



Revisiting our approach to behavioral health referrals

This system of matching referrals to behavioral health practitioners' historical effectiveness seeks to strengthen patient outcomes.

Approximately 1 in 4 people ages 18 years and older and 1 in 3 people ages 18 to 25 years had a mental illness in the past year, according to the 2021 National Survey of Drug Use and Health.¹ The survey also found that adults ages 18 to 25 years had the highest rate of serious mental illness but the lowest treatment rate compared to other adult age groups.¹ Unfortunately, more than 60% of patients receiving mental health treatment fail to benefit to a clinically meaningful degree.²

However, there is growing evidence that referring patients to behavioral health practitioners (BHPs) with outcome-measured skills that meet the patient's specific needs can have a dramatic and positive impact. There are 2 main steps to pairing patients with an appropriate BHP: (1) use of measurement-based care data that can be analyzed at the patient and therapist level, and (2) data-driven referrals that pair patients with BHPs based on such routine outcome monitoring data (paired-on outcome data).

Psychotherapy's slow road toward measurement-based care

Routine outcome monitoring is the systematic measurement of symptoms and functioning during treatment. It serves multiple functions, including program evaluation and benchmarking of patient improvement rates. Moreover, routine outcome monitoring-derived feedback (based on repeated patient outcome measurements) can inform personalized and responsive care decisions throughout treatment.

For all intents and purposes, routine outcome monitoring plus feedback is synonymous with measurement-based care, which is becoming the preferred term in psychotherapy.³ Although measurement-based care is often the standard of practice for treating physical health conditions, the adoption of measurement-based care practices for treating mental health conditions remains low.³ The implementation of routine outcome monitoring is the lynchpin of measurement-based care, which in psychotherapy includes³:

- routinely administered symptom/functioning measure, ideally before each clinical encounter,
- practitioner review of these patient-level data,
- patient review of these data with their practitioner, and
- collaborative reevaluation of the person-specific treatment plan informed by these data.

CASE SCENARIO ►

Violeta W is a 33-year-old woman who presented to her family physician for her annual wellness exam. Prior to the exam, the medical assistant administered a Patient Health Questionnaire-9 (PHQ-9) to screen for depressive symptoms. Ms. W's score was 20 out of 27, suggestive of depression. To further assess the severity of depressive symptoms and their effect on daily function, the physician reviewed responses to the questionnaire with her and discussed treatment options. Ms. W was most

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interested in trying a low-dose selective serotonin reuptake inhibitor (SSRI).

At her follow-up visit 4 weeks later, the medical assistant re-administered the PHQ-9. The physician then reviewed Ms. W's responses with her and, based on Ms. W's subjective report and objective symptoms (still a score of 20 out of 27 on the PHQ-9), increased her SSRI dose. At each subsequent visit, Ms. W completed a PHQ-9 and reviewed responses and depressive symptoms with her physician.

The value of measurement-based care in mental health care

A narrative review by Lewis et al³ of 21 randomized controlled clinical trials (RCTs) across a range of age groups (eg, adolescents, young adults, adults), disorders (eg, anxiety, mood), and settings (eg, outpatient, inpatient) found that in at least 9 review articles, measurement-based care was associated with significantly improved outcomes vs usual care (ie, treatment without routine outcome monitoring plus feedback). The average increase in treatment effect size was about 30% when treatment was accompanied by measurement-based care.³

Moreover, a recent within-patient meta-analysis by de Jong et al⁴ shows that measurement-based care yields a small but significant increase in therapeutic outcomes ($d = .15$). Use of measurement-based care also is associated with improved communication between the patient and therapist.⁵ In pharmacotherapy practice, measurement-based care has been shown to predict rapid dose increases and changes in medication, when necessary; faster recovery rates; higher response rates to treatment³; and fewer dropouts.⁴

Perhaps one of the best-studied benefits of measurement-based mental health care is the ability to predict deterioration in care (ie, patients who are off-track in a way that practitioners often miss without the help of routine outcome monitoring data).^{6,7} Studies show that without a data-informed approach to care, some forms of psychotherapy or therapy with BHPs who are not sufficiently skilled in treating a given diagnosis increase symptoms or create significant harmful and iatrogenic effects.⁸⁻¹⁰ Conversely, the meta-

analysis by de Jong et al⁴ found a lower percentage of deterioration in patients receiving measurement-based care. The difference in deterioration was significant: An average of 5.4% of patients in control conditions deteriorated compared to an average of 4.6% in feedback (measurement-based care) groups. There were even larger effect sizes when therapists received training in the feedback system.⁴

Routine outcome monitoring without a dialogue between patient and practitioner about the assessments (eg, ignoring complete measurement-based care requirements) may be inadequate. A recent review by Muir et al⁶ found no differences in patient outcomes when data were used solely for aggregate quality improvement activities, suggesting the need for practitioners to review results of routine outcome monitoring assessments with patients and use data to alter care when necessary.

Measurement-based care is believed to deliver benefits and reduce harm by enhancing and encouraging active patient involvement, improving patient understanding of symptoms, promoting better communication, and facilitating better care coordination.³ The benefits of measurement-based care can be enhanced with a comprehensive core routine outcome monitoring tool and the level of monitoring-generated information delivered for multiple stakeholders (eg, patient, therapist, clinic).¹¹

A look at multidimensional assessment

The features of routine outcome monitoring tools vary significantly.¹² Some measures assess single-symptom or problem domains (eg, PHQ-9 for depression or Generalized Anxiety Disorder-7 [GAD-7] scale for anxiety) or multiple dimensions (multidimensional routine outcome monitoring). Multidimensional routine outcome monitoring may have benefits over single-domain measures. Single-domain measures and the subscales or factors of more comprehensive multidimensional routine outcome monitoring assessments should possess adequate specificity and sensitivity.

Some recent research findings question the construct validity of brief single-domain

measures of common presenting problems, such as depression and anxiety. For example, results from a factor analysis of the PHQ-9 and GAD-7 scale in patients with traumatic brain injury suggest these tools measure 1 psychological construct that includes depression and the cognitive components of anxiety (eg, worry)¹³—a finding consistent with those of other tools.¹⁴ Similarly, a larger study of 7763 BH patients found that a single factor accounted for most of the variance of the 2 combined measures, with no set of factors meeting the exacting standards used to develop multidimensional routine outcome monitoring.¹⁵ These findings suggest that the PHQ-9 and GAD-7 largely overlap and are not measuring different aspects of health as most practitioners believe (eg, depression and anxiety).

In commonly used assessments, multiple-factor analytic studies with high standards have supported the construct validity of domain-specific subscales, indicating that the various questions tap into different constructs of psychological health.^{14,16,17}

Beyond multiple domain-specific indicators, multidimensional routine outcome measurements provide a global total score that minimizes Type I (false-positive conclusion) and Type II (false-negative conclusion) errors in tracking patient improvement or deterioration.¹⁸ As one would expect, multidimensional routine outcome monitoring generally includes more items than single-domain measures; however, this comes with a trade-off. If there are specificity and sensitivity concerns with an ultra-brief single-domain measure, an alternative to a core multidimensional routine outcome measurement is to aggregate a series of single-domain measures into a battery of patient self-reports. However, this approach may take longer for patients to complete since they would have to shift among the varying response sets and wording across the unique single-domain measures.

In addition, the standardization/normalization of multidimensional routine outcome monitoring likely makes interpretation easier than referring to norms and clinical severity cutoffs for many distinct measures. Furthermore, increased specificity

enhances predictive power and allows BHPs to screen and track other conditions besides depression and anxiety. (It is worth noting that there are no known studies that have looked at the difference in time to administer or ease of interpretation of multidimensional routine outcome monitoring tools vs multiple single-domain measures.)

■ **Two multidimensional** routine outcome monitoring tools that cover a comprehensive series of discrete symptom and functional domains are the Treatment Outcome Package¹² and Counseling Center Assessment of Psychological Symptoms.¹⁶ These tools, which include subscales beyond general depression and anxiety (eg, sleep, substance misuse, social conflict), take 7 to 10 minutes to complete and provide outcome results across 12 symptom and 8 functional dimensions. As an example, the Treatment Outcome Package has good psychometric qualities (eg, reliability, construct and concurrent validity) for adults,¹² children,^{14,19} and adolescents,¹⁹ and can be administered through a secure online data collection portal. The Counseling Center Assessment of Psychological Symptoms has demonstrated high construct validity and good convergent validity.¹⁶ These assessments can be administered in paper or digital (eg, electronic medical record portal, smartphone) format.²⁰

CASE SCENARIO ►

Ms. W's physician asked her to go online using her phone and answer the questions in the Treatment Outcome Package. Her results, which she viewed with her physician, were displayed in graph form (FIGURE). Her scores were represented in Z scores normalized to the general population, with "0" representing the general, nontreatment-seeking population average and positive scores representing the number of standard deviations (SDs) more severe than the general population average.

Although this assessment scored Ms. W's clinically elevated depression as mild, it revealed abnormalities in 3 other domains. Sexual functioning issues represented the most abnormal domain at greater than 3 SDs (more severe than the general population), followed by poor life quality and school/work functioning.



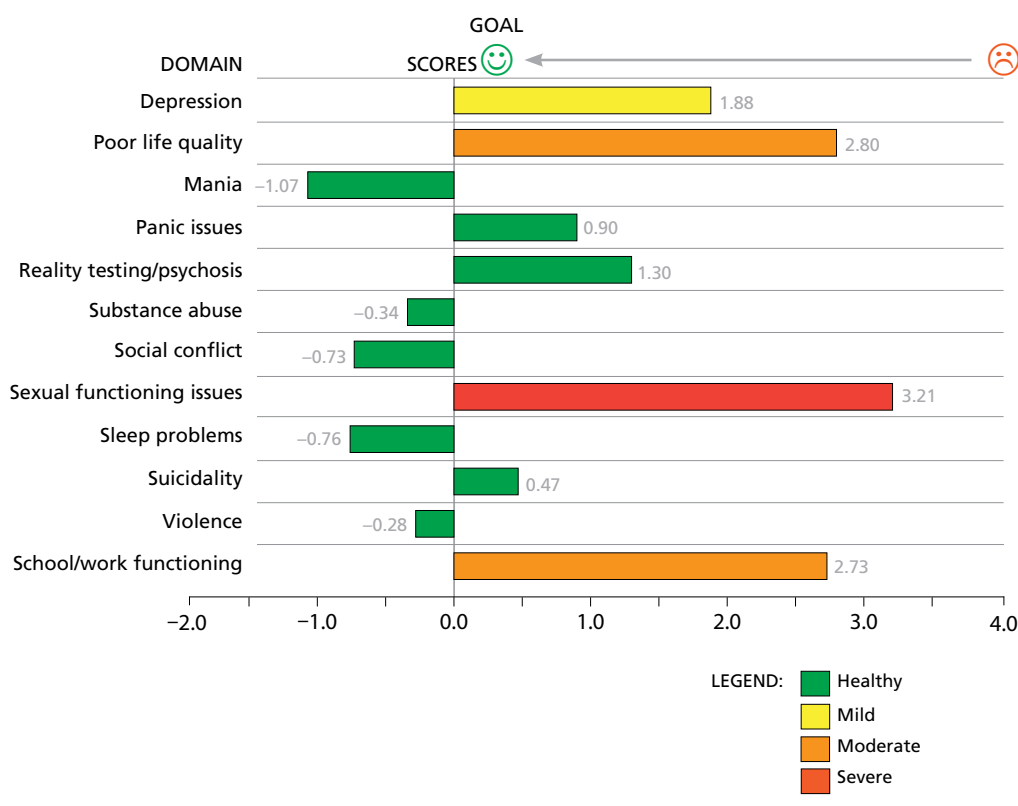
Perhaps one of the best-studied benefits of mental health measurement-based care is the ability to predict deterioration in care.

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FIGURE

Visual review of a patient's multidimensional routine outcome monitoring assessment

The patient's results across 12 mental health domains are shown here in graph form. Scores are represented in Z scores normalized to the general population, with "0" representing the nontreatment-seeking population average and positive scores representing the number of standard deviations more severe than the general population average.



➤ It is essential to customize referrals to match a patient's most elevated mental health concerns with a therapist who will most effectively treat those domains.

After reviewing Ms. W's report, her physician decided that pharmacologic management alone (for depression) was not the most appropriate treatment course. Therefore, her physician recommended psychotherapy in addition to the SSRI she was taking. Ms. W agreed to a customized referral for psychotherapy.

Data-driven referrals

When psychotherapy is chosen as a treatment, the individual BHP is an active component of that treatment. Consequently, it is essential to customize referrals to match a patient's most elevated mental health concerns with a therapist who will most effectively treat those domains. It is rare for a BHP to

be skilled in treating every mental health domain.⁹ Multiple studies have shown that BHPs have identifiable treatment skills in specific domains, which physicians should consider when making referrals.^{9,21,22} These studies demonstrate the utility of aggregating patient-level routine outcome monitoring data to better understand therapist-level (and ultimately clinic- and system-level) outcomes.

Additionally, recent research has tested this idea prospectively. An RCT funded by the Patient-Centered Outcome Research Institute and published in *JAMA Psychiatry* showed a significant and positive effect on patient outcomes (ie, reductions in general impairment, impairment involving a patient's

most elevated domain, and global distress) using paired-on outcome data matching vs as-usual matching protocols (eg, therapist self-defined areas of specialty).²² In the RCT, the most effective matching protocol was a combination of eliminating harm and matching the patient on their 3 most problematic domains (the highest match level). These patients ended care as healthy as the general population after 16 weeks of treatment. A random 1-year follow-up assessment from the original RCT showed that most patients who had been matched had maintained their improvement.²³

Therefore, a multidimensional routine outcome monitoring tool can be used to identify a BHP's relative strengths and weaknesses across multiple outcome domains. Within a system of care, a sample of BHPs will possess varying outcome-domain profiles. When a new patient is seeking a referral to a BHP, these profiles (or domain-specific outcome track records) can be used to support paired-on outcome data matching. Specifically, a new patient completes the multidimensional routine outcome monitoring tool at pretreatment, and the results reveal the outcome domains on which the patient is most clinically severe. This pattern of domain-specific severity then can be used to pair the new patient with a BHP who has demonstrated success in addressing the same outcome domain(s). This approach matches a new patient to a BHP with established expertise based on routine outcome monitoring.

Retrospective and prospective studies have found that most BHPs have stable performance in their strengths and weaknesses.^{11,21} One study found that assessing BHP performance with their most recent 30 patients can reliably predict future performance with their next 30 patients.²⁴ This predictability in a practitioner's outcomes suggests report cards that are updated frequently can be utilized to make case assignments within BH or referrals to a specific BHP from primary care.

Making a paired-on outcome data-matched referral

Making customized BH referrals requires access to information about a practitioner's

previous routine outcome monitoring data per clinical domain (eg, suicidality, violence, quality of life) from their most recent patients. Previous research suggests that follow-up data from a minimum of 15 patients is necessary to make a reliable evaluation of a practitioner's strengths and weaknesses (ie, effectiveness "report card") per clinical domain.²⁴

Few, if any, physicians have access to this level of updated outcome data from their referral network. To facilitate widespread use of paired-on outcome data matching, a new Web system (MatchedTherapists.com) will allow the general public and PCPs to access these grades. As a public service option, this site currently allows for a self-assessment using the Treatment Outcome Package. Pending versions will generate paired-on outcome data grades, and users will receive a list of local therapists available for in-person appointments as well as therapists available for virtual appointments. The paired-on outcome data grades are delivered in school-based letter grades. An "A+," for example, represents the best matching grade. Users also will be able to sort and filter results for other criteria such as telemedicine, insurance, age, gender, and appointment availability. Currently, there are more than 77,000 therapists listed on the site nationwide. A basic listing is free.

CASE SCENARIO ▶

After Ms. W took the multidimensional routine outcome assessment online, she received a list of therapists rank-ordered by paired-on outcome data grade, with the "A+" matches listed first. Three of the best-matched referrals accepted her insurance and were willing to see her through telemedicine. Therapists with available in-person appointments had a "B" grade. After discussing the options with her physician, Ms. W opted for telehealth counseling with the therapist whose profile she liked best. The therapist and PCP tracked her progress through routine outcome monitoring reporting until all her symptoms became subclinical.

The future of a "referral bridge"

In this article, we present a solution to a common issue faced by mental health care pa-



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tients: failure to benefit meaningfully from mental health treatment. Matching patients to specific BHPs based on effectiveness data regarding the therapist's strengths and skills can improve patient outcomes and reduce harm. In addition, patients appear to value this approach. A Robert Wood Johnson Foundation-funded study demonstrated that patients value seeing practitioners who have a track record of successfully treating previous patients with similar issues.^{25,26} In many cases, patients indicated they would prioritize this matching process over other factors such as practitioners with a higher number of years of experience or the same demographic characteristics as the patient.^{25,26}

These findings may represent a new area in the science of health care. Over the past century, major advances in diagnosis and treatment—the 2 primary pillars of health care—have turned the art of medicine into a science. However, the art of making referrals has not advanced commensurately, as there has been little attention focused on the “referral bridge” between these 2 pillars. As the studies reviewed in this paper demonstrate, a referral bridge deserves exploration in all fields of medicine. **JFP**

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