Which behavioral health screening tool should you use—and when?

This review focuses on screens to assess everything from mood and substance use to pain and cognition. It also offers an algorithm to aid with clinical decision making.

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The authors reported no potential conflict of interest relevant to this article. Some of the material that appears here was originally published by the authors in the Winter 2019 issue of **Texas Psychologist**.

doi: 10.12788/jfp.0089

Many screening tools are available in the public domain to assess a variety of symptoms related to impaired mental health. These tools can be used to quickly evaluate for mood, suicidal ideation or behavior, anxiety, sleep, substance use, pain, trauma, memory, and cognition (**TABLE**). Individuals with poor mental health incur high health care costs. Those suffering from anxiety and posttraumatic stress have more outpatient and emergency department visits and hospitalizations than patients without these disorders,[1,2] although use of mental health care services has been related to a decrease in the overutilization of health care services in general.[3]

Here we review several screening tools that can help you to identify symptoms of mental illnesses and thus, provide prompt early intervention, including referrals to psychological and psychiatric services.

Mood disorders

Most patients with mood disorders are treated in primary care settings.[4] Quickly measuring patients' mood symptoms can expedite treatment for those who need it. Many primary care clinics use the 9-item Patient Health Questionnaire (PHQ-9) to screen for depression.[5] The US Preventive Services Task Force (USPSTF) has recommended screening for depression with adequate systems to ensure accurate diagnoses, effective treatment, and follow-up. Although the USPSTF did not specially endorse screening for bipolar disorder, it followed that recommendation with the qualifying statement, "positive screening results [for depression] should lead to additional assessment that considers severity of depression and comorbid psychological problems, alternate diagnoses, and medical conditions."[6] Thus, following a positive screen result for depression, consider using a screening tool for mood disorders to provide diagnostic clarification.

The Mood Disorder Questionnaire (MDQ) is a validated 15-item, self-administered questionnaire that takes only 5 minutes to use in screening adult patients for bipolar I disorder.[7] The MDQ assesses specific behaviors related to bipolar disorder, symptom co-occurrence, and functional impairment. The MDQ has low sensitivity (58%) but good specificity (93%) in a primary care setting.[8] However, the MDQ is not a diagnostic instrument. A positive screen result should prompt a more thorough clinical evaluation, if necessary, by a professional trained in psychiatric disorders.

We recommend completing the MDQ prior to prescribing antidepressants. You can also monitor a patient's response to treatment with serial MDQ testing. The MDQ is useful, too, when a patient has unclear mood symptoms that may have features overlapping with bipolar disorder. Furthermore, we recommend screening for bipolar disorder with every pa-

TABLE

Free behavioral health screening tools

Measure	Sensitivity, %	Specificity, %	PPV, %	NPV, %	Available at
AUDIT	81	94	37	77	www.auditscreen.org
CATS	N/A	N/A	N/A	N/A	https://www.apaservices.org/practice/reimbursement/health-registry/ptsd-screening-assessment.pdf
CRAFFT	76	94	83	91	www.crafft.org/
C-SSRS	95	95	22.4	99.9	https://cssrs.columbia.edu/wp-content/uploads/C-SSRS_Pediatric-SLC_11.14.16.pdf
GAD-7	89	82	29	99	https://adaa.org/sites/default/files/GAD-7_Anxiety-updated_0.pdf
ISI	82.4	82.1	70	90.2	www.myhealth.va.gov/mhv-portal-web/insomnia-severity-index
MDQ	58	93	50	82	www.sadag.org/images/pdf/mdq.pdf
MoCA	94	42	77	76	www.mocatest.org
PCL-5	74.5	70.6	75	97	www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp
PHQ-9	95	67	88	83	www.mdcalc.com/phq-9-patient-health-questionnaire-9
SCARED	81.8	52	84.3	80.3	www.midss.org/content/screen-child-anxiety-related-disorders-scared
SOAPP-R	81	68	57	87	www.helpisherede.com/Content/Documents/SOAPP-Tool.pdf

AUDIT, Alcohol Use Disorder Identification Test; CATS, Child and Adolescent Trauma Screen; CRAFFT, Cars, Relaxation, being Alone, Forgetting, Family/Friends, and Trouble; C-SSRS, Columbia Suicide Severity Rating Scale; GAD-7, Generalized Anxiety Disorder–7 item; ISI, Insomnia Severity Index; MDQ, Mood Disorder Questionnaire; MoCA, Montreal Cognitive Assessment; N/A, not available; NPV, negative predictive value; PCL-5, Posttraumatic Stress Disorder Checklist; PHQ-9, Patient Health Questionnaire–9; PPV, positive predictive value; SCARED, Screen for Child Anxiety Related Disorders; SOAPP-R, Screener and Opioid Assessment for Patients with Pain–Revised.

tient who reports symptoms of depression, given that some pharmacologic treatments (predominately selective serotonin reuptake inhibitors) can induce mania in patients who actually have unrecognized bipolar disorder.[9]

Suicide

Suicide is the 10th leading cause of death among the general population. All demographic groups are impacted by suicide; however, the most vulnerable are men ages 45 to 64 years.[10] Given the imminent risk to individuals who experience suicidal ideation, properly assessing and targeting suicidal risk is paramount.

The Columbia Suicide Severity Rating Scale (C-SSRS) can be completed in an interview format or as a patient self-report. Versions of the C-SSRS are available for children, adolescents, and adults. It can be used in practice with any patient who may be at risk for suicide. Specifically, consider using the C-SSRS when a patient scores 1 or greater on the PHQ-9 or when risk is revealed with another brief screening tool that includes suicidal ideation.

The C-SSRS covers 10 categories related to suicidal ideation and behavior that the clinician explores with questions requiring only Yes/No responses. The C-SSRS demonstrates moderate-to-strong internal consistency and reliability, and it has shown a high degree of sensitivity (95%) and specificity (95%) for suicidal ideation.[11]

Anxiety and physiologic arousal

Generalized anxiety disorder (GAD) is one of the most common anxiety disorders, with an estimated prevalence of 2.8% to 8.5% among primary care patients.[12] Brief, validated screening tools such as the Generalized Anxiety Disorder–7 item (GAD-7) scale can be effective in identifying anxiety and other related disorders in primary care settings.

CONTINUED

Screen for bipolar disorder when symptoms of depression are reported.

The GAD-7 comprises 7 items inquiring about symptoms experienced in the past 2 weeks. Scores range from 0 to 21, with cutoffs of 5, 10, and 15 indicating mild, moderate, and severe anxiety, respectively. This questionnaire is appropriate for use with adults and has strong specificity, internal consistency, and test-retest reliability.[12] Specificity and sensitivity of the GAD-7 are maximized at a cutoff score of 10 or greater, both exceeding 80%.[12] The GAD-7 can be used when patients report symptoms of anxiety or when one needs to screen for anxiety with new patients or more clearly understand symptoms among patients who have complex mental health concerns.

The Screen for Child Anxiety Related Disorders (SCARED) is a 41-item self-report measure of anxiety for children ages 8 to 18. The SCARED questionnaire yields an overall anxiety score, as well as subscales for panic disorder or significant somatic symptoms, generalized anxiety disorder, separation anxiety, social anxiety disorder, and significant school avoidance.[13] There is also a 5-item version of the SCARED, which can be useful for brief screening in fast-paced settings when no anxiety disorder is suspected, or for children who may have anxiety but exhibit reduced verbal capacity. The SCARED has been found to have moderate sensitivity (81.8%) and specificity (52%) for diagnosing anxiety disorders in a community sample, with an optimal cutoff point of 22 on the total scale.[14]

Sleep

Sleep concerns are common, with the prevalence of insomnia among adults in the United States estimated to be 19.2%.[15] The importance of assessing these concerns cannot be overstated, and primary care providers are the ones patients consult most often.[16] The gold standard in assessing sleep disorders is a structured clinical interview, polysomnography, sleep diary, and actigraphy (home-based monitoring of movement through a device, often worn on the wrist).[17,18] However, this work-up is expensive, time-intensive, and impractical in integrated care settings; thus the need for a brief, self-report screening tool to guide further assessment and intervention.

The Insomnia Severity Index (ISI) assesses patients' perceptions of their insomnia. The ISI was developed to aid both in the clinical evaluation of patients with insomnia and to measure treatment outcomes. Administration of the ISI takes approximately 5 minutes, and scoring takes less than 1 minute.

The ISI is composed of 7 items that measure the severity of sleep onset and sleep maintenance difficulties, satisfaction with current sleep, impact on daily functioning, impairment observable to others, and degree of distress caused by the sleep problems. Each item is scored on a 0 to 4 Likert-type scale, and the individual items are summed for a total score of 0 to 28, with higher scores suggesting more severe insomnia. Evidence-based guidelines recommend cognitive behavioral therapy for insomnia (CBT-I) as the first-line treatment for adults with primary insomnia.[19]

Several validation studies have found the ISI to be a reliable measure of perceived insomnia severity, and one that is sensitive to changes in patients' perceptions of treatment outcomes.[20,21] An additional validation study confirmed that in primary care settings, a cutoff score of 14 should be used to indicate the likely presence of clinical insomnia[22] and to guide further assessment and intervention.

The percentage of insomniac patients correctly identified with the ISI was 82.2%, with moderate sensitivity (82.4%) and specificity (82.1%).[22] A positive predictive value of 70% was found, meaning that an insomnia disorder is probable when the ISI total score is 14 or higher; conversely, the negative predictive value was 90.2%.

Substance use and pain

The evaluation of alcohol and drug use is an integral part of assessing risky health behaviors. The 10-item Alcohol Use Disorder Identification Test (AUDIT) is a self-report tool developed by the World Health Organization.[23,24] Validated in medical settings, scores of 8 or higher suggest problematic drinking.[25,26] The AUDIT has demonstrated high specificity (94%) and moderate sensitivity (81%) in primary care settings.[27] The AUDIT-C (items 1, 2, and 3 of the AUDIT) has also demonstrated comparable sensitivity, although slightly lower specificity, than the full AUDIT, suggesting that this 3-question screen can also be used in primary care settings.[27]

Opioid medications, frequently prescribed for chronic pain, present serious risks for many patients. The Screener and Opioid Assessment for Patients with Pain–Revised (SOAPP-R) is a 24-item self-reporting scale that can be completed in approximately 10 minutes.[28] A score of 18 or higher has identified 81% of patients at high risk for opioid misuse in a clinical setting, with moderate specificity (68%). Although other factors should be considered when assessing risk of opioid misuse, the SOAPP-R is a helpful and quick addition to an opioid risk assessment.

The CRAFFT Screening Tool for Adolescent Substance Use is administered by the clinician for youths ages 14 to 21. The first 3 questions ask about use of alcohol, marijuana, or other substances during the past 12 months. What follows are questions related to the young person's specific experiences with substances in relation to Cars, Relaxation, being Alone, Forgetting, Family/Friends, and Trouble (CRAFFT). The CRAFFT has shown moderate sensitivity (76%) and good specificity (94%) for identifying any problem with substance use.[29] These measures may be administered to clarify or confirm substance use patterns (ie, duration, frequency), or to determine the severity of problems related to substance use (ie, social or legal problems).

Trauma and PTSD

Approximately 7.7 million adults per year will experience posttraumatic stress disorder (PTSD) symptoms, although PTSD can affect individuals of any age.[30] Given the impact that trauma can have, assess for PTSD in patients who have a history of trauma or who otherwise seem to be at risk. The Posttraumatic Stress Disorder Checklist (PCL-5) is a 20-item self-report questionnaire that screens for symptoms directly from the *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* (*DSM-5*) criteria for PTSD. One limitation is that the questionnaire is only validated for adults ages 18 years or older. Completion of the PCL-5 takes 5 to 10 minutes. The PCL-5 has strong internal consistency reliability (94%) and test-retest reliability (82%).[31] With a cutoff score of 33 or higher, the sensitivity and specificity have been shown to be moderately high (74.5% and 70.6%, respectively).[32]

The Child and Adolescent Trauma Screen (CATS) is used to assess for potentially traumatic events and PTSD symptoms in children and adolescents. These symptoms are based on the *DSM-5*, and therefore the CATS can act as a useful diagnostic aid. The CATS is also available in Spanish, with both caregiver-report (for children ages 3-6 years or 7-17 years) and self-report (for ages 7-17 years) versions. Practical use of the PCL-5 and the CATS involves screening for PTSD symptoms, supporting a provisional diagnosis of PTSD, and monitoring PTSD symptom changes during and after treatment.

Memory and cognition

Cognitive screening is a first step in evaluating possible dementia and other neuropsychological disorders. The importance of brief cognitive screening in primary care cannot be understated, especially for an aging patient population. Although the Mini Mental Status Exam (MMSE) has been widely used among health care providers and researchers, we recommend the Montreal Cognitive Assessment (MoCA).

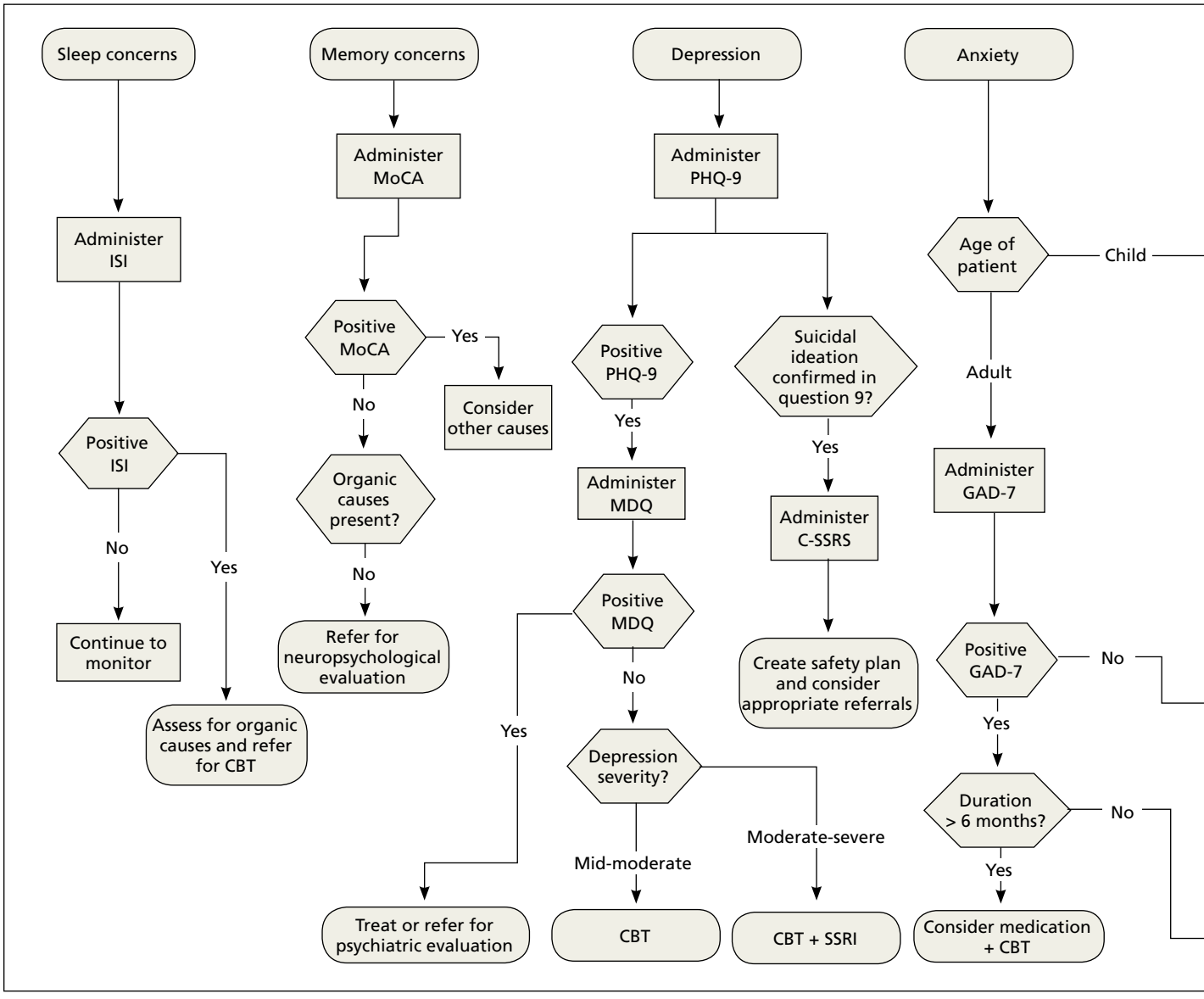
The MoCA is a simple, standalone cognitive screening tool validated for adults ages 55 to 85 years.[33] The MoCA addresses many important cognitive domains, fits on one page, and can be administered by a trained provider in 10 minutes. Research also suggests that it has strong test-retest reliability and positive and negative predictive values for mild cognitive impairment and Alzheimer dementia, and it has been found to be more sensitive than the MMSE.[34] We additionally recommend the MoCA as it measures several cognitive skills that are not addressed on the MMSE, including verbal fluency and abstraction.[34] Scores below 25 are suggestive of cognitive impairment and should lead to a referral for neuropsychological testing.

The MoCA's sensitivity for detecting cognitive impairment is high (94%), and specificity is low (42%).[35] To ensure consistency and accuracy in administering the MoCA, certification is now required via an online training

The SCARED questionnaire for children yields an overall anxiety score, as well as subscales for such features as panic disorder, separation anxiety, and significant school avoidance.

FIGURE

How to use selected behavioral health screening tools in clinical practice

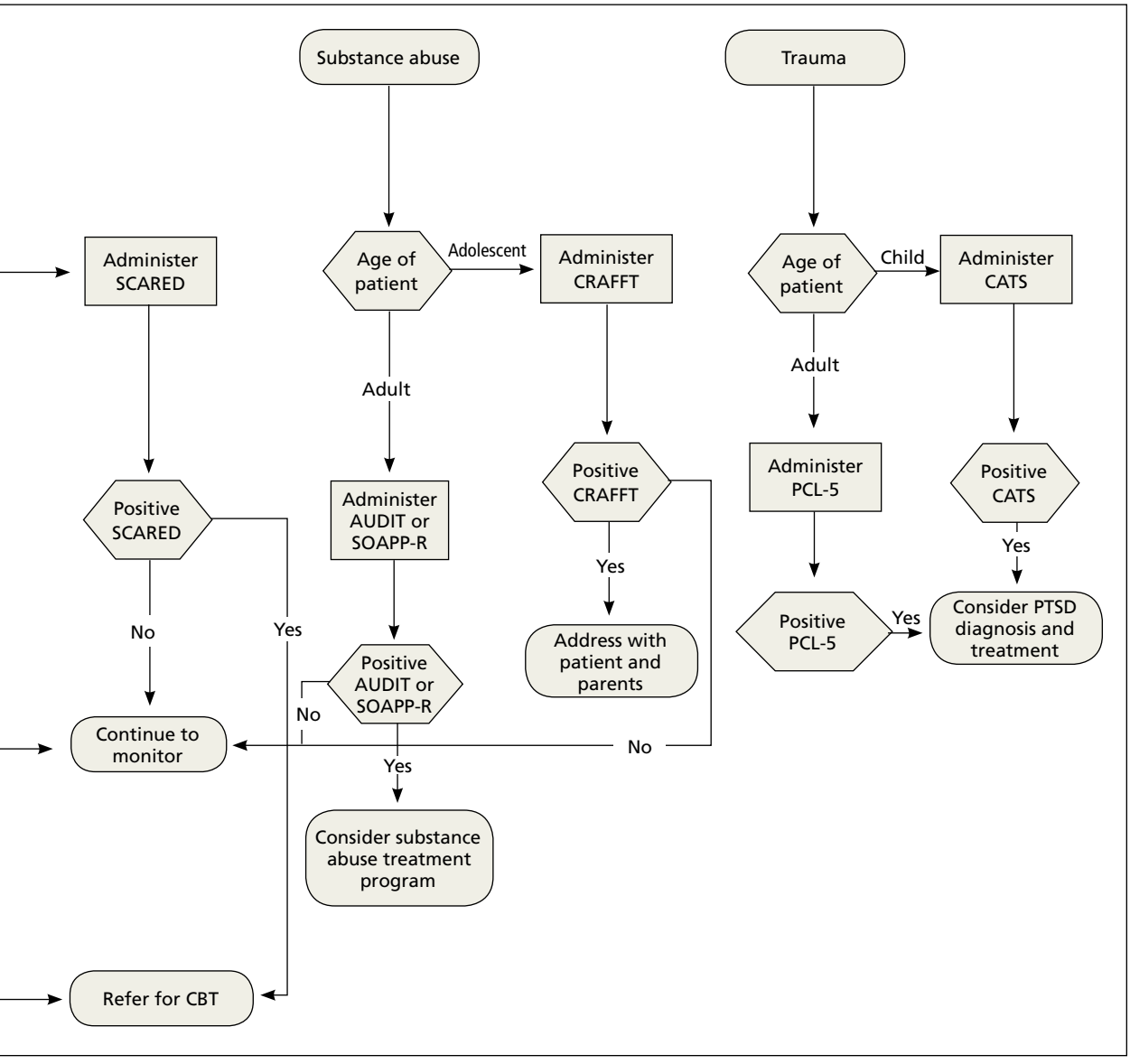


AUDIT, Alcohol Use Disorder Identification Test; CATS, Child and Adolescent Trauma Screen; CBT, cognitive behavioral therapy; CRAFFT, Cars, Relaxation, being Alone, Forgetting, Family/Friends, and Trouble; C-SSRS, Columbia Suicide Severity Rating Scale; GAD-7, Generalized Anxiety Disorder–7 item; ISI, Insomnia Severity Index; MDQ, Mood

program through www.mocatest.org.

Adapting these screening tools to practice

These tools are not meant to be used at every appointment. Every practice is different, and each clinic or physician can tailor the use of these screening tools to the needs of the patient population, as concerns arise, or in collaboration with other providers. Additionally, these screening tools can be used in both integrated care and in private practice, to prompt a more thorough assessment or to aid in—and inform—treatment. Although some physicians choose to administer certain screening tools at each clinic visit, knowing about the availability of other tools can be useful in assessing various issues.



Disorder Questionnaire; MoCA, Montreal Cognitive Assessment; MMSE, Mini-Mental State Examination; PHQ-9, Patient Health Questionnaire–9; PCL-5, Posttraumatic Stress Disorder Checklist; SCARED, Screen for Child Anxiety Related Disorders; SOAPP-R, Screener and Opioid Assessment for Patients with Pain–Revised.

The **FIGURE** can be used to aid in the clinical decision-making process. JFP

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