

# **ABSTRACT**

Mental illnesses are the leading causes of disability worldwide. Psychotic disorders occur in about 3% of people in the general population during their lifetimes. Patients experiencing acute psychosis need a medical provider who is capable of differentiating among medical, drug-induced, and psychiatric causes of the presentation to initiate the most appropriate management plan. This article focuses on the role of the acute care NP in medical clearance evaluations and initial management of adult patients experiencing acute psychosis in acute care settings.

Keywords: acute care NP, acute psychosis, emergency certification, medical clearance, mental health, primary psychosis, secondary psychosis

# **Acute psychosis: Medical clearance** evaluation and initial management

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cute psychosis is a syndrome of symptoms that develops into a psychiatric emergency. Psychiatric emergencies include acute disturbances of thought, mood, behavior, or social relationships requiring immediate intervention.<sup>1</sup> Psychosis is defined as grossly impaired connection with reality including one or more of five domains of symptoms: 1) hallucinations, 2) delusions, 3) disorganized thoughts and speech, 4) disorganized motor function, and 5) negative symptoms (anhedonia, avolition, affective blunting, and so on). 12 The first four domains are considered to be positive symptoms. In an acute psychotic state, the patient has at least one symptom from any of the first three listed domains. Psychosis is classified as primary or secondary, depending on the etiology. Primary psychosis refers to those symptoms caused by underlying mental disorders, such as schizophrenia, bipolar disorder, and depression, and is characterized by positive and negative symptoms. Secondary psychoses are caused by specific medical conditions or drug misuse.<sup>2</sup>

Patients who develop acute psychosis may present to the ED, or the condition can develop while the patient is hospitalized, especially in critical care settings. The rapid onset and/or progression of one or more of the five domains of psychotic symptoms indicates emergent need for evaluation and stabilization. Patients with acute psychosis who present to the ED or who are already hospitalized should undergo a medical clearance evaluation to exclude medical causes and clear them to be evaluated for inpatient psychiatric admission.3 Inpatient psychiatric settings are not designed to provide medical management of patients; therefore, patients with acute psychosis secondary to a medical problem must be managed on a medical unit. The focus of this article is on the role of the acute care NP (ACNP) in the medical clearance evaluation and initial stabilization of adult (18 years of age and older) patients experiencing acute psychosis in acute care settings.

# **EPIDEMIOLOGY**

Although mental illness is the leading cause of years lived with disability worldwide, the prevalence and incidence of acute psychosis are highly variable because of the number of associated causes and differences in age groups. 4.5 Despite the variability of data on the prevalence and incidence of acute psychosis, lifetime prevalence of all psychotic disorders among the general population has been roughly estimated as 3% and lifetime prevalence of psychotic disorders due to a general medical condition has been estimated as 0.21%. 6 It is important to consider both medical conditions and psychiatric illness when a patient presents with acute psychosis.

The average age of onset of primary psychosis in males occurs between the mid-teens and mid-20s and in females occurs between the late teens to late 20s.<sup>7</sup> Among older adults, secondary psychosis accounts for about 60% of cases of psychosis.<sup>8</sup> For example, the prevalence of psychotic symptoms among individuals

with major neurocognitive disorders and delirium, respectively, are 40% and 42%.8 Schizophrenia, which occurs in about 1 in 200 adults ages 20 years and older, is in its acute presentation or state the most disabling type of mental disorder.4 The World Health Organization describes the patient with acute schizophrenia as having only one-fifth of the health and functional capacity that a healthy person has.4

#### **ETIOLOGIES**

Medical problems associated with acute psychosis include, but are not limited to, illicit substance use, prescribed drug misuse, acute poisoning, intracranial tumors, paraneoplastic syndrome, electrolyte abnormalities, nutritional deficiencies, autoimmune disease, central nervous system (CNS) infections, systemic infections, or neurocognitive disorders such as progressive dementia. Psychiatric problems associated with acute psychosis can include new-onset psychiatric disease or exacerbations of chronic psychiatric disorders due to acute illness or medication nonadherence. Psychiatric disease can involve brief psychotic disorder, postpartum psychosis, schizophreniform disorder, delusional disorder, major depressive disorder, schizoaffective disorder, bipolar disorder, or schizophrenia.

#### Older adults

Older adult patients present with secondary acute psychosis due to an organic medical illness more often than with primary psychosis.<sup>13</sup> Furthermore, the process of natural aging of the brain, development of dementia, social isolation, increased economic strain, sudden environmental changes (for example, hospitalization), and dependence upon others can become stressors that contribute to neurocognitive decline for older adults who have lived many years independently.<sup>13</sup> Additionally, stressors associated with aging compound the effects of chronic illness and use of regular medications. Acute psychosis in an older adult without a history of psychiatric issues or illicit substance use is unlikely to be related to primary psychosis.<sup>13</sup> Nevertheless, the ACNP should consider all these factors unique to the older adult population when developing a differential diagnosis and management plan.

# **EVALUATION**

The primary goal in the evaluation of a patient with acute psychosis is to identify the causative factors of the patient's condition, determining whether psychosis

stems from a psychiatric or physical problem. The ACNP's role in evaluating the patient with acute psychosis is to collect the history, perform the physical exam, and conduct a diagnostic workup that allows the provider to clear a patient medically for emergent psychiatric evaluation or to pinpoint a medical cause for the presentation. The history and physical exam provide the primary data for the differential diagnosis and management plan; lab tests and imaging should also be ordered to diagnose or exclude medical disease.

#### **History**

Collecting a patient's history is one of the most important parts of the evaluation because it enables the ACNP to understand the pattern of symptom onset and progression. Acute psychosis can have a sudden or progressive onset of confusion, delusions, hallucinations, or mood and personality changes. The ACNP should inquire about these symptoms with the patient and secondary sources. Family, occupational, and medical history (including regarding prescribed home medications, over-the-counter medications, and illicit drug or alcohol use) can be key to understanding the patient's presentation pattern, which can in turn elucidate the underlying cause.

Patients presenting with acute psychosis should be evaluated mentally and physically. Those with a medical history of psychiatric or other mental health disorders in particular should be evaluated for psychotropic medication adherence and prior episodes of acute psychosis. Additionally, a history of arrhythmias, cardiovascular disease (CVD), liver disease, kidney disease, and neuromuscular disorders should be identified and evaluated for related etiologies. Acute or critically ill patients should be evaluated for acute kidney and liver dysfunction contributing to the patient's presentation due to poor drug clearance, uremia, or hepatic encephalopathy. The patient's previous medical history and history of present illness could help the ACNP determine if the patient's presentation is related to complications of chronic medical disease, psychotropic medication toxicity, or psychotropic medication nonadherence.

Hospitalized patients who develop acute psychosis during their stay should be evaluated for all hospitalprescribed medications, especially steroids, antibiotics, opioids, and benzodiazepines.<sup>1,14</sup> Steroids and antibiotics are common hospital-prescribed medications that can cause acute psychosis. 15 Adverse reactions of opioids and benzodiazepines—when used together or separately—place patients at risk for acute delirium or drug-drug interactions with other psychotropic medications.14-16

Suicidality, homicidality, and grave disability. Suicidality and homicidality should be evaluated carefully. The risk factors of previous suicide attempts and history of physical violence increase the risk of suicide and violence, respectively. Access to weapons should also be a part of history collection, as it increases the risk of suicide or homicide. Patients with a plan to die by suicide or commit homicide are at the highest risk for endangering themselves or others. The ACNP should directly ask individuals if they intend to kill themselves or someone else and how they plan to do so. Additionally, direct questioning helps the ACNP to differentiate between the patient's intention to hurt themselves or someone else, particularly if the patient has a history of nonsuicidal self-harm (NSSH), and the intention to kill oneself or someone else. NSSH is different from suicidality because the intent of NSSH is to relieve anxiety and pressure rather than to die.<sup>17</sup>

Grave disability related to psychiatric problems is legally defined as an individual's inability to care for their own basic needs such as eating, self-care, and protection from harm because of a mental illness. 18-20 Standards for defining and caring for persons found to be gravely disabled may differ slightly from state-to-state, thereby requiring the ACNP to be aware of their state's statutes. Inquiring about and evaluating for the patient's ability to independently perform activities of daily living (for example, bathing, eating, and grooming) can help the ACNP determine whether the patient is gravely disabled. Inquiring about the patient's ability to maintain employment and social relationships can also provide insight into the patient's level of disability.

**Collateral history.** Patients presenting with acute psychosis may not be able to provide a reliable or comprehensive history due to their potential or actual loss of awareness of reality. Therefore, the ACNP should seek information from family, friends, or others who have observed the patient's behaviors. Interviewing the patient and others who can provide insight into the patient's baseline behaviors and health status provides critical information that can support a full evaluation.

#### Physical exam

The physical exam should be comprehensive. The febrile patient with acute psychosis should be carefully

examined for CNS infections, systemic inflammatory disorders, drug toxicities, or neoplastic etiologies. Patients with tachycardia and/or hypertension should be examined for other physical findings consistent with cardiopulmonary disease, CVD, drug misuse or toxicity, acute poisoning, or illicit substance withdrawal. Likewise, patients with bradycardia, bradypnea, or hypotension should be examined for related medical problems or physical findings consistent with drug toxicities.

A neurologic exam should be conducted thoroughly and carefully to exclude focal deficits that could indicate CNS pathology. Findings consistent with systemic inflammatory or autoimmune disorders (for example, bilateral joint pain, swelling or redness, exanthems, and so on) should be examined for manifestations of acute or chronic illness involving multiple body systems that can contribute to altered mental status or acute

Suspicion for sepsis should be accompanied by an exam for a source of infection. Patients with multiorgan dysfunction should be evaluated for asterixis. muscle tremors or fasciculations, and/or jaundice that could indicate the dysfunction's severity.

# Mental status exam

The ACNP should perform a comprehensive mental status exam (MSE) when performing a medical clearance evaluation. The MSE is a crucial component of evaluating a person's current mental state, particularly

**TABLE 1.** Correlating history findings to the differential diagnosis in acute psychosis<sup>1</sup>

History findings	Differential diagnosis considerations
Onset	
Acute	Medical illness
Waxing/waning	Delirium, encephalopathy
Episodic	Medication, substance, or toxin
Chronic	Psychiatric illness
Life phase during symptom onset	
Childhood (age ≤10 years)	Genetic/chromosomal anomaly
Adolescence to young adulthood	Psychiatric illness, substances
Older adulthood (age ≥65 years)	Dementia, delirium
Personal/family history associated with psychosis	
Medical	Medical illness
Psychiatric	Psychiatric illness
Substances or medications	Substance-/medication-induced
Co-occurring symptoms	
Physical	Medical illness
Neurologic deficits	Neurologic illness
Psychiatric	Psychiatric illness

in patients presenting with acute psychosis. The patient's level of consciousness, appearance, mood and affect, language, thought content and processes, perceptions, and cognition should be assessed. Typical presentations of primary psychosis often include fixed auditory hallucinations, fixed delusions, generally intact orientation, and an intact level of consciousness.8 Atypical presentations of psychosis include a lack of orientation, memory impairments, hallucinations that are not auditory, and acutely fluctuating levels of awareness and consciousness, aligning most with symptoms of secondary psychosis.<sup>8,21</sup> Differentiating between typical and atypical presentations of psychosis can assist the ACNP in identifying primary psychosis or secondary psychosis.

# **DIFFERENTIAL DIAGNOSIS**

Acute psychosis is not pathognomonic for underlying psychiatric disorders, and as such, these disorders should be viewed as diagnoses of exclusion. Variables such as pattern of onset, presentation, previous psychiatric history, and temporal relation to known medical causes should be thoroughly examined in patients presenting with acute psychosis (*Table 1*). Primary psychosis is commonly characterized by positive and negative symptoms.<sup>2</sup> Symptoms of schizophrenia and psychotic mood disorders follow a pattern of gradual, insidious onset during which time a prodromal period of nonspecific psychiatric symptoms may be present.<sup>1,8</sup>

> The patient's age at symptom onset can also help distinguish between primary and secondary psychosis. The peak age of onset of psychosis due to psychotic disorders such as schizophrenia and bipolar disorder is late adolescence to young adulthood. Sudden onset of psychosis due to mental illness is uncommon in young children and older adults. In young children, hypoglycemia, impaired oxygenation, substance intoxication, and CNS infections are important differentials to explore.<sup>22</sup> Older adults tend to have multiple medical comorbidities, predisposing them to polypharmacy. In addition, drug toxicity should be considered among older adults due to sensitivity to drug effect because of age-related physiologic changes.<sup>21</sup> Older adults and hospitalized patients, particularly critically ill patients,

are susceptible to developing acute delirium or a syndrome known as ICU psychosis. 14,15 Delirium should be considered in those with an acute onset of visual hallucinations, disorientation, transient disturbances in cognition, and fluctuating levels of consciousness.8 Hallucinations and delusions can also occur in individuals diagnosed with major neurocognitive disorders; one study, for example, found a mean pooled prevalence of about 41% for these symptoms in patients with Alzheimer disease.8

Psychotic symptoms that develop abruptly, with an onset from hours to days, may be more consistent with secondary psychosis. Visual hallucinations without delusional thought are more commonly seen in secondary psychosis, whereas auditory hallucinations, delusional perception, and thought broadcasting are hallmark symptoms of schizophrenia.8 Medication issues such as poor adherence, adverse reactions, and toxicities should be considered in these cases. Acutely psychotic symptoms occurring temporally to medication or substance misuse, infection, another medical illness, and abnormal vital signs/physical exam findings suggest secondary psychosis.8

The medical problems most associated with secondary psychosis include encephalopathy, stroke, intracranial lesions, neuromuscular disease, nutritional deficiencies, endocrine disorders, autoimmune disorders, and infectious disorders (Box 1).1,8-12,15,21,24 The ACNP should collect a thorough medical, surgical, and family history from the patient, collateral sources, and/ or previous medical records. Illicit or other substance use, medication toxicity, and toxin exposure are other medical causes of secondary psychosis (Box 2). 1,14-16,25

# **DIAGNOSTIC PLAN**

The ACNP should focus the diagnostic plan on evaluating the patient for underlying medical conditions causing drug-induced or other secondary types of acute psychosis. Medical screening labs such as a complete blood cell (CBC) count and comprehensive metabolic panel (CMP) are routine serum lab tests used to screen patients for underlying infectious, inflammatory, hemorrhagic, or electrolyte disorders, as well as for organ dysfunction contributing to the patient's presentation (Box 3). Routine lab evaluation should also include a toxicity screening of substances most associated with substance-induced psychosis (for example, methamphetamines, opioids, alcohol, 3,4-methylenedioxymethamphetamine [MDMA], tetrahydrocannabinol,

# **BOX 1. Medical problems associated with** acute psychosis

- Acute stroke
- Autoimmune disorders (for example, systemic lupus erythematosus, paraneoplastic syndromes)
- CNS infections (for example, encephalitis, meningitis, HIVassociated infection)
- Chromosomal or genetic anomalies
- Dementia (for example, Lewy body dementia, Alzheimer disease dementia)
- Hydrocephalus
- Neuromuscular and demyelinating disorders (for example, multiple sclerosis, leukodystrophies)
- Nutritional deficiencies (for example, vitamin A, D, or B12 deficiency; zinc deficiency; electrolyte imbalances)
- Encephalopathy (for example, hepatic, metabolic, or Wernicke encephalopathy)
- Endocrine disorders (for example, Addison disease, Cushing syndrome, hyper- or hypothyroidism)
- Toxidrome (for example, alcohol intoxication, unintentional or intentional poisoning)

Abbreviation: CNS, central nervous system.

# **BOX 2.** Substances, medications, and toxins that can induce acute psychosis

- Illicit substances
  - o Cocaine
  - Lysergic acid diethylamide (LSD)
  - o 3,4-methylenedioxymethamphetamine (MDMA; commonly known as ecstasy)
  - o Tetrahydrocannabinol (THC; including synthetic cannabinoids)
  - Phencyclidine (PCP)
- Inhalants (for example, paint thinners, glue, spray paint)
- Prescribed medications
  - o Antibiotics, antivirals, and antiparasitics
  - Antiepileptic drugs
  - Antihistamines
  - Antiparkinsonian drugs
  - Chemotherapeutics
  - Corticosteroids
  - Muscle relaxants
- Toxins
  - o Arsenic
  - Carbon monoxide
  - Organophosphates

and so on), but it does not need to delay psychiatric evaluation.<sup>1,15,25</sup> The ACNP should be aware of substances that cannot be tested for (for example, synthetic cannabinoids, paint thinners) or that are difficult to detect (for example, cathinones, MDMA) when a toxidrome of unknown etiology is highly suspected.<sup>25</sup>

In patients with underlying CVD or endocrine disorders, a thyroid-stimulating hormone test should be

# **BOX 3.** Routine medical clearance workup for acute psychosis

- Complete blood cell (CBC) count
- Comprehensive metabolic panel (CMP)
- Toxicology panel
  - Serum alcohol level
  - Urine drug screen
    - Amphetamines
  - Barbiturates
  - Benzodiazepines
  - Cocaine
  - Methamphetamine
  - 3,4-methylenedioxymethamphetamine (MDMA; commonly known as ecstasy)
  - Tetrahydrocannabinol (THC)
  - Opiates
  - Phencyclidine (PCP)

Note: Toxicology panels can include different tests across organizations. The ACNP should add specific tests along with set panels according to their index of suspicion.

performed. 9,12,26,27 Patients living with autoimmune disease or those suspected to have autoimmune disease should undergo inflammatory marker collection (for example, antinuclear antibodies, erythrocyte sedimentation rate, C-reactive protein, rheumatoid factor, and so on). 19 Finally, patients suspected to have a CNS infection related to an immunocompromising illness should be evaluated for HIV, herpes simplex virus, and syphilis. 1

#### 12-lead ECG

Patients living with psychiatric illness have a two- to threefold higher risk for CVD-related illness and mortality than the general population.<sup>27</sup> Additionally, psychopharmacotherapies can propagate the development of CVD. The 12-lead ECG can be useful in initial evaluation of a patient with acute psychosis who is at risk for or has known CVD to establish a baseline or assess them for acute medical problems. The test evaluates for acute arrhythmia, QT segment prolongation, ectopy, or electrolyte imbalances caused by the effects of chronic disease or medications (such as antipsychotics, antihypertensives, diuretics, and antiarrhythmics).<sup>28</sup>

# **Imaging**

Radiographic or computed tomography (CT) tests may be indicated to evaluate the patient initially for specific medical problems that could be the cause or complication of acute psychosis presentations or for concomitant medical problems that are not related to psychosis. Patients with a persistent coarse cough productive of purulent sputum or hypoxia should undergo chest

radiograph to evaluate for pneumonia or another lower respiratory condition; patients who have experienced blunt trauma to the thorax should also undergo chest radiograph to exclude bone fractures or pneumothorax. Patients experiencing homelessness and those engaging in tobacco use, for example, are particularly vulnerable to atypical lower lung infections resulting in an increase in cough and sputum production. Patients with a new focal neurologic deficit or altered mental status should undergo imaging of the head with a noncontrast CT study to evaluate for intracranial mass or acute stroke, which could cause acute personality and/or mood changes.<sup>1,12</sup>

# **MANAGEMENT**

The goals for an ACNP managing a patient with acute psychosis should be to stabilize and treat medical problems, diagnose or exclude medical etiologic factors of acute psychosis, and medically clear or not clear the patient for admission to an inpatient psychiatric unit. Upon the patient's presentation, the patient might be screened for suicidality or homicidality by their triage nurse in the ED or their assigned inhospital nurse. The ACNP must evaluate the patient further to assess the patient's risk factors for suicide, homicide, and grave disability.

#### **Emergency certification**

Patients presenting with acute psychosis may require emergency certification (EC), also known as physician emergency certification (PEC), for their safety or the safety of others. Particularly, patients found to be suicidal, homicidal, and/or gravely disabled generally meet criteria for EC. The ACNP should be aware of circumstances under which state laws set by Nurse Practice Acts allow EC initiation for a patient who is suicidal, homicidal, or gravely disabled. Not all patients who present with acute psychotic symptoms warrant EC; criteria and procedures for initiating EC are defined by each state. Initiating EC for patients with drug- or alcohol-induced psychosis related to addictive disorders, for example, is generally not supported.

To initiate an EC, the standard of care generally requires that the ACNP perform a face-to-face evaluation of the patient and determine if they are suicidal, homicidal, or gravely disabled.<sup>20,28</sup> Following initiation, in most states, the EC entails an involuntary hold of the patient for 72 hours within a hospital setting to prevent them from harming themselves or others, as

well as performance of a full medical and psychiatric evaluation. The involuntary hold varies in duration in different states, thereby reinforcing the need for the ACNP to be aware of state laws. The EC can be rescinded before the 72-hour expiration time by a psychiatrist or psychiatric provider with credentialing and privileges to admit, discharge, diagnose, and treat patients hospitalized for inpatient psychiatric care. If the EC is rescinded, the ACNP should reevaluate the patient for medical and psychiatric stability and should arrange for disposition of the patient to the respective level of care (for example, home with selfcare, a long-term nursing facility, or other appropriate setting). Holding a patient against their will via EC can be a highly litigious matter; therefore, careful evaluation, management, and reevaluation of the patient are needed, along with thorough interviews of both the patient in question and any collateral sources, for the most comprehensive assessment.18

# Pharmacotherapeutic management

A prospective observational study reported that the most common medications prescribed by emergency medicine providers for patients with psychiatric emergencies (inclusive of acute psychosis) are risperidone. lorazepam, and haloperidol.<sup>16</sup> Haloperidol was commonly prescribed to patients for behavioral control when diagnosed with substance use or schizophrenia, and it was also used in all cases of acute psychosis.<sup>16</sup> Benzodiazepines like lorazepam and anticholinergics were most commonly prescribed for patients with substance use and schizophrenia.16 The ACNP should select the most appropriate medication or combination of medications to stabilize the patient's behaviors and facilitate their safety.

The ACNP should carefully review the patient's medical and medication history to help guide pharmacotherapeutic prescribing. Consultation with a psychiatric-mental health NP or psychiatrist regarding antipsychotic prescribing may be indicated. However, the ACNP should be aware of first- or second-line drugs (such as haloperidol, olanzapine, lorazepam, and diphenhydramine) that can be used initially to manage the patient's acute psychosis, whether it is primary or secondary. This section provides an overview of these medications.

**Antipsychotics.** Antipsychotic medications are used in the acute phase of treatment to reduce the severity of psychotic symptoms. Typical antipsychotic

(first-generation) and atypical antipsychotic (secondgeneration) drugs can alleviate severe psychotic symptoms in acute psychosis.<sup>29</sup> First-generation antipsychotics are most effective in patients with positive symptoms of psychosis, whereas secondgeneration antipsychotics work well for both positive and negative symptoms.<sup>29,30</sup> Practice guidelines recommend initiating a second-generation antipsychotic over a first-generation antipsychotic because secondgeneration antipsychotics are less likely to result in adverse involuntary movement disorders such as extrapyramidal effects and tardive dyskinesia.<sup>29</sup> Secondgeneration antipsychotics can, however, cause metabolic adverse reactions such as diabetes and dyslipidemia and should be used with caution in patients with these cardiovascular risk factors. 1,27 It is acceptable practice to augment a second-generation antipsychotic medication with a benzodiazepine or a first-generation antipsychotic to reduce agitation in the patient presenting with acute psychosis.<sup>29</sup> Ultimately, the initial drug selection should be based on the patient's presenting symptoms and medical history as well as the drug's adverse reaction profile.

**Benzodiazepines.** Benzodiazepines are used to treat agitation in patients presenting with acute psychosis. Benzodiazepines, when administered with an antipsychotic, can provide rapid symptom relief in highly agitated patients.29 Lorazepam is often used because it has reliable absorption when administered either orally or I.M. and it can reduce the dosage of antipsychotics needed for symptom reduction.<sup>16,29</sup>

Antihistamines and anticholinergics. Antihistamine and anticholinergic medications are also used in acute psychosis to potentiate antipsychotic or anxiolytic medications and to treat medication-induced movement disorders. Patients presenting with tremors, catatonia, or severe extrapyramidal symptoms from use of antipsychotic medications can benefit from concomitant or monotherapeutic use of these drug classes.31 Use of antihistamines and anticholinergics can also come with significant adverse reactions, including acute cognitive dysfunction and delirium, along with increased risk for developing dementia with prolonged exposure. 32,33

**Older adult prescribing considerations.** The ACNP should consider the unique adverse reactions of psychopharmacotherapies in older adult populations. Older adults are more susceptible to drug-induced cognitive dysfunction with the use of anticholinergic

agents and exhibit higher incidence of acute delirium with benzodiazepine use. 32,33 The cumulative effects of these drugs, when used in conjunction with other medications to treat medical comorbidities, place older adults at an increased risk for hospitalization and a higher risk for institutionalization in long-term-care facilities. 21,32 Additionally, older adults requiring the chronic, concomitant use of cardiac and psychotropic medications have an increased risk for cardiac arrhythmias. Polypharmacy in older adults can further increase this risk. 21,32

Management of acute psychosis in these patients should center on identification of the underlying cause and reversal, if possible, through a combined approach of pharmacologic therapies and nonpharmacologic psychotherapies. Such interventions include cognitive behavioral therapy, family involvement in reorienting the patient when possible, environmental modifications, and verbal de-escalation when appropriate.<sup>21</sup>

# Disposition

The disposition of patients with acute psychosis can be challenging due to the lack of inpatient and outpatient mental health facilities, psychiatric providers, and, in some cases, social or family support, along with the patient's level of function and capacity to care for themselves. 19,20 Patients who are already hospitalized during the onset of acute psychosis may require continual one-on-one observation by a healthcare professional to ensure their safety in the medical unit. The ACNP caring for a patient who presents to the ED with acute psychosis will have to determine, after medical clearance, whether the patient requires inpatient psychiatric evaluation or whether the situation is sufficiently safe for outpatient psychiatric evaluation. Patients medically cleared following EC initiation must be placed in a locked unit or patient room with continual direct supervision until they can be evaluated for admission to an inpatient psychiatric unit.1,18,19

### PATIENT AND FAMILY EDUCATION

The emotional and financial burden associated with acute psychosis can affect both the individual and their family. Patients living with acute psychosis can often exhibit poor insight into their illness; therefore, consistent family involvement plays an integral role in helping to achieve and/or improve recovery outcomes.<sup>34</sup> Educating patients and families about acute psychosis

can lead to enhanced outcomes, increased treatment adherence, higher levels of patient insight, and reduced levels of stress among family members.<sup>35</sup> Timing of this communication with and education of the family may be challenging; family members of patients with newly diagnosed psychiatric disorders often have questions about the implications of the disorder for the long term, and they may feel distressed and overwhelmed.<sup>36</sup> Family members should be educated on the patient's diagnosis, possible causes for the psychosis, and its potential impact on functioning. The ACNP should also provide education on maintaining safety for both the patient and caregivers; the risks, benefits, and rationale for current tests and treatment recommendations; and recognition and management of future episodes.<sup>36</sup> Overall, the ACNP should provide up-to-date, evidencebased education to help bridge the knowledge gap and promote autonomy in the shared decision-making process, all while using an individualized, patient-centered approach.37

# **ACNP PRACTICE IMPLICATIONS**

As a medical provider, the ACNP should have or should develop skills related to the medical clearance and initial management of patients experiencing acute psychosis in hospital settings. Differentiating between psychosis arising from medical conditions versus from psychiatric conditions can be challenging, particularly among patients with co-occurring illnesses. However, the ACNP's ability to evaluate the patient quickly yet comprehensively and facilitate their disposition to the most appropriate treatment setting is vital to the patient's safety and overall health-related outcomes.

For the ACNP's edification, *Box 4* provides illustrative case exemplars that offer overviews of evaluation, diagnosis, and management of acute psychosis under various circumstances.

#### CONCLUSION

Acute psychosis is a psychiatric emergency that can result from medical, psychiatric, and/or drug-induced etiologies. The number of conditions that can cause psychotic symptoms can make differentiating between primary psychosis and secondary psychosis challenging. A comprehensive history, physical exam, mental status exam, and lab investigations are vital in this process and can help distinguish between primary and secondary psychosis promptly. Occasionally,

#### **BOX 4.** Case exemplars

#### CASE 1

A 23-year-old male presents to the ED with a family member who is concerned that the patient "is not acting the same." Family states the change in the patient's behavior started 2 months ago and has been worsening. The family member reports that the patient is speaking to people who are not present, is becoming increasingly agitated each day when other family members or friends visit, has been sent home from work for the past 2 days, and has not been able to sleep through the night due to his fear of someone trying to capture him. The patient has no prior medical history and no regular home medications. The family member does not believe the patient uses illicit substances. The patient is a first-year law student and works with an attorney as a paralegal part-time. Over the last few weeks, the family reports that the patient has not been regularly bathing, shaving, washing his clothes, eating, or sleeping well. The family member is very concerned about the patient's mental state and does not know him to have ever experienced these problems previously. The patient's father had an alcohol use disorder and died in his early 40s due to complications from liver disease. The family member is unaware of any other family history.

The patient is awake, alert, and oriented to self. He cannot be interviewed due to nonlinear conversation and tangential, pressured speech. The patient reports hearing voices and says he cannot stop the voices from talking to him. The patient denies suicidal or homicidal ideation. The patient is anxious, hyperactive, and pacing around the room. He is very difficult to redirect during the interview but is cooperative with the physical exam.

#### Case 1 discussion

The patient is a young adult male likely experiencing the progression of primary psychosis. The patient is experiencing typical auditory hallucinations and delusional perceptions, which are hallmark symptoms of primary psychotic disorders. Both positive and negative symptoms of psychosis are present. The patient's age and insidious onset of symptoms are consistent with the peak age of onset and progression of schizophrenia

and psychotic mood disorders. An emergency certification per state laws should be initiated, and the patient should be medically cleared for emergent psychiatric evaluation.

#### CASE 2

A 72-year-old male hospitalized for mild acute pancreatitis secondary to hypertriglyceridemia begins reporting that bugs are in his can of nutritional supplement drink. The patient's nurse reassures him that no insects or bugs are in the drink but offers him a different can of the supplement. The patient continues to report seeing bugs and becomes agitated, saying that the nurse is trying to poison him. The patient attempts to escape the hospital room and becomes combative.

Upon reevaluation of the patient, the patient is disoriented to self, place, and time. He is anxious, inattentive, and uncooperative. The patient is found to continue to have normal vital signs except for a new fever, with an oral temperature of 100.6 °F (38.1 °C). The patient has no wounds, focal pain, or other abnormal changes to his physical exam. The nurse reports to the acute care NP (ACNP) that the patient has not voided all day today and had a urine output of 230 mL the previous day. The patient's microscopic urinalysis reveals a significant pyuria (without contamination of epithelial cells), mild hematuria, and mild proteinuria and is positive for nitrates. A culture is initiated of the urine. The ACNP also orders a repeat CBC with a basic metabolic panel, blood cultures, and a lactate level

#### Case 2 discussion

The patient is an older adult male with acute delirium secondary to acute genitourinary infection. The new fever indicates an acute medical condition that could be caused by acute infection, acute inflammatory response, neoplastic-related fever, or medication-induced fever. The patient's mental status is abnormal but without evidence of primary psychosis. The patient should be monitored closely for his safety and illness progression. The source of infection should be confirmed and empiric antibiotic treatment initiated until the urine culture and sensitivity report is available for antibiotic de-escalation.

imaging studies may need to be ordered for further exclusion of medical illness. Medical clearance and appropriate disposition are the priorities for any patients presenting with acute psychosis. Finally and importantly, ACNPs should be familiar with state regulations regarding EC to be ready to act accordingly for patients who need it.

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