Conceptualization, Assessment, and Treatment of Traumatic Stress in First Responders: A Review of Critical Issues

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Abstract: First responders are regularly confronted with exposure to traumatic events, including potentially life-threatening situations as well as the grave injuries and deaths of colleagues and civilians. Evidence indicates that the prevalence of posttraumatic stress disorder (PTSD) is substantially higher among first responders than the general population. This article provides information about the outpatient trauma services at McLean Hospital's LEADER (Law Enforcement, Active Duty, Emergency Responder) program to assist clinicians who encounter these first responders in their practices or who are specifically interested in working with this patient population. We begin by synthesizing the literature on the prevalence of PTSD in first responders following work-related exposure to traumatic stress, and by addressing the occupation-specific risk factors and the third-variable risk factors that may contribute to potentiated risk. We then discuss assessment strategies and treatment options used in our program, which is tailored for individuals who are dealing with mental health issues stemming from occupation-specific traumatic-stress exposure. We also address the unique challenges of treating traumatized first responders with more complex issues such as traumatic stress exposure across the lifespan and safety issues, including acute suicidality. We conclude by discussing notable gaps in the literature, including the need to investigate why and how women present with different PTSD symptoms than men and how these differences need to be taken into account in determining appropriate treatment for women.

Keywords: assessment, first responders, posttraumatic stress disorder, trauma, treatment

The Boston Marathon bombing and subsequent suspect-apprehension efforts the week of 15 April 2013 brought the unique mental health needs of first responders to the attention of McLean Hospital. To meet these needs, local representatives from police, government, and the hospital came together to begin shaping a treatment program. Out of these meetings, the LEADER (Law Enforcement, Active Duty, Emergency Responder) program at McLean Hospital was initiated. It is now a robust program offering services across multiple diagnostic areas and levels of care, including inpatient, residential, partial hospital, and outpatient services. Working with first responders is a privilege afforded to those who participate in the LEADER program. This article seeks to help other clinicians to provide first responders with culturally sensitive and diagnostically sound assessment and treatment.

For individuals with posttraumatic stress disorder (PTSD), the LEADER program was developed within the context of well-established, hospital-wide services for assessing and treating traumatic stress, with a focus on childhood and interpersonal trauma. Currently, our trauma programs offer a comprehensive, phase-oriented approach to PTSD treatment, including multimodal interventions for both male and female first responders.[1] As expertise regarding this unique population has grown, the unmet needs of the broader community have become more apparent. This article provides the background and experiences of our program to assist clinicians who will encounter these first responders in their practices. We focus here on law enforcement officers (LEOs), ambulance personnel (EMT/paramedics), and firefighters and other fire personnel (FFs), although we well recognize the important, high-risk work of all emergency-response personnel.

PTSD PREVALENCE RATES

First responders are exposed to potentially traumatic events repeatedly while on the job. For example, LEOs, EMT/paramedics, and FFs are exposed to death, serious injury, and violence at significantly higher rates than most civilian professionals.[2–4] Given the high frequency and severity of

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traumatic exposures, it is not surprising that first responders are at an elevated risk for developing PTSD.

Over the past two decades, a growing body of research has yielded prevalence estimates for the development of PTSD in first responders following work-related exposure to traumatic events. These data were derived mostly from small-scale, retrospective studies utilizing self-report measures, rather than from diagnostic clinical interviews. As such, results must be interpreted judiciously. Nevertheless, cumulative range estimates can serve as potentially reliable indicators of PTSD prevalence. Studies show that LEOs develop PTSD at rates ranging from 6% to 32%,[4–9] EMT/paramedics at rates ranging from 9% to 22%,[2,5,7,10,11] and FFs at rates ranging from 17% to 32%.[12–24] By contrast, approximately 7% to 12% of adults in the United States will develop PTSD at some point in their lifetimes.[25,26]

These wide ranges indicate that third-variable risk factors influencing PTSD prevalence exist both within groups (at the level of individual) and between groups (at the level of occupation type). For example, the lower ranges of PTSD prevalence rates found in some studies of LEOs may be explained by underreporting of symptoms due to fears of being considered unfit for duty and the requirements attendant to carrying a firearm.[7] However, using a conservative estimation calculation,[27,28] prevalence data suggest that more than 87,000 LEOs, 21,000 EMT/paramedics, and 804,000 FFs suffer from PTSD in the United States. Likely, many more suffer from subthreshold PTSD symptoms, causing significant occupational and social impairment.[6,9,18] As such, LEOs, EMT/paramedics, and FFs should be considered as special populations at increased relative risk.

RISK FACTORS FOR DEVELOPING PTSD

Several non-occupational and occupation-specific risk factors may increase the likelihood of developing PTSD subsequent to traumatic stress exposure in LEOs, EMT/paramedics, and FFs. Non-occupational risk factors can be organized into three categories: historical, peritraumatic, and posttraumatic.[29–34] Historical risk factors include family history of psychiatric disorders, intelligence, education, early conduct problems, childhood adversity, and childhood abuse.[35,36]

Peritraumatic risk factors include severity of the traumatic event, perception of the trauma as life threatening, actual physical injury or assault, dissociation during the event, and magnitude of the dissociative response.[30–33,37] Posttraumatic risk factors include the absence of social support, poor access to healthy coping skills, limited access to mental health resources, and other life stressors.[9,32,34]

Occupation-specific risk factors include the cumulative nature of the traumatic events encountered on the job, the types of traumatic events encountered, routine occupational stress, the perception of inadequate workplace social support, and the concurrent experience of gender or ethnic discrimination or stigmatization.[2,5,24,29,35,38–41] In addition, hostile occupational environments that include exposure to extreme heat, fire, smoke, risk for repeated physical injury, and erratic sleep patterns may alter inflammatory and physiological stress responses, and compromise resilience in the face of PTSD risk factors.[33,42–44] Given that first responders are repeatedly exposed to high-magnitude stressors, occupational risk may be compounded throughout their careers, placing even the most resilient at increased risk for problematic posttraumatic responding.[20,30]

Individuals confronted with high-impact and high-frequency stressors are at an increased risk of experiencing an acute stress response.[45,46] While such responses are normal, some of these individuals subsequently develop more serious impairments that require assessment and treatment—for example, acute stress disorder (ASD) or PTSD.[45,46] An acute stress response at the time of, or shortly after, exposure to traumatic stress involves well-documented biological and psychological sequelae, which may include transient experiences of hyperarousal, anger/irritability, sadness, numbing, nightmares, and intrusive thoughts.[31,32] Although rates of treatment seeking vary, the culture and self-image of first responders may discourage them from seeking formal mental health interventions that are seen as stigmatizing.[47–49]

Some of the individuals acutely affected by traumatic events subsequently develop ASD, which can be associated with increased risk for developing PTSD.[45,46,50,51] ASD can be identified in individuals starting three days after an event and includes multiple symptoms within five diagnostic categories: intrusions, negative mood, dissociation, avoidance, and arousal.[33,34] This disorder is differentiated from a more typical, transient response to acute stress exposure by the persistent severity of symptoms beyond the time frame of an acute stress reaction.[33,52] ASD was formally introduced in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) in an attempt to identify a PTSD prodrome.[53] The predictive value of the criteria, however, has been questioned.[33,52,54,55] While a diagnosis of ASD is associated with high risk for subsequently developing PTSD, the majority of those with PTSD will not have met criteria for ASD.[54,55] In addition, the requirement of dissociation in the diagnosis of ASD may identify a specific subgroup at risk for PTSD.[56–59] Dissociation experienced prior to or during a traumatic event appears to confer added risk for PTSD in first responders,[42] though not consistently in the general population.[33]

DIAGNOSIS AND ASSESSMENT OF PTSD

Diagnostic assessment is the cornerstone of the clinician's ability to develop the best treatment plan, and constitutes the first phase of treatment for each first responder. A thorough diagnostic evaluation clarifies which problems and symptoms have priority in treatment, and will guide decision making about pacing into later phases of treatment. Further, while careful assessment and symptom stabilization for PTSD can be provided safely to any traumatized first responder, the important decision about when to proceed to the trauma-focused processing phase of treatment is dependent upon a thorough understanding of the first responder's past history,

the presence of co-occurring psychiatric and medical conditions, and functional status. A number of both standardized clinical interviews and self-report measures for assessing traumatic event exposure[43,44] and PTSD symptoms[43,44] in adults have been developed. Some of these assessment tools are available only for purchase, whereas others can be found in the articles cited[43,44] or through the National Center for PTSD (http://www.ptsd.va.gov). Comprehensive reviews comparing the psychometric and cost-utility analyses of these tools are readily available to clinicians and researchers.[43,44]

We will focus on PTSD assessment measures that have been updated to reflect the most current diagnostic criteria for PTSD, as presented in DSM-5.[34] These include the Clinician Administered PTSD Scale for DSM-5 (CAPS-5)[60,61] and the PTSD Checklist for DSM-5 (PCL-5).[62] Diagnostic assessment is geared toward the generation of a full psychiatric differential with an added emphasis on trauma-spectrum disorders. All assessments should include a comprehensive clinical interview as well as the administration of a validated measure for assessing PTSD. The CAPS-5 is a structured clinical interview considered to be the gold standard for diagnostic assessment of PTSD. The PCL-5 is a brief, self-report measure of current PTSD symptomatology that can be used to monitor PTSD treatment response longitudinally. Both of these measures are licensed by the National Center for PTSD, Behavioral Science Division.

Researchers at the National Center for PTSD in Boston initially developed the CAPS in 1990.[61] Recently, this same group updated the CAPS to reflect changes in DSM-5.[60] The CAPS-5 is a structured clinical interview containing 30 items assessing for the full spectrum of DSM-5 PTSD criteria, including exposure to a traumatic event (Criterion A) and the core symptom clusters of intrusion (Criterion B), avoidance (Cluster C), negative alterations in cognition and mood (Criterion D), and alterations in arousal and reactivity (Criterion E). It is a diagnostic tool capable of assessment for both current and lifetime PTSD diagnoses. It includes items assessing duration of symptoms, severity of symptoms, response validity, and extent of social and occupational impairment. The CAPS-5 also includes assessment for a dissociative subtype of PTSD[63,64] using two items probing for experiences of depersonalization and derealization. As reviewed in detail by Weathers and colleagues (2001),[65] psychometric properties of the CAPS have been evaluated extensively across a wide range of traumatized sample types and, overall, are excellent. The CAPS has been found to show consistency over repeated administration times (test-retest reliability), over different interviewers or raters (interrater reliability), and across its various test items (internal consistency). In addition, CAPS scores correlate strongly with other measures of PTSD (convergent validity) and weakly with measures of different diagnostic constructs (discriminant validity). The CAPS also has been found to perform well in analyses designed to examine capacity to predict PTSD diagnostic status. In a personal communication with Dr. Terry Keane at the National Center for PTSD, he stated studies are currently under way to evaluate the psychometric properties of the recent version update.

The PCL was developed in 1993[65] at the National Center for PTSD. It has become, over the years, one of the most widely used self-report measures of PTSD symptomatology[66] and has consistently demonstrated excellent psychometric properties across many different settings.[67] The PCL recently was revised to reflect DSM-5 changes to the PTSD criteria.[62] The PCL-5 is a 20-item self-report measure employing a rating scale from 0 to 4 for each symptom within the clusters of intrusion (Criterion B), avoidance (Cluster C), negative alterations in cognition and mood (Criterion D), and alterations in arousal and reactivity (Criterion E). The PCL-5 does not assess for symptoms of dissociation, duration of symptoms, or occupational and social impairment. The PCL-5 can be administered at the time of assessment or on a regular basis to assess for changes in symptoms. Recent findings suggest that, since its modification to adapt to the DSM-5, the PCL-5 is a psychometrically sound measure of PTSD. For example, the PCL-5 consistently demonstrated strong internal consistency, test-retest reliability, and both convergent and discriminative validity across traumatic event–exposed samples, including active military service members,[68] military veterans,[69] and college students.[70]

First responders may be reluctant to discuss their PTSD symptoms or to acknowledge the presence of traumatic events in their lives, because of the stigma associated with diagnosis and treatment of psychiatric disorders.[1] As such, the therapeutic benefit they may derive from disclosing traumatic experiences and distress with a respectful, understanding professional should not be underestimated. Clinicians should take care to provide skillful pacing and containment during discussion to counteract potential flooding during the assessment. The clinician can also provide feedback about assessment results and diagnosis in a clinically sensitive manner, building the first therapeutic step in what will become an ongoing, psychoeducational process regarding the management of PTSD symptoms. As previously noted, it is rare for individuals exposed to traumatic events to present solely with symptoms of PTSD, which highlights the important need for comprehensive diagnostic evaluation for first responders.[1]

Many first responders report that they are expected to minimize the impact of traumatic exposures in their professional and personal lives.[1] Therefore, first responders often engage in avoidance and may employ substance use or high-risk behavior to that end.[71] Avoidance may present as absenteeism from work and result in early retirement.[1,24] First responders may also describe extreme irritability or an intense anger response that they may not perceive as a posttraumatic response.[72] Further, they are likely to endorse constant hypervigilance and may experience sleep disruption due to nightmares or the challenges of sleeping while working on shifts.[1,73,74] Many first responders note that their symptoms create tension with significant others and children.[75] Others may report conflict in the workplace, noting that they engage in greater discord with colleagues and supervisors than in the past.[11,74,76] These factors indicate the

importance of comprehensive assessment and psychoeducation regarding symptoms. Psychoeducation also plays a significant role in reducing subcultural boundaries that may prohibit a first responder from seeking and receiving appropriate treatment.[1]

TREATMENT CONSIDERATIONS: A PHASE-ORIENTED APPROACH

Since the initial inclusion of PTSD in 1980 as a diagnostic entity in DSM-III,[77] the development of psychosocial and psychopharmacologic PTSD treatments has progressed at an impressive rate. Various forms of treatment have been evaluated by outcome studies using rigorous methodology.[45,46,78,79] Currently, definitive professional practice guidelines exist, providing well-documented treatment recommendations for PTSD caused by a range of traumatic events experienced by a variety of different patient populations.[50,80]

Trauma-focused processing may be contraindicated for those with actively concurrent suicidal or homicidal ideation, recent (past two months) nonsuicidal self-harm, active substance dependence, or psychosis.[51] Furthermore, trauma-focused processing may be contraindicated in those without adequate social support, safety, and daily structure.[81–83] Historically, trauma-focused processing treatment has been contraindicated prior to a period of stabilization and skills training in those with complex PTSD.[81,82] However, recent studies have shown that cognitive-behavioral approaches combined with brief exposure elements can be used effectively in this population.[51,84,85] This treatment advance is especially important for treating first responders with job-related PTSD complicated by a childhood abuse history and significant dissociation or mood dysregulation.

The approach to PTSD treatment in first responders is phase oriented through the outpatient trauma services at McLean Hospital's LEADER program. It has the following structure:

- Phase 1: Diagnostic assessment (as discussed above)
- Phase 2: Symptom stabilization and skills training
- Phase 3: Trauma-focused processing
- Phase 4: Consolidation and aftercare

Treatment Phase 2: Symptom Stabilization and Skills Training

The phase-oriented approach to treatment recognizes that some individuals with PTSD and other co-occurring symptoms may require an initial period of stabilization or skills training prior to undertaking trauma-focused processing.[81–83] Immediate stabilization is warranted to address issues involving physical safety (e.g., suicidal or homicidal intention/plan) or active self-harm and neglect. In addition, rapid stabilization may be warranted in cases of severe co-occurring depression, medically urgent co-occurring substance dependence, or debilitating reexperiencing symptoms (nightmares, flashbacks, intrusions) and accompanying hyperarousal symptoms (agitation and severely disrupted sleep). Such acute issues typically require inpatient level of care. In such cases, focus is on providing safety, medication evaluation, rapid symptom containment, and crisis management. During the hospitalization, fundamental coping skills, such as safety planning, grounding, self-care, and sleep hygiene, are taught and actively reinforced in a collaborative manner.

Our program has found that skills-acquisition training can be an appropriate next step for first responders with PTSD who are newly stabilized or for those with PTSD who are without acute safety/medical issues or severe debilitation but are nevertheless dealing with symptoms that intrude significantly upon daily functioning.[47] This treatment includes the following: psychoeducation; containment of PTSD-specific symptoms; management of co-occurring psychiatric health conditions; skills training in distress tolerance, emotion regulation, and impulse control; maintenance of supportive relationships with others; maintenance of healthy life style; and resilience training. Skills-acquisition training may not be required as a separate stage of treatment, however, for individuals requiring trauma-focused treatment.[86]

Treatment modalities such as the dialectical behavior therapy–prolonged exposure (DBT PE) protocol integrate treatment approaches that increase skills in regulating emotion and tolerating distress while also addressing symptoms of PTSD.[75,87,88] This growing body of research indicates significant improvements in PTSD symptoms, suicidal behaviors and urges, dissociation, depression, anxiety, and trauma-related guilt and shame in patients presenting with low-to-moderate suicidality behaviors and self-injurious behaviors.[51,75,87–89] This research indicates that co-occurring symptoms may improve alongside symptoms of PTSD without completing skills-acquisition treatment in advance of trauma-focused treatment;[89] future studies are needed, however, to replicate these intriguing but early findings that, to date, have been conducted primarily by a single research group working with adults.

Treatment Phase 3: Trauma-Focused Processing

Well-documented, empirical support exists for several trauma-focused treatment modalities, including cognitive processing therapy (CPT), prolonged-exposure therapy (PE), and eye-movement desensitization and reprocessing. All have received "A" ratings, established on the strength of their respective published evidence bases, in practice guidelines issued by the International Society for Traumatic Stress Studies[80] and other national oversight agencies.[50,90–92] Substantial literature supports several trauma-focused treatment modalities;[85,93–96] for the purpose of this article, however, we focus on CPT, PE, and EMDR. Although no single treatment modality has been identified as most effective for first responders,[28] one study of LEOs with varying trauma histories found that 90% of participants chose PE or CPT as their first or second most preferred treatment.[97]

Cognitive Processing Therapy CPT is a type of cognitive-behavioral therapy developed specifically for PTSD.[98] Among many skills, patients learn to challenge distorted negative self-cognitions resulting from traumatic experiences.[99,100] This 12-session treatment has successful, long-lasting recovery

outcomes as measured by randomized, clinical trials and has a high rate of success in patients with co-occurring conditions (e.g., depression, substance abuse, anxiety disorders, and personality disorders).[100–104]

Given CPT's unique focus on distorted negative self-cognitions, it may be especially helpful for individuals who have a history of chronic, childhood traumatic-event exposure—for example, individuals who have experienced early childhood abuse and neglect—who may have less favorable outcomes with therapies focused primarily on exposure-based interventions.[84,105,106] For individuals with complex PTSD, CPT also can be an effective treatment without the exposure component or may be used as an actively planned, paced intervention to control dissociative symptoms while constructing the trauma-relevant narrative.[98]

There is a long-standing, well-studied history of using CPT to treat PTSD among veterans,[103,107–111] including those with co-occurring alcohol use disorder.[112] No treatment-outcome studies have been published to date, however, with a specific focus on LEOs, EMT/paramedics, or FFs. In one study of 36 LEOs diagnosed with PTSD, 39% selected CPT as their first choice of treatment[97] when presented with multiple empirically based PTSD treatment descriptions. Research on the efficacy of CPT, coupled with indicated first-responder interest, suggests that CPT may be a treatment of choice for this unique population.

Prolonged Exposure PE is an internationally utilized cognitive-behavioral approach and treatment of choice for PTSD.[113] It has a significant evidence base supporting its effectiveness in treating PTSD, with lasting results both posttreatment and at follow-up.[114,115] PE incorporates components of PTSD psychoeducation, in vivo exposure to safe but feared stimuli related to trauma, imaginal exposure to traumatic memories, self-assessment of anxiety using subjective units of distress, and processing of trauma memories.[51,116] Treatment consists of 8 to 15 90-minute individual sessions that engage in some form of exposure, with the goal of achieving physiological activation and habituation within and across exposure sessions.[117]

PE treats both PTSD-related distress and more general trauma-related distress;[118] its focus on fear reduction also indicates great effectiveness in treating avoidance symptoms.[119,120] It has been found effective in reducing negative trauma-related cognitions and depression symptoms.[121,122] It was studied with first responders following the 11 September 2001 terrorist attacks and found to be highly effective for this group in reducing symptoms of PTSD.[123]

Eye Movement Desensitization and Reprocessing EMDR is a treatment approach in which the patient's attention is directed to an external stimulus while concentrating on an emotionally disturbing experience, such as a traumatic event.[124] Saccadic eye movements, hand taps, and auditory tones are utilized while the patient concurrently engages in sequential exposure, desensitization, cognitive restructuring, and rehearsal.[124] This form of treatment has been found effective in reducing symptoms of PTSD as measured by psychometrically sound self-report measures.[95,125–130] It remains unclear, however, whether an external stimulus is required to achieve symptom improvement or whether the primary benefit of EMDR is derived from the emotional-processing component of treatment.[120,125]

A number of studies have highlighted the effectiveness of EMDR in mass trauma situations, including natural disasters[131,132] and terrorist attacks.[133] EMDR has been studied as a first-line PTSD treatment for first responders to good effect, suggesting its utility with the first-responder population.[1,134–136] EMDR may also serve to help first responders reintegrate to work through a reduction in avoidance symptoms, leading to increased social and occupational productivity and a faster return to work following occupation-specific traumatic events.[137]

Contraindications to Trauma-Processing Treatment Although trauma-processing treatment may be indicated for individuals with co-occurring diagnoses, there are several definitive contraindications to the use of trauma-processing treatments. Individuals with PTSD who are involved in an ongoing violent relationship (for example, victims of domestic or other familial violence) should not undergo trauma-processing therapy until safety has been established and maintained. In addition, these treatment approaches are frequently contraindicated for those with suicidality, homicidality, current dependence on substances, and severe dissociative symptoms. Despite these contraindications, however, CPT has been used to successfully treat individuals with histories of childhood abuse and complex PTSD presentations, once problematic dissociation has been controlled. Additionally, exposure therapy may benefit individuals diagnosed with the dissociative subtype of PTSD[51,138]—despite beliefs about the negative impact of dissociation on this form of therapy.

Treatment Phase 4: Consolidation and Aftercare

Continued treatment following trauma-focused processing is recommended for first responders seeking treatment through our program. This phase of treatment may incorporate self-assessment, cognitive restructuring, and behavioral strategies, including exposure and distress tolerance for ongoing maintenance of therapeutic gains. By this stage, first responders will have received psychoeducation regarding the clinical characteristics, etiology, course, and treatment of trauma-related diagnoses, and have developed self-assessment skills to gain insight into how trauma-related symptoms are affecting daily functioning.[1] The goal of this fourth stage of treatment is to help them to identify resources and build skills to help manage recurring or new stressors, to integrate new skill acquisition into daily routines, and to reintegrate to social and occupational roles, including engagement in peer support, while utilizing new skill sets to avoid the recurrence of behaviors targeted in treatment, such as avoidance.[1]

SPECIAL TREATMENT CONSIDERATIONS: SUICIDALITY AND OTHER SAFETY ISSUES

Research findings have been mixed on whether suicide rates among police officers and firefighters are higher than in the general population or equivalent to them.[139–144] An association between the presence of PTSD symptoms and elevated suicidality in the first-responder population has been consistently demonstrated,[9,27,139,140] though this effect may be driven or exacerbated by co-occurring depression.[27,141] Given that negative alterations in mood and cognition are part and parcel of PTSD, determining whether the first responders' depressive symptomatology is related to past traumatic events has important clinical ramifications.

Other important risk factors for suicidality have been documented. When LEOs believe that their traumatic experiences are not manageable, their risk of suicidality increases.[139] Alcohol consumption with severe PTSD also increases the risk of suicidality in LEOs as much as tenfold when compared to LEOs with lesser PTSD symptomatology.[142] In FFs, one study noted that numbing and reexperiencing symptoms were particularly associated with suicidal ideation.[27] In addition, job loss or demotion, and attendant loss of status, as well as public shame, may contribute to suicidality.[139] Personal and family adversity, including inability to provide for family or a sense of being a burden to family, are also associated with significant suicidality.[143]

Shift work has not been specifically implicated in increased suicidality among LEOs and FFs. Working evening and overnight shifts, longer hours, and sleep deprivation are associated, however, with a greater frequency of exposure to stressful events.[145–147] Some studies have found that LEOs and FFs with more experience on the job have a decreased risk for depression and suicidality.[142,144,145] First responders with more than 20 years of experience, however, may be self-selecting for retirement versus continued work. Studies of whether race or ethnicity affect suicidality in firefighters have reported conflicting results.[140,145]

It is critical to keep in mind that LEOs who are depressed or repeatedly flooded with PTSD symptoms—who may potentially become suicidal—have access to high-lethality weapons. Recent research also indicates that other types of safety concerns are important to monitor when working with first responders diagnosed with PTSD. For example, corrections officers who dissociate are at greater risk of assault by inmates, and paramedics with insomnia or nightmares may be fatigued and more prone to make medical errors.

First-responder groups have been trained in a particular subculture that may affect their perceptions of mental health and treatments.[1] Culturally sensitive care includes maintaining an ongoing awareness and curiosity about occupational norms and their implications for clinical management.[146] As with all individuals entering into treatment, an important initial step is to establish an alliance. This is particularly true for first responders, as many have concerns about disclosure (especially if they have been referred by their units). Fears about whether treaters will prioritize their well-being, behave with commitment, and treat them with respect can be especially problematic for police, sheriff, and corrections officers, who have high levels of interaction with hostile members of society or impersonal bureaucratic systems. Once an alliance is established, ongoing assessment of safety is important. Frank discussion about a range of concerns is critical, including those concerns that do not merit disclosure or hospitalization. In addition, education about medication use that will not affect alertness, cognitive processing, or reaction time is an important consideration when working with active-duty first responders.

Given the unique responsibilities of first responders, other concerns include potential public safety concerns and occupational interference. Many clinicians are familiar with suicidal behaviors but less so with behaviors posing a risk to others. While mandated reporting requirements do not vary by patient population, it is important to know that a restraining order or child-protection reporting can result in occupational suspension for police officers. Also concerning in relation to safe job performance are the intrusion of flashback symptoms into current activities and the chronically heightened assessment of threat. Limited duty may not exist for some occupational categories. Where concerns about fitness for duty or public safety exist, a specialty consultation is recommended.

SPECIAL POPULATION CONSIDERATIONS: FEMALE FIRST RESPONDERS

Special considerations for female first responders are of great importance because of both the scarcity of research and the heterogeneity of this population. In the existing literature on female first responders, LEOs are better represented than either EMT/paramedics or those who work as volunteer or paid FFs (Bureau of Labor Statistics). In some ways the samples of female LEOs "break all the rules" of the conventional wisdom on PTSD. Women generally are considered at higher risk than men of experiencing traumatic stress exposure within relationships, particularly sexual violence,[41,147] and studies have found that females are at higher risk of developing PTSD.[41] Nevertheless, some studies have found that female LEOs have lower rates of PTSD than civilian samples.[39,57,148]

The interpretation of traumatic events is highly important to the development of PTSD, and one's identity obviously and notably affects this attribution and interpretation. Studies have found differences in the types of incidents that precipitate PTSD symptoms in female (child abuse cases) versus male (shooting incidents) police officers.[149] Others have identified differences in how personality characteristics, as well as coping or attribution styles, may differ between male and female LEOs.[150] Emotional distress has been seen as a key factor in developing PTSD, but questions remain regarding the impact of first-responder culture and experiences in mediating increased emotional reactivity and cumulative PTSD symptoms among female first responders.[29,39,151]

Women who work in guarding or "protective" professions may acculturate to the traditionally masculine gender roles

associated with LEOs or other subcultures. This acculturation may explain why female LEOs may experience less peritraumatic emotional distress than civilian females.[151] Female LEOs also appear to be at increased risk for somatization following traumatic exposure—a characteristic often found in male LEOs.[39] Recent alcohol use and PTSD have not always been connected in policing samples,[57] which is a stark difference from civilian data.[152,153] Recent findings show, however, that both male and female LEOs increase alcohol use as a means of coping with PTSD.[3,39]

Female first responders with both interpersonal and occupational exposure to traumatic stress may also experience the complication of institutional trauma—trauma that originates from, or is reinforced by, a previously trusted authority; this complication is especially common when the interpersonal traumas occur in the workplace.[152,153] Such situations present a challenge in identifying the best treatment options for female first responders. More evidence regarding the potential benefits of the common practice of treating males and females separately across occupational subpopulations, versus cohort therapy by occupation, would be invaluable in determining the best practice for treating female first responders. The benefits of sex-separated group therapy for individuals who have suffered work-related sexual harassment have been clinically observed, but evidence for a standard of care regarding first responders would be highly welcome.[154] In addition, confirmation, or an elaboration, of the differences in treating civilian trauma versus occupation-specific trauma, with recommendations for the latter, would be beneficial for clinicians in pharmacotherapy and other therapeutic modalities. This question is of particular importance as female first responders may respond differently than men to treatments for PTSD. For example, prazosin treatment for nightmares has been an important tool arising out of Veterans Administration research,[155,156] but many women with interpersonal trauma find less daytime benefit and cannot tolerate the high dosing patterns used in the classic VA studies. It might be that dissociative-subtype PTSD needs to be separated out in research samples, for better understanding of the treatment nuances associated with that disorder. It is important to note that the only medications with an Food and Drug Administration approval for treating PTSD are sertraline and paroxetine. All other medications mentioned in this article are being used "off label" based on research and empirical support only.

In treating female first responders with PTSD, numerous factors need to be kept in mind, including their potentially different attachment styles from male first responders and also the likelihood of their having relational versus individualistic coping styles. Successful treatment is best achieved through person-centered care and careful attunement to both the stated and inferred individual goals of the patient. Consistently adopting a clarifying and learning stance toward the content of a patient's history will also increase clinical attunement and improve the clinician's odds of making beneficial treatment recommendations resulting in reduced treatment frustration and dropout. Practical and logistical difficulties are also common among female first responders presenting for treatment. Female first responders are frequently responsible for child and elder care, which creates challenges in finding time for to be available for treatment.[157] Access to flexible day treatment and outpatient options is valuable for this cohort. Additionally, standards of care developed for male first responders may need to be adapted in order to provide women with individualized trauma–informed care.

CONCLUSION

As referenced throughout, the assessment and treatment of PTSD and trauma spectrum disorders in the heterogeneous category of first responders requires consideration of their unique subcultural concerns and risk factors. The risk of retraumatization is great among first responders, requiring additional sensitivity in clinical work. Further, additional research specifically focused on assessing and treating PTSD among first responders is greatly needed. In a systematic review of 845 randomized, control trials of PTSD treatment outcomes, only 2 (0.2%) focused on first responders,[28] and even less is known about female first responders.

In addition to the dearth of treatment studies, treatment guidelines are lacking for first-responder populations. Therefore, clinicians are encouraged to use international guidelines for PTSD treatment and to focus on the importance of assessing PTSD and ASD in this population. With regard to assessment, clinicians are encouraged to inquire about occupational and childhood experiences, which may be useful in providing psychoeducation to patients regarding the interconnections between their present symptoms, recent traumas, and occupational and childhood history.

Following a thorough assessment, preferably using a standardized measure, a stage-based approach to treatment is recommended. In stage 1, it is critical to identify acute symptoms such as suicidality or co-occurring medical or psychiatric illnesses that require additional interventions. Stage 2 places an emphasis on achieving safety and acute-symptom stabilization through skills management. For example, medication and behavioral interventions to restore sleep hygiene may be necessary before concentration and energy are adequate for intensive work. Initial work also will be hampered if the patient does not have the skills to manage acute exacerbations with grounding and soothing techniques (often along with additional safety planning). Stage 3 of trauma-focused treatment involves intensive evidence-based trauma processing with a prerequisite of a general skills base to effectively manage acute distress without undue safety risks. Finally, stage 4 involves transitioning individuals to greater self-management, including the ability to identify the need for additional assistance. For individuals with a disruption in work or other independent living activities, this phase will focus on integration of skills to return to social and occupational routines.

First responders undergoing treatment for traumatic stress may require ongoing safety assessments and should return to

an earlier phase of treatment as needed. It is important to educate all individuals beginning this treatment about the possibility of returning to an earlier stage when confronted with increased unsafe or treatment-interfering behaviors. Consultation with peers or specialists in traumatic-stress treatment, safety assessment, or first-responder subculture is necessary when issues of public safety may exist. Additionally, special considerations for treatment settings or treatment approaches developed primarily for men may need to be adapted for female first responders. Finally, the first-responder population and clinicians working with first responders will benefit from increased awareness of their special needs and of the best practices in assessing and treating PTSD.

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