Use of Quality Measures for Medicaid Behavioral Health Services by State Agencies: Implications for Health Care Reform

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Objective: The structure-process-outcome quality framework espoused by Donabedian provides a conceptual way to examine and prioritize behavioral health quality measures used by states. This report presents an environmental scan of the quality measures and satisfaction surveys that state Medicaid managed care and behavioral health agencies used prior to Medicaid expansion in 2014.

Methods: Data were collected by reviewing online documents related to Medicaid managed care contracts for behavioral health, quality strategies, quality improvement plans, quality and performance indicators data, annual outcomes reports, performance measure specification manuals, legislative reports, and Medicaid waiver requests for proposals.

Results: Information was publicly available for 29 states. Most states relied on process measures, along with some structure and outcome measures. Although all states reported on at least one process measure of behavioral health quality, 52% of states did not use any outcomes measures and 48% of states had no structure measures. A majority of the states (69%) used behavioral health measures from the National Committee for Quality Assurance's Healthcare Effectiveness Data and Information Set, and all but one state in the sample (97%) used consumer experience-of-care surveys. Many states supplemented these data with locally developed behavioral health indicators that rely on administrative and non-administrative data.

Conclusions: State Medicaid agencies are using nationally recognized as well as local measures to assess quality of behavioral health care. Findings indicate a need for additional nationally endorsed measures in the area of substance use disorders and treatment outcomes.

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Although efforts to measure health care performance have been under way for more than 25 years in the United States, the federal government and states have accelerated their investments in measurement in recent years (1,2). The Affordable Care Act (ACA) required the secretary of the Department of Health and Human Services (DHHS) to "establish a national strategy to improve the delivery of health care services, patient health outcomes, and population health." In March 2011, DHHS released the first report to Congress establishing the National Quality Strategy's three aims: improve the overall quality of care, improve population health, and reduce the cost of high-quality health care (3).

Advancing performance measures is of particular importance for behavioral health care. The ACA and the Mental Health Parity and Addiction Equity Act of 2008 are expected to stimulate demand for behavioral health services by providing mental health care and substance abuse treatment benefits to an estimated 62 million additional Americans. Beginning in 2014, the ACA requires all nongrandfathered small-group plans and individual policies to cover mental health and substance abuse treatment as an essential health care benefit (4). The ACA also provides incentives for the development of integrated service delivery systems such as affordable care organizations, bundled payment systems, payfor-performance systems, and other delivery and financing structures aimed at containing costs (5–8). Performance measures are critical under these new systems to ensure the appropriate balance among costs, access to care, and quality of care. Individuals with mental health and substance use disorders may be particularly vulnerable to low-quality treatment because disproportionately they are in a low-income bracket, lack social supports, have cognitive and functional disabilities, and may be reticent to complain about poor-quality care because of concerns about stigma (9).

Although historically the quality improvement infrastructure for behavioral health care has been less developed than that of medical care (10,11), in recent years a number of agencies have responded to the call for more quality measures for

HEDIS MEASURES FOR BEHAVIORAL HEALTH, 2011 AND 2013

The following measures of effectiveness, access and availability, and utilization were identified in 2011.

Effectiveness of Care

- Antidepressant medication management
- Follow-up care for children prescribed medication for attention-deficit hyperactivity disorder
- Follow-up care after hospitalization for mental illness

Four measures were added in 2013:

- Diabetes screening for individuals who have schizophrenia or bipolar disorder and who use antipsychotic medications
- Diabetes monitoring for individuals with diabetes and schizophrenia
- Cardiovascular monitoring for individuals with cardiovascular disease and schizophrenia
- Adherence to antipsychotic medications for individuals with schizophrenia

Access and Availability

- Initiation and engagement of alcohol and other drug dependence treatment
- Identification of alcohol and other drug services

Utilization

• Mental health utilization: inpatient, intermediate, ambulatory, and all utilization

behavioral health care. In 2014, the Substance Abuse and Mental Health Services Administration (SAMHSA) released the National Behavioral Health Quality Framework (NBHQF) in an effort to harmonize and prioritize health behavior measures that reflect the core principles of SAMHSA, as well as to support the National Quality Strategy. The NBHQF identifies six priorities: promoting effective prevention, treatment, and recovery practices for behavioral health disorders; ensuring that behavioral health care is person centered; encouraging the coordination and integration of care; assisting communities to use best practices; increasing the safety of behavioral health care; and fostering affordable high-quality care.

Other organizations, including the National Committee for Quality Assurance (NCQA), the National Quality Forum (NQF), the Institute of Medicine, and the Agency for Healthcare Research and Quality, are also moving forward with new behavioral health performance measures. For example, NCQA's Healthcare Effectiveness Data and Information Set (HEDIS) contains ten behavioral health measures covering the quality domains of effectiveness of care, access to and availability of care, and utilization of care (see box on this page). Four of these measures were added in calendar year 2013 to address coordination of primary care for individuals with diagnoses of schizophrenia or bipolar disorder (12). As of mid-2014, NQF had endorsed approximately 75 measures specific to behavioral health. Eight of the HEDIS measures are currently endorsed by NQF (13). The Centers for Medicare and Medicaid Services (CMS) is also developing behavioral health quality measures for inpatient psychiatric facilities (14).

The purpose of this study was to examine the behavioral health care quality measures that state Medicaid and behavioral health agencies use for reporting on quality and to identify common measures or themes among states. Findings will help determine which measures are most salient for states and any gaps in measurement areas.

METHODS

We conducted online searches of 50 state Medicaid and mental health and substance abuse agency Web sites in September 2013. Using the following terms, we searched the state Web sites in regard to behavioral health quality indicators: behavioral health quality; behavioral health performance; and mental health quality, mental health performance reports, publications, data, and special projects. A search was also conducted for state Medicaid managed care contracts, quality strategies, quality improvement plans, quality and performance indicators data, annual outcomes reports, performance measures specification manuals, legislative reports, and Medicaid waiver requests for proposals. We used the Joint Commission's definition for quality indicator: a quantitative measure that can be used to monitor and evaluate the quality of governance, management, and clinical and support functions that affect behavioral health outcomes (15). These measures were typically listed as such on the agency Web sites.

Through federal Medicaid managed care regulations (42 C.F.R. §438.200), CMS requires all states contracting with a managed care organization to have a written State Quality Strategy for assessing and improving the quality of the managed care services they offer (16). Therefore, we searched for these CMS-required quality strategy reports. Finally, we searched for any surveys or similar tools administered by the states to assess consumer satisfaction with quality of care.

We then created a database to organize the information collected. The database contained the following information on each quality indicator: state name, indicator name, originator (HEDIS, state, and so on), domain (as established by the National Inventory of Mental Health Quality Measures [NIMHQM]), category (structure, process, or outcome), source document, Web site from which the information was retrieved, and whether the state has a Medicaid managed care behavioral health program.

We queried a number of states that did not have publicly available quality indicators, and two reasons these states provided for not publishing behavioral health quality indicators on the Internet were that their quality measurement initiatives were in the development stages and that there was no state mandate to publish quality measurement initiatives.

RESULTS

From the 50 states reviewed, 29 states provided information on their Web site: Arizona, California, Colorado, Connecticut, Florida, Illinois, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, and Washington. Except for New Hampshire, each of the 29 states reviewed had some form of Medicaid-managed behavioral health care. Some states used an integrated plan that offered behavioral and general medical care through the same health plan; other states used a carve-out plan, in which behavioral health services were managed by a separate health plan (Table 1).

Table 2 provides information on the quality measure reporting that the 29 states use. The Donabedian quality-ofcare framework guided us in identifying these measures as relating to structure, process, or outcome (17). In this framework, structure measures concern the attributes of the setting, human resources, financing, and organizational structure; process measures describe what occurs in giving and receiving care; and outcome measures refer to the effects of health care on the health status of patients and populations (18). Table 2 also provides information on consumer experience-of-care surveys that states are using with individuals who receive behavioral health services and information on the originator of the measure.

Structure-Process-Outcome Framework

Seventy-four of the 369 measures (20%) used by states in our sample were classified as structure measures. Fifteen of the states (52%) represented in the sample used at least one measure of financial, human resource, or organizational structure. Over half of the measures used by states in our sample were classified as process measures; a total of 222 (60%) measures focused on the process of giving and receiving care. All states in the sample had at least one process measure, and ten states (34%) used only process measures to evaluate the quality of behavioral health services. Seventy-three of the measures (20%) could be classified as outcome measures, with 14 of the states (48%) using at least one outcome measure.

HEDIS Measures

Table 2 also indicates the states' use of HEDIS measures and other state-developed measures. Twenty state agencies (69%) in our sample used the behavioral health HEDIS measures for 2011, and eight of these states (28%) relied solely on HEDIS measures to assess behavioral health performance.

TABLE 1.	Type of behavioral health care programs offered by the
states rev	viewed

State	Integrated care ^a	Behavioral health managed care carve-out ^b	Behavioral health fee for service
Arizona		\checkmark	
California		\checkmark	
Colorado		\checkmark	
Connecticut		\checkmark	
Florida	\checkmark	\checkmark	
Illinois	\checkmark	\checkmark	
lowa	\checkmark	\checkmark	
Kansas		\checkmark	
Kentucky	\checkmark	\checkmark	
Louisiana		\checkmark	
Massachusetts	\checkmark	\checkmark	
Michigan		√ √ ^c	
Nebraska	\checkmark	\checkmark	
Nevada	\checkmark		
New Hampshire			\checkmark
New Jersey	\checkmark	\checkmark	
New Mexico		\checkmark	
New York		\checkmark	
North Carolina		\checkmark	\checkmark
Oklahoma	\checkmark		
Oregon	\checkmark	\checkmark	
Rhode Island	\checkmark		
South Carolina	\checkmark	\checkmark	
Tennessee	\checkmark	\checkmark	
Texas		\checkmark	
Utah		\checkmark	
Vermont	1		
Virginia	1	\checkmark	
Washington		✓ ^c	
Total	15	24	2

^a Integrated general medical and behavioral health managed care

^b These states separate some or all behavioral health benefits from the overall bealth plan

^c Either substance abuse treatment, inpatient behavioral health care, or both are carve-outs.

Non-HEDIS Measures

Finally, 21 states (72%) were identified as either adapting HEDIS measures or developing their own behavioral health measures by relying on administrative or nonadministrative data gathered from chart review or state-specific databases. Most of these states developed measures in addition to the standard measures, but two states (Connecticut and Michigan) relied mainly on non-HEDIS or locally developed measures. Some representative examples of state-developed measures are shown in Table 3, grouped into the domains adopted from the NIMHQM.

Some states—for example, Iowa and New Mexico—used administrative data to measure recovery-based services. Both states measured the percentage of claims for consumer-run services. Administrative data were also used to measure evidence-based pharmacotherapy. Colorado used administrative claims to determine the percentage of enrollees who were prescribed redundant antipsychotic medication; several states used pharmacy claims to determine whether prescriptions for high-risk medications were not refilled.

		Qu	ality meas	ure	S	ource
State	Survey ^a	Structure	Process	Outcome	HEDIS ^b	Non-HEDIS
Arizona	State-approved survey	1	7	1	3	6
California	CAHPS	1	2			3
Colorado	MHSIP	5	36	24	4	61
Connecticut	State-approved survey	2	2			4
Florida	State-approved survey	1	6	2	5	4
Illinois	State-approved survey	1	12	2	6	9
lowa	CAHPS	4	13	6		23
Kansas	CAHPS	26	30	13		69
Kentucky	CAHPS		8		6	2
Louisiana	State-approved survey	1	11	2	6	8
Massachusetts	State-developed survey	11	2	1	3	11
Michigan	MHSIP	3	7			10
Nebraska	Survey with state input	3	14	4	4	17
Nevada	CAHPS		3		3	
New Hampshire	CAHPS		4	2	6	
New Jersey	CAHPS		2		2	
New Mexico	MHSIP	9	6	6	2	19
New York	Unknown		18	4		22
North Carolina	State-approved survey	6				6
Oklahoma	ECHO		2			2
Oregon	MHSIP Youth Services Survey for Families		2	2		4
Rhode Island	CAHPS		4		4	
South Carolina	CAHPS		3		3	
Tennessee	CAHPS		3		3	
Texas	CAHPS		8	4	10	2
Utah	CAHPS (under consideration)		4		3	1
Vermont	State-approved survey		1		1	
Virginia	State-approved survey		5		5	
Washington	CAHPS	1	7		5	2
Total		74	222	73	84	285

^a CAHPS, Consumer Assessment of Healthcare Providers and Systems; ECHO, Experience of Care and Health Outcomes; MHSIP, Mental Health Statistics Improvement Program

^b Healthcare Effectiveness Data and Information Set

Finally, New Mexico and Utah are examples of states that used nonadministrative data. New Mexico measured the number of programs employing workers who are Native American or who speak Spanish. Utah uses a state-developed measure of screening for clinical depression and follow-up as a measure of continuity and coordination of care.

Consumer Experience-of-Care Surveys

All states in our sample except one (New York) used an identified consumer experience-of-care survey. Thirteen states (45%) reported using the Consumer Assessment of Healthcare Providers and Systems (CAHPS) consumer survey. The CAHPS has a set of comprehensive surveys sponsored by CMS that collect consumer data on the interpersonal aspects of health care (19). Eight states (28%) required an unnamed state-approved survey. Four states (14%) used the Mental Health Statistics Improvement Program (MHSIP) consumer survey. The MHSIP was developed by SAMHSA to assess the quality of mental health services, specifically in the areas of general satisfaction, access to services, service quality and appropriateness, participation in or a substance use disorder; however, these measures were largely structure measures targeting claims payment, critical incidents, and grievance and appeals.

DISCUSSION

Many state behavioral health performance measure efforts are under way. State variation in the assessment of behavioral health care services has implications for determining the quality of current care and the impact of health care reforms.

Many states have continued to rely on the NQF-endorsed HEDIS measures to provide stakeholders with an assessment of the quality of these services. However, as the landscape of behavioral health care changes, we found that many states are incorporating, adapting, or developing additional measures to fill in gaps. Some alterations broaden the existing HEDIS measures. Examples include the expansion of existing HEDIS follow-up measures to assess the quality of follow-up care after hospitalization for substance abuse or after emergency department visits. Some states have attempted to fill perceived gaps in the NQF-endorsed

treatment, treatment outcomes, cultural sensitivity, improved functioning, and social connectedness. Two states (7%) reported using a state-developed survey. One state (3%) required the Experience of Care and Health Outcomes (ECHO) Survey. The ECHO combines aspects of the MHSIP and CAHPS and was endorsed by the NQF in

2007 (13,20).

Mental Health and Substance Abuse **Treatment Measures** Table 4 provides information regarding the target population for the behavioral health measures. A total of 172 of the measures (47%) used by states in our sample were classified as targeting individuals with mental illness. Twenty-five states (86%) used at least one mental health measure. Only 56 measures (15%) concerned substance use disorders, with 14 states (48%) having at least one substance abuse treat-

ment measure. Sixteen states

(55%) published 141 measures

(38%) targeting individuals with either a mental illness

measures, such as the addition of measures that address recovery progression, integrated care, and patient safety. States are also using administrative and nonadministrative data to create quality measures that cover a wide variety of domains. An example of a measure using administrative data is Iowa's measure of the percentage of expenditures used to support consumer-run services. Examples of nonadministrative data measures include Kansas' measure of the percentage of state-qualified providers of services to children with serious emotional disturbance, Louisiana's measure of the number of persons served by evidence-based practices and by promising practices that have been implemented to fidelity.

Despite states efforts to develop additional quality indicators that promote evidencebased care and increased access to care, gaps in monitoring the quality of care continue to be found. For example, the use of outcome measures among states was limited. Although almost half of the states (48%) included at least one measure that addressed issues such as self-reported improvement in symptom severity or stable living environment, only 20% of all cataloged measures could be classified as outcome measures. A proportion of the outcome measures (21%) were hospital readmission rates, which could be considered to be a proxy measure of outcome. We consider outcome measures to be an area for expansion in quality measurement, although states may hesitate to include measures that do not account for illness severity. Although the use of behavioral health risk-adjustment models

TABLE 3. State-developed behavioral health measures, by National Inventory of Mental Health
Quality Measures domain

Domain and state-developed measures	States
Access	
Access to behavioral health provider (encounter for a visit) within 7 days of being designated as "active care" for an initial visit	Arizona
Receipt of primary care visits for those with behavioral health diagnoses	Colorado, North Carolina
Number of out-of-state placements Number of programs and agencies using community health workers, peer specialists, and practitioners	Kansas New Mexico
designed specifically for individuals who are Native American or who speak Spanish	
Continuity and coordination of care Average time between first and second contact for routine outpatient services for new clients	California
Number of emergency and follow-up visits after discharge for behavioral health	Colorado, Louisiana, Massachusetts
Follow-up after inpatient substance abuse treatment services	North Carolina
Percentage of clients with serious mental illness who are a focal point of behavioral health care	Colorado
Hospital length of stay Percentage of participants who have a comprehensive crisis plan that is documented for easy access by all providers involved	Kansas Connecticut
Percentage of acute care facility discharges for enrollees who were hospitalized for a mental or substance use disorder that resulted in a readmission within 30 days	Florida, New York
Screening for clinical depression and follow-up	Utah
Evidence-based pharmacotherapy Prescription refills within a prescribed time for specific mental or substance use disorders	Colorado, Illinois, New York
Percentage of members prescribed redundant or duplicated antipsychotic medication	Colorado
Evidence-based psychosocial interventions Number of children under age 6 who are assessed and receive early-intervention service plans	Louisiana
Number of individuals served in evidence-based practices and in promising practices that have been implemented to fidelity	Louisiana, New Mexico
Patient safety: number of adverse events, including abuse, neglect, or death; number of grievances and appeals Recovery-based	Colorado, Kansas, Massachusetts, Nebraska, North Carolina
Percentage of claims for consumer-run programs Progress toward independent living for members with severe mental illness	Iowa, New Mexico Colorado
Substance abuse treatment Percentage of discharges from detoxification for substance abuse followed by a lower level of service for substance use disorder within 14 days	New York
Rate of readmission to detoxification or rehabilitation for substance use disorder within 30 days	New York
Jtilization, cost, and efficiency Percentage of eligible people receiving ≥1 mental health or substance abuse service in a year (penetration rate)	California, Colorado, Kansas, Michigan New Mexico
Percentage of involuntary admissions to 24-hour inpatient settings for children and adults for mental health treatment	lowa

TABLE 4. State use of 369 behavioral health quality measures, by disability type

	Mental	Substance use	
State	disorder	disorder	Both
Arizona			9
California	1		2
Colorado	25	13	27
Connecticut	4		
Florida	8		1
Illinois	7	1	7
lowa	10	3	10
Kansas	41	9	19
Kentucky	8		
Louisiana	4	4	6
Massachusetts	3		11
Michigan	7	3	
Nebraska	2	1	18
Nevada	3		
New Hampshire	4		2
New Jersey	2		
New Mexico	6	3	12
New York	10	12	
North Carolina			6
Oklahoma			2
Oregon			4
Rhode Island	4		
South Carolina	2	1	
Tennessee	3		
Texas	5	2	5
Utah	3	1	
Vermont	1		
Virginia	4	1	
Washington	5	2	
Total	172	56	141

has accelerated in recent years, states may lack resources to collect the data needed to conduct appropriate risk adjustment (21). None of the states in our sample indicated the use of risk adjustment for any measure.

Greater efforts are also needed to develop additional standardized substance abuse treatment measures, given that Medicaid expansion is expected to significantly increase coverage for individuals with substance use disorders (22). Although some states have responded by adapting the few existing HEDIS measures to capture follow-up from substance abuse treatment, additional measures are needed for evaluating screening, integrated care, and use of evidencebased treatment. New York has attempted to fill the gap in substance use disorder treatment measures by developing a comprehensive array of measures for substance abuse treatment, follow-up care, and psychopharmacological treatment.

States also need to standardize measures of crisis services utilization. Many states reportedly struggle with finding psychiatric beds for individuals needing inpatient psychiatric care and with emergency department overuse because of the reduction in psychiatric hospital beds, lack of communitybased services, and lack of insurance for behavioral health treatment needs (23). The ACA may ultimately reduce overuse by providing needed insurance coverage; however, standardized emergency department utilization and emergency department wait-time measures are needed in the interim as more states resort to managed care for their behavioral health services. The standardization and adoption of crisis services utilization measures—such as the emergency department utilization measures used by Louisiana or the treatment followup measures used by Illinois and Colorado after emergency department visits—could provide states with a means of comparison and assist in improving quality of care.

The ubiquity of experience-of-care surveys is noteworthy. Our findings reveal that states used several different consumer surveys, including CAHPS, MHSIP, and state-developed or state-approved surveys. Only one state (Oklahoma) used the ECHO, which was developed specifically for managed behavioral health care. There are likely two main reasons for states' high utilization of experience-of-care surveys. Some surveys are required for federal funding. The MHSIP is currently part of the data requirements for block grants from the SAMHSA Center for Mental Health Services. States initially started reporting MHSIP data in 2002, and as of December 2012, all 50 states were reporting MHSIP results (24). Some experience-of-care surveys appear to be related to managed care implementation. Although experience-ofcare surveys are not a federal requirement, many states use the survey results as a means to show compliance with Medicaid managed care regulations.

A standardized survey that would allow for national comparisons, particularly among states with behavioral health managed care, would be beneficial. In the absence of widespread adoption of the ECHO, one possibility includes developing standardized modules to add to the MHSIP survey that would be specific to managed care and substance abuse treatment. Standardized administration and sampling strategies would also help states compare the quality of their services with the quality in other states.

Finally, it should be noted that these findings are fairly similar to earlier scans of behavioral health quality measures, which revealed that most state Medicaid programs use HEDIS measures, consumer surveys, and some outcome measures (25,26). This relatively fixed state of behavioral health quality measurement seems to indicate that states may face challenges in meeting the increasingly demanding needs of a complex and evolving health care system, but there are some indications that measurement of behavioral health care quality is improving. For example, states such as Colorado, Kansas, and New York are developing a rich array of measures to meet their needs for performance measurement. Also, the number of NQF-endorsed measures continues to increase. It is expected that state adoption of these measures will follow. Also, the expansion of Medicaid managed behavioral health care is providing the impetus for states and behavioral health providers to improve their data collection systems, thereby improving their ability to collect performance measurement data.

We acknowledge limitations in our study. We limited our review to a convenience sample defined by state information available on the Internet. The information provided on the Internet for the 29 states reviewed may not allow for a comprehensive assessment. Also, our findings may be skewed toward more information for states with Medicaid managed care, because these states are required to publish and submit a quality strategy to CMS.

CONCLUSIONS

Under the ACA insurance expansions, behavioral health services should be more readily accessible to those seeking care. A more robust quality improvement infrastructure is needed as behavioral health service utilization increases in the United States to improve the overall quality of care, improve population health, and reduce the cost of high-quality health care. Standardized surveys and measures, new measures, standardized administration procedures, and comprehensive sampling strategies should be developed to allow for state-bystate comparisons and for the establishment of national benchmarks. Finally, there is a need for additional nationally endorsed measures in the areas of substance abuse, treatment outcome, and crisis services. States are developing their own measures in these areas to fill the current gap, which may make standardization of measures more challenging in the future. The National Quality Strategy should be considered as a foundation for future development of national benchmarks.

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