Chapter e81: Evaluation of Psychiatric Illness

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KEY CONCEPTS

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1. Patients with psychiatric conditions are treated in all healthcare settings. All clinicians should apply the basic principles of the psychiatric assessment to provide the best care.

2. The *Diagnostic and Statistical Manual of Mental Disorders,* Fifth Edition (*DSM-5*) and the Pocket Guide to the *DSM-5 Diagnostic Exam* provides clinicians with a standardized approach for the initial assessment and follow-up of patients with psychiatric conditions.

3. The World Health Organization's International Classification of Diseases and Related Health Problems (ICD) classification is currently used in all patient care settings for billing purposes.

4. Clinicians should be prepared to gather both psychiatric and physical health histories from their patients. Obtaining a release of information (ROI) from patients to communicate with other healthcare providers or significant others is often necessary when sharing protected health information (PHI).

5. Patient interviews should be conducted in an atmosphere that ensures the comfort and privacy of both the patient and the clinician. Effective listening skills and the application of open-ended questions are essential in the interview process and for building a therapeutic relationship. Motivational interviewing can empower patients to participate and help design achievable treatment goals.

6. If a patient is in crisis, the clinician may feel some apprehension about asking certain assessment questions. Knowing what specific questions to ask can help facilitate inquiry about sensitive areas, such as delusional thinking and suicidality.

7. Current and past medication histories, including allergies, adverse effects, and clinical response are cornerstones of effective medication management. The medication history should be assessed for safety (eg, contraindications and medication interactions), tolerability (eg, adverse effects), efficacy (eg, response of target symptoms and adequate dosage and duration), and adherence (eg, affordability and the ability to take medications as prescribed).

8. Baseline mental status examination (MSE), psychiatric rating scales, and psychological/neuropsychological tests are useful tools in diagnosing and monitoring the severity of symptoms and response to treatments of psychiatric disorders.

9. Although there are no diagnostic tests for psychiatric disorders, physical and laboratory assessments can help rule out substances, medications, or medical conditions that may produce similar or overlapping symptoms.

10. Psychiatric rating scales, cognitive testing, and psychological testing provide objective measures of psychiatric symptoms, adverse effects, memory, and intellectual capacity and are often used in research and clinical settings.

BEYOND THE BOOK

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Watch the following videos to learn about the mental status examination (MSE) and build your knowledge of the MSE which is an assessment commonly used in psychiatry. The "Objective" component of the S.O.A.P. acronym S (Subjective), O (Objective), A (Assessment), and P (Plan) is used to describe the physical examination in the field of medicine. In contrast, psychiatry uses the MSE as the "Objective" component to describe the patient's appearance, concentration, thoughts, and feelings. Understanding the MSE can help you identify target symptoms for psychiatric pharmacotherapy. Try completing a practice MSE on a simulated patient.

Psychiatric history and MSE tutorial: http://www.youtube.com/watch?v=U5KwDgWX8L8

(This video describes the MSE.)

Video demonstrating components of the MSE link: http://www.youtube.com/watch?v=1HbgPhq3MzA

(This video gives examples of the MSE and offers the opportunity to complete a practice MSE.)

Self-evaluation questions:

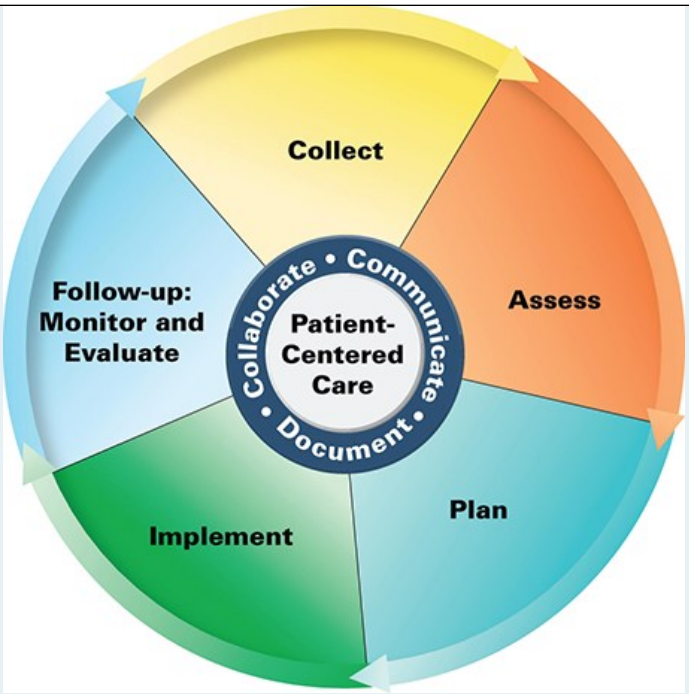
1. When would you administer a MSE? What type of information do you get from the MSE?
2. How would you use the information obtained from the MSE to care for a patient with psychiatric illness?
3. What is the difference between the MSE and the mini-mental state examination (MMSE)?

INTRODUCTION

1 Common psychiatric conditions such as depression, anxiety, and substance use disorders are known to negatively impact overall treatment outcomes for chronic medical conditions and subsequently increase healthcare costs.[1] Patients with severe and persistent psychiatric conditions (eg, schizophrenia) often have untreated comorbid medical illnesses requiring care coordination between providers to address and prevent serious medical and/or medication-related consequences.[2,3] Additionally, many high-risk, rural, and underserved populations may not have easy access to fully integrated behavioral health and primary care services, which complicates treatment.[4,5] Furthermore, primary care providers may lack training to manage populations with health disparities.[4,5] New practitioners need to be aware of commonly occurring and sometimes comorbid psychiatric-medical conditions along with evidence-based solutions to achieve positive outcomes for all patients.

PATIENT CARE PROCESS

Patient Care Process for the Psychiatric Assessment



Collect

- Patient characteristics (eg, age, sex, pregnancy status)
- Current medications including over-the-counter (OTC), aspirin/nonsteroidal anti-inflammatory drugs, herbal products, and dietary supplements
- Past medication history, including medications not tolerated and any allergies to medications
- Current and past medical/psychiatric history (personal and family)
- Social history (eg, tobacco, cannabis, ethanol use) and dietary habits
- Overall functional status (see Table e81-1)
- Objective data
  - Mental Status Examination (eg, cognitive and emotional status) (Table e81-2)
  - Psychiatric rating scales, psychological tests, and suicide assessment (seeTable e81-2–81-5 and 81-7)[6,7]
  - Blood pressure (BP), heart rate (HR), respiratory rate (RR), weight, height, body mass index (BMI)
  - Labs including glucose, lipids, complete blood count (CBC), serum medication levels, and pharmacogenetic testing results if available.

Assess

- Cognitive and emotional status (eg, MSE and presence of anxiety, depression (Table e81-2)
- Vitals: (eg, systolic/diastolic blood pressures, heart rate, and weight [BMI])
- Presence of medical conditions that may overlap psychiatric conditions or medication adverse reactions (eg, pain, nausea, vomiting, constipation, edema, tremors, headaches, dizziness)

- Presence of stress or possible stressors (eg, suicidality, recent surgery, pregnancy, estrogen use, recent hospitalizations, social determinants of health)
- Ability/willingness to seek additional psychiatric support (eg, psychotherapy, outpatient groups, hospitalization, community support groups, and so on)
- Ability/willingness to follow up with psychiatry services including medication management, psychotherapy, and/or substance use disorder treatment if indicated, and primary care around medical conditions
- Prior medication adherence
- Pharmacogenomics testing results

Plan*

- Medication therapy regimen including specific psychiatric medication(s), dose, route, frequency, and duration
- Monitoring parameters including efficacy (eg, serum medication monitoring, pain assessment, and safety plan [eg, calling 911])
- Patient education (eg, purpose of treatment, dietary and lifestyle modification, medication-specific information, medication administration/adherence techniques, and review results of laboratory/pharmacogenetic test results)
- Patient education around self-monitoring for resolution of mental health symptoms, when to call the clinic with questions and concerns, and when to seek emergency medical attention (eg, suicidality)
- Obtain release of information to obtain collateral information (eg, family members, case managers, therapists, medical providers)
- Send letters and/or copies of progress notes to healthcare clinicians who are also providing medications or other therapies when appropriate (eg, starting new medications, concerns about possible adverse effects)
- Make referrals to other providers when appropriate (eg, psychologist, social worker, neurologist, pain specialist, dietician, and substance use disorder treatment)

Implement

- Provide verbal and written patient education regarding all elements of treatment plan
- Use motivational interviewing and coaching strategies to maximize adherence
- Schedule follow-up to monitor and assess medication effectiveness (eg, clinical rating scales (see Tables e81-2–81-5 serum medication levels), adherence assessment of all recommendations
- Collaborate with patient, caregivers, and other healthcare professionals

Follow-Up: Monitor and Evaluate

- Resolution of behavioral health symptoms (eg, utilizing rating scales at every patient care encounter) (Table e81-2)
- Presence of adverse medication reactions (Table e81-2) and changing medical condition status
- Patient adherence to treatment plan using multiple sources of information (eg, medication refill records, medication administration records, serum medication levels)
- Reevaluate treatment plan at least every 1 to 3 months. Consider scheduling early (2 weeks) or more frequent follow-up visits after starting new medication therapy or monitoring behavioral risks such as suicidality

*_Collaborate with patient, caregivers, and other healthcare professionals._

In the United States, depression, diabetes and substance use disorders are among the top 10 health burdens, defined by the total number of years of life lost and years lived with disability (ie, disability adjusted life-years). Between 1990 and 2016, the rates of depression (ranked 9th) increased by 27% and both diabetes (ranked 4th) and substance use disorder (ranked 7th) increased by 76% and 75%, respectively.[8] Of grave concern, the Centers for Disease Control and Prevention (CDC) recently reported escalating occurrence of fatal suicides; especially, among US citizens (54%) *not diagnosed* with a psychiatric condition.[9] Primary care providers may be unaware that their patient is considering suicide. Data show that 80% of fatal suicides occurred within 1 year after being seen by a primary care provider, and 44% occurred within 1 month.[10] These rates are even higher in a subgroup of adults over the age of 50 years (97%) and females (89%) 1 year after being seen by a primary care provider. An earlier study of 5,894 patients who died by suicide found that approximately 22% of suicide-related deaths occurred within 1 week of an encounter with a primary care provider.[11] Integration of behavioral health services in primary healthcare settings may address the increasing health burden of psychiatric illness, co-occurring chronic illnesses (eg, depression and diabetes), reduced life-span, and collaborative reimbursement mechanisms for healthcare providers.[1] Reducing the barrier to mental health screening and treatment is important to help reduce currently seen mental health treatment disparities as high levels of mental distress can be seen at the intersections of gender identity, race, and ethnicity.[12,13]

Providing a fully integrated and unified care-coordination between psychiatric and primary care services improves treatment outcomes and provides cost-savings in general practice settings.[14–17] In response to evidence supporting unified care-coordination, the Centers for Medicare & Medicaid Services (www.CMS.gov) recently updated Medicare Part B Current Procedural Terminology billing codes to report behavioral health integration (BHI) services for beneficiaries.[18] Unlike traditional billing structures, a wide range of practitioners, including nonprescribers, can provide cost-shared BHI services focused on systematic care management of patients with psychiatric conditions.[18] Expectantly, BHI services will provide the infrastructure needed to achieve the Institute for Healthcare Improvement "Triple Aim" of improving the patient's experience of care, improve health and life-span of populations, and reduce cost of healthcare.[19]

Prioritization of advanced mental health training for all practitioners (eg, psychiatric, substance use, and suicide assessments) combined with unified behavioral and primary healthcare coordination will increase the likelihood of achieving optimal treatment outcomes.[1–5,8,11,17,20] This chapter provides an introduction to basic components of the psychiatric assessment, including diagnostic framework, interview strategies, utilization of laboratory data, validated assessment tools, and procedures used by clinicians to develop individualized treatment plans with patients. Greater information regarding neurologic assessments as well as the diagnosis of substance use disorders is contained in Chapters e72, "Evaluation of Neurological Illness" and e84, "Introduction to Substance Use Disorders." Readers needing a greater knowledge depth in areas such as diagnosis of psychiatric illnesses, motivational interviewing, and suicide assessment, are encouraged to explore other resources.[20–26]

OVERVIEW OF DIAGNOSTIC CLASSIFICATION SYSTEMS USED IN PSYCHIATRY

2 The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*) is the most widely accepted diagnostic reference in the United States for the care of individuals with mental disorders. The *DSM-5* provides a common language for practitioners to describe and diagnose psychiatric disorders, which is essential because there is considerable overlap of symptoms across many diagnoses.

3 In contrast, the World Health Organization's *International Classification of Disease and Related Health Problems (ICD)* primary function was to provide scientists a means of collecting all disease and health information across populations.[27] The ICD classification is currently used in both behavioral health and nonbehavioral health settings for billing purposes in the United States.

The current *DSM* version (*DSM-5*) organizes diagnostic categories as well as specific diagnoses using a developmental life span approach.[28] Diagnostic specifiers allow the clinician to clarify diagnoses, such as major depressive disorder, with terms to describe severity (eg, mild, moderate, or severe), course (eg, single episode, recurrent episode), and pattern of presentation (eg, with psychotic features). The *DSM-5* provides clinician resources such as objective diagnostic and follow-up assessments, utilization of severity rating scales, screening tools, and cultural assessments. For example, the *WHO Disability Assessment Schedule 2.0* (WHODAS) can be used to indicate the level of functional impairment (Table e81-1).[29] A complete list of the suggested patient assessment measures is available online (ie, "Online Assessment Measures").[6,25]

TABLE e81-1

Global Illness and Disability Assessment Scales

Rating Scale	Type	Scoring	Comments
Clinical Global Impressions (CGI) Scale CGI (S): Severity of Illness CGI (I): Global Improvement CGI: Efficacy Index	Clinician rated	1-item, CGI-S and CGI-I with a 7-point symptom severity and improvement score. 1-item CGI efficacy index: Total score: 1-4 marked improvement; 5-8 moderate; 9-12 minimal; 13-16 unchanged or worse	Observational and nonsymptom-specific for assessing three global subsets: severity of illness, global improvement, and efficacy index measures both therapeutic and adverse effects. CGI rating scales example can be found at: http://www.psywellness.com.sg/docs/CGI.pdf
WHO Disability Assessment Schedule WHODAS 2.0	Patient, proxy, or clinician (interviewer) rated	Assessment options include: 12 items, 12 + 24 items, and 36 items; total score is the summative score. Complex scoring "item-response theory." Uses an algorithm to determine a range of disability 0 = no disability and 100 = full disability	Covers six domains of functioning including: cognition, mobility, self-care, getting along, life activities, and participation.

Data from References 6 and 29–31.

The 5th edition of the *DSM-5* has retained the descriptive approach found in earlier editions with updates to the exact content. This descriptive text provides information for all mental health disorders regarding diagnostic features, prevalence, development and course, risk and prognostic factors, functional consequences of the disorder, differential diagnosis, comorbidity and, where applicable, culture- and gender-related diagnostic considerations.

Diagnosing mental disorders and developing an appropriate treatment plan with patients requires the clinician to engage in a comprehensive interview that assesses the patient's presenting problem(s), and provides the biopsychosocial context for understanding those problems. *The Pocket Guide to the DSM-5 Diagnostic Exam* includes examples of screening and follow-up questions used in a diagnostic interview for each of the mental disorder categories in *DSM-5*.[32] It also discusses approaches to establishing a therapeutic alliance with patients, conducting a 30-minute diagnostic interview, a stepwise approach to differential diagnosis, and evaluations in special populations (ie, cultural assessments).

Currently, *DSM-5*, WHO ICD-10, and recently released ICD-11 will continue to exist as companions in the diagnostic coding classification of psychiatric disorders. In the United States, the ICD, as it is used in reference to psychiatric disorders, is mandated by insurance companies to secure payments; whereas globally it is used to secure information regarding the epidemiology of the disorders. Broad differences currently exist between *DSM-5* and ICD-10. However, ICD-11, that has an implementation start date scheduled for January 1, 2022, appears to be more in line, at least organizationally, with *DSM-5*.[27] It will be important during these transitions to understand both systems and be fluent with integration.

In summary, the *DSM-5* and ICD provide clinicians with a systematic approach toward evaluating patients, thereby allowing for the development and implementation of better treatment plans and a more consistent way to evaluate treatment outcomes.

THE CLINICAL INTERVIEW

The psychiatric clinical assessment is more than a verbal communication exchange with the patient, as the clinician should be prepared to assess both

the psychiatric and physical health conditions of patients. Often multiple prescribers are involved in the treatment of patients that can result in the occurrence of polypharmacy. Communication exchanges between psychiatry and primary care services are often fragmented, even if they are co-located, due to varying degrees of practice integration and siloes of practices.[1,33,34] Training of clinicians to recognize effects of social determinants of health such as lack of nearby health services, unmet basic needs (eg, affordable housing, healthy food), economic inequities (eg, education, employment), and social (eg, relationships, isolation) disparities can reduce barriers and increase access to care.[4,5,35,36] Clinician recognition and assessment of the effects of stigma and discrimination during clinical interviews can reduce impacts of violence and suicide in vulnerable racial, ethnic, and sexual minorities and adolescents.[34,37] Also, clinician awareness that patients with severe and persistent mental illness (SPMI) have a shortened life span compared with patients without psychiatric disorders increases the urgency for ensuring continued access to primary care services.[38] For example, routine laboratory monitoring is critical since a significant number of patients who take antipsychotic medications are not adequately monitored for adverse medication effects, such as emergent diabetes and dyslipidemia.[39–43] Therefore, the interviewer should be aware of the significant barriers to care in this population to ensure the patient is receiving consistent and high-quality management of co-occurring conditions.[1–5,16,17,34–36,38,39,41]

Release of Information

4 Because coordination of care is often lacking, permission from the patient should be obtained before the interview is completed to obtain "collateral information," such as psychiatric and medical diagnoses, laboratory test results, medication lists, and other verbal or written records. Collateral information can be obtained by asking the patient to sign a "Release of Information" (ROI), which is mandatory in order to contact significant others, family members, and other clinicians.[44]

In summary, the clinician should be prepared to assess the psychiatric and physical health of the patient, which is discussed in more detail in the "Mental Status Examination" and "Physical Examination and Laboratory Assessment" sections later in this chapter.

Interview Techniques

5 Interviews should be conducted in a quiet, nonstimulating, private, and comfortable area where the patient and the interviewer feel at ease.[21,22,32,45] The interview setting should be appropriate to the patient's level of acuity and a safe environment for both parties. The interviewer should introduce themselves, explain the purpose of the meeting, and ask about the reasons or expectations for the visit in order to establish a trusting relationship (ie, therapeutic alliance). Additionally, the interviewer should confirm the patients preferred gender pronouns and use them consistently, being careful not to make assumptions. Generally, open-ended questions come first followed by questions focused on more specific or personal data. Open-ended questions allow the patient to provide descriptions and other information in his or her own words. Even though more specific questions may then be necessary to fill in the gaps, beginning in this manner minimizes the risk of "leading" the patient. For example patients can respond to specific questions and "yes" or "no" questions with answers they think the interviewer wants to hear. The interviewer must listen carefully and remain nonjudgmental about the information offered by the patient to develop trust and rapport and to ensure completeness and accuracy of the information. Motivational interviewing is another technique that can be useful for engaging the patient if conflicting issues arise such as discussions around medication adherence, tobacco, substance, or alcohol use.[46] The motivational interview approach to patient interactions is described by the acronym OARS (*O*pen-ended questions, *A*ffirmations, *R*eflective *L*istening, and *S*ummary).[46] More comprehensive descriptions and training opportunities for motivational interviewing are available in other sources.[47,48]

Whether a clinician takes notes or just listens during the interview is an individual decision; the primary considerations are accurately recalling the details of the examination and assuring that the patient is comfortable with the note taking. Table e81-2 provides examples of questions useful for gathering information toward the completion of the clinical interview. Before any conclusions are made during a patient interview, the impact of social determinants of health, such as trauma history, safety, housing needs, food insecurity, and financial status needs to be assessed.[49] Ethnicity and cultural background can influence a patient's presentation and clinical assessment. For example, a spiritual belief or fear can sound delusional in one culture but may be a standard belief in another culture. If a clinician is unclear whether culture of origin accounts for some of the patient's symptoms, he or she should obtain an ROI to consult with a family member or person familiar with the patient's culture of origin.[50] The Cultural Formulation Interview found in the assessment tools of *DSM-5* can also be used to assist the clinician who suspects that cultural influences may be affecting the diagnostic assessment.[6]

TABLE e81-2

Examples of Interview Questions for Assessing Psychiatric Disorders[a]

Mania

1. Tell me what your typical day is like.[b]
2. Do your thoughts go faster than you can say them?
3. Have you noticed a change in the amount of sleep that you require?
4. Have you spent a lot of money lately, and what did you spend it on?
5. Do you have a lot of extra energy? (To assess hallucinations and delusions, see "Schizophrenia" section below.)

Depression

1. How do you spend your time?[b]
2. Do you cry without any reason?
3. Do you still enjoy the same hobbies or activities that you once did?
4. Has your weight changed recently?
5. Have you had changes in your energy level recently?
6. Do you have any guilty feelings?
7. Do you find it difficult to remember phone numbers, names of friends, appointments, and so on? (To assess sleep and suicidal potential, see "Sleep" and "Suicide" sections below.)

Schizophrenia

Delusions

1. How do people treat you?
2. Do you feel that people plot against you?
3. Do you ever feel that you are watched or spied on?
4. Do you have any special abilities?
5. Does anyone ever try to mess with you or bother you?
6. Do others read your thoughts?

Hallucinations

1. Does the TV or radio ever tell you things?
2. Do you hear voices that other people don't hear?
3. What do they say? How many voices?
4. How often do they bother you?
5. Do the voices ever tell you to kill yourself or someone else?
6. Have you ever heard your name called when there is no one?
7. Have you ever seen anything strange that you can't explain?
8. Do you ever see things that bother you and no one else?
9. Do you want to act on what the voices say?

Thought Broadcasting or Insertion

1. If I stood by you, could I hear your thoughts?
2. Does your head ever act like a radio?
3. Do you feel that others can put thoughts in your head?

Insight

1. What reasons did your family give you for coming here?
2. What concerns brought you here?[b]
3. Do you consider yourself in need of help?
4. What does your medication do for you?[b]

Sleep

1. Tell me about your sleep.
2. How many hours do you sleep each night at present?
3. How many hours do you usually sleep at night?
4. Do you sleep all through the night?
5. Is there a reason for your waking up?
6. Do you have trouble falling asleep?
7. How do you feel when you wake up?

Suicide Screening[30]

1. Have you wished you were dead or wished you could go to sleep and not wake up?
2. Have you had any actual thoughts of killing yourself?
3. Have you been thinking about how you might kill yourself?
4. Have you had these thoughts and had some intention of acting on them?
5. Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?
6. Have you ever done anything, started to do anything, or prepared to do anything to end your life?

[a]For all of these example questions, try to get the patient to expand on their answers.

[b]These assessment questions or inquiries may be used early in the interview to assess other psychiatric disorders as well.

Interviewer Challenges

6 Patient assessments can be challenging when symptoms of the condition prevent effective engagement with the clinician. While patients with mania may exhibit speech that is rapid and unorganized, patients with depression may respond with few words. Patients in the manic phases of bipolar disorder may not pause as they speak (ie, pressured speech), making it difficult for the interviewer to interject. In these cases, the interviewer can regain control by politely redirecting the patient back toward the question.

The interviewer should always be prepared to adjust their communication approach based on the responses or reactions of the patient. Often, as in the disease of schizophrenia, a patient may demonstrate *poor* insight and judgment. It can be common for the clinician to react negatively with anger if the patient seems to be manipulating and not adherent with treatment. Instead of reacting negatively, one principle in motivational interviewing is to "roll with resistance" in which the clinician accepts the patient's perspective and encourages the patient to explore their own solutions.[21,46] In another situation, patients with psychosis may be paranoid and appear guarded or frightened by the interviewer's empathetic or even supportive statements, or questions.[51] During any patient encounter, clinicians should be aware of strong emotions such as fear, anger, or frustration and be careful not to judge or react to the patient. Overall, the best approach when feeling tension during the patient encounter is to remain calm, speak softly, be respectful, use shorter or closed-ended questions, and be "matter of fact" for asking for only essential information.[21] Sometimes patients can become agitated and in rare situations, violent. Often violence is preceded by increased psychomotor agitation as evidenced by pacing, shaking, speaking in a loud voice, crossing arms, or gripping an object (ie, chair or table). In the rare instances where there may be a concern about safety, the interviewer should remain at a safe distance from the patient and avoid any behavior that could be misconstrued as threatening, such as being overly friendly (eg, touching) or unnecessary staring. In these circumstances, it is best to keep the encounter brief and interview the patient in the presence of another

healthcare provider. Both the patient and interviewer should have equal access to leave the room if either becomes too uncomfortable. If a patient becomes threatening to the interviewer, the interviewer should not hesitate to leave the room and call for help. In summary, applying motivational interviewing skills or just remaining calm, quiet, and respectful may de-escalate the agitated patient, preserve the therapeutic alliance, and improve overall treatment adherence.[46–48]

Risk Assessment and Suicide

The risk assessment requires that the interviewer be knowledgeable and comfortable discussing dangerous behaviors such as aggression and suicidality. The interviewer must regularly, at each patient visit, assess risk factors and document the patient's level of suicidality or harm to others. The clinician needs to be aware of risk and protective factors associated with suicide and patient's recent past history to predict current suicide risk at the time of the patient encounter.[52,53] However, readers must be aware that often patients may withhold specific information about recent risky behaviors and simply screening for suicide may not always elicit dangerous intent (eg, injury to self or others).[20] A person is most likely to withhold information if they feel embarrassed, fear discovery, and/or fear their suicide plans may be interrupted. Patients can sense an interviewer's lack of comfort and anxiety discussing this topic and be reluctant to discuss suicidal thoughts and risk. To address this tendency to withhold information, experts recommend an interview approach known as the Chronological Assessment of Suicidal Events.[20] The Chronological Assessment of Suicidal Events approach can aid the clinician in establishing mutual trust and empathic rapport with the patient to determine recent or imminent lethal or dangerous behaviors (eg, suicide attempt).[20] An interviewer should not use technical words like "suicide" and instead ask directly "Have you had any thoughts about killing yourself?" Asking a patient about dangerous thoughts, intents, or plans will not increase the risk.[20] The risk is greater if these questions are never asked or signs of distress (eg, psychosis, psychological pain, incurable health condition, recent loss) are ignored.[53] Patients experiencing command auditory hallucinations with violent content, and/or current substance/alcohol use, and/or recent history of aggression to self or others may require immediate attention and even hospitalization. In summary, with advanced education, supervised experiential training, and clinical experience assessing behavioral risk, a clinician may save their patient's life or prevent harm to another person. Please note that this section is only meant to serve as an introduction to the risk assessment. Readers are encouraged to explore other resources and training opportunities on suicide assessment.[20,54–58]

Psychiatric History

History of psychiatric disorders in patients and their families provides important information when formulating a diagnosis and treatment plan. Information collected should include the current and previous psychiatric diagnoses, psychiatric hospitalization and emergency room visits, reasons for admission (ie, suicide intentions), clinical presentation of acute symptoms, time frame between acute episodes, level of functioning between episodes, length of each episode, total duration of the psychiatric disorder, and treatment given during each episode, as well as response to those treatments.[21] Baseline functioning or the highest level of functioning achieved in the last few years is important because it helps to define a treatment goal. Information on the history of the current episode and reasons for presenting to the clinician should also be gathered. A family history should include a medication history of the immediate relatives because a family member's response to a given medication might predict an individual patient's response to that same medication.[21]

Social History

A social history contains educational and occupational background; religion; marital status; substance use, including tobacco, cannabis, caffeine, and alcohol; and current living situation. By understanding a patient's living environment and social determinants of health, strategies to foster treatment adherence, reduce stress, and increase social support can be developed. To probe this area initially, the clinician can ask patients to describe their social support network. This can be followed by more specific questions such as: "To whom are you closest?" or "In whom do you confide?"

Medication History

7 A thorough current and past medication history is one of the most important contributions a clinician can make to treatment planning. The history should include medications for both psychiatric and medical conditions and list all medications, including OTC and supplements, taken by the patient. The history should also report how each medication was tolerated and describe the responses to a single medication or combination of medications. All allergies must be noted. Because most psychiatric medications have a delayed onset of effect, it is important to determine whether an adequate trial

(dose and duration) was provided before the patient is deemed "nonresponsive" to that medication. If a patient has a history of nonadherence, specific causes should be investigated. Causes of nonadherence may include, but are not limited to medication cost, complicated dosing schedules, lack of insight, failed efficacy, and adverse effects.

Mental Status Examination

The mental status examination (MSE) is a key patient assessment tool in psychiatry and is analogous to the physical examination in medicine. The MSE is completed through a direct patient interview and provides a systematic method of organizing and reporting current behaviors, thoughts, perceptions, and functioning. The MSE has several components (eg, appearance, attitude, activity, speech and language, mood and affect) and is combined with other aspects of the patient workup (history of present illness, physical examination, appropriate laboratory tests, and medical and psychiatric history) to give a full picture of the presenting problem and factors contributing to the mental disorder.[21–26,32,45] The addition of symptom rating scales incorporated into the MSE can greatly enhance the clinical assessment. Consistent identification and tracking of symptoms with rating scales can enable both the clinician and patient to mutually construct specific treatment goals and measure clinical progress such as changes in symptom frequency or severity over weeks or months.[30] Although terminologies can be misleading, the MSE should not be confused with the Mini-Mental State Examination (MMSE), which is discussed in the "Neuropsychiatric Rating Scales" section later. The components of the MSE include:

Appearance and Attitude Toward the Examiner

The appearance of the patient throughout the interview should be noted, including age, dress, grooming and hygiene, use of cosmetics, and facial expressions. A description of appearance also should include unusual physical characteristics (eg, mannerisms, restlessness, and so on) and the general state of physical health. The interviewer should note whether the patient is cooperative, mute, hostile, paranoid, guarded, and/or withdrawn.

Activity

Motor activity may be excessive or diminished. Overactivity during the interview can range from hand wringing; restless leg movements; and picking at clothing, skin, or hair to severe pacing in the room. Underactive patients move less than expected. Patients with rigid posture, an absence of movement, and failure to communicate may be catatonic or paranoid or experiencing medication adverse reactions.

Speech and Language

The quantity, flow, and speed of speech and the amount of eye contact should be noted. The appropriateness and degree of eye contact varies significantly among cultures, and before poor eye contact is interpreted, the patient's cultural background should be considered. Speech should be assessed as to whether it proceeds logically in a goal-directed manner or whether the content is vague and poorly organized. Abnormal speech characteristics include thought blocking, whereby the person suddenly stops speaking without any obvious reason. *Thought blocking* usually occurs when hallucinations or delusions intrude into the person's thinking or when upsetting issues are discussed. Conversely, *pressured speech* is observed in conditions such as bipolar disorder. *Flight of ideas* is overproductive, rapid speech during which the patient jumps rapidly from one idea to the next. *Circumstantial* and *tangential speeches* are evidence of disorganized thoughts. *Circumstantial speech*, whether pressured or not, lacks a clear direction because of excessive unrelated information, but the circumstantial patient eventually makes full "circle" back to their point. In tangential speech, however, the ultimate point is never made. *Perseveration* is repetition of an original answer to subsequent questions. *Mutism* is identified when the patient does not respond even though they are aware of the discussion.

Affect and Mood

Affect describes the patient's current emotional tone, as expressed through facial expression, body posture, and tone of voice, all of which can be objectively observed by the clinician. Mood describes feelings, which are subjectively reported by the patient. Changes in facial expression and the presence of tears, flushing, sweating, or tremors should be noted. Affect can be described further by its range, appropriateness, intensity, and stability. For example, in individuals with schizophrenia or depression, the affect can be *flat*, whereby no change in expression occurs throughout the interview. In contrast, during a manic episode, the affect is very intense and often *excited. Blunted affect* denotes that the range of emotional expression is reduced but not absent. An example of *inappropriate* or *incongruent affect* is when a patient laughs in a situation that would be expected to produce sadness. A rapidly shifting affect from one extreme to the other is described as *labile*.

Thought and Perceptual Disturbances

A variety of thought disturbances can occur in psychiatric disorders. Many of these disturbances generally indicate the presence of psychosis, psychotic disorder (eg, schizophrenia), or impaired reality testing. *Delusions* are fixed, false beliefs that are not based in reality or consistent with the patient's religion or culture. Delusions can be paranoid, somatic, or grandiose in nature. Delusions are often unshakable, and although the clinician can challenge the delusional thinking, one should not attempt to talk to a patient out of a delusion. The lack of awareness of a psychiatric disorder (anosognosia) can often accompany delusions. *Thought broadcasting* is the belief that one's thoughts are audible to others. *Hallucinations* are false sensory impressions or perceptions that occur in the absence of an external stimulus. Hallucinations can be auditory, visual, olfactory, tactile, or gustatory and can be continuous or intermittent. In contrast, *illusions* are visual misperceptions involving a misinterpretation of a real sensory stimulus. For example, a person experiencing an illusion may react in fear if they momentarily misperceive a breeze moving a curtain to be an intruder. This phenomenon does not always indicate a psychiatric disorder and can be seen in persons without psychiatric disorders. Not all thought disturbances are indicative of psychosis. For example, the couplet of obsessions and compulsions can indicate the presence of obsessive-compulsive disorder, which is not considered to be a psychotic disorder. *Obsessions* are unwanted thoughts or ideas that intrude into a person's thinking. *Compulsions* are actions performed in response to the obsessions or to control anxiety associated with the obsession.

Evaluation of Cognition

The MSE assesses sensorium, attention, concentration, memory, and higher cognitive functions such as orientation and abstraction. If deficits in memory and concentration are primary or secondary complaints of the patient or these deficits are apparent during the interview, more formal or standardized mental status testing (eg, MMSE) may be required. The clinician should document whether the patient has received medications with sedative properties because the outcome of the examination can be altered if central nervous system depressants were recently taken.

Sensorium, or level of consciousness, refers to the alertness of the patient, and if they are not fully alert, the amount of stimulation needed to awaken the patient. Attention and concentration can be further assessed using serial subtraction by 7s ("serial 7s") or 3s or by having the patient spell a five-letter word backward (eg, d-l-r-o-w). General intelligence can be assessed casually by asking factual information about current news items, recent presidents, or popular television shows or sporting events. *Memory* is the ability to recall prior information and experiences. There are many descriptors referring to specific types of memory such as working memory (ie, the capacity to hold information such as a phone number in mind for a few seconds), short-term memory (ie, the ability to recall newly acquired information after several minutes), and long-term or remote memory (historical facts) that are commonly assessed as part of the MSE. Orientation to time, place, person, and situation assesses short-term memory. Asking a patient to recall three objects, 5 minutes after they are learned, is the definitive test for short-term memory. Although deficits in short-term memory may be seen in depression and anxiety, this finding is the hallmark feature of dementia. Asking the patient to do a certain task (eg, pick up a pen with his or her right hand and then fold a piece of paper and pass it to the examiner) or spelling a five-letter word in reverse are examples of testing working memory. Patients with cognitive deficits, such as those seen in dementia and schizophrenia, can exhibit deficits in working memory. Remote memory is assessed by asking patients to recall old facts about their lives, such as where they were born or where they went to school. Whereas remote memory usually remains intact the longest in patients with intellectual decline, the inability to create new memories is generally the first sign of a memory deficit. *Abstraction* is the ability to interpret information such as a proverb (eg, "People in glass houses shouldn't throw stones") or identify similarities or differences between words (eg, apple and orange). Abstraction is influenced by education, cultures, and linguistic fluency; thus, an inability to abstract is not always a sign of a psychiatric disorder. Persons with schizophrenia often provide *concrete* (literal or superficial interpretations) or *bizarre* responses to probes of abstraction.

Risk Assessment

Clinicians typically document the presence or absence of violent, suicidal, and/or homicidal thoughts in the mental status narrative or in a separate "risk assessment" section of the progress note. The risk assessment is typically comprised of core principles including motive/desire (ie, killing self or others, psychological pain, hopelessness, helplessness, perceived burden on others, feeling trapped or intolerably alone); capability (eg, history of nonfatal suicidal behavior, available lethal means of killing self/others); intent (eg, active suicidal behavior, plan(s), preparatory behaviors, expressed intent); and buffers/connectedness (protective factors) such as immediate supports, core values/beliefs, engagement with helper, ambivalence/fear, and sense of purpose.[53,58] Examples of suicide assessment questions are outlined in TABLE e81-2. The Columbia-Suicide Severity Rating Scale (C-SSRS), is an evidence-supported tool for suicide assessment consisting of a simple series of questions that can be adapted to a particular setting, population, and language (eg, Screener with Triage for Primary Care Settings).[55,56] Healthcare providers can use the C-SSRS to assess suicide risk and

identify patients at increased risk of suicide.[56]

Insight and Judgment

Insight refers to patient awareness that they have a psychiatric disorder and the impact of that disorder on their life. *Anosognosia* is a term used to define the complete lack of insight or awareness of a psychiatric disorder. For example, the symptom of *poor* insight is thought to be the main cause of *poor* judgment such as nonadherence with prescribed medications.[57] Levels of insight may be variable based on the level of acuity of the psychiatric disorder.

Judgment is the ability to make decisions appropriate to the situation and can be impaired in people with a variety of psychiatric disorders. Judgment can be assessed by asking patients how they would handle either their current or a hypothetical situation. As with insight, judgment also can be fluid. For example, intoxicated patients can demonstrate *poor* insight and judgment only to improve over several hours as their blood alcohol concentration decreases.

In summary, the MSE is the clinician's observations and expert opinion based on the patient's history, verbal responses, nonverbal reactions, appearance, and behaviors. The MSE is primarily used to establish the patient's diagnosis, target symptoms, response, and treatment plan. In addition to the MSE and based on the discretion of the clinician, a physical examination, laboratory assessments, objective rating scales, and psychological testing may be needed for a comprehensive mental health assessment and follow-up. These assessment tools are described in the following sections.

PHYSICAL EXAMINATION AND LABORATORY ASSESSMENT

9 There is no consensus about specific laboratory tests for diagnosing or evaluating psychiatric disorders.[25] An emerging area of interest is the identification of biologic markers (eg, pharmacogenetics) as diagnostic tools, predictors, or indicators of medication response.[59] Recent developments in brain imaging (functional magnetic resonance imaging [fMRI]) using computer algorithms are being studied and show promise in diagnostics. For example, a recent meta-analysis of fMRI studies found evidence for diagnostic specificity in schizophrenia and bipolar disorder.[60] Although there are no diagnostic tests to definitively indicate that a patient has a specific psychiatric disorder, physical assessments and laboratory tests are important to clarify the etiology of presenting symptoms.

Physical Assessment

Patients who present with psychiatric symptoms need a careful medical assessment for overlapping symptoms from differing causes.[2,3,25,26,28] A complete physical examination, along with a detailed medical and medication history, vital signs, BMI, pregnancy test when indicated, and routine blood chemistry are commonly part of the workup of persons with a psychiatric disorder. In most cases, a physical examination should be chaperoned in the behavioral health setting.

Presenting symptoms can have multiple etiologies (ie, medical, medications, and psychiatric disorders). Medical conditions, psychiatric disorders, medication adverse reactions, and substance use can cause symptoms that are often indistinguishable. Patients with psychiatric disorders, especially depression and anxiety disorders, may present to primary care providers with only physical or somatic complaints (eg, gastrointestinal) and thus receive unnecessary medical treatment, while the root psychiatric cause is overlooked.

In contrast, psychiatric disorders may predispose a person to medical complications. For example, patients with SPMI have a high prevalence of modifiable risk factors such as poor nutrition, obesity, substance use disorders (eg, tobacco, alcohol, and other substances), and sedentary lifestyles, leading to increased morbidity and mortality.[1–5,8,9,16,17,38,41,49] Patients diagnosed with schizophrenia can have a 13 to 15 years of potential life lost with an average weighted life expectancy of 63 years compared to the general US life expectancy of 79 years based on 2018 data and 77 years based on 2020 data due to the Covid-19 pandemic.[61,62] The recent Covid-19 pandemic increased mortality rates by three-fold in patients diagnosed with schizophrenia, after adjusting for medical conditions.[63] Other possible causes leading to premature deaths in patients with schizophrenia may include suicide, tobacco use, substance use, and comorbid medical conditions, including cardiovascular disease, diabetes, respiratory disease (eg, chronic obstructive pulmonary diseases), and other infectious diseases (eg, influenza, pneumonia, and HIV/AIDS).[61]

Psychotropic medications, such as antipsychotic agents used for the treatment of mental illness can also cause or exacerbate medical conditions, such

as diabetes mellitus, hyperlipidemia, or cardiac arrhythmias, necessitating an initial assessment and routine monitoring as recommended in treatment guidelines.[39–41,64,65] Baseline and follow-up assessments are needed to help document future adverse medication reactions. For example, the 2004 expert consensus guidelines recommend that patients taking antipsychotics should be periodically screened for symptoms of metabolic syndrome, including body weight, waist circumference, blood pressure, and fasting serum lipids and glucose.[41,64,65] Please refer to Chapter 87 "Schizophrenia" for in-depth information on antipsychotic adverse effects.

Abrupt onset of psychiatric symptoms can be an important clue that a medical cause (eg, delirium from an encephalopathy) may be present, whereas most chronic psychiatric disorders (eg, schizophrenia) may have a prodromal period prior to an acute episode. Patients older than 40 years at first presentation are more likely to have a medical cause for their psychiatric symptoms, because major psychiatric disorders, such as schizophrenia and bipolar disorder, usually first present in adolescence or early adulthood. Family history can provide additional clues. Patients with fluctuating levels of consciousness; disorientation; memory impairment; or visual, tactile, or olfactory hallucinations are more likely to have a medical basis for their presentation that can be diagnosed by medical diagnostics (eg, laboratory tests, computed tomography [CT], magnetic resonance imaging [MRI]).

Laboratory Assessment

General laboratory screenings are useful for medication monitoring and ruling out medical causes of psychiatric disorders. Urine toxicology and blood alcohol tests play an important role in identifying the contribution of alcohol and substances to the presenting symptoms. Additional testing can include an electroencephalogram (EEG) to evaluate for the presence of seizure activity and other neurologic conditions; CT or MRI scans to detect structural abnormalities; sedimentation rate and antinuclear antibodies for autoimmune disorders; vitamin B_{12} and folate concentrations for anemias; endocrine tests (eg, thyroid function) for identifying hormonal and metabolic disorders; and other workups as needed.[25] Laboratory tests should be individualized to the patient's age, medical/medication history, cooperativeness, and physical health. However, extensive testing is usually unnecessary and not cost-effective.

Clinicians also use diagnostic tests to evaluate appropriate medication use, such as pregnancy monitoring with divalproex, renal status when using lithium, or an electrocardiogram (ECG) when using medications that prolong the QT interval (eg, tricyclic antidepressants such as amitriptyline). Serum medication concentration monitoring is recommended for medications with a narrow therapeutic index (eg, lithium, divalproex, and carbamazepine). Serum concentration monitoring can also be useful for assessing medication adherence when there is an inadequate response or adverse medication effects. The clinician should differentiate "therapeutic range," the serum concentration to target for beneficial effect, from "reference range." Discretion is necessary since most laboratories provide a "reference range" for many medications which reflect serum concentration variability among patients taking a specific medication. Therefore, serum medication concentration reference ranges may not always predict therapeutic benefit or adverse medication effects. Consensus guidelines are available to help guide clinicians' interpretation of serum medication concentrations.[66] Finally, clinicians must also be aware of pharmacokinetic and pharmacodynamic medication, food, and genetic interactions that occur, which raise the probability of adverse effects, toxicity, or loss of efficacy.

Pharmacogenetics may help clinicians predict and minimize medication and disease interaction risks and adverse medication reactions. Presently there are 40 medications of potential relevance for psychiatric disorders that have pharmacogenetic biomarker information referenced in the US Food and Drug Administration (FDA) product labeling (drugs@FDA). Much of this information highlights the potential influence of genetically determined metabolizer status on dose requirements or dose-related outcomes, but does not provide recommendations about whether or not to obtain pharmacogenetic testing. The newly established FDA Table of Pharmacogenetic Associations further categorizes drug–gene relationships into three sections: Section 1: Pharmacogenetic Associations for which the Data Support Therapeutic Management Recommendations; Section 2: Pharmacogenetic Associations for which the Data Indicate a Potential Impact on Safety or Response; and Section 3: Pharmacogenetic Associations for which the Data Demonstrate a Potential Impact on Pharmacokinetic Properties Only.[67] A growing number of commercial pharmacogenetic tests are now available that assess genes related to neuropsychiatric medications and provide clinical decision support to prescribers.[68] Complicating matters, commercial pharmacogenetic tests assess a number of genes that go beyond those listed in FDA product labeling. Additionally, the interpretation of genotype results and decision support provided back to prescribers can differ across commercial tests that use a "combinatorial" approach to collate results from pharmacokinetic and pharmacodynamic genes.[69] To assist prescribers, consensus guideline development groups have published resources to facilitate the interpretation of genetic test information.[70–73] As it relates to medications used to treat psychiatric conditions, the current evidence suggests potential utility of genes that influence medication metabolism in relation to dosing and dose-related outcomes for some but not all antidepressant and antipsychotic medications.[74] Additionally, genetic variation in immune system genes may predispose some individuals to life-

threatening reactions such as Stevens–Johnson syndrome if exposed to carbamazepine and other antiseizure medications (see Chapter 75, "Epilepsy").[75] Prior to ordering a pharmacogenetic test, it is recommended that the patient be counseled on the reasons for the test, and clarifying what the patient should expect and not expect from the results.[76] Presently, insurance reimbursement for pharmacogenetic tests is highly variable. Thus, prior to ordering a test, financial considerations should be discussed with the patient. In striving toward patient centered care, clinicians are encouraged to become knowledgeable about pharmacogenetic testing to address patient questions, encourage conversation, and shared decision making around medication selection.

In summary, a range of assessments and laboratory tests can aid clinicians in conducting comprehensive workups to verify diagnoses, identify overlapping medical or potential medication-related problems, and optimize the patient's medication experience.

MEASUREMENTS OF PSYCHIATRIC SYMPTOMS AND COGNITIVE FUNCTION

10 In addition to the MSE, symptom-based rating scales are useful tools to provide an objective way to measure subjective data (eg, feelings, thoughts, and perceptions) and to screen or diagnose specific disorders. Because there are many types of scales from which to choose, the clinician rater needs training and experience to select and effectively use the most appropriate scale. Rating scales are used in a variety of settings, including research and patient care, and can serve an administrative purpose, such as quality control.[30]

Some rating scales are self-administered ("patient-rated") and do not require a staff member to collect the data. Patient-rated scales require minimal resources to administer and can provide valuable information. However, some patients may be unable to complete a rating scale for a variety of reasons, including limited literacy, instrument length (ie, number of items), and severity of symptoms.

In contrast, "clinician-rated" scales may provide a more consistent measure of target symptoms or behaviors. However, major drawbacks includes the substantial time commitment for staff learning how to administer the tests, variability of symptoms interpretation among clinician, and the inability of some patients to tolerate these interviews, especially patients who are severely paranoid or agitated. For optimal benefit, repeated use of rating scales are usually necessary to objectively describe longitudinal changes over a defined treatment period as opposed to a single snapshot of a complex clinical situation.

Sensitivity, specificity, reliability, and validity are important considerations when selecting a rating scale. *Sensitivity* refers to a test's ability to detect a symptom or illness given that the symptom or illness is present. *Specificity* refers to a test's ability to correctly determine that a symptom or illness is absent when the person does not have the illness.[30,77]

Reliability is the extent to which the score on the scale reflects the hypothetical "true" score and how much interference occurs from outside influences.[30,78] Reliability is reported by the correlation coefficient, which represents a chance correlation (0.00) or perfect correlation (1.00). Rating scales with correlation coefficients of less than 0.7 are usually considered unreliable for clinical studies. *Interrater reliability*—agreement in rating scores among clinician raters—is important to achieve when multiple clinicians rate the same patient or population. Interrater reliability is established by having all raters independently rate individual patients at the same time to determine the correlation of their scores.

Validity, in contrast, is the ability of a scale to measure what it was designed to measure. Various validity tests are performed on a rating scale to ensure that the scale assesses the appropriate aspects of the illness (*content validity*), the correlation with diagnoses or clinical change (*criterion-related validity*), and the extent to which the scale measures symptom traits in contrast to a specific symptom (*construct validity*).[30,78] Before administering any rating scale, the clinician should be trained or observed using the rating scale and have thorough knowledge of the rating scale's strengths and limitations.

Psychiatric Rating Scales

Psychiatric rating scales provide the clinician, patient, and researcher with quantitative measures of symptoms associated with many psychiatric disorders and medication-related adverse effects. Symptom-based rating scales for specific illnesses such as schizophrenia (Table e81-3), depressive and bipolar disorders (Table e81-4), anxiety, stress/trauma-related, and obsessive compulsive disorders (Table e81-5) and neurodevelopmental disorders (Table e81-6) can be used to complement the initial diagnostic formulation, help screen for new symptoms, and monitor symptom severity at each follow-up visit. In addition, clinician and patient rating scales can be used to guide questions asked during the patient care interview, articulate

patient-centered goals of therapy, aid in treatment planning, and assessing ongoing quality outcome of patient care.

TABLE e81-3

Schizophrenia Rating Scales

Rating Scale	Type	Scoring	Comments
Brief Psychiatric Rating Scale-Anchored (BPRS-A)	Clinician rated	18-item, 7-point severity scale: mildly ill ≈ 32, moderately ill ≈ 44, markedly ill ≈ 55, and severely ill ≈ 70 when correlated to the CGI (Clinical Global Impressions Scale; see Table e81-1)	The anchored BPRS provides descriptions of each severity rating to increase the interrater reliability. The BPRS has four clusters of symptoms: thinking disturbance, anxious depression, withdrawal-retardation, and hostility-suspiciousness.
Positive and Negative Syndrome Scale (PANSS)	Clinician rated	30-item, 7-point severity scale: mildly ill ≈ 57, moderately ill ≈ 75, markedly ill ≈ 95, and severely ill 116 when correlated to the CGI	Based on the 18-item BPRS for assessing the presence or absence of positive and negative symptoms, and psychopathology of schizophrenia.
Scale for the Assessment of Positive Symptoms (SAPS)	Clinician rated	34-item, 6 point severity scale. Items rated 0-5 (0 = none, 5 = severe). 30% improvement commonly used as a benchmark for response.	Commonly used in clinical trials or clinically along with the SANS. Assesses bizarre behavior, delusions, hallucinations, and thought disorder.
Scale for the Assessment of Negative Symptoms (SANS)	Clinician rated	25-item, 6 point severity scale. Items rated 0-5 (0 = not at all, 5 = severe)	Commonly used in clinical trials or clinically along with the SAPS. Five domains assessing different features of negative symptoms (blunted affect, alogia, avolition, anhedonia, and attention)
Calgary Depression Rating Scale (CDSS)	Clinician rated	9-item, 4 point severity scale. Items rated 0-3 (higher scores indicate greater symptom severity) to assess depressive symptoms in patients with schizophrenia.	Valid and reliable scale for assessing depression in schizophrenia. A score above 6: 82% specificity and 85% sensitivity for predicting a major depressive episode. https://cumming.ucalgary.ca/research/calgary-depression-scale-schizophrenia/home.

Data from References 30 and 79–84.

TABLE e81-4

Depression and Bipolar Disorder Rating Scales

Rating Scale	Type	Scoring	Comments
Hamilton Depression Rating Scale (HAM-D or HDRS)	Clinician rated	17-item, 0-7 no depression; 8–16 = mild depression; 17-23 = moderate depression; >23 = severe depression	Used to screen patients for clinical studies and to determine severity of symptoms and treatment outcome. HDRS is the standard to compare other depression rating scales against.
Montgomery–Asberg Depression Rating Scale (MADRS)	Clinician rated	10-item, 7-point scale. For each item: 0 = no symptoms; 6 = severe symptoms	Differentiates among all the intermediate grades of depression. Decreases bias in patients with other medical illnesses and increased somatization (varied unexplained physical symptoms).
Beck Depression Inventory (BDI)	Patient rated	21-item, 0-9 = normal; 10-15 = mild depression; 16-19 = mild-moderate; 20-29 = moderate-severe; 30-63 = severe depression	The standard for depression self-rating scales and an objective measure of change in symptoms as a result of treatment.
Zung Self-Rating Depression Scale (ZSDS)	Patient rated	20-item, 4-point severity scale: <50 = normal; 50-59 = minimal-mild; 60-69 = moderate-marked; ≥70 severe depression	Severity rated by frequency of occurrence of symptoms. May not be as sensitive in measuring changes in severity of symptoms.
Patient Health Questionnaire (PHQ-9)	Patient rated	9-item, 4-point scale. For each *DSM-IV* depression criteria item: 0 = not at all; 3 = nearly every day. Score <10 = minimal depression symptoms	Commonly used in primary care to establish a diagnosis of depression and assess severity of depressive symptoms.
Quick Inventory of Depressive Symptomatology (QIDS-C [Clinician] and QIDS-SR [Patient])	Clinician and patient rated	16-item, scores range 0-27; 0-5 = none; 6-10 = mild; 11-15 = moderate; 16-20 = severe; 21-27 = very severe	Used to assess symptom severity and symptomatic change. QIDS-SR found to be as sensitive to symptom change as the HDRS. Has usefulness in both clinical and research settings.
Young Mania Rating Scale (YMRS)	Clinician rated	11-item, 5-point severity scale: 13 = minimal; 20 = mild; 26 = moderate; 38 = severe	Used to screen patients for clinical studies and to determine severity of symptoms and treatment outcome. YMRS is the standard to compare other mania rating scales against.
Mood Disorder Questionnaire (MDQ)	Patient rated	15-item, score of ≥7 suggestive of bipolar spectrum disorder	Screens for a lifetime history of mania or hypomania. Does not assess severity of illness.

Data from References 30 and 85-88.

TABLE e81-5

Anxiety, Obsessive Compulsive Disorder, and Trauma and Stress- Related Disorder Rating Scales

Rating Scale	Type	Scoring	Comments
Generalized Anxiety Disorder			
Generalized Anxiety Disorder Assessment – 7 (GAD-7)	Patient rated	7-item, 3-point scale. Score of > 10 should receive further evaluation	Screens for GAD and assesses severity of illness
Hamilton Anxiety Scale (HAM-A or HAM-AS or HAMRS)	Clinician rated	14-item, 5-point scale. scores of ≥ 18-20 for moderate anxiety	Consists of subscales to measure somatic and psychic anxiety
Zung Self-Rating Anxiety Scale (Zung SAS)	Patient rated	20-item, 4-point intensity scale	Correlates to the clinician-rated Anxiety Status Inventory (ASI); however, there is little information on the validity of either test
Obsessive Compulsive Disorder			
Yale–Brown Obsessive-Compulsive Scale (YBOCS)	Clinician rated	Semistructured interview	Consists of several clusters of obsessions and compulsions; used to assess baseline severity and change in treatment studies
Panic Disorder			
Sheehan Panic and Anticipatory Anxiety Scale (SPAAS)	Patient and clinician rated	Three-part scale	Measures panic attacks, anticipatory anxiety, and limited symptom attacks
Social Anxiety Disorder			
Liebowitz Social Anxiety Scale	Clinician-rated	24-item; each item rated for fear and avoidance, both 3-point scale	Used as a diagnostic tool and assesses treatment response; will provide an overall severity assessment and an assessment of the following: performance fear, social fear, performance avoidance, and social avoidance
Trauma and Stress-Related Disorder			
Clinician Administered PTSD Scale (CAPS)	Clinician rated	30-item—structure interview; 4-point scale	Used as a diagnostic tool for current or lifetime diagnosis, severity of illness and assessment of symptoms over last week
PTSD Checklist	Patient rated	Number items dependent on version—civilian, military, *DSM-5* symptom specific; 5-point scale	Used as a screening, diagnostic tool, and assessment of treatment response

Data from References 14, 15, 30, 89–97.

TABLE e81-6

Neurodevelopmental Disorders Rating Scales

Rating Scale	Type	Scoring	Comments
Connors 3rd Edition	Parent and Teacher rated	Three scoring options including: full-length form (most detailed), short form (when frequent monitoring is needed), and index form which is useful in screening and treatment monitoring of attention deficit hyperactivity disorder (ADHD).	Assesses inattention and hyperactivity as well as related problems in executive functioning, learning, aggression, and peer/family relations.
Aberrant Behavior Checklist for children under age 5	Caregiver rated	58-item scale to assess the presence and severity of various problem behaviors commonly observed in individuals diagnosed with intellectual developmental disabilities.	Each item is scored as 0 (never a problem), 1 (slight problem), 2 (moderately serious problem), or 3 (severe problem). Item subscales: Irritability, agitation, & crying (15 items); lethargy/social withdrawal (16 items); stereotypic behavior (7 items); hyperactivity/noncompliance (16 items); and inappropriate speech (4 items).
Children's Yale–Brown Obsessive-Compulsive Scale (CY-BOCS-PDD)	Clinician rated	Semistructured interview	This is a version of the Children's Yale–Brown Obsessive Compulsive Scale modified for pervasive developmental disorders

Data from References 106–109.

The American Psychiatric Association Practice Guidelines for the treatment of Patients with Schizophrenia recommends using quantitative measures, especially at the initial assessment, to determine the severity of psychotic symptoms (Table e81-3), functional impairments, and targets of treatment interventions.[7] For example, rating scales can assist clinicians with initial, ongoing monitoring, and management of muscle-related or extrapyramidal side-effects (EPS) (Table e81-7) including tremors (Parkinson-like symptoms), acute muscle contractions (dystonia), internal restlessness (akathisia), and tardive dyskinesia (TD) associated with antipsychotic therapy. Although beyond the scope of this chapter, there are a myriad of rating scales available to clinicians that take into account specific populations and/or characteristics such as age, gender, behaviors (eg, feeding/eating, sexual, sleep-wake, substance use, and so on), caregiver burden, quality of life/wellbeing etc.[6,30]

TABLE e81-7

Adverse Effects Measuring Instruments

Rating Scale	Type	Scoring	Comments
Abnormal Involuntary Movement Scale	Tardive dyskinesia (TD) assessment	12-item, 5-point severity scale. Items 1-4 orofacial movement; 5-7 extremity and truncal movement; 8-10 global severity; 11 and 12 problems with teeth or dentures (yes or no)	5-10 minutes to complete. Most commonly used. Diagnostic criteria: at least 3 months of antipsychotic treatment. Mild severity score (2) in two discrete areas or moderate severity (3) in one area (eg, orofacial) indicates TD. Tremor is not counted. http://www.cqaimh.org/pdf/tool_aims.pdf
Dyskinesia Identification System: Condensed User Scale (DISCUS)	TD assessment	15-item, 5-point severity scale. Items 1, 2 face; 3 eyes; 4, 5 oral; 6-9 lingual; 10, 11 head, neck, or trunk; 12, 13 upper limb; 14, 15 lower limb	5-10 minutes to complete. More descriptive criteria for scoring severity than the Abnormal Involuntary Movement Scale. Scoring based on three dimensions: frequency, detectability, and intensity. Tremor is not counted. http://hrstonline.com/wp-content/themes/healthrisk/article/DISCUS.pdf
Modified Simpson-Angus Scale (MSAS)	medication-induced Parkinson and dystonia assessments	10-item, 5-point anchored severity scale. Mean score is obtained by adding all scores and dividing by 10. A mean score of 0.3 is the upper limit for no EPS	5-10 minutes to complete. Item domains include gait, arm dropping, shoulder shaking, elbow rigidity, wrist rigidity, leg pendulousness, head dropping, eye blinking, tremor, and salivation. http://www.outcometracker.org/library/SAS.pdf
Barnes Akathisia Rating Scale (BARS)	medication-induced akathisia	4-item, including three 4-point anchored severity scored items and a 5-point global rating score item. Total score of 12 possible	10 minutes to complete. Items 1-3: objective observation of restlessness, subjective awareness of restlessness, and subjective distress related to restlessness. Diagnostic criteria: require both objective and subjective ratings of at least one in either two subjective items. http://outcometracker.org/library/BAS.pdf

EPS, extrapyramidal symptoms.

Data from References 30, 98, 99.

In summary, patient- and clinician-rated scales are widely used in psychiatric research and can be very valuable to both patients and patient care providers in the clinical setting by providing a consistent and objective framework to assess and to monitor treatment outcomes and medication effectiveness and safety for most psychiatric illnesses.[7,30,31,77–84,86–93,98–104]

Neuropsychiatric Rating Scales

Neuropsychiatric rating scales provide specific information, such as the rate of change and severity of cognitive decline or improvement. They are useful when repeated measurements of a patient's mental status are needed because they allow the clinician to determine response to an intervention (eg, medication) in a more systematic manner. In addition, some cognitive function measures are useful screens for neurocognitive disorders (eg, Alzheimer's disease). A number of cognitive rating scales are available, the most common being the MMSE.[23]

The MMSE is a structured interview that globally assesses many cognitive domains, including orientation, visuospatial organization, memory, and reasoning, to determine an overall score of cognitive function. The maximum score is 30, and a score of 23 or less is indicative of significant cognitive

impairment. The MMSE takes 5 to 10 minutes to administer and is used routinely in the clinical setting.[94] Other examples of cognitive rating scales include the Blessed Information Memory Concentration test (BIMC), the Dementia Rating Scale (DRS-2), the Clock Drawing test (CDT), and Alzheimer Disease Assessment Scale (ADAS).[15,94–96,105]

Most of the rating scales involve a structured interview that requires clinician training to ensure accurate administration. Noise and distraction can affect the patient's performance ability; therefore, the interview should be conducted in a quiet area with adequate lighting. The interviewer should speak slowly and clearly to the patient when providing instructions and asking questions.

PSYCHOLOGICAL TESTING

Although most nonpsychology trained clinicians do not administer psychological testing, the results from these types of assessments can be used to evaluate the role of medication in relationship to the diagnosis. Psychological testing alone cannot establish a firm diagnosis but can be a useful diagnostic tool when coupled with clinical judgment. Types of psychological testing include personality tests (eg, Minnesota Multiphasic Personality Inventory-2), intelligence tests (eg, Wechsler Adult Intelligence Scale—Revised, Wechsler Intelligence Scale for Children—Revised), and neuropsychological tests (eg, Bender Visual Motor Gestalt Test).[21,23,24] Neuropsychological and intellectual assessments generally require special training or a patient referral to a specialist, such as a licensed psychologist or neuropsychologist, and should not be confused with psychiatric rating scales, which can be administered by most clinicians. As with physical examinations, laboratory results, and rating scale scores, psychological test results are best used as only one part of a comprehensive diagnostic plan.

CONCLUSION

Healthcare providers with psychiatric assessment skills may be more likely to identify overlapping physical and mental health problems, initiate psychotropic medication therapy, and/or refer their patients for additional psychiatric services to improve overall health outcomes and save lives. Hopefully, evidence-based practices and provider reimbursement for integrated behavioral health services will incentivize healthcare systems to consistently provide integrated and unified psychiatric and primary care services for all patients. In the meantime, clinicians are encouraged to seek advanced suicide prevention and psychiatric assessment training to reduce the rising rates of deaths by suicide and address negative health outcomes due to comorbid psychiatric conditions.

ACKNOWLEDGMENTS

The authors are grateful to Carolyn Phelps, PhD, DreamLife Psychological Services, for her assistance with reviewing the sections on mental status examination and psychological testing.

ABBREVIATIONS

ADAS	Alzheimer Disease Assessment Scale
ADHD	attention Deficit hyperactivity disorder
AIDS	acquired immunodeficiency syndrome
AIMS	abnormal involuntary movement scale
APA	American Psychiatric Association
BARS	Barnes Akathisia Rating Scale
BDI	Beck Depression Inventory

BIMC	Blessed Information Memory Concentration (test)
BMI	body mass index
BPRS-A	Brief Psychiatric Rating Scale—Anchored
CAPS	Clinician Administered PTSD Scale
C-SSRS	Columbia-Suicide Severity Rating Scale
CDSS	Calgary Depression Scale for Schizophrenia
CDT	Clock Drawing Test
CFI	Cultural Formulation Interview
CGI (S)	Clinical Global Impression Severity of Illness Scale
CGI (I)	Clinical Global Impression Global Improvement Scale
CT	computed tomography
DISCUS	Dyskinesia Identification System: Condensed User Scale
DRS-2	Dementia Rating Scale
DSM	*Diagnostic and Statistical Manual of Mental Disorders*
DSM-IV-TR	*Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision
DSM-5	*Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition
ECG	electrocardiogram
EEG	electroencephalogram
EHR	electronic health record
EPS	extrapyramidal symptoms
fMRI	functional magnetic resonance imaging
HAM-A, HAM-AS, HAMRS	Hamilton Anxiety Scale
HAM-D, HDRS	Hamilton Depression Rating Scale
HIV	human immunodeficiency virus
ICD	International Classification of Diseases
MADRS	Montgomery–Asberg Depression Rating Scale

MDQ	Mood Disorder Questionnaire
MMSE	Mini-Mental State Examination
MRI	magnetic resonance imaging
MSAS	Modified Simpson–Angus Scale
MSE	mental status examination
OARS	*O*pen-ended questions, *A*ffirmations, *R*eflective listening, and *S*ummary
PANSS	Positive and Negative Syndrome Scale
PHQ-9	Patient Health Questionnaire for assessment of depression
PTSD	Post-Traumatic Stress Disorder
QIDS-C	Quick Inventory of Depressive Symptomatology—Clinician rating scale
QIDS-SR	Quick Inventory of Depressive Symptomatology—Self-Report
QT interval	Measure of the time between the start of the Q wave and the end of the T wave in electrocardiogram results
ROI	release of information
SANS	Scale for the Assessment of Negative Symptoms
SAPS	Scale for the Assessment of Positive Symptoms
SPAAS	Sheehan Panic and Anticipatory Anxiety Scale
SPMI	Severe and Persistent Mental Illness
TD	tardive dyskinesia
WHODAS	WHO Disability Assessment Schedule
YBOCS	Yale–Brown Obsessive-Compulsive Scale
YMRS	Young Mania Rating Scale
Zung SAS	Zung Self-Rating Anxiety Scale
ZSDS	Zung Self-Rating Depression Scale

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SELF-ASSESSMENT QUESTIONS

1. Which resource is helpful in identifying the diagnostic criteria for schizophrenia?
   A. *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*)
   B. American Psychiatric Association Practice Guidelines for Psychiatric Evaluation
   C. Mini-Mental State Examination (MMSE)
   D. Brief Psychiatric Rating Scale (BPRS)
2. Which term *best* describes the ability of a psychiatric rating scale to determine if a symptom or disorder is absent when the patient does not have the related condition?
   A. Reliability
   B. Validity
   C. Sensitivity
   D. Specificity
3. The primary care clinic providers would like to implement a depression screening tool. The scale needs to be completed by the patient in a short amount of time while waiting to see the clinician. Results would then be assessed by the clinician to determine risk of depression. Select the *most* appropriate rating scale for depression based on this practice setting.
   A. Hamilton Depression Rating Scale (HDRS)
   B. Montgomery–Asberg Depression Rating Scale (MADRS)
   C. Clinical Global Impressions Scale (CGI)
   D. Patient Health Questionnaire (PHQ-9)
4. A patient is experiencing the following symptoms: inability to sit still, pacing, feelings of inner restlessness. No other unusual muscle movements are observed such as tremors, twitching, or rigidity. Patient does not complain of any anxiety or being worried about anything in particular. The patient was started on an antipsychotic 2 weeks ago. Which rating scale would be the *most* appropriate to assess these symptoms?
   A. Abnormal Involuntary Movement Scale (AIMS)
   B. Barnes Akathisia Scale (BAS)
   C. Dyskinesia Identification System: Condensed User Scale (DISCUS)
   D. Modified Simpson-Angus Scale (MSAS)
5. The clinician asks a patient with a history of schizophrenia the following question during the clinical interview: “Do you feel that people plot against you?” Which target symptoms of schizophrenia is this question addressing?

A. Auditory hallucinations

B. Thought broadcasting

C. Paranoid delusions

D. Grandiose delusions

6. Which statement is *true* regarding a psychiatric history obtained during the clinical interview?

A. History of the patient's highest level of functioning or "baseline" does not influence treatment goals.

B. Psychiatric history should include both the patient's and patient's family history.

C. Family history of medication response does not influence medication selection.

D. Only the description of the current psychiatric episode influences the diagnosis.

7. Which statement is *true* regarding medical comorbidities in a patient with severe persistent mental illness (SPMI) compared to the general population?

A. Patients with SPMI receive the same level of medical care as the general population.

B. Patients with SPMI have an overall lower prevalence of modifiable risk factors.

C. Patients with SPMI have a shortened life span compared to the general population.

D. Diabetes risk is higher in the general population compared to patients with SPMI.

8. Which statement correctly describes a limitation associated with the use of psychiatric rating scales in the clinical setting?

A. Some clinician-rated scales require a substantial time commitment to administer.

B. Psychiatric rating scales are less useful in the clinical setting than the research setting.

C. Rating scales do not provide evidence of longitudinal changes in severity of illness.

D. Rating scales are only helpful when used initially to diagnose a mental illness.

9. A 21-year-old patient with no previous history of mental illness is admitted to the inpatient psychiatry unit with a recent acute change in mental status. Upon examination it is noted that the patient is paranoid, irritable, confused, and complains of hearing threatening voices. Which question below may best alerts the clinician to further assess an acute safety concern?

A. How often do you cry without any reason?

B. What do the voices tell you to do?

C. Describe your sleep at night?

D. Do you feel that people plot against you?

10. A patient with moderate major depressive disorder with recurrent episodes (F33.1) presents with the chief complaint that "My Prozac stopped working." Past medication history reveals multiple trials with antidepressants with temporary benefit and/or intolerable adverse effects resulting in interrupted drug therapy. The patient asks the provider about getting genetic testing to find "a medication that works." Complete the statement that *correctly* describes what the patient should expect from pharmacogenetic testing and subsequent results? Pharmacogenetic testing _____.

A. Is now affordable to all patients and reimbursed by most medical insurance carriers.

B. Can explain how a person's genes may either increase or decrease the liver's ability to metabolize certain medications and help explain lack of therapeutic benefit (eg, rapid and ultra-rapid metabolizers) or side-effects (eg, reduced and poor metabolizers).

C. Identifies medications that are contraindicated due to side-effects and are most likely to be effective for the patient.

D. Can explain how a person's genes affect antidepressant medication activity (ie, mechanism of action) at the target receptor level to explain lack of therapeutic benefit or adverse effects (eg, increasing or decreasing serotonin activity in the brain).

11. The following finding is identified during a mental status examination: The patient described feeling sad and hopeless; but smiled inappropriately throughout the interview. Which section of the mental status examination should this observation be documented?

A. Mood and affect

B. Evaluation of cognition

C. Insight and judgment

D. Thought and perceptual disturbances

12. Which statement is *true* regarding the mental status examination (MSE)?

A. It is based only on observation of the patient.

B. It is a shorted version of the Mini-Mental State Examination (MMSE).

C. It provides a systematic method of organizing and reporting current behaviors, thoughts, perceptions and functioning.

D. It should be used independently of other assessments to identify the presenting illness and contributing factors.

13. Which communication technique has been found useful in working with a patient who becomes angry and defensive after your inquiry about suspected alcohol or substance use?

A. Requesting for a release of information to contact a significant other

B. Closed-ended questioning followed by open-ended questioning

C. A motivational interview technique called "roll with resistance"

D. An interview technique that only utilizes passive listening and reflection

14. A 91-year-old nursing home patient presents to the emergency department with recent mental status changes including dizziness, confusion, and aggression over the past two days. The patient scored an 18 (moderate cognitive impairment) on the mini-mental status examination (MMSE). In addition to the mental status examination (MSE), what additional information is needed to complete a thorough evaluation?

A. Blood chemistry, complete blood count, and urinalysis

B. Hamilton Depression Rating Scale (HDRS) score

C. Electrocardiogram and pharmacogenetic testing

D. Patient Health Questionnaire (PHQ-9) score

15. A 6-year-old student has been having behavioral problems in the classroom that are very disruptive to the other students and affecting his scholastic performance. The parents have noticed some of these behaviors at home; but, were hoping they would go away. His behavior consists of leaving his seat without permission, climbing on the classroom desks and windows, unable to finish homework, forgetful, and loses assignments

on multiple occasions. The family practice provider is considering the diagnosis of attention deficit hyperactivity disorder. Which test or assessment to help clarify this patient's diagnosis requires special training or patient referral to a specialist, such as a licensed psychologist or neuropsychologist?

A. Children's Yale–Brown Obsessive Compulsive Scale modified for pervasive developmental disorders

B. Mini-Mental State Examination

C. Wechsler Intelligence Scale for Children—Revised

D. Connors 3rd Edition

SELF-ASSESSMENT QUESTION-ANSWERS

1. **A.** *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*) provides a common language for practitioners to describe and diagnose psychiatric disorders (see section: Overview of Diagnostic Classification Systems Used in Psychiatry).

2. **D.** Specificity is the correct answer and refers to a test's ability to correctly determine that a symptom or illness is absent when the person does not have the illness. For example, a test with 90% specificity correctly reports 90% of patients without the illness, but 10% patients without the illness are incorrectly identified as false positives (see section: Measurements of Psychiatric Symptoms and Cognitive Function).

3. **D.** Patient Health Questionnaire (PHQ-9) is a patient-rated scale that can be completed by the patient in the waiting area. The other scales are clinician-rated scales that are typically completed during or shortly after the patient encounter (see Table e81-4).

4. **B.** Barnes Akathisia Scale (BAS) allows the clinician to determine the severity of a patient's inability to sit, pacing, and internal restlessness which is a side-effect of antipsychotic agents known as akathisia. The Modified Simpson-Angus Scale is used to assess parkinsonian-like side-effects (eg, tremor, slowed gait) and both Abnormal Involuntary Movement Scale and Dyskinesia Identification System: Condensed User Scale monitor for movements suggesting tardive dyskinesia (see Table e81-7).

5. **C.** Paranoid delusions are fixed or unshakable false belief, fear, or feeling that there is a plot or scheme aimed at the person to cause physical and/or psychological harm. Although auditory hallucinations sometimes may be described as frightening or threatening voices, this would not be referred to as a delusion. Hallucination are symptoms that are associated with one or any of the five senses (hearing, sight, taste, touch, and smell). Thought broadcasting is when a person believes that others around them can actually hear the person's thoughts or able to "read" their mind (see sections: Mental Status Examination [Thought and Perceptual Disturbances]).

6. **B.** Psychiatric history needs to include both the patient's and patient's family history. This information can be used to establish a baseline or the highest level of function that does influence the treatment goals. Family history of medication response can affect medication selection. The clinician needs both current and past psychiatric episodes including hospitalizations and other events related to acute psychiatric symptoms (eg, suicidality, substance intoxication, and so on) (see sections: Psychiatric History and Medication History).

7. **C.** Patients with SPMI have shortened life span compared to the general population due to lack of medical care, behavioral risk factors (eg, suicide, tobacco/substance use), and chronic diseases such as diabetes (see section: Physical Assessment).

8. **A.** Clinician-rated scales can take substantial time to administer and complete. However, psychiatric rating scales can help estimate presence and severity of symptoms during initial diagnosis and also provide a consistent approach to monitoring symptoms over time (longitudinal changes) (see section: Measurements of Psychiatric Symptoms and Cognitive Function).

9. **B.** What do the voices tell you to do? The clinician must determine the content of the auditory hallucinations if possible. For example, there is an increased risk of suicide/homicide if auditory hallucinations are commanding the patient to harm themselves or other. Command hallucinations can necessitate the need to escort the patient to the emergency department to assess safety and possible hospitalization (see Table e81-2).

10. **B.** Although pharmacogenetic testing can identify potential genes that may affect a medication's mechanism of action, most of the pharmacogenetics research evidence focuses on how genes affect liver enzymes (ie, cytochrome P450 enzymes) and drug metabolism.

Pharmacogenetic testing can determine if the person's P450 liver enzyme activity is normal, rapid, reduced, or lacking activity (eg, poor metabolizer). Pharmacogenetic testing can provide guidance to the clinician and patient around medication selection; but pharmacogenetic test results do not provide a definitive list of all medications that are contraindicated or guaranteed to be effective. Pharmacogenetics testing is expensive and not covered by all medical insurance companies (see section: Laboratory Assessment).

11. **A.** The clinician would document in the mental status examination's section that the patient's mood and affect is depressed with incongruent smiling. This information can help clarify a diagnosis, since one would expect that a person with depression would appear sad or have a sad affect. In this case, the clinician is likely to explore other underlying symptoms such as anxiety, delusions, and other cognitive distortions (eg, auditory hallucinations) to explain the inappropriate smiling. (see sections: Mental Status Examination [Affect and Mood]).

12. **C.** The mental status examination provides a systematic method of organizing and reporting current behaviors, thoughts, perceptions, and functioning. The mental status examination pulls together all of the information gathered during the patient encounter including recent history, contributing factors, direct observation of the patient, and other findings (eg, laboratory findings, behavioral rating scale results, and so on) (see sections: Mental Status Examination).

13. **C.** The motivational interview technique called "roll with resistance" can de-escalate a person who is angry and defensive when the interviewer does not react negatively to a patient's anger. Although listening and reflection can be effective, it should not be the only technique utilized (see section: Laboratory Assessment).

14. **A.** Based on the recent mental status changes, observations of the patient, and MMSE finding, a thorough medical assessment including laboratory tests (eg, blood chemistry, complete blood count, and urinalysis) is needed to rule out possible delirium due to possible infection or other medical conditions to explain the acute decrease in cognitive function (see section: Laboratory Assessment).

15. **D.** Psychological testing utilizing the Wechsler Intelligence Scale for Children—Revised can help clarify this patient's diagnosis and needs to be administered by a trained provider such as a psychologist. The obsessive compulsive disorder assessment might be helpful if the family provider was considering obsessive compulsive disorder (OCD) instead of the diagnosis of attention deficit hyperactivity disorder (ADHD). The mini-mental state examination (MMSE) is reserved for adult patients to assess alertness, speech, cognition, and memory. The Connor's 3rd edition is a parent–teacher-rating scale that can be used in the home or school setting to assess observed symptoms of ADHD (see Table e81-6).