

Summary of the Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder (PTSD) in Adults

Guideline Development Panel for the Treatment of PTSD in Adults, American Psychological Association

The American Psychological Association (APA) developed a clinical practice guideline (CPG) to provide recommendations on psychological and pharmacological treatments for posttraumatic stress disorder (PTSD) in adults. This paper is a summary of the CPG, including the development process. Members of the guideline development panel (GDP) used a comprehensive systematic review conducted by the Research Triangle Institute–University of North Carolina Evidence-based Practice Center (RTI-UNC EPC) as its primary evidence base (Jonas et al., 2013). The GDP consisted of health professionals from psychology, psychiatry, social work, and family medicine as well as community members who self-identified as having had PTSD. PTSD symptom reduction and serious harms were selected by the GDP as critical outcomes for making recommendations. The GDP strongly recommends use of the following psychotherapies/interventions (in alphabetical order) for adults with PTSD: cognitive–behavioral therapy, cognitive processing therapy, cognitive therapy, and prolonged exposure therapy. The GDP conditionally recommends the use of brief eclectic psychotherapy, eye movement desensitization and reprocessing (EMDR), and narrative exposure therapy (NET). For medications, the GDP conditionally recommends the following (in alphabetical order): fluoxetine, paroxetine, sertraline, and venlafaxine. There is insufficient evidence to recommend for or against offering Seeking Safety, relaxation, risperidone, and topiramate. A subgroup of the GDP reviewed studies published after the systematic review for those treatments that received substantive recommendations; the GDP concluded that future systematic reviews that incorporated those new studies could change the recommendations for EMDR and NET from conditional to strong. For all other treatments, results of the update indicated that recommendations were unlikely to change or that there were no new trials for comparison. The target audience for this CPG includes clinicians, researchers, patients, and policymakers.

Keywords: PTSD, clinical practice guideline, trauma

Editor's note. The members of the Guideline Development Panel for the Treatment of PTSD in Adults were Christine A. Courtois (chair), Washington, District of Columbia; Jeffrey H. Sonis (vice-chair), Department of Social Medicine, University of North Carolina at Chapel Hill; Laura S. Brown, Seattle, Washington; Joan M. Cook, Department of Psychiatry, Yale School of Medicine; John A. Fairbank, Department of Psychology and Neuroscience, Duke University; Matthew J. Friedman, Department of Psychiatry, Dartmouth Geisel School of Medicine; Joseph P. Gone, Department of Global Health and Social Medicine, Harvard Medical School; Russell T. Jones, Department of Psychology, Virginia Polytechnic Institute and State University; Annette M. La Greca, Department of Psychology, University of Miami; Thomas A. Mellman, Department of Psychiatry and Behavioral Sciences, Howard University Hospital; John Roberts, Jacksonville, Florida; and Priscilla Schulz, Seattle, Washington. American Psychological Association guidelines staff: Lynn F. Bufka, Raquel Halfond, and Howard Kurtzman.

facilitate decision making for both provider and patient. It is not intended to limit scope of practice in licensing laws for psychologists or for other independently licensed professionals, nor limit coverage for reimbursement by third party payers. This document was adopted as APA policy on February 24, 2017, and will be reviewed within five years of this date. A decision to sunset, update, or revise the document will be made at that time. For guidance on using this guideline please refer to [Placing Clinical Practice Guidelines in Context](#).

The full guideline is available at <http://www.apa.org/ptsd-guideline/ptsd.pdf> (Appendix is available at <https://www.apa.org/ptsd-guideline/appendices.pdf>). The present article is not the formal guideline. In order to meet publication requirements, the order was changed, and some additional content was added.

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This guideline is intended to be aspirational. It is not intended to create a requirement for practice but rather to be a general guide and

Scope of the Guideline

A systematic review of the evidence for treatment, *Psychological and Pharmacological Treatments for Adults With Posttraumatic Stress Disorder* (PTSD; referred to below as the RTI-UNC Systematic Review or Jonas et al., 2013; see Table 1), served as the primary evidence base.¹ The trials included in the systematic review had samples that were broadly diverse in terms of gender, race, ethnicity, and type of trauma.

The RTI-UNC Systematic Review addressed the following Key Questions:

1. What is the efficacy of psychological and medication treatments for adults with PTSD, compared to no treatment or to inactive controls?
2. What is their comparative effectiveness (i.e., psychological treatments compared to other psychological treatments, medication treatments compared to other medication treatments, and psychological treatments compared to medication treatments)?
3. Which treatments work best for which patients? In other words, do patient characteristics or type of trauma modify treatment effects?
4. Do serious harms of treatments or patient preferences influence treatment recommendations?

In this guideline, the term *efficacy* refers to the impact of a treatment compared to an inactive control. The term *comparative effectiveness* of two treatments refers to the impact of two active treatments compared to each other or the impact of a PTSD treatment to an active control. Although of considerable importance in the treatment of PTSD, this guideline does not address complementary or alternative treatments, acute stress disorder (ASD), assessment and screening of PTSD, subthreshold PTSD, PTSD prevention, PTSD treatment in children, dose/timing/duration of treatment, or cost. It is the hope of panel members that future iterations of this guideline (American Psychological Association, Guideline Development Panel for the Treatment of PTSD in Adults, 2017a, 2017b) include these topics as the evidence base develops.

Trauma involves events that pose significant threat (physical, emotional, or psychological) to the well-being and safety of the victim or loved ones/friends and are overwhelming and shocking. Many adults exposed to traumatic events experience a range of posttraumatic psychophysiological reactions, though most of these reactions remit spontaneously within approximately the first month of occurrence (Nugent et al., 2009; Orcutt, Erickson, & Wolfe, 2004; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). If reactions persist, they might meet criteria for PTSD. The 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American*

Psychiatric Association, 2013), defines PTSD as comprised of four clusters of symptoms including intrusive and recurrent memories of the trauma, avoidance of trauma-related stimuli, numbing and/or negative changes in mood or cognitions pertaining to the trauma, and changes in physiological reactivity and arousal. The *DSM-IV-TR* (4th ed., text rev.; American Psychiatric Association, 2000) previously defined PTSD as being comprised of three symptom clusters including avoidance and numbing, reexperiencing, and hyperarousal. Of note, all of the studies included in the RTI-UNC systematic review that served as the evidence base for that report used *DSM-IV-TR* or earlier *DSM* criteria and are those discussed throughout this guideline. In a large national sample in the United States, Kilpatrick, et al. (2013) showed 96.5% concordance between *DSM-IV-TR* and *DSM-5* on diagnosis or absence of diagnosis of PTSD. Members of the APA PTSD GDP (hereafter referred to as “the panel” or “members of the panel”) therefore believe that the findings from the systematic review and this guideline are likely to be applicable to patients who are diagnosed with PTSD based on *DSM-5*.

PTSD can range from relatively mild to totally debilitating, can be short-term or lifelong, and has been found to create vulnerability for revictimization and retraumatization (for a comprehensive overview, see Duckworth & Follette, 2012). Some individuals and populations are especially at risk, and comorbidities such as substance use and abuse, depression, anxiety, dissociation and dissociative disorders, personality disorders, psychosis, cognitive impairment, personal risk taking, violence toward self and others, difficulty with relationships and parenting, and increased risk of non-suicidal self-injury and of suicide are common to the diagnosis (Sareen, 2014). Psychosocial impacts can include occupational and career difficulties, homelessness, poverty, and incarceration, among many others (such as Vogt et al., 2017). These factors make PTSD a complicated and challenging psychophysiological and psychosocial disorder to treat and suggest the need for detailed guidance to indicate which treatments are effective and for whom.

Currently, numerous guidelines from various agencies and professional organizations recommend several trauma-focused psychological interventions for treating PTSD, and most acknowledge some benefit of several medication treatments (Forbes et al., 2010). The present guideline differs from other guidelines in several ways. It fully follows and builds upon the standards set forth by the Institute of Medicine (IOM; now the National Academy of Medicine) of the National Academies of Sciences, Engineering, and Medicine standards for developing high-quality, independent, and reliable practice guidelines (IOM, 2011a). Its recommendations and suggestions for treatment are based on an

¹ This review has since been updated (Hoffman et al., 2018). Any decisions to revise APA’s guideline will consider new systematic reviews for its evidence base.

Table 1

Summary of Recommendations of the APA Guideline Development Panel for the Treatment of PTSD in Adults

Intervention recommendation	Strength of recommendation
Psychotherapy	
For adult patients with PTSD, the panel strongly recommends that clinicians offer one of the following psychotherapies/interventions (listed alphabetically):	Strong For
<ul style="list-style-type: none"> • Cognitive behavioral therapy (CBT) • Cognitive processing therapy (CPT) • Cognitive therapy (CT) • Prolonged exposure therapy (PE) 	
For adult patients with PTSD, the panel suggests that clinicians offer one of the following psychotherapies/interventions (listed alphabetically):	
<ul style="list-style-type: none"> • Brief eclectic psychotherapy (BEP) • Eye movement desensitization and reprocessing therapy (EMDR) • Narrative exposure therapy (NET) 	
For adult patients with PTSD, there is insufficient evidence to recommend for or against clinicians offering the following psychotherapies/interventions (listed alphabetically):	
<ul style="list-style-type: none"> • Relaxation (RX) • Seeking Safety (SS) 	Insufficient
Pharmacotherapy	
For adult patients with PTSD, the panel suggests that clinicians offer one of the following (listed alphabetically):	Conditional For
<ul style="list-style-type: none"> • Fluoxetine • Paroxetine • Sertraline • Venlafaxine 	
There is insufficient evidence to recommend for or against clinicians offering the following medications (listed alphabetically) for treatment of adults with PTSD.	
<ul style="list-style-type: none"> • Risperidone • Topiramate 	
Comparative effectiveness	
For adult patients with PTSD, the panel recommends clinicians offer either prolonged exposure or prolonged exposure plus cognitive restructuring when both are being considered.	Strong For
For adult patients with PTSD, the panel recommends clinicians offering either venlafaxine ER or sertraline when both are being considered.	Strong For
For adult patients with PTSD, the panel suggests clinicians offer CBT rather than relaxation when both CBT and relaxation are being considered.	Conditional For
For adult patients with PTSD, the panel suggests clinicians offer prolonged exposure therapy rather than relaxation when both prolonged exposure therapy and relaxation are being considered.	Conditional For
For adult patients with PTSD, the panel concludes that the evidence is insufficient to recommend for or against clinicians offering Seeking Safety versus active controls.	Insufficient

analysis of a comprehensive independent systematic review of the literature for treatment of PTSD in adults. Further, panel members who worked on the present guideline document were an interdisciplinary group from professions including psychology, social work, primary care, and psychiatry—and included consumer members as well. Finally, the present guideline includes attention to potential and actual harms and burdens of PTSD treatments and patient preferences as part of the process.

It was the panel's goal in the development of this guideline to render a collective judgment and decision-making process that is transparent so that interested readers might appropriately appreciate the rationale for the recommendations made in response to the evidence in the systematic review. This guideline may provide a foundation for developing key questions for future systematic reviews leading to updated recommendations regarding effective treatments for PTSD in adults. Finally, it should be reiterated that a clinical practice guideline is based

on the best available research evidence at the time of its development and should not be construed as a standard of care or prescribing a specific course of treatment.

Process and Method

Following its detailed review of the findings of the systematic review, the panel considered four factors as it drafted recommendations: 1) overall strength of the evidence; 2) the balance of benefits versus harms/burdens; 3) patient values and preferences; and 4) applicability. Based on the combination of these factors, the panel made a strong or conditional recommendation for or against each treatment or made a statement that there was insufficient evidence to be able to make a recommendation for or against. The panel used a tool called a *decision table* to document its decision-making process for each recommendation. Copies of the decision tables are available in [Appendix D](#) of the full guideline document.

Treatment Outcomes Considered in the Guideline

The members of the panel identified and prioritized outcomes for treatment decision-making, using the Delphi method following the GRADE Consortium system recommendation (Guyatt et al., 2011a, 2011b). The Delphi method uses multiple rounds of questions posed to experts who answer anonymously. Discussion of aggregate responses follows each round of questions. The GRADE system is a transparent methodology for grading the strength of evidence and recommendations in guideline development that is widely used and considered to be a benchmark in the field. In assigning their ratings, panel members considered the importance of the outcome, taking into consideration the perspectives of both providers and patients. *Critical outcomes* were defined as those that are essential and necessary to the treatment decision-making process. *Important outcomes* were defined as those that were significant but not critical for making a decision. Critical outcomes were weighted more heavily in recommendation decisions than important outcomes. *PTSD symptom reduction* and *serious harms (adverse events; i.e., hospitalization secondary to suicidal ideation or attempt, violence toward self or others)* were deemed *critical outcomes* by the panel. Remission, loss of PTSD diagnosis, quality of life, disability or functional impairment, prevention or reduction of comorbid medical or psychiatric conditions, adverse events leading to treatment discontinuation, other adverse events, and burdens were deemed *important outcomes*.

Panel Formation and Conflicts of Interest

APA's Advisory Steering Committee (ASC) for Development of Clinical Practice Guidelines issued a call for panel member nominations (including self-nominations) for individuals from a variety of backgrounds (consumer, psychology, social work, psychiatry, general medicine) with content and treatment knowledge or methodological expertise. Treatment developers who might have a strong allegiance to their method were not selected to serve on the GDP but their participation in the public comment period was encouraged.

Conflicts of Interest²

Before final appointment to the GDP, nominees provided information regarding possible *Conflicts of Interest* (COI), a significant issue in the Agency for Healthcare Research and Quality (AHRQ, 2014) and Institute of Medicine (now National Academy of Medicine; 2011) standards. Emphasis was placed on disclosing all potential conflicts for review. While intellectual affiliations were expected, no panel members were to be singularly identified with interventions nor were they to have significant known financial conflicts

that would compromise their ability (or appearance thereof) to weigh evidence fairly. It was understood, however, that some "adversarial collaboration," a term coined by Mellers, Hertwig, and Kahneman (2001) to indicate that different points of view are to be expected and are encouraged as part of the process, would occur. Upon review of COI disclosure statements and determination of no significant conflicts, the ASC made final membership recommendations to the APA Board of Directors for confirmation.

COI forms were updated on an annual basis, or sooner if the need arose, and then reviewed by staff, the panel chair, and the ASC. While panel members had a range of activities pertinent to their roles on the panel and the treatment of PTSD, no member was deemed to have intellectual or financial conflicts of interest that would limit participation in decision-making.

Comprehensive Search of the Professional Literature

A *systematic review* involves a methodical and organized search for studies of efficacy and effectiveness regarding the treatment under consideration (IOM, 2011b). The RTI-UNC Systematic Review was selected as the primary evidence base because it followed rigorous standards including assessment of study quality, provided a degree of transparency unmatched by other extant systematic reviews, and, at the inception of the panel, was the most up-to-date systematic review of PTSD treatments. For the RTI-UNC Systematic Review, a variety of scientific databases were searched using selective search terms to identify relevant studies. The list of search terms can be found on pages B1–B19 of the RTI-UNC Systematic Review. The identified individual studies were then evaluated to determine whether they met inclusion criteria and assessed for risk of bias using predefined criteria used by all the AHRQ EPCs (Viswanathan et al., 2012).

Risk of bias assessment considers the degree to which an individual study is free of systematic error (bias), that is, the degree to which the study has high internal validity. Ratings of risk of bias reduce the possibility that conclusions are based on studies that are significantly methodologically flawed. For the RTI-UNC Systematic Review, the assessment was conducted by two investigators, one of whom was an experienced researcher; differences in ratings were resolved by consensus or by review by another experienced researcher. Studies were rated as low, medium, or high risk of bias, with high risk signifying results of questionable validity, typically due to a fatal flaw, such as very high attrition. The systematic review authors used a list of 12

² A list of author disclosures can be found on p. 95 of the full guideline document, located <https://www.apa.org/ptsd-guideline/ptsd.pdf>. Conflict of interest forms for all authors are available by request for public review by emailing cpg@apa.org.

methodological questions, based on predefined criteria from the AHRQ “Methods Guide for Comparative Effectiveness Reviews” designed to assess risk of bias. To receive a rating of low risk of bias, a study needed to receive favorable responses to 10 or more questions, have only minor methodological issues for unfavorable responses (such as lack of provider blinding), and to not have a fatal flaw. If a study had a fatal flaw in one or more categories, it was assigned a high risk of bias rating. Studies were assigned a medium risk of bias if they had three or more minor methodological problems or at least one problem that was more than minor but not a fatal flaw. Appendix E, pages E1–E27 of the RTI-UNC Systematic Review document describes the risk of bias criteria, questions used to assess those criteria, and ratings of all individual studies included in the systematic review. Studies that were rated high risk of bias were not included in analyses used to determine efficacy or comparative effectiveness. However, sensitivity analyses were conducted in which high risk of bias studies were added to meta-analytic results to determine whether the conclusions would have been different if those high risk of bias studies had been included. A diagram on page ES-8 of [Jonas et al. \(2013\)](#) shows the disposition of articles included and excluded in the systematic review.

In sum, after an exhaustive search strategy that had high sensitivity, screening of 3,048 records, review of the full-text of 527 articles by researchers with expertise in meta-analysis or PTSD or both, there were 147 studies that were eligible for inclusion in the systematic review. Of those, 46 were rated as high risk of bias and included only in sensitivity analyses. Of the 101 studies that were low or medium risk of bias, 77 were included in quantitative meta-analyses. The remaining 24 trials that were low or medium risk of bias were evaluated qualitatively in the systematic review but were not entered into quantitative meta-analyses, most commonly because there was only one trial of a treatment.

Assessing the Impact of New Trials on the Recommendations

The search process for studies for the RTI-UNC Systematic Review that the GDP panel used as the evidence base for its recommendations ended with studies published before May 24, 2012. For multiple reasons, it was not feasible for the panel to conduct an entirely new systematic review of RCTs that were published thereafter and then redo the decision tables based on the updated evidence. To determine whether the panel recommendations based on that evidence would be likely to hold up in the face of new evidence published since that time, the panel members conducted a revised search, to identify trials published between May 25, 2012, and June 1, 2016, germane to the comparisons evaluated in the original report. A subcommittee of five members of the panel assessed the potential

impact of those new RCTs on its recommendations. The subcommittee did not assess risk of bias or strength of evidence and acknowledges that conclusions based on those assessments could be different. The subcommittee then presented its assessment to the entire panel for discussion and decision-making. The panel concluded that, based on the new trials, its recommendations for all of the interventions except two (EMDR and NET) were unlikely to change; there was insufficient additional evidence from the supplementary search to determine whether the conditional recommendations for EMDR and NET would change to strong. The panel acknowledges uncertainty in the stability of its conditional recommendations for EMDR and NET based on this more recent evidence; an updated guideline might lead to upgrading the conditional recommendation to strong recommendations for both of those interventions.

Assessing Strength of Evidence

A body of evidence is the aggregated data from one or more studies of an intervention for a particular outcome. For example, the results from the meta-analysis for PTSD symptom reduction for cognitive processing therapy based on four randomized trials, is a body of evidence. Strength of evidence (SOE) ratings, conducted by all AHRQ-funded EPCs in their systematic reviews, indicate the degree of confidence that the estimated effect in a body of evidence is the true effect.

SOE ratings are based on four major criteria, of which *risk of bias* (defined and discussed above) is the first, followed by *consistency*, *directness*, and *precision* ([Owens et al., 2010](#)). *Consistency* is the degree to which the direction of effect is the same or different in the studies included in a body of evidence. *Directness* is the degree to which the evidence linking the effect of an intervention to an outcome is based on, 1) the true health outcome, as opposed to a surrogate marker of that health outcome³ and 2) head-to-head comparison of individual interventions as opposed to comparison of two separate bodies of evidence. *Precision* of an estimate is based on the width of the confidence interval around the estimated summary effect size in a meta-analysis the narrower the confidence interval, the greater the precision. If two clinically distinct conclusions (e.g., that an intervention is better than inactive control and that an intervention is worse than inactive control) are possible based on a wide confidence interval, the body of evidence is rated as imprecise.

Strength of evidence rating by the AHRQ EPCs also depends on three additional minor domains: *dose–response relationship* (evidence that higher “doses” of an intervention are associated with larger effects represents higher

³ The true health outcome refers to the actual outcome of interest (i.e., death from a heart attack) while a surrogate marker refers to a factor that alters the risk of outcome of actual interest (i.e., blood pressure level).

strength evidence), *magnitude of an effect* (large-magnitude effects represent higher strength evidence), and *publication bias* (evidence that unpublished studies were not included in summary effect estimates lowers the strength of evidence).

For the RTI-UNC Systematic Review, two researchers conducted strength of evidence assessments for each body of evidence. Each was rated as high, moderate, low, or insufficient/very low strength. Disagreements between the two raters were resolved by consensus or by the assessment of another experienced researcher. Strength of evidence for all bodies of evidence used in the development of the current guideline is shown in the Evidence Profiles, included in Appendix C of the full guideline document. A description of Evidence Profiles is found below.

The development and use of decision tables. *Decision Tables* are documents developed for use by panel members that summarize and evaluate the evidence generated in the systematic review (included in the evidence profiles), along with any supplemental information.

Assessing magnitude of benefits. One of the key components of the decision-making process for the GDP was assessment of the balance between benefits and harms, requiring the quantification of both benefits and harms. Quantification of the *magnitude (size) of benefits* was based on data from the quantitative meta-analyses for each of the important and critical outcomes for those interventions that had at least low quality of evidence for the critical outcome, PTSD symptom reduction. For each of the outcomes, magnitude of benefits was rated on a 5-point scale: 1 = *large/medium benefit*, 2 = *small benefit*, 3 = *no effect*, 4 = *small harm*, 5 = *medium/large harm*.

For deliberations about the role of chance in the estimation of effect magnitude, the APA PTSD GDP developed practices consistent with the recommendations of the APA Task Force on Statistical Inference (Wilkinson, L., & Task Force on Statistical Inference, American Psychological Association, Science Directorate, 1999). Specifically, the panel assessed point estimates of effects and the precision with which they were estimated, based on 95% confidence intervals, rather than relying on *p* values, because *p* values conflate magnitude of effect with the precision of the estimates (i.e., a low *p* value can be due to a large magnitude effect or a large sample size or both; a high *p* value can be due to a small magnitude effect or a small sample size or both).

Since harms (otherwise termed “serious adverse events”) was one of the two critical outcomes of treatment decided upon by the panel, it needed more precise specification and definition. Panel members considered events such as the need for hospitalization secondary to risk for suicide or a suicide attempt as a serious adverse event and then identified additional harms such as medication side effects or personal decompensation. Harms were differentiated from burdens. Burdens were determined to be encumbrances

associated with treatment (e.g., time spent, homework/need to practice, cost, inconvenience) rather than damages.

Although serious adverse events were considered by the panel to be one of the two most critical outcomes, the panel included information on four harms/burdens outcomes: “adverse events leading to withdrawals,” “other serious adverse events” (critical outcome), “other adverse events,” and “burdens.” Information for each of these four outcomes was gleaned from several sources as follows: empirical data included in the studies included the systematic review⁴ (this was generally the most limited of the sources given that many studies did not include information on harms/burdens), information from an APA staff search of the literature to identify additional harms/burdens (see details of this search in the paragraph below), information from patient members of the panel, and information from clinician members of the panel. All these data were considered together as the panel rated each of these four harms/burdens outcomes in preparation for an overall consideration of the balance of benefits to harms/burdens across outcomes. Please refer to the decision tables included in Appendix D of the full guideline document for additional details of the panel’s ratings.

The systematic review of the treatment literature did not generate sufficient data on harms and burdens of interventions because, unfortunately, this information is not routinely reported in studies of psychosocial treatments or in detail in many studies of psychopharmacological interventions. APA staff examined each article in the systematic review, as well as those excluded due to high risk of bias or the wrong study design, to extract data regarding harms and burdens, such as dropout/attrition, symptom worsening, homework, and so forth. Further, a focused literature search resulted in 60 additional articles that included case study designs, observational studies, and archival data extractions. The panel recognized that the quality of all these studies varied significantly. Despite this, they provided valuable detailed information regarding harms and burdens for the panel’s decision-making.

Assessing patient values and preferences. In addition to assessing the benefits and the harms/burdens, the panel sought to ascertain patient *values and preferences* associated with specific interventions. For this, panel members relied on a recently conducted systematic review (Simioli, Neilson, Thompson, & Cook, 2015) of the literature conducted by a member of the GDP and her research team (independent of the RTI-UNC Systematic Review team and

⁴ The lack of information on harms/burdens in many studies serves as a barrier to fully assessing potential harms/burdens of treatments. Ideally future research will follow new Journal Article Reporting Standards recommendation (Appelbaum et al., 2018) to include mention of harms and burdens.

its report), supplemented by additional careful searching of the professional literature by APA staff.

Applicability of evidence. The final determinant that panel members considered, before making recommendations, was the *applicability (generalizability)* of the evidence to various populations and settings. Many of the studies included in the systematic review focused on diverse trauma type along with other characteristics such as country of origin (i.e., Middle East, Africa, Australia, Americas, and Europe). Please refer to Table D-2 in Appendix D of the RTI-UNC Systematic Review for additional demographic details of included studies.

Decision-making regarding treatment recommendations. Based on the ratings of these four factors (strength of evidence, balance of benefits vs. harms/burdens, patient values and preferences, and applicability), the guideline panel then decided regarding its recommendation for a particular treatment or comparison of treatments. The scale for recommendations was, as follows: strong for, conditional for, insufficient evidence, conditional against, strong against. Panel members were able to reach consensus regarding the strength and direction of recommendation given to each treatment in most cases, but, for several, a vote was required when a consensus was not reached through discussion (see Appendix D of the full guideline).

External review process. This document was comprehensively reviewed by the members of the APA ASC. That feedback was then reviewed and responded to by the panel members and the guideline draft was modified based on that feedback. The draft was subsequently posted on the APA web site (October 5–December 4, 2016) and public feedback was solicited for 60 days. More than 890 responses were received. Public comments were grouped by topic and theme, with panel members responding to representative comments for each. Responses can be viewed at: <http://www.apa.org/ptsd-guideline/public-comments.pdf>. Based on concerns raised in the public comments as well as findings from the updated review that it conducted of randomized trials published after the RTI-UNC Systematic Review, the panel conducted de novo review (including a repeat of the decision table process) for three interventions: EMDR, NET and topiramate. For both EMDR and NET, the panel concluded that no errors in the original decision table process had been made, based on the evidence from the RTI-UNC Systematic Review. The panel did not believe that the evidence was sufficient to change the strength of recommendation for EMDR or NET. However, for both EMDR and NET, findings from the updated search suggested that the strength of evidence for the critical outcome of PTSD symptom reduction and some of the important outcomes might be upgraded were those new studies to be included in new and future meta-analyses. For topiramate, the panel concluded that there were no errors of fact in the original decision table process but that its adverse effects had not been given

sufficient weight. Based on its revised conclusion that the benefits of topiramate were evenly balanced with harms, the panel changed its draft recommendation of “conditional for” to insufficient evidence for or against topiramate.

In addition, the panel concluded that the intervention that had been labeled “exposure” in the RTI-UNC Systematic Review could be described as prolonged exposure in the guideline because most of the trials included in the exposure body of evidence were in fact trials of prolonged exposure.

Discussion⁵

For treating PTSD in adults, the present guideline strongly recommends cognitive–behavioral therapy (CBT), cognitive processing therapy (CPT), cognitive therapy (CT), and prolonged exposure therapy (PE) and conditionally recommends the use of brief eclectic psychotherapy (BEP), eye movement desensitization and reprocessing (EMDR), and narrative exposure therapy (NET). The present guideline also conditionally recommends the use of fluoxetine, paroxetine, sertraline, and venlafaxine. These recommendations are largely but not entirely consistent with those of other guidelines as described in greater detail below.

Although some psychotherapies (CBT, CPT, CT, PE) received strong recommendations but no medications did, the panel does not make recommendations of psychotherapy before or instead of medications or use the term “first-line” treatment because there was insufficient evidence from the systematic review on direct comparisons between psychotherapy and medications for PTSD. The assignment of a “strong” recommendation is based primarily on the larger magnitude of benefits, driven by reduction in symptoms, to harms for psychological treatments than medications. Although it is assumed that some psychotherapies can cause negative consequences and their use for some individuals can have downsides, fewer harms have been reported for psychological treatments than for medication treatments. It is important to note that the larger magnitude PTSD symptom reduction achieved by psychological treatments *may be* related to the two major methodological differences in the RCTs of psychological and medication treatments: 1) blinding of participants in all medication trials but no blinding used in the psychotherapy trials; 2) concurrent controls in all medication trials but nonconcurrent controls used in psychotherapy trials that used wait-list controls. In a sys-

⁵ The PTSD GDP used the same categorization scheme that was used by the systematic review that served as the primary evidence base. That categorization scheme is similar in most respects to categories used by other systematic reviews of PTSD treatments with the exception that trauma-focused interventions were not analyzed as a separate category in the RTI-UNC systematic review. The PTSD GDP did not categorize psychotherapies by proposed mechanism of action and did not use proposed mechanism of action in any recommendation deliberations. For further description of each treatment please refer to [Appendix A](#) of the full guideline document.

tematic review of meta-analyses of psychotherapy and medications for adult psychiatric disorders, [Huhn and colleagues \(2014\)](#) showed that trials without blinding and with nonconcurrent controls have larger effect sizes than trials with blinding and concurrent controls. Consequently, while the panel did give some interventions strong recommendations and others conditional recommendations, without actual studies comparing treatments, the panel did not make any recommendations about psychotherapy versus medication treatment. Clinical judgment and patient preferences (as well as patient response to psychotherapy or psychopharmacology) are all important factors in deciding the course of treatment for PTSD.

Treatment effect heterogeneity (subgroup effects), and generalizability were evaluated in the RTI-UNC Systematic Review and those authors concluded that there was insufficient evidence “to determine whether the findings are applicable to all those with PTSD or whether they are applicable only to certain groups” and insufficient evidence about whether there were subgroup effects, although included studies contained diversity of the samples. Based in part on this conclusion, members of the APA panel did not reach consensus about the generalizability of the systematic review’s findings, reflecting differences of opinion found in the literature about conditions required to demonstrate generalizability ([Post, de Beer, & Guyatt, 2013](#); [Rothwell, 2005](#)). Some panel members contended that lack of generalizability to all subgroups should be assumed in the face of insufficient evidence about generalizability. Others on the panel believed that, in the face of insufficient evidence about generalizability or strong theoretical rationale to suggest treatment effect heterogeneity, generalizability to most subgroups should be assumed. Panel members agreed that examination of treatment effect heterogeneity with diverse samples should be prioritized for future research.

Community members on the GDP shared what they considered to be important patient values and preferences for PTSD treatment. These included such things as having a psychotherapist who is aware of and knowledgeable about trauma, who offers information about treatment, teaches coping skills, works from a personalized approach, and is sensitive to cultural and sociodemographic differences and other contextual concerns. Likewise, clinicians on the panel shared their views of general patient values and preferences gained from their experience providing treatment. They found variation in patient preferences for trauma-focused therapies, preference for psychotherapy over medication in many cases (though a minority prefers medication or both) and some who prefer no treatment whatsoever. Many seek short-term treatment geared toward symptom relief and alleviation of their suffering. Clinicians and community members also reported that patients want information about treatment, value clinicians who are sensitive about trauma response and are also culturally competent⁶ and have various preferences regarding intensity and

pace of treatment (see Appendices here <https://www.apa.org/ptsd-guideline/appendices.pdf>).

Clinical Considerations

To implement interventions effectively, several considerations are relevant, including therapist training in trauma treatment in general and in the treatments to be implemented in particular, especially skill and fidelity in delivering those treatments. Informed consent (or refusal) includes providing patients with information about potential available treatments before or during treatment (if the patient chooses treatment). This includes discussion and can include written material about the processes and procedures involved, the effectiveness and risk-benefits, as well as associated emotional and practical demands. Attention to patient preference and collaborative decision-making between patient and practitioner are recommended strategies ([Knapp & VandeCreek, 2012](#)).

At present, a body of literature is available that shows an association between certain factors (sometimes referred to as “common factors”) in the patient and in the patient–therapist relationship, and treatment outcomes (for reviews, see [Norcross, 2011](#); [Norcross & Wampold, 2011](#)). These findings indicate that relationship factors have an impact on outcome, regardless of the treatment modality used. They include such variables as the treatment alliance, therapist empathy, and collecting and applying patient feedback, while goal consensus, collaboration, and positive regard are probably effective and factors that are promising include genuineness, repairing alliance ruptures, and managing countertransference. A recent

⁶ The GDP recommendations for PTSD treatments were developed using rigorous processes promulgated by the Institute of Medicine and based on evidence from a strong and transparent systematic review conducted by RTI-UNC Evidence-based Practice Center ([Jonas et al., 2013](#)). In keeping with the tripartite evidence-based approach that has been the APA standard (consisting of research evidence, clinician input and judgment, and patient preference and values; [American Psychological Association, Presidential Task Force on Evidence-Based Practice, 2006](#)), panel members recognize that psychotherapy is a complex endeavor and that important factors contribute to ethical and effective implementation of all treatments. One of those important issues is the role of culture. Cultural competence (referring to a number of therapist characteristics, including cultural humility, willingness to explore and become aware of nonconscious biases, and attention to issues of power and privilege; [Brown, 2008](#)) is important in all psychosocial treatment. However, it is particularly relevant in the context of PTSD as barriers to treatment—especially mistrust, access, sociodemographic characteristics, and culture and linguistics—may be complicated by the experience of trauma ([Brown, 2008](#)). Further, cultural competence is important given the debate about the cross-cultural validity of PTSD and its components as a diagnosis (see [Hinton & Lewis-Fernandez, 2011](#)) as well as the fact that the perception of what constitutes a trauma, along with perception of the severity of trauma, can vary by culture ([Herbert & Forman, 2010](#)). Cultural competence, additionally, requires attention to of the various “identities” that each patient brings to treatment. Culture is not simply ethnicity but also encompasses variables of gender, sexuality, social class, religion, immigration status, age and age cohort, disability status, and finally, the manner in which each of these is germane to the trauma history ([Hays, 2016](#)). Cultural competence refers to the adoption, by the therapist, of attitudes and behaviors that improve the quality of relationship when there is real or perceived difference between therapist and patient. Culturally competent therapists take the stance that all humans have multiple and intersecting identities on such variables as sex, gender, race, ethnicity, sexuality, social class, spiritual identification, linguistic status, and experience of trauma exposure ([Hays, 2016](#)).

systematic review of evidence-based therapy relationship factors on treatment outcomes for adults with trauma was conducted and reported on by Ellis, Simiola, Brown, Courtois, and Cook (2018). The bulk of the studies were on therapeutic alliance, with alliance found to be predictive of or associated with a reduction in various symptomatology, including PTSD and depression. The authors cited the need for additional research on therapy relationship variables in general and on trauma treatment to increase client engagement and treatment effectiveness.

Other treatment considerations include the therapist working from a trauma-informed approach, attending to the role of socioeconomic, cultural or other diversity or contextual issues, and practicing cultural humility (Hunt, 2005). These may facilitate whether patients find therapist actions and recommendations intelligible, useful, and worthwhile. They may also have a direct impact on the treatment application. Finally, collecting systematic data on patient outcomes can provide insight into progress and treatment targets and guidance when adjusting treatment seems necessary (Boswell, Kraus, Miller, & Lambert, 2015).

Research Considerations

Although the research evidence is strong for the efficacy of particular psychotherapy and pharmacological treatments for adults with PTSD, many other treatments are being used or are under development and there are still significant gaps in the literature. These gaps include the lack of RCTs for newer and emerging treatments, the comparative effectiveness of psychological and pharmacological treatments and combinations of treatments, evaluation of moderators of treatment effects (i.e., subgroup or other effects such as baseline severity), applicability of findings to patients with comorbidities and PTSD, patient preferences for care, and impact of treatments on important patient-oriented outcomes such as quality of life, long-term treatment effects, adverse effects and harms, along with other outcomes that are not as easily quantifiable such as moral injury, posttraumatic growth, emotional regulation, identity and sense of self, and ability to form and sustain intimate and other relationships. More attention to the impact of treatment harms in both psychotherapy and medications research is indicated.

In addition to the research gaps noted, there are methodological concerns with many of the current PTSD treatment trials that should be addressed in future studies. Specifically, the panel recommends that investigators design trials to minimize attrition, identify reasons for attrition/dropout, decrease missing data, and incorporate rigorous methods of handling missing data such as multiple imputation or maximum likelihood. Future trials should report the recency of trauma and history of past and multiple trauma, address the potential for researcher allegiance effects, evaluate treat-

ments of longer duration and the application of multiple treatments (however they are applied, i.e., concurrently or sequentially), provide long-term evaluation of outcomes (PTSD symptoms and other outcomes), and include samples large enough to minimize the potential for covariate imbalance despite randomization. Future trials should also retain rigorous methodologic features that have been commonly used in previous research, such as assessment of treatment fidelity, and continue to address questions of generalizability.

The panel did not have data on which to make recommendations for some treatments in use because they arise from traditions with non-RCT research practices or the quality of the research base has not been subjected to the level of critical appraisal of this systematic review. As noted above, it is based on studies published through May 2012, and any updating will necessarily rely on an updated review(s) which will reflect additions in the literature and studies that hopefully address some of the gaps noted above. It is the hope of members of this panel that suggested methodological improvements will serve to enhance future iterations of the present guideline and continue to alleviate the suffering of individuals with PTSD.

Comparison With Other PTSD Guidelines

With some exceptions, APA PTSD treatment guideline conclusions are largely consistent with guideline recommendations previously published by other professional associations and organizations (American Psychiatric Association, 2004; International Society for Traumatic Stress Studies [ISTSS], Cloitre et al., 2012; Foa, Keane, Friedman, & Cohen, 2009; Forbes et al., 2007; National Health and Medical Research Council [NHMRC], 2013; National Institute for Health and Care Excellence [NICE], 2005; Veterans' Affairs/Department of Defense [VA/DoD], 2010, 2017; WHO, 2013). Although some other guidelines prioritize treatments as "first-line" or "second-line," the APA panel chose not to use these terms in its recommendations because sufficient evidence from comparative effectiveness studies was lacking to justify their use. All in all, the current effort contributes to the compendium of guidelines that recommend, with varying levels of strength and confidence, a core set of evidence-based psychotherapies for adults with PTSD, most of which, with the exclusion of brief eclectic psychotherapy, fit into the trauma-focused category of treatment: cognitive-behavioral therapy, cognitive processing therapy, cognitive therapy, prolonged exposure therapy, brief eclectic psychotherapy, eye movement desensitization and reprocessing therapy, and narrative exposure therapy.

One other difference between the current guideline and other PTSD treatment guidelines is that the current guideline recommends EMDR conditionally while other guidelines have recommended it strongly. EMDR received a

conditional recommendation because of low strength of evidence for the critical outcome of PTSD symptom reduction in the RTI-UNC systematic review that served as the primary evidence base. All interventions that received a strong recommendation by the panel had at least moderate strength of evidence for PTSD symptom reduction and at least moderate strength of evidence for at least one important outcome, such as remission or loss of PTSD diagnosis. However, as noted above, based on its review of randomized trials published after the publication of the systematic review, the panel believes that the recommendation for EMDR could be changed from conditional to strong in future updates to the guideline.

In terms of pharmacotherapy for PTSD in adults, the current APA PTSD guideline suggests the use of three from the class of selective serotonergic reuptake inhibitors (SSRIs), fluoxetine, paroxetine, or sertraline, as well as venlafaxine from the class of serotonin norepinephrine reuptake inhibitors (SNRIs). The conclusions from the current effort add to the pharmacotherapy recommendations from the PTSD guidelines previously published by the WHO, Phoenix Australia, VA/DoD, ISTSS, NHMRC, NICE, and the American Psychiatric Association.

The 2013 WHO guideline offers the recommendation that the SSRIs and tricyclic antidepressants (TCAs) be considered when recommended psychotherapies (stress management, CBT with a trauma focus and EMDR therapy) have failed or are unavailable or when patients present with comorbid depression of moderate or greater severity. Similarly, the 2013 NHMRC, 2005 NICE, and 2017 VA/DoD guidelines caution that medications should not be used as a *routine* first-line treatment for adults with PTSD in either general medical or specialty mental health care, in preference to evidence-based trauma-focused psychotherapies. The DoD/VA and Phoenix Australia guidelines recommend psychotherapy before medication and not using medication absent psychotherapy, if possible. The NHMRC guideline specifies that where medication is considered, SSRI antidepressants should be the first choice and the other new generation antidepressants (notably mirtazapine) and TCAs should be considered as a second line options. The APA panel did not complete a decision table or make recommendations for tricyclic antidepressants because the strength of evidence was rated insufficient in the systematic review. Three RCTs were identified that were rated high risk of bias due to completer-only (instead of intention to treat) analysis or high attrition.

The systematic review on which the current guideline is based found insufficient/very low SOE for the critical outcome of PTSD symptom reduction and the important outcome of reduction of comorbid depression or anxiety for mirtazapine. There was one trial of nefazadone evaluated in the systematic review, but it was rated high risk of bias. Although some guidelines have recommended prazosin for

nightmares, this panel did not make any recommendations for its use because nightmares were not identified as a critical or important outcome (this should not be taken to suggest that they are not a significant hyperarousal symptom, nor that they are not important to address clinically). Additionally, the SOE for prazosin was rated insufficient/very low for PTSD symptom reduction (a critical outcome), or remission or loss of diagnosis (important outcomes).

The current effort expands upon previously published PTSD guidelines by including recommendations on comparative effectiveness of PTSD treatments. For example, among adult patients with PTSD, the current guideline suggests using prolonged exposure rather than relaxation when both prolonged exposure and relaxation are being considered. Similarly, the current guideline suggests using CBT rather than relaxation when both CBT and relaxation are under consideration, and either prolonged exposure or prolonged exposure plus cognitive restructuring when both are being considered. As more data on the comparative effectiveness of PTSD treatments become available, recommendations for treatments including combination treatments, will represent a major advancement for future updates of this guideline.

Guideline Summary and Future Directions

Direct exposure to and experiencing of trauma and potentially traumatic events are now recognized as extremely common in human experience. After traumatic exposure, the most favorable outcome occurs when posttraumatic reactions are naturalistically processed to a degree of resolution and do not subsequently develop into onerous or ongoing symptoms. However, since a significant proportion of exposed individuals develop ASD and PTSD and symptoms can be debilitating or lifelong, there is an urgent need for treatments that effectively ameliorate its symptoms.

The available PTSD treatment research is substantial, but increased sophistication in design and methodology is now required. The research context influences the type and quality of available studies in several ways. Emerging and novel treatment methods, in addition to established practices, warrant investigation to build on currently available findings. Because funding for research can become circular and create systemic bias, such as additional funding directed to more closely examine particular facets of interventions already supported in the empirical literature, novel or other emerging treatments or innovations may not be adequately researched. Panel members recommend attention to this issue among funders. Panel members also support the ongoing research pertaining to treatment process and outcome, both in general and as it applies more specifically to work with traumatized individuals. It is hoped that future updates of this guideline will benefit from these methodological

advances and attention to additional treatments, all in the interest of relieving the suffering associated with PTSD.

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