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Quality Measures For Mental Health And Substance Use: Gaps, Opportunities, And Challenges

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ABSTRACT **Following up on its *Crossing the Quality Chasm* report, in 2006 the Institute of Medicine issued a report that included sweeping recommendations to improve the quality of behavioral health care in the United States. To date, few of those recommendations have been implemented, and there is little evidence that behavioral health care quality has improved significantly over the past ten years. However, the advent of health care reform, parity of insurance coverage, and growing recognition of the impact of behavioral health disorders on population health and health care costs have created new demands and opportunities for expanded and innovative strategies to assess the quality of care for this patient population. We provide an overview of the current state of quality measurement in behavioral health, identify key priorities for measure development, and describe the most important challenges. We recommend a coordinated plan that would boost investment in developing, evaluating, and implementing behavioral health quality measures; conduct research to develop the evidence necessary to support a more robust set of measures; overcome barriers to the improvement and linking of data sources; and expand efforts to build the capacity of the clinical workforce, in partnership with consumers, to improve quality.**

A number of factors are aligning that will bring significant changes to health care quality measurement and monitoring in the behavioral health sector. These include pronouncements by important bodies, such as the Institute of Medicine (IOM), which ten years ago followed its influential *Crossing the Quality Chasm* report[1] with one that identified quality and safety measurement as essential first steps in delivering more effective care to consumers with mental illnesses or substance use disorders.[2]

Other factors include important legislation such as the Affordable Care Act (ACA) and the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008, which contain provisions to improve the quality of care delivered to behavioral health consumers, both directly and through approaches to provider payment that are tied to the quality of care. The Medicare Access and CHIP Reauthorization Act of 2015 extends these payment reform efforts with a new Merit-Based Incentive Payment System for providers and incentives for participation in alternative payment models.[3]

These reforms bring expanded resources and requirements for assessing quality, with an array of legislative authorities and executive branch regulations as well as federal and state agencies, professional societies, and nongovernmental organizations charged with or focused on develop-

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ing and implementing quality measures. A key question is to what extent the behavioral health field is prepared to navigate the growing expectations for developing, endorsing, and using quality measures, given the complexity of these processes and the particular barriers the field faces to its engaging these processes.

In this article we provide an overview of the current state of quality measurement for behavioral health conditions, identify key priorities for measure development, describe the most important challenges in quality measurement for this area, and make recommendations on how these challenges can be addressed.

Current State Of Quality Measurement

Quality measures have many uses, such as to understand variations in care, assess the impact of specific programs, guide local quality improvement efforts, and determine incentives or provide data for consumer and purchaser decision making. When measures are used for "high stakes" accountability purposes (for example, public reporting or value-based purchasing), there are particular expectations for and scrutiny of the "quality" of quality measures. Despite the broad availability of measures to assess behavioral health care, many have not been subjected to and are unlikely to meet the requirements expected for national endorsement and use in federal programs.

A recent review by Milesh Patel and coauthors of several large national databases identified 510 measures that address behavioral health.[4] About 5 percent of the measures are used in major quality reporting programs, such as the Inpatient Psychiatric Facility Quality Reporting Program or the Physician Quality Reporting System. About 10 percent are endorsed by the National Quality Forum (NQF) based on an evaluation of their importance, scientific acceptability, feasibility, and usability.

The limited number of endorsed measures derives from a number of issues. First, there is extensive duplication. For example, Patel and coauthors found twenty-five different measures that assessed follow-up care after hospitalization.[4] In addition, many measures originate from research work, and the focus of research measures might not be generalizable to or practical for accountability needs. Finally, many measures have insufficient evidence to establish their usefulness in improving outcomes.

Furthermore, measures focusing on behavioral health make up only about 5 percent of the items in the Measures Inventory maintained by the Centers for Medicare and Medicaid Services (CMS) and applied in its programs.[5] Thus, there is insufficient representation of this topic across CMS programs (for example, the Medicare Advantage health plan "star rating" program has only one mental health measure).[6]

Many of the most widely used behavioral health quality measures derive from sets maintained by accrediting bodies, such as the Joint Commission's Hospital-Based Inpatient Psychiatric Services measures and the National Committee for Quality Assurance's Healthcare Effectiveness Data and Information Set (HEDIS). The adaptation and use of existing measures reflects a deliberate effort to align public- and private-sector measurement, focus on well-accepted measures, and draw on existing data sources.

The impact of quality measurement and reporting on behavioral health has been limited. Overall, the level of performance and the rate of improvement of HEDIS measures for behavioral health are mediocre, particularly compared to measures for general medical conditions. Among commercial plans, the average performance on four behavioral health measures reported in 2014 was 48 percent, compared to an average of 72 percent for six cardiovascular and diabetes measures (Exhibit 1). In the case of HEDIS measures, performance is measured by the extent to which providers comply with recommended guidelines, so these findings mean that, on average, people with mental health or substance use needs get recommended care half the time, while recommended care occurs about two-thirds of the time for people with diabetes or hypertension. Patterns were similar for Medicaid and Medicare.

Trends over the past decade raise concerns as well, as demonstrated again by results from HEDIS reporting for health plans. Overall, quality trends generally show slow incremental improvement across all types of measures in the most recent years.[7] However, the patterns differ for behavioral health conditions. For example, measures assessing changes in diabetes and hypertension care from 2006 to 2014 showed an average improvement of 5–7 percentage points across commercial, Medicare, and Medicaid plans (Exhibit 2). In contrast, average quality declined over this period for behavioral health measures for two out of three payers (Medicaid was the exception).

Key Priorities For Measure Development

Several strategies and domains stand out as timely and potentially high-value targets for quality measurement and improvement, based on public health and cost impact, consumer demand,

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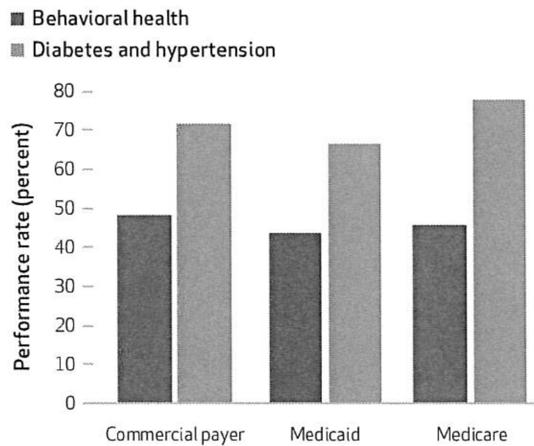
EXHIBIT 1

Average performance rates on Healthcare Effectiveness Data and Information Set (HEDIS) quality measures for behavioral health conditions versus diabetes and hypertension, by payer, 2014



SOURCE Authors' analysis of data from National Committee for Quality Assurance. 2015 State of Health Care Quality table of contents (see Note 6 in text). **NOTES** Performance is measured by the extent to which outcomes measures are achieved or providers comply with recommended care, as indicated below. The behavioral health care performance rate is the average of rates for antidepressant medication management (acute phase), follow-up after hospitalization for mental illness within seven days, initiation of alcohol and other drug dependence treatment, and follow-up care for children prescribed attention deficit hyperactivity disorder medication within thirty days. The diabetes and hypertension care performance rate is the average of rates for controlling high blood pressure for hypertension and the following five indicators from the comprehensive diabetes care measure: hemoglobin A1c (HbA1c) testing; HbA1c poor control (>9.0 percent), which is reversed because lower performance is better for this indicator; eye (retinal) exam performed; medical attention for nephropathy; and blood pressure control (<140/90 mmHg).

potential leverage for systems change, and current paucity of available measures. We highlight five key priorities: expansion of outcomes measurement, structural approaches (including accreditation or recognition programs such as patient-centered medical homes), integrated care, psychosocial interventions, and substance use disorders. The latter four represent strategies and domains that have received less attention to date and could be promising targets for expanding behavioral health quality measures.

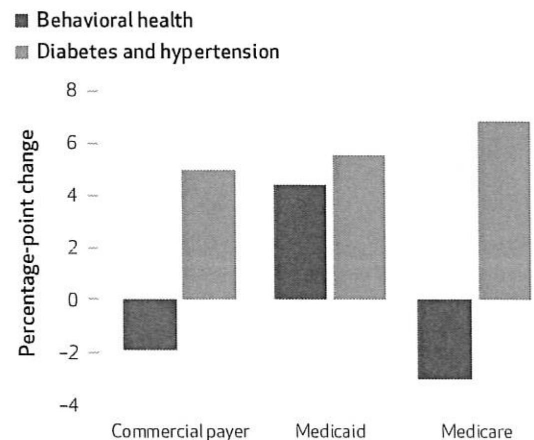
EXPANSION OF OUTCOMES MEASUREMENT There is increasing emphasis on engaging patients and families in evaluating health care and prioritizing the development of quality measures that incorporate patient-reported outcomes. In the behavioral health field, the concept of "recovery" has gained a great deal of traction among consumers and policy makers, in part as a response to the history of stigma, pessimism, and discrimination affecting people with mental illnesses. The Substance Abuse and Mental Health Services Administration defines recovery as "a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential."[8] Incorporating this concept into the evaluation of mental health outcomes would expand the domains of quality measures from traditional clinical outcomes focused on symptoms to areas such as quality of life, housing, and economic stability, as well as personal empowerment and engagement in care and community. These constructs could measure progress on patient-oriented goals that should result from successful treatment and could be directly measurable (as opposed to some processes of behavioral health treatments).

While numerous clinical tools for assessing consumer outcomes exist, they are not routinely used in clinical settings. Moreover, there are few performance measures based on consumers' reports of outcomes for behavioral health.

An exception to this is the use of a symptom-based tool for depression, the nine-item Patient Health Questionnaire (PHQ-9), which has been incorporated into two measures endorsed by the NQF: depression remission at twelve months, and depression response at twelve months—progress toward remission. These two depres-

EXHIBIT 2

Average change in performance from 2006 to 2014 on Healthcare Effectiveness Data and Information Set (HEDIS) quality measures for behavioral health conditions versus diabetes and hypertension, by payer



SOURCE Authors' analysis of data from National Committee for Quality Assurance. 2015 State of Health Care Quality table of contents (see Note 6 in text). **NOTES** We calculated the amount of change between 2006 and 2014 for each measure described in Exhibit 1 and then calculated the average change rate for each measure between 2006 and 2014. A negative result means that performance declined.

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There is general agreement on the components of structure that support high-quality care.

sion measures are being proposed for accountable care organization reporting.[9]

These measures are limited to measuring symptom response for a specific condition. However, they can provide a model for expanding outcomes measurement to other behavioral conditions beyond depression and also to different domains and types of outcomes, as envisioned by the consumer recovery movement. Furthermore, the availability of mobile devices, web-based tools, patient portals, and other new technologies offer additional opportunities for real-time and longitudinal data collection relevant to clinical decision making as well as to quality reporting.

STRUCTURAL APPROACHES Structural approaches focus on enhancing the capacity of organizations and providers to provide effective care likely to achieve favorable outcomes.[10] At the center of recent health care reform efforts to improve quality are accreditation, certification, recognition, and payment programs such as Health Homes for Medicaid and other populations[11] and the National Committee for Quality Assurance's patient-centered medical home and specialty recognition programs, which reward or incentivize organizational behavior that supports care that is focused on outcomes.[12]

There is general agreement on the components of structure that support high-quality care. Those components derive from the Chronic Care Model[13] and measurement-based care concepts.[14] Key elements are systematic, targeted assessments of key clinical outcomes using standardized tools that are completed on a longitudinal basis and entered into a registry that enables relentless follow-up by care managers. To achieve optimal outcomes, clinicians are trained to use "stepped care" strategies to intensify treatment (for example, adding psychotherapy or increasing medication dose) to achieve remission or significant improvement in targeted clinical outcomes.

These approaches are supported by multiple clinical trials. However, they are still not standard in clinical practice, and there are few accreditation or recognition programs specifically developed for behavioral health organizations. On a promising note, the recently enacted Protecting Access to Medicare Act of 2014 incorporates a demonstration program to establish Certified Community Behavioral Health Clinics that could incorporate many of the attributes described above.[15]

INTEGRATED CARE Multiple reports have reaffirmed the high costs, "siloed" structures, and problems in quality across the interface of mental health or substance use disorders and general medical conditions.[16–18] The consequences of this fragmentation are significant. People with severe mental illnesses such as schizophrenia often suffer from other chronic conditions (for example, cardiovascular diseases, high blood pressure, and diabetes) and have been demonstrated to have a shorter life expectancy, compared with the general population.[19] Furthermore, in primary care settings, people with chronic general medical illnesses often have concomitant behavioral health conditions such as depression, anxiety, and alcohol abuse, which increase the risk for serious complications and mortality.

Several innovative programs at the state level focus on integrated care. Missouri built systematic measurement of health outcomes for patients with severe mental illnesses into the state's Medicaid Health Homes program.[20] Washington State created a publicly funded program to implement integrated care models in a network of more than a hundred community health centers.[21] And health plans and medical group practices in Minnesota combined a new payment structure and incentives with facilitated implementation of best practices for primary care treatment of depression that included structure, process, and outcomes measures.[22] However, few indicators have been implemented at the national level that specifically assess the quality of behavioral and general health care integration.

The following strategies could support the development of integrated care measures: create accreditation or recognition programs requiring formal mechanisms for the integration of behavioral and general medical care systems (a recent *Health Affairs* article documented that care management processes were used less often for depression than for other chronic diseases in US primary care practices),[23] develop measures with particular focus on both the ability of patients in primary care settings to access effective mental health care and the ability of individuals treated in behavioral health care settings to access needed preventive services and primary care, and

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segment analysis of measures for patients with severe mental health conditions as a "disparity category." This would involve comparing the performance of a health system or organization for its entire population eligible for a given measure with its performance for this subgroup (for example, measures of effective diabetes care for patients with diabetes and with versus without comorbid behavioral conditions).

There are some signs that the call for better measures at the interface of general medical and mental health is gaining traction. For example, the NQF recently endorsed several measures related to general health issues for people with severe mental illnesses,[24] and CMS expanded behavioral health measures for accountable care organizations.[9]

PSYCHOSOCIAL INTERVENTIONS A wide variety of evidence-based psychosocial interventions exist for treating behavioral health conditions. A recent IOM report on establishing evidence-based standards for psychosocial interventions defined these interventions as "interpersonal or informational activities, techniques, or strategies that target biological, behavioral, cognitive, emotional, interpersonal, social, or environmental factors" with the aim of reducing symptoms and improving functioning or well-being.[25(p31)] Examples include brief counseling interventions to reduce alcohol misuse, specific forms of psychotherapy such as cognitive behavioral therapy for depression, and multicomponent team interventions such as Assertive Community Treatment for schizophrenia (an evidence-based practice model that provides a combination of treatment, rehabilitation, and support services to people with severe mental illnesses whose needs have not been met through traditional mental health services).

Only two of the thirty-one behavioral health quality measures endorsed by the National Quality Forum address psychosocial interventions. More work is needed to develop methods and data sources to determine whether components of effective care are actually delivered to consumers in these interventions. Since many consumers would prefer psychosocial interventions such as talk therapy to medication, quality measures could play an important role in supporting patient-centered treatment.[26]

Following the work of Avedis Donabedian,[10] Jonathan Brown and coauthors[27] recommended a structure, process, and outcomes framework for considering measurement opportunities that address psychotherapies, and the IOM extended this framework to consider psychosocial interventions more broadly.[25] This approach favors a holistic view of improvement and integrates two of our priority areas into efforts to advance a particular therapy.

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Both reports[25,27] favored the use of structural measures that address training, supervision, and caseloads for therapists as a first step, paired with measurement of outcomes. One example that reflects this approach is the Improving Access to Psychological Therapies program in Britain. This program has demonstrated improvements in outcomes,[28] and there is preliminary evidence that it has reduced costs for physical health needs.[29]

SUBSTANCE USE DISORDERS While each of the priorities mentioned above applies to both mental health and substance abuse, additional valid and reliable measures are especially needed to assess care for substance use conditions, including alcohol and drug use disorders, unhealthy alcohol use, and prescription drug misuse. Few people with these problems receive even minimally adequate treatment. For example, recent data suggest that fewer than 5 percent of individuals with a past-year alcohol use disorder received treatment for their alcohol misuse from a health care practitioner.[30] Lack of treatment and the recent rapid increase in opioid abuse suggest that developing new measures for substance use disorders should be a high priority.

The ACA is expanding coverage and access to care for substance use problems, yet there are significant gaps in the availability of measures.[31] Excluding tobacco, only 5 of the 651 measures endorsed by the NQF are related to substance use disorders.[31] None of these measures has demonstrated strong associations with clinical outcomes, although recent work has shown some significant associations in large data sets.[32,33] Furthermore, these measures rely heavily on evaluating the number and timing of visits using administrative encounter data, instead of assessing whether evidence-based care was actually delivered.

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A wide variety of evidence-based psychosocial interventions exist for treating behavioral health conditions.

Moving From Measurement To Improvement

In 2006 the IOM laid out a comprehensive strategy for strengthening the quality improvement infrastructure in behavioral health. The strategy consisted of the following five steps: filling gaps in the evidence base for effective care and synthesizing evidence for identifying and disseminating effective practices, building capacity and training clinicians to deliver measurement-based care, identifying an organization to provide leadership in stewarding the development of quality indicators and providing resources to build the science of quality measurement in behavioral health, bringing behavioral health into the mainstream of advances in health information technology, and incorporating quality measurement and improvement into the day-to-day activities of behavioral health organizations and providers.[2]

While there has been some movement toward implementing these recommendations as part of overall health care reform, the quality measurement and improvement infrastructure in behavioral health remains far behind that of the rest of the health care system. We recommend a focus on the four priorities described next to address these gaps.

INVESTMENT, LEADERSHIP, AND COORDINATION The separation of behavioral health systems and agencies from the mainstream of health care and the myriad disciplines involved in care pose obstacles in achieving consensus and collaboration in measure development. Furthermore, no single federal agency or private-sector group has been designated to lead the development of behavioral health quality measures, and there is no clearly identified source of responsibility for supporting and funding the science of developing quality measurement and improvement strategies.

One recent initiative, the Core Quality Measures Collaborative,[34] a consortium that includes health plans' chief medical officers and leaders from CMS, NQF, and national physician organizations, together with representatives of employers and consumers, may provide a blueprint for the mental health and substance use disorder field. A similar approach that includes representatives of the multiple disciplines that provide care for individuals with behavioral health conditions along with consumers and other stakeholders may lead to establishing a set of meaningful core measures that could be harmonized across commercial and government payers and reduce variability in measure selection, collection burden, and overall cost.

Initiatives in other countries may serve as additional models for carving out a leadership role for a consortium of major stakeholders similar to the Core Quality Measures Collaborative. In the United Kingdom, multiple National Health Service mental health trusts have organized a benchmarking network for reporting standard performance data and sharing best practices.[35] And in Canada, where the health care system is largely organized at the provincial level, the Mental Health Commission—in collaboration with the Graham Boeckh Foundation—has introduced a set of national mental health indicators that provide information on a wide range of issues including access, caregiving, homelessness, population well-being, recovery, stigma, and suicide.[36]

DEVELOP THE NECESSARY EVIDENCE Quality measures are intended to reflect the best available evidence, which is typically synthesized and reported in systematic reviews, meta-analyses, and ultimately clinical practice guidelines. Meta-analyses and intervention trials provide strong support for some behavioral health interventions (for example, pharmacotherapies, cognitive behavioral therapy, interpersonal therapy, and team-based interventions such as Assertive Community Treatment), and to some extent, these treatments have somewhat specific clinical guidelines. However, for some disorders and treatments, clinical guidelines lack specificity, and additional evidence is needed.

For example, the recent IOM report mentioned above[25] highlighted the need to strengthen the evidence base on the efficacy and effectiveness of psychosocial interventions, and to identify the elements of those interventions that reflect fidelity to evidence-based models. Such evidence could inform the specification of quality measures that reflect key processes of care. The funding streams and scientific community that generate the evidence used to construct quality measures are largely disconnected from the quality measurement enterprise.

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Stronger collaboration between funding agencies and scientists could help yield the evidence needed to fill gaps in measurement. For example, research focused on testing new interventions should have an explicit focus on identifying the elements of treatment that contribute to outcomes, which could then be translated into clinical guidelines and quality measures. There is a need to systematically assess gaps in evidence and the specificity of clinical guidelines across a broad spectrum of behavioral health treatments to inform the development of a federal research agenda that could marry the goals of intervention testing with the needs of quality measurement. It is notable that the National Institute of Mental Health recently released a request for applications for funding research on pragmatic strategies for assessing psychotherapy in practice.[37]

IMPROVE AND LINK DATA SOURCES Commonly used data sources often do not contain critical information to measure the quality of care. For example, claims data, while useful for measuring the frequency of antipsychotic medication refills, provide little information on the content of psychosocial services. Likewise, electronic health records (EHRs) are an appealing data source for quality measures, but they often lack structured fields that capture information on the delivery of specific behavioral health treatments.[27,38]

EHR adoption in behavioral health care settings has lagged behind that in general medical care settings,[39] and US programs such as the EHR incentive program have had limited focus on behavioral health.[40]

Furthermore, data from multiple entities, including health plans, mental health clinics, and primary care or specialty practices, are needed to assess whether people with severe mental illnesses receive alcohol screening, treatment, or both. However, providers and health care entities often do not share such data. Behavioral health providers are often reluctant to share their records for quality measurement because of privacy laws such as the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and the federal confidential regulation known as 42 CFR Part 2. In response to concerns that these regulations impede the exchange of information, the Department of Health and Human Services is considering modifying them.[41]

Enhancing the capacity of EHRs to incorporate specific elements of behavioral health treatment as structured fields could be one promising strategy for improving data sources for quality measurement. Structured fields would need to be defined in a manner that captured the most essential elements of evidence-based treatments while simultaneously incorporating structured assessments (such as the PHQ-9 or other mental health assessments) that help providers identify behavioral health problems and track outcomes,[25] as well as capturing both behavioral and physical health information (or allowing for the interoperability of systems that capture this information).[42] Electronic systems that incorporate repeated structured assessments are already used by health plans and could serve as a model for EHRs and other systems.

Behavioral health providers are often reluctant to share their records for quality measurement because of privacy laws.

Building clinical registries or other systems to capture data from multiple electronic sources could also facilitate the reporting of measures. For example, the HEDIS depression measures are calculated by drawing on fixed fields from multiple sources (EHRs, clinical registries, and electronic case management records) to examine the full range of consumers' care across multiple settings and types of care. However, the development and use of these systems requires leadership from entities such as health plans and ACOs, as well as state agencies that may be well positioned to facilitate the sharing of information across organizations in the future.

BUILD THE CAPACITY OF THE CLINICAL WORKFORCE A well-prepared workforce that is trained and held accountable for improving quality and outcomes for individuals with behavioral health conditions is necessary. There remains wide variation in the extent to which various professionals are trained in evidence-based care and the implementation of quality improvement strategies. Training in and the application of quality measurement and improvement, including elements of measurement-based care, should be an essential component of behavioral health provider training programs and provider organizations. Moreover, within the fragmented US health care system it is critical to establish mechanisms of shared accountability across the silos

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of current organizational, regulatory, and financial structures.

Involving consumers more meaningfully in their own care and in the design and improvement of the care system also offers tremendous opportunity. Engaging consumers in measuring aspects of their care through the use of telephone and web applications, along with targeted feedback, will ensure that they are not merely asked for more data without receiving the benefit of the information collected.

Conclusion

Ongoing health care and payment reforms have placed increased pressure on the behavioral health field to engage in quality measurement and improvement. Although not yet fully prepared and facing significant challenges, the field has begun to develop a reasonable number of quality metrics, and there are clear short-term opportunities to build a more targeted and balanced portfolio of meaningful measures. Improving the quality of care for behavioral health conditions requires coordinated leadership to articulate and guide efforts, build evidence about what treatments work and for whom, develop more detailed and integrated data systems that illuminate the quality of care across time and settings, and the meaningful collaboration of the clinical workforce and consumers. ■

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