PTSD in Military Service Members and Veterans

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Vignette

George was drafted into the Army at age 19. He was deployed to Vietnam for 1 year, serving as a helicopter mechanic for his unit. He recalled encountering seriously wounded men on his first day in-country; the extent of their injuries was like nothing he had ever seen before. George reported that the most difficult experience of his deployment occurred midway through his tour; his unit was engaged in an intense firefight, including several helicopter missions to bring supplies to forces on the ground. One of the helicopters needed an urgent repair, but George was having difficulty due to a lack of appropriate supplies. As he was trying his best to make due with makeshift parts, he could hear reports coming through the radio from other soldiers who needed additional ammunition. He could tell that they were being gradually overpowered by the enemy forces. George was ultimately able to get the helicopter running, but more than half of the men on the ground were killed that day.

After George returned from his deployment and separated from the Army, he struggled to find his footing in civilian life. He felt resentful of the general public's attitude towards the Vietnam war, feeling that it did not honor the sacrifice and bravery of his fellow soldiers. At the same time, he felt unworthy of having survived the war as a relatively young man with no attachments. One of the men who was killed in the firefight was a Sergeant with a wife and child, and George asked himself,

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"Why did I live, when he was a better man than me? Why should his family lose him, when I don't have anyone who depends on me?" He imagined his fellow soldiers brutally killed like the bodies he had seen on his first day of deployment.

George did not speak to anyone about his Vietnam service; he did not like to remember those days, and he did not believe that civilians could understand the realities of the war. He worked in a machine fabrication shop, but drank heavily on nights and weekends. Although he eventually married and had children, his family experienced him as emotionally withdrawn but occasionally volatile. He was especially irritable in crowds, complaining that "There's too many idiots moving around and getting in everyone's way!" He also had regular nightmares, and eventually he and his wife began sleeping separately. George's wife assumed that he had "seen some hard things" while deployed but thought it was best not to bring up the topic for fear of destabilizing him or causing him to be angry.

Introduction

Posttraumatic stress disorder (PTSD) first became a diagnostic entity in the Third Edition of the Diagnostic and Statistical Manual of Mental Disorders (*DSM-III*; [1]). However, the psychological sequelae of warfare involvement have been documented for centuries, such as Shakespeare's vivid account of Hotspur, a fierce soldier whose wife complained of "faint slumbers" in which he "murmur(s) tales of iron wars", startle, agitation ("beads of sweat… like bubbles in a late-disturbed stream"), "cursed melancholy", and self-isolation [2]; some writers have argued that the earliest depictions of PTSD can be found in writings from Mesopotamia (present-day Iraq) as long ago as 1300 BC [3]. In the early twentieth century, terms such as *battle fatigue*, *war neurosis*, and *shell shock* connoted psychological and physical symptoms thought to arise from combat environment and prevented soldiers from returning to front lines [4]. While current military personnel undergo routine screens for PTSD across their deployment cycle [5], many veterans of earlier conflicts lived with PTSD symptoms for decades without having an appropriate label for their condition and effective treatment, and many still lack an understanding of the nature of PTSD and how it has shaped their life trajectories. Practitioners working with military personnel and veterans must consider the diverse demographic, cultural, and contextual factors that influence how patients make sense of their symptoms and dealing with the condition [6]. To address these issues, we first provide an overview of the epidemiology of PTSD by eras of military service and summarize risk factors which increase susceptibility to PTSD onset and symptom maintenance. Next, we review evidence on comorbidity and quality of life in PTSD. We then turn to issues regarding screening, assessment, and treatment. Throughout the chapter, we use case vignettes to illustrate unique aspects of military and veteran PTSD; these vignettes are composite examples drawn from multiple different clinical cases.

Epidemiology of PTSD by Era of Military Service

Prevalence estimates of PTSD in any given war cohort vary as a function of the study design, sample, and assessment methods.

World War II (1941–1946) and Korean Conflict (1950–1955)

Prevalence estimates among WWII and Korean Conflict Veterans are typically based on small samples and inherently biased by survival effects, as it was impossible to assess PTSD among veterans who died before the diagnosis was formalized in 1980. For example, in a small sample of nonpsychiatric inpatients at a Department of Veterans Affairs (VA) hospital, 19% of WWII and 30% of Korean Conflict veterans scored above the PTSD cutoff on a self-report measure [7]. In the Medical Follow-Up Agency's longitudinal study of WWII and Korean Conflict prisoners of war (POWs), prevalence estimates for *DSM-III-R* [8] PTSD assessed via diagnostic interview were 12–19% for WWII POWs and 38% for Korean Conflict POWs, when their typical ages were 65–75 and 55–65, respectively [9].

Several contextual factors are useful in considering the experiences of WWII and Korean era veterans. For most of the twentieth century, psychiatrists and military officials commonly attributed "shell shock" or psychiatric difficulties in soldiers to stable individual vulnerability factors, cowardice, or malingering to seek repatriation [10]. Such beliefs likely reduced veterans' willingness to acknowledge psychiatric symptoms, despite shifts in popular opinions which only took place in their later lives. Other aspects of their military experience provided buffer against combat stressors, such as the use of "primary groups" or "buddy systems" which promoted group cohesion during lengthy deployments. Especially for WWII veterans, homecoming to a supportive community, a booming postwar economy, and GI Bill benefits for education and mortgages facilitated their long-term adaptation [10].

Vietnam Era (1961–1975)

In a large, nationally representative veteran sample, the National Vietnam Veterans Readjustment Study (NVVRS; [11]) estimated that among theater veterans (those who were deployed to Vietnam), 15% men and 8% women had current DSM-III-R PTSD in 1986–1988; lifetime prevalence was 31% for men and 27% for women. In a 25-year follow-up study of this cohort, current prevalence of DSM-5 [12] PTSD was 4.5% for men and 6.1% for women. Between the two occasions, self-reported PTSD symptoms remained high and increased modestly among theater veterans, whereas symptoms were low and stable among era veterans (those who were in the military during the Vietnam war but did not serve there) [13].

Combat and non-combat aspects of the Vietnam war influenced its psychiatric sequelae. For theater veterans, guerilla style warfare had no front line; base camps were under constant risk for guerilla attacks, and it was difficult to tell friend from foe. Soldiers faced significant unpredictability and threat daily. Because tours were limited to a year, soldiers arrived at and departed the war theater individually; such rotation schedules did not provide the sense of solidarity and social structure afforded by the earlier "buddy system" [14]. Both theater and era veterans faced an unwelcoming public at home who often opposed the war; many veterans were insulted for their war involvement, felt misunderstood about their difficulties, and had low desire to reintegrate into civilian culture [4]. Demographically, as the U.S. military transitioned to an all-volunteer force during this war (75% personnel enlisted), participation from Blacks and socioeconomically disadvantaged men increased compared to previous eras [15]. Vietnam veterans were younger on average than WWII Veterans (mean age: 19 vs. 26; [7]). As we discuss in the *Risk Factors* section below, it is useful to consider how these factors underlie cohort differences in susceptibility for psychiatric conditions.

Persian Gulf War (1990–1991)

Unlike the Vietnam War, the Persian Gulf War was an extremely brief, successful, and well-received military operation. However, shortly upon homecoming, some personnel reported symptoms that have come to be known as Gulf War Syndrome—fatigue, headaches, joint pain, cognitive and sleep disturbances, skin and respiratory conditions [16]. The unexplained symptoms are thought to be related to deployment-related environmental exposures, such as biological and chemical warfare agents, prophylactic medications, depleted uranium munitions, and pollutants including petroleum and fumes from oil-well fires. As for PTSD, a large epidemiologic survey estimated a population prevalence of 10.1% for current DSM-III-R PTSD assessed by survey in 1995–1997. Gulf War veterans had 2.6 times greater odds than their military counterparts not deployed to the Gulf to screen positive for PTSD [17]. Another large-scale survey reported similar estimates: 8.0% for active duty veterans and 9.3% for deployed reservists [18]. Of note, Gulf War troops differed from earlier cohorts in their large proportion of National Guards and Reservists (17%), and women (7%).

Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF, 2001–2014)

OEF and OIF are U.S. military responses to the terrorist attacks on September 11, 2011 ("9/11"), and together they represent America's longest period of continuous combat operations. When assessed in 2011, OEF/OIF service members included more women compared to earlier cohorts (16% in OEF/OIF vs. 7% in Gulf War), and a significant proportion were married (53%) and had children (44%) [5, 19].

About one-third of the OEF/OIF and Persian Gulf cohorts were ethnic minorities, compared with approximately 10% in Vietnam War [19, 20]. As the size of the U.S. military declined steadily since the early 1990s, the number of military deployments per service member increased and there has been a greater reliance on Reservists and National Guards for frequent peacekeeping and humanitarian operations (28% in OEF/OIF; [20]).

While war fatalities have declined over time, more military personnel return home with severe war-related morbidities. Approximately 13–16% OEF/OIF Veterans were estimated to meet criteria for current DSM-IV-TR PTSD when assessed with anonymous surveys; estimates were similar when DSM-5 criteria were used [21, 22]. Suicide rates in the U.S. Army have increased sharply in recent years and are particularly high among younger OEF/OIF personnel [23]. Explosions account for nearly three-quarters of all OEF/OIF combat injuries [24], and nearly one-fifth of OEF/OIF personnel were estimated to have deployment-related traumatic brain injury (TBI; [25]).

Active Military Personnel

Fewer studies have evaluated the prevalence of psychological conditions among active military personnel relative to research on veterans. The Department of Defense (DoD) conducts periodic, anonymous Surveys of Health-Related Behaviors Among Active Duty Military Personnel (HRBS) to monitor lifestyle behaviors of service members and better understand how these behaviors relate to military readiness, health, and well-being. HRBS samples are representative of all active duty personnel. In the 2005 HRBS, prevalence of questionnaire-based DSM-IV PTSD was 6.7%. In the 2008 HRBS, PTSD prevalence increased to 12.4–13.3% among active duty personnel deployed to combat since 9/11, and to 8.2% among those not deployed post-9/11 [26]. These findings are consistent with the observation that PTSD rates tend to increase from assessments conducted shortly upon homecoming to longer-term follow-up conducted in subsequent years [27]. In a more recent study which also assessed PTSD anonymously via questionnaire among infantry soldiers, prevalence was 12% in the entire sample and 18% among those who had been deployed in Iraq or Afghanistan [22]. A slightly lower prevalence of 8.6% was reported in a study which collected personal identifiers [28]; work by Warner and colleagues has shown that when soldiers are allowed to report mental health issues (including PTSD) anonymously, rates are two- to fourfold higher compared to personally identifiable reports [29]. This work highlights the role of mental health stigma in screening and evaluating military personnel, particularly those in active duty.

Vignette

Andrea came from a military family; her father and older brother were both Marines, with her father having over 30 years of service prior to his retirement. Andrea eagerly enlisted in the Marines following her high school graduation. She felt

motivated to emulate her father and brother's examples, and to serve her country. She also knew that the War on Terror was ongoing, and she was excited about defending American values overseas.

Andrea was quite familiar with "Marine culture" given her family environment. She was the only sister among four siblings, and identified as a tomboy and an athlete. She knew that basic training would be physically and emotionally exhausting but was excited to prove herself. As expected, her first weeks of basic training were grueling. One day while returning from the shower, she was cornered by 2 male Marines. Although she attempted to fight them off, they sexually assaulted her. During the incident, the men also taunted Andrea, alternately insinuating that she desired the attack and threatening her with slander or violence if she tried to report them. For portions of the event, Andrea felt as though she had left her body and was watching the scene from above.

Andrea did not report the attack. She did not want to jeopardize her standing as a new recruit. She felt ashamed for having been caught off-guard and for not having appropriate "situational awareness." She continued with her training, although it was extremely difficult to continue seeing the perpetrators around the base. She withdrew into herself and felt that she had become hardened towards others. Although previously she was outgoing and sociable, Andrea stopped keeping in touch with her old friends and would no longer attend parties or other events. She was not interested in dating, saying "Men just want to take advantage of you, they want to use you and then once they've gotten what they want they throw you away." She felt uncomfortable with any physical contact, including hugs from her family or being touched by a doctor during the course of an exam.

Risk Factors

A number of studies have examined factors associated with greater risks for developing PTSD or maintaining symptoms over time. Across cohorts, pre-trauma risk factors include female gender, ethnic minority status, younger age, lower socioeconomic status (SES), education, intellectual ability, psychiatric history, genetics, and prior stressor exposure including early adversity [30–33]. While some studies reported that women were more vulnerable to developing PTSD than men (e.g., [28]), gender differences in the type and severity of trauma exposure (e.g., interpersonal vs. combat), demographics (e.g., educated nurses in Vietnam War), psychosocial processes (e.g., familial concerns among deployed mothers) can at least partially explain the differential risks [34, 35]. It is also critical to note the changing roles of military women: from nurses in the Vietnam War, to military police and pilots in the Persian Gulf War, and being eligible for combat duties since 2013.

Military risk factors for PTSD include enlisted (vs. officer) status, lengthier and more frequent deployments, inadequate unit support, exposure to combat, atrocities or abusive violence, life-threatening situations, malevolent environments such as lack of shelter from weather, and peritraumatic dissociation [33, 36]. Post-military risk factors include inadequate post-deployment social support, psychological

symptoms, and stressor exposure after homecoming [33, 37]. A growing literature has focused on identifying resilience factors, such as coping strategies, optimism, and locus of control, which protect against the development of PTSD [38].

Comorbidity

Military personnel and veterans with PTSD typically present with multiple comorbid neuropsychiatric and medical conditions. In the National Comorbidity Survey, PTSD was linked to 4–7 times greater odds of ever having a major depressive episode, 3–6 times greater odds of having Generalized Anxiety Disorder, and 2–4 times greater odds of having a substance use disorder [28]. PTSD is also related to greater risks of suicidal behaviors [39], TBI [25], and dementia [40]. In population-based veteran samples, comorbid physical health conditions include heart disease, obesity, migraine, chronic pain, arthritis and rheumatoid arthritis, osteoporosis, respiratory conditions, and sleep disorder [41, 42].

Quality of Life in PTSD

Quality of life refers to "physical, mental and social well-being" [43], and is increasingly recognized as an important aspect of health across many physical and mental health conditions. Quality of life can be thought of as consisting of material/social elements, functioning (role performance), and wellbeing or satisfaction [44, 45]. For example, individuals might be assessed in terms of their marital or employment status (material/social), interpersonal functioning (role performance), or overall life satisfaction (wellbeing). Studies have found that veterans and service members with PTSD are significantly impaired across all domains [46]. They generally have a higher likelihood of unemployment (e.g., [47]), impaired social and relationship functioning (e.g., [48–50]), and lower ratings of life satisfaction [51]. The bulk of research has focused on PTSD symptom severity predicting later quality of life outcomes, but a bidirectional relationship has been explored and supported in a smaller number of studies (e.g., [52]).

There is some evidence that OEF/OIF veterans show less impact of PTSD on various aspects of quality of life compared to what is seen among older veterans; for example, multiple studies among OEF/OIF veterans have failed to find a relationship between PTSD and unemployment status [50, 53]. However, it is possible that the "cohort advantage" observed in OEF/OIF veterans are due to the trends of increasing PTSD symptoms and declining social resources (e.g., social support) in the post-deployment years, combined with a longer lapse between homecoming and PTSD assessment among Gulf War veterans [54]. As discussed above (see "Epidemiology" section), recent veterans and current service members experience a unique military context that may serve to increase or decrease the impact of PTSD on their quality of life compared to earlier cohorts (e.g., greater awareness of PTSD and increased efforts to screen for symptoms, but also increased numbers of

deployments and less time between them). Regardless, reintegration into society post-deployment or post-service can be challenging and may exacerbate symptoms of PTSD in some individuals. Military service provides a strong sense of routine and purpose, as well as structures for social interaction, and it may therefore be particularly important to attend to these factors as a way to promote robust quality of life among returning veterans.

Schnurr and Lunney [55] examined the question of what level of symptom reduction is associated with a meaningful improvement in quality of life among a sample of 235 female veterans and Army soldiers who underwent weekly PTSD treatment. At posttreatment the women were categorized into four mutually exclusive groups representing increasing levels of improvement: No Response, Response, Loss of Diagnosis, and Remission. Results showed that those who achieved Loss of Diagnosis also reached a good endpoint on all measures of quality of life, and the authors thus recommend the absence of a PTSD diagnosis as an optimal benchmark for clinical care.

Screening and Assessment

Proper assessment of PTSD is critical to providing high-quality clinical care, and therefore it is strongly recommended that patients be assessed before, during, and after treatment. Fortunately there are many validated measures of varying lengths and methods of administration (i.e., self-report versus clinician-administered) available, a selection of which are reviewed below.

Each assessment format has both strengths and weaknesses; for example, self-report measures are beneficial in environments where time is limited, but they necessarily entail fixed (and brief) item content and require respondents to display reasonable comprehension, insight, and honesty. In contrast, clinician-administered interviews allow for the judgment of a trained expert to be incorporated into the ratings but can take an hour or longer to complete. The selection of an assessment battery should be guided by the goals of the assessment, knowledge of the target population, and an appreciation for the limitations of the clinical environment [56]. The use of multiple measures is encouraged when possible, in order to reduce bias (Table 12.1).

Life Events Checklist (LEC-5; [57])

The LEC is a self-report measure that screens for exposure to potentially traumatic events across the lifespan. Sixteen specific categories are assessed (e.g., natural disasters, combat, sexual assault), and a final item captures "any other very stressful event or experience." Respondents indicate the type of exposure they have had to each event category, such as direct exposure, witnessing, learning about the event, or does not apply. The LEC may be used to identify an index event for more detailed symptom inquiry or can simply provide an overview of a patient's lifetime trauma load.

Table 12.1 Selected measures for the assessment of trauma and PTSD symptomatology

Measure	Purpose	Format	Length	Cut-score
Life Events Checklist (LEC-5)	Screening for exposure to potentially traumatic events across the lifespan	Self-report	Assesses 17 categories of potentially traumatic events	*N/A*
Primary Care for PTSD Screen for *DSM-5* (PC-PTSD-5)	Screening for PTSD	Self-report	5 items	3 or 4
PTSD Checklist for *DSM-5* (PCL-5)	Assessment of symptom severity and likely diagnosis	Self-report	20 items	33
Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5)	Assessment of symptom severity and diagnosis	Clinician-rated	Items cover assessment of Criterion A, the 20 core PTSD symptoms, as well as distress/impairment and dissociative symptoms	*N/A*

All measures listed above are freely available through the National Center for PTSD website (www.ptsd.va.gov)

Primary Care PTSD Screen for DSM-5 (PC-PTSD-5; [58])

The PC-PTSD-5 is a 5-item screening tool for PTSD. The measure consists of dichotomous yes/no questions, including an initial prompt regarding exposure to potentially traumatic events and five subsequent questions regarding symptoms of nightmares, avoidance of thoughts/feelings, hypervigilance, numbness or detachment, and feelings of guilt or blame. Scores are calculated by summing the number of endorsed items. The measure has been validated among a sample of veterans in VA primary care, and either a three or a four was found to be an appropriate cut-score [58].

PTSD Checklist for DSM-5 (PCL-5; [59])

The PCL-5 is a questionnaire consisting of 20 items that correspond to the DSM-5 PTSD symptoms. The PCL is one of the most widely used and validated PTSD questionnaires available. Items are rated on a 0–4 scale (total score = 0–80), with higher scores indicating greater severity of symptoms. A cutoff score of 33 has been shown to indicate likely PTSD status among a clinical veteran sample [60], and 33/34 was the optimally efficient cutoff among an epidemiological sample of soldiers [22].

Clinician-Administered PTSD Scale for DSM-5 (CAPS-5; [61])

The CAPS-5 is a structured diagnostic interview for PTSD. Items are scored on a 0–4 scale that incorporates ratings of both intensity and frequency, and total scores for the measure range from 0 to 80. The CAPS-5 is considered the gold-standard measure for both symptom severity and diagnostic status and has been validated in a military sample [62].

Treatment Efficacy and Effectiveness

A meta-analysis examining randomized controlled trials demonstrated an effect size of $g = 1.26$ for cognitive behavioral treatments for PTSD (including Cognitive Processing Therapy and Prolonged Exposure) and $g = 1.01$ for Eye Movement Desensitization and Reprocessing, whereas antidepressant medications had an effect size of $g = 0.43$ [63]. Trauma-focused psychotherapies also maintain their impact for at least several months following the end of treatment, whereas medications have lower efficacy and must be maintained to show continued benefit [64]. Effectiveness studies of CPT and PE among veterans have shown that both treatments result in substantial symptom reductions (including secondary symptoms of depression and anxiety) when used in regular clinical care [65–67]. A study of veterans with comorbid PTSD and alcohol use disorder (current or past) showed that these dual-diagnosis patients also respond well to CPT [68]. Dropout from psychosocial treatments for PTSD is a concern, with reported rates from VA facilities ranging from approximately 35 to 50% (e.g., [69–71]). However, dropout from CBT for PTSD is comparable to and even lower than dropout from treatments for other mental disorders [72]. Encouragement from loved ones, particularly if the relationship in general is positive, appears to substantially decrease the risk of dropout from trauma-focused therapies [71].

Researchers continue to explore how to improve upon PTSD treatment. Recent studies have focused on how best to match patients to particular treatments (e.g., [73]), examining how providers modify treatments to fit their setting (e.g., [74]), and identifying ways to make treatment more efficient (e.g., [75, 76]).

Treatment Recommendations

The VA and the DoD jointly produce a practice guideline that can be used to inform the treatment of Veterans and Servicemembers with PTSD [77]. Some research suggests that military-related PTSD is associated with lesser treatment response relative to PTSD due to other factors (e.g., [63, 78]). However, many of the studies of treatments included in the VA/DoD guideline were conducted in individuals with military-related PTSD, so there is no reason to assume that effective treatments for PTSD in general should not be used to treat Veterans and Servicemembers. The

Table 12.2 Recommendations regarding specific treatments as outlined by the VA/DoD PTSD guideline

Intervention type	Recommended (first-line)	Suggested (weaker recommendation)	Do not recommend/ suggest against
Psychotherapy	Individual, manualized trauma-focused psychotherapy with a primary component of exposure and/or cognitive restructuring (e.g., Prolonged Exposure, Cognitive Processing Therapy, and Eye Movement Desensitization and Reprocessing)[a]	Stress Inoculation Therapy, Present-Centered Therapy, and Interpersonal Therapy	*None noted*
Medications	Sertraline, paroxetine, fluoxetine, and venlafaxine	Nefazodone, imipramine, and phenelzine	Divalproex, tiagabine, guanfacine, prazosin (for primary PTSD treatment), risperidone, benzodiazepines, D-cycloserine, hydrocortisone, and ketamine

[a]The guideline recommends individual trauma-focused psychotherapy as the initial treatment approach. If this treatment is not available or preferred, the guideline recommends one of the four recommended medications or the three suggested non-trauma-focused psychotherapies but does not prioritize one modality over the other

following text is based on the VA/DoD guideline, although it is consistent with recommendations in other PTSD guidelines [79, 80] (Table 12.2).

Regarding psychotherapy, the VA/DoD guideline recommends individual, manualized trauma focused psychotherapy that has a primary component of exposure and/or cognitive restructuring. The most well-studied of these trauma-focused treatments are Prolonged Exposure, Cognitive Processing Therapy, and Eye Movement Desensitization and Reprocessing. The guideline suggests—a weaker recommendation—several individual manualized non-trauma-focused psychotherapies as well: Stress Inoculation Therapy, Present-Centered Therapy, and Interpersonal Therapy. Recommended medications are sertraline, paroxetine, fluoxetine, and venlafaxine. Suggested medications are nefazodone, imipramine, and phenelzine. The guideline suggests group therapy over no treatment, but does not specify a type. The text notes that the evidence is strongest for group Cognitive Processing Therapy, but even that treatment appears to be more effective in individual format [81].

The evidence was judged insufficient for other types of psychotherapy, a number of medications, complementary and integrative treatments such as yoga and meditation, and somatic treatments such as repetitive transcranial magnetic stimulation and hyperbaric oxygen. Based on either demonstrated lack of efficacy and/or benefits relative to harms, the guideline recommends against divalproex, tiagabine, and

guanfacine, and suggests against prazosin (for the primary treatment of PTSD), risperidone, benzodiazepines, D-cycloserine, hydrocortisone, and ketamine. Evidence on prazosin for treating nightmares was judged insufficient, and a large randomized clinical trial published after the guideline was finalized found that prazosin did not improve nightmares or PTSD in general [82].

The guideline recommends individual trauma-focused psychotherapy as the initial treatment approach. If individual trauma-focused therapy is not available, or not preferred, the guideline recommends one of the four recommended medications or the three suggested non-trauma-focused psychotherapies, but does not prioritize one modality over the other.

When using any guideline it is important to remember that it is just that—a guide to inform care, and not a mandate to prescribe care. Treatment should begin with a conversation about choice. The VA/DoD guideline's first recommendation is to engage in shared decision-making, in which the patient and clinician collaborate to help a patient to choose a preferred treatment [83, 84]. Elwyn et al. [83] summarize the process in three steps. First is *team talk*, supporting patients when they learn about choices and clarifying their goals. Next is *option talk*, to help them understand treatment options, and finally *decision talk*, to clarify the patient's preferences and values make a choice that is right for them. The National Center for PTSD [85] has developed a decision aid to help patients and providers engage in shared decision-making.

Vignette

"Casey" returned from his second deployment to Iraq in 2010. He was 25 years old and eager to get out of the Army and begin a new life. He used funds from the GI Bill to enroll in a community college, with hopes of eventually transferring to a 4-year institution and then going on to receive an MBA. However, he quickly found that focusing in the classroom was impossible for him. He struggled to follow the lectures ("The teacher sounds like the grown-ups in Peanuts – wah wah") and he was uncomfortable in the crowded classroom. He found his classmates to be unserious and would get visibly irritated by their joking or complaints about everyday hassles. At the same time, he was having frequent intrusive thoughts about his deployment experiences. His best friend Tom had been killed on a mission while they were in Iraq, and Casey was constantly bombarded by memories of Tom and his death. After failing his midterm exams, Casey withdrew from the two courses he had signed up for that semester. He began to feel helpless, and his previously passive suicidal ideation began to become more frequent and active.

During a routine appointment with his primary care doctor, Casey reported that he was experiencing frequent nightmares and had had to withdraw from school due to his concentration difficulties and irritability. His doctor asked more questions about Casey's nightmares, and Casey told the doctor about Tom's death. The doctor administered the PC-PTSD-5 and explained to Casey that he had screened positive for PTSD. This conversation helped Casey to make sense of his confusing mix of symptoms (feeling edgy and tense, but also shut down and numb), and he felt somewhat relieved to have a better understanding of what was happening with him. He agreed to accept a referral for treatment.

Soon afterwards, Casey began weekly individual trauma-focused therapy. The clinician talked with Casey about his goals for treatment and provided an overview of the recommended approaches. Casey thought that Prolonged Exposure felt like the right fit for him. Each week he and the therapist would walk through the day of Tom's death, including describing vivid details of the mission and of Casey holding Tom's body while he died. As his therapy "homework," the clinician had Casey listen to tapes of the session and also to engage in in vivo exposures such as attending a lecture and sitting in the front of the room, or going to a parade on Veterans' Day.

Treatment was not easy. Casey struggled with full engagement during the first several imaginal exposure sessions; he admitted to his clinician that he was holding back because he was afraid of letting himself genuinely experience his reaction. However, the clinician provided encouragement and with time Casey allowed the emotions to come. Gradually the in-session practice and homework exercises resulted in a reduced emotional response to reminders of Tom's death. Casey was able to process his grief, fear and anger. Although his PCL-5 score at the beginning of treatment was a 40, after 15 sessions of PE he scored a 20, well below the clinical cutoff. He had also re-started his college courses and was excited to be doing well. He reported, "I think I'm honoring Tom more this way, by remembering him but also moving forward in my life."

Clinical Pearls

- When working with service members and veterans with probable or confirmed PTSD, providers should take into account how their military experience (e.g., era of service, warzone exposure), demographic (e.g., age, education), contextual (e.g., social support, life stressors, treatment history), and health (e.g., comorbid conditions) may intersect to influence their symptomatology, as well as their awareness of and openness to endorsing the symptoms.
- Although military and veteran patients share a similar status, different cohorts across time have had quite varied experiences of their military service, their post-service reintegration into civilian society, and the level of cultural/systemic awareness with regards to PTSD.
- Military cultural competence [86] is a starting point for working with these patients, but an appreciation for the diversity of their experiences and trends over time are critical.
- Many service members and veterans have experienced both military- and non-military-related traumas [87, 88]. Women veterans who have experienced MST are particularly likely to have also experienced sexual traumas as children, or as adults in civilian life. PTSD symptoms may be related to one or more of the patient's lifetime traumatic events and understanding the patient's overall trauma load (perhaps via administration of the LEC), as well as how earlier traumatic experiences may be impacting the presentation of PTSD related to a later "index" trauma will be useful clinically.
- It may be beneficial to incorporate patients' family members or other loved ones into treatment in some way, whether by conducting a joint session to provide psychoeducation and address concerns or by sending materials home for family members to read.

- Recent evidence suggests that veterans who reported that their family members encouraged them to face distressing situations were twice as likely to persist in trauma-focused psychosocial treatment rather than dropping out [71]. Incorporating family members may help to bolster their support for treatment, and therefore increase patients' compliance and retention.

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