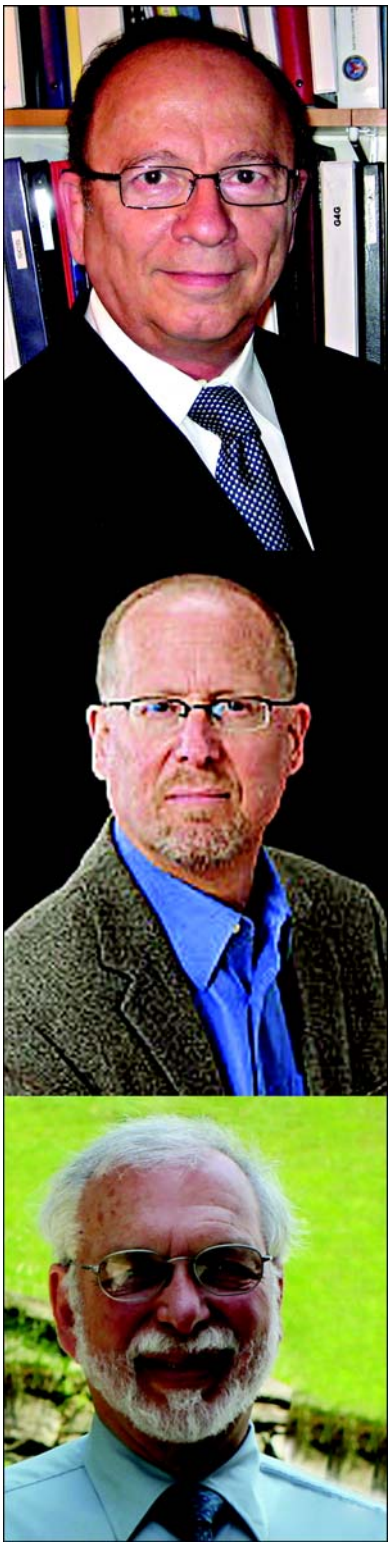

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JRRD Guest Editorial

The VA/DOD Clinical Practice Guideline for Management of Post-Traumatic Stress (update 2010): Development and Methodology

CLINICAL PRACTICE GUIDELINES

The Department of Veterans Affairs (VA)/Department of Defense (DOD) clinical practice guidelines (CPGs) are recommendations that are made to VA/DOD healthcare providers regarding their approaches to treatment of a variety of medical conditions. They are based on the best available clinical evidence and are designed to achieve the most desirable outcomes based on a variety of clinical situations. In general, CPGs have been defined as "systematically developed statements to assist practitioner and patient in making decisions about appropriate healthcare for specific clinical circumstances" [1]. CPGs are being used throughout healthcare systems as a means of enhancing quality, reducing costs, and optimizing performance. Good CPGs can change the process of healthcare and improve outcomes by providing recommendations for the management of patients and supporting the development of standards to assess outcomes. A CPG should also assist in healthcare providers' education and training, likewise educating the patients; help in making informed decisions; and improve communication between the patient and provider. A CPG, when implemented, will influence practice patterns.

GUIDELINE DEVELOPMENT

There have been many recommended approaches to CPG development methodologies. The World Health Organization (WHO) assessed models of CPG development used internationally and identified the following best practices in CPG development [2]:

- Developed by multidisciplinary CPG development working groups (WGs).
- Explicit, transparent use of systematic reviews of evidence to develop recommendations.
- Documentation of the CPG development process (including disclosure of interest declarations at all levels of involvement).
- Include ratings of the evidence associated with key recommendations.
- Defined and explicit process for consultation and peer review of the draft CPG.

- Multiple level outputs, including versions (modules) for specialists, primary care professionals, and patients.

The development and the underlying principles of the process used to develop the VA/DOD CPGs are very much consistent with the principles described by the WHO and those practiced by other healthcare organizations that have developed CPGs (e.g., National Institute for Health and Clinical Excellence and Institute for Clinical Systems Improvement). The VA/DOD process is also consistent with the proposed eight standards for developing trustworthy CPGs published recently by the Institute of Medicine [3].

CPGs are usually developed by groups of clinicians. Clinicians regularly make difficult choices about treatment options. Often, there is uncertainty about the value of different options, and practice can vary widely. CPGs can be seen as one way of assisting clinicians in decision-making. In an ideal world, CPGs would be based on evidence derived from rigorously conducted empirical studies. In practice, there are only few areas of care where sufficient research based evidence exists. In such situations, the development of comprehensive CPGs will inevitably have to be based partly on consensus of the opinions and experience of clinicians and others in the subject at hand.

A technology assessment published in 1998, reviewed 177 primary research and review articles that studied the factors that affect the decisions that emerge from consensus development approaches and assessed the implications of the findings for the development of CPGs [4]. A group consensus process brings to bear a wider range of direct knowledge and experience. The interaction among the group members can stimulate consideration of a wider range of options, and debates can challenge old ideas and generate new ones. However, several issues need to be addressed and pitfalls need to be avoided when a group of experts is attempting to reach consensus. For example, the choice and mixture of participants, the bias and conflict of interest they may bring with them, and the cost of bringing people together. Consideration should be given to avoiding both a few opinionated members dominating the proceedings and the tendency to treat group decisions as unanimous when the degree of dissent within the group is an important piece of information.

Given the expected diversity of opinion that any group of experts may display, there is a need for methods to organize their subjective judgment, especially in areas where a state of uncertainty exists. A consensus development process has been used extensively as a CPG development methodology. This process makes the best use of available information and scientific data or draws on the collective wisdom of the participants. However, although it may capture collective knowledge, there is a need to structure the process and make certain that it captures the best recommended clinical practice and validates these recommendations with the available scientific evidence.

Two main conceptual and practical approaches have guided the VA/DOD WGs to form the foundation of the development process of CPGs—the algorithmic approach and the evidence-based approach. Both approaches are important. Together, they provide a structured process that helps eliminate the potential risks and pitfalls of group decision-making and improves the scientific credibility of the output.

ALGORITHMIC APPROACH

All VA/DOD CPGs are presented in an algorithmic format and include at least one detailed clinical algorithm. Clinical algorithms have been used in the healthcare setting for many years, often as aids to clinical diagnosis and management of medical problems. The VA has adopted the algorithmic approach since the inception of the CPG effort in 1994. The use of the algorithmic format was chosen because of the evidence that such a format improves data collection and diagnostic and therapeutic decision-making and changes patterns of resource use. Algorithms have a problem-solving orientation coupled with functional specific actions or critical decisions to be taken. The algorithmic format allows the providers to sort out the logic and sequence of the decision-making process as well as the recommended

observations and actions to be taken for choosing the appropriate interventions for their patients.

The clinical algorithm presents the CPG as a diagram that includes a step-by-step decision tree. The algorithmic format outlines the process of clinical decision-making and thereby helps focus the design of clinical practice and allows the provider to follow a linear approach to critical information needed at the major decision points in the clinical process. Throughout all VA/DOD CPGs, standardized symbols (Society for Medical Decision-Making Committee, 1992) are used to display each step in the algorithm. This standardization is essential when attempting to implement a nationwide consistent approach across several CPGs involving different medical specialties.

The clinical algorithm enables an experienced clinician to capture best how he or she approaches clinical problem management. Faced with a quality clinical algorithm, many clinicians will respond that it reflects their current treatment pattern. The clinical algorithm will then form the foundation upon which evidence-based treatment approaches will be incorporated.

The algorithm map also provides an overview of the key points in management that should be buttressed by the evidence. Constructing the algorithmic logic that drives the CPG is the step that is most frequently overlooked in developing a CPG.

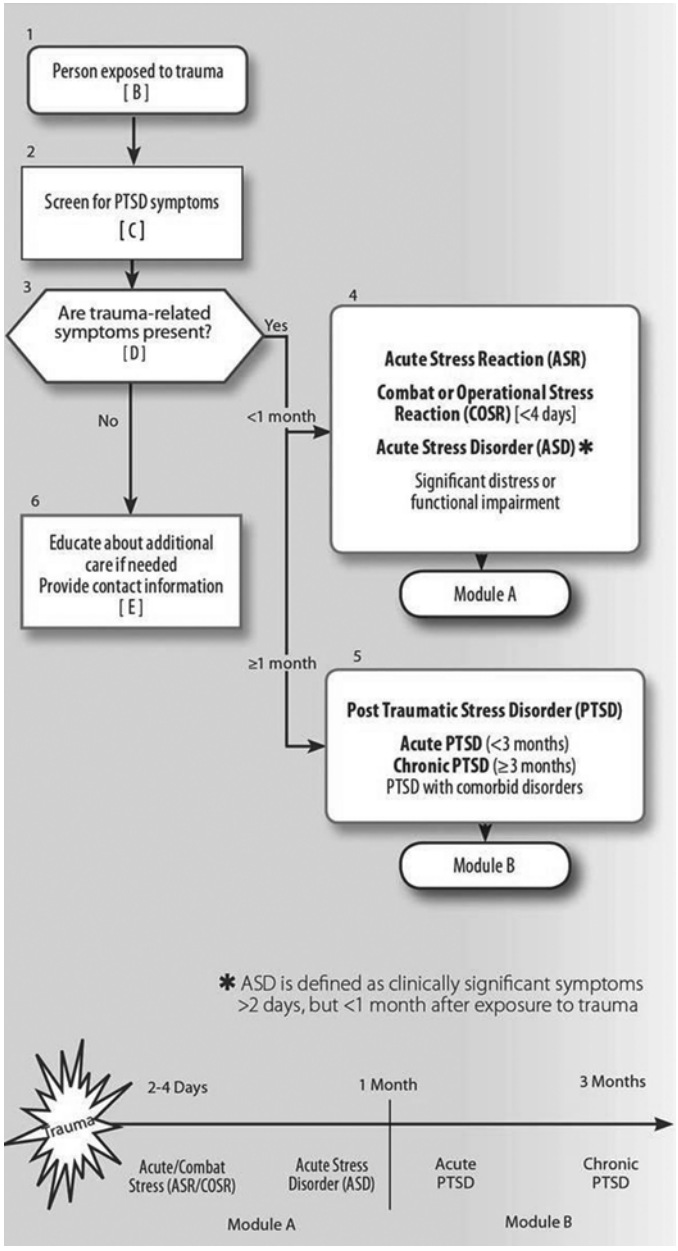

Figure 1.
Core module: initial assessment and triage.

POSTTRAUMATIC STRESS ALGORITHMS

Several features of the clinical algorithm are apparent in the core algorithm of the posttraumatic stress (PTS) guideline (**Figure 1**). First, arrows connecting numbered boxes indicate the order in which the steps should be followed. Second, the algorithm includes key decision boxes (hexagons) containing questions that are always followed by two arrows, one corresponding to a "yes" answer and the other to "no." Third, action boxes (rectangles) contain instructions describing actions to be performed (e.g., to assess, treat, or evaluate response to treatment). The algorithm is to be read from top to bottom, and from left to right, until an answer box, or terminal node, is reached. Each algorithm should only be applied to the population of patients described in the first box—a clinical state box (rounded rectangles).

Since this was an update of the 2003 revision of the VA/DOD PTS CPG, the previous version of the guideline was considered the seed algorithm. The

guideline WG critically reviewed the seed algorithm and identified necessary changes or improvements. Further changes were made at later stages, after the review of the evidence. The core algorithm depicts a diagnostic strategy aimed at classifying those patients with early symptoms lasting less than 1 month to be managed by Module A: Management of Acute Stress Reaction (ASR). When the patient has symptoms for more than 1 month, the clinician is directed to follow Module B: Management of PTSD.

This framework represents one of the key changes from the first version of the VA/DOD PTS CPG (2003). The WG developed a revised comprehensive clinical algorithm incorporating the three modules of the 2003 CPG into two modules (A and B). The third module in the original CPG that focused on patients diagnosed with acute stress disorder (ASD) was eliminated based on consensus of the group that no evidence was found for specific different treatment interventions for patients with ASD. After incorporating the accumulating evidence and the clinical experience in the field since the first CPG, the WG decided to simplify the algorithm in a way that would maximally facilitate a practical approach to clinical decision-making and hopefully improve adherence to the CPG recommendations.

Each of the management algorithms (Modules A and B) include both diagnostic and treatment modalities. For example, Module A (**Figure 2**) depicts the step-by-step process that incorporates recommendations regarding the diagnosis and management of symptoms of ASR in the immediate period after exposure to trauma, the management of ASD, and the effective interventions to prevent progression of stress reaction to full PTSD. Several rectangles represent action boxes containing instructions (e.g., "Assess environment for threat," or "Ensure basic needs are met"). The management algorithms also classify patients into separate subgroups according to differences in symptom presentation and treatment needs. Classification occurs each time a decision box is encountered. The yes/no answer to the question in the decision box defines a new subset of the patient population. When the answer to the question is yes, clinicians should follow the pathway to the right. When the answer is no, clinicians should follow the box listing actions recommended for these patients. Thus, patients are classified according to the type of procedure or treatment that they require or is appropriate for them.

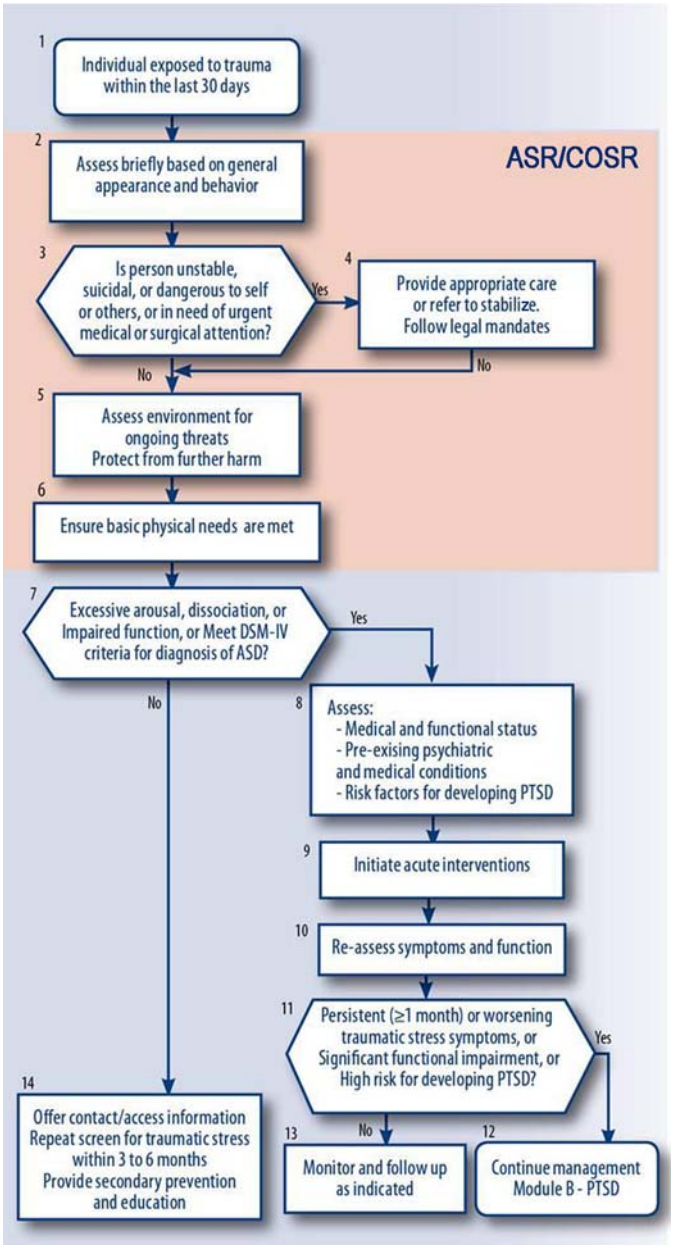

Figure 2.
Acute stress reaction (ASR)/combat or operational stress reaction (COSR) decision tree. ASD = acute stress disorder; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, fourth edition; PTSD = posttraumatic stress disorder.

For example, managing a patient who is unstable or dangerous to self or others (box 3) should not

continue down through the following assessment and treatment steps until stabilization and safety are assured. Those who are stable are assessed for ongoing trauma (box 5) and their needs attended to (box 6). The next key question separates a subgroup of these patients who exhibit clinically significant posttraumatic symptoms (box 7). They follow the path to the right and should be assessed and treated following boxes 8 to 13. Those who do not present with such symptoms end up in terminal node box 14, are provided education and information, and exit the algorithm.

In summary, the clinical logic behind the algorithm of Module A defines three groups of patients, all having been exposed to trauma in the past 30 days: (1) those who are unstable and need emergency interventions, (2) those who developed symptoms or dysfunction and may proceed to develop full-blown disorder (ASD or PTSD), and (3) those who perhaps recovered from the exposure and do not need any additional management beyond education and future screening.

Module B of the CPG incorporates the diagnosis and management of patients with PTSD. The WG combined two algorithms of the original CPG that distinguished between primary and specialty care into one module, emphasizing a patient-centered approach that recommends the management and intervention shown to be effective in treating PTSD regardless of the treatment setting (e.g., primary care or mental health clinic). This approach should allow providers to use the CPG as a starting point that improves collaborative efforts and focuses on key aspects of care.

Guideline Annotations

In addition to the algorithm, the CPG includes a list of recommendations that are presented in the CPG annotations. The annotation summarizes the CPG's more detailed textual material concerning specific aspects of patient management; it also refers to supporting evidence in the relevant text discussion where citations to literature are provided. As a general rule, the annotated algorithm depicts the common thread (or lowest common denominator) about which there is reasonable consensus concerning necessary care or recommended management strategies for all patients with PTSD [5]. Recommendations that are based on the evidence (and, as necessary, on expert consensus) are linked to each step in the algorithm. Thus, the algorithm flowchart, in addition to displaying the decision-making process, organizes the content of the CPG in a manner that is relevant to the clinical problem facing the provider.

A letter within each box of the algorithm refers the reader to the corresponding annotation. The annotation text elaborates on the recommended action statements that are found within each box of the algorithm. Included in the annotations are brief discussions that provide the underlying rationale and specific evidence tables to support each step in the process. The annotations indicate whether each recommendation is based on scientific data or expert opinion.

Intervention Recommendations

A third module included in the CPG (Module I) describes specific treatment strategies for evidence-based interventions to prevent, treat, and manage specific symptoms of PTSD. The annotations in both Modules A and B refer the reader to Module I and recommend that patient and provider preferences should drive the selection of evidence-based psychotherapy and/or evidence-based pharmacotherapy as a first-line treatment. The optimal setting of care for the individual patient and the specific choice of treatment modality will depend on the individual patient preferences, the level of comfort and experience of the provider, and the available resources.

EVIDENCE-BASED APPROACH

Since the initial efforts to develop CPGs (more than a decade ago), the discipline known as evidence-based medicine has grown extensively. Methods of systematic review of medical literature that identify, select, and critically appraise relevant studies on a certain topic have been developed, and techniques for evaluating studies have been published. The

increased number of published systematic reviews of randomized controlled trials (RCTs) raises the question of how much of what is evidence-based is actually implemented in day-to-day patient care.

The practice of evidence-based medicine means integrating individual clinical experience with the best available clinical evidence from systematic research. Evidence-based healthcare is essentially concerned with shifting organizational culture and individual behavior so that a greater proportion of decisions in the healthcare system are based on scientific evidence. A systematic assessment of the available research evidence and the synthesis of research findings on a particular topic are regarded as the cornerstones of evidence-based healthcare.

GUIDELINE DEVELOPMENT PROCESS

The CPG development process was a highly iterative process involving a number of simultaneous tasks. The process consisted of the following steps to identify the evidence and formulate evidence-based recommendations:

1. Convene a multidisciplinary CPG development WG.
2. Formulate a clear clinical question from a patient's problem.
3. Search the literature for relevant clinical articles.
4. Evaluate (critically appraise) the evidence for its validity and usefulness.
5. Formulate useful findings into recommendations for clinical practice.

Clinical Practice Guideline Working Group

The members of the WG were VA/DOD healthcare clinicians who are recognized either as experts in the topic or known for their contributions to the care of patients to be covered under the CPG. The Offices of Quality Performance and Patient Care Services of the VA and the Army Medical Command of the DOD identified clinical leaders to champion the CPG development process. During a preplanning conference call, the clinical leaders defined the scope of the CPG and identified a group of clinical experts from the VA and DOD to form the Management of Post-Traumatic Stress WG. The heterogeneous WG represented the full range of disciplines that are relevant to the CPG questions. The WG participants were drawn from the fields of primary care, psychiatry, psychology, internal medicine, pharmacology, nursing, and social work. The WG, lead by the champions and guided by the facilitator, is the main body responsible for creation of the CPG documents

Although there was an attempt to select panel members with relatively open minds and at least transparent biases, it is inevitable that each member brought with them their unique perspectives based on their professional training and experience. The diverse mixture of disciplines was to ensure that a variety of perspectives were brought to the development processes, especially with the understanding that decision-making was conducted in an open and transparent environment in which all participants were encouraged to contribute to the process.

It is important to note that the VA and DOD patient populations are not necessarily the same; therefore, separate VA and DOD subgroups of the WG were convened to develop specific sections of the CPG. For example, a subgroup of Active Duty providers was convened to address the management of acute combat stress reaction during combat and deployment situations.

Formulating Clinical Questions

During the planning teleconferences, research questions about the evidence supporting the decision points and interventions under consideration were developed. The use of decision-relevant questions within the algorithm boxes is an important feature in the construction of the algorithms. Properly phrased, these questions compel CPG developers to clearly define the types of patients who should or should not be considered to receive particular interventions or who should or should not be managed in a defined manner. The WG developed a set of 13 researchable questions within the focus areas of the CPG and identified associated key terms to enable the literature search. For this CPG, two sets of questions were developed. The first

addressed acute and early intervention aimed at preventing PTSD in adults with recent exposure to trauma. The second set focused on therapy of adult patients with PTSD to achieve resolution of symptoms and functional outcome. This approach ensured that the CPG development work outside of meetings focused on issues that practitioners considered important and also produced criteria for the literature search and the selection of studies that formed the body of evidence for this CPG update.

Using a consistent format for developing answerable questions ("PICO") all questions specified:

- **P**opulation—Characteristics of the target patient population.
- **I**ntervention—Exposure, diagnostic, prognostic, or therapeutic intervention.
- **C**omparison—Intervention, exposure, or control used for comparison.
- **O**utcome—Outcomes of interest.

These specifications served as the preliminary criteria for selecting studies for review and determined the boundaries for admissible evidence.

Literature Search

This step consisted of a two-stage process—an initial literature review of secondary sources and a search for original studies. To eliminate a potential bias, a third-party research institution was contracted to conduct the systematic review of the evidence. The research team applied consistent and unbiased procedures to ensure high quality and valid assessment of the existing systematic reviews and original studies.

Selection of Evidence

The evidence selection process was designed to identify the best available evidence to address each key question and ensure maximum coverage of studies at the top of the hierarchy of study types. Published, peer-reviewed RCTs, as well as meta-analyses and systematic reviews that included RCTs, were considered to constitute the strongest level of evidence in support of CPG recommendations. This decision was based on the judgment that RCTs provide the clearest, most scientifically sound basis for judging comparative efficacy. The WG also recognized the limitations of RCTs, particularly considerations of generalizability with respect to patient selection and treatment quality. When available, the search sought out critical appraisals already performed by others that described explicit criteria for deciding what evidence was selected and how it was determined to be valid. The sources that have already undergone rigorous critical appraisal include Cochrane Reviews, Best Evidence, Technology Assessment, Agency for Healthcare Research and Quality systematic evidence reports, and other published evidence-based CPGs.

The following databases were searched: Medline/PubMed, Embase, PsycINFO, OVID, PILOTS, and Cochrane Central Register of Controlled Trials. Limits were set for language (English) and type of research (RCTs, systematic reviews including evidence-based practice and health technology assessment reviews, and meta-analyses). For prognostic and diagnostic questions (e.g., the validity or yield of screening tests or assessment tools), cohort or other prospective non-RCT designs were considered.

The searches covered the period since the publication of the first VA/DOD CPG on management of PTSD (between January 1, 2002, and August 31, 2009). The following inclusion criteria were used to select the articles identified in the literature search for possible inclusion:

- Published in the United States, United Kingdom, Europe, Australia, Japan, or New Zealand.
- Full articles only published in English.
- Study populations: age limited to adults ≥18 yr and all races, ethnicities, and cultural groups.
- Relevant outcomes able to be abstracted from the data presented in the articles.
- Sample sizes appropriate for the study question addressed in the study. RCTs were included if they were initiated with ≥30 participants.

The initial global literature search yielded 59 systematic reviews and meta-analyses addressing pharmacotherapy, psychotherapy, combination, enhancement, complementary, and other topics. Of the RCTs, 178 were found on the same subjects. Twenty-four controlled trials addressed combination, enhancement, and other areas. Refinement of

the review process with input from the WG members identified studies that met the baseline criteria for inclusion, addressed one or more of the researchable questions, and covered topic areas that had either not been addressed in the previous version of this CPG or had been included but not fully developed. A more detailed (full) search was conducted on each question, supplemented by hand searches and cross-referencing to search for relevant articles.

Preparation of Evidence Tables (Reports) and Evidence Rating

The results of the searches were organized in evidence reports, and copies of the original studies were provided to the WG for further analysis. Each reference was appraised for scientific merit, clinical relevance, and applicability to the populations served by the VA and DOD healthcare systems. Evidence appraisal provides an indication to the WG regarding the scientific validity and applicability of the literature.

Work Group Meetings

The WG participated in two face-to-face meetings to reach consensus about the CPG algorithm and evidence-based recommendations and to prepare a draft document. The draft continued to be revised by the WG through numerous conference calls and individual contributions to the document.

The group was divided into several subtask groups that focused on different aspects of the CPG (i.e., recommendation for pharmacotherapy, psychotherapy, screening, and diagnosis procedure). The plenary group convened to discuss discrepancies in ratings for the formulated recommendations. In most cases, an informal consensus within the WG was sufficient to formulate recommendations based on the best evidence. In areas where this approach did not lead to conclusion, the facilitator used a structured discussion format (i.e., a nominal group process) to expedite the process and reach conclusions based on the collective experience of the group. Where existing literature was ambiguous, or where scientific data was lacking on an issue, the recommendations were based on the clinical experience of the members of the WG. These recommendations are indicated in the evidence tables as based on "working group consensus."

Recommendation and Quality Rating

The clinical experts from the VA and DOD WG reviewed the evidence table reports and evaluated the strength of the evidence, considering the quality of evidence (QE) and the significance of the net benefit (NB; potential benefit minus possible harm) for each intervention.

The overall strength of each body of evidence made up of the individual studies that addresses a particular "key question" was assessed, as in all VA/DOD CPGs, using methods adapted from the U.S. Preventive Services Task Force. To assign an overall QE (good, fair, or poor), the WG considered the number, quality, and size of the studies; consistency of results between studies; and directness of the evidence. Consistent results from a number of higher-quality studies (RCTs and meta-analyses of RCTs) across a broad range of populations support, with a high degree of certainty, that the results of the studies are true and are considered good QE. A fair QE was assigned to the body of evidence indicating that the results could be caused by true effects but a moderate risk of biases is present across some or all of the studies. A poor QE indicates that any conclusion is uncertain because of serious methodological shortcomings, sparse data, or inconsistent results.

The strength of recommendation was then determined based on the QE and the clinical significance of the NB for each intervention, as demonstrated by the body of evidence. Thus, the grade (i.e., A, B, C, D, or I) assigned to CPG recommendations (**Table**) reflects both the QE and the potential clinical NB that the intervention may provide to patients.

Edit and Review of Final Draft

The WG continued to meet in weekly 1-hour conference calls for several weeks. Each conference call discussion was summarized and posted on a collaborative development Web site, and the CPG draft and/or algorithm was updated online. This CPG development Web site allowed the WG to add

comments, share opinions, and identify issues that needed to be discussed among all members or required additional research by the research team.

The final draft of the CPG was posted for public review for 5 weeks. VA network staff and DOD facilities staff were asked to provide feedback to the CPG development experts via the Web site, which was available for online comment. The comments submitted to the Web site were logged and documented. After the end of the review period, the CPG champions met with the facilitator to integrate the comments of the reviewers, as appropriate, and to complete the final draft. The champions contacted members of the WG as needed to respond to or address the issues brought about by the review process.

The final draft of the CPG document was presented in two related conferences of VA mental health providers and DOD healthcare providers. Additional feedback and comments were collected from the audience and integrated in the final document.

The final CPG *VA/DOD Clinical Guideline for Management of Post-Traumatic Stress* was submitted to the national VA/DOD Evidence-Based Practice Work Group (EBPWG) for review and approval. The EBPWG approved the full CPG and the summary of recommendations and published it on the VA Web site in PDF embedded in HTML pages. VA/DOD clinicians are able to download the CPG via the Internet (http://www.healthquality.va.gov).

IMPLEMENTATION

The ultimate goal of the development of CPGs is to improve care. CPGs represent perhaps the most important method of achieving consensus on best practices. They are endorsed by the sponsoring organization and have leadership support. They are useful in promoting increased awareness of best practices and knowledge about the nature of those practices. However, awareness and knowledge are only the beginning steps toward the real goal of CPG development: the improvement of clinician skills and the routine implementation of recommended practices.

Identification of best practices is only a starting place in the journey to better treatment. It is well established that the simple publication of written CPGs is insufficient for effecting actual changes to the practice of busy clinicians. There are many reasons for this. Sometimes, CPGs fail to “speak” to the real world of clinical care. This means that those expected to absorb the CPG wisdom may not be receptive to its messages. The VA/DOD CPG should, in many ways, be attractive to the practicing clinician. It is based not only on research evidence but also on the consensus judgments of clinical experts. This is important because the research literature is often mute on many of the questions facing treatment providers in the trenches. The first version of the CPG, which formed the basis of this second revision, was created with the active participation of a range of practicing clinicians, including chaplains, clinical psychologists, psychiatrists, social workers, primary care practitioners, and Readjustment Counseling Service Veteran Center staff members. This means that the real-world perspective of field personnel has significantly influenced this document and its recommendations. It is also true that this CPG is relatively broad in scope. It is designed to address a range of issues of importance to clinicians. In an effort to ensure the clinical relevance of the CPG, areas of practice were addressed for which little evidence is as yet available, such as clergy involvement in care.

Table.
Final grade of recommendation.

Quality of Evidence	Net Benefit of Intervention			
	Substantial	Moderate	Small	Zero or Negative
Good	A	B	C	D
Fair	B	B	C	D
Poor	I	I	I	I

Perhaps a more fundamental obstacle to translating CPGs into actual practice is a lack of access to evidence-based training methods. Effective training is characterized by access to highly interactive training workshops that provide a significant opportunity to practice elements of a new skill and receive feedback and coaching during that practice; moreover, posttraining supervision is vital if new skills are to be consolidated and integrated into routine practice [6–7]. Unfortunately, although a new generation of mental health training initiatives has begun to incorporate best practices in training [8–9], access to this kind of training experience as yet remains extremely limited for most clinicians. Motivated clinicians face significant challenges in learning new skills and protocols. Training workshops of the kind described previously may not be available, and more importantly, there may be little access to posttraining supervision from experts knowledgeable in a particular skill. Fortunately, there is increasing recognition that traditional continuing education training activities are not effective. Clinicians themselves need to have a voice in requesting effective trainings on topics included in the CPG. In fact, having such a CPG available may improve arguments that training is needed to master elements of the CPG. Clinicians can also take steps to arrange supervision opportunities. Existing clinical supervision forums can be shaped to more actively promote practices highlighted in the CPG. In many clinical practice settings, there will be individuals with expertise related to the various CPG recommendations. These individuals can be approached to provide supervision. Inside the VA, as the evidence-based trainings in prolonged exposure and cognitive processing therapy move into a decentralized phase, clinical consultants in those training initiatives can be approached to extend their supervisory activities to include other elements of the CPG. Perhaps the most practical approach for many clinicians will be to partner with interested peers to create ongoing mutual supervision groups to support one another in making practice changes. Mutual supervision should become a standard operating procedure in mental health treatment settings.

Even evidence-based training will often be insufficient to engender actual change in practice. This is because additional systems obstacles to CPG implementation still remain. Such obstacles can include the structure of clinic design, dominance of existing nonrecommended practices that may have enthusiastic support among certain clinician cohorts, competition with other priorities or mandated procedures, and lack of leadership support. Managers, therefore, must play a key role in implementing CPGs in their settings. To move toward providing CPG-concordant care and implementing best practices in PTSD assessment and treatment, they must work to assess and address systems obstacles. For example, they must take steps to enable their clinicians to learn and practice needed skills. This means encouraging ongoing participation in training and supervision, something that, in the short term, may conflict with other goals, such as maintaining clinician workload, reducing waiting lists, and ensuring rapid access to assessment and treatment. Managers must also establish expectations that their staff members should be familiar with the CPG and work to implement its recommendations. Especially useful would be the creation of quality improvement processes designed to measure and increase CPG implementation. To facilitate this implementation, managers must examine the architecture of their treatment programs to reduce any systems barriers to delivery of CPG-recommended practices. Finally, and perhaps most important, they must implement outcomes measurement.

Central to the creation of these CPGs is the concept of evidence-based care. Traditionally, this is taken to mean the adoption of assessment and treatment practices demonstrated to be effective in methodologically sound research trials. However, possibly even more fundamental to the improvement of treatments is the incorporation of outcomes monitoring and measurement into everyday clinical operations. When clinicians and managers develop the habit of looking at patient outcomes, they can move toward evidence-based clinical decision-making throughout the treatment processes. This important change is carefully included in this CPG, with its recommendation that “at a minimum, providers

should perform a brief PTSD symptom assessment at each treatment visit. The use of a validated PTSD symptom measure, such as the PTSD Checklist (PCL), should be considered" [10].

A challenging question for anyone interested in using the VA/DOD CPG to reflect on his or her own practices and make changes is how to navigate the somewhat bewildering array of information contained in the document, as well as the many recommendations. We suggest that the reader may wish to review the CPG algorithm and recommendations as a whole; then, based on interests and local needs, prioritize recommendations and the personal changes needed to implement them. Some issues to consider include—

- What practices, if implemented, would significantly improve the care I offer?
- What will be relatively easy for me to learn?
- What am I motivated to change, and for which skills is there someone nearby that I could engage to help me learn?

We are now seeing a change in what it means to be a mental health clinician. In the past, we received training in graduate schools that gave us a set of skills that we then applied for the rest of our careers. Now, there is increased awareness that many practitioners did not receive adequate training in evidence-based treatments in their training programs. Moreover, our field is evolving at an ever-increasing pace, with new research findings addressing additional patient needs and sometimes challenging our established ways of providing help. Mental health practitioners now must be increasingly adaptive, learning new methods, trying new delivery systems (e.g., telehealth), bringing new technologies into the treatment process, and collaborating more actively with other professionals to achieve more integrated care. The new "adaptive practitioner" will need to engage in lifelong learning and move with the times to improve patient and family outcomes.

CONCLUSIONS

The VA/DOD CPG development process combines both approaches, i.e., use of an algorithm and reliance on evidence-based medicine, to inform the clinical decision-making process. The algorithms, developed by expert clinicians, provided a foundation for questioning and challenging currently accepted medical practice. They permit the sort of modeling and testing required to explore the effects of changing assumptions about outcomes and preferences on the structure and content of the CPG. In some cases, the algorithm revealed a need to gather additional evidence to support and inform decisions that were not apparent to the CPG developers earlier in the process. A multitude of questions were asked to challenge existing practices and to recommend an improved evidence-based practice.

In other cases, the algorithm identified previously undetected weaknesses in the decision tree where certain points may not have been evidence-driven. Where there is no evidence or no QE available, the experts formulated, through consensus, recommendations based on opinion and experience. The proponents of evidence-based CPGs tend to be sharply critical of consensus procedures. However, much of medical practice consists of decisions that are considered accepted, rational practice but are not based on evidence [11].

Developing a tool (the CPG) that makes the most important information for decision-making available at the time of patient care will benefit from the two complementary development strategies described previously. An algorithmic CPG that includes evidence-based recommendations developed through a structured, systematically designed process can largely contribute to the drive toward clinical effectiveness and influence physician behavior. Finally, completion of the CPG is not completion of the task. Next, it is necessary to aggressively implement the new CPG to ensure that servicemembers and veterans receive the best evidence-based treatment for PTSD.

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