Co-occurring Psychiatric Disorders

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High-Yield Review Points

- The presence of co-occurring psychiatric disorders and substance use disorders is associated with worse outcomes for both disorders.
- Adequate treatment has been shown to improve outcomes for both disorders, in varying degrees.
- Given the diagnostic challenges in patients with co-occurring disorders, assessment should occur via serial, longitudinal assessments, and using multiple information sources.
- Treatment of co-occurring disorders should be integrated.
- Treatment of both disorders should be based on a long-term perspective, and should consider pharmacologic and psychosocial interventions.

Introduction

The presence of both psychiatric and substance use disorders in a patient is referred to as co-occurring disorders (COD), and is associated with worse outcomes in both the psychiatric disorder and the substance use disorder. The negative outcomes include higher rates in both disorders for relapse, hospitalization, violence, incarceration, homelessness, infections, underachievement and failure in work and school, and treatment noncompliance [1–4]. One contributing factor is that the treatment for substance use disorders (SUDs) and psychiatric disorders is often offered in parallel or consecutive systems, rather than integrated systems where both

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disorders can be addressed simultaneously. This can make it challenging for patients to access the services they need and the fragmentation in services can increase the likelihood of treatment non-adherence [2, 4]. Some of the psychiatric symptoms present in patients seeking treatment may be the result of the substance itself, and resolve completely within days or weeks following abstinence [5].

Epidemiology

Two major epidemiologic studies have provided information about the prevalence of substance use disorders and psychiatric disorders in the United States, the Epidemiologic Catchment Area (ECA) study and the National Comorbidity Survey (NCS). Other important studies include the National Longitudinal Alcohol Epidemiologic Survey (NLAES) and the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) [5]. A systematic review and meta-analyses found strong associations between co-occurring SUDs with major depression and any anxiety disorder. The strongest associations were found between illicit drug use and major depression, followed by illicit drug use and any anxiety disorder and alcohol use and any anxiety disorder [6].

In reviewing prevalence data, patients' setting has a considerable impact, as the prevalence of co-occurring disorders is lowest in people living in the community (3–4%), higher in individuals seeking mental health treatment (40–60%), and highest in people in substance use treatment settings (50–60%). Patients with severe and persistent mental illness have particularly high rates of co-occurring SUDs. For example, up to 75–90% of patients with schizophrenia are likely to use nicotine, and the prevalence of tobacco use is only slightly lower in patients with bipolar disorder (55–70%). Of note, nicotine is not routinely included in epidemiological assessments of SUDs [4].

Major depression is the most common COD among patients presenting for treatment of SUDs. Although bipolar disorder is less common in this group, the presence of bipolar disorder increases the likelihood of an SUD fourfold. The high rates of association could be an artifact of treatment seeking and result in an overestimate of prevalence data (selection bias), so it is important to also compare them with community samples drawn from the general population [5].

(a) *Epidemiologic Catchment Area Study*

The National Institutes of Mental Health's ECA study (1980–1984) determined the prevalence of comorbid alcohol, other drug and mental disorders among 20,291 persons in community and institutional settings using Diagnostic and Statistical Manual IV (DSM-IV) criteria for diagnoses. Lifetime prevalence rates in persons interviewed by the ECA program were 22.5% for any non-substance use mental disorder, 13.5% for alcohol abuse or dependence, and 6.1% for other drug abuse or dependence. Among those with a lifetime mental disorder, there was an association of more than twice the risk of having an alcohol use disorder and over four times the

risk of having another drug use disorder. Abuse or dependence of one addictive substance increases the risk of abuse or dependence on another addictive substance by seven times. Patients with drug disorders (abuse or dependence) were more likely (53%) to have a comorbid mental disorder compared to patients with alcohol disorders (37%) [7].

One interesting finding of the ECA is that individuals treated in clinical settings (specialty mental health or addiction settings) have significantly higher odds of having comorbid disorders, perhaps related to the severity of their symptoms or the impairment in function. Among the institutional settings, comorbidity of addictive and severe mental disorders was highest in the prison population, most notably related to diagnoses of antisocial personality disorder, schizophrenia, and bipolar disorder [7].

In terms of specific diagnoses, schizophrenia was associated with nearly five times higher risk of having an SUD, when compared to the general population. Antisocial personality disorder increased the likelihood of substance abuse and substance dependence. The anxiety disorders more likely to have comorbid SUDs include phobias, panic disorder, and OCD. Bipolar disorder is more likely to have comorbid SUD when compared with major depression [4, 7].

(b) *National Comorbidity Survey Replication*

The NCS-R was a national survey of households conducted between February 2001 and April 2003 using a fully structured diagnostic interview to assess 12-month prevalence, severity and comorbidity of anxiety, mood, impulse-control, and substance disorders among adults in noninstitutionalized settings. The DSM-IV was used as diagnostic criteria, and schizophrenia was excluded. About one-quarter of the total sample met criteria for any disorder, and among these, 55% of participants had a single diagnosis. The authors concluded that although mental disorders are widespread, the serious cases are concentrated among a relatively small proportion of highly comorbid cases. The odds ratio of a comorbid lifetime mental illness and any lifetime SUD was 2.4 [4, 8].

Assessment and Diagnosis

One of the most challenging questions facing clinicians working with patients with co-occurring disorders is when to make a diagnosis of either disorder. Depending on the treatment setting, a patient may present intoxicated, experiencing withdrawal symptoms, or in varying lengths of abstinence. In these situations, psychiatric symptoms present could be the result (or exacerbated) by the presence or absence of the substance. Some of the psychiatric symptoms present in patients seeking treatment may be the result of the substance itself, and resolve completely within days or weeks following abstinence [5]. For example, symptoms of anxiety present while a patient is experiencing alcohol withdrawal could well be attributed to the withdrawal syndrome, and expected to resolve completely once the patient is no longer

in withdrawal. However, if anxiety is part of a primary psychiatric disorder, symptoms are likely to persist beyond the alcohol intoxication and withdrawal, and may interfere with the alcohol use disorder (AUD) treatment. Additionally, the varying levels of severity of each disorder contributes to the heterogeneity in clinical presentations [9]. Assuming an etiological diagnosis (i.e., treating one disorder will resolve the other disorder) when assessing patients with CODs may result in insufficient treatment of both disorders.

Assessment of patients with CODs should ideally occur via serial, longitudinal assessments, and utilizing multiple sources to gather data (i.e., semi-structured interviews, collateral information, laboratory testing, and physical examination). In patients with chronic substance use, serious and persistent mental illness and medical comorbidities, cognitive impairment may add to diagnostic challenges. The goal is to avoid under-diagnosis, for example, by believing that treatment of the AUD will automatically relieve the anxiety disorder (i.e., etiological diagnosis) as well as over-diagnosis, for example, diagnosing a primary psychotic disorder and a stimulant use disorder in a patient who only experiences psychosis when intoxicated.

One important way to avoid over-diagnosis is to understand the time course during which particular substances can induce psychiatric symptoms. Diagnosis should occur at minimum once the individual is no longer in active withdrawal. For most substances, this is typically 2–4 weeks after acute withdrawal, but with methamphetamine and alcohol-induced psychoses, it may be necessary to wait several months. Given the epidemiological data, it is more likely that patients will have COD than etiological diagnoses [4]. For psychotic symptoms in particular, a common diagnostic criterion used in research and clinical practice is that psychotic symptoms must persist for at least 1 month following cessation of substance use, in order to make a diagnosis of a primary co-occurring psychotic disorder [5].

Clinicians should also consider the severity of the presenting symptoms into their assessment. Regardless of whether presenting psychiatric symptoms are the result of a co-occurring psychiatric disorder or substance-induced, their severity may require immediate action. For example, although substance-induced depression can resolve rapidly, it can be as dangerous as major depressive disorder in terms of the higher risk of suicide and self-injurious behavior [5]. Similarly, symptoms of anxiety and psychosis related to substances may be so impairing as to require immediate attention, regardless of their etiology.

A complete assessment provides screening for co-occurring psychiatric and substance use disorders, medical comorbidities, and risky behaviors (suicide attempts, violence, sexual practices, intravenous needle use). Additionally, it seeks to fully comprehend the extent of the disorders, by not only evaluating the acute risks, but also the scope of the patient's disability and their personal/environmental resources to help guide their recovery. Finally, understanding of a patient's motivation for change and stage of recovery helps clinicians guide their interventions to better match the patient's readiness for treatment [9].

Treatment

There is limited high-quality evidence to evaluate treatment of individuals with co-occurring psychiatric and substance use disorders. However, the cumulative evidence from more than 25 studies completed over the past three decades strongly supports the integration of psychiatric and substance use treatments as more effective, compared to services offered in a separate or parallel fashion [2, 3]. This means that the most effective interventions are combined at the clinical interface, with the same clinicians or clinical team providing appropriate mental health and substance use interventions in a way that is coordinated and guides patients in learning to manage both illnesses. The strategies of treatment are to engage people in treatment of both disorders, to use pharmacologic and psychosocial interventions that are matched to a patient's stage of change, and to consider a long-term perspective in treatment [3]. Components may include social skills training, family psychoeducation interventions, and peer-oriented groups [2].

In traditional parallel or sequential treatment, the burden of establishing and following a treatment plan often falls on the patient, with lack of improvement of one illness frequently impeding the ability to access treatment for the other illness [10]. Different funding sources for agencies treating either disorder can affect the ability to provide integrated services. However, the Mental Health Parity and Addiction Equality Act and the Affordable Care Act have mandated increased availability for behavioral health and SUD treatment services, [11] which could result in improved integration of services.

Specific pharmacologic information for each psychiatric disorder is presented below. A Cochrane review including 32 randomized controlled trials found no compelling evidence to support any one psychosocial intervention over another for people to remain in treatment, reduce substance use, or improve their mental state, when serious psychiatric illness is involved. It should be noted that methodological difficulties existed that hindered pooling of the results, so these results should be interpreted with caution [12].

General principles of treatment of CODs are to consider the patient's stage of motivational engagement (i.e., will treatment be focused on abstinence or harm-reduction?); treat both disorders simultaneously and aggressively for the best outcomes in both disorders; select treatments including medications that could potentially treat both disorders; prioritize use of medications that have the least liability for abuse/addiction; monitor for potential toxicity or interactions with other medications or substances of abuse; and monitor closely for treatment adherence [4].

(a) *Mood disorders*

Initiation of treatment for the SUD should always be an important part of the treatment for a patient with co-occurring mood and SUDs. However, for patients with a primary mood disorder, abstinence alone will not be sufficient to improve the mood symptoms [5].

In the treatment of co-occurring depression, antidepressants are not uniformly effective in improving mood. There is some evidence showing their superiority over placebo in patients with co-occurring AUD, but the evidence is less consistent in patients with OUD or cocaine use disorder. Antidepressants appear to improve SUD outcomes only when depression outcomes improve. Meta-analyses suggest there is more consistent efficacy in the treatment of depression in this population with mixed-mechanism antidepressants than for selective serotonin reuptake inhibitors (SSRIs), although tricyclic antidepressants have a potential for toxicity. SSRIs should be used cautiously or avoided in patients with depression and co-occurring early-onset AUDs, given their association with worse drinking outcomes in the early-onset type of alcohol dependence [4]. This should be balanced with the fact that SSRIs are generally well tolerated and have a relatively benign side-effect profile [5]. Medications for treatment of the SUDs should also be considered. By improving substance use, these medications may also reduce substance-induced depressive symptoms, and thus improve mood, reduce stress, and improve overall functioning [5].

Psychosocial treatments studied include motivational interviewing, which can improve treatment engagement and retention, cognitive behavioral therapy (CBT), a community reinforcement approach (CRA), voucher incentives, and 12-step facilitation. Both CBT and CRA appear effective at both decreasing depressive symptoms and substance abuse [4].

Indirect evidence has suggested that anticonvulsants such as valproic acid and carbamazepine should be selected over lithium as first-line agents in the treatment of patients with bipolar disorder and co-occurring SUDs. This stems from studies finding that substance abuse predicts a poor response to lithium and that the variants of bipolar disorder (mixed or rapid-cycling) are more prevalent among patients with co-occurring disorders and also more likely to respond to anticonvulsants. There is also some evidence that valproic acid can have positive effects on AUD independent of its effects on mood improvement [13].

In patients with suicidal ideation, however, lithium remains the only mood stabilizer with an anti-suicidal effect, and thus may be preferred over anticonvulsants. There is less robust evidence for effectiveness in this population of lamotrigine, gabapentin, and second-generation antipsychotics. Of note, both quetiapine and aripiprazole have shown improvements in mood and substance use outcomes [5]. Use of psychosocial treatments can further enhance treatment, particularly with CBT. Two CBT approaches have been used specifically for patients with co-occurring SUDs and bipolar disorder, Integrated Group Therapy (IGT) and CBT plus medication monitoring.

(b) *Anxiety disorders*

Generalized anxiety disorder (GAD), panic disorder, and social anxiety disorder are the most common anxiety disorders that can co-occur with SUDs and they are the most studied. SSRIs are generally considered first-line medications due to their tolerability, safety, and effectiveness in the treatment of anxiety disorders; SNRIs

are considered alternate first-line. Other medications that can be used include mirtazapine (some promise in treatment of panic disorder and social anxiety disorder), buspirone (most helpful in treatment of uncomplicated generalized anxiety disorder), pregabalin (some evidence in treatment of GAD), gabapentin (some promise in treatment of social anxiety disorder), beta blockers (no controlled trials support efficacy in treatment of GAD), and clonidine (reduces acute opioid withdrawal symptoms including anxiety) [5].

There is very limited evidence for the use of atypical antipsychotics in the treatment of anxiety disorders, despite their widespread use; associated weight gain and the risk of metabolic syndrome are significant considerations. Benzodiazepines should generally be avoided in this population, particularly when there is active substance use, given the risk of misuse and short-term efficacy. In patients with a history of SUD, benzodiazepines should be used with caution, closely monitored, and longer-acting agents with lower abuse potential such as oxazepam and chlordiazepoxide may be considered. Finally, patients with panic disorder and comorbid stimulant use disorder (such as cocaine), may respond well to anticonvulsants, due to a hypothesized neuronal sensitization mechanism induced by repeated stimulant administration [5].

Psychosocial treatments studied for co-occurring SUDs and anxiety disorders include CBT, mindfulness, acceptance-based treatments, and 12-step groups. Of these CBT is among the most effective interventions, resulting in improvement of both anxiety disorders and SUDs [4, 5].

(c) *Psychotic disorders*

There is insufficient evidence to guide treatment of psychotic disorders in patients with comorbid substance use disorders. Some studies suggest that atypical or second-generation antipsychotics are preferable to typical or first-generation antipsychotics, due to treatment of negative symptoms as well as reduction of substance use and craving, but there have been other studies showing no difference between atypical and typical antipsychotics [4, 5]. Among the atypical antipsychotics, clozapine is one of the most studied medications for treatment of co-occurring schizophrenia and SUDs. Although the evidence is limited to case reports and correlational studies, clozapine decreased use of alcohol, nicotine, cannabis, cocaine and other drugs of abuse, in addition to its well-established efficacy in treating psychosis. There are, however, no randomized controlled clinical trials demonstrating its superiority over other antipsychotics [4]. Other antipsychotics studied include risperidone [14], olanzapine, quetiapine, and aripiprazole [4]. Interestingly, some patients with co-occurring schizophrenia and SUDs are more likely to experience EPS with antipsychotic medications, which may indicate closer clinical monitoring for side effects as a way to enhance medication compliance.

Psychosocial treatments specific for co-occurring schizophrenia and SUD have been identified. They include dual recovery therapy, modified cognitive behavioral therapy, modified motivational enhancement therapy, the Substance Abuse Management Module, and Behavioral Treatment for Substance Abuse in Severe and

Persistent Mental Illness (BTSAS). These treatments include components of motivational interviewing, relapse prevention, and social skills training; they also encourage participation in 12-step programs such as Alcoholics Anonymous. BTSAS, for example, delivers treatment in an outpatient small group setting, involving elements of motivational interviewing, contingency management, and structured goal setting, with the purpose not only of decreasing substance use but also providing social skills training, psychoeducation, and relapse prevention for both disorders [4].

(d) *Trauma-related disorders*

Dysregulation of the hypothalamic-pituitary axis and the noradrenergic systems has been identified as a common pathway for PTSD and SUDs. Although most of the available evidence for these CODs focuses on treatment for the symptoms of PTSD, there is some evidence that individuals can benefit from interventions that primarily target the SUDs. Patients with CODs respond to standard pharmacotherapies in treatment of PTSD comparably to patients with only PTSD. Sertraline and paroxetine are FDA-approved for treatment of PTSD. One important consideration is that patients with "type B" alcoholism (severe alcohol problems, high levels of comorbid psychopathology, early-onset alcoholism), SSRIs may produce worse outcomes compared to placebo [5].

Among psychotherapies, three different types of cognitive behavioral therapy (exposure-based therapy, cognitive-focused therapy, and anxiety/stress management therapy) have been studied. Seeking Safety is one of the most widely known and studied type of integrated CBT. It is a manualized treatment consisting of 25 sessions, initially developed as a group modality for adult women, but has since expanded to other populations and to individual therapy [5].

(e) *Attention-deficit and hyperactivity disorder*

Much has been written regarding the importance of effective treatment of ADHD as a way to prevent teenage and young adult use of substances. This stems from evidence that children with untreated ADHD are more likely to use substances recreationally. Similarly, untreated ADHD may negatively affect the course of SUD and interfere with treatment [5].

Given the abuse potential of medications used to treat ADHD, especially stimulants, parents and medical providers are often concerned that treatment of ADHD with stimulants may lead to substance abuse in adults. Although there is no increased risk of this occurring, the risks of a stimulant prescription must be considered, especially for patients with SUDs. One strategy is to prescribe long-acting preparations of stimulants that may have lower abuse potential and may be of particular utility for patients with co-occurring ADHD and SUDs. The lower abuse potential stems from a slower rate of onset of the drug's effects, less positive subjective drug effects, and increased difficulty using via a non-oral route [5].

In patients with co-occurring ADHD and SUDs, one proposed strategy has been to classify patients into groups of low, moderate, and severe risk for misuse or diversion [5]. In the high-risk group, non-stimulant medications can be the first choice in

treatment of ADHD; long-acting formulations of stimulants (methylphenidate skin patch or crush-resistant pill form, lisdexamphetamine) can be considered when non-stimulants are not effective.

Stimulants have also been considered for treatment of some SUDs, particularly cocaine and amphetamines, with mixed results. Dextroamphetamine has had the most consistent positive effects in treatment of cocaine use disorder, as well as in substitution treatment of amphetamine dependence [5]. Despite this evidence, use of stimulants in this population is a controversial topic, and should be done with close clinical monitoring to decrease the risk for diversion or misuse.

(f) *Personality disorders*

The presence of a personality disorder in patients with CODs can complicate and negatively affect the course of treatment of the SUD, and is associated with non-adherence and increased risk of relapse. It is not the specific personality disorders but their severity that is the best predictor of therapeutic outcomes [5].

In terms of treatment, the goal is to minimize the impact of the personality disorder. This is best accomplished in a structured and integrated system, employing both pharmacotherapy (when indicated) and psychosocial/psychotherapeutic interventions. Patients with personality disorders are at increased risk of polypharmacy in their treatment, so symptom-targeted psychotherapy should occur as an adjunct to psychosocial interventions. Treatment focuses on increasing the therapeutic alliance, performing risk assessments, and addressing the motivational and interpersonal problems that contribute to both co-occurring disorders. No specific medications have been studied for treatment of comorbid SUDs and personality disorders. Some psychotherapies have been developed, including a modified version of Dialectical Behavior Therapy (DBT), DBT-S, which includes the standard DBT components, focuses on abstinence and the therapeutic alliance, and seeks to improve motivation for change [5].

(g) *Eating disorders*

Eating disorders may be overlooked when assessing for co-occurring disorders with SUDs. Depending on the severity of the eating disorder, medical stabilization may be necessary prior to initiation of treatment for the SUD. Therefore, screening should occur in all patients undergoing treatment for an SUD [5]. No specific pharmacotherapy or psychotherapy interventions have been studied when both disorders are present.

Outcomes

Functional imaging studies in patients with SUDs reveal dopaminergic reductions in the basal prefrontal regulation of behavior. It is unclear if these are the result of chronic substance use or if underlying deficits in psychiatric conditions (ADHD, schizophrenia) make substances more salient and rewarding, increasing the

likelihood of abuse [5]. Given the likely common pathways contributing to COD, it makes sense to treat both as a way to improve outcomes for both disorders.

Treatment of SUDs and comorbid mood disorders, psychotic disorders, anxiety disorders, eating disorders, PTSD and other trauma-related disorders has been shown to improve outcomes for both disorders (i.e., reductions in psychiatric symptoms and in substance use), although in varying degrees. The inverse, lack of treatment, has definitely been shown to worsen outcomes. Untreated major depression among patients with SUDs, for example, has been associated with worse substance use outcomes, worse psychiatric symptoms, and increased risk of suicide [5]. In some patients, use of antidepressants not only appears to reduce symptoms of depression, but also of AUD. In psychotic disorders, although both typical and atypical antipsychotics can improve psychotic symptoms, only atypical antipsychotics have shown some benefit in reducing craving or substance use. Clozapine in particular appears to be the most effective antipsychotic medication in terms of substance abuse [15]. The combination of AUD and anorexia nervosa is a strong predictor of a fatal outcome, and recovery rates for both disorders are generally poor. On the other hand, patients with comorbid bulimia nervosa and SUD have similar treatment outcomes to patients without a history of SUD, although the presence of binge eating tends to confer worse outcomes.

Review Questions

1. Ms. Lopez is a 43-year-old female who has enrolled in an intensive outpatient program, and reports drinking about 1 bottle of wine per day for the past 15 years, occasionally "losing count" of how much she drinks on the weekends, having fights with her children about her alcohol use, and having multiple crying spells per week that often end in thoughts of "it would be easier if I just didn't wake up." Which of the following diagnoses is the most common psychiatric comorbidity among patients presenting for treatment of substance use disorders?
   A. Bipolar disorder
   B. Borderline personality disorder
   C. Generalized anxiety disorder
   D. Major depressive disorder
   E. Schizophrenia

   Answer: D.

   Explanation: Major depressive disorder is the most common psychiatric diagnosis among patients presenting for treatment of an SUD. Bipolar disorder is less common in this group, but its presence increases the likelihood of a SUD by at least four times. Among patients in institutional settings, the highest psychiatric comorbidity was found to be in the prison population, most notably related to diagnoses of antisocial personality disorder, bipolar disorder, and schizophrenia.

(See The ASAM principles of addiction medicine; Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study.)

2. Mr. Smith is a 35-year-old male recently released from jail after his second charge of driving under the influence of alcohol and cocaine. For many years he has struggled with periods of irritability and high energy, during which he doesn't need to sleep and makes very impulsive decisions, often followed by periods of severe depression. He drinks up to 1 pint of vodka per day during most days of the week and has recently been using cocaine more frequently. Which of the following is true about epidemiological studies examining the prevalence of substance use disorders and psychiatric disorders in the United States?
   A. The Epidemiologic Catchment Area (ECA) study examined prevalence data among adults in both community and institutionalized settings.
   B. The National Comorbidity Survey Replication (NCS-R) was a follow-up study to collect information about changes in psychiatric and substance use disorders.
   C. The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) has been conducted in six consecutive waves to evaluate substance use across the lifetime.
   D. The National Longitudinal Alcohol Epidemiologic Survey (NLAES) sampled the alcohol use of adults in institutionalized and household settings.
   E. The National Longitudinal Illicit Drug Epidemiologic Survey (NLIDES) sampled household participants 16 years of age and older, to account for teenage cannabis use.

   Answer: A.

   Explanation: The ECA is the only one of these epidemiological surveys to sample adults in both community and institutional settings. The NCS-R was a study done with more than 9000 new participants rather than re-interviews. The NESARC is a third-generation epidemiologic survey, with wave 1 conducted in 2001–2002 and wave 2 conducted 2004–2005, including more than 30, 000 of the original participants. The NLAES was a household survey and did not include adults in institutionalized settings. Option e is not an actual epidemiologic study.

   (See The ASAM principles of addiction medicine; The American Psychiatric Publishing textbook of substance abuse treatment; Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study; Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication.)

3. Thomas is a 52-year-old male recently admitted to the psychiatric unit following a suicide attempt. He had previously required medical stabilization including admission to the intensive care unit due to delirium tremens from alcohol and for cardiac monitoring related to his intentional drug overdose. Initial evaluation reveals symptoms of depression, continuous alcohol use since age 12, and a strong family history of alcohol use disorder (AUD). Which of the following is the next best step in his treatment?

A. Offer no medications or treatment for depression, and refer the patient to an inpatient substance use treatment facility, as his depression is unlikely to improve if he continues to drink alcohol.
B. Initiate any antidepressant, as his AUD will likely subside if he has been "self-medicating" his depression.
C. Initiate amitriptyline, which can be helpful in treating depression and insomnia, and is inexpensive.
D. Initiate an antidepressant in the SSRI category, as they have been shown to improve depression and alcohol use in early-onset, severe AUD.
E. Initiate a mixed-mechanism antidepressant, which meta-analyses suggest are more efficacious in treating depression in this population.

Answer: E.

Explanation: For patients with a primary mood disorder, abstinence alone is unlikely to resolve symptoms of depression. Option b is incorrect because antidepressants appear to improve AUD outcomes only if depression also improves. Amitriptyline would not be a first-line agent in this patient, and likely should be avoided, given the potential risk for toxicity. SSRIs should be used with caution or avoided in patients with depression and early-onset alcohol use disorder, stronger family history of AUD, and more severe dependence, as drinking could worsen. Meta-analyses suggest there is more consistent efficacy in the treatment of depression with mixed-mechanism antidepressants than for SSRIs.

(See The ASAM principles of addiction medicine; The American Psychiatric Publishing textbook of substance abuse treatment.)

4. Ms. Evans is a 29-year-old female who is presenting for evaluation and treatment of opioid use disorder. She was recently treated for infectious endocarditis stemming from intravenous heroin use. She describes struggling with recurrent nightmares of previous sexual trauma, flashbacks near daily of her assault, being easily startled, and avoidance of any sexual activity with her partner. Use of opioids has previously provided some respite from these symptoms, but she wishes to stop using illicit drugs. Which of the following psychotherapies was developed specifically for treatment of co-occurring posttraumatic stress disorder (PTSD) and substance use disorders?
A. Seeking Safety
B. Mindfulness-based stress reduction
C. Dual recovery therapy
D. Integrated group therapy
E. Acceptance and commitment therapy

Answer: A.

Explanation: Seeking Safety is one of the most widely known and studied type of integrated CBT, developed specifically for co-occurring PTSD and substance use disorders. Mindfulness-based stress reduction is a type of treatment focused on anxiety and stress management, but does not specifically address PTSD. Dual recovery therapy blends traditional addiction and psychiatric treat-

ment, based on the patient's stage of recovery, but does not specifically address symptoms of PTSD. Integrated group therapy is a type of CBT approach that has been used specifically for patients with co-occurring SUDs and bipolar disorder. Acceptance and commitment therapy involves mindfulness strategies but is also not specific for PTSD.

(See The ASAM principles of addiction medicine; The American Psychiatric Publishing textbook of substance abuse treatment.)

5. Mr. Fernandez is a 60-year-old male presenting to his primary care physician for treatment of low energy and motivation, increased crying spells, decreased appetite, increased isolation, and poor self-care. He was recently fired from his job because of unexcused absences. He has struggled with similar episodes since his twenties, but never sought treatment. For the past 40 years, he has been drinking an average of 6–18 beers daily after work, and admits to drinking until he "passes out" recently, as a way to help him fall asleep. Based on available epidemiological data, which of the following psychiatric disorders is most likely to have co-occurring SUD (excluding tobacco use disorder) among patients presenting for treatment?
   A. Mood disorders
   B. Anxiety disorders
   C. Trauma-related disorders (e.g., PTSD)
   D. Personality disorders
   E. Attention-deficit and hyperactivity disorder

   Answer: A.

   Explanation: Mood disorders (major depression, more specifically) is the most common co-occurring psychiatric disorder among patients presenting for treatment of SUDs. Although bipolar disorder is less common in this group, the presence of bipolar disorder increases the likelihood of an SUD by at least four times. In institutional settings, particularly the prison population, co-occurring severe psychiatric disorders and SUDs is most notably related to diagnoses of antisocial personality disorder, schizophrenia, and bipolar disorder.

   (See The ASAM principles of addiction medicine; Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) Study. JAMA: the journal of the American Medical Association.)

References

1. Najt P, Fusar-Poli P, Brambilla P. Co-occurring mental and substance abuse disorders: a review on the potential predictors and clinical outcomes. Psychiatry Res. 2011;186(2–3):159–64.
2. Drake RE, Mueser KT, Brunette MF, McHugo GJ. A review of treatments for people with severe mental illnesses and co-occurring substance use disorders. Psychiatr Rehabil J. 2004;27(4):360–74.
3. Brunette MF, Mueser KT. Psychosocial interventions for the long-term management of patients with severe mental illness and co-occurring substance use disorder. J Clin Psychiatry. 2006;67(Suppl 7):10–7.

4. Galanter M, Kleber HD, Brady K. The American Psychiatric Publishing textbook of substance abuse treatment. 5th ed. Washington, DC: American Psychiatric Publishing; 2015. xix, 960 pages p.
5. Ries R, Miller SC, Saitz R, Fiellin DA, American Society of Addiction Medicine. The ASAM principles of addiction medicine. 5th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins; 2014. xli, 1795 pages p.
6. Lai HM, Cleary M, Sitharthan T, Hunt GE. Prevalence of comorbid substance use, anxiety and mood disorders in epidemiological surveys, 1990-2014: a systematic review and meta-analysis. Drug Alcohol Depend. 2015;154:1–13.
7. Regier DA, Farmer ME, Rae DS, Locke BZ, Keith SJ, Judd LL, et al. Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) study. JAMA. 1990;264(19):2511–8.
8. Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005;62(6):617–27.
9. Buckley PF. Prevalence and consequences of the dual diagnosis of substance abuse and severe mental illness. J Clin Psychiatry. 2006;67(Suppl 7):5–9.
10. Burnam MA, Watkins KE. Substance abuse with mental disorders: specialized public systems and integrated care. Health Aff (Millwood). 2006;25(3):648–58.
11. Priester MA, Browne T, Iachini A, Clone S, DeHart D, Seay KD. Treatment access barriers and disparities among individuals with co-occurring mental health and substance use disorders: an integrative literature review. J Subst Abus Treat. 2016;61:47–59.
12. Hunt GE, Siegfried N, Morley K, Sitharthan T, Cleary M. Psychosocial interventions for people with both severe mental illness and substance misuse. Cochrane Database Syst Rev. 2013;10:CD001088.
13. Salloum IM, Cornelius JR, Daley DC, Kirisci L, Himmelhoch JM, Thase ME. Efficacy of valproate maintenance in patients with bipolar disorder and alcoholism: a double-blind placebo-controlled study. Arch Gen Psychiatry. 2005;62(1):37–45.
14. Temmingh HS, Williams T, Siegfried N, Stein DJ. Risperidone versus other antipsychotics for people with severe mental illness and co-occurring substance misuse. Cochrane Database Syst Rev. 2018;1:CD011057.
15. Drake RE, Mueser KT, Brunette MF. Management of persons with co-occurring severe mental illness and substance use disorder: program implications. World Psychiatry. 2007;6(3):131–6.