

# Chapter 27

## SEVERE PSYCHIATRIC ILLNESS IN THE MILITARY HEALTHCARE SYSTEM

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INTRODUCTION

BRIEF PSYCHOTIC DISORDER, SCHIZOPHRENIFORM, AND SCHIZOPHRENIA

SUBSTANCE-INDUCED PSYCHOSIS

BIPOLAR DISORDER

MAJOR DEPRESSIVE DISORDER

POSTTRAUMATIC STRESS DISORDER

REMOTE SITE TREATMENT CONSIDERATIONS

AIR EVACUATION

SUMMARY

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## INTRODUCTION

New military recruits with psychiatric illness often will have their first contact with mental health professionals within the military healthcare system. Demographics, personal development, and life circumstances contribute to first-presentation illness that manifests only after active duty entry. Medical standards for enlistment or commission and retention effectively select out service members with recurrent or chronic mental illness. Providers who care for military service members are thus afforded a unique opportunity to set the tone for therapeutic alliances with patients unfamiliar with mental healthcare. Providers must also contend with patients struggling with insight and acceptance of newly diagnosed mental illness.

Several assumptions are made in this discussion of severe psychiatric illness in the military. Diagnoses elaborated in this chapter are based on the 4th edition of the *Diagnostic and Statistical Manual (DSM-IV-TR)* of the American Psychiatric Association. Combat zones are considered to be outside the continental United States. Severe mental illnesses include, but are not limited to, the diagnoses of brief psychotic disorder, schizophreniform disorder, schizophrenia, schizoaffective disorder, delusional disorder, major depressive disorder—severe, and bipolar disorder types I and II. And finally, the use of antidepressants and neuroleptics requires 4 to 6 weeks before efficacy can be fully realized.

Almost 90% of new recruits enlist in the Army before the age of 25, thus falling within the window of the average age of onset for many psychiatric illnesses.<sup>1</sup> Schizophrenia will begin earlier in men than women, but excepting less distinct prodromes, the average age of onset falls well within this window. Bipolar disorder is considered to have a bimodal peak onset, both in early adulthood and again later in life (around age 50), a time when many are ending their military careers. Depression can begin at any age, but the average age of onset is 25, falling well within the new-recruit age range.

Entering into military service is not a decision that most take lightly. It requires geographic separation from friends and family, changes in daily activities, loss of some flexibility enjoyed by civilians, and the

potential for hazardous deployments. A decision to join can challenge one's existential and phase-of-life development and presents service members with stressors rarely found in the civilian workforce. Drastic life changes can be accompanied by destabilizing anxiety, a precipitate of psychiatric illness.

Some new recruits enter military service to bring a change of direction to their lives. Although most often this is a personal developmental milestone followed by a successful career, it can sometimes be the result of premilitary failings resulting from subclinical or fully developed mental illnesses. Obligations required of soldiers and the stringent fitness for duty requirements may be unknown to those who see military service as a chance to bring about a change in their lives. At its extreme, recruits may join the military with preexisting severe mental illness, often stopping pharmacologic treatment shortly before entering basic training to facilitate acceptance into service.

The military operates in environments ranging from remote locales with few to no medical facilities through major academic medical centers. Soldiers may find themselves in garrison, peacetime missions, training exercises, or combat zones. Each of these environments presents its own unique challenges to new onset or recurrence of major psychiatric symptoms. Resources at each locale are utilized to control symptoms and agitation until definitive care can be administered, often within the confines of continental United States military medical facilities.

Military mental health professionals provide care within the context of the physical disability system and military regulations. Providers must often comply with the actions of the physical evaluation board (which will determine fitness for duty and potential disability ratings), while simultaneously attempting to maximize clinical improvement. These competing agendas and potential conflicting interests can add an unwelcome complexity to patient management. Patients undergoing fitness-for-duty and disability determination may have a financial or administrative disincentive for improvement or accurate reporting of decline in their clinical status due to varying degrees of conscious and unconscious secondary gain.

### BRIEF PSYCHOTIC DISORDER, SCHIZOPHRENIFORM, AND SCHIZOPHRENIA

The spectrum of primary thought disorders described in the DSM-IV-TR may present uniquely in a military community. Though predominately distinguished by length of symptoms, brief psychotic disorder may terminate in non-thought-disorder

diagnoses such as adjustment disorders.<sup>2</sup> Differentiating true schizophreniform disorder (as defined by complete resolution of symptoms within 6 months of onset) from first-break schizophrenia (which has the same symptoms as schizophreniform disorder

but lasts for a lifetime) may be possible only after clinical observation. Often the clinician will need to wait to see if the symptoms persist over time; it is estimated that 25% of these cases will resolve.<sup>3</sup> Unfortunately for many patients, both brief psychotic disorder and schizophreniform disorder may serve only as place markers in the timeline of new onset schizophrenia, most commonly a chronic and disabling disease.

A detriment to clinical accuracy can occur with such early presentation of primary thought disorders. It is common for psychotic symptoms to not be fully developed leading to ambiguous perceptual disturbances, delusional beliefs, or executive functioning that may make diagnosis more difficult. Premature diagnoses of delusional disorder and psychosis not otherwise specified may underestimate the severity of illness and long-term functional implications if the true disorder is schizophrenia. Military providers should consider this phenomenon when applying diagnoses and determining treatments and disposition management.

Presentation of psychotic illness is different than that seen in the general community. Closer scrutiny and command oversight can result in a greater interpersonal immersion than in the civilian workplace.

## **SUBSTANCE-INDUCED PSYCHOSIS**

Intentional and unintentional ingestions of supplements, medications, or illicit substances can result in mental status changes that may mimic severe thought disorders. History, physical examination, and laboratory testing sometimes detect a particular agent, but history may be difficult to obtain from an acutely agitated patient. Furthermore, not all substances are readily detected in drug screens or routine laboratory tests, or laboratory testing may not be possible in some field environments.

Illicit substances and novel ways of utilizing items not intended for consumption have their own usage trends in the community. Illicit substance use has its own variations in popularity depending on street costs, accessibility, and cultural acceptance. Knowing which items are “in style” can assist with more rapid diagnosis of sudden changes in mental status. In addition, novel ways of ingesting or inhaling routine items, such as pressurized air, solvents,

Command-directed evaluations can require service members to undergo evaluation with a level of dysfunction that may not have reached threshold criteria in a civilian healthcare system. Early referral may be beneficial, as symptoms may be present for shorter periods before presentation to mental healthcare and thus offer an opportunity to positively effect long-term outcome through early treatment.<sup>4,5</sup> Ensuring compliance during initial treatment may enhance outcomes and slow declines in function seen in naturalistic studies.<sup>6</sup> Service members undergoing a medical evaluation board often wait for months, if not more than a year, before adjudication, which offers an opportune time for close monitoring of compliance and subsequent clinical status.

Pharmacologic management of primary thought disorder extends beyond the scope of this chapter. Long-term metabolic and extrapyramidal side effects should be weighed against proven efficacy for positive and negative symptoms and receptor profiles.<sup>7</sup> When psychosis arises in remote locations, choice of an antipsychotic agent is often more dictated by availability than the previously described variables. This may be problematic if efficacy is achieved despite long-term issues of toxicity.

or even brake fluid, can alter mental status. Familiarity with these substances may allow for more rapid detection of their use and intervention for the potentially life-threatening complications that may develop. Collateral history from fellow service members, barracks health and welfare inspections, and prior substance abuse history may help providers determine if a particular agent is associated with behavioral change.

Withdrawal from substance dependence can not only result in an acute change in mental status indistinguishable from primary mental illness, but it may also be associated with life-threatening complications. Military service with controlled environments—weekend drills, field exercises, combat deployments, and military training schools—can interrupt accessibility to drugs or alcohol for a chronic substance-using service member. Healthcare providers should remain vigilant for, and be prepared to treat, such events.

## **BIPOLAR DISORDER**

Bipolar disorder presents diagnostic and management considerations for service members presenting with current or past histories of mania. With a bimodal onset, it can affect new recruits in their second decade

or those getting ready to retire in their fifth decade.<sup>8</sup> Both are associated with significant adjustments, as younger patients will have to contend with management of an indefinite mental illness, and those in

mid-life have retirement and generational phase-of-life development potentially derailed with a new-onset mental illness.

Bipolar disorder type I can present with frank psychosis, making diagnosis more difficult. Acutely agitated patients with grandiose delusions may be indistinguishable from those with agitated schizophrenia without collateral history to suggest prior and current mood criteria. Misdiagnosis may be more common in certain ethnic groups and thus caution should be taken when suggesting diagnoses in minority populations.<sup>9</sup>

Bipolar type II can be less dramatic in its presentations with hypomania. A decreased need for sleep, narcissism, and increased goal-directed activity can be adaptive for noncommissioned and commissioned officers. Presentation for care can commonly occur under times of marked duress, such as a combat deployment, when defenses used in a hypomanic state are overwhelmed (leading to decompensation) or during depressed mood episodes. Traditional antidepressant medications can cause destabilization and thus a careful collateral history is needed for any service member

presenting with depression, to ensure there have not been prior manic symptoms.

Bipolar disorder has a high likelihood of recurrent mood episodes and providers should give strong consideration for initiation of a medical evaluation board.<sup>10</sup> Environmental changes, lack of access to laboratory monitoring, and sleep-cycle changes can destabilize this condition, and conversely, early treatment, avoidance of illicit drug and alcohol use, and lifestyle management can improve long-term prognosis.<sup>11</sup> Military mental healthcare providers are in a unique position to affect the course of this illness long after patients have separated from the service.

Choice of pharmacologic agents should account for likely indefinite treatment and potential long-term side effects, such as metabolic impact and tolerance. Practice guidelines continue to push the envelope of evidenced-based treatments and extend beyond the scope of this chapter. Providers, however, should seek these resources to remain abreast of agents with the most evidence-based efficacy while mitigating potential side effects.<sup>12</sup>

## MAJOR DEPRESSIVE DISORDER

Depression is a common disorder affecting service members of all ages.<sup>13</sup> The effect of this illness on performance can be more variable than seen with primary thought disorders or bipolar disorder, ranging between little to no impact on performance to marked decrement with potential harm to self or others. Remote locales, variable pharmacologic and psychotherapeutic resources, command support, and psychosocial stressors all can affect treatment decisions and disposition.

The DSM-IV-TR does not distinguish between exogenous or endogenous depression. Although many cases have some components of external influences and endogenous predispositions, unique military environments can bring about extraordinary levels of environmental stress that challenge the most resilient of personalities. Geographic separation from friends and family, combat exposure, obligated tours of duty, scrutiny from command, loss of privacy, and physical demands are some of the unique military stressors than can help precipitate a depressed mood. Because service members are often unable to change their occupations or duty assignments and thus avoid an unpleasant stressor, hopelessness may ensue, leading to suicidal and/or homicidal thoughts. Even though meeting criteria for major depressive disorder, many of these service members will have rapid resolution of symptoms if medically removed from the situation, such as through evacuation, more fitting the intent of

the diagnosis of adjustment disorder despite being incorrect by criteria.<sup>14</sup>

Whereas overt behavior associated with mania and psychosis will garner the attention of peers and commanders, isolation associated with a worsening depression may go unnoticed. Deployment to areas far from mental health resources, stigma associated with accessing care, and unwarranted fear of career damage if treated may delay entry into care. Ongoing military efforts to raise awareness and ease access cannot completely negate these effects. Unfortunately, ready access to firearms and heavy machinery make self-injurious behavior lethal in a military with a predominately younger male population, which has tended to prefer this mechanism for suicide.

Fortunately, mild to moderate depression can be treated with relative ease using both therapy and psychopharmacology, with medical assets allowing care in almost all austere locations. Providers who choose to use medications in their treatment of mild to moderate depression should consider agents less likely to cause sedation, ataxia, weight gain, or anticholinergic side effects because all of these can impair a soldier's performance. Antidepressants with shorter half-lives and associated withdrawal phenomenon should also be avoided because compliance is not always accommodated by operational tempos.

Severe depression may be associated with marked performance decrement, reality testing impairment,

or injurious behavior, and should be managed at fixed facilities removed from active military operations. Diagnostic clarity often requires inpatient observation to rule out a depressive episode of bipolar disorder, or the presence of a primary thought disorder such as schizoaffective disorder, especially if there are comorbid psychotic symptoms. Treatments will likely require

antidepressant and antipsychotic administration, with electroconvulsant therapy (ECT) as an option for those refractory to medication, unable to tolerate medication, or those with life-threatening severity, such as imminent suicidality or catatonia. Single episode severe depression with psychosis warrants strong consideration for a medical board.

### **POSTTRAUMATIC STRESS DISORDER**

Combat-related posttraumatic stress disorder (PTSD) may account for up to 20% of inpatient admission to CONUS medical facilities through the aeromedical evacuation system.<sup>15</sup> Often the symptoms of PTSD alone do not lead to inpatient treatment, but rather comorbid psychiatric conditions (with or without illicit substance use) manifest potentially dangerous clinic states that necessitate inpatient psychiatric treatment. With increased awareness of the phenom-

enon of PTSD and possible financial disability compensation, patients may find PTSD symptoms easier to discuss with providers, thereby masking another major psychiatric illness. Providers should remain vigilant for confounding illness present in patients who arrive with severe disability or safety concerns and insist on a sole diagnosis of PTSD. Further discussion of PTSD is covered elsewhere and readers are referred to those relevant sections of this book.

### **REMOTE SITE TREATMENT CONSIDERATIONS**

Any mental health facility must be prepared to handle agitated and violent patients no matter how remote the location. Treatment teams need to construct contingency plans utilizing whatever resources they have available to secure a violent or agitated patient, including using restraint and emergency pharmacologic management. For smaller teams, other personnel may need to be enlisted to train and potentially assist with a restraint. Potential personnel resources may include medics, other unit members, military police, and battalion aid station staff. Soft-point restraints are a Joint Commission standard, but not always available on site. Providers may have to use locking ties typically reserved for detainees until appropriate restraint can be obtained. Pharmacologic treatment of agitation may require intramuscular injections that do not require refrigeration.

relocation and thereby have less capability to provide resource intensive care. The threshold for evacuation will need to change to accommodate operational tempo in these situations. Skill sets of providers may also dictate what is feasible, as does patient availability. Expectations of patients to follow up weekly in an active combat environment may not be appropriate if traveling to and from the medical site is a hazard itself. Attending line unit battle update briefings will help with accurate intelligence acquisition for ongoing operations as well as foster a collaborative relationship with commands.

Pharmacologic options may be limited, particularly in immature operational areas. Providers should be aware of what medications are available to them and, when possible, assist with deciding which medications to pack at the start of a mission. Availability of medical supplies and utilizing surrounding medical facilities can help expand medication options.

While awaiting air evacuation, patients should be kept in a quiet room with minimal distractions. Patients who suffer from psychosis can misunderstand the most basic voice inflection, so providers should interact with these patients in a neutral tone and focus on factual information, such as current location, plan for evacuation, dosing of medications, and formal names of the people who are involved in the patient's care. A patient who is psychotic at a combat stress center can be disruptive to soldiers recovering from mood and anxiety conditions. Providers should educate other patients at the facility about differing disease presentations in an effort to minimize pathologic identification for those for whom this would be a concern.

If troop movements are ongoing, medical facilities may find themselves occupied with tasks of unit

### **AIR EVACUATION**

The international deployment of military forces creates a unique situation where patients may be evacuated across continents at the beginning of their

mental healthcare. Although hospitalization alone can be an adjustment, time-zone changes, layover in medical facilities, and long evacuation flights may affect

the presentation of patients as they move through the system.<sup>16</sup> Exposing patients to this process is justified by the need to get them to a fixed medical facility for definitive treatment and fitness-for-duty determination.<sup>17</sup> Given the risks of symptom exacerbation and subsequent agitation, a low threshold for pharmacologic treatment and possible physical restraint should be considered.

Another consequence of medical evacuation is evolution of clinical state when service members reach rear-echelon medical facilities. There may be numerous reasons for such an occurrence. Once removed from whatever stressor may have precipitated or aggravated their condition, some service members will reconstitute quickly en route. Other patients may have time to reflect on consequences of admitting to delusional belief systems or to the presence of hallucinatory events, and thus began to recant their stories given the reaction of those to whom they had confided. Some service members may admit to severe psychiatric symptoms with secondary gain as a motivator and, upon seemingly realizing their objective, begin to report a rapid recovery to escape the mental healthcare system. Treatments instituted at the lower echelon of care may have a rapid effect leading to genuine symptom improvement. The end result is that patients diagnosed with severe psychiatric disorders at lower echelons of care may look different and much less ill when arriving at a tertiary treatment facility.

Providers should not dismiss collateral and observed behavior noted downrange. Underestimation of severity of illness can have consequences to both patient care and unit readiness. Upon arrival at the definitive care facility, medical records should be reviewed and collateral contacts made with medical personnel involved in the care of the patient prior to that point. Existence of electronic record systems

should facilitate continuity of care, but austere environments may not allow for such a convenience and physical records may not survive extensive evacuation routes. Providers should make concerted efforts at overcoming inherent obstacles to continuity that military operations may create.

Command should be notified of the patient's arrival at each step along an evacuation route. It is not uncommon for patients to be evacuated from an operational area with such efficiency as to outpace command notification. In addition, commands can provide invaluable collateral data on history of presentation, premorbid functioning, known interpersonal and social stressors, environmental exposures, and actions that may be subject to the Uniform Code of Military Justice.

Patients should receive a thorough medical-psychiatric assessment upon arrival at definitive treatment facilities. Lower echelons of care may not have resources available to meet practice guideline recommendations for medical workup of the psychiatric patient. The receiving facility should ensure that psychiatric symptoms do not have a medical or substance-induced cause. Operational environments downrange may also have competing priorities, such as ongoing combat operations, that prevent providers from completing a thorough assessment. In some cases, an expeditious evaluation may have been formed to determine appropriateness for evacuation and initial management. Some patients may require tests, such as a positron emission tomography scan, magnetic resonance imaging, or electroencephalography, that can only be performed at higher echelon facilities. Finally, case load downrange may not lend itself to a thorough psychiatric assessment that can be performed at a major medical facility with subspecialty consultations and graduate medical education programs.

## SUMMARY

Severe psychiatric illness represents an important component of military mental healthcare. Unique aspects of military service and operations may impact presentation and disease processes. Military

mental health providers should be familiar with the management of severe psychiatric illness and the nuances of its treatment in an operational environment.

## REFERENCES

1. Civilian data from Bureau of Labor Statistics Current Population Survey File; 2004. Available at: [http://www.defenselink.mil/prhome/poprep2004/enlisted\\_accessions/age.html](http://www.defenselink.mil/prhome/poprep2004/enlisted_accessions/age.html). Accessed May 28, 2008.
2. Beighley PS, Brown GR, Thompson JW Jr. DSM-III-R brief reactive psychosis among Air Force recruits. *J Clin Psychiatry*. 1992;53:283-288.
3. Zhang-Wong J, Beiser M, Bean G, Iacono WG. Five-year course of schizophreniform disorder. *Psychiatry Res*. 1995;59(1-2):109-117.

4. Jarskog LF, Lieberman JA. Neuroprotection in schizophrenia. *J Clin Psychiatry*. 2006;67(9):e09.
5. Wyatt RJ, Henter I. Rationale for the study of early intervention. *Schizophr Res*. 2001;51(1):69–76.
6. McGlashan TH. A selective review of recent North American long-term followup studies of schizophrenia. *Schizophr Bull*. 1988;14:515–542.
7. Lieberman JA, Stroup TS, McEvoy JP, et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *N Engl J Med*. 2005;353(12):1209–1223.
8. Hale RE, Yudofsky SC, eds. *The American Psychiatric Publishing Textbook of Clinical Psychiatry*. 4th ed. Washington, DC: American Psychiatric Publishing; 2003: 490.
9. Mukherjee S, Shukla S, Woodle J, Rosen AM, Olarte S. Misdiagnosis of schizophrenia in bipolar patients: a multiethnic comparison. *Am J Psychiatry*. 1983;140(12):1571–1574.
10. Tohen M, Zarate CA Jr, Hennen J, et al. The McLean-Harvard First-Episode Mania Study: prediction of recovery and first recurrence. *Am J Psychiatry*. 2003;160(12):2099–2107.
11. Post RM. Kindling and sensitization as models for affective episode recurrence, cyclicity, and tolerance phenomena. *Neurosci Biobehav Rev*. 2007;31(6):858–873.
12. Suppes T, Dennehy EB, Hirschfeld RM, et al. The Texas implementation of medication algorithms: update to the algorithms for treatment of bipolar I disorder. *J Clin Psychiatry*. 2005;66(7):870–886.
13. Grammer GG, Cooper M. *National Collaborative Study of Early Psychosis and Suicide: New Onset Psychosis in New Military Service Members*. Bailey K Ashford Research Award. Washington, DC: Walter Reed Army Medical Center; 2001.
14. American Psychiatric Association. *Quick Reference to the Diagnostic Criteria From DSM-IV-TR*. Washington, DC: American Psychiatric Association; 2005.
15. Data on file at Department of Psychiatry, Walter Reed Army Medical Center, Washington, DC; 2004.
16. Ritchie EC. Psychiatric patients. In: Hurd WW, Jernigan JG, eds. *Aeromedical Evacuation: Management of Acute and Stabilized Patients*. New York, NY: Springer-Verlag; 2003: Chap 26.
17. Ritchie EC, Morse JH, Brewer PG. Surviving the “air evac”: medical and logistical issues of evacuating psychiatric patients by air from Korea to the United States. *Mil Med*. 1996;161(5):298–302.

