at the SMHA central and regional offices and the provider network needs to be undertaken. This assessment includes data collected by the SMHA, SMHA reporting and regulatory requirements, and provider accreditation and regulatory requirements. As part of this assessment, it is important to identify consumer and provider data that is collected and reported. Data that is of suspect validity and reliability or of low yield could be eliminated. It is important to evaluate the data collection methods and the types of requests to ensure the collection of core measures, consider the burden placed on provider staff, and how the data is used. This assessment, which integrates policy and technology, should include a data collection and information systems inventory, a technical specifications assessment, and an implementation plan that includes both quality improvement and technical components.
2. **Conduct QMRS planning.** QMRS planning activities should include the following:
  - a) determining priority QMRS goals and values for quality mental health services;
  - b) creating QMRS vision and mission statements;
  - c) determining the agencies, populations, settings, and services that will be included in the QMRS;
  - d) determining the functionality that currently exists;
  - e) determining what needs to be built and

how best to accomplish it. Included in this determination is exploring the use of a unique client identifier and the ability to collect individual level encounter data.

3. **Determine organizational development requirements**, such as what steps will be taken to foster an internal and external culture that supports quality measurement, reporting, and improvement. This step also includes determining the data and reporting the SMHA needs to manage its system, creating processes to remediate sources of low quality data needed to support the QMRS, as well as identifying needed QMRS staff and IT resources.
4. **Engage stakeholders**. The SMHA needs to identify the types of stakeholders that will be involved and then determine how to engage them. The role(s) stakeholders will have in the QMRS development and oversight, and the process for ongoing stakeholder participation need to be established from the beginning and then clearly communicated. This is also important that stakeholders have the opportunity to have meaningful roles in creating and sustaining a culture supportive of quality measurement, reporting, and improvement.
5. **Engage in interagency collaboration** to determine how other state agencies can be involved in the QMRS and to determine how the QMRS can support the work of other agencies (e.g., use of a unique client identifier to track services across state agencies).

These five steps all impact the QMRS. The importance of SMHA and provider staff and stakeholder training on the nuances of measures and their relationship to quality improvement permeates through all of the steps.

## Conclusion

Of all the components needed to build an effective QMRS, the most essential may be SMHA leadership that has the authority to effect changes and develop support for the QMRS. We feel that the QMRS will be best served when stakeholders work with the SMHA and have an active role in QMRS development and/or oversight. Even with strong leadership and stakeholder involvement, it takes time to develop and implement a QMRS. Best practice states told us to expect a five-to-ten year implementation curve. Improving the existing QMRS will also require additional resources. Organizations should not underestimate the staff and time that will be needed to further develop their QMRS.

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## Project Overview

The vision of the Massachusetts Department of Mental Health (DMH), as the State Mental Health Authority, is to promote mental health through early intervention, treatment, education, policy and regulation so that all residents of the Commonwealth may live full and productive lives. DMH's mission is:

*“To assure access to services and supports in order to meet the mental health needs of individuals of all ages, enabling them to live, work, and participate in their communities and to improve the quality of life for adults with serious and persistent mental illness (SPMI) and children with serious mental illness (SMI) or severe emotional disturbance (SED).”*

The Executive Office of Health and Human Services (EOHHS) reorganization resulted in the authority for the MassHealth Behavioral Health Programs Unit being delegated to the Commissioner of Mental Health. Thus, the population has been broadened to include all MassHealth individuals receiving behavioral health services.

In keeping with the department's guiding principles to provide responsive, high quality, cost effective services and the department's commitment to data driven decision-making, DMH has requested the University of Massachusetts Center for Health Policy and Research (CHPR) to conduct interviews with national experts and conduct research on efforts in other states to develop and implement comprehensive and integrated quality improvement initiatives. This project will inform the Department's strategic priority of developing and implementing an overarching quality plan and to further develop its quality measurement and reporting system (QMRS), so that it can better:

- Reflect DMH's increased responsibilities for additional populations and service settings as defined by the Unified Behavioral Health system.
- Support DMH's vision, mission, and meet strategic goals.
- Support efficient and effective management practices, e.g., be able to monitor and quickly respond to trends proactively rather than reactively.

Before expanding its current QMRS, DMH wanted to learn more about what was occurring nationally regarding QMRS. In this way, DMH could incorporate national best practices and lessons learned into their QMRS planning and development as appropriate to its vision, mission, and goals.

DMH asked CHPR to research national trends and best practices in QMRS. To conduct this project, CHPR worked closely with the DMH core project team.

## Organization of Findings

We first report on the populations served, organization of services and settings and other components of the QMRS in the four best practice states. We then report on findings as they relate to each research question. Findings from our national experts and/or the literature begin each section on research question findings. We then provide findings from our best practice states. The Discussion Section summarizes lessons learned by research question domain area. We close the report with a brief summary of lessons learned, and recommendations for next steps for SMHA's to take as they further their QMRS development.

A DMH Resource Notebook has been developed as part of this project. The Resource Notebook includes various PowerPoint Presentations, tools, and other resource materials related to QMRS development. References to the resource notebook are made throughout this report for readers who would like to obtain more detailed information on certain topics.

Unless otherwise noted, we use the term “best practice SMHAs” to indicate a consensus finding or lesson learned across the four states with best practices in QMRS. We use “national experts” to indicate a consensus finding or lesson learned from at least three of our five national experts.

## **Research Questions**

The core project team developed the following research questions to guide this project.

1. What national initiatives, accreditation, and regulatory requirements should states be aware of in developing a behavioral health quality measurement system?
2. What are the key management and infrastructure components a SMHA needs to build into a QMRS?
3. How are quality measures selected, and what measures should be used?
4. How do states implement and use their QMRS to improve quality?

## **Methodology**

This project used multiple qualitative methods to gather information. These methods included the following:

- Targeted behavioral and physical health quality literature review, document review and internet research. As part of this review, we compiled a listing of national behavioral health quality frameworks, national behavioral health measure sets, relevant accreditation agencies, and federal behavioral health regulations and reporting requirements. Appendix 1 provides a complete list of items reviewed for this project.
- Comparative analysis of national measure sets, and the core performance measures used by the best practice states studied for this project. The DMH Resource Notebook provides analysis results.
- Interviews with five national experts in the field of behavioral health QMRS and/or government: James Callahan, Richard Dougherty, Vijay Ganju, Richard Hermann, Ron Manderscheid, and Robert Rosenheck. National experts were identified based on our literature review and recommendations from the DMH project team. Please see Appendix 2: Detailed Methodology for additional information on each expert.

Identification of four best practice states— Connecticut, Ohio, Oklahoma, and Washington—and two best practice organizations—Veteran’s Health Administration (VHA) and PacifiCare Behavioral Health—for additional study. Best practice states and organizations were selected based on national expert recommendations, a review of each recommended state’s and organization’s quality reporting and measurement system capabilities, and the National Alliance for the Mentally Ill

(NAMI) Annual Report Card results<sup>3</sup>. Please see Appendix 2: Detailed Methodology for information on the selection rationale and the list of fifteen states considered for additional study by this project.

- Interviews with the four best practice states' commissioners and/or their designees and with administrators at Veteran's Health Administration (VHA) and PacifiCare Behavioral Health. We also conducted two site visits at Veteran's Integrated Service Network—Region 1 as part of the VHA interview.
- Targeted review of how all each of the recommended states that excelled in one or more components of a QMRS use their website for public reporting and public transparency. Results of this review are available in the DMH Resource Notebook.

## Limitations

We targeted literature, document, and website reviews to meet the needs of this project. To respect the time of all of the people we interviewed, we conducted interviews within a 60-90 minute time span. This allowed us to gather high-level information from the best practice states and organizations. Follow-up for additional information was conducted as needed.

*"If you've seen one state, you've seen one state..."* There is wide state variability in the funding mechanisms and resources, organization, authority for settings and populations served by SMHA's. No state is an exact "match" to Massachusetts. While we found that these differences did not lead to any notable differences in how the states developed and use their QMRS, state differences pose barriers for an SMHA seeking to directly import another state's QMRS.

This report relies on each national expert's and SMHA respondent's experiences, views, and/or research as a major source of project findings. It is possible that some interview results will not always agree with the perceptions of others in the field.

## Core Definitions and Terms

Throughout this report, we use the terms "stakeholders" and "quality measurement and reporting system" (QMRS). We also refer to levels at which the QMRS is used and terms such as domain, indicator, and measure. Below, we define these terms.<sup>4</sup>

### Core Term—Stakeholders

This report defines stakeholders to include consumers, family members, providers, advocates, and other individuals with a vested interest in the quality of mental health services.

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<sup>3</sup> NAMI Report Card results apply to best practice states only.

<sup>4</sup> The definitions for domain, indicator, and measure were taken from <http://www.mhindicators.org/ind-overview-definitions.asp>

### **Core Term—Client, Consumer, and Patient**

Because the literature, providers, consumers, and SMHAs each use a variety of terms to indicate the person whom they serve and/or treat, the terms “client”, “consumer” and “patient” are used interchangeably throughout this report.

### **Core Definition—Recovery**

For this report, we define recovery as having both a clinical and rehabilitation/client centered focus. Clinical outcomes include “observable diminution of signs and symptoms of disorder and the restoration of cognitive, social, and occupational functioning. The rehabilitation model of recovery refers to the person's efforts to live his or her life in a meaningful and gratifying way despite the limitations imposed by enduring disability”<sup>5</sup>.

### **Core Definitions—Quality Measurement and Reporting System (QMRS)**

Reflecting the developmental nature of behavioral health quality improvement, we found there currently is no one term and definition for what constitutes a system that measures the quality of behavioral services for the ultimate purpose of quality improvement. Drawing from the work of the Institute of Medicine (IOM) in the area of overall health quality, we found that the term Quality Measurement and Reporting System (QMRS) is a commonly used term for this type of system<sup>6 7</sup>. For the purposes of this project, we developed a working definition of a QMRS for behavioral health services that addresses the goals of the Massachusetts Department of Mental Health.

For purposes of this project and future related projects, the project team defined QMRS as a system that measures the quality of behavioral health care, inclusive of its structures, processes, and outcomes, which reports its results to consumers, providers, and oversight organizations with the goals of quality improvement, management, and decision support.

In support of the definition, Figure 3 below illustrates the components of the Decision Support (DS) 2000+<sup>8</sup> model which includes key information modules (e.g., population, enrollment, encounter data, etc) and shows how they can be linked together and transformed into outputs to answer a range of critical questions. The graphic also summarizes the key components and processes critical for a successful QMRS that are stressed throughout this report.

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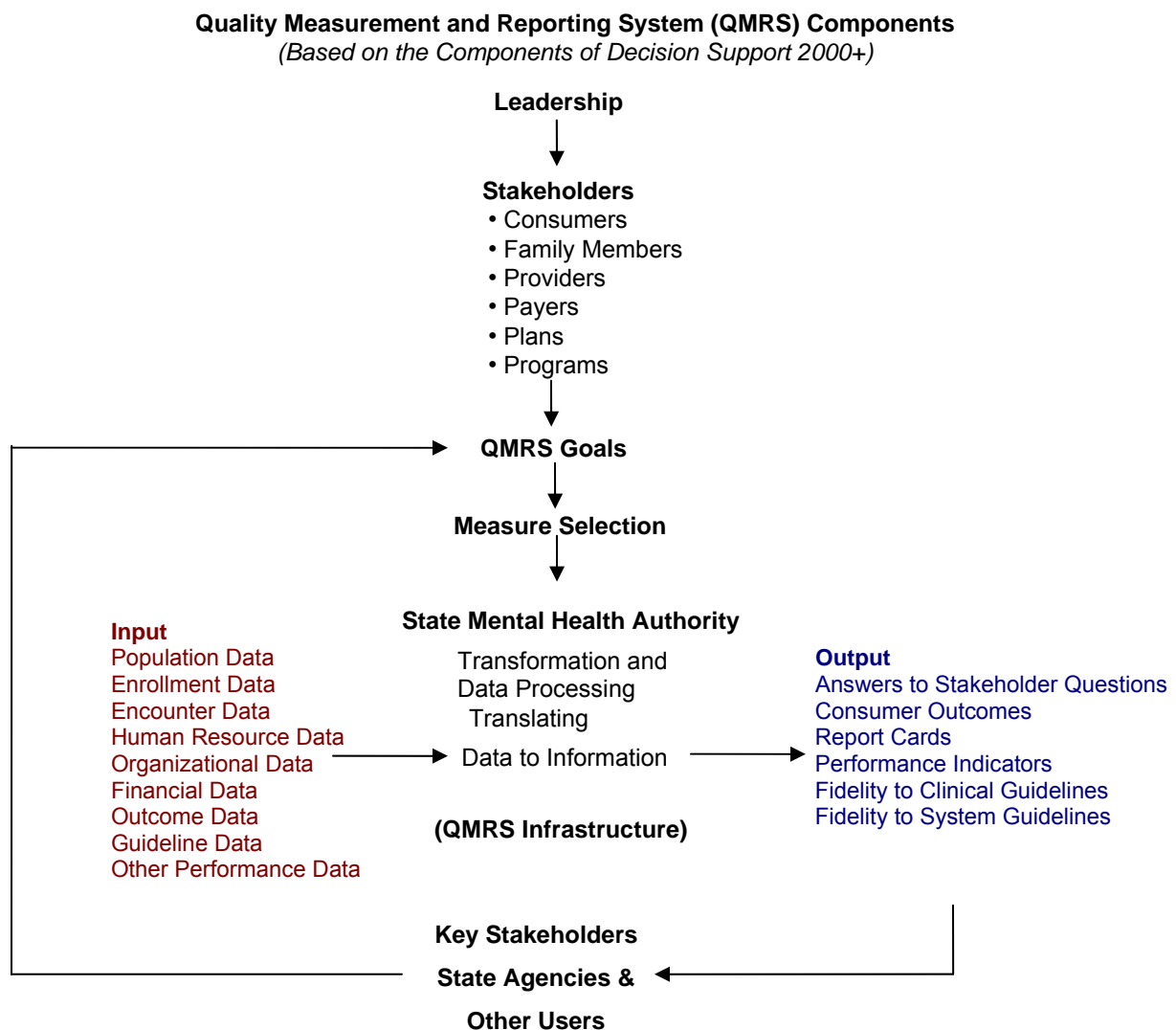
<sup>5</sup> Larry Davidson; Martha S. Lawless; and, Fiona Leary. “Concepts of recovery: competing or complementary?” *Curr Opin Psychiatry* 18(6):664-667, 2005. © 2005 Lippincott Williams & Wilkins

<sup>6</sup> National priorities for healthcare quality measurement and reporting: a consensus report. Washington, DC National Quality Forum, c2004.

<sup>7</sup> Mcglynn EA. An evidence-based national quality measurement and reporting system. *Medical Care* 2003;41(1 Suppl):18–15.

<sup>8</sup> Hederson, Marilyn, J., Minden, Sarah, L. and Manderscheid, Ronald. W. Decision Support 2000+. [www.mhsip.org/ds2000/ds2sumdoc.401.pdf](http://www.mhsip.org/ds2000/ds2sumdoc.401.pdf)

Figure 3: Inputs and Outputs for a Model QMRS



### Core Definition—Domain

“Domain” is defined as a group of issues, elements, or components that have some important aspects in common.

1. The Access Domain covers any aspect that has to do with individuals getting the services they need.
2. The Process Domain covers all interactions between an individual and the healthcare system, including clinical aspects and interpersonal content. Areas included in the clinical area include prevention, assessment, treatment, continuity, coordination, and safety.
3. The Outcome Domain includes anything that addresses the results of services on individual’s lives.

### Core Definition—Indicator

“Indicator” is defined as the specification of how well something (e.g., an organization) is performing. Typically, the indicator is expressed as a ratio (e.g., the percent of service recipients who report a certain level of satisfaction).

### Core Definition—Measure

“Measure” is defined as the methodology for deriving and calculating quantitative results that may be used in an indicator. Some indicators are derived from administrative data. Others may be derived from an “instrument” (e.g., a survey that has been developed to determine consumers' perceptions regarding the quality of services they received. A multi-question survey measure may yield one or more scores, depending upon design, and may reflect one or more dimensions.)

### Using QMRS Results

A review of the literature shows that state mental health authorities (SMHA) and health care organizations use QMRS results to view performance from various perspectives:

- **Macro/systems level**—High-level data collection and reporting used for accountability and/or public reporting purposes.
- **Management level**—Measurement of performance indicators that support management accountability in the provision of quality behavioral health services
- **Client/Provider level**—Improvement of provider services and/or used by providers to improve client outcomes; also used by the client to improve client outcomes.

### Why Develop a Quality Management and Reporting System (QMRS)?

In a time of increased demand for accountability, stakeholder expectations that services should help consumers achieve recovery, the presence of new and emerging best practices, competing budgetary priorities, and limited resources, it becomes critical that a comprehensive approach be in place to address these multiple priorities systematically. The three goals of the Mental Health Statistics Improvement Program (MHSIP) Decision Support 2000+ information system report highlight why it is important to develop a QMRS: 1) Improve decision support; 2) Improve quality of mental health services; and, 3) Facilitate effective communication within the mental health system and between it and other human service systems<sup>9</sup>.

Many states and organizations have developed systems to collect data, but lack a comprehensive approach to turn data into useful information. A well built QMRS can provide information to address these priorities. Perhaps, most importantly, a QMRS that collects and analyzes individual client level encounter and outcomes data can directly support consumer recovery.

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<sup>9</sup> [www.mhsip.org/ds2000/](http://www.mhsip.org/ds2000/)

## Findings

### ***Background on the Best Practice States***

Tables 1-4 below provide targeted information about the best practice states interviewed for this project. The tables include information on each state SMHA's populations and settings responsibilities, how services are organized, and core components of each state's QMRS. This information helps to provide context to each best practice SMHA's responses. Additional information about each state is provided throughout this report, and in the DMH Resource Notebook.

We did not find that the differences between SMHAs, e.g., internal SMHA organization, SMHA place in state government, SMHA's service, setting, or population responsibilities, etc., had a noteworthy impact on the state's QMRS development, or influenced how each best practice state reported using their QMRS.

**Table 1: Background on Connecticut SMHA and QMRS**

<b><i>Connecticut Department of Mental Health and Addiction Services (DMHAS)</i></b>		
<b>Populations Served</b>	<b>Organization of Services and Settings</b>	<b>QMRS Components</b>
Adults (18 and over) with psychiatric and/or substance abuse disorders that lack the financial means to obtain such services on their own	<p>Local Mental Health Areas (LMHA) contract with providers</p> <p>14 LMHAs and over 90 affiliated private non-profit community based organizations provide services</p> <p>DMHAS operated long- and short-term inpatient psychiatric stays</p> <p>DMHAS contracted acute inpatient and ambulatory psychiatric care provided by general hospitals and two private psychiatric hospitals</p>	<p>System began implementation in 2000</p> <p>Annual Consumer Surveys conducted with adults</p> <p>Statewide Mental Health measures recently oriented into NOMS framework</p> <p>QMRS developed by Commissioner and department staff with stakeholder input with the main goals of determining value of services and to help determine whether services support the recovery of consumers</p> <p>Provider reports for internal use that identify or flag the providers that have data quality or data submission problems</p> <p>Site-visits are conducted by QMI staff on an ongoing basis. Since January 2006 providers have had a site-visit around QMI issues, addressing data quality and use of data for quality improvement</p> <p>Performance outcome reports are available to providers through a secure password protected WEBSAS reporting tool</p>

Table 2: Background on Ohio SMHA and QMRS

<b>Ohio Department of Mental Health (ODMH)</b>		
<b>Populations Served</b>	<b>Organization of Services and Settings</b>	<b>QMRS Components</b>
Children and adults with mental illness or serious emotional disturbance	<p>ODMH provides counties with funds; county boards develop and oversee their own service array</p> <p>County boards contract separately with providers</p> <p>OMHD regulates and licenses all community mental health providers</p> <p>412 certified CMHCs</p> <p>135 licensed adult residential facilities with 1047 beds, and 51 child and adolescent residential facilities with 904 beds</p> <p>5 state-run Behavioral Health Organizations that provide inpatient services for adults at 9 sites</p>	<p>System development began around 1996</p> <p>Consumer Outcomes System: Consumer outcomes tools used by consumers and clinician to manage care, for quality improvement and accountability purposes</p> <p>Consumer Outcomes Data Mart: publicly accessible web-based data mart that allows users to generate reports based upon outcomes data collected throughout the state</p> <p>Internal use of a Balanced Scorecard to track performance and quality indicators</p> <p>Broad array of stakeholder's developed system within parameters established by Commissioner Hogan</p>

Table 3: Background on Oklahoma SMHA and QMRS

<b>Oklahoma Department of Mental Health and Substance Abuse Services (DMHSAS)</b>		
<b>Populations Served</b>	<b>Organization of Services and Settings</b>	<b>QMRS Components</b>
Adults at or under 200% FPL and all children receiving services in the areas of mental health and substance abuse.	SMHA contracts directly with providers in the 17 mental health service areas	<p>System development began in 1980's</p> <p>Used MHSIP quality framework for measure selection and information technology infrastructure</p> <p>Reports National Outcome Measures</p> <p>Managed by Director of Decision Support</p> <p>Public website access to aggregate performance data</p> <p>Provider has password protected access to up-to-date performance data on client's functioning</p>

**Table 4: Background on Washington SMHA and QMRS**

<b>Washington Mental Health Division (WMHD)</b>		
<b>Populations Served</b>	<b>Organization of Services and Settings</b>	<b>QMRS Components</b>
Children and adults with mental illness enrolled in Medicaid; children and adults who qualify as low income and also meet statutory need requirements	<p>Licensed community mental health agencies provide community based services</p> <p>Two state hospitals for adults. 1 for children.</p> <p>Contracts with 14 Regional Support Networks (RSNs)</p> <p>RSNs operate under two contracts with MHD: one contract is a Prepaid Inpatient Health Plan (PIHP) for Medicaid enrollees and the other as a state-funded contract for non-Medicaid services</p>	<p>2000 WA legislature required accountability system to be developed</p> <p>QMRS implemented in 2004</p> <p>Uses consumer outcomes tool; tool is electronically submitted on Telesage platform</p> <p>QMRS incorporates NOMs</p> <p>Consumer and provider access to individual and aggregate outcomes data</p> <p>Annual performance reports</p>

## **Research Question Findings**

**Q1. *What national initiatives, accreditation, and regulatory requirements should an SMHA be aware of in developing a behavioral health quality measurement system?***

This research question reports on the range of national behavioral health measurement initiatives, accreditation, and regulatory requirements that should inform a SMHA when developing their QMRS. We examined how the best practice SMHAs have incorporated these frameworks, regulatory and accreditation requirements into their systems. The frameworks, initiatives, and regulations we report upon for this question are those we found to be most relevant to an SMHA and/or those most relevant to Medicaid agencies with regard to mental health services.

## **National Expert and Literature Review Results**

### **Background**

Our national experts told us that before developing a QMRS, it is important to consider whether an external framework will be used, or a new value-based framework developed. Additionally, when creating a QMRS and selecting measures, it is important to consider existing initiatives and measure sets. Our experts told us to address provider data burden. QMRS development should also consider incorporating data that is required by state and federal regulation, as well as data required by national accreditation agencies.

The national experts interviewed indicated that the field of behavioral health quality is still developing. They indicated that there are more physical health quality measures. These measures have been developed and tested over a longer period than those for

behavioral health. The national experts interviewed also noted that there are fewer behavioral health evidence-based practices (EBPs) than in physical health and that behavioral health standards of care are less well defined than in physical health.

Our national experts told us that the majority of national behavioral health measurement systems and/or initiatives address macro-level performance issues, but do not address specific issues of care delivery between providers and consumers. Our experts advised us that it is more important to develop the QMRS based on values than on a specific framework.

## Frameworks: Literature and Document Review

Noteworthy frameworks include the following:

- **Donabedian’s “structure, process, and outcome” framework** is perhaps the best-known approach to quality. This framework, introduced in the 1970’s, has been used by the National Committee on Quality Assurance (NCQA) and others to develop standards for care.
- **2001 Institute of Medicine’s (IOM) report, *Crossing the Quality Chasm***, establishes the importance of improving the quality of health care. It also establishes six aims for improvement in care: safety, patient-centered, equitable, effectiveness, efficiency, and timeliness, as a framework to measure, monitor and improve health care. In addition to its framework, the IOM report also provides a guide for developing and implementing the structure and process for achieving these aims.
- **2006 IOM Report, *Improving the Quality of Health Care for Mental and Substance-Use Conditions: Quality Chasm Series***. Because of the substantial differences between the physical health, mental health, and substance abuse service delivery systems, there were questions as to whether the IOM framework could be generalized to behavioral health. This report examines those issues, and determines that the framework is appropriate for behavioral health service delivery systems and settings. However, our national experts note that this framework does not address the issues of client outcomes in general, recovery outcomes in particular, or provider performance.
- **Mental Health Statistics Improvement Program (MHSIP)** began in 1976 as an effort by the federal government to collaborate with states in the development and implementation of data and information systems standards. The MHSIP report, *Data Standards for Mental Health Decision Support Systems*, often referred to as FN-10, was published in 1989. FN 10 recommends standards and presents minimum data sets for patient/client, event, human resources, financial and organizational data. The MHSIP Quality Report and Toolkit, released in 2005, reflect changes in the behavioral health care industry and technology advancements since FN-10 was published. The MHSIP framework takes into consideration the IOM framework, and

addresses issues of recovery and provider performance. Forty-eight states now use MHSIP, either in whole or in part, to support quality measurement<sup>10</sup>.

- **Centers for Medicare and Medicaid Services (CMS) Quality Framework for Transformation Grant States or Quality Matrix** is used to envision the desired outcomes of Home and Community Based Services programs. The framework includes seven domains: participant access, participant-centered service planning and delivery, provider capabilities, participant safeguards, participant rights and responsibilities, participant outcomes and satisfaction, and system performance.

The work of the Massachusetts Systems Transformation Grant Advisory Committee at the EOHHS level has developed a five-year strategic plan for a quality management system using the CMS framework. Appendix 3 includes a crosswalk between the domains of the IOM and CMS frameworks. This is important given the need for congruence across EOHHS agencies.

While the **2003 President's New Freedom Commission's Report on Mental Health** is not a QMRS framework, this report and its findings have had a significant impact on the expectations and goals that states and stakeholders have for a mental health system. According to the Commission, the six overall goals of a transformed mental health system are as follows:

1. Americans understand that mental health is essential to overall health.
2. Mental health care is consumer and family driven.
3. Disparities in mental health services are eliminated.
4. Early mental health screening, assessment, and referral to services are common practice.
5. Excellent mental health care is delivered and research is accelerated.
6. Technology is used to access mental health care and information.

### **National Behavioral Health Initiatives and Measure Sets**

The following are the major national behavioral health initiatives that we reviewed. Please see the DMH Resource Notebook for more detailed information on these initiatives, and the crosswalk of their measures to the IOM framework.

- American College of Mental Health Administration's (ACMHA) Consensus Set of Indicators for Behavioral Health, 2001
- Forum on Performance Measures, Adult Mental Health Working Group
- Mental Health Statistics Improvement Program (MHSIP)
- SAMHSA Uniform Reporting System (URS)
- SAMHSA National Outcomes Measures (NOMs)
- Washington Circle Group

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<sup>10</sup> [www.mhsip.org/ds2000/](http://www.mhsip.org/ds2000/)

## National Accreditation Organizations

The following are the primary accreditation agencies for behavioral health providers in Massachusetts. In some states, national accreditation satisfies state quality requirements. Accreditation requirements must be taken into account when designing a QMRS especially when considering provider burden issues. Please see the DMH Resource Notebook for more information on these national accreditation organizations.

- Commission on Accreditation of Rehabilitation Facilities (CARF)
- Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- Council On Accreditation (COA)
- National Committee on Quality Assurance (NCQA )

## Federal Regulations

States receiving Medicaid, Medicare or SAMHSA funds are required to comply with the following federal regulations. These regulations need to be considered when developing a QMRS.

- Centers for Medicare and Medicaid Services (CMS): Conditions of Participation (CoPs). Health care organizations must meet CoPs to participate in Medicaid and Medicare. JCAHO accreditation satisfies CoPs, and many states, including Massachusetts, use JCAHO accreditation in this way.
- Balanced Budget Act of 1997 (BBA): The BBA requires state Medicaid agencies to have a written strategy for assessing and improving the quality of care provided by managed care organizations. Under the BBA, each managed care health system must have a qualified External Quality Review Organization review and report on the systems ability to meet federal requirements.
- Substance Abuse and Mental Health Services Administration (SAMHSA) includes two reporting requirements:
  - Uniform Reporting System (URS). URS is currently a requirement for all block grant recipients.
  - National Outcome Measures (NOMs). NOMs reporting is currently optional, but will be required for all block grant recipients as of 2007.

## State Results

Best practice SMHAs told us that their SMHA's values provided the framework for their QMRS. Values of best practice SMHAs explicitly reflect a focus on recovery. For three of our best practice states, the MHSIP framework, because it was developed with consumer and other broad stakeholder input, supported those values, and was incorporated in part or in whole into the state's QMRS. Ohio chose to partner with consumers and other stakeholders to develop its QMRS. Other priorities, e.g., legislative, accountability, or reporting requirements, and legal actions were also taken into consideration when constructing an overarching framework. We found that no best practice state explicitly used the Institute of Medicine's quality framework, although each state's measures fit into the IOM framework.

**Q2: What are the key management and infrastructure components a SMHA needs to build into a QMRS?**

The findings associated with this research question report on the management and infrastructure components needed to build a successful QMRS. These include tangible components, such as staff and IT, and intangible components, such as leadership and organizational culture.

**National Expert Findings**

Our national experts described two categories of infrastructure that are essential for an effective QMRS—intangible and tangible infrastructure.

Intangible infrastructure includes organizational leadership, an organizational culture committed to using data for management and quality improvement, and strong consensus and/or support among stakeholders.

Tangible infrastructure components include:

- Integrated, reliable data reported in a timely manner
- Efficient means to collect encounter level data
- Unique client ID and provider ID and/or data-matching algorithms or other means to track and link service usage
- Staff and IT infrastructure and capacity to collect, analyze, and report on reliable client and provider data
- Timely reporting of data to multiple audiences in user-friendly formats

Our experts told us that the intangible infrastructure, particularly leadership, drives the development and effective use of the tangible infrastructure. Leadership is necessary to build a culture, both internally within the SMHA and externally with stakeholders, that supports data driven management.

**Best Practice SMHA Findings****How Best Practice SMHAs Define Behavioral Health Quality**

In general, states defined quality operationally, e.g., structure, process, outcome, or by the goals of their QMRS. Ohio illustrates its definition of quality through its “quality triangle.”

Figure 4



**Source:** ODMH Quality Agenda, [www.mh.state.oh.us/oper/outcomes/data.mart/dm.background.pdf](http://www.mh.state.oh.us/oper/outcomes/data.mart/dm.background.pdf)

Each SMHA reported that the primary goals of their QMRS are to:

- Support client/consumer recovery
- Support SMHA data-based decision making and effective and efficient management practices
- Address each SMHA's identified priority areas

Table 5 below shows the QMRS priority areas of the best practice states.

**Table 5: QMRS Priority Areas of Best Practice State SMHAs**

State	QMRS Priority Areas
<b>CT</b>	Co-occurring disorders, trauma, gender, cultural competence, use of evidence-based practices (EBPs)
<b>OH</b>	Assessment/measurement of outcomes, provider quality, use of EBPs
<b>OK</b>	Number of EBPs and system of care programs, number of people who are seen, adult inpatient follow-up in outpatient care after discharge, adults with major mental illness receiving case management or individual rehabilitative services
<b>WA</b>	Treatment in the community, quality services available statewide, services are available that clients need or request

Additional QMRS goals and priorities of these states are to:

- Meet federal, regulatory, accreditation requirements as applicable, e.g., NOMs, JCAHO.
- Provide accountability to legislature/governor and other stakeholders. This accountability includes meeting QMRS legislatively established goals, addressing legal decisions, and incorporating stakeholder priorities.

In WA and OH, another goal of the QMRS is to provide information to consumers for treatment planning, through its consumer outcomes tool.

### **QMRS Infrastructure—Leadership and Organizational Culture**

Each SMHA has had longevity (five or more years) in one or more key management positions that champions the QMRS. Many of these managers have been leaders in the field of recovery and/or in the on-going development of the MHSIP framework.

Table 6: Key State SMHAs Administrators at This Position Five Years or More

State	Commissioner	Director of Quality or Decision Support	Director of Research and/or Evaluation
CT	X		(Previous director, 5+ yrs.)*
OH	X+		X
OK	X	X*	NA
WA		NA	X*

\* Chair of the MHSIP policy group

+ Chair, President's New Freedom Commission on Mental Health

These leaders in turn have been the primary drivers in developing their SMHA's QMRS and have furthered an organizational culture that supports QMRS. Each best practice state also reported their legislature and/or governor strongly supports data-based decision making. Of note, in 2000, the Washington legislature passed legislation that required the WMHD to develop a data-based management system.

To create a public culture to support their QMRS, each SMHA reported using a number of avenues to educate the legislature and stakeholders about their QMRS, and to demonstrate the value of these programs. These avenues include: a) educating stakeholders about the purposes of a QMRS; b) educating stakeholders about how to interpret data and access reports; c) quality newsletters; d) use of the SMHA's website to post quality plans, evaluation results and other similar documents; e) public presentations; and f) public reporting of QMRS results. Each state reported that it tailors its QMRS reports and data presentations to be useful and accessible to multiple audiences.

Each state SMHA reported they used multiple mechanisms for stakeholder involvement and oversight of their QMRS. Table 7 below shows some of the mechanisms used by states.

Table 7: Stakeholder Participation in Best Practice States' QMRS Development and Oversight: Current Workgroups or Committees

	CT	OH	OK	WA
<b>Workgroups and Committees</b>	Regional Mental Health Boards Regional Consumer Advisory Councils Monthly QI Directors Forum	Outcomes System Quality Improvement Group Clinical Quality Council	Governing Board Performance Improvement Committee Performance Improvement Coordinators Workgroup	Performance Indicator Workgroup Performance Data Group Information Systems Data Evaluation Committee

### **QMRS Infrastructure—Staff**

We found that each best practice SMHA has developed an IT infrastructure and staff dedicated to quality improvement. Each SMHA:

- Has a dedicated quality or decision support department for purposes of quality measurement and reporting.
- Has strong evaluation and/or research capabilities either internally or externally through academic or other contractual relationships. For instance, Washington works with external research partners<sup>11</sup> on an on-going basis for evaluation and research functions. On a case-by-case basis, Oklahoma allows its dataset to be used by academic researchers for purposes of national comparisons.

### **QMRS Infrastructure—Technology**

Because of time constraints, we were unable to collect information about the data systems used by each state to collect and transmit data. Information in this section focuses on the capabilities of the technology systems, rather than the system itself. Key findings regarding technology capacity include:

- Each SMHA has the ability to collect individual client-level encounter data electronically using a unique client ID.
- Oklahoma and Washington use a unique client ID and/or a data-matching algorithm to track service usage within their system across one or more service systems, e.g., juvenile and adult corrections/criminal justice, Medicaid, transitional assistance.
- Oklahoma's SMHA website provides public access to a database that allows the user to conduct queries in a number of service usage domains by region(s) and/or provider(s).
- Washington uses an electronic consumer outcomes tool to collect consumer outcomes data. Providers and consumers can access their data electronically.
- Ohio's SMHA website allows providers and other stakeholders access to its Outcomes Data Mart.

To develop and/or maintain their data management infrastructure, SMHAs use federal, national, and other grants selectively to support or enhance their data management infrastructure. For example, OK uses a variety of federal and national grants to create and support its data infrastructure, and continues to use program evaluation grants to support some staff positions. Ohio used a CMS data infrastructure grant to develop their Solutions for Ohio's Quality Improvement and Compliance (SOQIC) initiative. SOQIC is a group of forms (electronic or paper) that contain all the documentation items that are needed to comply with Medicaid and Medicare regulations, ODMH's Certification Standards (with one exception), and all the requirements of the accrediting bodies. SOQIC forms are used to assist provider agencies in complying with audits they are likely to receive, and to organize the data needed to provide high quality clinical

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<sup>11</sup> WA works with the Washington State University sponsored Washington Institute for Mental Health Research and Training, and the legislatively funded Washington State Institute for Public Policy.

care. The goals of SOQIC are to improve quality, reduce costs, and ensure compliance with federal requirements.

### **Q3: How are quality measures selected, and what measures should be used?**

SMHA's are faced with difficult decisions when determining which quality measures to choose in building their QMRS. With this research question, we present points to consider when selecting measures, and recommendations for stakeholder involvement in the selection process. We also summarize the types of measures the best practice SMHAs include in their QMRS.

### **National Experts Results**

Our national experts offered a great deal of advice about meaningful stakeholder involvement in measure selection. Their overarching message was that stakeholder involvement in selecting measures is essential. Stakeholder involvement helps ensure that the QMRS measures meet the needs of stakeholders. Involvement also supports stakeholder buy-in into the QMRS, which in turn helps sustain the QMRS over time. However, it was noted that core measures needed by the SMHA to manage the system can be taken out of the consensus process. The most important aspects are first to determine how stakeholders will be involved and second to be transparent about that process. The DMH Resource Notebook provides additional information on participatory decision-making processes.

Once an overall stakeholder engagement process is determined, our experts recommended the use of a strategic process that incorporates:

- Commissioner's priorities and/or the SMHA's strategic plan
- What the SMHA needs to know to manage its system
- What the SMHA and stakeholders want the system to achieve
- Regulatory and other reporting requirements
- Reliable data that is already being collected, as appropriate
- Consideration for the burden of additional data collection and reporting at the local provider level
- Consideration for the cost to collect the data
- Areas that are ripe for improvement

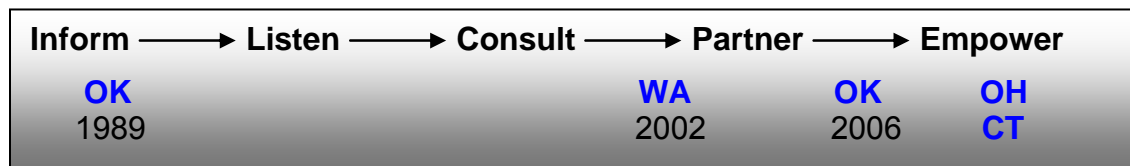
### **Best Practice SMHA Findings**

#### **Stakeholder Involvement**

Each state varied in its approach to engaging stakeholders in measure selection. Ohio's SMHA developed guidelines and criteria to incorporate into the QMRS and then empowered about fifty stakeholders with developing the QMRS within those parameters. Washington's SMHA incorporated stakeholder concerns and feedback as it developed and implemented its QMRS. In 1989, the OK SMHA made the decision to use MHSIP, but now incorporates stakeholder advice and/or partners with stakeholders.

As noted earlier, each state has significant stakeholder involvement in QMRS oversight committees and workgroups. Figure 5 provides a summary of participatory decision making levels.

Figure 5: Best Practice SMHA’s Stakeholder Involvement in QMRS Measure Selection<sup>12</sup>



### Common Measures Selected

Our analysis of quality measures used by the best practice states showed that although they selected measures that tap into very similar domains related to quality (e.g., access, appropriateness of care, and outcomes), each state selected somewhat different measures to assess specific aspects of each domain. However, we found some common quality measures were shared across at least three of the states. The highest frequency of common measures was in the outcomes domain.

Table 8 presents quality measures used by at least three of the states in the domains of access, appropriateness of care, and outcomes<sup>13</sup>. Appendix 4 provides a comparative chart of all of the state’s quality measures.

Table 8: Common QMRS Quality Measures of Best Practice States

Domain	CT	OH	OK	WA
Access	Percent of adults reporting positively (Access domain as measured by the MHSIP Consumer Survey)	Penetration rate of community mental health services per 100,000 for the total population and for special populations	Penetration rate of any mental health service from a DMHSAS-funded agency per 1,000 by population living at or below 200% state poverty level for adults, children, and adults with Major Mental Illness (MMI)	Penetration rate of community outpatient services for total population and by age, race/ethnicity, and Medicaid eligibility
Appropriateness of Care	Percent of non-forensic adults who were discharged from inpatient care within the quarter and were re-hospitalized within 30 and 180 days of discharge		Percent of adults who were discharged from inpatient care within the quarter and were re-hospitalized within 30 days of discharge	Percent of adults who were discharged from inpatient care and were re-hospitalized within 30 days of discharge by Medicaid versus non-Medicaid enrolled status

<sup>12</sup> Secretariat, C. C. (2000). Health Canada Policy Toolkit for Public Involvement in Decision Making. Ottawa, Ontario.

<sup>13</sup> These are the organizing domains for measures used in the MHSIP framework.

Domain	CT	OH	OK	WA
Outcomes	Percent of adults who were competitively employed in past year	Percent of adults with serious mental illness who are employed	Change in employment from admission to discharge overall and by level of care	Percent of adult outpatient service recipients who were employed at any time during year by Regional Service Network and statewide
	Percent of consumers who were homeless in past year		Change in current residence from admission to discharge overall and by level of care	Percent of adult outpatient service recipients who were homeless at any time during the year by RSN
	Percent of adults who were arrested during the past year		Recidivism rate of persons linked through the Community Linkage Program	Change in number of arrests in 30 days from admission to discharge overall and by level of care

#### **Q4: How do states implement and use their QMRS to improve quality?**

Once a QMRS is designed and ready for roll-out, how the QMRS is implemented will determine its success. This research question reports on findings related to successful implementation of a QMRS and how a SMHA can translate results from a QMRS into quality improvement of services.

### **National Expert and Literature Findings**

#### **Addressing Provider Buy-in and Provider Data Burden**

Our national experts told us that implementing a QMRS is a process, rather than an event. When developing and implementing the QMRS, they stressed the need for transparency and stakeholder representation. The experts noted that provider participation and compliance are particularly essential to the QMRS. To facilitate provider buy-in to the QMRS, an SMHA may need both a “carrot and a stick” approach. The stick can be applied through law, regulations, and contracts that require provider participation in the QMRS. For example, the Connecticut Department of Mental Health and Addiction Services may impose a financial penalty on contractors if they fail to submit timely and accurate reports. Such penalties may, at the discretion of the Department, be withheld from payments to the contractor.

The SMHA can make participation in a QMRS appealing to providers by eliminating provider reporting that has minimal yield for SMHA managers, by involving providers in the development and oversight of the QMRS, and by using financial or other incentives. Addressing provider data burden is of particular importance to successful implementation of a QMRS. A 2006 RAND report notes that non-profit providers can

spend up to 50% of their time on documentation and reporting, and 11% of their time on budget related compliance reporting requirements<sup>14</sup>.

### ***Using QMRS to Improve Quality***

Experts told us that using QMRS for improvement is also a developmental process. Most states are currently at the macro/systems performance level, e.g., most states are able to collect and use data for accountability and reporting, and performance monitoring in key areas. However, moving to the improvement of provider quality and consumer outcomes remains a challenge for most states and most providers.

A summary of experts' comments regarding this area includes:

- Using data to improve provider performance and client outcomes requires individual client level encounter data.
- Consumers, providers, and other stakeholders buy into a system when they experience benefit at this level.
- Examining how commercial companies and best practice organizations, notably PacifiCare Behavioral Health (PBH) and the Veteran's Health Administration (VHA), use data to improve provider performance and clients outcomes may be helpful to SMHAs.
- NOMs is also an opportunity for Massachusetts to track trends statewide and at regional levels with reliable measures. From there, if client level encounter data is available, states can drill down to the provider and client level for quality improvement.

### ***Best Practice State SMHA Findings***

Across the state interviews, two primary themes emerged regarding successfully implementing a QMRS—provider resistance to the QMRS and provider data burden. Our national experts also noted the importance of addressing these two issues.

### **Addressing Provider Resistance and Provider Data Burden**

While a QMRS relies on data, the amount of time that providers spend collecting and reporting data can take time away from service delivery. Each state recognized that their QMRS represented some level of provider data collection and reporting burden to its providers and that addressing burden remained a challenge. For instance, Washington noted that their consumer outcomes tool is typically electronically completed and transmitted at the provider's office. Washington's SMHA expected that this process would be relatively burden free to providers. However, some data collection burden, and uncompensated provider costs to administer, exists even with electronic tool administration.

Oklahoma and Washington both advised that when implementing the QMRS with providers, it is important to pilot or begin the rollout process with high-performing and early adopter provider agencies. By doing so, early implementation problems can be

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<sup>14</sup> 2006 RAND. Meeting Funder Compliance: A Case Study of Challenges, Time Spent, and Dollars Invested.

identified and addressed. However, Washington noted that the piloting process did not eliminate all problems with provider implementation and that provider incentives would have eased their implementation barriers.

### **Using Contracting and Regulation to Support QMRS**

Due to time constraints in the state interviews, we were only able to gather limited information about how the best practice states use contracting and regulation to support their QMRS. Each of the best practice SMHAs reported they use their contracting process to support QMRS activities, but do not yet use performance based contracting specifically.

We were able to glean a few examples from Washington and Ohio of specific contracting or regulatory requirements used to support their QMRS. Washington's Regional Support Network (RSNs) contracts require providers to administer the Telesage consumer outcomes tool, monitor specific performance measures, and meet defined target benchmarks. If RSNs providers do not meet these benchmarks, they must then submit plans to increase performance to meet them. Ohio DMH uses its certification authority to require community mental health providers to administer Consumer Outcomes surveys and report that data to the department. Additionally, Ohio providers must demonstrate that they conduct quality improvement activities using the data from the Consumer Outcomes System to receive certification.

### **Reporting and Performance Monitoring**

Each of the states reported that they are using their QMRS to meet federal and state reporting requirements, monitor and respond to trends in quality, and support effective and efficient management practices. One important method in which they meet these goals is through reporting of results both in the aggregate and at provider or population specific levels to various audiences, including internal and external (public) ones.

With varying levels of sophistication, each of the states includes public reporting of aggregate quality results on their SMHA websites and in public documents. For example, Ohio DMH recently launched its Consumer Outcomes Data Mart, a web based data mart that allows users to generate reports based upon the consumer outcomes data collected throughout the state. Oklahoma also includes a similar web based system for public reporting of results. Best practice SMHAs also provide data reports to their provider communities to support quality improvement.

Table 9 below shows the frequency of internal and external quality reporting conducted by the best practice states, and the most recent public reports available on the SMHA's websites.

Table 9: Best Practice State Quality/Performance Reports

State	Quarterly	Semi-annual (Every 6 mos.)	Annual	Most Recent Report on Website <sup>15</sup>
<b>CT</b>	Provider reports (Monthly)		Statewide Performance Outcomes measures table on website, public Provider-specific Consumer Survey Reports	Statewide Outcomes measures table, 2005 Consumer Survey Report SFY 2006
<b>OH</b>	Statewide Outcomes reports, public and provider	Balanced Scorecard for internal department	Statewide Outcomes Norms reports, public and provider	June 2006 for Statewide Outcomes Data Report
<b>OK</b>	Regional Performance Management Report, public reporting			June 2006 for Regional Performance Mgmt Report
<b>WA</b>	Telesage Outcomes reports, providers		Performance Indicator report	2005 Performance Indicators Report

We found most of the best practice state's performance reports to be sophisticated with well-defined measures. The states commented that these various reports are used to monitor and respond to trends such as an increase in inpatient utilization for a specific population group.

### Using QMRS to Improve Quality at the Provider/Client Level

The best practice SMHAs reported they are moving from measurement to quality improvement. Some examples of how best practices states are using their QMRS for improvement include the following:

- **Oklahoma** uses its QMRS to monitor access to evidence-based practice (EBP) programs by specific populations. They report on this in their Regional Performance Reports, but they don't track fidelity to EBPs on their website public reports.
- **Connecticut** is developing a value index to determine the relative value of programs, e.g., what are the outcomes for new or established EBP or other programs, and are those programs worth the investment? Connecticut is also using its QMRS to investigate how to define episodes of care that will support long-term recovery.

<sup>15</sup> Reports available on each SMHA's website as of September 2006

Each best practice state provides data to its counties, regions, or individual providers for quality improvement. Each state had an expectation that these entities, especially providers, would use data for quality improvement. However, each state found that providers have varying resources and abilities to conduct quality improvement activities. Connecticut, Ohio, and Oklahoma are using and/or are developing regional provider performance centers or user groups as a means to improve provider ability to conduct quality improvement<sup>16</sup>.

### ***VHA and PacifiCare Health Systems—Why Look at Other Organizations?***

In addition to our best practice states, we also interviewed administrators at the Veteran's Health Administration (VHA) and PacifiCare Behavioral Health (PBH). We chose these organizations based on a review of the literature and the recommendations of our national experts. The VHA's QMRS has led to substantial and measurable improvement in patient outcomes and PacifiCare has demonstrated the ability to implement quality improvement at the provider level that directly impacts client outcomes.

These two organizations differ from state SMHAs. The VHA is a closed health system with salaried provider employees. PacifiCare is a managed care organization that contracts directly with providers. Thus, both organizations have the ability to directly influence provider behavior. However, both systems' QMRS experience in the development and implementation of their QMRS mirrors best practice states. Lessons learned regarding implementation and using QMRS are also comparable. Perhaps most important is that the core elements of each system could be replicated by an SMHA. More information on the VHA and PacifiCare Behavioral Health QMRS can be found in the DMH Resource Notebook.

### **Background on the Veteran's Health Administration (VHA)**

The VHA serves 5.1 million patients<sup>17</sup> using a regional approach that incorporates 21 Veterans Integrated Service Networks (VISNs). With the implementation of its QMRS in the mid-1990's, physical and behavioral health care has improved dramatically. After many years of under-performing, the VHA is currently rated by the National Committee for Quality Assurance (NCQA) as the United States' number one health care system. The VHA's QMRS was developed under the leadership of former Under-Secretary for Health, Department of Veterans Affairs, Ken Kizer, over a five year period.

Core components of the VHA's QMRS include:

- Interoperable electronic health record.
- Evidence-based practice guidelines built into the electronic health record.

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<sup>16</sup> Ok used a SAMHSA Transformation Grant to fund its Innovation Center

<sup>17</sup> Safety is Not Enough: Moving to Effectiveness and Caring through New Care Models and New Technologies (2004). Veterans Health Administration

- Automated pharmacy ordering which has almost eliminated prescribing medication as well as dispensing errors.
- Sophisticated benchmarking across about ninety measures including behavioral health. Please see Appendix 4 for a list of the VHA behavioral health quality measures.
- Use of performance incentives. Within the ninety performance measures are twenty measures on average that are considered high priority. These twenty measures are selected by the VHA with input from VISN directors. To receive performance bonuses, all managers and medical doctors who serve as clinicians are on the pay-for-performance plan and must meet target goals for these measures. Social workers, nurses, and psychologists on Executive Career Field Status are also part of the plan.

While the VHA's framework and QMRS supports high quality care, its medical focus does not include recovery outcomes or other outcomes that may be of importance to its veterans and their families. The Region I VISN<sup>18</sup> is working with consumers on a peer specialist initiative. However, most of the consumer and family involvement is through the national Committee on Serious Mental Illness.

Of all the QMRS systems we encountered, the VHA appeared to have the most sophisticated QMRS. The VHA is able to use its QMRS for improving quality of care at the provider and client level. In large part, this quality can be attributed to its interoperable electronic health record, measure benchmarking, and performance incentive programs. Of note, the VHA electronic health record software is in the public domain and could be used by SMHAs and their providers.

### **PacifiCare—Background on the PacifiCare and Its ALERT<sup>®</sup> System**

PacifiCare Behavioral Health (PBH) is a commercial managed behavioral health care company that serves over 4 million members in 13 states. PBH has recently merged with United Behavioral Health (UBH). The PBH outcomes system, known as the ALERT<sup>®</sup> System is expected to become part of UBH's operations. See the Resource Notebook for more detailed information on the Alert<sup>®</sup> System.

The ALERT<sup>®</sup> System was developed under the leadership of Ed Jones, former Chief Clinical Officer at PBH. Development of the system took two years, and incorporated provider feedback. Chief QMRS system components include:

- 30-item outcomes tool that patients complete at predetermined points over the course of treatment. This tool assesses depression, risk of suicide, substance abuse, and premature termination of treatment.
- Change Index Score that benchmarks patient progress and clinician effectiveness.
- Number of sessions/course of treatment becomes a decision between therapist and patient; prior authorization is waived when the client's outcomes form is submitted.

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<sup>18</sup> VISN 1 covers the six state New England region (Massachusetts, Maine, New Hampshire, Vermont, Connecticut, and Rhode Island).

- An Honors for Outcomes Program identifies and recognizes individual clinicians and group practices that achieve above average outcomes, regardless of length of treatment or treatment methods. The program also identifies and works with clinicians and group practices achieving below average outcomes.

We found that the VHA and PBH share a number of success factors. Leadership, benchmarking of performance measures, and technology were some of the important shared success factors. Table 10 below summarizes these success factors.

**Table 10: VHA and PBH—Success Factors**

<b>Success Factor</b>	<b>VHA</b>	<b>PBH<sup>19</sup></b>
Leadership in developing and implementing the QMRS	X	X
Ability to influence providers to use the QMRS, e.g., salaried or direct contracts	X	X
Systems have clear clinical focus that allows providers to identify and address client treatment needs quickly	X	X
System has focus on provider accountability, monitoring and feedback	X	X
VISN/PBH managers have access to provider and client level data for purposes of provider and quality improvement	X	X
Interoperable electronic health record facilitates evidence based practice in care delivery; documentation; and, data collection/analysis	X	
Veterans/clients have live, online access to current information about their medical history and treatment	X	
Provider incentives, including public recognition or financial rewards	X	X
Cost of data capture is minimal to providers	X	X
Stakeholder engagement was built into the development and implementation of the system		X
Began roll-out with a few, high performing providers		X
QMRS training and education are on-going	X	X

## Discussion: Summary of Lessons Learned

Across our interviews with national experts, best practice SMHAs and best practice organization representatives, a number of cross-cutting lessons learned emerged. These lessons are summarized below in the following areas: Leadership, Staff and Information Technology (IT) Infrastructure, Measure Selection, Implementing QMRS, and Using QMRS for Improvement. For quick reference, Table 11 summarizes lessons and critical success factors learned from the national experts (NE), best practice states, and organizations.

<sup>19</sup> PacifiCare Behavioral Health's (PBH) Alert® System was the focus of the interview so some of the critical success factors do not apply here as we did not focus on the organization itself but rather on the tool used for quality improvement.

**Table 11: Summary of Critical Success Factors, Frameworks Adopted, and QMRS Use**

<i>Factors and Uses</i>	NE <sup>20</sup>	VHA	PBH <sup>21</sup>	CT	OH	OK	WA
<b>Critical Success Factors</b>							
Strong Leadership	•	•	•	•	•	•	•
Longevity in Key Positions	•	•		•	•	•	•
Organizational Culture Focused on Quality Improvement	•	•	•	•	•	•	•
Investment in Infrastructure—IT	•	•	•	•	•	•	•
Data Integrity	•	•	•	•	•	•	•
Quality Staff/Analytic Capacity	•	•	•	•	•	•	•
Ability to Collect Individual Client-level Encounter Data—Unique ID	•	•	•	•	•	•	•
Electronic Health Record	•	•					
User Friendly Reports	•	•	•	•	•	•	•
Consumer, Family, and Other Advocate Involvement	•			•	•	•	•
Provider Collaboration	•			•	•	•	•
Provider Incentives	•	•	•				•
Remove Provider Data Burden	•						
Build Framework Based on Values	•	•		•	•	•	•
Focus on a Few Core Measures	•	• <sup>22</sup>					
Build on Existing Measures	•	•		•	•	•	•
<b>Framework Adopted and/or Recommended</b>							
Values Based	•	•		•	•	•	•
MHSIP	•			•		•	•
IOM		•					
CMS <sup>23</sup>							
<b>Using QMRS Results</b>							
Macro-Systems Level Focus	•	•	•	•	•	•	•

<sup>20</sup> National experts identified specific factors as being critical to success and recommended specific frameworks and levels for using QMRS results.

<sup>21</sup> PacifiCare Behavioral Health's (PBH) Alert® System was the focus of the interview so some of the critical success factors do not apply here as we did not focus on the organization itself but rather on the tool used for quality improvement.

<sup>22</sup> Although the VHA incorporated many measures into their quality management system, there are only 12 mental health measures that are currently tracked.

<sup>23</sup> The CMS Framework was not recommended by the national experts interviewed nor is it used by any of the four best practice states. The reason it is included is that it is used by the Massachusetts Systems Transformation Grant Advisory Committee at the EOHHS level in the development of their five-year strategic plan for a quality management system and DMH is within the EOHHS structure.

Management Level Focus	•	•	•	•	•	•	•
Client/Provider Level Focus	•	•	•	•	•	•	•

Of note, the MHSIP framework was used for QMRS development by three of the four best practice states. The MHSIP framework is value-based and includes a strong consumer perspective. While not a specific framework, all states reported the influence of the President's New Freedom Commission Report on Mental Health on their QMRS development.

## ***Lessons Learned: Leadership***

### **Leadership and Longevity in Key Positions is Needed**

Overall, leadership appeared to be the most important ingredient for a QMRS. Leadership is needed to:

- Develop the system
- Champion the system
- Support and institutionalize an organizational culture that accepts and uses QMRS, both at the SMHA and provider level
- Engage stakeholders

Leadership may initially come from the legislature/governor, or from a visionary within the SMHA. However, the visionary, if not commissioner, must have authority to implement and make changes.

We also found that longevity in key positions, such as Commissioner, Director of Quality/Decision Support and/or Research was necessary to sustain the QMRS until the system is more fully developed, proves its continued value, and/or becomes institutionalized.

However, regardless of the position, an understanding of and commitment to using data and a commitment to consumer recovery also appeared to be consistent leadership traits.

### **Internal and Community QMRS Cultures Must Be Established**

While leadership is a critical component for a QMRS, creating an organizational culture that supports the QMRS over time is also crucially important. This culture must exist internally within the SMHA. An external culture must also be nurtured and established within state government, legislature, and across all stakeholders. This organizational culture understands the value of data and the use of data for improvement.

Establishing such a culture requires on-going communication of results and education efforts both within the SMHA and externally. We found that best practice states and organizations use a number of avenues to communicate QMRS results and the value of the QMRS. States use their websites, publications, and newsletters to communicate what a QMRS is and its results. Of note, it appears that a high performing QMRS with an established QMRS organizational culture that includes clearly articulated roles and responsibilities for leadership and decision making can survive leadership changes.

### **Lessons Learned: Staff and IT Infrastructure**

It is important to develop the staff and IT infrastructure needed to support the QMRS goals. To collect and use QMRS data, the capacity to collect reliable data must exist. Dedicated staff with strong analytic capabilities are also needed to report, interpret, and use data for quality improvement.

IT supports QMRS best when the ability to collect client encounter data across providers and service sites is possible. The VHA and some best practice states have built the IT capability that allows providers and consumers real-time access to their data, and allows the public to have access to aggregate data. Best practice states have used a variety of national and federal grants to supplement existing or one-time state funds to build these capacities. QMRS IT can support the integration of mental health, substance abuse and physical health services. The VHA has constructed its QMRS to include IT capacity to collect reliable data across providers and settings that supports clinical integration.

### **Lessons Learned: Implementing and Using the QMRS**

#### **Stakeholder Participation in Measure Selection**

The process for selecting measures will depend on the state SMHA's philosophy and approach to stakeholder engagement. There was a wide range of stakeholder involvement in measure selection in the best practice states and in the organizations we reviewed. It appears to be most important that the process and rationale for measure selection is clearly articulated and transparent.

#### **Values Should Drive QMRS Measure Selection**

QMRS measures should address the three levels of a QMRS described earlier in this document—macro/systems, management, and client/provider. Most important, the measures should reflect the values and goals of the SMHA's system. Other considerations for selecting measures should include, at a minimum: selecting measures with an established evidence-base, reliability of data, data collection burden to providers, cost of data retrieval, and state and federal benchmarking capacity, e.g. NOMs.

#### **Measure Selection Should Consider Accreditation, Accountability, and Regulatory Requirements**

As noted earlier in this report, SMHAs and their provider agencies must meet many accreditation, federal and state regulatory requirements, as well as other reporting requirements. These requirements should be directly built into the QMRS. Some states use meeting certain accreditation standards as an indicator for quality.

#### **Stakeholders Can Be Actively Engaged in QMRS Oversight and Management**

Best practice state SMHAs use work groups and committees to keep stakeholders actively engaged in QMRS oversight and management. This supports principles of recovery—consumers are involved in treatment decisions that affect their lives—,

provides public accountability and transparency, and keeps the SMHA focused on goals important to stakeholders.

### **Provider Buy-In is Needed to Implement a QMRS**

While contracting and regulation can be used to require providers' participation in the QMRS, it does not guarantee compliance. Providers must see the potential or experience the real value of the QMRS. We learned that by starting small with high performing, early adopter agencies, early implementation issues can be quickly discovered and addressed, and the benefit more quickly realized. Incorporating financial or other incentives can speed provider buy-in. A QMRS that does not increase, or even decreases provider data burden is likely to be more attractive to providers.

### **Using QMRS for Improvement Takes Time and the Ability to Influence Provider Behavior**

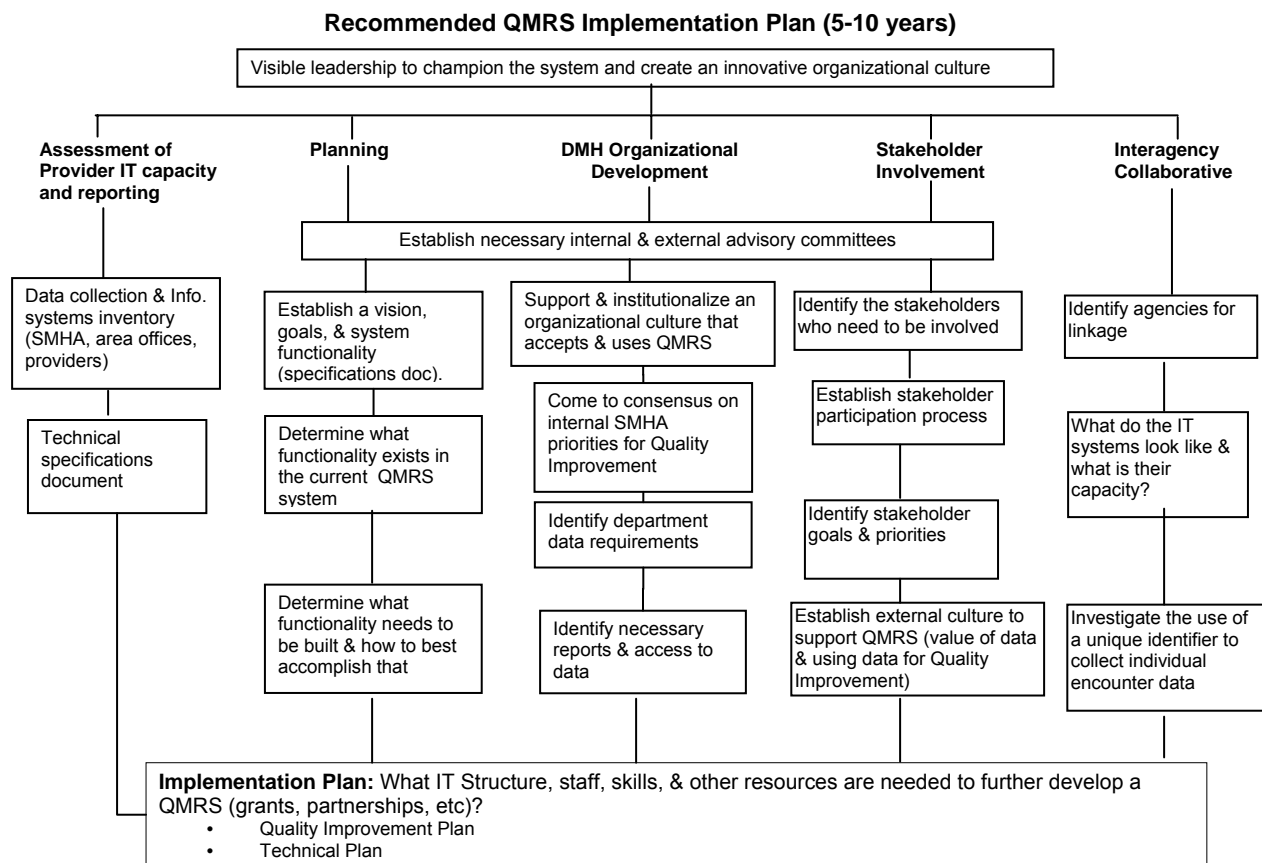
We found that the VHA and PBH are able to use their QMRS for quality improvement. Each organization is able to collect client level and provider level data, as well as benchmark data, and influence provider behavior through financial and/or other incentives.

Based on the experience of the best practice states, DMH should not expect that all providers will be able to use data for quality improvement. Providers vary in their ability to use data, or the resources of time and staff to implement quality improvement projects. The sophistication of IT across providers also varies. Both Ohio and Oklahoma hold provider forums and provide ongoing technical assistance. Ohio has established, and Connecticut is developing, regional performance improvement centers to address the varying levels of provider capacities.

### **Recommended Next Steps**

In order for a SMHA to move forward efficiently and effectively with its QMRS development, we recommend that they take a number of important steps. Many of these activities can be conducted simultaneously, while other steps are sequential. Across all activities is the need for visible leadership to champion the QMRS and to create an innovative organizational and community culture that supports QMRS. Additionally, to take action on any of the following steps, resources of staff and time will be needed. Figure 6 below provides a flow chart of recommended activities in five major areas: (1) assessment of provider capacity; (2) planning; (3) DMH organizational development; (4) stakeholder involvement; and (5) interagency collaboration. The process begins with the establishment of internal and external advisory committees and culminates in the development of an implementation plan with both quality improvement and technical components.

Figure 6: Recommended QMRS Implementation Plan (5-10 years)



### ***Assessment of DMH and Provider IT Capacity and Reporting***

As a first step, a SMHA should conduct an assessment of the current QMRS system and IT capacities at central and area offices as well as pilot an assessment with a small number of early adopter providers. The SMHA should also identify existing sources of reliable data that can be used for quality measurement thus building on the existing system.

It is important to evaluate the data collection methods and the types of requests to ensure the collection of core measures, consider the burden placed on providers and how the data is used. This assessment is likely to uncover that some data currently collected is of low yield, unreliable or not used. Low yield or unreliable data should then be eliminated and core quality measures should be established. The connection between policy makers and information technology staff is important. Three developmental steps are envisioned resulting in the following deliverables:

1. ***Data Collection and Information Systems Inventory:*** Develop an inventory of hardware, software, data collection, and other processes at the SMHA Central and Area Offices as well as from the behavioral health contractor(s) that support the existing quality management structure and strategies and provide decision support and

measurement of the quality of care provided. This inventory addresses the question, *where is the organization now?*

**2. *Technical Specifications Document:*** Develop a document identifying a preliminary list of functional requirements for a QMRS. This involves quality management systems specifications to be recommended for implementation (e.g., collection of encounter level data for clients served by the SMHA, use of a unique client identifier, development of standards for data collection and transmission, etc). This document addresses the question, *where does the organization want to be?*

**3. *Implementation Plan:*** Develop an implementation plan that includes both quality improvement and technical components. This implementation plan builds the bridge between policy and quality improvement, and technology. The plan includes a gap analysis between current and desired capabilities. This plan would include the specific measures to be included as well as the reports to be issued and the degree of provider and consumer access to the information. In the case of the VHA, the Computerized Patient Record System and the Decision Support System are the foundation of their quality improvement initiative. On the technical side, the specific steps that need to be taken will be outlined in terms of hardware, software, data collection, and other processes to implement the Quality Improvement Program developed by a SMHA and the stakeholder team and establish real-time, data-driven decision supports and data reporting capacities. This plan addresses two important questions, *how will the organization get there and how will they know when they have accomplished their QMRS goal(s)?*

## **Planning**

In order for a SMHA's QMRS to have a clear focus, we recommend they consider conducting a number of additional planning activities. These activities will help structure subsequent activities and include:

- Establish a mission and vision for the QMRS. This will help focus the organization in its on-going QMRS efforts.
- Prioritize and identify QMRS goals. If not already in place, develop a process to determine how goals align with stakeholder goals and priorities. Incorporate stakeholder goals into the QMRS.
- Develop a long-range plan for populations, settings, and services that will be included in the QMRS. Additionally, determine if achieving mental health, substance abuse, primary care, and agency service integration will be a goal of the QMRS.
- Identify additional QMRS specifications and capabilities that will be needed to achieve the QMRS goals. For instance, determine if a unique client ID will be developed for use across agencies, and how data will be transmitted across regions and state agencies.
- Identify capabilities and functionality that need to be built and determine how best to accomplish that.

- Explore grants to support QMRS development. Additionally, determine the appropriate level of training and support providers may need and explore the possibility of establishing regional performance improvement centers as Ohio has done and Oklahoma and Connecticut are developing.

### **Organizational Development**

The following are organizational development activities for the SMHA to consider.

- Establish necessary advisory committees. Identify the individuals within the Department that need to be involved in design and development to establish a core leadership team and subcommittee structure.
- Create processes to support culture change. Consider how QMRS activities and successes will be communicated internally and externally, e.g., using newsletters, websites, and provider recognition.
- Identify what types of data and reports are needed by the organization to manage its system.
- Identify what data and reports will be available to individual providers and individual consumers for quality improvement. Additionally, determine what data and reports will be publicly available.
- Identify the SMHA's current data reporting requirements, e.g., data needed for reporting requirements and data needed by a Commissioner and others for system monitoring and improvement.
- Determine what QMRS resources will be needed to collect, analyze, and report QMRS data. Ohio and the VHA have conducted cost analyses for data collection. An SMHA may wish to determine relative costs of data collection and build that into their QMRS budget.
- Acquire resources needed for the QMRS. Explore the availability of grants as a means to augment existing staff or IT. Explore extending resources through academic or other partnerships.

### **Stakeholder Involvement**

The following steps should be taken to assure appropriate stakeholder involvement.

- Identify individuals and organizations outside the SMHA whose involvement will ensure that the system that is developed is responsive to the needs of stakeholders and establish a clear participation process.
- Create a process for systematic engagement that is consistent with organizational needs and policies.
- Identify the goals and priorities of consumers, family members, advocates, and providers.
- Establish an external culture to support quality measurement, reporting, and improvement.

## **Interagency Collaboration**

It is important that the SMHA consider interagency collaboration from the very beginning of the process of QMRS development in much the same way as involving other external stakeholders is important. One way to involve other agencies is through an organization's QMRS stakeholder planning and oversight structures and processes. A SMHA should consider processes to work with other state agencies to:

- Share and transmit data
- Develop a unique, cross-agency client identifier
- Develop reports that will be used across state agencies for quality improvement at the client and provider level.

## **Conclusion**

Leadership that has the authority to make change may be the most essential component needed to build an effective QMRS. We feel the QMRS will be best served when other leaders, consumers, and other stakeholders have an active role in QMRS development and/or oversight. Even with strong leadership and stakeholder involvement, it takes time to develop and implement a QMRS. Best practice states told us to expect a five-to-ten year implementation curve. Improving the existing QMRS will likely also require additional resources. Federal, national, and other grants can be used to support QMRS IT and staff, but the SMHA should not underestimate the resources of time and staff that will be required.

When selecting measures, the SMHA will need to decide whether to use or modify an existing framework, or whether to develop a new value-based framework. To come to this decision, the SMHA may wish to examine the MHSIP framework and Decision Support 2000, and the other frameworks discussed in this report.

Consumers are an integral part of a QMRS. We feel that the QMRS will be best served when stakeholders work with the SMHA and have an active role in QMRS development and/or oversight. A well designed QMRS supports client recovery and includes consumers in selecting measures. QMRS information needs to be presented to consumers in a way that supports their treatment choices and allows consumers to play an active role in their treatment and recovery.

When developing QMRS capacities, it will be important to build IT that supports the collection of client and provider level encounter data across providers and other state agencies. This IT will support the use of evidence-based practices across settings and providers, and support clinical integration across mental health, substance abuse, primary care, and other health and human services. To make sure quality improvement activities result from the measurement and reporting aspects of the QMRS, the SMHA will need to offer training and technical assistance for providers to interpret the results of their QMRS reports and to develop QI interventions related to their specific results. Additionally, the SMHA may want to strengthen support and adherence to QMRS reporting requirements through the use of contract language and other incentives. The biggest challenge will be to move from measurement and reporting to improvement.

In summary, the Massachusetts DMH is to be congratulated for taking the time to learn practical and important lessons from national experts and best practice SMHAs before embarking on the task of expanding its current QMRS. As mentioned, CHPR built upon the initial work, conducted on behalf of DMH, and took it one step further by developing the 5-10 year implementation plan or roadmap. SMHA's can use this report and the materials contained in the supplemental Resource Notebook to inform their ongoing development of a high-performance QMRS that supports their vision, mission, and goals.

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### **Relevant Accreditation Agencies with Behavioral Health QMRS Requirements**

Commission on Accreditation of Rehabilitation Facilities (CARF) <http://www.carf.org/>

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) <http://www.jointcommission.org/>

Council on Accreditation (COA) <http://coanet.org/front3/index.cfm>

National Committee on Quality Assurance (NCQA ) <http://www.ncqa.org/>

## Appendix 2: Detailed Methodology

This project used multiple qualitative methods to gather information that includes the following:

- Targeted behavioral and physical health quality literature, document review, and internet research. As part of this review, we compiled a listing of national behavioral health quality frameworks, national behavioral health measure sets, relevant accreditation agencies, and federal behavioral health regulations and reporting requirements. Appendix 1 provides a complete list of items reviewed for this project.
- Comparative analysis of national measure sets and the core performance measures used by the best practice states studied for this project. The Quality Resource Notebook provides analysis results.
- Interviews with five national experts in the field of behavioral health QMRS and/or government: James Callahan, Richard Dougherty, Vijay Ganju, Richard Hermann, and Robert Rosenheck. These experts were selected based on our literature review and the advice of the project team.

**Appendix Table 1: National Experts—Areas of Expertise**

<b>National Expert</b>	<b>Background Information and Areas of Expertise</b>
<b>James Callahan</b>	Currently retired Professor, Brandeis University, Heller School for social Policy and Management / former Commissioner of Massachusetts DMH, former Secretary of Massachusetts Department of Elder Affairs, former Assistant Commissioner for MassHealth (Massachusetts Medicaid)  Historical perspective on MA DMH, measure selection, using performance measures for QI
<b>Richard Dougherty</b>	President, DMA Health Strategies  National initiatives/best practice states, measure selection, management and infrastructure, using performance measures for QI
<b>Vijay Ganju</b>	Director, Center for Mental Health Quality and Accountability National Research Institute (NRI) of the National Association of State Mental Health Program Directors (NASMHPD)  National initiatives/best practice states, management and infrastructure, measure selection
<b>Richard Hermann</b>	Adjunct Associate Professor of Health Policy and Management, Department of Health Policy and Management at the Harvard School of Public Health / Associate Professor in Medicine and Psychiatry at Tufts University School of Medicine / Assistant Professor in Psychiatry, Harvard Medical School / Director, Center for Quality Assessment and Improvement in Mental Health (CQAIMH)  Measure selection, using performance measures for QI
<b>Ron Manderscheid</b>	Director, Mental Health and Substance Use Programs, Constella Group, L.L.C. and former Chief of the Survey and Analysis Branch of the Division of State and Communities Systems Development within SMHSA's Center

<i>National Expert</i>	<b>Background Information and Areas of Expertise</b>
	for Mental Health Services (CMHS). National initiatives/best practice states, state implementation of QMRS, management and infrastructure
<b>Robert Rosenheck</b>	Director, VHA's Northeast Program Evaluation Center (NEPEC) Management and infrastructure, implementing QMRS, using performance measures for QI

- Identification of four best practice states— Connecticut, Ohio, Oklahoma, and Washington—and two best practice organizations—Veteran's Health Administration (VHA) and PacifiCare Behavioral Health—for additional study.
- Interviews with the four best practice states' commissioners and/or their designees and with administrators at Veteran's Health Administration (VHA) and PacifiCare Behavioral Health. We also conducted two site visits at Veteran's Integrated Service Network—Region 1 as part of the VHA interview. Table 2 below shows the rationale for selecting best practice states and organizations, and the twenty states considered. Table 3 below shows who we interviewed from each best practice state and organization.

Appendix Table 2: Best States and Organizations Selection Rationale

<i>Recommended State/Organization</i>	<b>Rationale</b>
<b>Connecticut</b>	NAMI "B+"; value indexing of programs; consumer involvement
<b>Ohio</b>	NAMI "B+"; system performance monitoring; data systems; analytic capacity; consumer involvement; reporting up of data from the counties; public reporting
<b>Oklahoma</b>	Using data for quality improvement; IT capability; NOMs, use of performance measures; consumer involvement; public reporting
<b>Washington</b>	Ability to integrate data set for state agencies; electronic outcomes tool; NOMs/URS; public reporting
<b>Veteran's Health Administration (VHA)</b>	IT, EHR, data collection, reporting, use of data for quality improvement
<b>PacifiCare Behavioral Health</b>	Commercial plan; outcomes tool, practice-based evidence; use of data to monitor provider performance

Appendix Table 3: Best Practice States and Organizations Interview Respondents

<i>State</i>	<b>Respondent</b>
<b>Connecticut</b>	Thomas A. Kirk, Commissioner
<b>Ohio</b>	Michael Hogan, Commissioner
<b>Oklahoma</b>	Terry Cline, Commissioner Steve Davis, Director of Decision Support

State	Respondent
Washington	Judy Hall, Director of Research
PacifiCare Health Systems	Ed Jones, consultant, developer of PacifiCare's ALERT system Eric Hamilton, manager of ALERT system
VHA—VISN-1	Sam Rofman, Service Line Director for Mental Health John Riley, Health Systems Administrator William Ruplinger, Decision Support System Coordinator

- Creation of a standard national expert interview guide that encompasses all of the research questions. Each national expert was asked selected questions from that guide that targeted their particular area(s) of expertise. However, each national expert was asked to respond to a core set of questions in the area of lessons learned and providing advice to an SMHA.
- Created a standard best practice state SMHA interview guide based on the project research questions. We modified some best practice state interview guide questions to reflect the differences between the organizations and states.
- Conducted a targeted review of each of the additional recommended best practice SMHA's website reporting and public transparency. Table 4 below lists the additional states. Please see the Quality Resource Notebook for results of this review.

**Appendix Table 4: Best Practice States and Organizations Interview Respondents**

State	Rationale
CA	(LA country) Children's QM system, uses data to improve quality of care
DE	Substance Abuse measures used to improved quality of care
HI	Children's QM system; one of the best states at using results to improve quality of care
IL	Piloting recovery measures
MA	Restraint and seclusion measures; MassHealth Behavioral Health outcome measurement tools; MassHealth Behavioral Health contracting for behavioral health services
MD	Comparability to MA regarding SMHA/Medicaid, EBPs
NY	Reporting; use of data warehouse; piloting recovery scores
OR	EBPs, public reporting
PA	Alleghany County/Pittsburgh. Use of MH and Medicaid data ( <i>County, not SMHA level</i> )
TX	Use of SA/MH and Medicaid data; moving to EMR; monitoring provider performance
UT/GA	Recommended by DMH

## Limitations

We targeted our literature, document, and website reviews to meet the needs of this project. Time limitations prevented us from conducting an exhaustive review of the quality improvement literature or of the states' QMRS efforts.

As noted above, national experts responded to core and specific questions. Therefore experts did not have the opportunity to respond to each question in the interview guide. To respect the time of all of the people we interviewed, we conducted interviews within a sixty-to-ninety minute time span. This allowed us to gather high-level, rather than detailed, information from the best practice states. Our time limitations also led to some skipped questions in the standardized best practice state interview guide.

Project timeframes restricted our ability to access and/or analyze fully best practice states' and other states' performance measures.

*“If you’ve seen one state, you’ve seen one state...”* There is wide state variability in funding, organization, authority for settings and populations served, funding, and other resources, etc. No state is an exact “match” to MA.

This report uses interview results that rely on the respondent's self-report as a source of project findings. It is likely that some interview results will not always agree with the perceptions of others.

**Appendix 3: Crosswalk of IOM and CMS Quality Frameworks**

IOM Framework		CMS Framework	
Equitable	Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socio-economic status.	Participant Access	Individuals have access to home and community-based services and supports in their communities
Timely	Reducing waits and sometimes harmful delays for both those who receive and those who give care		
Patient-centered	Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions	Participant-Centered Service Planning and Delivery	Services and supports are planned and effectively implemented in accordance with each participant's unique needs, expressed preferences and decisions concerning his/her life in the community
		Participant Outcomes and Satisfaction	Participants are satisfied with their services and achieve desired outcomes
Effective	Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding under-use and overuse, respectively)	Provider Capacity and Capabilities	There are sufficient HCBS providers and they possess and demonstrate the capability to effectively serve the population
Safety	Avoiding injuries to patients from the care that is intended to help them	Participant Safeguards	Participants are safe and secure in their homes and communities, taking into account their informed and expressed choices.
		Participant Rights and Responsibilities	Participants receive support to exercise their rights and in accepting personal responsibility
Efficient	Avoiding waste, including waste of equipment, supplies, ideas, and energy	System Performance	The system supports participants efficiently and effectively and constantly strives to improve quality

### Appendix 4: Comparative Chart of Measures

The following chart is an attempt to bring together the mental health quality measures used by the four best practice states and the Veteran’s Health Administration, the measures recommended the by MHSIP Quality Report, and required by SAMHSA’s National Outcomes Measures System (NOMS) into a chart for comparison purposes. The shaded measures are those that are shared in common by at least two of the entities included in the chart. This chart is still a work in progress, as we are waiting for additional quality measures from Connecticut’s SMHA, and for specific measures used by the VHA. Currently, this chart only lists VHA indicators.

Sources of information for the measures included in the chart are as follows:

- CT:** Mental health performance outcome measures from DMHAS Quality Management and Improvement Department
- OH:** Balanced Scorecard for Ohio Department of Mental Health
- OK:** Regional Performance Management Reports and real time data available to providers for treatment and data quality monitoring from ODMHSAS
- WA:** Performance Indicators Report, 2004
- VHA:** Documentation from VISN I
- MHSIP:** 2005 MHSIP Quality Report
- NOMS:** [www.nationaloutcomesmeasures.samhsa.gov](http://www.nationaloutcomesmeasures.samhsa.gov)

**Please note:** The domains used to organize the measures in this chart, access, appropriateness of care, and outcomes, are taken from the MHSIP quality report domains. Shaded boxes indicate common measures shaded across the states and organizations included in this chart

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
<b>ACCESS MEASURES</b>						
Percent of adults reporting positively about access on the MHSIP Consumer Survey	Penetration rate of community mental health services per 100,000 for the total population and for special populations (i.e., African American, age 0-17, age 18-64, and age 65+)	Penetration rate of any mental health service from a DMHSAS-funded agency per 1,000 by population living at or below 200% state poverty level for adults, children and	Penetration rate of community outpatient services for total population and by age, race/ethnicity, and Medicaid eligibility	Percent of Community Based Outpatient Clinics serving at least 1,500 patients with at least 10% of their qualifying visits having a Mental Health specialty encounter	Percent of adult consumers and caregivers that feel access to treatment is convenient and timely.	Rate of utilization of SMHA Mental Health services per 1,000 population by age, gender, race and ethnicity

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
		adults with Major Mental Illness (MMI)				
A utilization rate of at least 90% will be achieved for specific levels of community care.	Percentage of homeless SMD not currently served by the mental health system linked to housing and/or mental health services	Penetration rate of mental health core outpatient services per 1,000 by population living at or below 200% state poverty level for adults and adults with MMI	Average number of outpatient service hours per consumer by age group, race/ethnicity, and Medicaid eligibility	Percent of homeless veterans entering a homeless program who receive mental health and substance use disorder specialty services within the period of 30 days prior to and extending to 60 days after the date of admission to the homeless program	Percent of adult consumers who feel they have access to a primary mental health provider who meets their needs in terms of ethnicity, language, culture, age and disability.	
At least 90% of individuals requiring transportation will be at their destination within ten minutes of requested arrival time.	Number of public and private inpatient staffed beds in Ohio	Penetration rate of acute or intermediate inpatient services per 1,000 by population of adults in poverty for adults and adults with MMI	Penetration rate of community inpatient services per 1,000 for the total population and by age and race/ethnicity	Percent of homeless veterans entering a homeless program who receive Primary Care services within the period of 30 days prior to and extending to 60 days after the date of admission to the homeless program		
		Penetration rate of face to face mental health crisis services per 1,000 by population of adults in poverty	Number of days spent in community inpatient services per 1,000 by age and race/ethnicity	Percent of psychosis patients projected as requiring Mental Health Intensive Case Management (MHICM) who receive outpatient care in MHICM		

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
			Penetration rate of state hospital and children’s long term inpatient facilities per 1,000 by age group and race/ethnicity	Waiting time for new patients		
			Number of days spent in state hospital and children’s long term inpatient facilities per 1,000 by age and race/ethnicity	Waiting time for existing patients		
			Percent of adults and caregivers and youth reporting positively about access on the MHSIP Consumer Survey			

**APPROPRIATENESS OF CARE MEASURES**

Percent of non forensic adults who were discharged from inpatient care within the quarter and were re-hospitalized within 30 and within 180 days of discharge

Consumers’ satisfaction with interaction with the mental health system on a scale of one to seven across all providers

Percent of adults who were discharged from inpatient care within the quarter and were re-hospitalized within 30 days of discharge



Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
hospitalized within 30 and within 180 days of discharge	hospitals, by residential facilities, and by Community agencies	than inpatient or crisis) within 7 days of being discharged from inpatient care	within 7 and 30 days of being discharged from inpatient care	year during an outpatient visit to cease tobacco use	any of a specified set of mental health disorders	
Percent of consumers reporting positively about quality and appropriateness of care	Number of “for cause” surveys of Community Mental Health Agencies	Percent of adults who received an hourly, face to face crisis service and received another service, other than crisis, within seven days	Percent of adults and children and caregivers reporting positively about the quality and appropriateness of care by RSN	“Mental Health missed opportunities”	Percent of adult consumers who felt respected, safe and listened to during their interactions with service providers	
Percent of adults reporting positively about active participation in treatment planning and decisions	Number of customer complaints and grievances	Number of persons who received the WRAP training by region by quarter as reported by OK Consumer Council	Percent of adults and children and caregivers reporting positively about active participation in treatment planning and decisions by RSN		Percent of adult consumers who felt they had active participation in their treatment planning and decisions	
Percent of consumers receiving supported housing	Percent of parents with scores of ≤ 10 on the Ohio Scales Satisfaction Scale	Number of persons who received the Family to Family training by region by quarter as reported by OK-NAMI	Percent of children who received outpatient mental health services in the home, school, or outside provider agency by RSN		Percent of adult consumers who felt they received high quality treatment in the past XX months	
Percent of clients screened for concurrent psychiatric conditions upon intake to methadone maintenance treatment program	Percent of board areas with at least one agency adopting one of CCOEs' Evidence-Based Practices (EBPs)	Number of children served in Systems of Care programs by region by quarter	Percent of mental health outpatient service recipients who had both a mental illness and a substance abuse diagnosis by age, RSN and statewide		Total number of medication errors by the total number of consumers receiving inpatient services during reporting period	
Percent of clients in methadone maintenance tx	Number of persons trained in EBPs by	Number of persons served in PACT	Percent of mental health outpatient service recipients		Percent of consumers with serious mental	

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
program evaluated by clinically appropriate staff when exhibiting moderate symptoms of depression, anxiety or other psychiatric disorders	CCOEs	programs by region by quarter	who received DASA services by age group, RSN and statewide		illness receiving peer support services	
Percent of clients in methadone maintenance tx program referred to mental health tx services when they are deemed beneficial	Number of persons trained in EBPs by Residency and Traineeship Programs	Percent of adults with MMI who received a case management or individual rehab service	Percent of adults who reported on the MHSIP Adult Consumer Survey that they saw a nurse or doctor in the past year for a health check up or because they were sick by RSN		Percent of adults with schizophrenia receiving new generation medications	
Percent of pregnant women admitted to substance abuse treatment with a confirmed prenatal visit within 45 days of admission	Number of EBPs promoted by Residency and Traineeship Programs	Percent of adults with schizophrenia, schizoaffective disorder, major depression or bipolar disorder who received a medication visit	Percent of people who received outpatient services and who were not hospitalized in any setting by age and race/ethnicity by RSN		Percent of adults with serious mental illness and adolescents receiving illness self-management training	
Percent of postpartum women in treatment for more than 60 days with a confirmed pediatric visit for their newborns	Percent of agencies determined to have met national quality standards				Percent of persons screened for a co-occurring mental illness/substance abuse disorder	
At least 50% of consumers will be admitted to or receive a service at a lower level of care within 14 days of discharge from an inpatient						

<b>Chart of Mental Health Quality Measures</b>						
<b>CT</b>	<b>OH</b>	<b>OK</b>	<b>WA</b>	<b>VHA</b>	<b>MHSIP Quality Report</b>	<b>NOMs</b>
psychiatric setting.						
At least 75% of consumers discharged from residential or inpatient settings will have at least two services in one community program in the month following their month of discharge						
<b>OUTCOMES MEASURES</b>						
Percent of adults who were competitively employed in past year	Percent of adults with serious mental illness who are employed	Change in employment from admission to discharge overall and by level of care	Percent of adult outpatient service recipients who were employed at any time during year by RSN and statewide	Percent of patients using tobacco any time during the past 12 months	Percent of adult consumers who were recently in the workforce reporting a target level of improvement in ability to perform paid work	Increased/Retained employment
Percent of adults who were arrested in the past 30 days and six months	Recidivism rate of persons linked through the Community Linkage Program	Change in number of arrest in 30 days from admission to discharge overall and by level of care	Percent of adult outpatient service recipients who were engaged in volunteer work during year by RSN and statewide		Percent of adults and adolescents with arrests during treatment year	Decreased criminal justice involvement
At least 60% of clients will maintain or increase their level of functioning between time of admission and time of discharge, as measured by living arrangements reported to DMHAS at admission and discharge.		Change in current residence from admission to discharge overall and by level of care	Percent of adult outpatient service recipients who were homeless at any time during the year by RSN and statewide		Percent of adult consumers who felt their life has improved as a result of mental health services	Increased stability in housing
At least 80% of clients will be	Percent of adults with	Change in Client	Percent of adult outpatient		Percent of adult and child	Decreased mental

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
living in stable housing at the time of discharge from residential services, as measured by living arrangements reported to DMHAS at discharge.	scores of $\leq 45$ and percent of adults showing $\geq 6$ points of improvement on the Symptom Distress Scale	Assessment Record (CAR) score from admission to discharge	service recipients who were living independently any time during year by RSN and statewide		consumers who report a decrease in symptom distress following treatment	illness symptomatology
At least 75% of clients across various levels of care will maintain or increase their level of functioning between time of admission and time of discharge or will maintain or increase their level of functioning over a 6 month period as measured by the Modified Global Assessment of Functioning Scale (MGAF)	Percent of child/adolescent consumers with scores of $\leq 41$ and the percent showing $\geq 10$ points improvement on the Ohio Scales Problem Severity Scale	Percent of adults with MMI who lived in independent housing during the quarter	Percent of child outpatient service recipients who were living in their own home or foster care any time during year by RSN and statewide		Percent of adults and caregivers who report they have access to social support and feelings of social connectedness other than from service providers	Increased social supports and social connectedness
	Percent of adults with average scores of $\geq 3.5$ and the percent of adults showing $\geq 0.5$ points of improvement on the Quality of Life Scale		Percent of child outpatient service recipients who were homeless any time during year by RSN and statewide		Percent of children and caregivers who report improved performance in school as result of services	Return to or remain in school
	Percent of parents of child/adolescent consumers with scores of $\leq 14$ and the percent showing $\geq 2$ points of improvement on the Ohio Scales Hopefulness Scale				Number of days absent from school in last 30 days as a percentage of available school days	

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
	Percent of adults with scores of $\geq 33$ and percent showing $\geq 4$ points of improvement on the Community Functioning Scale				Percent of children and adolescents with juvenile justice involvement in past year	
	Percent of child/adolescent consumers with scores of $\geq 34$ and the percent showing $>8$ points of improvement on the Ohio Scales Functioning Scale					
	Percent of adults with scores of $\geq 2.74$ and percent showing $\geq 0.3$ points of improvement on the Making Decisions Empowerment Scale					
	Percent of child/adolescent (age 12 to 18) consumers with scores of $\leq 11$ and percent showing $\geq 2$ points of improvement on the Ohio Scales Hopefulness Scale					
	Percent of kids 5 to 18 who meet SED criteria with ROLES scores on					

Chart of Mental Health Quality Measures						
CT	OH	OK	WA	VHA	MHSIP Quality Report	NOMs
	the Ohio Scales that indicate out-of-home placement					
	Percent of SED kids with MACSIS service location codes that indicate out-of-home					
	Percent of kids who seriously considered and percent who attempted suicide in the past 12 months					
	Percent of kids 12 to 18 indicating that they were talking or thinking about death several times or more in a 30 day period					
	Rate of suicide completions per 100,000 in Ohio by age					
	Percent of kids 5 to 18 who meet SED criteria and are having low levels of trouble in school					
	Percent of kids who meet SED criteria and are improving in school performance					
	Percent of eligible consumers with					

<b>Chart of Mental Health Quality Measures</b>						
<b>CT</b>	<b>OH</b>	<b>OK</b>	<b>WA</b>	<b>VHA</b>	<b>MHSIP Quality Report</b>	<b>NOMs</b>
	Outcomes reported					
	Psychiatric causes as a percentage of disability in the workplace					