ISSUE BRIEF

Fixing Behavioral Health Care in America

A National Call for Measurement-Based Care in the Delivery of Behavioral Health Services

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*Note: The Kennedy Forum hosted several focus groups to discuss provider outcomes and accountability issues in the behavioral health field. This list is not exhaustive of all focus group participants. In addition, focus group participation does not mean a formal endorsement of The Kennedy Forum recommendations or this issue brief by the attending organizations.

Executive Summary

The Challenge

Patients with mental health and substance use disorders (MH/SUD) treated in routine care experience worse outcomes than patients enrolled in clinical trials that have demonstrated the effectiveness of evidence-based treatments. This large gap between routine outcomes and optimal outcomes exists across a wide range of patient populations and treatment settings, including primary care and specialty behavioral health.

One of the main contributors to poor outcomes in routine care is that providers do not typically use symptom rating scales in a systematic way to determine quantitatively whether their patients are improving. Yet, virtually all randomized controlled trials with frequent and timely feedback of diagnostic-specific, patient-reported symptom severity to the provider during the clinical encounter found that outcomes were significantly improved compared to usual care across a wide variety of mental health disorders.

Patient Reported Symptom Rating Scales

Symptom rating scales (also known as patient-reported outcome measures) are brief structured instruments that patients use to report their perceptions about the frequency and/or severity of the psychiatric symptoms they are experiencing. A number of diagnostic-specific symptom rating scales exist that have been psychometrically validated to assess the severity of depression, bipolar disorder, anxiety disorders, post-traumatic stress disorder, schizophrenia, and substance use disorders. These symptom rating scales (e.g., PHQ-9 for depression) are practical to administer, interpretable, reliable, and sensitive to changes in the frequency/severity of psychiatric symptoms and functional impairment over time. Much like using a blood pressure cuff to track treatment outcomes in hypertension, monitoring behavioral health outcomes with a symptom rating scale helps providers determine whether a treatment is working or not.

However, only 18% of psychiatrists and 11% of psychologists in the United States routinely administer symptom rating scales to patients to monitor improvement. This is equivalent to treating hypertension without using a blood pressure cuff to determine whether a patient's blood pressure is decreasing. With clinical judgement alone, behavioral health providers frequently fail to detect a lack of improvement or a worsening of symptoms in their patients, and this can lead to clinical inertia (i.e. not changing the treatment plan even though the patient is not benefiting from the current treatment).

Without the systematic monitoring of symptoms, providers miss opportunities to improve their treatments over time and clinical practices miss opportunities to evaluate quality improvement activities. In addition, when aggregated across all patients in a clinical practice or healthcare system, symptom rating scale data can be used to demonstrate the value of behavioral health services to payers, thereby helping to inform the development of reimbursement policies of payers. The failure to use symptom rating scales to demonstrate to payers and other stakeholders the effectiveness of behavioral health treatment may contribute to the chronic underfunding of behavioral health services in the United States.

The Clinical Impact of Measurement-Based Care

For at least 20 years, leaders in our field have advocated for measurement-based care (MBC) that systematically uses validated symptom rating scales to drive clinical decision making. Standardized symptom rating scales are not a substitute for perceptive clinicians carefully assessing symptoms, and are not intended to replace clinical judgment. Rather, ratings scales are designed to optimize the accuracy and efficiency of symptom assessment in order to improve the detection of patients and/or targeted populations that are not responding to the current clinical interventions. With

measurement-based care, providers are empowered to more quickly change or fine-tune treatment plans when patients are not improving. Patients who regularly complete symptom rating scales also are likely to become more knowledgeable about their disorders, attune to their symptoms, and cognizant of the warning signs of relapse or reoccurrence, thus enabling them to better self-manage their illness and seek treatment without delay.

Symptom Rating Scale Assessment Limitations

Measuring patient reported symptoms has the potential to improve outcomes, but not all approaches are effective. For example, assessing patients once for depression using a symptom rating scale (i.e. screening) does not improve outcomes.

To inform clinical decision making, data from symptom rating scales must be current, accurate, interpretable and easily available during the clinical encounter. Because many pharmacotherapy and psychotherapy treatments are associated with a specific to a diagnosis (e.g., mood stabilizers for bipolar disorder, prolonged exposure therapy for posttraumatic stress disorder), rating scales that are diagnostic-specific are clinically actionable. Virtually all randomized controlled trials with frequent and timely feedback of diagnostic-specific, patient-reported symptom severity to the provider during the clinical encounter found that outcomes were significantly improved compared to usual care.

In the context of research and clinical practice, measurement-based care has been found to be effective across a wide range of patient populations (e.g., adults, children), diagnoses, and treatment types (e.g., marriage counseling, individual psychotherapy, and pharmacotherapy). However, research has also shown that feeding back outdated symptom severity data to providers outside the context of the clinical encounter is not clinically actionable, and therefore, is not considered to be effective measurement-based care for improving patient specific outcomes. . A meta-analysis of 27 randomized controlled trials enrolling patients with a variety of behavioral health disorders found that measurement-based care programs using symptom rating scales in a systematic fashion promoted more effective clinical encounters.

Expert Consensus Supporting Measurement-Based Care

For at least 20 years, leaders in the behavioral health field have been calling for the routine use of symptom rating scales to inform clinical decision making. Consensus exists too that MBC can also be used to improve outcomes at the provider and clinical levels, and also inform payers about the value of behavioral health services. In other words, there are secondary gains to be made with MBC beyond improving the outcomes of individual patients.

Empirical Evidence Supporting Measurement-Based Care

Virtually all randomized controlled trials with frequent and timely feedback of patient reported symptoms to the provider during the clinical encounter significantly improved outcomes or trended towards significance. Not surprisingly, the effect of MBC is stronger for patients whose symptoms did not initially improve compared to those who did initially improve. However, without symptom rating scales it is not possible to determine which patients are improving and which are not. Based on this body of research, the Substance Abuse and Mental Health Services Administration recognized MBC as an evidence based practice:
http://legacy.nreppadmin.net/ViewIntervention.aspx?id=370

Feasibility

Symptom rating scales are feasible to administer in a range of clinical settings and are highly acceptable to patients and providers. Measurement-based care can be incorporated into routine care regardless of the characteristics of the patient population, or the treatment philosophy and training background of providers.

Patients perceive symptom rating scales to be efficient, complementary of their provider's clinical judgment and as evidence that their providers are taking their behavioral health problems seriously. In addition, most providers find symptom rating scales helpful in monitoring response to treatment and prompting treatment changes such as change in antidepressant dose, adding or switching medications, starting psychotherapy, or asking more questions about suicide.

Despite the evidence for effectiveness, acceptability, feasibility, and professional endorsement of measurement-based care, there has been limited adoption of MBC through symptom rating scales for both specialty behavioral providers and primary care providers who treat mental health and substance use disorders.

Overall Recommendations

Without MBC, millions of patients seeking help for their mental health disorder will endure ineffective treatment and their deterioration or lack of improvement will go undetected by their provider. The time is long overdue for the field of mental health to embrace the concept of MBC and live up to the standard set by other medical specialties. While the primary advantage of MBC is improved outcomes for patients with mental health disorders, a secondary benefit is the potential to use aggregated symptom rating scale data to enhance professional development, facilitate practice and program level quality improvement, and positively influence payer purchasing decisions and reimbursement policies.

The Kennedy Forum strongly endorses the following policy:

> **All primary care and behavioral health providers treating mental health and substance use disorders should implement a system of measurement-based care whereby validated symptom rating scales are completed by patients and reviewed by clinicians during encounters. Measurement-based care will help providers determine whether the treatment is working and facilitate treatment adjustments, consultations, or referrals for higher intensity services when patients are not improving as expected.**

Measurement-based care is similar, but not equivalent, to performance measurement and provider profiling. However, unlike performance measurement and profiling which focus on practices and providers respectively, measurement-based care involves the systematic use of symptom rating scales to inform clinical decision making at the patient encounter level.

The primary benefit of measurement-based care is improved clinical outcomes for each individual patient. An indirect benefit of measurement-based care is that patient level outcomes can be aggregated across providers, clinics and healthcare systems to inform quality improvement activities, and reported to payers in order to demonstrate the value of the behavioral health services being delivered.

Expanding the Use of Measurement-Based Care

Patients and Patient Advocacy Groups

The use of symptom severity scales has many benefits for patients by:

- **Patient Feedback.** Completing symptom rating scales and reviewing the information with providers validates the way patients are feeling and can ameliorate the self-blame that some patients experience.(24)
- **Patient Engagement.** Using symptom rating scales empowers patients by giving them a new role in their treatment by helping them communicate with their providers and making them feel more involved in clinical decision making.(62)
- **Patient Knowledge.** Sharing the results from MBC helps patients more fully understand their disorder and the fluctuation in their symptom severity over time.
- **More Effective Treatment Approach.** Relying on symptom rating scales helps providers determine when treatments are not working and leads to the delivery of more effective treatment for patients.

Given these benefits, patients, family members, and patient advocacy groups should demand that measurement-based care be implemented in their provider's clinical practice. Patients can be a catalyst for change by asking their providers to start using symptom severity scales so they can better describe their symptoms during encounters and follow their own progress over time.

Providers and Provider Organizations

The use of symptom severity scales also has many benefits for providers by:

- **Treatment Focus.** Streamlining assessments by focusing the discussion on symptoms identified as most severe by the patient.
- **Earlier Feedback.** Promoting feedback by providers to their patients earlier in the course of treatment that helps assess improvements or ongoing challenges through the use of symptom rating scales. For example, patient recognition of even small decreases in symptom severity may help them feel more optimistic and hopeful, and to maintain better adherence to the treatment plan.
- **Clinical Effectiveness.** Encouraging providers to objectively assess the effectiveness of various treatments or treatment components in a range of clinical contexts and use this information to become a better clinician.
- **Quality.** Helping clinical practices evaluate quality improvement efforts.
- **Value-Based Care.** Creating an evaluation platform that can be used by providers, practices, and healthcare systems to demonstrate to payers that the services they deliver are effective.

The potential exists for using aggregated symptom rating scale data to make comparisons between providers, and some providers may not be comfortable reconciling their personal assessment of their effectiveness with objectively measured outcome data. Moreover, it can be challenging to adequately adjust for potential case mix differences in the patients of different providers. Therefore, it will be important for providers and provider organizations to caution payers and quality assurance organizations using MBC to penalize providers based solely on aggregated outcome data generated by measurement-based care. At the same time, providers should be held accountable if their patients are experiencing poor outcomes and they are not revising treatment plans, getting additional consultation or referring their patients to higher levels of care.

This issue brief also addresses the importance of provider training and leveraging technology to promote MBC interventions.

Payers

The use of symptom rating scales also has many benefits for payers by:

- **Transparency.** Promoting transparency and accountability. Under the Mental Health Parity and Addiction Equity Act, payers are held accountable to offer equivalent benefits for behavioral health and physical health. Symptom rating scale data can be easily aggregated across patients to make outcomes more transparent and to enable payers to observe the outcomes of treatments they are legally required to reimburse providers to deliver. In addition, promoting MBC also allows payers to hold provider organizations accountable for the quality of care they deliver assuming that appropriate case mix adjustments have been made when comparing providers in diverse settings. .
- **Value-Based Care.** Aggregating key data at the provider or provider organization level will give payers the information they need to assist in the identification of providers who are generating the best outcomes and to make value-based purchasing decisions accordingly.
- **Smart Provider Networks.** Identifying the top providers in terms of quality can help payers create smart provider networks to promote better behavioral health outcomes. Even though randomized controlled trials demonstrate that provider profiling does not improve the outcomes of an individual provider's patients, payers can use aggregated symptom rating scale data to help identify higher quality provider organizations.
- **Payer Reimbursement.** Helping payers better allocate dollars for MH/SUD services. If providers can demonstrate good patient outcomes, payers likely will increase the proportion of health care expenditures allocated to treating behavioral health disorders, which in turn will drive better clinical and financial outcomes.
- **Actionable Measures.** Creating feedback loops that target enhanced clinical practices. Payers should allow provider organizations to choose validated symptom rating scales that their providers believe best inform their clinical decision making. Requiring providers to use

rating scales that are not perceived to have clinical utility will likely result in the reporting of outcomes data that have not been clinically verified for accuracy.

Payers, such as private insurance companies, state and federal government purchasers (e.g., Medicaid, Medicare, Tricare, and Veterans Health Administration) and self-insured employers should incentivize the use of measurement-based care by providers and healthcare systems.

Regulators and Accreditation Organizations

Regulators and accreditation organizations should develop objective quantifiable performance measures for health care systems, managed care organizations, and health insurance companies that support the adoption of measurement-based care.

Researchers

While there are dozens of disease-specific symptom rating scales that have been empirically validated and are used routinely in clinical care, future research should focus on improving these scales to make them briefer, as well as more reliable and sensitive to change.

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Issue Brief:
Fixing Behavioral Health Care in America

A National Call for Measurement-Based Care
in the Delivery of Behavioral Health Services

The Challenge

Outcomes of mental health care provided in real world settings lag far behind the outcomes achieved in large trials of evidence-based treatments. The gap between optimal outcomes and routine outcomes has been observed across a wide range of treatment settings (primary care, specialty mental health care) and service sectors (private and public).[2-8]

The Need for Systematic Measures

One of the main contributors to poor outcomes is the lack of systematic measurement to determine whether patients are responding to treatment. There are a number of brief, validated symptom rating scales that can reliably measure the change in frequency/severity of psychiatric symptoms over time. **Yet, only 18% of psychiatrists and 11% of psychologists in the U.S. routinely administer symptom rating scales to monitor treatment response.**[9, 10]

This is an indefensible clinical practice and it is equivalent to treating high blood pressure without using a blood pressure cuff to measure if a patient's blood pressure is improving. With clinical judgement alone, mental health providers only detect deterioration for 19% of their patients who experience worsening symptoms.[10] Detection rates are even lower for patients whose symptoms are not improving as expected.[11] The inability to detect patients not responding well to treatment leads to clinical inertia (i.e. not changing the treatment plan despite lack of improvement), and it contributes to the persistently poor patient outcomes observed in routine behavioral health care.[12]

In addition to contributing to poor patient outcomes, the lack of routine outcome measurement also may be detrimental for behavioral health providers, clinical practices and healthcare systems. Not measuring patient outcomes in a systematic way may inhibit providers from honing their clinical skills over time. It has been argued that practicing medicine without observing outcomes is akin to practicing archery with a blindfold.[13]

Imagine you have been newly diagnosed with hypertension and your primary care provider prescribes you an antihypertension medication. Now imagine visiting your primary care provider's office for a checkup and the nurse does NOT measure your blood pressure with a blood pressure cuff. What would your discussion with the provider sound like? It might go something like this:

MD– *"How is your blood pressure doing?"* ***Patient–*** *"OK. I think it might be a little better."* ***MD–*** *"Good. Sounds to me like the medication I prescribed is working. Let's keep you on that medication for now."*

Now imagine that conversation being repeated at all of your checkups. Would you be happy with the quality of your medical care? You should not be. You are at increased risk for experiencing a stroke and your primary care provider is liable for medical malpractice. Yet, inexplicably, this is the current standard of care in the field of mental health.

The inability of behavioral health providers to enhance their clinical skills by observing the clinical effectiveness of their treatments may also be contributing to the persistently poor outcomes observed in routine care. Similarly, without symptom rating scales, clinical practices cannot adequately evaluate the effectiveness of their quality improvement efforts. Likewise, clinical practices cannot demonstrate to payers that their treatments actually improve outcomes. This in turn may be contributing to chronic underfunding of behavioral health services. Inadequately treated behavioral health disorders account for 27% of all disability in the United States.[14] Depression alone accounts for over three times the disability of diabetes, over four times that of cancer, and over five times that of ischemic heart disease.[14] The 14% of private and public health plan enrollees with a mental health diagnosis have nearly tripled the average physical health care costs of enrollees without a mental health diagnosis.[15] Yet only 7% of health care spending is allocated to behavioral health treatment.[15] The lack of investment in behavioral health treatments on the part of payers may reflect their perceptions about the poor value of behavioral health treatment. **To address the chronic underfunding of behavioral health services, symptom rating scales could be used to demonstrate the effectiveness of behavioral health treatments to payers in order to increase reimbursement levels and reduce restrictions on behavioral health services.**[16]

Without the use of symptom rating scales, behavioral health providers are not detecting many of their patients who are not responding to treatment, leading to clinical inertia and poor patient outcomes. Likewise, despite the high costs of behavioral health disorders to society and the potential for substantial cost savings, payers limit expenditures for behavioral health treatment because they question the value of behavioral care.

Overview

The purpose of this issue brief is to describe the logic behind and the empirical evidence for routine implementation of measurement-based care (MBC) in behavioral health and primary care practices who are treating MH/SU Disorders. This issue brief is structured to cover the following MBC issues:

1. Patient reported symptom rating scales explained
2. The clinical impact of measurement-based care
3. Symptom rating scale assessment limitations
4. Expert consensus supporting measurement-based care
5. Empirical evidence supporting measurement-based care
6. Feasibility
7. MBC Case Examples
8. Recommendations

Patient Reported Symptom Rating Scales

Innovators in behavioral health research and practice have developed a number of brief structured rating scales that measure the severity of psychiatric symptoms defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Symptom rating scales (also known as patient-reported outcome measures) are brief structured instruments that patients use to report their perceptions about the frequency and/or severity of the psychiatric symptoms and level of functional impairment they are experiencing. Patient reported symptom rating scales were used in the research trials that led to the FDA approval of most currently used psychotropic medications.

In the context of research, patient reported symptom rating scales have been shown to be equivalent to clinician rating scales (independent assessment) with respect to identifying treatment responders and remitters.[17] Symptom rating scales are preferable in many ways to clinicians' ratings of their own patients' symptoms. It has been argued that clinicians who are responsible for delivering the treatment have a stake in treatment outcomes and may have a biased assessment of patient's improvement over time.[18] While it has also been argued that some patients with mental health disorders may have difficulty cooperating with the administration of symptom rating scales and assessing their symptom severity,[18] this perspective diverges from a patient-centered approach to care. Patients are clearly in the best position to assess their own well-being.

Much like using a blood pressure cuff to track treatment outcomes in hypertension, monitoring behavioral health outcomes with a self-reported symptom rating scale helps providers determine when a treatment is not working well for their patient. Symptom rating scales are just as practical, interpretable, reliable and sensitive to change as the medical tests that are commonly ordered in routine practice.

For example, the Patient Health Questionnaire (PHQ-9) is a brief, nine item self-reported symptom rating scale with one question for each symptom of major depressive disorder. The PHQ-9 generates an overall severity score that is easily interpretable as minimal, mild moderate, moderately severe and severe, and thus results are clinically actionable.

Brief symptom rating scales have been empirically validated to assess severity of most mental health disorders including depression, bipolar disorder, anxiety disorders, posttraumatic stress disorder, schizophrenia, and substance abuse.[19]

Because many pharmacotherapy and psychotherapy treatments are associated with specific to a diagnosis (e.g., mood stabilizers for bipolar disorder, prolonged exposure therapy for posttraumatic stress disorder), rating scales that are diagnostic-specific are clinically actionable.

Symptom rating scales also assess quality of life domains like insomnia, appetite, and concentration. With revisions to the Diagnostic and Statistical Manual of Mental Disorders, psychiatric diagnoses are constantly evolving and research into bio markers will ultimately change how clinicians assess and treat patients.

However, current limitations with trial and error approaches to treatment (e.g., medication trials) underscore the importance of MBC. Specifically, without bio markers to inform clinicians as to which treatment will work best for each individual patient, initial treatment choices (even those guided by clinical practice guidelines) are often ineffective. Thus, in the absence of clear biological causal mechanisms to guide clinical decision making, it is critical to use MBC to monitor the effect of treatment in order to facilitate refinement of the treatment plan when it is not working.

Individuals and patients with mental illness are not typically defined by their symptoms. Each person is unique, with their own individualized recovery goals. A discussion of patient-determined recovery goals should be part of every clinical encounter in addition to symptom severity. Patients and providers can use goal attainment scaling to explicitly incorporate recovery outcomes into the clinical encounter. Changes to the treatment plan can be driven by lack of goal attainment and/or lack of improvement in symptoms. While symptom reduction in the short term can promote recovery goal attainment in the long run, both measures can be considered proximal outcomes that drive treatment decisions.

In some cases, barriers exist to implementing goal attainment scales compared to symptom rating scales as part of a MBC program:

- First, developing an individualized goal attainment scale is relatively time consuming compared to using a brief standardized symptom rating scale.
- Second, some providers may not be able to incorporate goal attainment outcomes into their treatment plans compared to symptom severity, especially prescribers.
- Third, because goal attainment scales are tailored for each patient, these outcomes cannot be aggregated across providers and programs to facilitate quality improvement activities and outcomes reporting to payers.
- Fourth, there is no research evidence that demonstrates that using goal attainment scales improves recovery outcomes. MBC could also be used to assess other important domains such as satisfaction, therapeutic alliance, side-effects, and functioning.[20] However, again there is currently no empirical evidence that feeding back these measurement domains to providers improves patient outcomes.

The Clinical Impact of Measurement-Based Care

Harding and colleagues define MBC as "enhanced precision and consistency in disease assessment, tracking, and treatment to achieve optimal outcomes".[16] **MBC involves the systematic use of symptom rating scales to drive clinical decision making.** MBC is not meant to be a substitute for perceptive clinicians carefully assessing symptoms and is not intended to replace clinical judgment.[16] Rather, MBC seeks to optimize the accuracy and efficiency of symptom assessment in order to maximize the likelihood that patients receive the most effective treatment and achieve optimal outcomes.

To be clinically actionable (i.e. able to inform clinical decision making), symptom rating scale data must be current, accurate, interpretable and easily available during the clinical encounter. Feeding back outdated symptom severity data to providers outside the context of the clinical encounter is not clinically actionable and is not considered to be effective MBC. To make symptom rating scale scores interpretable, changes in symptom severity should be categorized as response, remission, non-response, relapse and recurrence in order to facilitate the use of treatment guidelines and medication prescribing algorithms.[21]

Depression treatment guidelines recommend systematic reevaluation of symptoms at specified intervals (e.g., 6 and 12 weeks) following treatment initiation and/or changes to the treatment plan.[22, 23] MBC greatly facilitates the use of guidelines and algorithms because the treatment response can be operationalized and quantified.[24] Treatment guidelines and algorithms also emphasize revising the treatment plan until remission is achieved and MBC facilitates this treat-to-target philosophy.[25] Residual symptoms (i.e. symptoms that remain, but not in sufficient severity to meet diagnostic criteria) are associated with an increased risk of relapse in depressed patients

Lambert and colleagues generate four categories of outcomes to report to providers.[1]

White Message—The Client is functioning in the normal range. Consider Termination.

Green Message—The rate of change the client is making is in the adequate range. No change in the treatment plan is recommended.

Yellow Message—The rate of change the client is making is less than adequate. Recommendations: consider altering the treatment plan by intensifying treatment, shifting intervention strategies, and monitoring progress especially carefully. This client may end up with no significant benefit from therapy.

Red Message—The client is not making the expected level of progress. Chances are he or she may drop out of treatment prematurely or have a negative treatment outcome. Steps should be taken to carefully review this case and decide upon a new course of action such as referral for medication or intensification of treatment. The treatment plan should be reconsidered.

who have responded to treatment.[26] **MBC facilitates the detection of residual symptoms and should prompt the clinician to consider intensifying the treatment plan until the patient's symptoms have completely remitted (i.e. treatment to target).** MBC also can facilitate collaboration and coordination across providers. For example, in the evidenced based Collaborative Care model, patient self-reported depression severity scores are collected by care managers and shared with the treating primary care provider and consulting psychiatrist to focus team based care.[25]

MBC leads to more favorable patient outcomes through enhanced therapeutic relationships (i.e. activated patients participating in meaningful joint decision making) and the timely revision of treatment plans that better meet the clinical needs of patients.[27] **If done correctly, the use of symptom rating scale to monitor patient progress helps prompt clinicians to overcome treatment inertia and change the treatment when patients are not improving.** [26]

In addition, experts believe that patients who regularly complete self-reported rating scales are likely to become more knowledgeable about their disorders, attune to their symptoms, and cognizant of the warning signs of relapse or reoccurrence, thus enabling them to better self-manage their illness.[24] Completing standardized symptom rating scales and reviewing the information with providers validates the way patients are feeling and can ameliorate the self-blame that some patients experience. **The use of symptom rating scales also empowers patients by giving them a new role in their treatment by helping them communicate with their providers and making them feel more involved in clinical decision making.** In addition, the routine use of symptom rating scales may help patients more fully understand their disorder and the fluxuations in their symptom severity over time.

For MBC to be effective and sustainable, experts believe that the symptom severity feedback must be clinically actionable.[28] In other words, the symptom rating scale data must be perceived to have a direct benefit to clinicians and patients during the clinical encounter.[27]

In addition, to being current, accurate, interpretable and available during the clinical encounter, the instruments used to measure symptom severity must be reliable (i.e. consistent across repeated measurements when there is no change in symptom severity) and sensitive to change (i.e. able to detect clinically meaningful changes in severity).[29] Due to the inherent variability in outcomes measurement, patient reported outcomes should be used as a starting point in the provider's evaluation of the clinical effectiveness of the current treatment.

Symptom Rating Scale Assessment Limitations

Measuring patient reported symptoms has the potential to improve outcomes, but not all approaches are effective. For example, assessing patients once for depression using a symptom rating scale (i.e. screening) does not improve outcomes. However the use of screening instruments can be very important in over-all quality assurance programs and can help patients and providers identify who should be engage in care.

A Cochrane review of depression screening found that patients with depression randomized to screening did not have better outcomes than patients randomized to no depression screening.[30] Similarly, providing clinicians with screening results and guideline concordant treatment recommendations (e.g., medication prescribing algorithms) does not improve outcomes relative to usual care.[31] This approach alone is often suboptimal because many initial treatment choices are ineffective as the field doesn't have accepted biological makers to allow for a personalized medicine approach.

Thus, measuring symptoms once and giving the information to providers is insufficient to improve outcomes without systems in place to monitor the outcomes of those screening positive.[32] **For MBC to be effective, there is also good evidence that symptom severity must be assessed frequently and shortly before or during the clinical encounter.[33-35]**

Another approach that does not appear to be effective in improving the outcomes of specific patients is physician profiling, whereby symptom severity data are aggregated across all the provider's patients and fed back to them along with comparisons to other providers. For hypertension, diabetes, depression and problem drinking, randomizing physicians to profiling or no profiling does not significantly affect outcomes.[35, 36]

Expert Consensus Supporting Measurement-Based Care

For at least 20 years, leaders in the behavioral health field have been calling for the routine use of symptom rating scales to inform clinical decision making. **While some symptom rating scales tend to be diagnostic specific, MBC itself is transdiagnostic and can be incorporated into routine care regardless of patient populations and types of clinical services.[19]** Likewise, because MBC is transtheoretical, it is highly flexible and can be incorporated into routine care regardless of the treatment philosophy and training background of providers.[19]

The theoretical benefits of MBC lead to it being the foundation of the intervention tested in the largest pragmatic trial (STAR*D) of depression treatments ever conducted in routine primary care and specialty mental health settings.[37] MBC care was also the foundation for the largest pragmatic trial (STEP-BD) of bipolar treatments ever conducted in routine specialty mental health settings.[38]

Similarly, symptom rating scales are considered integral to many evidence based psychotherapies such as cognitive-behavioral therapy, cognitive process therapy and prolonged exposure therapy. The Group for the Advancement of Psychiatry now officially endorses the use of standardized symptom rating scales to supplement clinical interviews.[24]

Consensus exists too that MBC can also be used to improve outcomes at the provider and clinical levels, and also inform payers about the value of behavioral health services.[20, 30] In other words, there are secondary gains to be made with MBC beyond improving the outcomes of individual patients.

Because providers discuss the self-reported symptom severity scores with their patients and use it to make treatment decisions, patients are incentivized to provide valid responses to the rating scale questions. This ensures the accuracy of the symptom severity data when aggregated across providers, clinics and healthcare systems. Experts anticipate that for providers and clinical practices that have relatively poor outcomes, the availability of aggregate symptom severity data will promote the adoption of treatment guidelines and evidence-based practices.[19]

At the level of the provider, routine collection of symptom severity can be used for professional development. For example, a provider can use aggregate symptom severity data to monitor the effectiveness of individual treatment elements (e.g., activity scheduling for cognitive behavioral therapy).[19] If specific treatment elements are found to help patients get better, providers can use this information to better treat their new patients.[19] Similarly, if the same symptom rating scales are used routinely by all clinicians in a practice, aggregate symptom severity data can also be used to support quality improvement efforts. Specifically, using Plan-Do-Study-Act cycles, aggregated symptom severity data can be used to determine whether the implementation of a new practice improves outcomes over time or between those providers/clinics who do and do not adopt the new practice.

Similarly, symptom severity data aggregated at healthcare system level can be used to demonstrate performance to accreditation organizations.[19] In 2015, The National Committee for Quality Assurance (NCQA) announced that depression symptom monitoring and depression response/remission rates will be health plan performance measures for the Healthcare Effectiveness Data and Information Set (HEDIS). **Aggregate symptom severity data can also be used to demonstrate the value of care delivered by a healthcare system to payers, thereby helping to inform reimbursement policies that most benefit patients.[19]**

In 2015, Anthem Blue Cross Blue Shield®, UnitedHealthcare® and the Centers for Medicare and Medicaid Services all announced value-based payment programs that are highly compatible with implementation of MBC in clinical practice. However, due to the many social determinants

of behavioral health, all these organizations will need to use risk adjustment methods to evaluate with differences in aggregated symptom severity data reflect differences in quality or differences in patient case mix.[39]

Empirical Evidence Supporting Measurement-Based Care

Virtually all randomized controlled trials with frequent and timely feedback of patient reported symptoms to the provider during the clinical encounter significantly improved outcomes.[28, 40-52] or trended towards significance.[53] Not surprisingly, the effect of MBC is stronger for patients whose symptoms did not initially improve compared to those who did initially improve.[49] However, without symptom rating scales it is not possible to determine which patients are improving and which are not. Based on this body of research, the Substance Abuse and Mental Health Services Administration recognized MBC as an evidence based practice: http://legacy.nreppadmin.net/ViewIntervention.aspx?id=370

Two recent meta analyses of MBC have been completed. Knaup and colleagues analyzed 12 studies of MBC and found that MBC had a small, but significant effect (Hedge's g = 0.10) on outcomes relative to usual care.[51] The small effect size was likely attributable to the heterogeneity of the studies with respect to the type of symptom rating scale, frequency of feedback, and to whom the feedback was directed (patients, care coordinator, provider). Subgroup analysis indicated that effect sizes were significantly larger for the outpatient setting (versus inpatient), patient self-rated (vs staff rated), change in symptom severity over time reported (vs current severity only), and frequent monitoring (vs twice).[51]

In addition, a meta-analysis of several dozen randomized controlled trials enrolling patients with a variety of behavioral health disorders found that measurement-based care programs using symptom rating scales in a systematic fashion promoted more effective clinical encounters. Specifically, Krägeloh and colleagues analyzed 27 studies of MBC which they categorized into five groups: 1) symptom severity scales with no feedback to patients or providers; 2) symptoms severity scales with feedback to the provide; 3) symptom severity scales with feedback to provider and patient; 4) symptom severity scales with feedback to provider and opportunities for unstructured discussion during the encounter; and 5) symptom severity scales with feedback to provider and opportunities for structured discussion during the encounter. Category five MBC interventions had the most consistently positive outcomes highlighting the importance of incorporating symptom severity scores into clinical encounter.[52]

Feasibility

Symptom rating scales are feasible to administer in a range of clinical settings and are highly acceptable to patients and providers. **Measurement-based care can be incorporated into routine care regardless of the characteristics of the patient population, or the treatment philosophy and training background of providers.**

Patients perceive symptom rating scales to be efficient, complementary of their provider's clinical judgment and as evidence that their providers are taking their behavioral health problems seriously. Virtually all providers find symptom rating scales helpful in monitoring response to treatment and prompting treatment changes such as change in antidepressant dose, adding or switching medications, starting psychotherapy, or asking more questions about suicide. Here are some examples:

- The Group for the Advancement of Psychiatry now officially endorses the use of standardized symptom rating scales to supplement clinical interviews.
- The National Council for Behavioral Health endorses the use of a research-backed outcomes measurement tool to help clinicians address functional deficits of individualized care plans.
- The United States Army Branch routinely uses a tablet based symptom rating scale system in its specialty mental health clinics.
- Federally Qualified Health Centers in the state of Washington routinely use a web-based patient outcomes tracking system to assess symptom improvement among their integrated mental health primary care patients.
- The National Committee for Quality Assurance (NCQA) has proposed depression symptom monitoring and feedback as health plan performance measures for the 2016 Healthcare Effectiveness Data and Information Set (HEDIS).
- Likewise in 2015, Anthem Blue Cross Blue Shield®, UnitedHealthcare® and the Centers for Medicare and Medicaid Services all announced value-based payment programs which incentivize measurement-based care.

Not only is MBC supported by empirical evidence, it is also feasible to implement in routine care. The STAR*D trial implemented MBC covered 2,876 patient with depression in 23 specialty mental health and 18 primary care clinics, a convenience sample of real world settings across the US.[37] Katzelnick and colleagues replicated the MBC protocol used in STAR*D trial for 1,763 patients with depression treated in 17 specialty mental health clinics across the US.[54] Likewise, the STEP_BD trial implemented MBC for 3,158 patients with bipolar disorder treated in 22 specialty mental health clinics across the US.[55] Although these were all randomized controlled

trials, the scope, heterogeneity, and representativeness of the patients, providers and clinics suggests that MBC is feasible to implement at a large scale.

MBC has a high acceptance rate among patients. In a qualitative study conducted in the 34 primary care clinics, patients with depression were positive about the symptom rating scales perceiving them to be efficient, complementary of their provider's clinical judgment and as evidence that their primary care providers were taking their mental health problems seriously.[56] Some patients also reported that the symptom severity scales helped them increase their understanding of their illness and better express themselves to their provider.[56]

A pilot study of 200 patients at a publically-funded community mental health center evaluated the feasibility and acceptability using hand-held devices to collect symptom severity. Patients reported that the hand-held devices were private, and as easy or easier to use compared to filling out paper forms.[57]

MBC has a high acceptance rate among providers. MBC can be implemented in such a way that it does not require additional time on the part of the provider.[26] In the study by Katzelnick and colleagues discussed above, psychiatrists rated the symptom rating scales as helpful for determining depression severity (94%), monitoring response to treatment (100%), tailoring treatment (82%), monitoring risk of suicide (71%) and improving the therapeutic alliance (53%). In addition, the psychiatrists rated the symptom rating scales as helpful for making treatment decisions in 93% of the 6,096 patient encounters. Importantly, MBC led to a treatment change in 40% of the patient encounters, including a change in antidepressant dose, adding or switching medications, starting psychotherapy, or asking more questions about suicide.

Provider acceptability is notably lower when the symptom severity scores are collected and fed back by the managed care company with a lag between symptom severity scale administration and the clinical encounter. In the study conducted by Brodey and colleagues, only 47% of the providers thought that the symptom severity scales administered by the managed care organization helped them monitor their patients' response to treatment.[50] Providers with negative perceptions about the MBC protocol were often concerned about the burden of additional paperwork and that the managed care company was intruding on the treatment process.[50]

Despite the evidence for effectiveness, acceptability, feasibility, and professional endorsement of measurement-based care, there has been limited adoption of MBC through symptom rating scales for both specialty behavioral providers and primary care providers who treat mental health and substance use disorders.

Case Examples

The Table below describes several example of MBC care across a range of settings and populations that demonstrate its feasibility at a large scale.

Table 1: Measurement-Based Care Program Examples

SETTING:	Federally Qualified Health Centers, Washington State
POPULATION:	Primary care patients
DISORDERS:	Depression, panic, generalized anxiety, PTSD, Bipolar Disorder, Substance misuse

DESCRIPTION: In Washington state, care managers at Federally Qualified Health Centers (FQHCs) use the Care Management Tracking System (CMTS) to collect symptom severity from patients with mood and anxiety disorders. CMTS is a web-based program that includes diagnostic specific self-scoring symptom rating scales (e.g., PHQ-9, GAD-7, PCL). Care managers collect and enter symptom severity into CMTS at treatment initiation and receive clinical reminders to conduct frequent follow-up assessments throughout the course treatment. CMTS identifies when primary care patients are deteriorating or not responding to treatment and flags them accordingly. CMTS is also designed to be accessed by the care manager's consulting psychiatrist who reviews the cases of patients who are deteriorating or not responding to treatment in order to give treatment recommendations to the primary care provider. In addition to tracking the outcomes of particular patients, symptom severity scores can be aggregated to the provider and clinic level. CMTS has been used to support the care for nearly 50,000 patients. A Medicaid managed care plan developed a pay for performance plan to incentivize higher quality care using process of care data from CMTS, including the presence of psychiatric consultations for patients who did not show clinical improvement. For patients with depression, the median time to responding to treatment was reduced from approximately 64 weeks pre-implementation to 25 weeks post-implementation.[58]

SETTING:	Department of Veterans Affairs, Nationwide
POPULATION:	Primary care patients
DISORDERS:	Depression, panic, generalized anxiety, PTSD, alcohol misuse

DESCRIPTION: The Department of Veterans Affairs has developed a clinical service, called the Behavioral Health Laboratory (BHL), to assist with the ongoing monitoring of primary care patients during the acute phase of depression treatment. The BHL functions much like a radiology laboratory. When a primary care provider orders an assessment, a health technician telephones the patient and collects initial and follow-up symptom severity scores using a computerized decision support system which interprets the results and reports them to the primary care provider along with recommendations to assist in clinical decision making. The BHL has been shown to improve depression outcomes in a randomized control trial[5] and has been mandated to be adopted by the Department of Veterans Affairs and has been used with over 150,000 patients.[59, 60]

SETTING:	Department of Defense, nationwide
POPULATION:	Specialty mental health patients
DISORDERS:	Depression, panic, generalized anxiety, PTSD, Bipolar Disorder, alcohol misuse

DESCRIPTION: The Department of Defense (Army Branch) has deployed the Behavioral Health Data Portal (BHDP) in its specialty mental health clinics. The BHDP is a web-based system for reporting clinical outcomes in real time. Patients complete disease-specific symptom severity scales (e.g., PHQ-9, GAD-7, PCL, AUDIT-C) on handheld devices in the waiting room. Completing all the symptom severity scales takes about 20 minutes during the initial visit and about 5 minutes during follow-up visits. The symptom severity scores are immediately presented in graphical format to the provider during the encounter. The BDHP has been used for nearly 800,000 assessments. Data are routinely aggregated and used to evaluate clinical performance and guide quality improvement efforts.

SETTING:	Kaiser Permanente, nationwide
POPULATION:	Primary care and specialty care patients
DISORDERS:	Depression

DESCRIPTION: Kaiser Permanente has deployed a stepped care approach for treating our members with depression, based on the collaborative care model.[2] One of the key elements of the program is to assess depression symptoms at baseline, and to reassess depression symptoms periodically during the episode. To support this, Kaiser Permanente has developed the capability and workflows within our Kaiser Permanente Health Connect Electronic Health Record (EHR) to collect PHQ-9 scores, which can be used to track improvement of individual patients and report average improvement for specific populations of patients. Assessments are administered in the clinic, and are also collected electronically through the patient portal in our EHR. Most regions have embedded reminders for PHQ-9 collection in the health tracking registries within the EHR. Kaiser Permanente uses this information to track depression outcomes, using metrics endorsed by the National Quality Forum where available. Metrics tracked include use of the PHQ-9 at episode start, reassessment with the PHQ-9 at 2-4 months, and remission and symptom improvement at 6 months. In addition to the PHQ-9, we are also using composite distress scores, combining assessments for anxiety, alcohol use, drug abuse, and global functioning.

SETTING:	Community Behavioral Health Centers, Missouri, Kansas, Utah, North Dakota, North and South Carolina, Maryland
POPULATION:	Behavioral Health Clients
DISORDERS:	Mental health, substance use, co-occurring disorders and intellectual-developmental disabilities

DESCRIPTION: The DLA-20© Functionality Assessment is being used by community behavioral health centers to identify functional impairment, to develop specific goals and to monitor progress towards recovery. The DLA-20 is a copyrighted clinician administered rating scale (rather than a patient-reported outcomes measure) that takes <10 minutes to complete. The DLA-20 incorporates a 7-point scale with anchors to rate how often or how well the client independently performed or managed each of the 20 activities of Daily Living (e.g., personal safety, grooming, dressing, housing, self-care, time management, etc.) during the last 30 days.[61] The National Council for Behavioral Health endorses the use of a research-backed outcomes measurement tool to help clinicians address functional deficits of individualized care plans.

Overall Recommendations

Without routine outcomes monitoring, millions of patients seeking help for their mental health disorder will miss important opportunities to have their treatments adjusted if they are not improving. Their lack of improvement or worsening of specific symptoms may go undetected by many of their providers. The time is long overdue for our field to embrace the concept of measurement-based behavioral care and live up to the standard set by other medical specialties.

While the primary advantage of measurement-based care is improved outcomes for patients, a secondary benefit is the potential to use aggregated symptom rating scale data to enhance professional development, practice improvement, and positively influence payer purchasing decisions and reimbursement policies.[16]

The cost of administering patient-reported symptom rating scales is minimal, yet the benefits of measurement-based care accrue to patients, providers and payers.

Without MBC, millions of patients seeking help for their mental health disorder will endure ineffective treatment and their deterioration or lack of improvement will go undetected by their provider. The time is long overdue for the field of mental health to embrace the concept of MBC and live up to the standard set by other medical specialties. While the primary advantage of MBC is improved outcomes for patients with mental health disorders, a secondary benefit is the potential to use aggregated symptom rating scale data to enhance professional development, facilitate practice level quality improvement, and positively influence payer purchasing decisions and reimbursement policies.[16]

Therefore, the Kennedy Forum strongly endorses the following policy:

> **All primary care and behavioral health providers treating mental health and substance use disorders should implement a system of measurement-based care whereby validated symptom rating scales are completed by patients and reviewed by clinicians during encounters. Measurement-based care will help providers determine whether the treatment is working and facilitate treatment adjustments, consultations, or referrals for higher intensity services when patients are not improving as expected.**

Measurement-based care programs should also:

- Use self-reported symptom rating scales that have been validated with respect to reliability, sensitivity to change, and interpretability;

- Administer symptom rating scales frequently and immediately prior to the clinical encounter to ensure that the information is clinically actionable; and
- Incorporate symptom rating scale scores into the clinical encounter in a structured manner in order to support the treatment-to-target principle.

Measurement-based care is similar, but not equivalent, to performance measurement and provider profiling. However, unlike performance measurement and profiling which focus on practices and providers respectively, measurement-based care involves the systematic use of symptom rating scales to inform clinical decision making at the patient encounter level.

The primary benefit of measurement-based care is improved clinical outcomes for each individual patient. An indirect benefit of measurement-based care is that patient level outcomes can be aggregated across providers, clinics and health systems to inform quality improvement activities, as well as reported to payers in order to demonstrate the value of the behavioral health services being delivered. The cost of administering symptom severity scales is minimal, yet the benefits of MBC accrue to all the stakeholders involved (patients, providers and payers).

Expanding the Use of Measurement-Based Care

The Kennedy Forum recommends a number of actions by targeted stakeholder groups as described in detail below.

Patients and Patient Advocacy Groups

Patients and patient advocacy groups can play a key role in the widespread dissemination of measurement-based care. Patients can demand that their providers use symptom rating scales. Patient advocacy groups, such as the National Alliance of the Mentally Ill and Depression and Bipolar Support Alliance, can educate their membership about the benefits of measurement-based care and urge clinical leaders, regulators, and accreditation officials to adopt standards that require the use of these instruments.

The use of symptom severity scales has many benefits for patients by:

- **Patient Feedback.** Completing symptom rating scales and reviewing the information with providers validates the way patients are feeling and can ameliorate the self-blame that some patients experience.[24]
- **Patient Engagement.** Using symptom rating scales empowers patients by giving them a new role in their treatment by helping them communicate with their providers and making them feel more involved in clinical decision making.[62]

- **Patient Knowledge.** Sharing the results from MBC helps patients more fully understand their disorder and the fluctuation in their symptom severity over time.
- **More Effective Treatment Approach.** Relying on symptom rating scales helps providers determine when treatments are not working and leads to the delivery of more effective treatment for patients.

Given these benefits, patients, family members, and patient advocacy groups need to demand that MBC be implemented in their provider's clinical practice. Patients and patient advocacy groups can play a key role in the widespread dissemination of measurement-based care. Patients can demand that their providers use symptom rating scales.

Patients can be a catalyst for change by asking their providers to start using symptom severity scales so they can better describe their symptoms during encounters and follow their own progress over time. For instance, patients could identify symptom severity scales online and bring completed forms to their next appointment.[16] Patient advocacy groups, such as the National Alliance of the Mentally Ill and Depression and Bipolar Support Alliance, can educate their membership about the benefits of measurement-based care and urge clinical leaders, regulators, and accreditation officials to adopt standards that require the use of these instruments.

Providers and Provider Organizations

To catch up to the standard set by other medical specialties, providers and provider organizations involved in the delivery of behavioral health services should assume a key role in the uptake of measurement-based care. Providers can demand that healthcare organizations adopt the use of symptom rating scales and develop the health information technology needed to support measurement-based care. Provider organizations such as the National Council for Behavioral Health, American Psychiatric Association, American Psychological Association, and American Medical Association, can educate their membership about the benefits of measurement-based care and provide training opportunities for learning best practices in measurement-based care and recommend the use of these by their membership.

The use of symptom severity scales also has many benefits for providers by:

- **Treatment Focus.** Streamlining assessments by focusing the discussion on symptoms identified as most severe by the patient.[19]
- **Earlier Feedback.** Promoting feedback by providers to their patients earlier in the course of treatment that helps assess improvements or ongoing challenges through the use of symptom rating scales. For example, patient recognition of even small decreases in symptom severity may help them feel more optimistic and hopeful, and to maintain better adherence to the treatment plan.[26]

- **Clinical Effectiveness.** Encouraging providers to objectively assess the effectiveness of various treatments or treatment components in a range of clinical contexts and use this information to become a better clinician.[19]
- **Quality.** Helping clinical practices evaluate quality improvement efforts.
- **Value-Based Care.** Creating an evaluation platform that can be used by providers, practices, and healthcare systems to demonstrate to payers that the services they deliver are effective.

In addition, the potential exists for using aggregated symptom severity scores to make comparisons between providers to measure their clinical performance. However, many provides may not be comfortable reconciling their personal assessment of their effectiveness with objectively measured outcome data.[1]

Under any tracking and reporting system that measures physician performance, one confounding variable that must be accounted for is the illness severity and case mix of each population served by a provider. Therefore, providers and provider organizations should proactively work with payers, employers and others to ensure objective metrics are used that are risk adjusted when aggregating and reporting on outcomes data generated by MBC.

With the appropriate methodological precautions, providers should be held accountable if their patients are experiencing poor outcomes and they are not revising the treatment plan, getting additional consultation, or referring the patient to a higher level of care. Moreover, MBC can be used to generate evidence for payers that behavioral health treatment works, which should lead to increases in reimbursement for behavioral health services over time.

Training

Providers and provider organizations must also advocate for training in MBC. Psychiatric residency programs and psychology counseling and social work graduate programs must begin providing MBC training. Ideally, MBC should be used as a benchmark for residents' and interns' growing clinical competence during training.[16] In addition, MBC should also be provided as part of continuing education and required for maintenance of certification.[16] Finally, providers and provider organizations should work with the electronic health record (EHR) and case management software vendors to incorporate symptom severity scales into their systems that are reliable, sensitive to change, and interpretable. Many validated symptom rating scales are in the public domain.

Technology

Providers and provider organizations should work with electronic health record (EHR), care management software and other information technology vendors to incorporate validated symptom rating scales into their systems that are reliable, sensitive to change, and interpretable. Many validated rating scales are available in the public domain. In addition, providers and provider

organizations should also invest in technology that enables patients to complete symptom severity scales prior to their encounter on handheld devices in the waiting room and upload the data to the EHR and case management software applications.[19]

Payers

The use of symptom rating scales also has many benefits for payers by:

- **Transparency.** Promoting transparency and accountability. Under the Mental Health Parity and Addiction Equity Act, payers are held accountable to offer equivalent benefits for behavioral health and physical health. Symptom rating scale data can be easily aggregated across patients to make outcomes more transparent and to enable payers to observe the outcomes of treatments they are legally required to reimburse providers to deliver. In addition, promoting MBC also allows payers to hold provider organizations accountable for the quality of care they deliver assuming that appropriate case mix adjustments have been made when comparing providers in diverse settings.
- **Value-Based Care.** Aggregating key data at the provider or provider organization level will give payers the information they need to assist in the identification of providers who are generating the best outcomes and to make value-based purchasing decisions accordingly.
- **Smart Provider Networks.** Identifying the top providers in terms of quality can help payers create smart provider networks to promote better behavioral health outcomes. Even though randomized controlled trials demonstrate that provider profiling does not improve the outcomes of an individual provider's patients, payers can use aggregated symptom rating scale data to help identify higher quality provider organizations.
- **Payer Reimbursement.** Helping payers better allocate dollars for MH/SUD services. If providers can demonstrate good patient outcomes, payers likely will increase the proportion of health care expenditures allocated to treating behavioral health disorders, which in turn will drive better clinical and financial outcomes.
- **Actionable Measures.** Creating feedback loops that target enhanced clinical practices. Payers should allow provider organizations to choose validated symptom rating scales that their providers believe best inform their clinical decision making. Requiring providers to use rating scales that are not perceived to have clinical utility will likely result in the reporting of outcomes data that have not been clinically verified for accuracy.

Payers, such as private insurance companies, state and federal government purchasers (e.g., Medicaid, Medicare, Tricare, and Veterans Health Administration) and self-insured employers should incentivize the use of measurement-based care by providers and healthcare systems. Payers should reform existing payment systems to better incentivize measurement-based care. It is specifically recommended that payers reform the existing fee-for-service system which does not incentive MBC.[63] Options for incentivizing MBC include paying for the development of health

information technology that supports measurement-based care, paying for symptom rating scale assessments within a fee-for-services framework (perhaps the quickest and easiest way to encourage the adoption), and pay-for-performance.[16]

Regulators and Accreditation Organizations

The following regulatory and accrediting agencies should develop, deploy and/or require the use of MBC performance measures that move beyond process measures:

- Accreditation Association for Ambulatory Health Care (AAAHC)
- Accreditation Commission for Healthcare (ACHC)
- Commission on Accreditation of Rehabilitation Facilities (CARF)
- Consumer Assessment of Healthcare Providers and Systems (CHAPS) Survey (sponsored by U.S. Department of Health and Human Services, Agency for Health Research and Quality)
- Joint Commission
- National Committee for Quality Assurance's (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS)
- State Insurance Departments
- URAC
- U.S. Center for Medicare and Medicaid Services (CMS)
- U.S. Department of Veterans Affairs' External Peer Review Program.

These regulators and accreditation organizations should develop objective quantifiable performance measures for health care systems, managed care organizations, and health insurance companies that support the adoption of MBC.

Researchers

While there are dozens of disease-specific symptom rating scales that have be empirically validated and are used routinely in clinical care, future research should focus on improving these scales to make them briefer, as well as more reliable and sensitive to change.

Symptom rating scales for panic disorder and attention deficit hyperactivity disorder in particular would benefit from a reduction in the required completion time. Also, while the use of disease-specific symptom rating scales has been demonstrated to improve outcomes, there is no rigorous evidence that measuring other outcomes domains (e.g., satisfaction, therapeutic alliance, side-effects, functioning and goal attainment) improves care. Future research should examine whether these outcome domains should be incorporated into MBC programs. In particularly, researchers should test whether the use of goal attainment scaling leads to changes in treatment planning and contributes to recovery outcomes. If incorporating goal attainment scaling into MBC does improve

recovery outcomes, researchers must also determine how to best to aggregate these outcomes (which are tailored for each patient) in order to facilitate quality improvement activities and outcomes reporting to payers.

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