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Conducting Prolonged Exposure for PTSD During the COVID-19 Pandemic: Considerations for Treatment

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The unprecedented effects and duration of the COVID-19 crisis are likely to elevate the population's level of anxiety due to psychological stress, economic hardship, and social isolation. This effect may be especially potent for individuals with pre-existing mental health conditions, such as posttraumatic stress disorder (PTSD). Prolonged Exposure (PE) therapy is a highly effective treatment for PTSD across trauma-exposed populations, and has been implemented effectively via telehealth. Nevertheless, PE implementation via telehealth may require specific adaptations during the COVID-19 crisis due to public health mandates calling for sheltering in place and physical distancing. This paper discusses strategies for implementing PE for PTSD during the COVID-19 pandemic, which may also be applied to other situations in which physical distancing must be considered.

THE impact of the COVID-19 pandemic on mental health has yet to be realized. Many speculate that social and economic modifications required to prevent viral spread is increasing psychological stress, economic hardship, and social isolation. Indeed, the unprecedented extent and duration of the current health crisis appears to be elevating anxiety for many. Reports from the National Center for Health Statistics' Household Pulse Survey on mental health during COVID-19 revealed that since April 2020, approximately 30% of adults experienced symptoms of anxiety and depression in the prior 7 days. These numbers reflect an increase from the same period in 2019

(National Center for Health Statistics, 2020). Moreover, studies of the impact of past epidemics such as SARS, MERS, and equine influenza have indicated that quarantine increases risk for psychological distress, including depression, anxiety, panic attacks, psychotic symptoms, suicidality, and post-traumatic stress symptoms (e.g., Lee et al., 2018; Mak et al., 2009; Maunder et al., 2003; Reynolds et al., 2008; Taylor et al., 2008).

While there are limited data on the psychological impact of COVID-19 on individuals with a preexisting mental health condition, reports indicated that these individuals have higher rates of anxiety and depression compared to those without mental health conditions (Alonzi et al., 2020; Wang et al., 2020). Those who experience posttraumatic stress disorder (PTSD) may be at particular risk for negative repercussions during the pandemic. First, individuals with PTSD exhibit clinically significant avoidance symptoms, which may keep them from

Keywords: cognitive-behavioral therapy; exposure therapy; post-traumatic stress disorder; trauma; COVID

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seeking vital resources such as health and mental health care. Shelter-in-place mandates may augment beliefs that the world is extremely dangerous and reinforce avoidance behaviors which, in turn, maintain PTSD symptoms (Foa & Kozak, 1986). Second, closings of schools and nonessential businesses have brought many families in constant, close physical proximity, which also may exacerbate basal levels of stress. Given that PTSD is associated with negative relational and family consequences such as intimate partner violence (Shorey et al., 2018), parenting problems (Leen-Feldner et al., 2011) and impaired relationship functioning (Taft et al., 2011), close quartering with family members may be especially challenging. Third, for those who cope with PTSD through the distraction of work, anxiety may be exacerbated if the COVID-19 crisis altered work schedules or resulted in loss of employment. What may have been manageable while working may become untenable when not working. Taken together, the stress of the COVID-19 crisis, the consequences of extended shelter-in-place mandates, and the impact of social distancing are likely to exacerbate PTSD symptoms. Unfortunately, these factors may also make these symptoms more difficult to treat.

Prolonged Exposure (PE) therapy is a highly efficacious treatment for PTSD across trauma-exposed populations (e.g., Cusack et al., 2016; Foa et al., 1999, 2005, 2018; Rothbaum et al., 2005; Schnurr et al., 2007), including those with comorbid depression (Powers et al., 2010), anger problems (Ford et al., 2018), guilt (Resick et al., 2002), and alcohol use disorder (Norman et al., 2019). As described in more detail below, the core interventions of PE consist of in vivo and imaginal exposure, wherein a person gradually engages with avoided environmental trauma-related cues (i.e., in vivo exposure) and engages in repeated imaginal re-creations of the traumatic event (i.e., imaginal exposure), followed by discussion of this exposure, (i.e., “emotional processing”). PE is considered a front-line PTSD treatment by institutional clinical practice guidelines such as those issued by the American Psychological Association and the U.S. Departments of Veterans Affairs and Defense (Hamblen et al., 2019). Although PE has been implemented effectively via telehealth procedures (Acierno et al., 2017, Morland et al., 2019), its implementation may require specific alterations during the COVID-19 crisis due to public health mandates calling for sheltering in place and physical distancing.

Physical distancing and shelter-in-place mandates set forth by the Centers for Disease Control and

Prevention (CDC, 2020), World Health Organization (WHO, 2020), and other government entities required mental health therapists to refrain from seeing patients in person, across virtually all settings. While following these directives is essential to reduce viral spread for collective safety, it has required many mental health therapists to adapt their practice quickly by transitioning to telehealth. Moreover, these public health mandates have forced behavioral health therapists to consider safety and feasibility as they implement PE treatment procedures that involve some risk of exposure to COVID-19. As such, this paper discusses considerations for implementing PE during the COVID-19 pandemic, and these strategies also may be applied to other situations where physical distancing must be considered. We briefly review guidelines for conducting therapy via telehealth, as this has been discussed extensively elsewhere (e.g., the American Telemedicine Association (Turvey et al., 2013); U. S. Department of Veterans Affairs & U.S. Department of Defense, 2017). We first provide considerations for starting PE and then focus on in vivo exposure, as this element of treatment is most likely to be impacted by COVID-19 restrictions. We present some considerations related to using technology during imaginal exposure; however, we expect that imaginal exposure and emotional processing will follow standard practice of PE. Finally, we discuss implications for using PE in the event of a future health pandemic.

Prolonged Exposure for PTSD

PE is a time-limited, cognitive-behavioral treatment for PTSD typically delivered in 8–15 sessions lasting 90 min each (Foa et al., 2019). Based on emotional processing theory (Foa & Kozak, 1986), PE works to address the trauma-related avoidance of thoughts, behaviors, and situations, as well as erroneous beliefs about dangerousness in the world and oneself as incompetent that develop as a result of trauma. By helping the patient in systematically approaching such content, the goals of PE are for patients to emotionally process their traumatic experiences, concepts, and perceptions so as to modify behaviors to overcome avoidance and reengage with life activities.

Session 1 involves a presentation of the rationale for treatment, including approaching trauma-related thoughts, feelings, and situations. This is followed by an interview focused on the most distressing, or index, trauma and its impact on current functioning. During this session, patients are also taught breathing retraining exercises. Session 2

focuses on psychoeducation about common reactions resulting from trauma, development of the in vivo hierarchy, and assignment of the first in vivo exposure homework. Session 3 introduces imaginal exposure to the index trauma memory, followed by emotional processing of the experience. Subsequent sessions follow a recurring agenda. Treatment continues to involve review of in vivo exposure and imaginal exposure homework, a 40 min imaginal exposure followed by processing, and the assignment of additional homework. In the final session, the patient's progress is examined, relapse prevention strategies are reviewed, and plans for further improvement or maintenance are discussed. All sessions are audio recorded for the patient to listen to between sessions, as a part of homework. For a more extensive review of PE, see the published manual (Foa et al., 2019).

Considerations for Starting PE During the COVID-19 Pandemic

PE is a treatment that usually begins after a traumatic event for patients who fail to experience natural recovery. As with any psychological disorder, evaluation to determine a primary diagnosis of PTSD or major PTSD symptoms is a necessary initial step before engaging in PE. We recommend using evidence-based assessments that include a clinical interview, such as the Clinician Administered PTSD Scale for DSM-5 (CAPS-5; Weathers et al., 2013a,b), PTSD Symptom Scale-Interview for DSM-5 (PSS-I-5; Foa et al., 2016a,b), the Posttraumatic Diagnostic Scale-5 (PDS-5; Foa et al., 2016a,b), or the PTSD Checklist-5 (PCL-5; Weathers et al., 2013a,b). For additional PTSD assessment strategies and determining patients that are appropriate for PE treatment, see the published manual (Foa et al., 2019).

The decision to start a course of PE should be made through collaborative discussion with the patient, and this may be especially important during the COVID-19 outbreak. This discussion generally involves ensuring that the patient is able and willing to engage in critical aspects of the treatment, such as attending sessions and completing assignments. Many patients with PTSD face barriers during COVID-19 that are otherwise less likely. These may include, for example, lack of childcare, lack of privacy at home, or worries about finances, securing food, or housing, if income is affected. Some patients may be working longer hours and have worries regarding exposing themselves and their family members to the virus, whereas others may be sick or caring for loved ones who have the virus.

In some cases, it may be appropriate to initiate PE to help patients more effectively manage their COVID-19-related stressors by reducing PTSD symptoms. In other cases, concerns about COVID-19 may be so encompassing in patients' lives that they do not have bandwidth to adequately engage in PE. Shared decision-making (Zisman-Ilani et al., 2017) is a strategy for the therapist and patient to decide on the optimal time to start PE. It is an opportunity for therapists to share information about the effectiveness of PE, discuss with the patient how therapy would work logistically given COVID-19 restrictions, and discuss the patient's unique circumstances related to treatment planning. Some patients may have valid barriers that suggest the necessity of delaying treatment. It is important to distinguish these concerns from PTSD-related avoidance that may influence decisions to stall or disengage in treatment. The therapist can assist the patient by separating valid barriers from PTSD-related avoidance to make the best decision. Therapists can ask specific questions about their patients' presenting concerns, while also discussing the benefits and consequences of moving forward with PE. Therapists can share aspects of treatment that can be flexible to accommodate patients' circumstances, such as session timing or frequency, and gain feedback regarding the acceptability of any such arrangements.

The presence of children and other family members at home during sessions is one major source of patient concern observed by the authors. The therapist can inquire about childcare from a partner, family, or friends. Ensuring that those in need of care during sessions are receiving such care by people the patient trusts and who can manage for the 90 min session can allow the patient to fully engage in treatment sessions. If the family concerns primarily relate to privacy, discussion of where the session will occur and what are the likely obstacles to privacy is necessary. It may be sufficient to brainstorm the location of the sessions and consider whether the patient has any closed-door space, including a bedroom, bathroom, or garage. If not, alternate sites for session may be necessary. For instance, many patients prefer to do the session in their parked car so that they can be away from interruption and avoid possible others overhearing the session. Daily imaginal exposure homework is another occasion that requires a degree of privacy. As it occurs independently, there is an opportunity to achieve privacy for homework by waking early to complete it before family is awake or after children go to sleep. These

plans should be revisited if issues come up in the course of treatment (such as session interruptions by family, etc.).

If logistical issues have been solved but the presence of family continues to be a concern, therapists might discuss the cost of temporary disruption of family routine for the benefit of eliminating the impact of PTSD. For example, the therapist may offer the following: “It sounds like you really care about your family’s comfort and well-being since you are worried about doing your sessions in the home. I wonder how PTSD gets in the way of their comfort? What would it be like for PTSD not to impact your family?” While ultimately it is the patient’s decision to begin or continue PE, it is important to help patients engage in and remain in treatment if possible. It is important to remind the patient that any arrangements to accommodate PE will be time-limited given the brief nature of the treatment.

Patients may also voice concerns about personal health conditions that could put them at increased risk of complications from a COVID-19 infection. We recommend consultation with the patient’s primary care physician or (specialist for relevant conditions) to establish a shared understanding of whether restrictions or precautions are necessary beyond public health guidelines.

Considerations for PE via Telehealth

Telehealth is broadly defined as providing health services using technology and electronic communications to support patient care. In the time of the COVID-19 pandemic, telehealth has become a necessary method for delivering outpatient behavioral health treatment, including PE. Fortunately, decades of research have demonstrated that anxiety and depression can be treated safely and effectively over video (Tuerk, Keller, & Acierno, 2018) and there have been a number of studies specifically supporting the use of evidence-based treatments for PTSD via telehealth (Acierno et al., 2016; Morland et al., 2014; Morland et al., 2015). PE via telehealth is feasible and noninferior to in-person delivery (Acierno et al., 2017; Morland et al., 2019; Tuerk et al., 2010). Based on this evidence, the *VA/DoD Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder* gives a strong recommendation to deliver PE via telehealth (U.S. Department of Veterans Affairs & U.S. Department of Defense, 2017).

PE via telehealth can be done through a “hub and spoke model,” whereby the therapists and patients are both at separate office locations, or

through telehealth to home, where the patient is in his or her home. The former is useful when the patient is far from a medical center that houses mental health services but can access a satellite clinic of that medical center. Home-based telehealth further improves access and convenience, and during the pandemic is most consistent with physical distancing and sheltering-at-home mandates; however, it creates more uncertainty in technology and confidentiality.

There is support for flexible use of technology and applications when delivering PE (Franklin et al., 2017). Several considerations should be made at the start of the telehealth delivery, regardless of whether one is beginning PE with a new patient or transitioning a current PE patient to telehealth. It may take a separate session or brief appointment to orient the patient to the new technology. Therapists and patients should discuss and agree that homework and weekly self-report PTSD and depression assessment measures will be completed prior to session and how these will be shared. Examples of methods for sharing include encrypted e-mail, screenshots of paper documents during session, and shared screen functionality of the televideo software. The smartphone application PE Coach (U.S. Department of Veterans Affairs, 2017a, 2017b) may be useful to support the organization of the session content and homework recording for remote sessions.

The American Telemedicine Association (ATA) outlines practice standards for video behavioral health encounters. For a more extensive review on technology and security information, see the *ATA Practice Guidelines for Video-based Online Mental Health Services* (Turvey et al., 2013).

PE via Phone Sessions

Therapists providing PE via telehealth modalities must be prepared for technical issues and should expect instances of video disruption, during which they can continue sessions via telephone. There is not sufficient evidence to take a decisive stance for or against conducting an entire course of PE via telephone. There is reason for caution, as PE via telephone has not been tested as an effective delivery modality, and one cannot see facial cues indicative of patient distress during imaginal exposure. Nonetheless, there are anecdotal observations by the authors of successful courses of PE via telephone. We propose that it is most certainly preferable to complete a session via telephone rather than cancelling it outright, provided it is not the first session of imaginal exposure, and particularly if the

therapist is familiar with the patient's level of affective engagement. If there is a pattern of video disruption that develops the therapist and patient should consider problem-solving technical issues using software help desks. If there is no technical resolution available, we recommend then shared decision making on whether it would be more appropriate to continue via telephone or wait to resume PE under better technical circumstances or later in-person.

Considerations for in Vivo Exposure

The aim of in vivo exposure in PE is for patients to be in the presence of discriminative stimuli associated with the trauma (i.e., reminders/triggers) for a sufficient duration and intensity so that distress reactions are elicited, and then, over time, begin to diminish despite remaining in the presence of the stimuli. In addition to, or sometimes instead of, reduction of emotional reactivity, in vivo exposure also results in an increased ability to handle negative affect or learn that intense affect is not dangerous and the patient can handle it. As such, in vivo exposure is a key treatment strategy for virtually all anxiety disorders. Through the process of in vivo, the patient breaks the self-reinforcing cycle of avoidance (i.e., gains corrective learning about the safety level, facilitates habituation to the trauma stimuli, and achieves a sense of mastery that he or she can handle negative affect and difficult situations). In vivo exposure practice items are generated by the patient in collaboration with the therapist. Together, they consider the relative risk of specific potential items in the context of what the individual wants or needs in order to increase functioning. The chosen items are included on the hierarchy. Patients then rate each exposure item on their hierarchy using the SUDs scale to indicate the level of distress they expect to experience when facing a particular situation. Exposures are chosen for practice each week, to be conducted daily if possible, and discussed at the following session. Patients begin with activities with moderate SUDs (not so low as to not elicit any distress), and then gradually work up their hierarchy as they become more comfortable in each exercise they practice. Patients are encouraged to stay in the exposure situation for an extended duration, preferably until their distress level, as measured by SUDs, is decreased by about 50% or more.

Unfortunately, the restrictions in place due to COVID-19 may reinforce some of the exact avoidance behaviors and beliefs that in vivo exposure counteracts. People are encouraged to limit time in public or stay at home entirely to reduce viral

spread and are reminded daily that mundane social contact carries risk. Even without guidance to do so, people may naturally develop increased vigilance of these potential threats or become watchful and suspicious of those who disregard COVID-19 warnings.

However, with some creativity and a strong grasp of the fundamentals of exposure, PE therapists still can find opportunities to challenge trauma-related avoidance while adhering to public health guidelines. Studies of PE in constrained environments such as residential settings show that it is feasible to conduct in vivo exposure successfully in such settings (e.g., [Norman et al., 2016](#)). When generating or modifying an existing hierarchy during COVID-19, it is important to consider reasons a patient is avoiding specific activities—often called the feared consequence. For example, elevators may be avoided because the movement generates aversive bodily sensations, or because of fear that a stranger will enter and assault them, or due to fear of being trapped. The therapist may assign patients who fear the bodily sensation to practice in-vivo assignments in their homes that generate the same sensations, such as spinning in a chair. Patients who are afraid of getting trapped can go into small spaces in their homes, such as an attic, basement, or closet. The pandemic may also bring about new fears and avoided situations or exacerbate existing ones. For example, while most people feel less safe during the pandemic, the authors have heard from several patients that they are taking measures to prepare for mass violence and looting they believe will result from the pandemic, such as buying firearm ammunition. Therapists should assess for situations brought on or exacerbated by the pandemic and add these to the hierarchy as indicated. Importantly, during the development of the hierarchy and throughout treatment, therapists should discuss health risks related to in vivo exposure with patients and should not make health decisions for them during the pandemic. COVID-19 considerations and examples for common in-vivo exposure hierarchy categories are addressed below. Additional examples can be found at: https://www.ptsd.va.gov/covid/COVID_pe_in-vivo.asp.

Exposure to Situations, Activities, Objects That Are Avoided Because They Are Perceived as Dangerous

Situational exposures appear most likely to present challenges during COVID-19-related restrictions, as they may directly incorporate strangers, businesses, and traveling in public. For many PTSD

patients, in vivo exposures in this category may include going to crowded places, such as coffee shops, malls, sporting events, department or big box stores, etc., many of which have been closed during the pandemic. Moreover, essential businesses that are open, and now other businesses that are slowly reopening, require new ways of engagement, such as staying 6 feet apart, wearing face masks, and having few people inside at a time. These societal changes create a context that may not activate the same level of fear or threat-related thoughts that a patient might experience under normal circumstances (e.g., due to lack of crowds), or it may actually increase the actual or perceived threat to the patient (due to the possibility of COVID-19 infection). When faced with these limitations, PE therapists (as always) need to consider carefully the specific trauma-related fears and feared consequences that are underlying situational avoidance and look for appropriate activities that could still address those fears. Some suggestions include the following:

- Spending time in a busy but open outdoor space (both to maintain physical distancing and/or face feeling vulnerable in locations without cover). If a particular crowded store were an in vivo hierarchy item, going to this store and parking in the lot may be an appropriate in vivo homework. Another idea may be walking around that area, maintaining social distance if consistent with local procedures.
- Walking in the neighborhood and making appropriate eye contact with the neighbors and saying “hello” from a safe distance.
- Driving to an unfamiliar location.
- Engaging in virtual exposures, such as watching videos with images and sounds of large, crowded events.
- Viewing on YouTube “Andrew M. Sherrill, PhD [360 Videos],” a public-access site with 360°, virtual reality videos to use for exposures. It requires the use of a virtual reality headset, which can be purchased at low cost, (e.g., Google Cardboard certified viewer <https://arvr.google.com/cardboard/get-cardboard>).

When creating the hierarchy, the therapist and patient should not limit items based on COVID-19 restrictions, but instead create the hierarchy that fits the patient and make efforts to find ways to approach items consistent with current safety and community standards. Plans can be made to complete exposures at a later time when COVID-19-

related risk is lessened or eliminated for activities that currently are not feasible (e.g., going to a crowded, indoor mall). It is the authors’ experience that, even when patients cannot complete some specific activities on their list, with successful treatment, anticipatory anxiety can still reduce as patients feel prepared to handle negative affect and difficult situations. This heightened efficacy can be an important insight for patients as they review their in vivo hierarchy at the final session.

Exposure to Situations or Cues That Are Avoided Because They Are Reminders of the Trauma

In vivo exposure to trauma-related cues is less dependent on interpersonal activities and the world at large. This part of PE may therefore be relatively less vulnerable to disruption from COVID-19. Personal reminders of the trauma, such as photos from deployment or of an acquaintance who perpetrated sexual assault will be accessible at home already. Other sights or sounds related to trauma may be approximated through media at home, such as TV/-movies, online videos, online image search, video games, or books. When assigning exposures that are completed through the use of technology, have these materials be specific and vetted with your patient prior to assigning the exposure. Situations in the world that are avoided strictly because they serve as trauma reminders often do not need to be crowded or even fully accessible. For instance, they could involve driving by the house where an assault occurred, or driving to a spot on the road where a motor vehicle accident occurred. During the COVID-19 pandemic, when some activities are limited, therapists can include a focus of exposure to emotional vulnerability and numbness. Therapists also can use behavioral experiments to approach emotional expression and consider negative cognitions such as “emotions are weak,” or “there is no value in emotional connection.” Activities could include touching/physical closeness to family members (to encourage feeling vulnerable) or emotional exposure by opening up about feelings or writing a no-send letter to put feelings to words.

Eliminating Safety Behaviors

Safety behaviors are activities in which patients engage to reduce their negative affective reactions when confronted with trauma-related stimuli that are not connected to actual reduction of risk. For instance, such behaviors may include patients’ having to carry benzodiazepines in their pocket when

going to church or constantly scanning when walking through the grocery store. Safety behaviors prevent patients from learning that they can engage in a specific situation and are safe and/or can tolerate their distress. Instead, they reinforce the notion that their safety or ability to handle the experience is due to the safety behavior. Typically during treatment, patients are asked to do their best to eliminate safety behaviors in the course of conducting in vivo exposure, as these behaviors can undermine the opportunity for corrective learning. However, for many patients who are highly anxious or avoidant, it is challenging to find a context in which there is a baseline sense of safety and comfort that is not dependent to some degree on safety behaviors. Even in the situation where they feel most comfortable (e.g., alone at home, watching a movie), they may acknowledge the presence of safety behaviors, such as looking out the window periodically to see who is in the neighborhood. They may also be passively monitoring the environment (e.g., their couch is already set up so that they face the door; weapons are stashed in the home) in ways that do not immediately come to mind as “behavior.” In these cases, systematically eliminating safety behaviors, including passive monitoring for threats, can be used as an in vivo exposure in itself. This type of in vivo exposure activity may be particularly useful during COVID-19 restrictions, since it may create opportunities that are accessible without having to leave the house. The important thing to remember is that the actual activity in which the patient engages is not essential, provided it is not so distracting that it serves as a safety behavior in itself. The emphasis of the exposure is on spending time without use of the safety behavior.

Examples include the following:

- Engaging in a quiet activity while sitting with one’s back to the unlocked front door of the home or to the outside of the house.
- Spending time in the home with all weapons locked away and out of reach.
- Closing one’s eyes and listening to music in a remote part of the home (where it’s impossible to monitor the entrances).
- Keeping lights in the home on or off at night, depending on which is difficult. Some patients report anxiety about keeping the house lit, because assailants could be monitoring their movements from outside. Others report keeping the house well-lit at all times so they can monitor for intruders in the house.
- Opening blinds/windows.
- Refraining from looking out the window to monitor the neighborhood.
- Keeping interior doors open or closed, depending on which is difficult. Some patients leave them open to be able to see into the space; others keep them shut for reassurance that the room is empty.

Behavioral Activation

Behavioral activation is not exposure per se, but trauma-related avoidance and avoidance of pleasurable activities often go hand in hand. Furthermore, there is both overlap and high comorbidity between PTSD and depression (Rytwinski et al., 2013), and comorbid depression negatively impacts treatment outcomes in PTSD treatment (Green et al., 2006; Steiner et al., 2017). Therefore, it is appropriate to include behavioral activation activities on the in vivo hierarchy, even if they are not anticipated to create distress. During the pandemic, many activities that patients normally enjoy or that help them manage stress, like going to the gym or meeting friends in a public place, may not be available. The in vivo hierarchy can be a place to help patients identify behavioral activation items that are safe and feasible. With some creativity, there are plenty of opportunities for behavioral activation even during social distancing:

- Going for a walk in nature or on a quiet street (wearing appropriate personal protective equipment).
- Playing games with family in the home or back yard.
- Exercising in the home, such as calisthenics or following an online exercise video.
- Cleaning.
- Working in the yard.
- Watching an engaging movie – comedy or action.
- Listening to upbeat music.
- Doing projects around the house that are rewarding or physically engaging.
- Socializing or playing games with others through internet apps or gaming systems.
- On-line workouts and social events (hosted by local gyms, Team Red White and Blue, etc.).

Therapist-Assisted in Vivo

Sometimes during the course of PE it is helpful to complete a therapist-assisted in vivo exposure with a patient. Therapist-assisted exposure can occur in the office (e.g., looking at pictures of a deceased loved one involved in the trauma story) or in public

(e.g., visiting a crowded place that is on the in vivo hierarchy together). The therapist-assisted in vivo exposure has a few goals, depending on the function of the patient's avoidance. These include supporting the patient to start the exposure, stay in the exposure for a period of time to experience new learning, and/or understand the specific thoughts that may be maintaining avoidance of the situation. During the COVID-19 pandemic, it is likely very difficult to complete an in-person in vivo exposure for the same reasons that in-person therapy sessions are not an option. However, patients can use their phones and its video applications for therapist-assisted in vivo exercises. Additionally, therapists can utilize telehealth to observe or support in vivo exposure in the home. For example, if a patient avoids the sound of fireworks because it reminds him or her of gunfire that occurred during the trauma, the therapist may conduct a therapist-assisted in vivo exposure through telehealth. This may include sharing a computer screen with the patient and playing a video of fireworks for an agreed period of time. The volume can be set according to the intended level of exposure intensity, and increased within session if the patient habituates to lower volume levels. Processing of the experience would follow. The patient would be instructed to complete the same in vivo exposure independently and with repetition. Another example would be if a patient avoided the room where their child died by suicide. If this was a particularly challenging in vivo exposure, the patient could have the therapist on video call the first time they entered the room, discuss what they see and the thoughts and feelings they are experiencing.

Considerations for Imaginal Exposure and Processing

A key component in PE treatment, imaginal exposure, is the procedure that helps patients directly experience their emotions about the trauma, reduce anxiety when cued by the trauma memory, and process the meaning of the trauma. Typically, imaginal exposure begins in PE Session 3 when the therapist describes the rationale for the procedure and then guides and supports them in recounting the memory in detail. The trauma narrative is audio recorded so the patient can listen between sessions for homework. When conducting remote sessions, in ideal circumstances a patient will have two devices: one for the telehealth encounter and one for recording the imaginal exposure. This way, the therapist can see (and hear) the patient while they record the narrative using the PE coach, a smartphone or tablet

audio feature, or any other audio recording device that includes playback. Therapists should inquire about computers, laptops, tablets, and smartphones. Some patients may have old, inactive phones they can use for the imaginal exposure recording. For patients who have access to one video device, typically teleconference platforms do not support simultaneous activity of the therapist viewing the patient and the patient recording audio. It is important to identify patients' current device status before starting treatment or within the first session. This provides the patient and provider a few sessions to problem-solve recording difficulties before imaginal exposure starts. If there is no solution to have two devices, therapists may consider splitting the session to conduct via video any session content prior to imaginal exposure, then conduct imaginal exposure via phone so that the patient can audio record the content, and then complete processing and homework assignment through video again. If audio recording during sessions continues to be a problem, therapists may consider purchasing low-cost digital recorders and mailing one to patients, or request that patients purchase recorders. As a last resort, if audio recording of imaginal exposure is not an option during session, patients may record narration of the memory independently, directly after the session, so that the therapist can view them via video completing in-session imaginal exposure. Any alternations made whereby the therapist does not view the patient during imaginal, or they do not audio record the imaginal exposure and processing in session, should be considered on a case-by-case basis and can be consulted on with other PE therapists. Some video conferencing software allows for direct, digital recordings of the sessions, although this creates the potential for distraction by the image of the patient upon later review. It also requires discussion with the patient about proper storage and encryption of the video file. An alternative approach is to use the patient's phone for audio recording, as is often used for in-person PE sessions. As usual, this necessitates discussion of password protecting the patient's phone. As discussed previously, completing any therapy in the home, including PE, runs the risk of breaches in privacy if other family members can hear components of the sessions. This is particularly important to consider with imaginal exposure, given the nature of detailed content the patient will say out loud. Thus, therapists should discuss privacy concerns with their patients before beginning treatment with this in mind.

Another important component of imaginal exposure is successful emotional engagement to support

enough activation of the trauma memory and emotions while still being able to integrate leaning and corrective information. Request increased communication on the part of the patient, particularly when engaging in phone sessions as well as relying on SUDs ratings can support successful emotional engagement. For example, if video connection were lost during a session and the decision was made to resume the session and complete in imaginal exposure and processing via phone contact, a therapist may direct the patient to describe what they noticed about their physical response during imaginal exposure during the processing phase or ask them to articulate in more detail about the process of imaginal exposure today. If a patient becomes overly engaged and emotionally dysregulated, have a pre-determined plan to help the patient reduce distress in subsequent sessions. The PE manual includes specific suggestions for overengagement that can be utilized during imaginal exposure, including revisiting the memory with eyes open, in past tense, or written and read aloud.

Some patients may be concerned about resuming life activities directly after a telehealth encounter that includes imaginal exposure whereby there are lingering thoughts about the trauma. This may be different during the pandemic due to many activities occurring in the home sequentially and without the physical and emotional buffers that typically occur (e.g., walking or driving back home or to work after a session). While over the course of treatment experiences such as taking care of children or conducting a work meeting directly after a session may support patients' disconfirmation that they can't handle thinking of trauma memory, therapists may consider discussing with the patient activities they find emotionally regulating and developing a plan to engage in these directly after the session (e.g., taking a walk around the block) before engaging in the next life activity. Emotional processing following imaginal exposure should follow the typical course of PE treatment, whereby it may include considerations for the current context, in this case COVID-19, depending on the patient's specific trauma-related thoughts and feelings.

Conclusion

PE is a highly effective and flexible individualized treatment for PTSD. During the unprecedented and uncertain circumstances of the COVID-19 pandemic, therapists will continue using PE. This paper draws on insights from experts across the country

who conduct PE, provide training and consultation through national training programs, and are authors of the PE manual. We described clinical considerations to successfully conduct PE during the COVID-19 pandemic that include the use of shared decision making (Zisman-Ilani et al., 2017) for engaging patients and the use of video telehealth and phone sessions to augment video when there are technical challenges. In addition, several ideas for how to focus the delivery of in vivo exposure during periods of quarantine and shelter-in-place mandates were described, including in vivo exposure that is compatible with current health restrictions, that can be conducted in the home, approximated through media or other activities, and given limitations to be out in the world, to focus on the specific trauma-related fears underlying situational avoidance and seek out appropriate activities that could still address those fears. Specific ideas for different categories of exposure during the pandemic, including exposure to situations avoided because they are perceived as dangerous, situations that are trauma reminders, safety behaviors, and behavioral activities, were detailed. While these ideas are not comprehensive, we intend for them to be a jumping-off point to support providers creatively working with patients. We recommended developing the hierarchy to fit the patient's treatment needs and following current safety and community standards during in vivo exposure. The use of technology to conduct sessions can easily support therapist-assisted in vivo exposures.

We expect imaginal exposure and processing to have limited disruptions when conducting PE during pandemic; still, a few considerations were presented, including using two technology devices to be able to audio record imaginal while seeing the patient, and supporting the patient in creating time between the session content and returning back to life activities given the likelihood all these activities are happening at home.

This article serves as a guide for those seeking to improve their understanding of conducting PE during COVID-19. Since March 2020, we have had the opportunity to engage with mental health providers and learn first-hand from their work in conducting PE during the COVID-19 restrictions. Public health restrictions have propelled therapists to be flexible in their delivery format and to develop meaningful and effective hierarchies with their patients that remain effective within restrictive public health guidelines. As mental health providers continue to grow aware of the impact of the pandemic on the

psychological stress of their patients, particularly those with PTSD, these recommendations for conducting PE may serve as a critical support for their practice.

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The authors have no conflicts of interest to declare.

We would like to thank all the mental health therapists treating PTSD and related conditions during the COVID-19 pandemic, and Julie Collins and Joel Williams, who provided editorial support for this manuscript.

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Received: May 15, 2020

Accepted: September 18, 2020

Available online xxxx