Since the time of Homer, warriors have returned from battle with wounds both physical and psychological, and healers from priests to physicians have tried to relieve the pain of injured bodies and tormented minds.\(^1\) The "soldier’s heart" of the American Civil War and the shell shock of World War I both describe the human toll of combat that since Vietnam has been clinically recognized as posttraumatic stress disorder (PTSD).\(^2\) The veterans of Operation Iraqi Freedom (OIF) and of Operation Enduring Freedom (OEF) share with their brothers and sisters in arms the high cost of war. As of August 2009, there have been 4333 confirmed deaths of US service men and women and 31,156 wounded in Iraq. As of this writing, 796 US soldiers have died in the fighting in Afghanistan.\(^3\)

Yet, there are also unique aspects of the combat experience of these veterans that influence their psychiatric presentations in acute settings. First, far more of the troops (up to 45%) are reserve or National Guard rather than active duty compared with earlier wars.\(^4\) Their combat exposure, severity of PTSD, and impairments in interpersonal functioning are more similar to those experienced by career military.\(^5\) These individuals are most likely to appear in crises in community emergency departments (EDs); they may present with problems that may be different from veterans of previous wars of from soldiers in active military duty. Typical presenting symptoms are marital stress from unexpectedly long deployments of 15 months (rather than the standard 12), employment concerns, financial stresses, and overall difficulty in reintegrating into civilian life. The absence of a strong military identity and cohesion, geographical separation from comrades, greater stigma, and misunderstanding from communities without exposure to the military or combat trauma serve as formidable barriers to care for these citizen-soldiers.
Second, multiple deployments have become the expectation. Many soldiers serve 2, 3, or even 4 tours of duty—a phenomenon unparalleled in other conflicts. Data from the Mental Health Advisory Team V report show that 11% of soldiers on their first deployment experienced mental health problems; that figure rose to 27% for those on their third tour.6

Third, it is estimated that up to 15% of all soldiers deployed to Iraq are women7; they have assumed an unprecedented combat support role in the war, resulting in greater risk for trauma. (See “Female Veteran Who Had Been Sexually Assaulted” case vignette.) Sadly, these women are also all too frequently victims of sexual harassment and assault. Although estimates from this conflict are not yet available, a study of female outpatients from Veterans Affairs hospitals found 23% had experienced sexual assault and 44% sexual harassment.8

Fourth, the enormous progress of battlefield medicine has created an unprecedented situation in which warriors who would have died in all previous wars from their injuries now survive. They must struggle with multiple devastating wounds—most commonly traumatic brain injuries (TBIs)9 often with co-occurring PTSD.10 Emergency physicians and mental health consultants who work in the ED often encounter returning veterans with subtle forms of cognitive impairment and medical conditions that have gone undiagnosed or untreated.

The goal of this review is to assist ED clinicians and psychiatrists who are faced with the challenges of caring for increasing numbers of returning veterans with combat-related physical and mental trauma. An overview of the epidemiology of mental health conditions identified in OIF/OEF veterans will serve as background for subsequent sections in which evidence-based assessment of PTSD, suicidality, and substance abuse in returning soldiers are the focus.11,12 Management approaches—including crises stabilization, initiation of psychotherapeutic and psychopharmacological treatments when clinically indicated, and (most important) education and counseling of patient and family regarding their mental health issues, safety, and arrangement of proper referral—will then be presented. Case vignettes will also be presented to illustrate these concepts.

It is hoped that the information, clinical guidance, and referral resources offered here will raise the comfort and competence level of ED clinicians so that they may see visits from our returning soldiers as a rewarding opportunity to serve those who have served.

EPIDEMIOLOGICAL BACKGROUND

One of the most comprehensive and authoritative sources for information about the mental health problems of returning soldiers is a 2007 longitudinal assessment of active duty and reserve soldiers returning from Iraq.13 In response to earlier methodological concerns about underestimation of the extent of mental health problems in OIF soldiers, the Department of Defense (DOD) conducted a Post-Deployment Health Re-Assessment (PDHRA) screening of 88,235 soldiers. Screening was administered immediately after return from deployment and then 3 to 6 months later. When compared with the prior study that utilized the Post-Deployment Health Assessment (PDHA), the population-based study that used the PDHRA documented significantly higher rates of mental health issues.14 Clinicians who administered the screening found that 20.3% of active duty and 42.4% of reserve soldiers required treatment for mental health issues. These findings highlight the need for effective outreach to reservists.

The incidence of interpersonal conflict had quadrupled from the earlier survey. This finding, which is particularly relevant for civilian ED staff, underscores the need for treatment not just of the soldier, but of the military family as well. Alcohol(Drug information on alcohol) problems were frequently
identified; nevertheless, few soldiers were referred for treatment. The authors of a JAMA article that compared the results of the PDHRA to the earlier PDHA suggest that this may be related to concerns about stigma and confidentiality that could affect the military careers of reservists and National Guard troops.13 Indeed, the study found that most of the soldiers who received mental health treatment were self-referred—a result echoing the earlier report by Hoge and colleagues.14

Drilling down into this and other literature identifies important diagnostic information for ED clinicians who treat returning soldiers. National Guard and Army Reserve veterans had much higher rates of PTSD, interpersonal conflicts, depression, and overall mental health risk than active duty soldiers (35.5% to 27.1%, respectively), as well as increased rates of referral for mental and physical health concerns.13 Rates of PTSD identified in returning veterans range from 12% to 19%; the most frequently quoted average is 15% to 16%, and rates are higher in OIF than in OEF veterans.15-17

The high prevalence of PTSD in service personnel involved in the wars in Iraq and Afghanistan has been much publicized in the public and professional press, but the elevated rates of other serious mental health disorders—in particular the comorbidity of substance abuse and PTSD—has been underappreciated. Up to 35% of soldiers meet criteria for major depressive disorder, and figures for problem alcohol use range from 11% to 40%, depending on definitions employed, methods of screening, and cohort examined.12,15,16 Respondents with lower education and lower income were more likely to have problematic alcohol use. Several studies have shown that returnees who engage in hazardous drinking are less likely to seek and receive appropriate diagnosis and treatment.12,15

There is a general trend across the research on returning veterans for young cohorts to have more serious mental health problems, including substance abuse and suicidal behavior. Soldiers with mental health issues consistently endorse an overall lower quality of health and life,15,18 higher distress, and functional impairment.16 A PTSD diagnosis alone is associated with more sick calls, missed worked days, worse general health, and a greater number and severity of somatic symptoms.19,20 All of this suggests that many OIF/OEF veterans may present to community EDs with physical symptoms that have a substantial psychosomatic component.20,21 A disturbing finding of emerging research is that returnees, especially OIF veterans with PTSD, have high levels of anger, hostility, and aggression22 and manifest more violent behavior than Vietnam veterans.23

ASSESSMENT OF PTSD

As the above-mentioned demographics indicate, PTSD—often co-occurring with other physical and mental health disorders—will probably be the most common presentation among veterans in community EDs. Thus, it is important for ED mental health professionals, especially emergency psychiatrists, to develop familiarity with the signs and symptoms that characterize the diagnosis as well as with validated screening instruments that can improve the accuracy of a clinical diagnosis. PTSD, acute stress disorder (ASD) and adjustment disorder—all of which can be seen in returning veterans—are unique in the DSM-IV-TR because their etiology in trauma and stress is specified.

PTSD is classified as an anxiety disorder in which there must be exposure to a traumatic event. Criterion A requires that:

1. The individual experiences directly or indirectly, by witnessing or confronting, an event or events that involved the actual or perceived threat of death or serious injury or disruption of physical integrity to the self or another human being.
2. The individual responds to the traumatic exposure with a sense of intense fear, helplessness, or horror.

In addition, a specified number of symptoms from criteria B through D are required and are listed in Table 1. Grouping of the symptoms in 4 core clusters (re-experiencing, avoidance, numbing, and hyperarousal) helps to both understand and recognize the primary dimensions of the disorder.

To distinguish PTSD from ASD, criterion D requires that the symptoms must last longer than 1 month and must cause clinically significant distress or impairment in social, occupational, or other areas of functioning to meet criterion E. PTSD can be classified as either acute, if the symptoms last for less than 3 months, or chronic if they persist longer. There is also a delayed-onset qualifier when criteria are only met for the disorder 6 months after the traumatic event, which several studies suggest may be the pattern in OIF veterans with comorbid depression and battle injuries.24-26

There are several specific assessments that can help the ED clinician identify PTSD. Among the most widely used is the Clinician-Administered PTSD Scale (CAPS),27 a 30-question evaluation corresponding to DSM-IV criteria that assesses severity, frequency, and intensity of current and past PTSD symptoms, as well as multiple areas of psychosocial functioning.28 Many of the more structured interviews have strong psychometric reliability and validity but require more training and time than can be expected in an ED setting. Fortunately, there are also a number of self-report measures that can easily be used in the ED, such as the National Center for PTSD Checklist for veterans.

A scale that has proved useful in the primary care area—the Primary Care PTSD Screen (PTSD-PC)—is also a good fit for the ED.29 It consists of 4 yes/no questions, takes about 2 minutes to administer, and requires no specialized training.

Obviously, positive screens on these briefer self-report measures warrant a comprehensive evaluation. Given the protean nature of the effects of PTSD on all aspects of life and the epidemiology reviewed above, the ED assessment should briefly touch on interpersonal and work functioning, recreation and self-care, physical health, and overall psychological state—including pre-deployment functioning and traumatic events. Note that soldiers experience traumatic experiences other than in combat situations, such as training accidents, exposure to chemical and biological weapons, and family stressors, and that women as well as many men all too frequently are victims of sexual harassment and trauma.30

Substance abuse

Substance use disorders (especially alcohol abuse) are the most common comorbid psychiatric condition in returning veterans with PTSD. The Alcohol Use Disorders Identification Test (AUDIT–C) has shown utility as a screening for alcohol use disorders and at-risk drinking in veterans,31 which includes OIF soldiers. The short-form shows promise for use in the ED.32

The Seeking Safety program, a cognitive-behavioral treatment for comorbid substance abuse and PTSD, has shown impressive results in veterans—especially women.33,34
Depression and suicide

Anger, substance abuse, and depression are all risk factors for suicidal and (in some cases) homicidal behavior. Their presence warrants risk assessment of self-harm and other harm in any veteran seeking emergency care, even if the chief complaint is a mundane medical problem. (See “Young Veteran With Polytrauma” case vignette.) All returning veterans should be screened for depression and suicidality. The Patient Health Questionnaire (PHQ)-2 is a brief depression screen consisting of 2 questions pertaining to depressed or hopeless mood and anhedonia over the past month. The PHQ-9 also assesses suicidal ideation. Both forms have shown validity and utility in primary care settings with veterans and can be used in a medical or psychiatric ED setting.

The year 2007 saw an alarming increase in suicide among active duty Army soldiers. There were 117 completed suicides and 934 nonfatal attempts in 2007. In January 2009, the Army announced that the suicide rate had risen for the fourth year in 2008 and surpassed that of civilians for the first time since the Vietnam war.

Analysis of the demographics of soldiers who completed or attempted suicide reveals a number of risk factors that ED clinicians may keep in mind when assessing returning veterans. Soldiers who killed themselves were more likely to be young, white, and in the lower enlisted ranks; 95% of suicide completers were men and 27% of suicide attempters were women. Firearms (60% of completed suicides), cutting, and overdose were the primary methods of self-harm. A recent failed intimate relationship was the most common contributing factor in both completions and attempts. Forty-four percent of those who killed themselves and 55% of those who tried to do so had a history that included at least 1 psychiatric diagnosis—chiefly mood, anxiety, or substance use disorders. Sixty-one percent of veterans who killed themselves had served in either Iraq or Afghanistan. Veterans’ access to and skill with firearms mandates that questions about weapons be included in any suicide risk assessment.

A diagnosis of TBI—particularly frontal lobe injury—has been documented to increase risk of suicide mediated through both neurobiological and psychosocial mechanisms. Those with such an injury may require more rigorous assessment and intervention.

PHARMACOLOGICAL TREATMENT

Given the prevalence of medical and substance abuse comorbidities in returning veterans, appropriate medical history and physical examination and clinically indicated laboratory testing—including a toxicology screen for alcohol and drugs—should be routinely performed before psychiatric evaluation. These data provide information regarding possible contraindications, drug interactions, or allergies that will inform the choice of psychopharmacological agents.

Veterans who present with bona fide psychiatric emergencies, such as acute psychosis, complicated withdrawal from alcohol, or active suicidal or homicidal intent or plan, must be managed through extant protocols for medical stabilization and psychiatric hospitalization operative in respective EDs. Established pharmacological regimens, such as benzodiazepines for acute withdrawal and anxiety and haloperidol (Drug information on haloperidol) or atypical antipsychotics for psychosis and agitation, are also the standard of care for veterans with these classic ED presentations. (See “Veteran in an Acute Dissociative State” case vignette.)

The treatment of ASD, including emerging research on interventions to prevent or minimize the risk for PTSD, will not be covered here. Such protocols are most suitable for use in military or VA psychiatry settings and require specialized competency. The evidence base for PTSD pharmacotherapy is reviewed.
in several clinical practice guidelines. The most pertinent to the current population comes from the VA/DOD. A précis of these recommendations is offered in Table 2.

There is general consensus that SSRIs are the first line of treatment for PTSD. Paroxetine and sertraline are both FDA-approved for the condition. These agents also have established efficacy for the panic and depression that are often comorbid with PTSD. Their benign side-effect profile also makes these agents ideal for initiation in the ED.

Clinicians should be aware of the 2007 FDA “black box” warning on all antidepressant medications indicating an increased risk of suicidality in young adults between 18 and 24 years old—the age range of many returnees. Research supports the benefit of SSRIs for reducing symptoms in the re-experiencing, avoidance/numbing, and hyperarousal clusters in men and women, as well as contributing to global improvement in symptoms.

Hyperarousal is one of the most distressing and dangerous PTSD symptoms. The literature reflects the role of anxiety and agitation in heightened suicidality and the efficacy of benzodiazepines in providing short-term risk-reduction. However, the expert consensus argues against the long-term (longer than 2 weeks) use of benzodiazepines because of risks of addiction and lack of efficacy in reducing core PTSD symptoms.

Prazosin, an alpha1-antiadrenergic agent, decreases norepinephrine hyperactivity, which is posited to be a central mechanism in the nightmares and other sleep disturbances that are among the most troubling symptoms in combat veterans. A 2005 clinical case series reported on the use of prazosin in 28 OIF soldiers with combat-related nightmares. The medication, administered at bedtime, resulted in elimination of nightmares in 20 patients and a reduced frequency or intensity of sleep disturbance in 2 patients. A 2008 review of 2 case reports, 2 chart reviews, 3 open-labeled trials, and 2 placebo-controlled trials published supports the efficacy and safety of this drug for nightmares in both combat- and noncombat-related trauma. Precise dosing regimens have not yet been established but generally begin with 2 mg at bedtime, with titration to 10 to 15 mg. Orthostatic hypotension and dizziness are the most frequent adverse effects to consider when prescribing.

The clinical experience of many psychiatrists and PTSD patients is that trazadone is effective for insomnia and nightmares in combat veterans. However, there is a paucity of research to support this finding; the drug is generally well tolerated. However, priapism is a concerning adverse effect, particularly in the younger OIF/OEF cohort. Finally, atypical antipsychotics also have an emerging place in PTSD pharmacology, particularly for symptoms of paranoia, intense hypervigilance, arousal, extreme agitation, dissociation, psychotic-type flashbacks, and brief psychotic reactions. Clinicians should keep the metabolic effects of these agents in mind and assess risk factors for obesity, diabetes, and hyperlipidemia if therapy with these agents is begun in the ED.

PSYCHOTHERAPY

The primary interventions for PTSD and associated trauma spectrum disorders are psychotherapeutic. This is even true in the ED, where time and resources are limited, a sustained therapeutic relationship is absent, and safety considerations frame the exigencies of treatment. Emergency psychiatrists should have a working knowledge of the most strongly recommended psychotherapeutic interventions for...
PTSD (Table 3) so they can counsel patients about the range of available and effective treatment options. Several of these therapies are available “virtually” or online, which may be particularly useful for veterans who live in rural areas or small communities with limited mental health resources.

While ED clinicians obviously cannot conduct a course of psychotherapy within the acute setting, fundamentals from these evidence-based approaches can be fruitfully incorporated into the clinical interview. Thus assessment can be transformed into a true therapeutic intervention. These essential elements can be summed up in the acronym C-A-R-E: Counseling, Assurance, Referral, and Education.

Counseling focuses less on potentially stigmatizing ascribing of a diagnosis and more on a patient-centered view of presenting distress—whether insomnia, irritability at home, or problems concentrating at work—and shared decision-making regarding treatment approaches.

Assurance offers returnees normalization of the symptoms within a broad trauma-spectrum model. While it does not minimize the difficult struggle facing the returnee, it inspires realistic confidence in the veteran’s innate resilience and hope for recovery.

For the ED clinician, referral may be the most significant action taken on behalf of the returning soldier who may not be aware of the wealth of in-person and Internet resources accessible within and outside the DOD and the VA (Table 4).

Education involves oral and written information on the trauma resulting from the 2 wars and the availability of safe and effective treatments. ED staff may wish to obtain information on the subject from these national organizations as well as from local outreach programs and make it readily available to patients and families.

The greater involvement of Army Reserve and National Guard soldiers underscores the importance of couples and family therapy, which are crucial for successful reintegration. Indeed, the spouse often motivates the veteran to seek care and couples therapy, which for OIF/OEF veterans shows promise.

CONCLUSION

The Pentagon estimates that 1.6 million military personnel have served in either Iraq or Afghanistan since the global war on terror began in 2001. The Rand study completed in January 2008 estimates that 300,000 OIF/OEF soldiers suffer from some mental health problem. These daunting statistics argue that nearly every ED in the country will at some time be responsible for the care of the psychiatric needs of returning veterans. Emergency psychiatrists and other mental health professionals have a unique opportunity to provide early diagnosis, and acute treatment, education, and referral for these patients and, in so doing, ease the road from war to home.
Case Vignettes

Female Veteran Who Had Been Sexually Assaulted

Young Veteran With Polytrauma

Veteran in an Acute Dissociative State

On the cover: Freedoms Door © 2009 J. Darling-Ellis J. Darling Ellis has studied art at the University of Wisconsin and with several well-known artists, including Eleanor Moore and Frank Bruckmann. Although she has a background in watercolor painting, sculpting in clay, and oil painting, she says, oil painting is my passion. She exhibits locally but sells her work primarily through word of mouth. Her paintings have been accepted for juried exhibits at the prestigious Lyme Art Association and the New Haven Paint and Clay Club, among others. She can be reached at momajane@aol.com.

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