BEHAVIORAL HEALTH

Using Rating Scales in a Clinical Setting

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Despite the importance of tracking patients' progress through the use of validated clinical rating scales, there is gross underutilization of such instruments. Several readily available rating scales are brief, useful, and easy to incorporate into clinical practice.

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In the current health care environment, there is an increasing demand for objective assessment of disease states.[1] This is particularly apparent in the realm of behavioral health, where documentation of outcomes lags that of other areas of medicine.

In 2012, the additional health care costs incurred by persons with mental health diagnoses were estimated to be $293 billion among commercially insured, Medicaid, and Medicare beneficiaries in the United States—a figure that is 273% higher than the cost for those without psychiatric diagnoses.[2] Psychiatric and medical illnesses can be so tightly linked that accurate diagnosis and treatment of psychiatric disorders becomes essential to control medical illnesses. It is not surprising that there is increased scrutiny to the ways in which behavioral health care can be objectively assessed and monitored, and payers such as the Centers for Medicare and Medicaid Services increasingly require objective documentation of disease state improvement for payment.[3]

Support for objective assessment of disease derives from the collaborative care model. This model is designed to better integrate mental health and primary care (among other practices) by establishing the Patient-Centered Medical Home and emphasizing screening and monitoring patient-reported outcomes over time to assess treatment response.[4] This approach, which is endorsed by the American Psychiatric Association, is associated with significant improvements in outcomes compared with usual care.[5] It tracks patient progress using validated clinical rating scales and other screening tools (eg, Patient Health Questionnaire [PHQ-9] for depression), an approach that is analogous to how patients with type 2 diabetes are monitored by A1C lab tests.[6] An extensive body of research supports the impact of this approach on treatment. A 2012 Cochrane review associated collaborative care with significant improvements in depression and anxiety outcomes compared with usual treatment.[7]

Despite these findings, a recent Kennedy Forum brief asserts that behavioral health is characterized by a "lack of systematic measurement to determine whether patients are responding to treatment."[8] That same brief points to the many validated, easy-to-administer rating scales and screening tools that can reliably measure the frequency and severity of psychiatric symptoms over time, and likens the lack of their use to "treating high blood pressure without using a blood pressure cuff to measure if a patient's blood pressure is improving."[8] In fact, it is estimated that only 18% of psychiatrists and 11% of psychologists use rating scales routinely.[9,10] This lack of use denies clinicians important information that can help detect deterioration or lack of improvement in their patients; implementing these scales in primary care can help early detection of behavioral health problems.

Behavioral health is replete with rating scales and screening tools, and the num-

ber of competing scales can make choosing a measure difficult.[1] Nonetheless, not all scales are appropriate for clinical use; many are designed for research, for instance, and are lengthy and difficult to administer.

Let's review a number of rating scales that are brief, useful, and easy to administer. A framework for the screening tools addressed in this article is available on the federally funded Center for Integrated Health Solutions website **(www.integration.samhsa.gov).** This site promotes the use of tools designed to assist in screening and monitoring for depression, anxiety, bipolar disorder, substance use, and suicidality.[11]

QUALITY CRITERIA FOR RATING SCALES

The quality of a rating scale is determined by the following attributes.

Objectivity. The ability of a scale to obtain the same results, regardless of who administers, analyzes, or interprets it.

Reliability. The ability of a scale to convey consistent and reproducible information across time, patients, and raters.

Validity. The degree to which the scale measures what it is supposed to measure (eg, depressive symptoms). Sensitivity and specificity are measures of validity and provide additional information about the rating scale; namely, whether the scale can detect the presence of a disease (sensitivity) and whether it detects only that disease or condition and not another (specificity).

Establishment of norms. Whether a scale provides reference values for different clinical groups.

Practicability. The resources required to administer the assessment instrument in terms of time, staff, and material.[12]

In addition to meeting these quality criteria, selection of a scale can be based on whether it is *self-rated* or *observer-rated*. Advantages to self-rated scales, such as the PHQ-9, Mood Disorder Questionnaire (MDQ), and Generalized Anxiety Disorder 7-item (GAD-7) scale, are their practicability—they are easy to administer and don't require much time—and their use in evaluating and raising awareness of subjective states.

However, reliability may be a concern, as some patients may lack insight or exaggerate or mask symptoms when completing such scales.[13] Both observer- and self-rated scales can be used together to minimize bias, identify symptoms that might have been missed/not addressed in the clinical interview, and drive clinical decision-making. Both can also help patients communicate with their providers and make them feel more involved in clinical decision-making.[8]

ENDORSED RATING SCALES

The following scales have met many of the quality criteria described here and are endorsed by the government payer system. They can easily be incorporated into clinical practice and will provide useful clinical information that can assist in diagnosis and monitoring patient outcomes.

Patient Health Questionnaire

PHQ-9 is a nine-item self-report questionnaire that can help to detect depression and supplement a thorough mental health interview. It scores the nine *DSM-IV* criteria for depression on a scale of 0 (not at all) to 3 (nearly every day). It is a public resource that is easy to find online, available without cost in several languages, and takes just a few minutes to complete.[14]

PHQ-9 has shown excellent test–retest reliability in screening for depression, and

TABLE

CAGE Questionnaire for Detection of Substance Abuse

Have you ever

1. Felt the need to **cut down** on your drinking or drug use?
2. Had people **annoy** you by criticizing your drinking or drug use?
3. Felt bad or **guilty** about your drinking or drug use?
4. Had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover (**eye-opener**)?

Source: O'Brien. *JAMA.* 2008.[27]

normative data on the instrument's use are available in various clinical populations.[15] Research has shown that as PHQ-9 depression scores increase, functional status decreases, while depressive symptoms, sick days, and health care utilization increase.[15] In one study, a PHQ-9 score of ≥ 10 had 88% sensitivity and specificity for detecting depression, with scores of 5, 10, 15, and 20 indicating mild, moderate, moderately severe, and severe depression, respectively.[16] In addition to its use as a screening tool, PHQ-9 is a responsive and reliable measure of depression treatment outcomes.[17]

Mood Disorder Questionnaire

MDQ is another brief, self-report questionnaire that is available online. It is designed to identify and monitor patients who are likely to meet diagnostic criteria for bipolar disorder.[18,19]

The first question on the MDQ asks if the patient has experienced any of 13 common mood and behavior symptoms. The second question asks if these symptoms have ever occurred at the same time, and the third asks the degree to which the patient finds the symptoms to be problematic. The remaining two questions provide additional clinical information, addressing family history of manic–depressive illness or bipolar disorder and whether a diagnosis of either disorder has been made.

The MDQ has shown validity in assessing bipolar disorder symptoms in a general population, although recent research suggests that imprecise recall bias may limit its reliability in detecting hypomanic episodes earlier in life.[20,21] Nonetheless, its specificity of > 97% means that it will effectively screen out just about all true negatives.[18]

Generalized Anxiety Disorder 7-item scale

The GAD-7 scale is a brief, self-administered questionnaire for screening and measuring severity of GAD.[22] It asks patients to rate seven items that represent problems with general anxiety and scores each item on a scale of 0 (not at all) to 3 (nearly every day). Similar to the other measures, it is easily accessible online.

Research evidence supports the reliability and validity of GAD-7 as a measure of anxiety in the general population. Sensitivity and specificity are 89% and 82%, respectively. Normative data for age- and sex-specific subgroups support its use across age groups and in both males and females.[23] The GAD-7 performs well for detecting and monitoring not only GAD but also panic disorder, social anxiety disorder, and posttraumatic stress disorder.[24]

CAGE questionnaire for detection of substance use

The CAGE questionnaire is a widely used screening tool that was originally developed to detect alcohol abuse but has been adapted to assess other substance abuse.[25,26] The omission of substance abuse from diagnostic consideration can have a major effect on quality of care, because substance abuse can be the underlying cause of other diseases. Therefore, routine administration of this instrument in clinical practice can lead to better understanding and monitoring of patient health.[27]

Similar to other instruments, CAGE is free and available online.[27] It contains four simple questions, with 1 point assigned to each positive answer (see Table); the simple mnemonic makes the questions easy to remember and to administer in a clinical setting.

CAGE has demonstrated validity, with one study determining that scores ≥ 2 had a specificity and sensitivity of 76% and 93%, respectively, for identifying excessive drinking, and a specificity and sensitivity of 77%

and 91%, respectively, for identifying alcohol abuse.[28]

Columbia Suicide Severity Rating Scale (C-SSRS)

C-SSRS was developed by researchers at Columbia University to assess the severity of and track changes over time in suicidal ideation and behavior. C-SSRS is two pages and takes only a few minutes to administer; however, it also may be completed as a self-report measure. The questions are phrased in an interview format, and while clinicians are encouraged to receive training prior to its administration, specific training in mental health is not required.

The "Lifetime/Recent" version allows practitioners to gather lifetime history of suicidality as well as any recent suicidal ideation and/or behavior, whereas the "Since Last Visit" version of the scale assesses suicidality in patients who have completed at least one Lifetime/Recent C-SSRS assessment. A truncated, six-item "Screener" version is typically used in emergency situations. A risk assessment can be added to either the Full or Screener version to summarize the answers from C-SSRS and document risk and protective factors.[29]

Several studies have found C-SSRS to be reliable and valid for identifying suicide risk in children and adults.[30,31] *USA Today* reported that an individual exhibiting even a single behavior identified by the scale is eight to 10 times more likely to complete suicide.[32] In addition, the C-SSRS has helped reduce the suicide rate by 65% in one of the largest providers of community-based behavioral health care in the United States.[32]

USING SCALES TO AUGMENT CARE

Each of the scales described in this article can easily be incorporated into clinical practice. The information the scales provide can be used to track progression of symptoms and effectiveness of treatment. Although rating scales should never be used alone to establish a diagnosis or clinical treatment plan, they can and should be used to augment information from the clinician's assessment and follow-up interviews.[5] **CR**

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