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A Guide to Guidelines for the Treatment of PTSD and Related Conditions

David Forbes and Mark Creamer
University of Melbourne

Jonathan I. Bisson
Cardiff University

Judith A. Cohen
Allegheny General Hospital and Drexel University College of Medicine

Bruce E. Crow
Office of the U.S. Army Surgeon General

Edna B. Foa
University of Pennsylvania

Mathew J. Friedman
National Center for PTSD and Dartmouth Medical School

Terence M. Keane
National Center for PTSD and Boston University School of Medicine

Harold S. Kudler
U.S. Department of Veterans Affairs

Robert J. Ursano
Uniformed Services University

In recent years, several practice guidelines have appeared to inform clinical work in the assessment and treatment of posttraumatic stress disorder. Although there is a high level of consensus across these documents, there are also areas of apparent difference that may lead to confusion among those to whom the guidelines are targeted—providers, consumers, and purchasers of mental health services for people affected by trauma. The authors have been responsible for developing guidelines across three continents (North America, Europe, and Australia). The aim of this article is to examine the various guidelines and to compare and contrast their methodologies and recommendations to aid clinicians in making decisions about their use.

David Forbes, Mark Creamer, Australian Centre for Posttraumatic Mental Health, University of Melbourne; Jonathan I. Bisson, Department of Psychological Medicine, Cardiff University; Judith A. Cohen, Department of Psychiatry, Allegheny General Hospital, and Drexel University College of Medicine; Bruce E. Crow, Office of the U.S. Army Surgeon General; Edna B. Foa, Department of Psychiatry, Center for the Treatment and Study of Anxiety, University of Pennsylvania; Mathew J. Friedman, National Center for PTSD, Executive Division, and Departments of Psychiatry and Pharmacology, Dartmouth Medical School; Terence M. Keane, Behavioral Science Division, National Center for PTSD, and Department of Psychiatry, Boston University School of Medicine; Harold S. Kudler, Mid-Atlantic Mental Illness Research, Education, and Clinical Center, U.S. Department of Veterans Affairs; Robert J. Ursano, Center for the Study of Traumatic Stress, Uniformed Services University.

Correspondence concerning this article should be addressed to: David Forbes, ACPMH, Level 1, 340 Albert Street, East Melbourne Victoria 3002, Australia. E-mail: dforbes@unimelb.edu.au.

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Over the course of the past 10 years a series of clinical practice guidelines for posttraumatic stress disorder (PTSD) have been published internationally (e.g., Australia, United Kingdom, and United States) and for particular constituencies within those countries. The development and dissemination of practice guidelines is clearly not restricted to the area of PTSD or, indeed, to mental health. In this era of evidence-based medicine, practice guidelines have proliferated across the health arena with the National Guideline Clearing House (www.guidelines.gov) recording approximately 2,500 guidelines across the health sphere. However, in the case of PTSD, the existence of a range of guidelines for the same disorder published at different times, in different countries, for different constituencies, with different methodologies, and potentially deriving different clinical recommendations can make it

Table 1. Clinical Practice Guidelines for Posttraumatic Stress Disorder

1. Clinical Practice Guideline for the Management of Post-Traumatic Stress VA/DoD Management of Post-Traumatic Stress Working Group, 2004 (http://www.healthquality.va.gov/Post_Traumatic_Stress_Disorder_PTSD.asp)
2. American Psychiatric Association Practice Guideline for the Treatment of Patients with ASD and PTSD American Psychiatric Association, 2004 (http://www.psychiatryonline.com/pracGuide/pracGuideTopic_11.aspx)
3. UK National Institute for Health and Clinical Excellence (NICE) Guidelines National Institute for Health and Clinical Excellence, 2005 (http://www.nice.org.uk/Guidance/CG26)
4. Australian National Health and Medical Research Council (NHMRC) Guidelines Australian Centre for Posttraumatic Mental Health, 2007 (http://www.nhmrc.gov.au/publications/synopses/mh13syn.htm)
5. The International Society for Traumatic Stress Studies (ISTSS) Guidelines Foa, Keane, Friedman, & Cohen, 2008 (www.istss.org;)
6. American Academy of Child and Adolescent Psychiatry (AACAP) Practice Parameters for PTSD in Children and Adolescents American Academy of Child and Adolescent Psychiatry; Cohen et al., 2010 (http://www.aacap.org)
7. Institute of Medicine. (2007). Treatment of PTSD: Assessment of the evidence. The National Academies Press, Washington, DC

Note. PTSD = posttraumatic stress disorder; ASD = acute stress disorder.

extremely difficult for the clinician to determine which of these guidelines' recommendations best apply to them in their clinical work. The aim of this article is to examine the various practice guidelines published in the area of PTSD and outline relevant features to aid clinicians in making decisions about their use.

WHAT ARE CLINICAL PRACTICE GUIDELINES?

Clinical practice guidelines can be described as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" (Field & Lohr, 1990, p. 38). Where possible, these guidelines are based on systematic reviews of the evidence from large well-conducted studies (Raine et al., 2004). These studies include not only rigorous randomized controlled trials (RCTs; e.g., efficacy trials), but also studies that attempt to replicate these findings in routine clinical settings (e.g., effectiveness trials). In reality, however, there are often areas where sufficient research evidence does not exist. In these circumstances, it is common to consider alternative forms of evidence with recommendations made largely on the basis of consensus by an expert group overseeing the process (Sniderman & Furberg, 2009). It also needs to be acknowledged that, even where a high level of evidence does exist, interpretation of that evidence is still required to translate a statement about the findings to a statement of recommended action. As described by Raine, Sanderson, and Black (2005), this is a shift between what "is" (the evidence) to what "ought" to occur (the clinical recommendation). Guidelines are one component of good clinical decision-making that takes into account patients' preferences and values, clinicians' values and experience, and the available resources. The extent to which these factors can ever be considered in a set of guidelines is obviously limited.

Ultimately, guidelines can be judged to be successful where they are (a) accepted (even "owned") by the broad range of practitioners in the field; (b) seen by those practitioners as relevant and useful; (c) based on the evidence of what works, for whom, and in what circumstances, yet without being overly prescriptive; and (d) not driven by cost considerations but, rather, by the goal of making a real difference in clinical practice and health outcomes. Hence, although mindful of the above caveats, we are united in our view that practice guidelines significantly contribute to the betterment of health care provision and client outcomes.

CLINICAL PRACTICE GUIDELINES IN PTSD

The practice guidelines to be considered in this article are listed in Table 1. These guidelines were selected as they met the criteria of a systematic review of the evidence, included ratings of the strength of the evidence, and included clinical recommendations generated by a working party of content experts with ratings as to level of confidence in the rating. There are many published evidence reviews that do not include the development and publication of clinical practice recommendations per se. More prominent examples of these include the Institute of Medicine (IOM, 2007) report and the American Psychological Association's Empirically Supported Psychological Treatments report (Chambless & Ollendick, 2001). With the exception of the IOM report, those evidence reviews that do not provide clinical practice recommendations will not be discussed here. The IOM report is included in the discussion below due to its prominence in the field and the more unique methodological standards it applied.

Methodologies

The first issues to be considered when interpreting practice guidelines and evaluating their methodologies are (a) who comprised the working party, (b) for which constituency was the guideline primarily designed, and (c) what was the focus of the evidence review (Raine et al., 2005). Table 2 outlines the methodologies for the seven guidelines considered here. Although the authors of each guideline would likely claim that their findings and statements are

Table 2. Methodologies Used in Clinical Practice Guidelines for PTSD

	VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
Country	United States	United States	United Kingdom	Australia	International	United States	United States
Year	2004	2004	2005	2007	2008	2009	2008
Constituency	For field personnel and health care workers assisting service members and veterans	Psychiatrists	Public mental health service staff who treat ASD & PTSD	Public and private mental health service who treat ASD & PTSD	Mental health clinicians who provide treatment for adults, adolescents, and children with PTSD	Child and adolescent psychiatrists	VA
Developed by	Cross-disciplinary	Psychiatrists	Cross-disciplinary	Cross-disciplinary	Cross-disciplinary	Psychiatrists	Cross-disciplinary
Nature of studies examined	RCTs, lower levels if no RCT available	RCTs, lower levels if no RCT available	RCTs	RCTs	All levels of studies	All levels of studies	High-level RCTs
Who conducted the review	Subject matter experts within VA/DoD, with assistance and guidance from trauma experts	Psychiatrist subject matter experts	Independent evidence review specialists with assistance and guidance from trauma experts	Independent evidence review specialists with assistance and guidance from trauma experts	Experts in major fields of therapy and treatment modalities used for patients with PTSD	Subject matter experts	Independent IOM review
Determination of the focus of the evidence review	Key questions determined at the outset	Literature search	Key questions determined at the outset	Key questions determined at the outset	Range of treatments applied in field	Literature search	Range of treatments applied in field
Nature of evidence review conducted to determine intervention effectiveness	Expert review	Expert review	Meta-analysis	Meta-analysis	Expert review	Expert review	Meta-analysis
Predetermination of what effect size would be considered significant	N	N	Y	Y	N	N	Y
Weighting of effectiveness	Data and consensus	Data and consensus	Data	Data	Data and consensus	Data and consensus	Data

Note. PTSD = posttraumatic stress disorder; ASD = acute stress disorder; IOM = Institute of Medicine; VA/DoD = Veterans Affairs/Department of Defense; APA = American Psychiatric Association; NICE = National Institute of Clinical Excellence; NHMRC = National Health and Medical Research Council; ISTSS = International Society for Traumatic Stress Studies; AACAP = American Academy of Child and Adolescent Psychiatry; RCT = randomized controlled trial.

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applicable across populations, each set of guidelines has a unique focus. The constituency for whom the guidelines were designed plays a large role in understanding the methodology and focus of the evidence reviews. In this context, the American Psychiatric Association (APA, 2004) and American Academy for Child and Adolescent Psychiatry (AACAP; Cohen et al., 2010) guidelines stand apart from the other guidelines in terms of the working party being primarily, if not exclusively, psychiatrists, compared to multidisciplinary working party representation in the case of the other practice guidelines. These two guidelines are written primarily for their membership and the literature searches are driven largely by key words selected by the psychiatrist working parties.

The International Society for Traumatic Stress Studies (ISTSS) practice guideline (Foa, Keane, Friedman, & Cohen, 2008) was developed primarily for its constituency, which comprises multidisciplinary practitioners working with survivors of trauma and spanning across a range of nations and theoretical paradigms. Not surprisingly, the approach taken in the development of this guideline was to identify the range of interventions potentially used by their constituency and conduct an evidence review for each intervention. The result of this approach was the development of a statement on the strength of the evidence for each intervention category, with less focus on ranking one treatment above another or on synthesizing recommendations across intervention categories.

The IOM review cannot be considered a practice guideline because no clinical recommendations were included in that report. The constituency for the IOM review was the U.S. Government's Department of Veterans Affairs (VA), which sought statements on the strength of the evidence for a range of interventions potentially used within the VA system. The IOM conducted reviews on a systematic list of identified interventions and produced statements on the strength of evidence for each.

These methodologies contrast to those of the U.S. Veterans Affairs/Department of Defense (VA/DoD, 2004), UK National Institute of Clinical Excellence (NICE, 2005), and Australian National Health and Medical Research Council (Australian Centre for Posttraumatic Mental Health, 2007) guidelines for which working parties developed a series of specific questions to be answered by the literature. These were verified and elaborated by a multidisciplinary panel representing a broad range of potential stakeholders, and then subjected to evidence reviews to answer these questions. An example of such a question is "do psychological interventions for PTSD improve outcomes compared to no interventions?" That is, they searched for research data that demonstrated the efficacy of treatment for PTSD before asking further questions about which of those treatments were most effective. As national government health bodies tasked with informing policy and practice through evidence-based recommendations, NICE and NHMRC were concerned only with those treatments that have demonstrable efficacy. Although this approach has the highest scientific rigor, it may not always take adequate account of whether the empirical data can be meaningfully translated into routine clinical practice. A distinguishing feature of the VA/DoD guideline was that it developed separate algorithms oriented to the initial point of contact being primary care and mental health settings.

The practice guidelines also varied in how the evidence reviews were conducted. Key considerations here include (a) the level of independence of the review team from the working party in the conduct of the reviews, (b) the levels of evidence that were considered acceptable, (c) the degree to which evidence statements were developed, (d) whether a prereview effect size was identified for determination of treatment effectiveness, and (e) the manner in which weighting between data and expert consensus was handled in generating statements of effectiveness. In this context, it is important to differentiate between a rating of the strength of the research evidence and a rating of the strength of the clinical recommendation derived from the evidence. Some practice guidelines report both, others report only one.

Rating the Research Evidence

Table 3 outlines the rating systems drawn from each of the seven guidelines (where available) that identify the strength of the research data according to objective levels. By these criteria, the IOM review is the most rigorous of the guidelines. The systematic literature review was conducted by the IOM, independently of the funding source (VA) and content experts, and included only the highest level RCTs. This review rejected RCTs with small sample sizes, inadequate blinding, and large numbers of dropouts, and included minimum standards in handling of missing data. Hence, the IOM review omitted a considerable portion of RCTs included in evidence reviews in all the other practice guidelines. (Of course, as previously noted, the IOM report was only intended to be an evidence review—it does not purport to be a practice guideline, although the two goals are not independent of one another).

The next level in terms of independence and rigor appears to be the VA/DOD, NICE, and NHMRC guidelines. In all these guidelines, (a) specific questions were developed beforehand to guide the systematic review; (b) the evidence review was conducted by a body independent of the working party who produced evidence statements; (c) only Level I and II studies were included where the question could be addressed by this level of evidence; and (d) in the case of the NICE and NHMRC guidelines, more formal meta-analyses were conducted and predetermined effect sizes representing clinical effectiveness were established against which research findings were rated.

Given the predetermination of effect sizes and relative risk ratios considered to represent clinically significant differences, the evidence statements in those guidelines provide a solid and as objective as possible method of interpreting study findings in relation to the review questions. (A relative risk [RR] is the probability of an event occurring—in this case likelihood of having a diagnosis of PTSD—in a group of people who have been exposed—in this case to treatment—compared to those who had not been exposed). The evidence statements include the number of studies that relate to the question asked (*k*), the number of cases included in all these

Table 3. Levels of Evidence

VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
[I] A least one properly done RCT	[A] Randomized double-blind clinical trial – A study of an intervention in which subjects are prospectively followed over time; there are treatment and control groups; subjects are randomly assigned to the two groups; both the subjects and the investigators are blind to the assignments	[I] Evidence obtained from a single randomized controlled trial or a meta-analysis of randomized controlled trials	[I] A systematic review of Level II studies	[A] Evidence is based on randomized, well-controlled clinical trials for individuals with PTSD	[RCT] Randomized, controlled trial is applied to studies in which subjects are randomly assigned to two or more treatment conditions	[I] Randomized controlled trial – Similar distribution of known confounders; validated PTSD outcome measure, double masking in pharmacotherapy studies, & assessor blinding or at least assessor independence in psychotherapy studies; no more than 40% loss to follow-up in any arm; loss to follow- up no greater than 15% absolute difference between groups; 10–40% missing outcome data acceptable depending on validity of missing data analytic method; rejection of LOCF if dropout >30%
[II-1] Well-designed controlled trial without randomiza-tion	[A-] Randomized clinical trial; same as above but not double-blind	[IIa] Evidence obtained from at least one well-designed controlled study without randomization	[II] A randomized controlled trial	[B] Evidence is based on well-designed clinical studies, without randomization or placebo comparison for individuals with PTSD	[CT] Controlled trial is applied to studies in which subjects are nonrandomly assigned to two or more treatment conditions	[II-1] Controlled trial without randomization

Continued

Table 3. Continued

VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
[II-2] Well-designed cohort or case-control analytic study	[B] Clinical trial – A prospective study in which an intervention is made and the results of that intervention are tracked longitudinally; study does not meet standards for a randomized clinical trial	[IIb] Evidence obtained from at least one other well-designed quasi-experimental study	[III-1] A pseudo-randomized controlled trial (e.g., alternate allocation or some other method)	[C] Evidence is based on service and naturalistic clinical studies, combined with clinical observations that are sufficiently compelling to warrant use of the treatment technique or follow the specific recommendation	[UT] Uncontrolled trial is applied to studies in which subjects are assigned to one treatment condition	[II-2] Cohort or case-control study
[II-3] Multiple time series, dramatic results of uncontrolled experiment	[C] Cohort or longitudinal study – A study in which subjects are prospectively followed over time without any specific intervention	[III] Evidence obtained from well-designed, nonexperimental descriptive studies, such as comparative studies, correlation studies, and case studies	[III-2] A comparative study with concurrent controls (e.g., nonrandomized, experimental trial; cohort study; case-control study; interrupted time series with a control group)	[D] Evidence is based on long-standing and widespread clinical practice that has not been subjected to empirical tests in PTSD	[CS] Case series/report is applied to a case series or case report	[II-3] Time series or uncontrolled experiment
[III] Opinion of respected authorities, case reports, and expert committees	[D] Control study – A study in which a group of patients and a group of control subjects are identified in the present and information about them is pursued retrospectively or backward in time	[IV] Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities	[III-3] A comparative study without concurrent controls (e.g., historical control study; two or more single arm studies; interrupted time series without a parallel control group)	[E] Evidence is based on long-standing practice by circumscribed groups of clinicians that has not been subjected to empirical tests in PTSD		[III] Opinion of respected authority, case report, and expert committee

Continued

Table 3. Continued

VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
	[E] Review with secondary data analysis – A structured analytic review of existing data, e.g., a meta-analysis or a decision analysis		[IV] Case series with either posttest or pretest/posttest outcomes	[F] Evidence is based on recently developed treatment that has not been subjected to clinical or empirical tests in PTSD		
	[F] Review – A qualitative review and discussion of previously published literature without a quantitative synthesis of the data		[V] Evidence from expert committee or opinions of experts			
	[G] Other – Textbooks, expert opinion, case reports, and other reports not included above					

Note. PTSD = posttraumatic stress disorder; IOM = Institute of Medicine; VA/DoD = Veterans Affairs/Department of Defense; APA = American Psychiatric Association; NICE = National Institute of Clinical Excellence; NHMRC = National Health and Medical Research Council; ISTSS = International Society for Traumatic Stress Studies; AACAP = American Academy of Child and Adolescent Psychiatry; RCT = randomized controlled trial; LOCF = last observation carried forward.

studies (*n*), either the effect size (standard mean difference, which is also Hedges' *g*) or relative risk ratios for determining comparisons in rates of diagnosis (RR), and the relevant confidence intervals. Two examples of evidence statements have been drawn from the NICE guidelines to illustrate this point. The first is an evidence statement that examines relative risk ratio of having a diagnosis of PTSD: "In comparing trauma focused cognitive behaviour therapy (CBT) versus stress management: There is limited evidence favouring trauma-focused CBT over stress management therapy on reducing the likelihood of having a PTSD diagnosis after treatment ($k = 6$; $n = 284$; RR = 0.78, 95% CI = 0.61 – 0.99)." The second examines the likelihood of difference between conditions on a dimensional outcome measure, e.g., PTSD severity: "In comparing trauma-focused CBT versus waitlist: There is evidence favouring trauma-focused CBT over waiting list on reducing the severity of PTSD symptoms (clinician rated measures) ($k = 13$; n = 609; standardized mean difference (SMD) = −1.36; 95% CI = −1.88 – −0.84)."

An additional methodological approach taken by the authors of the NICE guideline was that pharmaceutical companies were contacted for access to data in the case of studies known to have been conducted but not published. In the case of two trials, the NICE guideline development group was able to obtain posttreatment means for outcome measures but not standard deviations. The standard deviations were therefore estimated and the results from these two studies included in the meta-analysis. These studies were not included in the evidence reviews for the other guidelines.

The APA and AACAP reviews represent the next level of rigor in that the literature reviews were conducted by the working party themselves using more informal methods. The literature was searched using key terms such as PTSD or trauma to access relevant publications which were then culled to form the body of evidence upon which the recommendations were based. Although evidence tables summarizing studies were developed, clear evidence statements along the lines of those described above were not.

Finally, the ISTSS practice guideline represents a mixed process, where evidence reviews and the development of evidence summaries were conducted by different working groups for each intervention category. As such, chapters on the different interventions varied significantly in terms of, for example, whether evidence tables were reported, the nature of the evidence review methodologies used, whether effect size statistics were reported and, if they were, which was used (e.g., Cohen's *d* or Hedges' *g*).

CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS

Each PTSD guideline includes up to 100 recommendations derived to varying degrees from the research evidence. Obviously, it is beyond the scope of this article to review similarities and differences across all these recommendations. Instead, the key recommendations will be compared to illustrate differences across the guidelines. The guideline recommendations often include a grade to describe the strength of each recommendation. That is, how confident can people be in using the recommendation to reliably drive practice? Rating systems used for grading the recommendations across the guidelines can be seen in Table 4. All guidelines attempted to use the highest level of evidence available to generate recommendations and all used expert consensus to generate recommendations for which empirical research was unavailable. A key difference, however, was the extent to which that expert consensus contributed to the strength of the recommendation rating. Whereas some (e.g., NICE, NHMRC) gave the highest rating only to recommendations with level I or II research support, others (e.g., APA, AACAP) gave the highest rating based on rigorous empirical evidence (RCT) and/or overwhelming clinical consensus. The key recommendations of the seven guidelines can be seen in Table 5.

It is important to recognize that, despite some areas of difference, there are many areas of concurrence across the guidelines in terms of their recommendations. All the guidelines strongly support the use of trauma-focused psychological treatment in PTSD for adults and, where addressed, for children. All the guidelines recognize some benefit of pharmacotherapy for the treatment of PTSD. Where addressed, all the guidelines caution against the routine use of psychological debriefing as an early preventive intervention for populations exposed to trauma. These are important areas of agreement that can do much to drive the wider adoption of evidence-based practice. Where differences exist, they are often a matter of degree. In general, they relate to the strength of recommendation rather than fundamental differences in what is, or is not, recommended.

There are probably three most obvious and important points of difference in the recommendations across these practice guidelines. These differences include (a) the extent to which pharmacotherapy, most notably selective serotonin reuptake inhibitors (SSRIs), is recommended; (b) the parameters of recommended psychological treatment and whether eye movement desensitization and reprocessing (EMDR) is an equivalent first line treatment to trauma-focused CBT (TFCBT); and (c) the degree to which guidelines seek evidence for, and provide, recommendations in the area of screening and assessment in addition to intervention.

In terms of pharmacotherapy, the key differences lie in whether SSRIs are recommended as an alternative first-line intervention (as reflected in the VA/DoD & APA guidelines) or as a second-line intervention when TFCBT is not available, acceptable, or suitable (e.g., NICE, NHMRC, AACAP). This difference is explained in part by the extent to which empirical data are the primary or sole basis upon which the recommendation is made. In the NICE and NHMRC guidelines, the independently conducted systematic literature review and predetermination of effect size parameters dictated the basis upon which the recommendations were made. The APA guidelines, however, needed to address that most physicians (to whom these guidelines are directed) do not

Table 4. Grading the Strength of Recommendations

VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
[A] A strong recommendation that the intervention is always indicated and acceptable	[I] Recommended with substantial clinical confidence	[A] At least one randomized controlled trial as part of a body of literature of overall good quality and consistency addressing the specifying recommendation (Evidence Level I) without extrapolation	[A] Body of evidence can be trusted to guide practice	Rating system based directly on A–F levels of evidence outlined in Table 3	[MS] Minimal Standard – applied to recommendations that are based on rigorous empirical evidence (e.g., RCTs) and/or overwhelming clinical consensus.	[1] Evidence is sufficient to conclude the efficacy of *X* in the treatment of PTSD (a qualifier of magnitude may be added if appropriate)
[B] A recommendation that the intervention may be useful/ effective	[II] Recommended with moderate clinical confidence	[B] Well-conducted clinical studies but no randomized clinical trial on the topic of recommendation (Evidence Levels II or III); or extrapolated from Level I evidence	[B] Body of evidence can be trusted to guide practice in most situations		[CG] Clinical Guideline – Applied to recommendations that are based on strong empirical evidence (e.g., non-RCTs) and/or strong clinical consensus	[2] Evidence is suggestive but not sufficient to conclude the efficacy of *X* in the treatment of PTSD (the committee may note inconsistencies in the data)
[C] A recommendation that the intervention may be considered	[III] May be recommended on the basis of individual circumstances	[C] Expert committee reports or opinions and/or clinical experiences of respected authorities (Evidence Level IV) or extrapolated from Levels I or II evidence. This grading indicates that directly applicable clinical studies of good quality are absent or not readily available.	[C] Body of evidence provides some support for recommenda-tion(s) but care should be taken in its application.		[OP] Option – Applied to recommendations that are acceptable based on emerging empirical evidence (e.g., uncontrolled trials or case series/reports) or clinical opinion, but lack strong empirical evidence and/or strong clinical consensus	[4] Evidence is suggestive that *X* treatment is ineffective in treating PTSD

Continued

Table 4. Continued

VA/DoD	APA	NICE	NHMRC	ISTSS	AACAP	IOM
[D] A recommendation that a procedure may be considered not useful/effective, or may be harmful		[GPP] Recommended good practice based on the clinical experience of the Guideline Development Group	[D] Body of evidence is weak and recommendation must be applied with caution.		[NE] Not Endorsed – Applied to practices that are known to be ineffective or contraindicated	[5] Evidence is suggestive that *X* treatment is harmful in the treatment of PTSD
[I] Insufficient evidence to recommend for or against – the clinician will use clinical judgment			[GPP] Good practice point, based on expert consensus opinion, in the absence of an evidence base			

Note. PTSD = posttraumatic stress disorder; IOM = Institute of Medicine; VA/DoD = Veterans Affairs/Department of Defense; APA = American Psychiatric Association; NICE = National Institute of Clinical Excellence; NHMRC = National Health and Medical Research Council; ISTSS = International Society for Traumatic Stress Studies; AACAP = American Academy of Child and Adolescent Psychiatry; RCT = randomized controlled trial; GPP = good practice point.

Table 5. Key Recommendations of the Clinical Practice Guidelines for PTSD

	VA/DoD	APA	NICE	NHMRC	ISTSS adults	AACAP	IOM	ISTSS Children & adolescents
Psychological treatment for PTSD 1st level rating	CT (A) Exposure (A) SIT (A) EMDR (A)	TFCBT (I)	TFCBT (A) EMDR (A)	TFCBT (A) EMDR in addition to in vivo exposure (A)	Exposure (A) CPT (A) CT (A) SIT (A) EMDR (A) Although reference on p624 "we can only recommend PE and CPT as first line treatments at this time" –although give "EMDR rating A" on p. 626	TF psychological therapy TFCBT most evidence (MS)	Exposure (including CPT)	TFCBT
2nd level rating	IRT (B) Psychodynamic psychotherapy (B)	EMDR (II) SIT (II) IRT (II)		Stress management (C)	Psychodynamic psychotherapy			EMDR
Psychological treatment for ASD	Brief CBT (A)	TFCBT (II)	TFCBT (B)	TFCBT (A)	CBT (A)			CBT
Recommendations on the initiation of therapy	Initiate treatment with both psychotherapy and pharmacotherapy	Initiate treatment with both psychotherapy and pharmacotherapy	Drug treatment should not be used as routine first line in preference to TF psychological therapy (A)	Drug treatment should not be used as routine first line in preference to TF psychological therapy (A)	Medication is a reasonable initial option if CBT is unavailable, not preferred by patient, or in combination with CBT.			
Pharmacotherapy for PTSD 1st level rating	SSRIs (A)	SSRIs (I)		SSRIs – General & specialist use (B)	Best evidence SSRIs and SNRIs SSRIs –sertraline, paroxetine, fluoxetine (A) SNRI-venlafaxine (A) TCAs (A) Mirtazapine (A) Nefazodone (A) MAOIs: phenelzine (A) Prazosin (A)	SSRIs (OP)	N/A	Fluoxetine Sertraline Citalopram (A/B)

Continued

Table 5. Continued

	VA/DoD	APA	NICE	NHMRC	ISTSS adults	AACAP	IOM	ISTSS Children & adolescents
2nd level rating	TCAs (B) MAOIs (B)	TCAs (II) MAOIs (II)	Paroxetine (B) Mirtazapine (B) general & mental health specialist use Amitriptyline (B) Phenelzine (B) mental health specialist use	Mirtazapine (B)TCAs (B)	Bupropion (C) Trazodone (C)	Clonidine (OP) Propranolol (OP)		Clonidine Guanfacine Propranolol (B,C,E)
Pharmacotherapy for ASD	Imipramine (B)	SSRIs (II)		Drug treatments for ASD not recommended (GPP)			N/A	
	Propranolol (C)	Other antidepressants						
Initial responses /prevention	Recommend against PD as a viable means of reducing ASD or PTSD	PD or single session techniques not recommended	Single-session interventions that focus on the traumatic incident should not be routine practice when delivering services (A)	Structured psychological interventions such as psychological debriefing, should not be offered on a routine basis (C)	PD should not be used following traumatic events (A)			Debriefing not recommended
			Offer practical social and emotional support	Psychological first aid in which survivors are supported, immediate needs met and monitored over time (GPP)	Provision of practical, pragmatic psychological support and information (C)			

Continued

Table 5. Continued

	VA/DoD	APA	NICE	NHMRC	ISTSS adults	AACAP	IOM	ISTSS Children & adolescents
			Mild & < 4 weeks, watchful waiting (C)					
Screening for exposure	(Population exposed by definition)	Screen for recent or remote trauma exposure (I)	For patients presenting. . . ask whether or not they have been exposed to a traumatic experience (GPP)	For patients presenting. . .ask whether or not they have been exposed to a traumatic experience (GPP)	N/A	Psychiatric assessment should routinely include question about traumatic experiences and PTSD symptoms	N/A	N/A
Screening for ASD and PTSD	Screen all patients for PTSD symptoms (C)	Assess for symptoms of ASD and PTSD (I)	For individuals at high risk of developing PTSD after a disaster, consideration should be given to the routine use of a brief screening instrument (C)	Service planning should consider the application of screening of individuals at high risk for PTSD after major disasters or incidents (GPP)				

Note. PTSD = posttraumatic stress disorder; ASD = acute stress disorder; IOM = Institute of Medicine; VA/DoD = Veterans Affairs/Department of Defense; APA = American Psychiatric Association; NICE = National Institute of Clinical Excellence; NHMRC = National Health and Medical Research Council; ISTSS = International Society for Traumatic Stress Studies; AACAP = American Academy of Child and Adolescent Psychiatry; RCT = randomized controlled trial; TFCBT = trauma-focused cognitive behavior therapy; CT = cognitive therapy; CPT = cognitive processing therapy; SIT = stress inoculation training; EMDR = eye movement desensitization and reprocessing; PD = psychological debriefing; IRT = imagery rehearsal therapy; SSRI – selective serotonin reuptake inhibitors; SNRI = serotonin norepinephrine reuptake inhibitors; TCA = tricyclic antidepressants; MAOIs; monoamine oxidase inhibitors; GPP = good practice point; MS = minimal standard; OP = option.

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practice cognitive–behavioral therapy. For the VA/DoD guideline, although the evidence review and determination of key questions were independent, the recommendations take into account a significant focus of the guideline on the algorithm for primary care as the initial point of contact. These differences highlight critical issues in the degree to which guideline recommendations are tailored to practical needs of constituencies and service systems, rather than being designed to inform policy makers in planning, developing, or purchasing of service systems. Finally, in terms of pharmacotherapy for children, AACAP and ISTSS recommendations were also influenced by the failure of some RCT evidence to document significant differences between SSRI and placebo responses.

For the ISTSS guideline, gradings are provided for levels of evidence for interventions in each chapter, but no gradings are provided as to the strength of recommendations. Because the recommendations relate to a particular category of intervention, it is difficult to determine a relative priority of recommendations across intervention categories, particularly where the evidence ratings appear comparable. This results, for example, in a statement that the evidence for CBT is stronger than for pharmacotherapy, yet the confidence in this statement is not rated and both CBT and pharmacotherapy recommendations receive Grade A evidence ratings.

The IOM report, as stated previously, adopts the most stringent criteria for study acceptance and review. Here pharmacotherapy (including SSRIs) failed to meet the required level of substantive evidence to support a recommendation at all. To understand this difference, it is necessary to know that the IOM evidence review rejected a number of pharmacotherapy studies that had been included in other guidelines' evidence reviews. These studies were rejected largely due to the failure to meet the stringent minimum IOM standards in terms of study design and data analysis including the management of missing data (including use of Last Observation Carried Forward). It is noteworthy, however, that a dissenting opinion was included in the IOM report with respect to the report's pharmacotherapy conclusions. Indeed in the IOM report only trauma-focused exposure, was identified as a recommended treatment, although this includes interventions with an exposure element such as cognitive processing therapy (CPT).

Another point of difference in pharmacotherapy recommendations among the PTSD guidelines is the more specific recommendation in the NICE guideline for paroxetine, whereas the VA/DoD, APA, ISTSS, and NHMRC guidelines recommend SSRIs more generally. A factor that may account for this is, as was outlined in the Methodologies subsection, the inclusion in the NICE evidence review of data from studies known to have been conducted but not published by pharmaceutical companies. The two studies mentioned previously for which standard deviations were not available both investigated sertraline; neither of these studies were included in the pharmacotherapy evidence reviews of the other guidelines.

The next key point of difference is the parameters of first-line recommended psychological treatments. Here there is some variation across the guidelines in how EMDR is addressed. In the IOM report, in view of the stringent criteria, only exposure is recommended, with EMDR failing to achieve a recommendation. In the NICE, NHMRC, VA/DoD, ISTSS, and APA guidelines the inclusion criteria for RCTs is less stringent. In all but the APA guideline, EMDR is given the highest rating alongside TFCBT in adults. The APA guideline gives EMDR a second strength rating. The factor that appears to contribute to this inconsistency in interpretation between the NICE, NHMRC, VA/DoD, and ISTSS guidelines on the one hand and the APA guideline, on the other, given all were reasonably consistent in terms of the level of RCTs included in the studies, was the manner in which the absence of support for the eye movement component in EMDR was addressed. The APA guideline took into account the absence of support for the eye movements per se in determining the recommendation rating, whereas the VA/DoD, NICE, NHMRC, and ISTSS guidelines were guided by the data effect sizes alone in rating the effectiveness and significance of the intervention. The Australian NHMRC guideline addressed the absence of evidence for the eye movements by adding a good practice point that followed the overarching recommendation. This practice point recommends to clinicians that as available evidence does not support the importance of eye movements per se in EMDR, they should be aware that treatment gains are more likely to be due to the engagement with the traumatic memory, cognitive processing, and rehearsal of coping and mastery responses.

Another interesting, if subtle, difference is the decision taken by the Australian NHMRC guideline group to reanalyze the EMDR data against TFCBT with and without a key study (Ironson, Freund, Strauss, & Williams, 2002) that included in vivo exposure in the EMDR treatment arm. From those analyses it was determined that the EMDR condition merited equivalent ranking to trauma-focused CBT only if the former included in vivo exposure. Hence, this caveat was placed on the EMDR recommendation. This raises the vexed question of when more fine-grained analyses such as these are justifiable and how to ensure consistency in those aspects across different approaches. On the one hand, it has important clinical applications; on the other, it could be argued that to conduct such analyses in the case of one approach and not others is unreasonable. The reduced evidence base for EMDR in the treatment of children and adolescents resulted in it meeting a Level B recommendation in the ISTSS guideline for children although it was included as a first-line intervention along with other trauma-focused interventions in the AACAP guideline.

The absence of integrating recommendations across the intervention categories in the ISTSS guidelines can make them difficult to interpret. Exposure, EMDR, CPT, and stress inoculation therapy are all given Grade A evidence ratings, yet the CBT section in the integrating chapter reports only exposure, CPT, and stress inoculation therapy as first-line treatments. The EMDR section

of the integrating chapter acknowledges the Level A rating for EMDR, but there is no statement that refers back to the CBT recommendation and addresses its place within the intervention lines for recommended treatments. It is clear from the above discussion that EMDR is the source of some disagreement across guidelines. Although it is beyond the scope of this article to provide details, suffice to say that EMDR and its efficacy has been the subject of considerable controversy and emotive debate over the years. The important point for this paper is the need for practice guidelines to rise above that debate and to provide objective and dispassionate recommendations based on the available evidence.

The final key point of difference is whether the guideline goes beyond a narrow definition of treatment to include recommendations around prevention, screening, assessment, and other aspects of care and, if so, the nature and rating of evidence used for such recommendations. Indeed, what constitutes evidence for such recommendations needs some consideration. Using screening as an example, there is evidence for the capacity of measures to accurately screen for PTSD. However, this is quite different from evidence that indicates screening as a process is effective in, for example, facilitating engagement in suitable care. The positions adopted in the guidelines range from those that provide a strong recommendation rating based largely on expert consensus (e.g., APA Rating I), through to those that provide a weak recommendation based on low levels of evidence (e.g., VA/DOD Rating C), to those that rely on strong clinical consensus but label them as "good practice points" (e.g., NICE, NHMRC) to distinguish them from those recommendations that are evidence based.

To a degree, these variations reflect a legitimate debate about whether research data alone is sufficient to dictate practice in real world settings: to what extent can laboratory findings be directly applied to routine clinical work? There is now increasing interest in effectiveness research that explores the application of evidence-based treatments in routine clinical practice settings. Although it is rarely possible to achieve the same level of methodological rigor as in RCT designs, the data from those studies provide crucial information about the practical applicability of the intervention and could reasonably serve as a useful complement to RCT studies in establishing the evidence base for key clinical questions and Level I recommendations. This would require changes to the evidence rules governing virtually all existing trauma-related guidelines. Whereas this might be met with some opposition, most would agree that a compromise is required—the findings of RCTs and other carefully designed research are of vital importance in guiding clinical decision making, but they must be translated and applied with caution.

IMPLICATIONS FOR CLINICIANS

It is clear from a detailed reading of the guidelines that there is insufficient empirical data to drive many of the recommendations. This presents a problem for guideline developers. Clinical practice is infinitely complex. Even within a single approach such as prolonged exposure, the clinician is required to make many decisions around the intricacies of implementation. That intervention, of course, is embedded in broader clinical care that includes, among other things, building a therapeutic alliance, comprehensive assessment, case formulation, and treatment planning. With our current state of knowledge it is unrealistic to assume that every aspect of care will be guided by Level I empirical data. Documents such as the IOM review, though an empirically rigorous document, is of limited benefit to practicing clinicians (and, of course, it was never intended to guide clinical care) because so many important questions are left unanswered. To avoid providing recommendations altogether on the grounds that no evidence is available runs the risk of producing guidelines that are of little benefit to clinicians in routine practice. The key point here is that guideline recommendations must be read carefully. Readers should be able to easily differentiate which recommendations are evidence-based and which are based on clinical consensus, as well as which are informed by the service system and which are independent of service systems. All guideline developers agree that, where possible, recommendations should be based on the available research evidence. As the body of empirical knowledge expands, we will presumably rely less and less on clinical opinion to drive recommendations for practice.

Where does all this leave the clinician in determining how best to assist people affected by trauma? First, we should reiterate that there is a high level of consensus across the various guidelines. Ideally, clinicians will take these key points as core principles of intervention, ensuring as far as possible that they receive training and supervision in those approaches that have the highest levels of support. Core recommendations should not be applied indiscriminately but, rather, should be used in the context of sound clinical judgement and decision making. Second, there is much that we do not currently know about the prevention, recognition, and management of posttraumatic mental health problems. In these areas of practice, it is reasonable to rely on the expert consensus recommendations (which, incidentally, also show strong areas of agreement across guidelines), as well as on the clinician's own judgement and case formulation. Even where practice guidelines rely on expert consensus, consideration needs to be given to the use of potentially more robust methods to reach this consensus, such as the Delphi method (Okoli & Pawlowski, 2004). (The Delphi method is a systematic, iterative approach that uses a panel of independent experts to generate consensus on a particular topic). Note that these guidelines are largely silent on the issue of clinician burnout secondary to what is variously termed secondary traumatization, vicarious traumatization, compassion fatigue, or countertransference associated with exposure to trauma narratives and traumatized patients. This could be an area for future development across guidelines.

Third, all the guidelines demonstrate a commitment to regular review and updating on the basis of new evidence. This is a

crucial philosophical position that, we believe, should drive clinical practice. That is, we must constantly monitor our interventions as new evidence emerges, being prepared to adjust our practice accordingly. Finally, notwithstanding the caveats in ensuring the recommendations are employed in the context of clinical judgement, there is no substitute for clinicians being adequately trained and skilled in the delivery of recommended interventions. The practice guidelines establish this as a minimum standard.

All of the practice guidelines have their target constituencies and should be interpreted accordingly. However, the guidelines that best allow clinicians to make informed judgments about the applicability of the recommendations to their particular clinical circumstances: (a) minimize the subjectivity of the ratings of effectiveness, (b) clearly delineate between strengths of recommendations on the basis of evidence compared to consensus, (c) provide clear and unequivocal direction as to the recommended lines of intervention, and (d) are guided by evidence with reference to service systems rather than being organized around the service system.

CONCLUSIONS

Absence of evidence does not equate to evidence of the absence of a treatment effect. Obviously, if research indicates that a treatment does not work or is harmful, that evidence must inform treatment decisions. However, the fact that no research has been conducted on a given intervention should not necessarily be interpreted to mean that the intervention is ineffective; it simply means that we do not have evidence to support its use at this stage. Of course, it is incumbent upon proponents of such interventions to conduct and publish rigorous trials to demonstrate efficacy if those approaches are to receive endorsement. Until such data are available, it is wise to first consider interventions for which good evidence does exist.

Health care has come a long way in recent years, with an increasing emphasis on using empirical evidence to drive clinical practice. These developments affect our practice both directly and indirectly; purchasers and consumers of mental health treatment in the aftermath of trauma are becoming better informed and increasingly demand the best possible care. We should welcome this evolution. Practice guidelines help us to embrace this challenge, while guiding the process such that the research evidence is carefully interpreted and translated to ensure its appropriate application to routine clinical care.

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