Posttraumatic Stress Disorder

30

David Austern, Jeffrey A. Cigrang, Sheila A. Rauch, and Ashley L. Evans

A Brief Description of the Disorder or Problem

After someone directly experiences, witnesses, or learns about a traumatic event, he or she may begin experiencing a variety of troubling cognitive, emotional, and physical symptoms. They may have intrusions of the event (e.g., nightmares), start avoiding reminders of the event, have unpleasant thoughts and feelings in relation to the event (e.g., self-blame), and could also have unpleasant physical symptoms in relation to the event (e.g., insomnia). While these symptoms are common in the aftermath of traumas, they typically subside after several weeks without the need for intervention. Posttraumatic stress disorder (PTSD) is a syndrome that can develop when the natural recovery process is thwarted.

D. Austern, Psy.D. (✉)
Veterans Affairs Maryland Healthcare System (VAMHCS), Baltimore, MD, USA

The Steven A. Cohen Military Family Clinic at NYU Langone Medical Center, New York, NY, USA
e-mail: david.austern@nyumc.org

J.A. Cigrang, Ph.D., A.B.P.P. • A.L. Evans, B.S.
Wright State University, Dayton, OH, USA
e-mail: Jeffrey.cigrang@wright.edu

S.A. Rauch, Ph.D., A.B.P.P.
Emory University School of Medicine and Atlanta VA Medical Center, Atlanta, GA, USA
e-mail: Sheila.a.m.rauch@emory.edu

PTSD is a common mental health problem in primary care populations, with prevalence estimates of approximately 12% in community-based (Stein, McQuaid, Pedrelli, Lenox, & McCahill, 2000) and Department of Veteran Affairs clinics (Magruder et al., 2005). Unfortunately, it is also quite burdensome; researchers have estimated the annual productivity loss resulting from PTSD may approximate $3 billion (Kessler, 2000). Veterans along with active duty military members may be especially vulnerable to developing PTSD and can experience unemployment, homelessness, and family disruption as a consequence of the disorder (Tanelian & Jaycox, 2008). Fortunately, there are a variety of treatment options for PTSD that include psychotherapy and medication management.

Research has established that trauma-focused psychotherapies (e.g., prolonged exposure, cognitive processing therapy) are efficacious in treating PTSD (Department of Veterans Affairs & Department of Defense, 2010; Institute of Medicine, 2014). However, people seeking help for PTSD symptoms can experience difficulty accessing these treatments, may drop out of treatment prematurely, or even find that the psychotherapy was not sufficiently helpful (Sloan, Marx, & Keane, 2011). Echoing these findings, a survey of returning veterans found that only one in four of those who met criteria for PTSD received minimally adequate treatment (Schell & Marshall,

A. Maragakis, W.T. O'Donohue (eds.), *Principle-Based Stepped Care and Brief Psychotherapy for Integrated Care Settings*, https://doi.org/10.1007/978-3-319-70539-2_30

2008). This is unfortunate because these evidence-based psychotherapies (EBPs) have been shown to reduce healthcare costs (Tuerk et al., 2013). Thus, untreated PTSD is a burdensome public health issue, and there is a growing need to improve the service delivery of psychological treatments.

One promising method of service delivery is stepped care. Patients are initially placed in the "least restrictive" treatment that is expected to offer them some benefit, while they maintain the option to be "stepped up" to a more intensive treatment if they are not benefitting. The stepped care service delivery model aims to increase efficiency by reserving more costly treatments (i.e., individual treatments requiring extensive therapist training and direct contact) for the patients most in need (Bower & Gilbody, 2005). However, applying stepped care principles to the service delivery of PTSD treatments is a relatively new endeavor.

The Veterans Affairs/Department of Defense practice guidelines (2010) propose a model of treating PTSD beginning with pharmacotherapy (e.g., prescribing antidepressants) and stepping patients up to psychotherapy and/or additional medication. This particular model presumes that patients are willing to engage in both forms of treatment, which may not be true. Military patients, for example, may have heightened concern toward medication's possible side effects, and this could create a significant barrier toward seeking treatment (Tanelian & Jaycox, 2008). In addition, many patients may not respond to medication or may experience side effects that prevent them reaching a therapeutic dose. Furthermore, there are inconclusive findings regarding the effectiveness of antidepressant medications for PTSD (Institute of Medicine, 2008). Recent meta-analyses support that trauma-focused psychotherapy should be a first-line treatment based on frequency and magnitude of response (Lee et al., 2016).

Within the Veterans Health Administration, PTSD treatment is commonly delivered inside specialty PTSD clinics (i.e., PTSD Clinical Teams) where providers often have specialized training and clinical expertise in treating PTSD. However, a study on service utilization found that returning veterans recently diagnosed with PTSD rarely completed treatment in the specialty clinics; results indicated that while 66% attended at least three PTSD clinic visits in the year following the positive PTSD screen, only 33% attended at least nine PTSD clinic visits in that same time frame. (Lu, Duckart, O'Malley, & Dobscha, 2011). The study's methodology makes it difficult to draw conclusions as to why more participants did not complete treatment in the study's time frame; although dropout is one theory, another possibility is that some participants benefitted and responded to treatment early. In fact, these authors questioned whether all veterans with PTSD require the same amount of treatment; perhaps more costly, intensive interventions could be reserved for those with more severe PTSD symptoms.

Perceived stigma about mental healthcare constitutes an additional barrier toward seeking treatment (Brown & Bruce, 2016; Hoge et al., 2004). Thus there may be an advantage to offering mental health services in primary care settings to decrease stigma associated with seeking treatment in the specialty mental health clinic (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009). For example, the VHA provides a blended model of both colocated collaborative care (i.e., a mental health provider is embedded in a primary care clinic) and care management (i.e., a mental health provider is referred to patients from the primary care provider for telephone evaluation and triage of mental health problems) in order to most effectively meet veterans' mental health needs (Zeiss & Karlin, 2008). A recent study examined the effectiveness of a centrally assisted collaborative telecare (CACT) intervention among military service members; authors found that patients who received the intervention experienced significantly greater reductions in PTSD and depression symptoms over 12 months of follow-up compared to patients who received usual care (Engel et al., 2016). The purpose of this chapter is to summarize information on stepped care and brief behavioral treatments for PTSD in primary care settings in the service of optimizing assessment of and care for this challenging disorder.

Effective Ways to Screen for PTSD in the Primary Care Setting

Without effective screening tools in place, PTSD symptoms can be overlooked by primary care providers (Magruder et al., 2005). Although a variety of PTSD screeners specific to the primary care environment have been tested, the Primary Care Posttraumatic Stress Disorder Screen (PC-PTSD) and the PTSD Symptom Checklist (PCL) have received the most scientific evaluation specifically for primary care use.

The PC-PTSD was a four-item yes-no screener that assessed the four major symptom clusters of PTSD (reexperiencing, numbing, avoidance, and hyperarousal) the patient had experienced over the past month. Equal weight was given to all four items. Department of Veterans Affairs and Department of Defense guidelines for PTSD screening recommended a cutoff of three positive endorsements of symptoms when using the PC-PTSD (Department of Veterans Affairs & Department of Defense, 2010), while a cutoff of two positive symptoms had been recommended for the civilian population (Van Dam, Ehring, Vedel, & Emmelkamp, 2010). Due to the recent changes in PTSD diagnostic criteria implemented in the DSM-5, the PC-PTSD was updated to reflect these changes (PC-PTSD-5). The PC-PTSD-5 added a fifth item, which assesses for trauma-related blame and guilt. According to the DoD/VA, the PC-PTSD-5 is still undergoing validation (Primary Care PTSD Screen for DSM-5 (PC-PTSD-5)", n.d.). However, a cutoff score of 3 is recommended as consideration for a positive screen (Prins et al., 2016).

The PCL was originally a 17-item self-report measure based on DSM-IV criteria that asks patients to rate the severity of their trauma symptomatology on a 5-point severity scale (i.e., "not at all" to "extremely"). There were different versions of the PCL that were worded to be most relevant to certain populations. The PCL-M was designed for use with military populations and was recommended by VA/DoD Clinical Practice Guidelines when screening for PTSD in primary care settings (Peterson, Luethcke, Borah, Borah, & Young-McCaughan, 2011). In contrast, the language used on the PCL-C was tailored to screening for PTSD in civilian populations (Stein et al., 2000). The PCL-5 is the newest edition of the PCL, updated according to DSM-5 diagnostic criteria, and now contains 20 items. Similar to the PC-PTSD-5, research on the PCL-5 is continuing to grow; however, recommended cutoff scores currently fall within the 31–33 range for the most efficient in predicting a DSM-5 PTSD diagnosis (Bovin et al., 2015).

With both measures providing similar screening performance, the choice of which to use is largely up to the needs and preferences of the individual clinic. The PCL-5 is considered easy to administer and score but clearly requires more time to complete than the PC-PTSD-5. However, since the screener is only five items, there is the potential to miss out on valuable information that can be obtained by the lengthier PCL-5. If civilian primary care providers are unaccustomed to screening for PTSD, it may be helpful to begin by asking broadly about a patient's history of trauma exposure. One recent study found that rates of exposure to any trauma ranged from 66.38 to 83.66% of participants depending on their race and ethnicity; of these participants, 9.1% went on to develop PTSD (Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). We recommend using the PC-PTSD-5 as a universal screener and then customizing the level of subsequent assessment based on the patient's clinical presentation and the available clinic resources.

How to Further Assess If a Screen Returns Positive

If the PC-PTSD-5 returns positive, further assessment of PTSD symptoms is recommended. However, the setting where one works will likely dictate the extent of additional assessment that is performed. This can range from administering the PCL-5 and querying about the patient's responses in an unstructured interview to administering structured PTSD assessments as part of a comprehensive battery of psychological measures. Given the fast-paced nature of the primary care environment, comprehensive psychological

assessments are more likely to be performed in specialty mental healthcare settings (e.g., PTSD Clinical Teams). Even within those settings, it is often the case that varying levels of assessments are performed based on the referral question and the patient's presenting problems. The most comprehensive assessment batteries are reserved for patients who present with the most complexity. Therefore, stepped care principles applied to the assessment of PTSD are helpful in maximizing clinical resources.

For some patients it may be sufficient to administer the Life Events Checklist for DSM-5 (LEC-5), the PCL-5, and query their responses. The LEC-5 is an instrument used to assess traumatic exposure and help establish that a patient meets Criterion A for PTSD. Although the PC-PTSD-5 provides patients with examples of six potential traumatic events (i.e., serious accident or fire, physical or sexual assault or abuse, earthquake or flood, war, seeing someone be killed or seriously injured, having a loved one die through homicide or suicide), the LEC-5 lists 16 events plus provides patients with the option to add their own. Furthermore, the PC-PTSD-5 does not distinguish among the variety of ways a patient may "experience" a traumatic stressor, whereas the LEC-5 does. For example, it is important for providers to know whether a patient has directly experienced the trauma, whether they witnessed it happening to someone else, or whether they learned about it happening to a close friend or family member.

After a provider determines the patient meets Criterion A, they can help the patient establish which event is the "index trauma," usually the most distressing event and often the focus of treatment. Helpful questions for providers to ask may include "Which event is currently the most distressing to you?" "Which event are you having the most intrusions about?" "Which event would you *least* like to discuss?" and/or "Which event occurred first?"

Once the index trauma is established, patients can fill out the PCL-5 in relation to the index trauma. Patients should be encouraged to keep this particular event in mind as they respond to the items, given the potential for multiple events to lead to an overly general report of symptoms. Querying their responses to the PCL-5 will help determine whether they are providing an accurate report of symptoms or whether they may be interpreting item content idiosyncratically (e.g., patients often have difficulty discriminating between experiencing intrusive thoughts and their own rumination).

When querying a patient's PCL-5 responses is insufficient for a provider's purposes, it may be necessary to use the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5), which is considered the "gold standard" in PTSD assessment. However, the CAPS-5 is unlikely to be administered in a primary care setting, and thus a referral to specialty mental health may be indicated in those instances.

Evidence-Based Stepped Care, Brief Psychotherapeutic Approaches, and Medications

There are no evidence-based guidelines for how behavioral health providers working in an integrated primary care clinic should treat PTSD (Possemato, 2011). Current Department of Veterans Affairs and Department of Defense guidelines for PTSD in primary care limit talk therapy options to supportive counseling (Department of Veterans Affairs & Department of Defense, 2010). However, the behavioral health provider interested in PTSD and primary care treatment is not without recourse. First, the remarkable growth in integrated care practice has resulted in publication of high-quality books authored by experienced clinicians (e.g., Hunter, Goodie, Dobmeyer, & Dorrance, 2009; Robinson & Reiter, 2007) that offer step-by-step guidance for using psychotherapy techniques adapted for the fast-paced environment of primary care. Though not specifically developed for PTSD, skills such as relaxation training, problem-solving, cognitive disputation, stimulus control, and sleep hygiene can provide some help to the patient in managing PTSD symptoms, while a referral for treatment to a specialty mental health provider is arranged. Second, several brief protocols for

treating PTSD have been developed specifically for use in an integrated primary care environment (Cigrang et al., 2011, 2015; Corso et al., 2009; Harmon, Goldstein, Shiner, & Watts, 2014), though the current maturity of the science is limited to clinical case series and smaller pilot studies. Commonalities across these protocols are the short appointment durations (20–30 min) and limited number of appointments (2–4).

A primary distinction between the primary care protocols is whether treatment content includes a focus on the traumatic experience. Behavioral activation (BA) has been adapted for treatment of PTSD and used in an integrated primary care setting (Harmon et al., 2014). Originally developed for treatment of depression, BA helps patients identify and engage in activities that are potentially rewarding and consistent with their life goals. As applied to PTSD, the use of BA is viewed as a pragmatic way to target the avoidance symptoms of PTSD without specifically reviewing traumatic memories (Mulick, Landes, & Kanter, 2011). While working toward increased engagement with their environment, patients with PTSD may also encounter situations that are being avoided because of their association with traumatic memories.

Clinical case series with BA have shown good outcomes for BA with comorbid PTSD and depression (Jakupcak, Wagner, Paulson, Varra, & McFall, 2010; Mulick & Naugle, 2010; Nixon & Nearmy, 2011) and PTSD alone (Jakupcak et al., 2006) using protocols that are not consistent with integrated care (i.e., require 45–90-min weekly sessions over a 12–16-week period). When a brief version of BA was examined with 82 veterans in primary care using three, 20-min sessions, no changes were demonstrated from pre- to posttreatment in symptoms (Harmon et al., 2014). However, a majority (62%) of participants went on to specialty mental health treatment, suggesting that the intervention may have had a positive effect on referral follow-through compared to standard referral to specialty mental health (26%; Bohnert, Sripada, Mach, & McCarthy, 2015).

Primary care protocols for PTSD that have focused specifically on aspects of the traumatic experience have used written exposure as a key element. Corso and colleagues (Corso et al., 2009) examined two types of writing tasks in an integrated primary care clinic, but small sample size prevents any conclusions.

Over the past several years, there has been an ongoing effort by a Department of Defense and Department of Veteran Affairs' team to further develop and evaluate a brief exposure-based PTSD treatment for use by behavioral health providers working in integrated primary care (Cigrang et al., 2011, 2015). Prolonged Exposure for Primary Care (PE-PC) built on the writing exercises from Corso et al. (2009) and the PE protocol create a program that includes imaginal exposure through writing, processing through writing exercises, and in vivo exposure in detailed patient and provider manuals.

At the first 30-min PE-PC appointment, patients are provided a "Confronting Uncomfortable Memories" activity workbook to be completed at home and brought back for use in subsequent appointments. The workbook asks the patient to write a first-person, detailed narrative of the traumatic event associated with the greatest level of current distress and preoccupation, including recollection of personal thoughts, feelings, and physical reactions, and to answer emotional processing questions (e.g., "How has this event changed what you think about yourself?" and "How has this event changed how you think about others?"). Patients are instructed to write and then read the trauma narrative and their answers to the emotional processing questions for at least 30 min three times per week. During the second, third, and fourth appointments, patients are asked to read the narrative and their answers to the emotional processing questions out loud. The remainder of each 30-min appointment is devoted to trauma-associated emotional processing using a focused discussion of problematic beliefs and the emotions they evoke. At the end of the fourth appointment, the patient and provider review treatment progress and collaboratively decided whether to conclude treatment or to arrange a referral to specialty mental health services.

An open trial of PE-PC with active duty military service members has shown significant improvements in PTSD and depression symp-

toms based on both self-report and clinician interview measures. Treatment gains were maintained at 6- and 12-month follow-up assessments. The percentage of participants whose symptoms met diagnostic criteria for PTSD was reduced by nearly half (Cigrang et al., 2015). Thus, PE-PC holds great promise for behavioral health providers interested in a brief, manualized protocol for treating PTSD in integrated primary care. A randomized clinical trial was recently completed evaluating PE-PC compared to a minimal contact wait list condition, and the results are forthcoming. Readers interested in learning about the process for achieving competence in the use of PE-PC are encouraged to contact the second and third author.

In addition to brief psychotherapy, both sertraline and paroxetine have an FDA indication as effective for the treatment of PTSD (Department of Veterans Affairs & Department of Defense, 2010). Providers must consider patient preferences, current medications, and side effects when discussing medication as an option for PTSD treatment. For those who do not fully respond to medication, psychotherapeutic approaches may still be indicated to augment medication or function as stand-alone interventions. Readers who are considering medications are referred to the VA/DoD clinical guideline for PTSD that provides a more complete review of options for PTSD treatment and symptom management.

What Does Not Work

Use of evidence-based care by practitioners when treating PTSD is of the utmost importance. Unfortunately, there is an assortment of widely disseminated practices that lack sufficient research support to justify their use (e.g., cranial electrotherapy stimulation or CES devices) or may even be contraindicated after being exposed to scientific scrutiny. For example, many patients with PTSD are prescribed benzodiazepines (e.g., valium) despite evidence cautioning against their use. A recent meta-analysis (Guina, Rossetter, DeRhodes, Nahhas, & Welton, 2015) suggests that these drugs may be contraindicated for patients with PTSD. Particularly troubling for behavioral health providers is the finding that benzodiazepines may interfere with exposure-based psychological treatments like PE (Van Minnen, Arntz, & Keijsers, 2002). Thus, behavioral health providers should be mindful of a patient's medication regimen prior to initiating evidence-based behavioral treatment for PTSD in a primary care setting or before referring a patient to specialty mental health.

Another intervention that has seen widespread use is psychological debriefing – an umbrella term for a variety of technologies (e.g., Critical Incident Stress Debriefing) promoting brief emotional and psychological support after a trauma (e.g., meeting with people exposed to 9/11) to prevent the development of PTSD. Although well-intentioned, psychological debriefing has not yielded sufficient research support to justify its use. In contrast, a meta-analysis suggested that Critical Incident Stress Debriefing can actually have a detrimental effect on natural trauma recovery (van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp, 2002). Behavioral health providers working in collaborative care settings should be mindful of these findings given that many hospitals unwittingly continue to employ psychological debriefing technologies (e.g., Critical Incident Stress Management Teams).

Providers benefit from having strong rationales for the treatments they recommend, especially when working with patients with PTSD who may have difficulty initially trusting providers. The stronger the scientific evidence that exists for the interventions we provide, the easier it is to recommend them. Although some interventions may be recommended within certain organizations, these interventions may nonetheless have questionable mechanisms of action (e.g., Eye Movement Desensitization and Reprocessing or EMDR). The purported mechanism of action (i.e., eye movements) of EMDR has largely been debunked in favor of a hypothesized exposure-based mechanism. Thus, it may be easier to explain to patients how exposure-based (i.e., PE) and cognitive-based (i.e., CPT) treatments work.

Providers may be tempted to use certain treatments that have some promising research support

but are not yet considered well-established. For example, Acceptance and Commitment Therapy has been studied as an alternative PTSD treatment to PE/CPT over the past decade; however, the research is in its infancy with a recent RCT showing no benefit over present-centered therapy (Lang et al., 2016). When in doubt about whether a particular intervention would be effective, providers may benefit from seeking free consultation from the National Center for PTSD Consultation Program (http://www.ptsd.va.gov/professional/consult/).

When to Refer to External Specialty Mental Health

Behavioral health providers should be mindful of when a patient may benefit from a referral to a specialty mental health clinic or program for PTSD treatment. Examples include if the patient requires additional assessment, if the patient prefers to be treated there, if the patient may benefit from treatment options unavailable in primary care, if the patient has certain diagnostic features or comorbidities that require a higher level of care, or if the patient did not achieve remission from PTSD after behavioral health treatment was attempted in a primary care setting.

Some patients require assessment beyond what is feasible in a primary care setting, especially when there are concerns about symptom validity. The CAPS-5 is a structured interview that assesses for PTSD by providing standardized questions and probes about symptoms in relation to the index trauma; in contrast to self-report measures like the PCL-5, the provider uses their clinical judgment to make symptom severity ratings with the CAPS-5. In addition to assessing PTSD symptoms, the CAPS-5 queries subjective distress and functional impairment and allows providers to rate overall response validity. Ensuring symptom validity can be especially important when assessing PTSD with compensation-seeking patients. Research has shown that veterans, who may seek to become "service-connected" (i.e., when one receives financial compensation for a disability linked to their military service) for PTSD, may overreport or exaggerate their symptoms (Frueh et al., 2003). Such assessment batteries with multiple symptom validity measures (e.g., including an objective personality measure with validity scales) are most likely administered in specialty mental health settings.

Although some patients may feel stigmatized if they are referred to specialty PTSD clinics or programs, others may prefer to be treated in those environments. Eliciting patient preference regarding specialty mental health treatment is especially recommended to reduce combat mental health utilization disparities. A recent study found that Asian and African-Americans were less likely to receive referrals to specialty mental health clinics than White and Latino Americans (Meyer, Saw, Cho, & Fancher, 2015).

Some treatment offerings may only be available in specialty settings, such as a psychoeducational orientation group for patients new to PTSD treatment. A recent study examining veterans' satisfaction and treatment preferences who attended a PTSD Clinical Team 60-min orientation group found that veterans were highly satisfied with the group's ability to educate them about available treatment options (Schumm, Walter, Bartone, & Chard, 2015). This particular PCT offered six different PTSD treatments as well as medication management options, which may be too comprehensive a treatment package for a behavioral health provider working in a primary care setting.

Behavioral health providers may also consider a referral when patients present with co-occurring disorders (e.g., substance use disorders or SUD). A recent exploratory study of military veterans' treatment preferences found that the overwhelming majority preferred integrated PTSD and substance use treatment (Back et al., 2014). Seeking Safety (Najavits, 2002), an integrated PTSD/SUD treatment delivered across 25 sessions in a group format, may not be available or feasible in a primary care setting, and the evidence for efficacy for the treatment of PTSD is low (Berenz & Coffey, 2012). Occasionally, outpatient care may be insufficient to meet a patient's needs. Residential PTSD programs exist for patients who may have

attempted EBPs in outpatient settings and were unsuccessful due to comorbidities (e.g., SUD) or psychosocial stressors. Additionally, it may be necessary to provide inpatient care to patients at risk of harming themselves; suicidal ideation and suicidal behavior have been found to be significantly associated with PTSD (Sareen, Houlahan, Cox, & Asmundson, 2005).

Finally, it may be indicated to refer patients for additional PTSD treatment if they do not respond or achieve remission after completing brief primary care-based treatments. For example, Cigrang et al. (2015) noted that a small minority of patients (2 of 24) requested to discontinue primary care-based PTSD treatment due to an increase in symptoms; both of these patients were offered a referral to specialty mental healthcare. The PE-PC protocol embodies the spirit of stepped care principles by emphasizing a collaborative decision between patient and provider regarding whether to refer patients to specialty mental healthcare.

The Role of the Primary Care Provider/Medical Team in Treatment

Behavioral health providers working in primary care settings are likely operating within the Primary Care Behavioral Health (PCBH) model (Robinson & Reiter, 2007), which is notably used in both VHA and military healthcare systems. In this model a behavioral health provider (e.g., psychologist) is embedded within a primary care clinic and works collaboratively with the medical team on behavioral health-related presenting problems of patients. The behavioral health provider may function in a variety of roles, including consultant, screener/assessor, and therapist. Clinical responsibility is typically maintained by the medical provider, with the behavioral health provider providing consultation and feedback regarding the patient's care. As such, this model is far more collaborative than other arrangements where patients may be referred from primary to specialty care and then clinical responsibility is transferred.

A recent study examined PCBH provider practices within two large healthcare settings, the VHA and the United States Air Force, and found that VHA behavioral health providers were more likely to regularly screen for PTSD than USAF providers (97% vs. 52%, respectively; Funderburk, Dobmeyer, Hunter, Walsh, & Maisto, 2013). Assuming that one's clinic and larger medical system is prepared to respond with help, it is important for providers to implement screening programs if there are not already ones in place. Furthermore, they should ensure that they are using DSM-5 consistent versions of the screening measures; it may be necessary to train support staff on how to orient patients to the screener if they are being administered the measures in a waiting room prior to meeting the PCBH provider. Consultation with primary care providers is also an important role for PCBH providers, although this may not occur with patients directly. Funderburk and colleagues noted that only 29–35% of VHA and USAF PCBH providers were regularly asked to join patient appointments by primary care providers; as such, providing important information (e.g., contraindications of benzodiazepines for PTSD patients) may need to take place at primary care staff meetings, which the majority of PCBH providers acknowledged attending. Ideally, the medical team will be receptive to the feedback and consultation offered by PCBH providers.

Some logistical considerations warrant mentioning when working with PTSD patients in primary care settings. Funderburk and colleagues found that the overwhelming majority of PCBH providers' offices were located within primary care clinics, and thus their patients used primary care waiting rooms. Patients with PTSD often have safety concerns and may be reluctant to sit with their backs to doors or other people. These concerns could be exacerbated by a hectic primary care environment. If feasible, it may be helpful to arrange the waiting area such that there is ample seating against the walls with at least some seats facing the door. Though reducing hypervigilance is a target of PTSD interventions, it is unrealistic to expect patients who are new to PTSD treatments to immediately stop scanning

and tolerate the distress evoked by the situation. Similarly, to the extent possible, reducing levels of crowding in waiting areas will be helpful in creating a calmer environment for patients who are likely to avoid exposure to crowds. These environmental modifications may go a long way toward making patients feel comfortable enough to receive PTSD treatment in a primary care setting.

How to Assess Impact on Care/ Quality Improvement Processes

There are numerous ways behavioral health providers working in primary care settings can assess the impact of their interventions. One important measure of an intervention's impact is whether it leads to symptom reduction and/or other improvements in subjective outcomes (e.g., enhanced quality of life) for patients. Depending on the setting, providers may want to measure symptoms on a weekly basis, or they may opt for measurement at fewer time points (e.g., pretreatment and posttreatment). Given the fast-paced nature of the primary care environment, administering the CAPS-5 at multiple time points is probably not feasible. However, the PCL-5 is well suited to function as a PTSD symptom outcome measure that can be easily administered on a weekly basis. Doing so allows the provider to make adjustments to the intervention if the patient's symptoms are not decreasing as expected. Although the collection of psychometric data on the PCL-5 is still an ongoing process, a recent study suggested that posttreatment scores at or below 24 likely represent clinically significant change for military members with PTSD (Wortmann et al., 2016).

Another important indicator of quality improvement is tracking outcomes related to attendance. Given how avoidance is one of the hallmark symptoms of PTSD, it is perhaps unsurprising that patients frequently have difficulties initiating and completing treatment. Monitoring patient attendance and noting whether they complete or drop out from treatment can be helpful in evaluating the tolerability of and satisfaction with the interventions being delivered. The PE-PC protocol was developed with these concerns in mind and seems to be well-tolerated (i.e., 71% of patients completed treatment) based on pilot study data (Cigrang et al., 2015). If providers are implementing a full PE or CPT protocol, they may consider patients who receive at least eight sessions as treatment completers based on Mott, Hundt, Sansgiry, Mignogna, and Cully's (2014) methodology; this is helpful in ascertaining whether patients are receiving an adequate dose of trauma-focused psychotherapy.

As previously discussed, evidence-based psychotherapies can reduce healthcare costs within a system, and a stepped care approach aims to maximize resources. Although it is beyond the scope of this chapter to provide a how-to guide in conducting health economic analyses, we can pinpoint several areas that may be fruitful targets for examination of cost-effectiveness. Does the intervention reduce the clinical burden on specialty PTSD care? The VHA has a mandate that all veterans must be scheduled for an initial appointment within 30 days or be compensated for a referral to a community provider. If even a small proportion of PTSD can be successfully treated in primary care, it may alleviate some of the need to provide community referrals, thus decreasing costs.

Another important question is how the receipt of the intervention impacts the overall healthcare spending on a particular patient. Ideally, patients receive the least restrictive, most cost-effective level of care necessary to benefit them and then do not receive additional, unnecessary mental healthcare. One may intuit that if a patient drops out of PTSD treatment, they will no longer be a financial burden on a healthcare system. However, Tuerk et al. (2013) found that veterans who dropped out of PE continued to use mental health services at a significantly higher rate than those veterans who completed PE. This finding underscores the importance of addressing dropout from PTSD treatments, as treatment completers may not require subsequent, costly mental health treatment.

As Bower and Gilbody (2005) note, a strong stepped care model of treatment is efficient and

acceptable. It is clearly more efficient to treat patients over four brief sessions in primary care settings than immediately refer them to specialty PTSD clinics where they will receive 8–15 longer sessions of PE/CPT. This smaller dose of treatment may offer substantial relief to a significant proportion of the population of patients suffering from PTSD. Without primary care treatments, all patients suffering from PTSD would be referred to specialty care and quickly overwhelm their healthcare systems. Research suggests that the majority of patients find these brief interventions acceptable and some may even prefer them over specialty PTSD treatment due to perceived stigma. In sum, we encourage behavioral health providers working in primary care settings to consider adopting a stepped care model of treatment if feasible within their healthcare systems.

References

Back, S. E., Killeen, T. K., Teer, A. P., Hartwell, E. E., Federline, A., Beylotte, F., & Cox, E. (2014). Substance use disorders and PTSD: An exploratory study of treatment preferences among military veterans. *Addictive Behaviors*, *39*(2), 369–373.

Berenz, E. C., & Coffey, S. F. (2012). Treatment of co-occurring posttraumatic stress disorder and substance use disorder. *Current Psychiatry Reports*, *14*, 469–477.

Bohnert, K. M., Sripada, R. K., Mach, J., & McCarthy, J. F. (2015). Same-day Integrated Mental Health Care and PTSD diagnosis and treatment among VHA primary care patients with positive PTSD screens. *Psychiatric Services*, *67*(1), 94–100.

Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2015, December 14). Psychometric Properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders–Fifth Edition (PCL-5) in Veterans. *Psychological Assessment*. Advance online publication.

Bower, P., & Gilbody, S. (2005). Stepped care in psychological therapies: Access, effectiveness and efficiency. *The British Journal of Psychiatry*, *186*(1), 11–17.

Brown, N. B., & Bruce, S. E. (2016). Stigma, career worry, and mental illness symptomatology: Factors influencing treatment-seeking for Operation Enduring Freedom and Operation Iraqi Freedom soldiers and veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, *8*(3), 276–283.

Cigrang, J. A., Rauch, S. A. M., Avila, L. L., Bryan, C. J., Goode, J. L., Hryshko-Mullen, A., & Peterson, A. (2011). Treatment of active duty military with PTSD in primary care: Early findings. *Psychological Services*, *8*(2), 104–113.

Cigrang, J. A., Rauch, S. A. M., Mintz, J., Brundige, A., Avila, L. L., Bryan, C. J., … the STRONG STAR Consortium. (2015). Treatment of active duty military with PTSD in primary care: A follow-up report. *Journal of Anxiety Disorders*, *36*, 110–114.

Corso, K. A., Bryan, C. J., Morrow, C. E., Appolonio, K. K., Dodendorf, D. M., & Baker, M. T. (2009). Managing posttraumatic stress disorder symptoms in active duty military personnel in primary care settings. *Journal of Mental Health Counseling*, *31*(2), 119–137.

The Management of Post-Traumatic Stress Working Group. (2010). *VA/DoD clinical practice guideline for Management of Post-Traumatic Stress*. Washington, DC: Department of Veterans Affairs, Department of Defense.

Engel, C. C., Jaycox, L. H., Freed, M. C., Bray, R. M., Brambilla, D., Zatzick, D., … Belsher, B. E. (2016). Centrally assisted collaborative telecare for posttraumatic stress disorder and depression among military personnel attending primary care: A randomized clinical trial. *JAMA Internal Medicine*, *176*(7), 948–956.

Frueh, B. C., Elhai, J. D., Gold, P. B., Monnier, J., Magruder, K. M., Keane, T. M., et al. (2003). Disability compensation seeking among veterans evaluated for posttraumatic stress disorder. *Psychiatric Services*, *54*, 84–91.

Funderburk, J. S., Dobmeyer, A. C., Hunter, C. L., Walsh, C. O., & Maisto, S. A. (2013). Provider practices in the primary care behavioral health (PCBH) model: An initial examination in the Veterans Health Administration and United States Air Force. *Families, Systems, & Health*, *31*(4), 341.

Guina, J., Rossetter, S. R., DeRhodes, B. J., Nahhas, R. W., & Welton, R. S. (2015). Benzodiazepines for PTSD: A systematic review and meta-analysis. *Journal of Psychiatric Practice*, *21*(4), 281–303.

Harmon, A. L., Goldstein, E. S. R., Shiner, B., & Watts, B. V. (2014). Preliminary findings for a brief posttraumatic stress intervention in primary mental health care. *Psychological Services*, *11*, 295–299.

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, *351*(1), 13–22.

Hunter, C. L., Goodie, J. L., Oordt, M. S., & Dobmeyer, A. C. (2009). Behavioral health in primary care: A practitioner's handbook. Washington, DC: American Psychological Association.

Institute of Medicine (IOM). (2014). *Treatment for posttraumatic stress disorder in military and veteran populations: Final assessment*. Washington, DC: The National Academies Press.

Institute of Medicine (IOM). (2008). *Treatment of posttraumatic stress disorder: An assessment of the evidence*. Washington, DC: The National Academies Press.

Jakupcak, M., Robertsd, L. J., Martell, C., Mulick, P., Michael, S., Reed, R., … McFall, M. (2006). A pilot

study of behavioral activation for veterans with posttraumatic stress disorder. *Journal of Traumatic Stress*, *19*, 387–391.

Jakupcak, M., Wagner, A., Paulson, A., Varra, A., & McFall, M. (2010). Behavioral activation as a primary care-based treatment for PTSD and depression among returning veterans. *Journal of Traumatic Stress*, *23*, 491–495.

Kessler, R. C. (2000). Posttraumatic stress disorder: The burden to the individual and to society. *The Journal of Clinical Psychiatry*, *61*(suppl 5), 4–12.

Lang, A. J., Schnurr, P. P., Jain, S., He, F., Walser, R. D., Bolton, E., Benedek, D. M., Norman, S. B., Sylvers, P., Flashman, L., Strauss, J., Raman, R., & Chard, K. M. (2016, June 20). Randomized controlled trial of acceptance and commitment therapy for distress and impairment in OEF/OIF/OND Veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. https://doi.org/10.1037/tra0000127

Lee, D. J., Schnitzlein, C. W., Wolf, J. P., Vythilingam, M., Rasmusson, A. M., & Hoge, C. W. (2016). Psychotherapy versus pharmacotherapy for posttraumatic stress disorder: Systemic review and meta-analyses to determine first-line treatments. *Depression and Anxiety*, *33*, 792–806.

Lu, M. W., Duckart, J. P., O'Malley, J. P., & Dobscha, S. K. (2011). Correlates of utilization of PTSD specialty treatment among recently diagnosed veterans at the VA. *Psychiatric Services*, *62*, 943–949.

Magruder, K. M., Frueh, B. C., Knapp, R. G., Davis, L., Hamner, M. B., Martin, R. H., … Arana, G. W. (2005). Prevalence of posttraumatic stress disorder in veterans affairs primary care clinics. *General Hospital Psychiatry*, *27*(3), 169–179.

Meyer, O. L., Saw, A., Cho, Y. I., & Fancher, T. L. (2015). Disparities in assessment, treatment, and recommendations for specialty mental health care: Patient reports of medical provider behavior. *Health Services Research*, *50*(3), 750–767.

Mott, J. M., Hundt, N. E., Sansgiry, S., Mignogna, J., & Cully, J. A. (2014). Changes in psychotherapy utilization among veterans with depression, anxiety, and PTSD. *Psychiatric Services*, *65*(1), 106–112.

Mulick, P.S. & Naugle, A.E. (2010). Behavioral activation in the treatment of comorbid posttraumatic stress disorder and major depressive disorder. International Journal of Behavioral Consultation and Therapy, 5(3&4), 330–350.

Mulick, P. S., Landes, S. J., & Kanter, J. W. (2011). Contextual behavior therapies in the treatment of PTSD: A review. *The International Journal of Consultation and Therapy*, *7*, 23–32.

Najavits, L. M. (2002). *Seeking safety: A treatment manual for PTSD and substance abuse*. New York: Guilford Press.

Nixon, R. D., & Nearmy, R. M. (2011). Treatment of comorbid posttraumatic stress disorder and major depressive disorder: A pilot study. Journal of Traumatic Stress, *24*, 451–455.

Peterson, A. L., Luethcke, C. A., Borah, E. V., Borah, A. M., & Young-McCaughan, S. (2011). Assessment and treatment of combat-related PTSD in returning war veterans. *Journal of Clinical Psychology in Medical Settings*, *18*(2), 164–175.

Pietrzak, R. H., Johnson, D. C., Goldstein, M. B., Malley, J. C., & Southwick, S. M. (2009). Perceived stigma and barriers to mental health care utilization among OEF-OIF veterans. *Psychiatric Services*, *60*, 1118–1122.

Possemato, K. (2011). The current state of intervention research for posttraumatic stress disorder within the primary care setting. *Journal of Clinical Psychology in Medical Settings*, *18*, 268–280.

Primary Care PTSD Screen for DSM-5 (PC-PTSD-5). (n.d.) Retrieved from https://www.ptsd.va.gov/professional/assessment/screens/pc-ptsd.asp.

Prins, A., Bovin, M. J., Smolenski, D. J., Marx, B. P., Kimerling, R., Jenkins-Guarnieri, M. A., … Tiet, Q. Q. (2016). The primary care PTSD screen for DSM-5 (PC-PTSD-5): Development and evaluation within a veteran primary care sample. *Journal of General Internal Medicine*, 1–6.

PTSD Consultation Program. Retrieved from http://www.ptsd.va.gov/professional/consult/

Roberts, A. L., Gilman, S. E., Breslau, J., Breslau, N., & Koenen, K. C. (2011). Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the United States. *Psychological Medicine*, *41*(01), 71–83.

Robinson, P. J., & Reiter, J. T. (2007). *Behavioral consultation and primary care*. New York: Springer.

Sareen, J., Houlahan, T., Cox, B. J., & Asmundson, G. J. (2005). Anxiety disorders associated with suicidal ideation and suicide attempts in the National Comorbidity Survey. *The Journal of Nervous and Mental Disease*, *193*(7), 450–454.

Schell, T. L., & Marshall, G. N. (2008). Survey of individuals previously deployed for OEF/OIF. In T. Tanelian & L. H. Jaycox (Eds.), *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery* (pp. 87–115). Santa Monica, CA: Rand Corporation.

Schumm, J. A., Walter, K. H., Bartone, A. S., & Chard, K. M. (2015). Veteran satisfaction and treatment preferences in response to a posttraumatic stress disorder specialty clinic orientation group. *Behaviour Research and Therapy*, *69*, 75–82.

Sloan, D. M., Marx, B. P., & Keane, T. M. (2011). Reducing the burden of mental illness in military veterans commentary on Kazdin and Blase (2011). *Perspectives on Psychological Science*, *6*(5), 503–506.

Stein, M. B., McQuaid, J. R., Pedrelli, P., Lenox, R., & McCahill, M. E. (2000). Posttraumatic stress disorder in the primary care medical setting. *General Hospital Psychiatry*, *22*(4), 261–269.

Tanelian, T., & Jaycox, L. (Eds.). (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery*. Santa Monica, CA: RAND Corporation.

Tuerk, P. W., Wangelin, B., Rauch, S. A., Dismuke, C. E., Yoder, M., Myrick, H., … Acierno, R. (2013). Health service utilization before and after evidence-based treatment for PTSD. *Psychological Services*, *10*(4), 401–409.

Van Dam, D., Ehring, T., Vedel, E., & Emmelkamp, P. M. (2010). Validation of the Primary Care Posttraumatic Stress Disorder screening questionnaire (PC-PTSD) in civilian substance use disorder patients. *Journal of Substance Abuse Treatment*, *39*(2), 105–113.

Van Emmerik, A. A., Kamphuis, J. H., Hulsbosch, A. M., & Emmelkamp, P. M. (2002). Single session debriefing after psychological trauma: A meta-analysis. *Lancet*, *360*, 766–771.

Van Minnen, A., Arntz, A., & Keijsers, G. P. J. (2002). Prolonged exposure in patients with chronic PTSD: Predictors of treatment outcome and dropout. *Behaviour Research and Therapy*, *40*(4), 439–457.

Wortmann, J. H., Jordan, A. H., Weathers, F. W., Resick, P. A., Dondanville, K. A., Hall-Clark, B., … Litz, B. T. (2016). Psychometric analysis of the PTSD Checklist-5 (PCL-5) among treatment-seeking military service members. *Psychological Assessment*. https://doi.org/10.1037/pas0000260

Zeiss, A. M., & Karlin, B. E. (2008). Integrating mental health and primary care services in the Department of Veterans Affairs health care system. *Journal of Clinical Psychology in Medical Settings*, *15*(1), 73–78.