AMERICAN PSYCHOLOGICAL ASSOCIATION

American Psychologist

In the public domain
ISSN: 0003-066X

2020, Vol. 75, No. 8, 1116–1129
http://dx.doi.org/10.1037/amp0000631

An Intervention Mapping Process to Increase Evidence-Based Psychotherapy Within a Complex Healthcare System

Chris Crowe and Claire Collie
Department of Veterans Affairs Office of Mental Health and Suicide Prevention, Washington, DC

Clara Johnson
National Center for PTSD, VA Palo Alto Healthcare System, Menlo Park, California

Shannon Wiltsey Stirman
National Center for PTSD, VA Palo Alto Healthcare System, Menlo Park, California, and Stanford University

In response to recommendations from the Special Committee on posttraumatic stress disorder (PTSD), the United States Department of Veterans Affairs, Veterans Health Administration (VHA) chartered a workgroup to identify strategies for improving the reach and fidelity of evidence-based psychotherapies (EBPs) implemented by VHA through clinician training initiatives. The workgroup, which comprised stakeholders in a variety of roles within the VHA, used an Intervention Mapping process, a practical approach to designing change strategies based on theory, evidence, and stakeholder input. High-level recommendations centered around implementation of recent VHA/Department of Defense (VA/DoD) treatment guidelines. In addition to recommended first-line and suggested second-line treatments, the guidelines include measurement-based care and shared decision making around EBPs and their alternatives to ensure that care is goal-oriented and patient-centered. To support increased reach and fidelity, the workgroup made four broad recommendations: (a) enhancing leadership support; (b) alignment of policies, programs, and processes that influence reach of EBPs as recommended in clinical practice guidelines, including implementation support to accompany EBP trainings; (c) use of clinical data to inform decision making at multiple levels, and to provide fidelity support when outcomes are lower than expected or desired; and (d) increasing veteran and stakeholder education and awareness of guideline recommendations and availability of EBPs. These recommendations accompanied a more detailed set of recommended steps for implementation. This article describes the Intervention Mapping process and a summary of resulting workgroup recommendations.

Editor's note. This article is part of a special issue, "Expanding the Impact of Psychology Through Implementation Science," published in the November 2020 issue of *American Psychologist*. Shannon Wiltsey Stirman and Rinad S. Beidas served as editors of the special issue, with Anne E. Kazak as advisory editor and action editor for this article.

Authors' note. Chris Crowe and Claire Collie, Department of Veterans Affairs Office of Mental Health and Suicide Prevention, Washington, DC; Clara Johnson, Dissemination and Training Division, National Center for PTSD, VA Palo Alto Healthcare System, Menlo Park, California; Shannon Wiltsey Stirman, Dissemination and Training Division, National Center for PTSD, VA Palo Alto Healthcare System, and Department of Psychiatry and Behavioral Sciences, Stanford University.

Clara Johnson is now at the Department of Psychology, University of Washington.

This article summarizes recommendations by workgroup members but does not represent the views of the Veterans Health Administration. The authors gratefully acknowledge the work of the individuals listed below, as well as the contributions of individual VHA employees and veteran stakeholder groups who shared perspectives and made suggestions. Workgroup members were: Kristine Day, Kristin Powell, Stacey Pollack, Angela Keen, Matt Miller, Kerry Renner, Ron Gironda, JoAnn Kirchner. We also gratefully acknowledge the contributions of the following consultants: Tara Galovski, Shannon Kehle-Forbes, Sonya Norman, Craig Rosen, Nina Sayer, Jeanne Gabriele, Victor Wong Jr., Kathleen Chard, Afsoon Eftekhari, Ellen Healy, Nathan Kimbrel, Mandy Kumpula, Peggy Henderson, Jennifer Burden, Stephen Sams, Tanya Aaen, Bradley Norlander, Michael Messina, Nancy Bernardy, Steve Holliday, Jennifer Joyce, Connie Ponce, Brian Daskivich, Rob Campbell, Jennifer Wood, Dorene Loew, Timothy Parker, Khamkay Chitaphong, and Kelly Phipps Maieritsch, and special advisors Jessica Hamblen and Paula Schnurr. This material is the result of work supported with resources from, and the use of facilities at the National Center for PTSD and the VA Palo Alto Healthcare System.

Correspondence concerning this article should be addressed to Chris Crowe, Department of Veterans Affairs Office of Mental Health and Suicide Prevention, (10P4M), U.S. Department of Veterans Affairs Central Office, 810 Vermont Avenue Northwest, Washington, DC 20420. E-mail: chris.crowe@va.gov

Public Significance Statement
This study suggests an Intervention Mapping process is a useful approach for designing change strategies based on theory, evidence, and broad stakeholder input. The process and recommendations presented here provide guidance for enhancing access to high quality, evidence-based psychotherapy in a large healthcare system.

Keywords: implementation, fidelity, Intervention Mapping, Department of Veterans Affairs, Evidence-Based Psychotherapy

Supplemental materials: http://dx.doi.org/10.1037/amp0000631.supp

Implementation and sustainment of evidence-based interventions are particularly challenging in large and complex systems. This article reports on an Intervention Mapping (Eldredge et al., 2016) process and the recommended implementation strategies that resulted from a workgroup that the United States Department of Veterans Affairs (DVA), Veterans Health Administration (VHA) chartered to identify steps to improve reach and fidelity of evidence-based psychotherapies (EBPs) in the VHA. Although the original focus of the workgroup was EBPs, this article will highlight relevant actions for any complex mental health intervention implemented in large health care systems.

Background

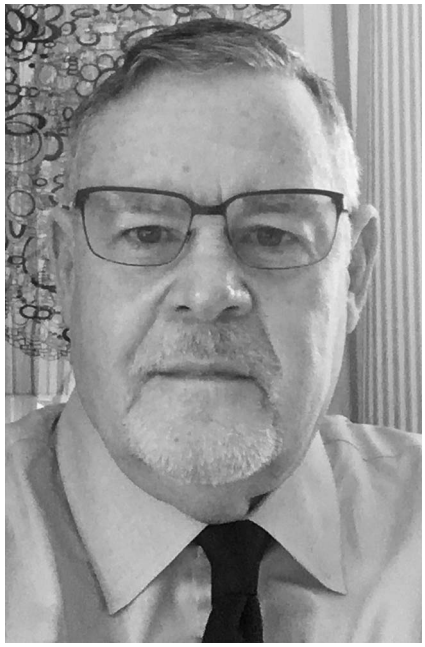
EBP in the VHA System

The VHA has made significant investments to increase veterans' access to EBPs. At the policy level, The Uniform Mental Health Services Handbook (DVA, 2008) set forth the expectation that all veterans with posttraumatic stress disorder (PTSD) "must have access to Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) as designed and shown to be effective," and that "all veterans with depression or anxiety disorders must have access to Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), or Interpersonal Psychotherapy (IPT)." The EBP clinician training programs disseminated psychotherapies that demonstrated efficacy or effectiveness in research trials, addressed conditions prevalent among veterans, and were well suited for dissemination in the VHA at the time of the Handbook's development (Karlin & Cross, 2014). Subsequent program evaluations of these VHA National Training Initiatives indicated levels of symptom change and/or rates of recovery that were comparable in terms of effect sizes to those found in clinical trials (cf., Eftekhari et al., 2013; Karlin et al., 2012). Despite the considerable efforts, promising findings within the VHA system and independent reviews indicate that current evidence supports the recommended EBPs as the first-line psychological treatment of PTSD in active duty military personnel and veterans (Kitchiner, Lewis, Roberts, & Bisson, 2019), researchers have documented low reach of EBPs. Studies that monitor clinician use of VHA's Computerized Patient Record System (CPRS) progress note templates to document EBP sessions, and studies that used Natural Language Processing (NLP) to examine clinical documentation of EBPs for PTSD indicate that EBP reach is significantly lower than would be predicted by the number of clinicians trained (Maguen et al., 2018; Rosen et al., 2019; Shiner et al., 2018). Most recently, Maguen et al. (2018) used NLP on a national level and determined that 20.2% of veterans with a PTSD diagnosis who received psychotherapy in the VHA received at least one session of an EBP for PTSD over the course of 15 years from 2001 to 2015, while Rosen et al. (2019) conducted the same procedure for CPRS notes during the 2015 fiscal year in nine PTSD Specialty Care programs and found that 35% of veterans with PTSD who engaged in psychotherapy initiate CPT or PE.

Factors Associated With EBP Reach

Numerous studies have examined organizational and provider-level factors that may explain the low reach of EBPs (Rosen et al., 2016). Despite several well-documented concerns about EBPs in the VHA (Rosen et al., 2016; Steenkamp & Litz, 2014; Steenkamp, Litz, & Marmar, 2020) and literature on factors that influence individual therapist decisions to provide EBPs including provider skepticism and concerns about fit, comorbidity, and other factors (Cook et al., 2015; Finley et al., 2020; Hamilton et al., 2020), the factors most strongly and consistently associated with EBP reach appear to be at the organizational level: leadership, team functioning, workload, and organizational support (Mohr et al., 2018; Rosen et al., 2016; Sayer et al., 2017).

Past research has examined patient-related attitudes and experiences with respect to EBP reach. Hundt et al. (2015) identified the following patient barriers: fears about symptom increases, beliefs that avoidance was helpful, doubts about the therapy rationale, and lack of knowledge about EBPs. Patient facilitators include needing to talk about the trauma, prior treatment experiences that led to confidence in their ability to engage in EBPs, knowing the EBP therapist, provider behaviors that facilitated buy-in, encouragement



Chris Crowe

from peers, and "desperation for symptom relief" (Hundt et al., 2015). The authors emphasize that veteran "word of mouth" around EBPs and certain provider behaviors (i.e., offering multiple treatment options, engaging in shared treatment decision making, providing information on available treatments, and describing treatment efficacy research) promote EBP initiation. Among veterans who participated in orientation meetings that included standardized information about EBPs and other treatment options offered at clinics, the majority chose an EBP with or without medications over no treatment or medications only (Schumm, Walter, Bartone, & Chard, 2015). In another evaluation, a brief orientation and treatment planning group resulted in a substantially higher rate of veteran choice of EBPs over alternative treatment options (i.e., symptom-focused treatments, supportive group therapy, complementary therapies, medications only, or no treatment; DeViva, Bassett, Santoro, & Fenton, 2017). However, in one study, when presented with options that include EBPs, 28% of veterans did not initiate EBP treatment (Keller & Tuerk, 2016). Studies have also suggested that dropout during the first third of the treatment protocol is not uncommon (Eftekhari et al., 2013).

Factors Associated With EBP Fidelity

Literature on the relationship of treatment fidelity and clinical outcomes has been mixed. A meta-analysis did not identify an association for therapies other than CBT for depression (Webb, Derubeis, & Barber, 2010). Subsequently, various studies identified associations between fidelity and symptom change for CPT with clinical trial and community samples (Farmer, Mitchell, Parker-Guilbert, & Galovski, 2016; Holder, Holliday, Williams, Mullen, & Surís, 2018; Marques et al., 2019). Other research has shown that additional aspects of implementation fidelity, such as the extent to which session frequency and consistency align with recommendations in treatment manuals, are associated with symptom change. Higher number of days and inconsistency in time between sessions was associated with worse outcomes, suggesting the possibility that adherence to the recommended frequency may increase the likelihood of good outcomes (Gutner, Suvak, Sloan, & Resick, 2016). It is possible that observed relationships between session frequency and clinical outcomes are not causal. Instead, other factors (e.g., clinic caseloads, scheduling constraints, and patient treatment motivation) may explain this relationship. On average, VHA medical record data suggests that sessions occur every two weeks (Sayer et al., 2019). Some studies have shown that feedback on intervention fidelity (e.g., the level of adherence and skill or competence) can support favorable training outcomes (Lu et al., 2012), and that supportive fidelity monitoring may reduce turnover, thereby preserving a trained workforce and EBP availability (Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009).

Current methods to assess EBP fidelity in the VHA are largely based on what can be gleaned from medical record data. The rate of compliance with the 2014 VHA requirement to use the EBP progress note templates in the medical records (Rosen et al., 2019) is unknown, although a recent study indicated that about 33% of patients in residential programs had clinical notes that used EBP templates, and that the number of templates used correlated with therapist-level self-reports of EBP use (Shiner et al., 2018). However, limitations to templates for fine-grained fidelity assessment include the fact that only self-reported adherence, rather than competence can be gleaned from templates, and not all elements of EBPs that are reflected in the templates are captured in the VHA's corporate data warehouse, which facilitates retrieval of large-scale data on clinical visits.

Special Committee on PTSD Report

Consistent with findings outlined above, the Fiscal Year (FY) 2015 Report of the Special Committee on PTSD identified several concerns regarding the delivery of EBPs for PTSD within the VHA (Institute of Medicine [IOM], 2014). One concern is related to reach: that VHA clinicians who receive extensive training and consultation in CPT and/or PE do not provide the therapy to veterans often enough to significantly increase opportunities to access these treatments. Additionally, some clinicians may not use the treatments often enough to develop and maintain the fidelity and expertise needed to ensure that veterans obtain optimal treatment outcomes. The committee also expressed concern about the lack of current validated mechanisms

Claire Collie

within the VHA for assessing the level of fidelity and quality with which clinicians deliver therapies following completion of training. In response, the VHA created a national workgroup to develop empirically based strategic recommendations about fidelity. VHA also tasked the workgroup with addressing a broader concern about emerging data indicating low EBP reach within VHA. The workgroup was formed with the intent to generate recommendations from all levels of stakeholders regarding ways to assess, improve, and sustain EBP use and fidelity, with an effort to inform EBP delivery beyond PTSD in the VHA.

To address the complexity associated with the reach and fidelity of EBPs, the workgroup leaders followed emerging recommendations from the field of implementation science and used an Intervention Mapping (IM) framework to decide upon recommendations for the VHA (Powell et al., 2017). IM is a process for developing theory- and evidence-based interventions or strategies, based on a systematic framework for planning, development, and implementation of effective interventions (Eldredge et al., 2016; Fernandez, Ruiter, Markham, & Kok, 2019). The aim of the current article is to outline the workgroup's IM approach and describe the resulting recommendations, emphasizing processes, and findings that may be broadly relevant for implementation and sustainment in large health care systems.

Method

The workgroup selected an IM Framework to guide the development of recommendations. The framework applies a model for change to the challenges of implementation by operationalizing the multilevel influences on success and linking them with appropriate, evidence-based implementation strategies to achieve specific performance objectives (Colquhoun, Squires, Kolehmainen, Fraser, & Grimshaw, 2017). Thus, it is particularly useful when there are multiple, potentially complex determinants of behaviors that are targeted for change, and it has increasingly been used in implementation projects (Colquhoun et al., 2017). More recently, Fernandez et al. (2019) used a proposed framework that adapts the process for implementation strategies. However, the process undertaken by the workgroup more closely aligns with IM, as it included the development of process and logic models to fully understand the ways in which the multilevel determinants may interact and influence one another. The workgroup based the process on Eldredge et al. (2016) and examples of IM in the literature, but rather than applying it to the development of a psychological intervention, they applied it to the selection and integration of implementation strategies to address low EBP reach and fidelity (Colquhoun et al., 2017; McEachan, Lawton, Jackson, Conner, & Lunt, 2008).

The workgroup followed the IM steps (Eldredge et al., 2016) that fell within the scope of the workgroup's charter. As described by Eldredge et al., Step 1 of the process, "Logic Model of the Problem," comprises: (a) Establish and work with a planning group, (b) Conduct a needs assessment to create a logic model of the problem, (c) Describe the context for the intervention, including the population, setting, and community, and (d) State program goals. The latter two steps were set forth in the charter for the workgroup, but once formed, the workgroup engaged in the remaining activities. The second step of the process, Program Outcomes and Objectives and Logic Model of Change includes: (a) State expected outcomes for behavior and environment (identified in the charter, definitions established by the workgroup), (b) Specify performance objectives for behavioral and environmental outcomes, (c) Select determinants for behavioral and environmental outcomes, (d) Construct matrices of change objectives, and (e) Create a logic model of change. Step 3, Program design/Recommendations includes: (a) selecting evidence-based change methods and (b) identifying practical applications and methods to deliver the change methods, including identification of existing resources and tools to support the recommended activities. The workgroup did not engage in Step 4 (Program Production), as this step would require formal adoption of the recommendations and dedicated resources. However, the group did compile a detailed list of steps and suggested program users for each step, consistent with Step 5 (Program Implementation Plan). Step 6 (Evaluation) was outside the scope of the workgroup's charter.

Clara Johnson

Step 1: Logic Model of the Program

Formation and composition of the workgroup. To begin, the workgroup enlisted core, consultant, and special advisor workgroup members who could provide a variety of perspectives and knowledge of different aspects of care delivery within the system. These 44 individuals included mental health policymakers, administrators, and program leads from relevant offices in VHA's Office of Mental Health and Suicide Prevention (e.g., National Center for PTSD, outpatient mental health, suicide prevention, psychosocial rehabilitation, and veteran integration), clinicians, EBP training program coordinators, EBP trainers/consultants, facility mental health chiefs, facility EBP implementation support staff, and implementation/health services researchers within the VHA. Additionally, following standard procedures for soliciting veteran feedback, liaisons from the workgroup discussed EBPs and sought input regarding needs, preferences, and recommendations from Veteran Mental Health Councils and representatives of Veteran Service Organizations (VSOs) after an initial review of evidence and preliminary drafts of recommendations (i.e., approximately halfway through the IM process). The liaison summarized veteran stakeholders' feedback on the preliminary recommendations for the workgroup. To capture a broader diversity of patient perspectives on PTSD treatment and experiences with EBPs, the workgroup also consulted qualitative research that summarized interviews with veterans during the IM process (e.g., Hundt, Barrera, Arney, & Stanley, 2017; Hundt et al., 2018).

Needs assessment and development of a logic model of the problem. IM begins with a needs assessment and identification of determinants, and ends with an evaluation of the program or intervention that is designed and produced through the IM process. The tasks are iterative, with the planners circling back to previous steps throughout the process to ensure that they have addressed all implementers, outcomes, determinants, and objectives. Because of limited travel budget and restrictions in terms of workgroup members' time, these activities occurred entirely through web and phone-based meetings (33 over a period of approximately 24 months, with workgroup lead meetings occurring between larger workgroup meetings) and work between meetings (e.g., reviewing literature/research findings, or drafts of logic models and recommendations). The workgroup first identified barriers and facilitators through a review of research on EBP implementation in the VHA that had very recently been completed at the time the workgroup commenced (Rosen et al., 2016). This review included consideration of multiple levels identified in implementation frameworks: Outer context (sociopolitical factors outside VHA), VHA System-, VISN (region)-, Facility-, Program/Clinic-, Individual Provider-, and Veteran- Levels. The workgroup also identified barriers and facilitators related to the EBP training programs, and reviewed VHA and non-VHA research on implementation determinants and strategies, including recent review articles (e.g., Rosen et al., 2016; Stirman, Gutner, Langdon, & Graham, 2016), local and national program evaluation, and descriptions of stakeholder experiences. Workgroup consultants periodically updated the literature review to include emerging research over the course of the workgroup's deliberations. Workgroup members read published reviews and consultants presented information about relevant findings on workgroup calls. Additionally, the group reviewed summaries of reach derived from documentation of EBP delivery through EBP templates in electronic health records, which were captured in the VHA's Corporate Data Warehouse. These data sources were reviewed to understand the range of EBP reach, and the findings regarding barriers and facilitators to implementation that have been identified within and outside the VHA.

The workgroup formulated these barriers and facilitators into a logic model that identified policies, behaviors, and other implementation determinants at each level that contributed to low reach and lower EBP fidelity. The group identified 84 barriers and organized the logic models into two major areas of outcomes: reach and fidelity. The reach model included 76 barriers, and the fidelity model included 50 barriers. The workgroup updated and refined the logic model of the problem over a dozen times by reviewing and discussing it on calls and sending feedback via e-mail. While the working model was far more detailed, for ease of interpretation the model depicted in the online supplemental materials is a refined summary that encompasses broad themes.

Shannon Wiltsey Stirman

Step 2: Program Outcomes and Objectives and Logic Model of Change

State expected outcomes for behavior and environment. Per the workgroup charter, EBP reach and fidelity were the two main expected outcomes. To address variability in key implementation term definitions, the workgroup first agreed upon definitions of reach and fidelity. Members recommended focusing on implementation fidelity (Carroll et al., 2007), as it includes elements of coverage/reach (proportion of eligible patients who receive the intervention), delivery of the core intervention elements, and attention to the timing, dose, and duration of the intervention. The workgroup conceptualized sufficient implementation fidelity as skilled delivery of an adequate and consistent dose of the treatment elements most closely associated with positive clinical outcomes.

State performance objectives. To increase the generalizability and recognize the flexibility required for the care of a complex patient population, the workgroup decided to focus on reach and fidelity to interventions recommended in VA/DoD (Department of Defense) clinical practice guidelines (CPGs), which might change as evidence emerges, rather than specific evidence-based psychotherapies (EBPs). VA/DoD Evidence-Based CPGs are available for PTSD (VA/DoD, 2017), Major Depressive Disorder (VA/DoD, 2016), Substance Use Disorders (VA/DoD, 2015), and suicide prevention (VA/DoD, 2019). Based on the original recommendations of the Special Committee on PTSD and as an example, the workgroup highlighted the recent VA/DoD CPG for the Management of Posttraumatic Stress Disorder and Acute Stress Reaction (VA/DoD, 2017). Informed by reviews of the most recent intervention research as well as by veteran stakeholder focus groups, this peer-reviewed CPG identified several effective first-line treatments for PTSD. In recognition of the importance of patient choice and the fact that a "one size fits all" approach does not reflect the realities of clinical care in a complex system, *these guidelines also provide flexibility*. Consistent with the American Psychological Association's Evidence-Based Practice in Psychology policy, the VA/DoD CPG for PTSD recommends a process of shared decision making (SDM) and integration of patient preferences. The CPG developers also suggest specific treatments when the recommended treatments are not available, indicated, or when veterans decline the first-line treatments. Finally, the guidelines encourage measurement-based care (MBC) to support ongoing collaborative clinical decision making and treatment planning. Thus, in addition to recommending specific first- and second-line psychotherapies identified in CPGs, the workgroup suggested that additional outcomes be included in efforts to determine whether guideline-informed care occurred. These additions allow a process by which veterans are made aware of and offered treatments that are recommended in the guidelines when they are indicated, that a discussion of treatment options and patient preferences occurs, and that the treatment plan is reviewed and updated based on discussions about the veteran's progress and goals. The workgroup also discussed how to measure and recognize increases in reach and fidelity to the interventions and processes recommended in the guidelines. It was important to identify feasible strategies for measurement in a large health care system while developing recommendations regarding gaps in current measurement capabilities.

Create matrices of change objectives and strategies. The workgroup next identified potential strategies that could address each of the most salient and central barriers related to low reach and fidelity. The workgroup leads presented the Expert Recommendations for Implementation Change (ERIC; Powell et al., 2015) and an example of the process of experts mapping strategies to barriers (Waltz et al., 2015) to the workgroup to illustrate an approach to identifying strategies. However, the workgroup elected not to restrict their recommendations to individual ERIC strategies and considered research findings on multifaceted or bundled implementation strategies (e.g., Aarons, Ehrhart, Farahnak, & Hurlburt, 2015; Glisson et al., 2010; Kauth et al., 2010; LoSavio et al., 2019). Small subworkgroups formed, comprising workgroup members and consultants with multiple perspectives and/or expertise at each level (e.g., system, EBP training program, facility, program, provider, and veteran). Over a series of 1-hr calls, subgroups examined research and local evaluation data to select the most promising strategies that could occur at their level to address barriers and facilitate increases in reach and fidelity. Existing research literature, as well as program evaluation and evidence from programs with higher reach and fidelity informed this

process, with workgroup members who had relevant knowledge or experience sharing literature, data, and other information to support decisions about appropriate strategies. The subgroups identified solutions that leveraged existing VHA programs and resources to address these barriers when possible. They engaged stakeholders from the field by asking workgroup members to report on the workgroup's activities to their local and national constituent groups to receive input on implementation strategies. They publicized an online suggestion box in these meetings and through emails, and received 28 suggestions from clinicians, supervisors, and program managers. After the small workgroups narrowed down the recommendations, the core workgroup reviewed and finalized a comprehensive set of recommendations.

Logic model of change. With input from consultants, the workgroup next developed the logic model of change that describes how strategies at each level of the system are expected to drive change at other levels. The detailed recommendations included the appropriate organizational level, resources and personnel required, timelines, and specific steps to take to implement the recommendations over the short- and longer-term (see online Supplemental Materials 2 for a summary of specific recommended actions). The workgroup then simplified the logic model by identifying encompassing themes of actions to promote change. They further distilled the recommendations under four broad themes to present as an executive summary to high-level leadership, with more detailed recommendations included as a "roadmap" for enacting the recommendations. The workgroup leaders shared a draft of the recommendations, which includes the broad themes and specific strategies within the VHA (see Figure 1), with the consultant workgroup and special advisors for comments before finalizing the recommendations.

Step 3: Program Design/Recommendations

The IM process resulted in a distilled list of detailed recommendations to support increased reach and fidelity of evidence-

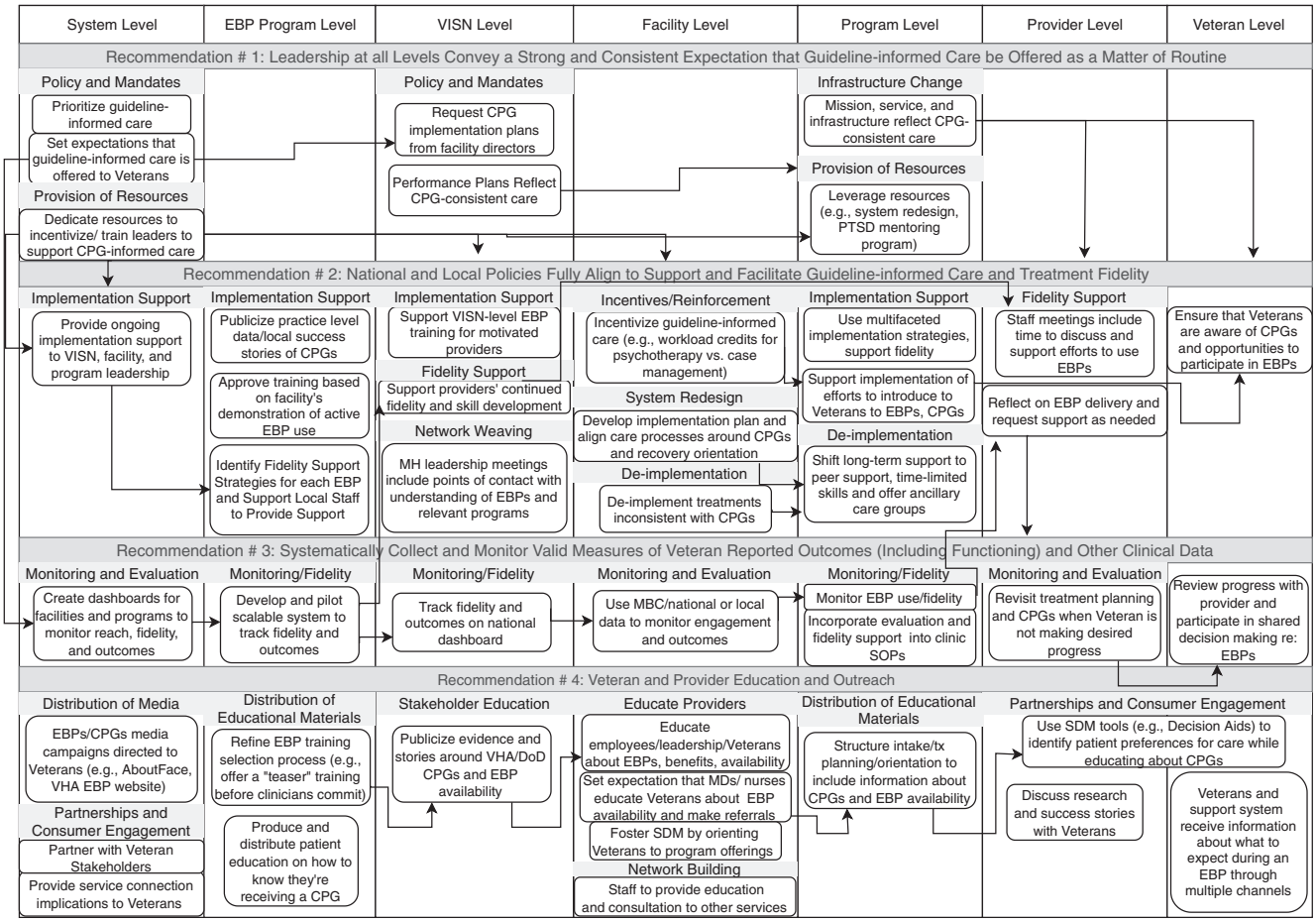


Figure 1. Positive logic model. PTSD = posttraumatic stress disorder; CPG = clinical practice guidelines; EBP = Evidence-Based Psychotherapy; tx = treatment; PCT = PTSD clinical team; VISN = veterans integrated service networks; SOP = Standard Operating Procedure; MBC = measurement based care; SDM = shared decision-making; NCPTSD = National Center for PTSD; MD = Medical Doctor; DoD = Department of Defense.

based care at the national/system, facility, program, clinician, and veteran levels. While organized under four broad themes, recommendations include details regarding a variety of implementation strategies at different levels within the system.

Results: Workgroup Recommendations

The narrative below includes recommendations and highlights key implementation strategies in the language the workgroup used, referencing the ERIC taxonomy when they aligned with the recommendations. A more detailed report was submitted to VHA leadership, and consistent with Step 5 of the IM process, online Supplemental Materials 2 includes examples of detailed steps involved in implementing the recommendations that include potential leads, timeframe, and other recommended implementation reporting details (Proctor, Powell, & McMillen, 2013). However, the summary below includes more high-level recommendations that may apply across complex mental health systems. Table 1 identifies ERIC strategies at multiple levels that were represented in the recommendations.

Recommendation 1: Leadership at all Levels Convey a Strong and Consistent Expectation That Guideline-Informed Care be Offered as a Matter of Routine

Research indicates that higher EBP reach and fidelity require a supportive organizational context, which is facilitated through strong and consistent expectations and support from executive leadership, facility Mental Health leadership, and program managers (Aarons et al., 2015; Cook et al., 2015; Sayer et al., 2017; Williams, Glisson, Hemmelgarn, & Green, 2017). The workgroup concluded it is crucial that leadership advocate consistently for facilities and programs to increase awareness of and access to CPG recommended treatments, to promote a culture of evidence-based care.

Implementation strategies that the workgroup recommended that leaders pursue include:

- Policy and directives. Formal endorsement and establishing quality measurement of efforts to ensure that veterans are well informed of the most recent VA/DoD CPGs and that care is informed by these guidelines.
- Recruit, designate, and train leadership that supports EBPs and CPG-informed care.
- Provision of resources to support implementation (detailed below).
- Restructuring, infrastructure change, and alignment of care processes.
- Measuring and incentivizing/reinforcing evidence-based care.

Based on extensive research, the workgroup recommends that similar prioritization and activity at the facility and program levels should mirror these strategies to achieve sufficient alignment to improve EBP reach and fidelity (Aarons, Ehrhart, Farahnak, & Sklar, 2014; Hemmelgarn, Glisson, & James, 2006; Shelton, Cooper, & Stirman, 2018). Subsequent recommendations further elaborate steps that would reflect and follow from strong leadership support and promotion of a culture of guideline-informed care.

Recommendation 2: National and Local Policies Fully Align to Support and Facilitate Guideline-Informed Care and Treatment Fidelity

Following the previous recommendation regarding leadership support, alignment of policies, infrastructure, and evaluation (see Recommendation 3) to support increased reach and fidelity is essential. Several large-scale VHA initiatives, including suicide prevention efforts and measurement-based care, share overlapping goals and potential benefits. Integration of these initiatives will result in their alignment in support of shared goals to ensure veterans receive effective and recovery-oriented care. Key activities and tools include:

- Implementation support. The workgroup recommended a funded mandate that ongoing, multifaceted interactive implementation support accompanies the VHA's EBP program, which already includes training and consultation strategies. This would include required up-front training for managers to support implementation, as well as ongoing mentorship, facilitation, or consultation to address barriers to EBP reach and fidelity within programs. Potential multifaceted implementation strategies include facilitation (Kauth et al., 2010; Kirchner et al., 2014; Ritchie et al., 2015), learning collaboratives (LoSavio et al., 2019), and interventions that target leadership and organizational change (Aarons et al., 2015), culture, and capacity (Williams et al., 2017). This level of support requires additional resources but can also leverage existing VHA supports.
- Implementation plans and tool development. Individual providers and clinics that will implement plans to increase availability of EBPs should receive audit and feedback tools and dashboards, how-to guides for managing scheduling grids, and other resources.
- Fidelity support. Based on existing research, the workgroup recommended that EBP program staff train individuals at the facility level to provide local support and training (cf., Aarons et al., 2009; German et al., 2018; Southam-Gerow & Prinstein, 2014), along with ongoing access to experts in the EBP training program who can support ongoing fidelity (Cooper, Bumbarger, & Moore, 2015). EBP training programs should monitor fidelity and offer additional (nonpunitive) support to programs and

Table 1
Workgroup-Recommended Multilevel Strategies Mapped to the Expert Recommendations for Implementation Change (ERIC) Taxonomy

Strategy	Recommendation no.	Level							
		Outer	System	EBP program	VISN	Facility	Program	Provider	Veteran
Use evaluative and iterative strategies	1, 2, 3		x	x	x	x	x	x	
Audit and provide feedback	1, 2, 3		x				x	x	
Develop implementation tools	2, 3		x	x		x			
Develop quality monitoring	3		x	x		x	x		
Provide interactive assistance	2					x	x		
Develop stakeholder relationships	1, 2, 3, 4		x	x	x	x	x	x	
Recruit and train for leadership	1, 2		x		x	x	x		
Inform local opinion leaders	2					x	x		
Promote network weaving	2, 4			x	x	x	x	x	
Train and educate stakeholders	1, 2, 3, 4	x	x		x	x	x	x	x
Identify and prepare champions	4		x		x	x	x		
Conduct ongoing training	2, 3, 4						x	x	
Provide ongoing consultation	2, 3						x	x	
Develop educational materials	4	x	x				x		x
Distribute education materials	1		x		x	x	x		
Educational meetings	3						x	x	
Educational outreach visits	4		x				x		x
Support clinicians	3, 4		x				x	x	
Relay clinical data to providers	3						x	x	
Engage consumers	2, 4								x
Prepare patients/consumers to be active participants	4	x	x						x
Use mass media	4	x	x						x
Utilize financial strategies	1					x	x		
Alter incentive structures	2		x			x	x		
Change infrastructure	1, 2					x	x	x	
Mandate change	1, 2		x						
Change record systems	2, 3		x			x	x		

Note. EBP = evidence-based psychotherapy; VISN = veterans integrated service networks; x = indicates which levels are involved in each strategy.

facilities that are consistently not achieving good clinical outcomes, to ensure that EBPs are appropriately tailored to individual veteran needs. In light of limited resources and the resource-intensive nature of fidelity monitoring, the workgroup recommends measurement of clinical outcomes (see Recommendation 3) to determine the need for additional consultation and fidelity support from EBP training programs.[1] However, the workgroup recommended that local resources and staff meeting time at all facilities be devoted to supporting CPG-informed care and discussion of application of EBPs to specific cases.

- Network weaving and regular communication. Meetings between EBP training programs and teams or individuals engaged in operations and implementation support (e.g., VISN Mental Health Leads, Quality Improvement and Implementation Consultants, Suicide Prevention Program Leads, and the PTSD Mentoring Program) would allow discussion of challenges, opportunities for alignment and efficiency, and development of action plans to address implementation barriers that reflect institutional knowledge.
- Incentives and reinforcement. Incentive structures and service delivery models should be consistent with the goal of providing CPG-informed care.
- System redesign. The workgroup recommended taking steps to ensure that systems of care are conducive to the desired practices and outcomes. For facilities with low EBP reach and little evidence of improvement under existing models of care, the workgroup suggests a shift in service delivery model to one that emphasizes a continuum of care and recovery that allows veterans to step up or down to appropriate levels of intensity (Sayer et al., 2017). Leadership guidance and support, access to specialty or ancillary care, and engagement of veteran stakeholders and peer support specialists would be essential to this transformation.
- Adjustment of staffing and hiring procedures, clinician schedules, workload expectations, and caseload sizes to support CPG-consistent care (e.g., weekly short-term psychotherapy) may be necessary in some settings, along with provider autonomy in timing and scheduling psychotherapy procedures.
- De-implementation. The system should engage in recommended processes to support de-implementation of practices that decrease the likelihood that veterans will engage in effective treatments and that are ineffective, unnecessary, inconsistent with treatment guidelines (e.g., benzodiazepines for PTSD), and/or do not improve key veteran outcomes, to better align care with evidence-based treatment (Niven et al., 2015).

Recommendation 3: Systematically Collect and Monitor Valid Measures of Veteran Reported Outcomes (Including Functioning) and Other Clinical Data

- Use of clinical data to inform decision-making. Clinicians and clinics should use monitoring, evaluation, and use of clinical information to inform and continually improve care. At the system level, the creation of dashboards will allow programs and facilities to examine the degree to which CPG-consistent care is offered, initiated, and completed. Real-time clinical data can inform decisions about how to allocate resources for additional fidelity support. Dashboards can track key measures collected from patients, including clinical (for primary and co-occurring problems) and functional outcomes, therapeutic alliance, patient engagement, and flow though programs and episodes of care. Clinics should incorporate the implementation of routine outcome measurement and documentation of shared decision-making into the Clinic Standard Operating Procedures and encourage consultation in team meetings on treatment and progress of individual clients, particularly those who are not experiencing improvement.
- Fidelity assessment. The workgroup recommends that EBP training programs further develop or identify fidelity monitoring systems based on the methods and instruments that have been established in the individual EBP's research and training programs. Clinics and clinicians will first need to pilot scalable and reliable fidelity monitoring and support strategies for some EBPs, before rolling them out with programs or clinicians that require extra support. The workgroup recommended that in the absence of patterns of poor clinical outcomes, support at the local level using clinical templates, dashboards, and fidelity measures used for EBPs may be sufficient, with EBP program support and oversight.

Recommendation 4: Veteran and Referring Provider Education and Outreach

Research and feedback from stakeholders suggest that many veterans are still not aware of CPGs, benefits of EBPs, or what they entail. A first step toward increasing reach is ensuring that veterans receive accurate information

[1] The workgroup cautioned against benchmarks for clinical outcomes that are established in the absence of clear guidance from the existing research literature, literature on veteran outcomes, and consideration of case mix (e.g., gender, age, service era, combat or MST exposure, and comorbidity) and severity. If benchmarks are desired, programs such as the United Kingdom's Improving Access to Psychological Treatment's approach (proportion moving toward recovery and proportion recovered; https://www.england.nhs.uk/mental-health/adults/iapt/) may provide guidance for benchmark development. However, to operationalize what might trigger further support in the shorter term, the workgroup suggests looking to the range of effect sizes found in practical clinical trials with similar populations, and published reports of the EBP Training Programs' program evaluations. Further research, particularly with diagnostically complex populations is imperative to inform appropriate benchmarks.

about their treatment options, including the availability of treatments recommended in guidelines for the problems for which they seek treatment. A recent IOM report recommends multifaceted public health communication campaigns to increase public awareness and influence attitudes or behavior (IOM, 2015). Recommendations include:

- Stakeholder education and awareness. The workgroup recommended that VHA publicize the VA/DoD CPGs and availability of guideline-consistent care utilizing a public health approach that focuses on the evidence and stories of the benefits of treatments identified in CPGs. Peer support specialists with lived experience in receiving guideline-informed care may also be well-positioned to provide outreach and education to veterans.
- Distribution of educational materials. The workgroup recommended dissemination of information about CPGs to veterans at every possible decision point throughout the course of care within the VHA. They suggested that VHA EBP training programs develop (or broadly disseminate existing) materials and toolkits to support facility efforts to increase awareness. The workgroup recommended developing and sharing existing decision aids and fact sheets via local social media, veterans' groups, and in mental health, addiction, and primary care settings. These materials should include information about what will happen during EBP care and how to know if the veteran is receiving EBPs. Clinicians and primary care providers should also provide accurate, accessible information about the effectiveness of alternative or experimental approaches in which veterans express interest.
- Distribution of media. A veteran-facing campaign could highlight stories of veterans who received evidence-based care (e.g., through Make the Connection or AboutFace, the VHA EBP website, and other web-based resources), and targeted press releases to local and national media sources could reach a broader audience of veterans and their family members. Local campaigns could include social media and information on monitors in waiting areas and incorporate effective messaging that includes stakeholder input (Kehle-Forbes, Gerould, Polusny, Sayer, & Partin, 2020).
- Partnerships and consumer engagement. Partnering and coordinating with VSOs and other veteran stakeholders at local and national levels to educate veterans about their treatment options will ensure that stakeholders are involved in the initiative. It will be essential to provide information and stories to counter the prevailing notion that mental health conditions such as PTSD and depression are chronic and untreatable.
- Education of providers and referral sources. Education and training about EBPs/CPGs also need to target providers. Providers outside of specialty mental health settings are often an important source of information regarding the availability of effective treatments. General Mental Health Clinic teams, primary care physicians, and specialists should be educated regarding relevant VA/DoD CPGs for common mental health problems. While there is evidence that education and training alone does not change therapist decisions about EBPs (Stirman et al., 2016), it is a key component of a broad and comprehensive implementation strategy. Education for mental health providers should include information on how to facilitate referrals to and engagement in CPG-recommended specialty care if the providers are not trained in EBPs. This includes training and support in shared decision making by presenting CPG-consistent options and education about EBPs and their alternatives in an unbiased, patient-centered manner. This may require addressing skepticism about EBPs and identifying approaches to do so more successfully in the context of the training programs, including emphasis on MBC and ongoing access to consultation. Alternatively, workgroup members and consultants suggested providing a briefer overview designed to orient providers and address concerns before allowing providers to "opt in" to full training and consultation. This latter approach would ensure that resources are devoted to training providers who would be more likely to ultimately use EBPs in their routine practice after training is completed.
- Network building. Facilities can build awareness and generate referrals by assigning qualified staff from specialty mental health programs and/or Local EBP Coordinators to educate other colleagues and teams, and to provide clinical consultation. This type of network will also allow the designated staff to gain credibility as content experts with their peers and allow them to advocate and champion for the use of EBPs/CPG-consistent care.

Conclusions

This article details the application of an IM process to develop a comprehensive set of recommendations to increase EBP implementation (reach and fidelity) in the VHA. In contrast to previous recommendations for implementation in VHA, the workgroup's comprehensive suggestions resulted from a unique and systematic effort involving stakeholders at all levels within the VHA system. ERIC

strategies were represented in the recommendations, but they were typically components of the more multifaceted approaches that field-based workgroup members conceptualized as necessary. This may be one reason why researchers have had limited success in mapping ERIC strategies to implementation constructs and barriers (Waltz, Powell, Fernández, Abadie, & Damschroder, 2019). While they may facilitate shared language and understanding for reporting the individual components represented in packages of implementation strategies, the strategies and terminologies may be challenging for field-based stakeholders to use when identifying solutions to address the complexities of implementation.

While the workgroup developed the recommendations specifically for EBPs represented in clinical practice guidelines, many may apply to other clinical innovations within large health care systems. The broad recommendations presented here were a distillation of more detailed recommendations that were made specifically for VHA. A limitation of this article is that to emphasize broadly applicable principles and recommendations, it did not provide a step-by-step guide to enacting the recommendations, although online supplemental materials include additional detailed suggestions. Enacting all recommendations would support a culture change, but would also require substantial commitment, time, and resources in a system with multiple competing priorities. However, many recommended actions may occur in the shorter term and in some cases, multiple entities have laid the groundwork and action is underway. For example, the recommendations leverage and suggest expansion or refinement of many existing resources and programs within the VHA. These resources include EBP training and consultation programs, the Modeling to Learn participatory system dynamics intervention (Zimmerman et al., 2016) and system redesign efforts, use of updated clinical templates, facilitation and leadership support programs, Quality Improvement and Implementation Consultants, decision aids, required MBC training across all EBP training programs, and programs such as the PTSD Mentoring Program (Rosen et al., 2012). Researchers have already begun to test approaches to supporting increased implementation and sustainment in partnership with facilities and national leadership. If pursued, final steps of the IM process (program production, program implementation, and evaluation) may take several years. In light of the complexity of implementation in large systems, a multiyear approach is likely necessary, and change may be incremental. However, the process of stakeholder engagement in the identification of solutions, informed by implementation science and understanding of the broad and local contexts, suggests a path forward to advance the goals and vision of increasing access to evidence-based care.

References

Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Hurlburt, M. S. (2015). Leadership and organizational change for implementation (LOCI): A randomized mixed method pilot study of a leadership and organization development intervention for evidence-based practice implementation. *Implementation Science, 10,* 11. http://dx.doi.org/10.1186/s13012-014-0192-y

Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Sklar, M. (2014). Aligning leadership across systems and organizations to develop a strategic climate for evidence-based practice implementation. *Annual Review of Public Health, 35,* 255–274. http://dx.doi.org/10.1146/annurev-publhealth-032013-182447

Aarons, G. A., Sommerfeld, D. H., Hecht, D. B., Silovsky, J. F., & Chaffin, M. J. (2009). The impact of evidence-based practice implementation and fidelity monitoring on staff turnover: Evidence for a protective effect. *Journal of Consulting and Clinical Psychology, 77,* 270–280. http://dx.doi.org/10.1037/a0013223

Carroll, C., Patterson, M., Wood, S., Booth, A., Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implementation Science, 2,* 40. http://dx.doi.org/10.1186/1748-5908-2-40

Colquhoun, H. L., Squires, J. E., Kolehmainen, N., Fraser, C., & Grimshaw, J. M. (2017). Methods for designing interventions to change healthcare professionals' behaviour: A systematic review. *Implementation Science, 12,* 30. http://dx.doi.org/10.1186/s13012-017-0560-5

Cook, J. M., Dinnen, S., Thompson, R., Ruzek, J., Coyne, J. C., & Schnurr, P. P. (2015). A quantitative test of an implementation framework in 38 VA residential PTSD programs. *Administration and Policy in Mental Health and Mental Health Services Research, 42,* 462–473. http://dx.doi.org/10.1007/s10488-014-0590-0

Cooper, B. R., Bumbarger, B. K., & Moore, J. E. (2015). Sustaining evidence-based prevention programs: Correlates in a large-scale dissemination initiative. *Prevention Science, 16,* 145–157. http://dx.doi.org/10.1007/s11121-013-0427-1

Department of Veterans Affairs. (2008). *Uniform mental health services in VA a medical centers and clinics*. Washington, DC: Author. Retrieved from http://www.mirecc.va.gov/VISN16/docs/UMHS_Handbook_1160.pdf

Department of Veterans Affairs & Department of Defense. (2015). *VA/DoD clinical practice guideline for the management of substance use disorders*. Washington, DC: Author. Retrieved from https://www.healthquality.va.gov/guidelines/MH/sud/VADoDSUDCPGRevised22216.pdf

Department of Veterans Affairs & Department of Defense. (2017). *VA/DoD clinical practice guideline for the management of posttraumatic stress disorder and acute stress disorder*. Washington, DC: Author. Retrieved from https://www.healthquality.va.gov/guidelines/MH/ptsd/VADoDPTSDCPGFinal012418.pdf

Department of Veterans Affairs & Department of Defense. (2019). *VA/DoD clinical practice guideline for the assessment and management of patients at risk for suicide*. Washington, DC: Author. Retrieved from https://www.healthquality.va.gov/guidelines/MH/srb/VADoDSuicideRiskFullCPGFinal5088212019.pdf

Department of Veterans Affairs & Department of Defense. (2016). *VA/DoD clinical practice guideline for the management of major depressive disorder*. Washington, DC: Author. Retrieved from https://www.healthquality.va.gov/guidelines/MH/mdd/VADoDMDDCPGFINAL82916.pdf

DeViva, J. C., Bassett, G. A., Santoro, G. M., & Fenton, L. (2017). Effects of a brief education and treatment-planning group on evidence-based PTSD treatment utilization and completion among veterans. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(Suppl. 1), 35–41. http://dx.doi.org/10.1037/tra0000189

Eftekhari, A., Ruzek, J. I., Crowley, J. J., Rosen, C. S., Greenbaum, M. A., & Karlin, B. E. (2013). Effectiveness of national implementation of prolonged exposure therapy in Veterans Affairs care. *Journal of the American Medical Association Psychiatry, 70,* 949–955. http://dx.doi.org/10.1001/jamapsychiatry.2013.36

Eldredge, L. K. B., Markham, C. M., Ruiter, R. A., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). *Planning health promotion programs: An intervention mapping approach*. New York, NY: Wiley.

Farmer, C. C., Mitchell, K. S., Parker-Guilbert, K., & Galovski, T. E. (2016). Fidelity to the cognitive processing therapy protocol: Evaluation of critical elements. *Behavior Therapy, 48,* 195–206. http://dx.doi.org/10.1016/j.beth.2016.02.009

Fernandez, M. E., Ruiter, R. A., Markham, C. M., & Kok, G. (2019). Intervention mapping: Theory-and evidence-based health promotion program planning. *Frontiers in Public Health, 7,* 209. http://dx.doi.org/10.3389/fpubh.2019.00209

Finley, E. P., Garcia, H. A., Ramirez, V. A., Haro, E. K., Mignogna, J., DeBeer, B., & Wiltsey-Stirman, S. (2020). Treatment selection among posttraumatic stress disorder (PTSD) specialty care providers in the Veterans Health Administration: A thematic analysis. *Psychological Trauma: Theory, Research, Practice, and Policy, 12,* 251–259. http://dx.doi.org/10.1037/tra0000477

German, R. E., Adler, A., Frankel, S. A., Stirman, S. W., Pinedo, P., Evans, A. C., . . . Creed, T. A. (2018). Testing a web-based, trained-peer model to build capacity for evidence-based practices in community mental health systems. *Psychiatric Services, 69,* 286–292. http://dx.doi.org/10.1176/appi.ps.201700029

Glisson, C., Schoenwald, S. K., Hemmelgarn, A., Green, P., Dukes, D., Armstrong, K. S., & Chapman, J. E. (2010). Randomized trial of MST and ARC in a two-level evidence-based treatment implementation strategy. *Journal of Consulting and Clinical Psychology, 78,* 537–550. http://dx.doi.org/10.1037/a0019160

Gutner, C. A., Suvak, M. K., Sloan, D. M., & Resick, P. A. (2016). Does timing matter? Examining the impact of session timing on outcome. *Journal of Consulting and Clinical Psychology, 84,* 1108–1115. http://dx.doi.org/10.1037/ccp0000120

Hamilton, A. B., Wiltsey-Stirman, S., Finley, E. P., Klap, R., Mittman, B. S., Yano, E. M., & Oishi, S. (2020). Usual care among providers treating women veterans: Managing complexity and multimorbidity in the era of evidence-based practice. *Administration and Policy in Mental Health, 47,* 244–253. http://dx.doi.org/10.1007/s10488-019-00961-y

Hemmelgarn, A. L., Glisson, C., & James, L. R. (2006). Organizational culture and climate: Implications for services and interventions research. *Clinical Psychology: Science and Practice, 13,* 73–89. http://dx.doi.org/10.1111/j.1468-2850.2006.00008.x

Holder, N., Holliday, R., Williams, R., Mullen, K., & Surís, A. (2018). A preliminary examination of the role of psychotherapist fidelity on outcomes of cognitive processing therapy during an RCT for military sexual trauma-related PTSD. *Cognitive Behaviour Therapy, 47,* 76–89. http://dx.doi.org/10.1080/16506073.2017.1357750

Hundt, N. E., Barrera, T. L., Arney, J., & Stanley, M. A. (2017). "It's worth it in the end": Veterans' experiences in Prolonged Exposure and Cognitive Processing Therapy. *Cognitive and Behavioral Practice, 24,* 50–57. http://dx.doi.org/10.1016/j.cbpra.2016.02.003

Hundt, N. E., Helm, A., Smith, T. L., Lamkin, J., Cully, J. A., & Stanley, M. A. (2018). Failure to engage: A qualitative study of veterans who decline evidence-based psychotherapies for PTSD. *Psychological Services, 15,* 536–542. http://dx.doi.org/10.1037/ser0000212

Hundt, N. E., Mott, J. M., Miles, S. R., Arney, J., Cully, J. A., & Stanley, M. A. (2015). Veterans' perspectives on initiating evidence-based psychotherapy for posttraumatic stress disorder. *Psychological Trauma: Theory, Research, Practice, and Policy, 7,* 539–546. http://dx.doi.org/10.1037/tra0000035

Institute of Medicine (IOM). (2015). *Measuring the impact of interprofessional education on collaborative practice and patient outcomes*. Washington, DC: The National Academies Press.

IOM. (2014). *Treatment for posttraumatic stress disorder in military and veteran populations: Final assessment*. Washington, DC: The National Academies Press.

Karlin, B. E., Brown, G. K., Trockel, M., Cunning, D., Zeiss, A. M., & Taylor, C. B. (2012). National dissemination of cognitive behavioral therapy for depression in the Department of Veterans Affairs health care system: Therapist and patient-level outcomes. *Journal of Consulting and Clinical Psychology, 80,* 707–718. http://dx.doi.org/10.1037/a0029328

Karlin, B. E., & Cross, G. (2014). From the laboratory to the therapy room: National dissemination and implementation of evidence-based psychotherapies in the U.S. Department of Veterans Affairs Health Care System. *American Psychologist, 69,* 19–33. http://dx.doi.org/10.1037/a0033888

Kauth, M. R., Sullivan, G., Blevins, D., Cully, J. A., Landes, R. D., Said, Q., & Teasdale, T. A. (2010). Employing external facilitation to implement cognitive behavioral therapy in VA clinics: A pilot study. *Implementation Science, 5,* 75. http://dx.doi.org/10.1186/1748-5908-5-75

Kehle-Forbes, S. M., Gerould, H., Polusny, M. A., Sayer, N. A., & Partin, M. R. (2020). "It leaves me very skeptical" messaging in marketing prolonged exposure and cognitive processing therapy to veterans with PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. http://dx.doi.org/10.1037/tra0000550

Keller, S. M., & Tuerk, P. W. (2016). Evidence-based psychotherapy (EBP) non-initiation among veterans offered an EBP for posttraumatic stress disorder. *Psychological Services, 13,* 42–48. http://dx.doi.org/10.1037/ser0000064

Kirchner, J. E., Ritchie, M. J., Pitcock, J. A., Parker, L. E., Curran, G. M., & Fortney, J. C. (2014). Outcomes of a partnered facilitation strategy to implement primary care-mental health. *Journal of General Internal Medicine, 29*(Suppl. 4), 904–912. http://dx.doi.org/10.1007/s11606-014-3027-2

Kitchiner, N. J., Lewis, C., Roberts, N. P., & Bisson, J. I. (2019). Active duty and ex-serving military personnel with post-traumatic stress disorder treated with psychological therapies: Systematic review and meta-analysis. *European Journal of Psychotraumatology, 10,* 1684226. http://dx.doi.org/10.1080/20008198.2019.1684226

LoSavio, S. T., Dillon, K. H., Murphy, R. A., Goetz, K., Houston, F., & Resick, P. A. (2019). Using a learning collaborative model to disseminate Cognitive Processing Therapy to community-based agencies. *Behavior Therapy, 50,* 36–49. http://dx.doi.org/10.1016/j.beth.2018.03.007

Lu, W., Yanos, P. T., Gottlieb, J. D., Duva, S. M., Silverstein, S. M., Xie, H., . . . Mueser, K. T. (2012). Use of fidelity assessments to train clinicians in the CBT for PTSD program for clients with serious mental illness. *Psychiatric Services, 63,* 785–792. http://dx.doi.org/10.1176/appi.ps.201000458

Maguen, S., Madden, E., Patterson, O. V., DuVall, S. L., Goldstein, L. A., Burkman, K., & Shiner, B. (2018). Measuring use of evidence based psychotherapy for posttraumatic stress disorder in a large national healthcare system. *Administration and Policy in Mental Health, 45,* 519–529. http://dx.doi.org/10.1007/s10488-018-0850-5

Marques, L., Valentine, S. E., Kaysen, D., Mackintosh, M. A., Dixon De Silva, L. E., Ahles, E. M., . . . Wiltsey-Stirman, S. (2019). Provider fidelity and modifications to cognitive processing therapy in a diverse community health clinic: Associations with clinical change. *Journal of Consulting and Clinical Psychology, 87,* 357–369. http://dx.doi.org/10.1037/ccp0000384

McEachan, R. R., Lawton, R. J., Jackson, C., Conner, M., & Lunt, J. (2008). Evidence, theory and context: Using intervention mapping to develop a worksite physical activity intervention. *BMC Public Health, 8,* 326. http://dx.doi.org/10.1186/1471-2458-8-326

Mohr, D. C., Rosen, C. S., Schnurr, P. P., Orazem, R. J., Noorbaloochi, S., Clothier, B. A., . . . Sayer, N. A. (2018). The influence of team functioning and workload on sustainability of trauma-focused evidence-based psychotherapies. *Psychiatric Services, 69,* 879–886. http://dx.doi.org/10.1176/appi.ps.201700432

Niven, D. J., Mrklas, K. J., Holodinsky, J. K., Straus, S. E., Hemmelgarn, B. R., Jeffs, L. P., & Stelfox, H. T. (2015). Towards understanding the de-adoption of low-value clinical practices: A scoping review. *BMC Medicine, 13,* 255. http://dx.doi.org/10.1186/s12916-015-0488-z

Powell, B. J., Beidas, R. S., Lewis, C. C., Aarons, G. A., McMillen, J. C., Proctor, E. K., & Mandell, D. S. (2017). Methods to improve the selection and tailoring of implementation strategies. *The Journal of Behavioral Health Services & Research, 44,* 177–194. http://dx.doi.org/10.1007/s11414-015-9475-6

Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., . . . Kirchner, J. E. (2015). A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. *Implementation Science, 10,* 21. http://dx.doi.org/10.1186/s13012-015-0209-1

Proctor, E. K., Powell, B. J., & McMillen, J. C. (2013). Implementation strategies: Recommendations for specifying and reporting. *Implementation Science, 8,* 139. http://dx.doi.org/10.1186/1748-5908-8-139

Ritchie, M. J., Kirchner, J. E., Parker, L. E., Curran, G. M., Fortney, J. C., Pitcock, J. A., . . . Kilbourne, A. M. (2015). Evaluation of an implementation facilitation strategy for settings that experience significant implementation barriers. *Implementation Science, 10,* A46. http://dx.doi.org/10.1186/1748-5908-10-S1-A46

Rosen, C. S., Bernardy, N. C., Chard, K. M., Clothier, B., Cook, J. M., Crowley, J., . . . Sayer, N. A. (2019). Which patients initiate cognitive processing therapy and prolonged exposure in department of veterans affairs PTSD clinics? *Journal of Anxiety Disorders, 62,* 53–60. http://dx.doi.org/10.1016/j.janxdis.2018.11.003

Rosen, C. S., Matthieu, M. M., Wiltsey Stirman, S., Cook, J. M., Landes, S., Bernardy, N. C., . . . Watts, B. V. (2016). A review of studies on the system-wide implementation of evidence-based psychotherapies for posttraumatic stress disorder in the Veterans Health Administration. *Administration and Policy in Mental Health and Mental Health Services Research, 43,* 957–977. http://dx.doi.org/10.1007/s10488-016-0755-0

Rosen, C. S., Nguyen, T., Bernardy, N. C., Hamblen, J. L., Ruzek, J. I., & Friedman, M. J. (2012). Evaluation of a mentoring program for PTSD clinic managers in the U.S. Department of Veterans Affairs. *Psychiatric Services, 63,* 1047–1050. http://dx.doi.org/10.1176/appi.ps.201100446

Sayer, N., Kehle-Forbes, S., Stirman, S. W., Bernardy, N., Chard, K., Eftekhari, A., . . . Spoont, M. (2019). *Practice patterns in delivery of evidence based psychotherapies for PTSD across the Veterans Health Administration*. Manuscript submitted for publication.

Sayer, N. A., Rosen, C. S., Bernardy, N. C., Cook, J. M., Orazem, R. J., Chard, K. M., . . . Schnurr, P. P. (2017). Context matters: Team and organizational factors associated with reach of evidence-based osychotherapies for PTSD in the Veterans Health Administration. *Administration and Policy in Mental Health and Mental Health Services Research, 44,* 904–918. http://dx.doi.org/10.1007/s10488-017-0809-y

Schumm, J. A., Walter, K. H., Bartone, A. S., & Chard, K. M. (2015). Veteran satisfaction and treatment preferences in response to a posttraumatic stress disorder specialty clinic orientation group. *Behaviour Research and Therapy, 69,* 75–82. http://dx.doi.org/10.1016/j.brat.2015.04.006

Shelton, R. C., Cooper, B. R., & Stirman, S. W. (2018). The sustainability of evidence-based interventions and practices in public health and health care. *Annual Review of Public Health, 39,* 55–76. http://dx.doi.org/10.1146/annurev-publhealth-040617-014731

Shiner, B., Leonard Westgate, C., Simiola, V., Thompson, R., Schnurr, P. P., & Cook, J. M. (2018). Measuring use of evidence-based psychotherapy for PTSD in VA residential treatment settings with clinician survey and electronic medical record templates. *Military Medicine, 183,* e539–e546. http://dx.doi.org/10.1093/milmed/usy008

Southam-Gerow, M. A., & Prinstein, M. J. (2014). Evidence base updates: The evolution of the evaluation of psychological treatments for children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 43,* 1–6. http://dx.doi.org/10.1080/15374416.2013.855128

Steenkamp, M. M., & Litz, B. T. (2014). One-size-fits-all approach to PTSD in the VA not supported by the evidence. *American Psychologist, 69,* 706–707. http://dx.doi.org/10.1037/a0037360

Steenkamp, M. M., Litz, B. T., & Marmar, C. R. (2020). First-line psychotherapis for military-related PTSD. *Journal of the American Medical Association, 323,* 656. http://dx.doi.org/10.1001/jama.2019.20825

Stirman, S. W., Gutner, C. A., Langdon, K., & Graham, J. R. (2016). Bridging the gap between research and practice in mental health service settings: An overview of developments in implementation theory and research. *Behavior Therapy, 47,* 920–936. http://dx.doi.org/10.1016/j.beth.2015.12.001

Waltz, T. J., Powell, B. J., Fernández, M. E., Abadie, B., & Damschroder, L. J. (2019). Choosing implementation strategies to address contextual barriers: Diversity in recommendations and future directions. *Implementation Science, 14,* 42. http://dx.doi.org/10.1186/s13012-019-0892-4

Waltz, T. J., Powell, B. J., Matthieu, M. M., Chinman, M. J., Smith, J. L., Proctor, E. K., . . . Kirchner, J. E. (2015). Innovative methods for using expert panels in identifying implementation strategies and obtaining recommendations for their use. *Implementation Science, 10,* A44. http://dx.doi.org/10.1186/1748-5908-10-S1-A44

Webb, C. A., Derubeis, R. J., & Barber, J. P. (2010). Therapist adherence/competence and treatment outcome: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 78,* 200–211. http://dx.doi.org/10.1037/a0018912

Williams, N. J., Glisson, C., Hemmelgarn, A., & Green, P. (2017). Mechanisms of change in the ARC organizational strategy: Increasing mental health clinicians' EBP adoption through improved organizational culture and capacity. *Administration and Policy in Mental Health and Mental Health Services Research, 44,* 269–283. http://dx.doi.org/10.1007/s10488-016-0742-5

Zimmerman, L., Lounsbury, D. W., Rosen, C. S., Kimerling, R., Trafton, J. A., & Lindley, S. E. (2016). Participatory system dynamics modeling: Increasing stakeholder engagement and precision to improve implementation planning in systems. *Administration and Policy in Mental Health and Mental Health Services Research, 43,* 834–849. http://dx.doi.org/10.1007/s10488-016-0754-1

Received October 15, 2019
Revision received March 02, 2020
Accepted March 04, 2020 ■