

# When war follows combat veterans home

While combat survivability is at an all-time high, vets return home to private struggles with depression, PTSD, traumatic brain injury, and substance abuse. Here's how to spot these patients in civilian medical practices and the steps you can take to help them.

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## PRACTICE RECOMMENDATIONS

› Ask, “Have you or a loved one ever served in the military?” as a way to uncover service-related concerns. **C**

› Conduct a thorough neurological evaluation with suspected mild traumatic brain injury, including vestibular, vision, postural, and neurocognitive assessments. **C**

› Use the Post-Traumatic Checklist–Military to assess individuals with possible post-traumatic stress disorder. **C**

### Strength of recommendation (SOR)

- A** Good-quality patient-oriented evidence
- B** Inconsistent or limited-quality patient-oriented evidence
- C** Consensus, usual practice, opinion, disease-oriented evidence, case series

**CASE ▶** A 37-year-old white woman presents for an employment physical. Your nurse reports that she also has a complaint of headaches, that she scored an 8 on the Alcohol Use Disorders Identification Test–Consumption (AUDIT-C), and that the result on her Patient Health Questionnaire (PHQ-2) suggests a depressive disorder. You ask the patient whether she has served in the military and discover that, in the last 4 years, she served 2 year-long tours in Afghanistan with her Army Reserve unit, returning home 6 months ago. Since her return, she has lost her job due to chronic tardiness (sleeping through her alarm, she says) and admits she has “started drinking again.” Her visit with you this day is only to undergo the physical exam required by her new employer. What are your next steps with this patient? What resources can you use to help her?

As long as human beings have engaged in combat, there have often been extraordinarily damaging psychiatric injuries among those who survive.<sup>1</sup> Combat survivability today is 84% to 90%, the highest in the history of armed conflict,<sup>2,3</sup> thanks to improvements in personal protective gear, vehicle armor, rapid casualty evacuation, and surgical resuscitation and stabilization that is “far forward” on the battlefield. These survivors are subsequently at high risk for a host of other medical conditions, which commonly include traumatic brain injury (TBI), post-traumatic stress disorder (PTSD), depression, suicide, and substance abuse.<sup>4-8</sup>

Family physicians—both civilian and uniformed—may be the first to encounter these individuals. Of the more than 2.4 million US service members who have been deployed to Afghanistan or Iraq in support of Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF), nearly 60% are no longer on active duty. Among this group, only half receive care

**TABLE 1**  
**Provider and patient resources**

Condition/resource	Web site	Comment
<b>Mild traumatic brain injury (TBI)</b>		
Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury	<a href="http://www.dcoe.health.mil">www.dcoe.health.mil</a>	Repository of information for patients and families
Defense and Veterans Brain Injury Center	<a href="http://www.dvbic.org">www.dvbic.org</a>	DoD-sponsored site for clinical care, research, and education
Brainline	<a href="http://www.brainline.org">www.brainline.org</a>	A service of WETA, the public TV and radio station in Washington, DC. It offers information and resources on preventing, treating, and living with TBI
<b>PTSD</b>		
National Center for PTSD	<a href="http://www.ptsd.va.gov">www.ptsd.va.gov</a>	US Department of Veterans Affairs–sponsored site for clinical care, research, and education
National Alliance on Mental Illness	<a href="http://www.nami.org">www.nami.org</a>	Grassroots organization providing education and advocating for access to treatment for mental health disorders
Mobile apps • PTSD Coach • Life Armor • PTSD Connect	<a href="http://www.ptsd.va.gov/public/pages/ptsdcoach.asp">www.ptsd.va.gov/public/pages/ptsdcoach.asp</a> <a href="http://t2health.org/apps/lifearmor">t2health.org/apps/lifearmor</a> <a href="http://www.ptsdconnect.com/">www.ptsdconnect.com/</a>	Information on PTSD and treatment, tracking symptoms, skills for handling stress-related symptoms, and direct links to support
<b>Suicide</b>		
Veterans Crisis Line	(800) 273-8255, or text 838255 <a href="http://www.veteranscrisisline.net">www.veteranscrisisline.net</a> <a href="http://www.veteranscrisisline.net/quiz">www.veteranscrisisline.net/quiz</a>	24/7 phone access to veteran counselors Anonymous online chat with counselor Online self-quiz to determine risk of suicide
National Veterans Foundation Lifeline for Vets	(888) 777-4443	24/7 phone access to veteran counselors
Prevention • Army • Navy • Air Force • Marine Corps	<a href="http://www.armyg1.army.mil/hr/suicide">www.armyg1.army.mil/hr/suicide</a> <a href="http://www.suicide.navy.mil">www.suicide.navy.mil</a> or <a href="http://www.navynavstress.com">www.navynavstress.com</a> <a href="http://www.af.mil/suicideprevention.asp">www.af.mil/suicideprevention.asp</a> <a href="http://www.usmc-mccs.org/healthpromotions/suicide_prev.cfm">www.usmc-mccs.org/healthpromotions/suicide_prev.cfm</a>	Assistance and general information for service members and their families
<b>Substance abuse</b>		
Department of Veterans Affairs Substance Use Disorder Program Locator	<a href="http://www2.va.gov/directory/guide/SUD_fls.asp?isFlash=1">www2.va.gov/directory/guide/SUD_fls.asp?isFlash=1</a>	Contact information for substance abuse disorder treatment programs for veterans and funded by the VA throughout the United States, American Samoa, Guam, Philippine Islands, Puerto Rico, and the US Virgin Islands

DoD, Department of Defense; PTSD, post-traumatic stress disorder; TBI, traumatic brain injury.

from the US Department of Veterans Affairs (VA).<sup>9</sup> Despite a concerted effort on the part of the Department of Defense (DoD) and the VA to develop and distribute effective, evidenced-based treatment protocols for veterans with combat-related conditions, major gaps remain

TABLE 2

## Criteria for distinguishing mild TBI from moderate-to-severe cases<sup>17</sup>

Criteria	Mild	Moderate	Severe
Structural imaging	Normal	Normal or abnormal	Normal or abnormal
Loss of consciousness	0-30 min	>30 min and <24 h	>24 h
Alteration of consciousness or mental state*	Momentary to 24 h	>24 h	>24 h
Post-traumatic amnesia	0-1 d	>1 and <7 d	>7 d
Glasgow Coma Scale score	13-15	9-12	<9

TBI, traumatic brain injury.

\*Alteration of mental status must be immediately related to head trauma.

in the care provided to combat veterans.<sup>10</sup> This article seeks to help fill that gap by providing the information you need to recognize and treat common combat-related illness, as well as resources to help improve the quality of life for veterans and their families (TABLE 1).

### Initial roadblocks to care

One of the biggest challenges in treating veterans with behavioral health issues is the fact that only 23% to 40% of those with mental illness seek care.<sup>11</sup> Among the reasons veterans have offered for avoiding behavioral health care are a fear of the stigma associated with mental illness, concern that treatment will negatively affect their career, lack of comfort with mental health professionals, and the perception that mental health treatment is a “last resort.”<sup>12</sup> Unfortunately, efforts by the DoD leadership to overcome these inherent biases have been largely unsuccessful<sup>13</sup> and much work is still required to see that service members get the care they need.

Due to low rates of self-reporting, effective screening is essential. With this in mind, the DoD has implemented the deployment health assessment program (DHAP), which requires service members to be screened for common conditions within 60 days of deployment, within 30 days of returning, and again at 90 to 180 days after their return.

While the long-term effects of this program are yet to be determined, results to date are promising. Since the DHAP was imple-

mented, there has been a significant decrease in occupationally impairing mental health problems and suicidal ideation requiring medical evacuation from a combat theater.<sup>14</sup>

■ **FPs should begin with a simple question.** Many of the 20+ million veterans living in the United States will not be wearing a uniform when they enter your office. Simply asking all of your patients, “Have you or a loved one ever served in the military?” may help you discover service-related questions or concerns.<sup>15,16</sup> Underscoring the importance of such screening is the recent decision by the American Academy of Family Physicians to partner with First Lady Michelle Obama and Dr. Jill Biden in a new campaign called “Joining Forces,” which aims to support veterans and their families.<sup>16</sup>

### Mild traumatic brain injury: Common—though overlooked

A TBI is any temporary or permanent neurologic dysfunction after a blow to the head.<sup>10,17</sup> TBI is classified based on severity and mechanism (direct blow to the head or exposure to blast waves). Mild TBI (mTBI) is commonly referred to as a concussion and usually is not associated with loss of consciousness or altered mental status. Brain imaging results are also normal with mTBI. Severe TBI, on the other hand, is associated with prolonged loss of consciousness, altered mental status, and abnormal brain imaging results (TABLE 2).<sup>17</sup>

■ **A unique obstacle to accurate evalu-**



Simply asking, “Have you or a loved one ever served in the military?” may help you uncover service-related concerns.

**> Veterans with non-cancer-related pain who are treated with opioid analgesics have an increased risk of adverse clinical outcomes compared with those not treated with opioids.**

**ation in the field.** It is important to emphasize that mTBI is a clinical diagnosis, and its detection requires honest patient communication. This can be problematic with motivated soldiers who are anxious to continue the mission and fear that any admission of symptoms might delay a return to their unit. As with a concussed athlete eager to return to the field of play, the clinical diagnosis of mTBI requires a high index of clinical suspicion and constant vigilance by the health care provider.

Despite being the most common combat-related injury, mTBI is often overlooked due to the absence of obvious physical injuries.<sup>4</sup> Recent data suggest that 28% to 60% of service members evacuated from combat have a TBI. Most of these injuries (77%) are mTBI.<sup>18-20</sup> Improved personal protective equipment (including Kevlar helmets and body armor) and the high number of blast-related injuries are likely responsible for the high incidence of mTBI among OEF/OIF veterans.<sup>8,21,22</sup> The prevalence of mTBI among service members not evacuated is estimated to be 20% to 30%.<sup>20</sup>

■ **Symptoms can persist.** Most patients with mTBI completely recover within 30 days of the injury. Unfortunately, 10% to 15% of mTBI patients develop chronic problems lasting months to years.<sup>4</sup> Residual symptoms most commonly include headache, irritability, depression, sleep disturbance, impaired reasoning, memory problems, and difficulty concentrating. These symptoms are not unique to mTBI and overlap with comorbid combat diagnoses like PTSD, depression, and sleep deprivation.<sup>10</sup> The following tools can help physicians determine whether mTBI is present.

■ **Checking for possible mTBI.** In the field, patients with possible mTBI can be screened rapidly using the Military Acute Concussion Evaluation (MACE, found at [www.dvbic.org](http://www.dvbic.org)), a modification of the validated and widely used Sideline Assessment of Concussion (SAC) tool. More challenging is evaluating potential mTBI patients who present weeks or months after a traumatic event, for which there are no simple confirmatory tests. In this event, conduct a thorough neurological evaluation that includes vestibular, vision, postural, and neurocogni-

tive assessments. For patients with persistent symptoms or possible anatomic brain abnormalities, magnetic resonance imaging (MRI) is the imaging modality of choice. Patients with complications or a questionable diagnosis are best managed in consultation with a neurologist.

■ **Initial treatment of mTBI** is symptom-based. When practical, try nonpharmacologic interventions first (TABLE 3).<sup>10</sup> In particular, have the patient avoid further high-risk exposures that could lead to second impact syndrome (an issue increasingly recognized in contact sports). Also critical are physical and cognitive rest and the restoration of sleep until the patient is completely asymptomatic.

If the patient exhibits irritability and depression, selective serotonin reuptake inhibitors (SSRIs) are first-line treatment. Avoid narcotics and sedative-hypnotic sleep medications if treating comorbidities such as pain and sleep deprivation. The VA/DoD guideline on managing concussion and mTBI provides additional detailed, evidence-based treatment recommendations.<sup>17</sup>

### **Reliving the horror again and again: PTSD**

PTSD is a persistent and, at times, debilitating clinical syndrome that develops after exposure to a psychologically traumatic event. It's the second most common illness among OEF/OIF combat veterans, with an estimated prevalence of 3% to 20%, a finding consistent with prior wars.<sup>6,23-25</sup> In the case of combat veterans, the inciting event usually involves an actual or perceived risk of death or serious injury. The individual's response to the event involves intense fear, helplessness, or horror. The traumatic event is persistently re-experienced through intrusive and disturbing recollections or dreams that cause intense psychological distress. This, in turn, leads to a state of persistent sympathetic arousal. As symptoms are often triggered by specific cues, individuals with PTSD actively seek to avoid thoughts, situations, or stimuli associated with the event.<sup>23,26</sup>

■ **Symptoms commonly associated with PTSD** include difficulty falling or staying asleep, recurrent nightmares, hypervigi-

lance, and an exaggerated startle response. Individuals with PTSD also have a poorer sense of well-being, a higher rate of work absenteeism, and significantly more somatic complaints than age-matched peers.<sup>27</sup> For symptoms to be attributable to PTSD, their onset must follow a recent inciting event and must also cause clinically significant distress or impairment in social, occupational, or other areas of daily living. Common comorbid illnesses include mTBI, depression, and substance abuse. As with mTBI, the presence of multiple comorbidities in patients with PTSD can complicate evaluation, diagnosis, and treatment.

**■ Diagnosis.** PTSD is subdivided into acute (symptoms lasting more than one month but less than 3 months after the traumatic event) and chronic (symptoms lasting longer than 3 months after the traumatic event).<sup>28</sup> The distinction of acute or chronic does not affect treatment, but it is useful information for the patient to have regarding prognosis and eventual outcome. Like mTBI, PTSD is a clinical diagnosis made only after a thorough, structured diagnostic interview. The use of a validated, self-administered checklist, such as the Post-Traumatic Checklist-Military (PCL-M), allows for an efficient review of a patient's symptoms and a reliable way to track treatment progress (<http://www.ptsd.va.gov/professional/pages/assessments/ptsd-checklist.asp>).

**■ Treatment options.** Effective evidence-based treatments for PTSD are cognitive behavioral therapy, eye movement desensitization and reprocessing (EMDR), and pharmacotherapy. SSRIs and serotonin-norepinephrine reuptake inhibitors (SNRIs) have the strongest evidence for pharmacologic benefit in the treatment of PTSD.<sup>28,29</sup> Other helpful medications are prazosin for nightmares and trazodone for sleep. Family physicians can use these medications as part of a patient-centered collaboration with the rest of the integrated care team, to offer the best chance for treatment success.<sup>10,28,30</sup>

### Depression: Vets are reluctant to self-report

Combat experience is a significant risk factor

for major depression. Estimates of the lifetime prevalence of depression in the general US population vary from 9% to 25% in women and 5% to 12% in men. By contrast, the prevalence of depression in OIF/OEF veterans ranges from 2% to 37%.<sup>24,31,32</sup>

**■ Screening can yield false negatives.** Many combat veterans are reluctant to self-report behavioral conditions, including depression. Screening, therefore, is important to identify potential depression and allow for intervention. Validated screening tools for depression include the PHQ-2 and PHQ-9, which are easy to use in the office setting. (See [http://www.cqaimh.org/pdf/tool\\_phq2.pdf](http://www.cqaimh.org/pdf/tool_phq2.pdf) [PHQ-2] and <http://www.integration.samhsa.gov/images/res/PHQ%20-%20Questions.pdf> [PHQ-9]). Importantly, some veterans will have a negative depression screen on return from deployment, and then test positive 6 to 12 months later.<sup>24</sup> Explanations for the early false-negative results include the excitement of being home and patients intentionally answering questions inaccurately to avoid excessive screening at their home base.<sup>11</sup>

**■ Treatment is most effective with a combination approach.** As with most cases of depression, combining psychotherapy and psychopharmacology appears to be most effective for treating depression related to combat experience.<sup>33,34</sup> While SSRIs and SNRIs are typical first-line pharmacologic agents, combat veterans often have comorbid mTBI, PTSD, or substance abuse issues that may influence the initial choice of therapy<sup>35</sup> (TABLE 3).<sup>10</sup>

### Suicide is on the rise in the military

Historically, the incidence of suicide has been 25% lower in military personnel than in civilian peers.<sup>36</sup> However, between 2005 and 2009, the incidence of suicide in the Marine Corps and Army almost doubled.<sup>37</sup> While the exact reasons remain unknown, it is likely due to prolonged and repeated deployments to a combat environment.<sup>12</sup> While the incidence of suicide has been particularly high in the Army (22 per 100,000 active-duty and reserve personnel per year), all services have been affected. In fact, since 2009, the number



The complicated relationship between substance abuse and behavioral health reinforces the need for screening, early diagnosis, and a multidisciplinary approach to treatment.

➤ Since 2009, the number of suicides among active duty service members exceeds those killed in action.

**TABLE 3**  
**Treatments applicable to post-traumatic disorders<sup>10</sup>**

<p><b>Sleep disorders</b></p> <ul style="list-style-type: none"> <li>• Promote good sleep hygiene</li> <li>• Trazodone and cognitive behavioral therapy can help alleviate insomnia</li> <li>• Prazosin can help alleviate the nightmares that commonly occur with PTSD</li> </ul> <p><i>Avoid long-term use of sedative-hypnotic agents.</i></p>
<p><b>Mood disorders</b></p> <p><b>SSRIs</b></p> <ul style="list-style-type: none"> <li>• Paroxetine and sertraline are FDA-approved for treatment of PTSD; fluoxetine is also effective for PTSD</li> </ul> <p><b>SNRIs</b></p> <ul style="list-style-type: none"> <li>• Venlafaxine is effective for PTSD</li> </ul> <p><i>Choose an agent based on patient preference, coexisting symptoms, and cost.</i></p>
<p><b>Persistent symptoms of mTBI</b></p> <p><b>Headache</b></p> <ul style="list-style-type: none"> <li>• Non-narcotic analgesics</li> <li>• Neurology, pain management, or behavioral therapy referrals</li> </ul> <p><b>Vision problems</b></p> <ul style="list-style-type: none"> <li>• Ophthalmology/optometry referrals</li> </ul> <p><b>Dizziness / vertigo</b></p> <ul style="list-style-type: none"> <li>• ENT, neurology, or physical therapy referrals</li> </ul>

ENT, ear, nose, and throat; FDA, US Food and Drug Administration; mTBI, mild traumatic brain injury; PTSD, post-traumatic stress disorder; SNRIs, serotonin-norepinephrine reuptake inhibitors; SSRIs, selective serotonin reuptake inhibitors.

of suicides among active duty service members exceeds those killed in action.<sup>37</sup>

■ **Consider all veterans to be at risk for suicide**, and screen accordingly. An effective screening tool is the Columbia-Suicide Severity Rating Scale (C-SSRS), which is able to predict those most at risk for an impending suicide attempt.<sup>34</sup> Service members identified as high risk for suicide require unhindered access to care. The VA has worked to improve access to care and provide evidence-based point-of-care treatment strategies.<sup>38</sup> Available resources can be found in **TABLE 1**.

Unfortunately, even with effective screening and treatment, not all suicides can be prevented. Studies have demonstrated that approximately 65% of service members who commit suicide had no known history of communicating their suicidal intent. Sadly, 25% of service members who committed suicide had seen a mental health provider within the previous 30 days.<sup>39</sup>

**Alcohol abuse is common; opioids present a unique risk**

Excessive use of alcohol and recreational and prescription drugs is common among OEF/OIF veterans, especially those with comorbid mental health disorders. Retrospective cross-sectional studies show that 11% to 20% of OEF/OIF veterans met DSM-IV-TR diagnostic criteria for substance use disorders.<sup>40-42</sup> At highest risk are single enlisted men under the age of 24 in the Army or Marine Corps who serve in a combat-specific capacity. Interestingly, the prevalence of substance use disorders among OEF/OIF veterans closely mirrors that reported in epidemiologic studies of Vietnam veterans (11%-14%).<sup>41</sup> This similarity, combined with the 39% lifetime prevalence of substance use disorders among Vietnam veterans, may foreshadow a similar lifetime prevalence of substance use disorders among OEF/OIF veterans.<sup>41</sup>

■ **Most-abused substances.** Alcohol is the most commonly abused substance among OEF/OIF veterans (10%-20%).<sup>40,41,43-45</sup> Other abused substances include opioids (prescribed or illicitly obtained), synthetic marijuana (“Spice” and “K2”), and “bath salts” (synthetic stimulants) (W.M. Sauve, MD, personal communication, August 27, 2012).

OEF/OIF veterans seem to be at particular risk for developing problems related to opioid use. A 2012 retrospective cohort study showed that veterans with non-cancer-related pain diagnoses treated with opioid analgesics had an increased risk for adverse clinical outcomes compared with those not treated with opioid analgesics (9.5% vs 4.1%; relative risk [RR]=2.33; 95% confidence interval [CI], 2.20-2.46). These outcomes included traumatic accidents, overdoses, self-inflicted injuries, and injuries related to



violence. This study also demonstrated that, compared with veterans without mental illness, veterans with mental illness (particularly PTSD) and non-cancer-related pain were significantly more likely to receive opioids to treat their pain and had a higher risk of adverse clinical outcomes, including overdose.<sup>46,47</sup>

Recreational use of synthetic marijuana and “bath salts” has increased in recent years. These substances are commonly labeled “not for human consumption,” which allows them to remain outside US Food and Drug Administration (FDA) regulation and be sold legally in the United States. Efforts to prohibit the sale or possession of these drugs, including the Federal Synthetic Bath Salt Ban in 2012, have fallen short, often due to creative product “re-engineering.”<sup>33</sup> Synthetic marijuana and stimulants are inexpensive, readily available, and perceived by users to be safe. Health care providers are often unaware that their patients are using these products. Adverse health outcomes associated with the use of these synthetic drugs include memory loss, depression, and psychosis.

### These alcohol and drug screens can help

One efficient screening tool to identify veterans at risk for alcohol abuse is the AUDIT-C, developed by the World Health Organization. This brief 3-question test identifies past-year hazardous drinking and alcohol abuse or dependence with >79% sensitivity and >56% specificity in male veterans, and >66% sensitivity and >87% specificity in female veterans. These numbers are similar to those provided by the full 10-question AUDIT.<sup>48,49</sup> The Drug Abuse Screen Test-10 (DAST-10) provides a similar screening instrument for other substances. Condensed from the original DAST-28 instrument, the DAST-10 identifies high-risk substance abuse with 74% to 94% sensitivity and 68% to 88% specificity.<sup>3</sup>

■ **Screen for comorbidities.** When you see veterans with a diagnosis of substance abuse, also evaluate for comorbid disease. Most veterans with substance use disorders (82%-93%) have at least one other mental health diagnosis (a 45% greater risk than that of civilians with substance abuse disorders),<sup>50</sup> most commonly PTSD, depression, anxiety,

and adjustment disorders.<sup>41,44,45</sup>

A number of hypotheses exist to explain the association between substance use disorders and other mental health diagnoses (“dual diagnoses”). The prevailing theory, in both veteran and civilian populations, is that substance abuse is an attempt to self-treat mental illness. Other evidence suggests that substance abuse promotes the development of mental illness, either by leading to a higher risk for traumatic experiences (increasing the chance of developing PTSD) or through a direct biochemical mechanism. Finally, concurrent substance use disorder and mental illness may be due to an undefined genetic or biological vulnerability.<sup>38,44</sup> This complicated relationship between substance abuse and behavioral health reinforces the need for screening, early diagnosis, and a comprehensive, multidisciplinary approach to treatment.

■ **Treatment options.** Office-based treatment options for narcotic and alcohol abuse and dependency are available to family physicians. Methadone has been used since the 1950s to treat opioid addiction and remains one of the mainstays of outpatient treatment.<sup>47,51</sup> Originally, methadone was restricted to detoxification and maintenance treatment in narcotic addiction treatment programs approved by the FDA. In 1976, this restriction was lifted, and all physicians registered with the Drug Enforcement Agency (DEA) were permitted to prescribe methadone for analgesia.

■ **In 2002, the FDA approved buprenorphine monotherapy and the combination product buprenorphine/naloxone for the treatment of opioid addiction.** The prescribing of buprenorphine products requires physicians to undergo extra training, declare to the DEA their intent to prescribe buprenorphine, and obtain a special DEA identification number.<sup>52,53</sup> Physicians interested in finding out more about buprenorphine treatment and prescribing requirements can go to the Substance Abuse and Mental Health Services Administration (SAMHSA) Web page at <http://samhsa.gov>.

■ **Naltrexone** is an opioid receptor agonist that is used primarily to treat alcohol dependency, and is thought to work by re-



For patients with dual diagnoses, it is not known whether sequential therapy (treating substance abuse first, then comorbid mental illness) or concurrent therapy produces better outcomes.

ducing the craving for alcohol. Multiple studies have proven the efficacy of naltrexone in an outpatient setting when used alone or in combination with psychotherapy.<sup>54,55</sup> If you are uncomfortable or unfamiliar with the use or prescribing of these medications, referral to a substance abuse clinic specializing in dual-diagnosis treatment (TABLE 1) may offer optimal outcomes for patients with substance abuse disorders and other mental illness.

**Cognitive behavioral therapy**—including coping skills training, relapse prevention, contingency management, and behavioral couples' therapy—and 12-step treatment programs are evidence-based options for the treatment of substance abuse disorders. Behavioral counseling interventions in the primary care setting (typically lasting 5-15 minutes) result in decreases in alcohol consumption, heavy drinking episodes, drinking above recommended amounts, and the number of days spent in the hospital, but have not been demonstrated to affect mortality, alcohol-related liver problems, outpatient

visits, legal problems, or quality of life.<sup>56</sup> Resources can be found at [www.niaaa.nih.gov](http://www.niaaa.nih.gov). For patients with dual diagnoses, it is not yet known whether sequential therapy (in which substance abuse is treated first, followed by treatment of the comorbid mental illness) or concurrent therapy results in better outcomes.<sup>57</sup>

**CASE ►** Your patient's history of recent combat service, acknowledgement of employment and behavioral difficulties, and initial screening results lead you to diagnose alcoholism and depression. Additionally, she denies any suicidal ideation, but admits to experimenting with synthetic marijuana. After some discussion, she agrees to see your clinic's social worker, and you start her on an SSRI with scheduled follow-up. **JFP**

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