



DEFENSE CENTERS OF EXCELLENCE
For Psychological Health & Traumatic Brain Injury

Guidance for Training, Education on Clinical Practice Guidelines

Education Directorate

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Table of Contents

1.0	Introduction	3
2.0	Training & Education for CPGs	4
3.0	Delivering CPG Training: Methods Comparison	6
4.0	Continuing Education Credit	9
5.0	Comparison of Methods for Evaluating Provider CPG Training	10
6.0	Summary	12
7.0	References	12

1.0 Introduction

The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) Education directorate's mission is to assess training and educational needs in order to identify and promote effective instructional material for stakeholders, resulting in improved knowledge and practice of psychological health and traumatic brain injury (TBI) care. In order to fulfill this mission, a study was performed in 2009 to identify resources and gaps in clinical guidance of training and education programs and in research in the areas of psychological health and TBI (DCoE 2009).

The study found that program planners and implementers needed more knowledge, technology and skills in order to deliver effective training and education programs. This paper supports this recommendation in the area of clinical practice guidelines (CPGs) training. Readers will receive an overview of common methods the Department of Veterans Affairs (VA) and Defense Department currently use to train providers and the medical community in utilization of CPGs and to evaluate the acceptance and successful use of various CPGs. Providing the necessary knowledge and resources will enable CPG implementers to better meet the diverse needs of the military and veteran provider network and ultimately improve the quality of care.

What Are Clinical Practice Guidelines?

CPGs are documented, evidence-based standards of health care that align patient care decision points and respective courses of action with clinical judgment and practitioner experience. These standards include screening, assessment, treatment and prevention guidelines in logical patient care algorithms. The use of CPGs supports consistent quality care and professional judgment in treatment of individual patients.

The VA/DoD Evidence-Based Practice Guideline Work Group (EBPWG) establishes VA/DoD CPGs based on recommendations from each military service and the VA. The working group uses clinical and epidemiological evidence to advise the VA/DoD Health Executive Council on best practices for improving the health of Veterans Health Administration (VHA) and Military Health System populations. Military readiness needs and high-volume, high-cost health treatments impact the CPG development process.

Supporting material, including toolkits and metrics, has been developed to assist providers in implementing the VA/DoD CPGs. The U.S. Army Medical Command (MEDCOM) Quality Management Office serves as the services' world-wide contact point for CPG information and implementation toolkits. While the VA Office of Quality and Performance serves as the VA's contact point for CPGs and toolkits, the Defense Department and VA work closely to advise the VA/DoD Health Executive Council and produce the CPG materials. A list of professional organizations and corresponding CPGs can be found on the MEDCOM Quality Management Office website and in the reference section of this document.

Integrating CPGs into practice is a complex process requiring cooperation, planning, resources, commitment and continual compliance and process improvement review. Comparisons of current practices with CPGs help caregivers and administrative staff to learn critical differences between their current clinical practice and CPGs. A plan can be formulated to change procedures so that the CPGs can be incorporated into a routine clinical operation. Compliance challenges can be identified by process improvement efforts both in implementation and evaluation. Data gathered from these studies will show both modified clinical outcomes and administrative changes.

2.0 Training & Education for CPGs

Annually, the Department of Health Affairs requires all Military Treatment Facilities (MTFs) to identify and select at least one clinical process to improve through the application of CPGs (<http://www.dtic.mil/whs/directives/corres/pdf/602520p.pdf>). As this requirement necessitates a rigorous CPG training and education program at all VA and MTF sites, the Defense Department appoints CPG champions and working groups to establish and oversee in-service training, continuing education and evaluation of CPG application.

CPG champions and work groups have multiple resources to guide and assist their work. The VA and DoD “[Manual for Facility Clinical Practice Guideline Champions](#)” and the “[TRICARE Medical Management Guide](#)” both provide detailed guidance. These and other resources are available in the references section of this document.

The table below describes additional psychological health and TBI training and education resources. Most of these trainings are conducted externally to the MTFs and have been developed in a variety of learning formats. Some of these trainings are not aligned directly to CPGs, but rather the topic of the CPG. In some cases, the CPGs pre-date the trainings by a number of years. CPGs can be found at the [DoD/VA CPG Home Page](#). U.S. Army MEDCOM and the U.S. Army Center for Health Promotion and Preventive Medicine have developed training toolkits specifically for MTF CPG champions and work groups. These toolkits include informational posters, provider training videos, patient education materials and convenient pocket-sized CPG reference cards.

Table 1: Psychological Health and TBI Training and Education Resources

Condition	Materials Description
Mild Traumatic Brain Injury (mTBI)	<ul style="list-style-type: none"> ▪ VA/DoD CPG for the Management of Concussion/mTBI (May 2009) - Provides clear and comprehensive evidence-based recommendations incorporating current information and practices for practitioners throughout the Defense Department and VA health care systems ▪ Walter Reed National Military Medical Center (WRNMMC): TBI Staff Lecture Series – tele/videoconferences for military, VA and civilian providers on various topics while emphasizing CPGs
Major Depressive Disorder (MDD)	<ul style="list-style-type: none"> ▪ VA/DoD MDD CPG ToolKit (April 2002) - contains provider care cards, pocket guides, guideline summaries, key points and posters ▪ Deployment Health Clinical Center (DHCC) Professional Development Hours (PDH)-CPG Desk Reference Toolbox - includes MDD Guideline Patient Assessment, Guideline Algorithm and Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) codes ▪ Army MEDCOM: MDD-CPG Satellite Broadcast
Deployment Health	<ul style="list-style-type: none"> ▪ DHCC (December 2001): DoD/VA CPG for Post-Deployment Health Evaluation and Management ▪ Wiley: Taped webcast
Substance Abuse	<ul style="list-style-type: none"> ▪ National Institute on Alcohol Abuse and Alcoholism (October 2009): Publications for physicians, social workers, clinicians and other health care professionals ▪ Deployment Health Clinical Center (DHCC): Provides clinical practice guidelines, policies and directives, fact sheets, training material and related links to assist health care providers and service members and their families
Post Traumatic Stress Disorder	<ul style="list-style-type: none"> ▪ Center for Deployment Psychology (CDP): Computer-based training ▪ National Center for Post Traumatic Stress Disorder (VA): Computer-based training ▪ DHCC: Taped webcast and computer-based training (RESPECT-Mil), CPG ▪ VA: Taped webcasts, computer-based training and videos ▪ Coming Home Project: Taped webcast training ▪ TRICARE: Computer-based training via MHS Learn Portal

3.0 Delivering CPG Training: Methods Comparison

The table below summarizes training methods and describes each method's advantages, challenges and required resources. For example, instructor-led classroom training allows the instructor to tailor materials to a specific audience, using examples the audience is likely to encounter. On the other hand, if a large, geographically-dispersed audience must be trained, technology-hosted learning may minimize costs and improve participant exposure. Choosing the appropriate method(s) is vital for increasing awareness and application of CPGs within any organization. Combining methods may be most effective to support the wide variety of adult learning styles.

Table 2 provides an overview of the learning methods and related considerations.

Table 2: Comparison of Learning Methods

Method	Advantages	Challenges	Resources Required
<p>Instructor-led local training Training is delivered on a specific date and time in a classroom setting</p>	<ul style="list-style-type: none"> Session may be very interactive Promotes group networking to enhance critical thinking skills Ability to tailor presentation based on pre-determined audience background Ability for instructor to assess and address the learners' non-verbal cues May allow for flexibility in training date(s) selected or timing of agenda 	<ul style="list-style-type: none"> Significant logistics coordination at the local level Challenge of finding acceptable date, time and location for participants Flexibility for scheduling make-up training may be limited 	<ul style="list-style-type: none"> Instructor salary/expenses (travel/per diem) Requires local coordination of location, registration, scheduling and CE application (if applicable) Significant instructor preparation time Marketing may be required As participants do not have to travel, productivity loss is minimized Potential room rental/food expense Presentation materials production Audio visual or other technical equipment rental
<p>Instructor-led conference Event held at offsite location where learning and networking is combined. Travel is often required</p>	<ul style="list-style-type: none"> Session may be very interactive Ability for instructor to assess and address the learners' non-verbal cues Ability to tailor presentation based on pre-determined audience background Promotes group interaction/networking May allow for flexibility in training date(s) selected or timing of agenda 	<ul style="list-style-type: none"> Significant coordination at a regional level with some coordination from the local level (scheduling, travel arrangements, etc) cutting orders for Strict attention to schedule/timing Minimal flexibility in make-up training 	<ul style="list-style-type: none"> Instructor salary/expenses (travel/per diem) Required coordination/registration/scheduling Significant preparation time for conference point of contact (POC) and instructor(s) Marketing Reduced productivity due to travel time Room rental/food expense Travel/lodging (instructor and/or participants) Presentation materials production Audio visual or other technical equipment rental
<p>Video teleconference (VTC) Training provided via video feed, often in real-time</p>	<ul style="list-style-type: none"> Excellent for learners with limited access to local training resources May host multiple locations at the same time and promote cross learning between MTFs and services 	<ul style="list-style-type: none"> Attendees may not print out the materials in advance (unless sent separately via email or other means); late registrants may not have access to materials Limited connectivity with 	<ul style="list-style-type: none"> Requires videoconference room or training room with portable teleconference unit Host requires access to multiple feeds to view all VTC participant sites Participants require a single

Method	Advantages	Challenges	Resources Required
	<ul style="list-style-type: none"> ▪ Provides real-time, interaction with all sites ▪ Instructors can see learners and assess non-verbal cues ▪ Moderate interactivity ▪ Option to record event for later (non-interactive) viewing (i.e., podcast) 	<p>learners</p> <ul style="list-style-type: none"> ▪ Requires reservation of an available videoconference room training room with portable unit or teleconference unit. This may limit participant seating ▪ Instructors must adjust delivery style to VTC; many find it awkward 	<p>feed VTC platform, at a minimum</p> <ul style="list-style-type: none"> ▪ Technical support for host and participants ▪ Requires POC for coordination, registration and scheduling ▪ Cost of materials reproduction is transferred to learners ▪ Minimizes travel and associated expenses
<p>Webinar/Webcast Slides are presented via streaming video</p>	<ul style="list-style-type: none"> ▪ May host multiple locations simultaneously and promote cross-learning among MTFs and services ▪ Presentation may be edited post-class and uploaded to website in a one-way delivery format ▪ Various levels of interactivity is supported: Real-time polling to assess current knowledge, white boards for brainstorming, real-time chats and feedback opportunities (applause, "yes" or "no") ▪ As interactive as the host desires and the system allows ▪ May record program for later; learners click on a Web address to join ▪ Non-interactive viewing (i.e., podcast) 	<ul style="list-style-type: none"> ▪ Requires a computer with internet access to participate ▪ Limited control over attendee attention ▪ Knowledge of the system is necessary to use many features ▪ Some systems require system pre-testing prior to logging on, which may cause participant delays ▪ Attendees cannot print materials prior to the meeting or have access to them if they were late registrants (unless sent in advance of the event) 	<ul style="list-style-type: none"> ▪ Technical support for host and participants is recommended and often necessary ▪ Requires host POC for coordination, registration, scheduling ▪ Reproduction costs are transferred to learners ▪ Minimizes travel and associated expenses
<p>Online forum Typically used by bachelor- and Master- level programs with varied curriculum</p>	<ul style="list-style-type: none"> ▪ Allows an instructor to conduct multiple discussions, accessible by learners at multiple sites ▪ Students log-on to a platform and post responses at any time (asynchronous) or chat live with instructor or students (synchronous) 	<ul style="list-style-type: none"> ▪ Requires a computer with internet access, 24/7 IT support and an assigned moderator ▪ Not intended for one-time training ▪ Participants must sift through content of varying value 	<ul style="list-style-type: none"> ▪ Purchased software can prevent users from posting certain words ▪ Requires assistance to review appropriateness of posts

Method	Advantages	Challenges	Resources Required
<p>E-Publications Written products delivered via email or posted online</p>	<ul style="list-style-type: none"> Product is portable and printable Text can connect learners to related websites Text can be interactive or contain audio or video hyperlinks Text may provide note-taking or underlining functions Minimal to no maintenance required for material until content is in need of updates or becomes obsolete Delivered instantaneously/easily accessible/portable 	<ul style="list-style-type: none"> Inability to track learner access/participation rates Lack of control over updates or revisions to existing material Lack of controls on distribution or utilization Lack of human interaction Difficult to notify those who previously downloaded that updates are available 	<ul style="list-style-type: none"> Maintenance required if the information is posted to a website No travel expenses Minimal technical support for host and participants Reproduction costs are transferred to learners
<p>Computerized templates built into Electronic Medical Record (EMR) system Standardized computer interface or templates are built into the EMR or disease registries. When a trigger is noted (diagnosis) the system creates prompts for the provider to support following CPG with step-by-step reminders. This is not considered training, but rather real-time education.</p>	<ul style="list-style-type: none"> Supports ease with which providers may consider CPGs during diagnosis and treatment Information is readily accessible at point-of-care Ability to tailor intervention to specific patient need(s) May be implemented at local MTF level Shapes behavior of provider practice style 	<ul style="list-style-type: none"> Difficult to determine impact of behavioral change Provides prescriptive point-of-care guidance in a non-traditional format May impact established care processes Creates a forced learning environment and may be perceived as coercive 	<ul style="list-style-type: none"> Depending on approach, may require standing up a local MTF team to integrate CPGs into Armed Forces Health Longitudinal Technology Application (AHLTA) Systemic solution requires a strategic enterprise solution with intensive programming needs within AHLTA Programming costs incurred when programming AHLTA with CPG updates
<p>Satellite broadcast Satellite broadcast is the distribution of high-quality video, live or taped, over a satellite network. CPG training does not require this level of quality or technical mobility</p>			<ul style="list-style-type: none"> Not recommended at this time

4.0 Continuing Education Credit

Defense Department clinicians can expand their professional competence, readiness skills and understanding of medicine at no cost. Continuing medical education (CME), which may be required in different specialty areas for annual or biannual licensure renewal, increases physicians' readiness to practice in a myriad of challenging environments. The CME

programs serve to maintain, develop or increase the knowledge, skills and professional performance of clinicians. CME activities encompass the entire spectrum of military medicine and are offered at various commands worldwide.

To evaluate learning, tests are taken after the CME is complete to ensure a thorough understanding of the material. CME training is evaluated by monitoring “special studies of clinical data which...produce rich details about the patients’ clinical status and clinicians’ implementation of required interventions” (VHA 2007). Knowledge deficits are discussed in one-on-one coaching sessions with CPG champions.

5.0 Comparison of Methods for Evaluating Provider CPG Training

The table below describes various evaluation opportunities and considers the time and cost factors of the method. It then makes an assessment of the type and degree of provider behavior change DCoE may expect from using the method described. The table provides guidance for selection of appropriate evaluation method and expected outcomes. When selecting an evaluation method, consider the type of CPG (e.g. prevention, treatment, screening) and what constitutes a measurable event.

Table 3: Comparison of Models for Evaluating Provider CPG Training

Evaluation Method	Advantages	Challenges	Resources Required	Expected Outcomes
<p>Pre- and Post-training examinations Providers are tested on how to follow CPGs using application or scenario testing. For maximum effectiveness, exam should be given as close to the start of training as practical and upon completion of training.</p>	<ul style="list-style-type: none"> Pre- and post-testing provides real-time feedback of course content and delivery Applicable to all training venues/media Test format may include true/false, multiple choice or essay type questions 	<ul style="list-style-type: none"> If both pre- and post-training exams are given, testing conditions for both tests should be consistent Test administration may vary based on type of training and require in-person or electronic collection of responses 	<ul style="list-style-type: none"> Test scoring and provision of test feedback requires varying levels of effort based on test format and type(s) of questions 	<ul style="list-style-type: none"> Expect a short-term cognitive gain (higher score on post-test than pre-test)
<p>Self-report of CPG use (survey) Providers are asked to evaluate their use of CPGs following training</p>	<ul style="list-style-type: none"> Automated survey can ease collection of self-reported practices 	<ul style="list-style-type: none"> Learners answer questions designed to assess the impact that CPG training has had on the providers' use of the application of those CPGs May capture unbalanced data - those who are applying the CPG may be more likely to self-report than those who are not applying the CPG Response rates are typically poor and may require rigorous follow-up to gather meaningful results 	<ul style="list-style-type: none"> Requires survey and reporting development, administration and interpretation 	<ul style="list-style-type: none"> Expect positive changes in behavior and a cognitive gain
<p>In-person chart review Manual review of medical charts for appropriate CPG application</p>	<ul style="list-style-type: none"> Manual chart reviews provide opportunity to solicit feedback from the clinician which can be provided to the CPG trainer. Such 	<ul style="list-style-type: none"> Provider may consider CPG, but decide not to apply due to circumstances. Chart review does not account for this 	<ul style="list-style-type: none"> May require travel time if reviewers external to the local area are used Required sample size may be cost-prohibitive Requires a carefully 	<ul style="list-style-type: none"> Expect documentation of compliance or documentation of the exception to the guideline

Evaluation Method	Advantages	Challenges	Resources Required	Expected Outcomes
	<ul style="list-style-type: none"> ▪ feedback can be input for future provider education needs ▪ Exposes correctable deficiencies in standards of care 	<ul style="list-style-type: none"> ▪ Lack of documentation may have legal implications. If not documented, the law considers care was not given ▪ Health Insurance Portability and Accountability Act (HIPAA) implications 	<ul style="list-style-type: none"> ▪ developed data collection tool ▪ Time intensive to collect, aggregate and analyze the data 	
<p>Electronic chart review Using International Classification of Diseases -10 (ICD-10), current procedural terminology (CPT), laboratory, pharmacy and radiological coding data, electronic queries may be used to 'pull' clinical interventions.</p>	<ul style="list-style-type: none"> ▪ Electronically aggregate/analyze data 	<ul style="list-style-type: none"> ▪ HIPAA implications ▪ May or may not identify correctable deficiencies in standards of care (contingent upon inclusion in the CPG) ▪ May be used to identify gaps in documentation 	<ul style="list-style-type: none"> ▪ Requires significant training and a data use agreement ▪ Must develop distinct data points for collection that may be captured electronically ▪ Must determine sample size ▪ Reports must be run to obtain data 	<ul style="list-style-type: none"> ▪ Expect documentation of compliance or documentation of the exception to the guideline
<p>Simulation. Practitioners demonstrate in person or via technology the application of their CPGs knowledge to different scenarios (laboratory setting or role plays)</p>	<ul style="list-style-type: none"> ▪ Real-time coaching can be delivered by a CPG expert or champion 	<ul style="list-style-type: none"> ▪ A clinical setting (real or simulated) would be required for a subject matter expert (SME) to facilitate the exercise and give feedback 	<ul style="list-style-type: none"> ▪ Need to create scenarios and method to evaluate the actions taken by the learner ▪ An electronic clinical setting would require SME to develop the evaluation and provide technical support to maintain the platform ▪ Feedback mechanism would need to be created 	<ul style="list-style-type: none"> ▪ Expect positive changes in behavior and a cognitive gain
<p>Require evidence of CPG training completion Services could provide documentation of their participation in training on new, updated and/or existing CPGs</p>	<ul style="list-style-type: none"> ▪ Provides physical evidence of CPG training participation 	<ul style="list-style-type: none"> ▪ Proof of training attendance is not assurance of subsequent application of the training content 	<ul style="list-style-type: none"> ▪ Need to create data collection and feedback mechanism 	<ul style="list-style-type: none"> ▪ Expect proof of training

6.0 Summary

The Defense Department and VA systems promote the standardization of health care delivery by developing and deploying CPGs that facilitate greater consistency, quality and cost-effectiveness. A mission of the DCoE Education directorate is to support these activities by offering the military services consultation, information and resources related to CPG education and training best practices. This document provides the means, framework and references for accomplishing this important mission that will improve provider performance and enhance the quality of care.

References

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CPG Training Guides

- [DoD/VA MTF CPG Champion Guide](#)
- [Army CPG Homepage](#)
- [TRICARE Medical Management Guide](#)
- [Air Force Population Health Management Guide](#)
- [Navy Health Promotion and Wellness](#)
- [Navy MTF Champion and Disease Management Program Coordinator](#)

CPG-Related Web Sites

American Academy of Allergy, Asthma and Immunology	American Psychiatric Association
American Academy of Family Physicians	American Society of Clinical Oncology
American Academy of Orthopedic Surgeons	Australian National Health and Medical Research Council
American Academy of Pediatrics	The Cochrane Collaboration
American Association of Neuroscience Nurses	Guideline International Network
American College of Cardiology	Institute for Clinical Systems Improvement
American College of Gastroenterology	National Guideline Clearinghouse
American College of Obstetricians & Gynecologists	National Institute for Health and Clinical Excellence
American College of Radiology	New Zealand Guidelines Group
American College of Rheumatology	The RAND Evaluation: Improving Chronic Illness Care
American College of Surgeons	Scottish Intercollegiate Guidelines Network
American Gastroenterology Association	The Society of Thoracic Surgery
American Heart Association	University of Alberta Evidence-Based Medicine Tool Kit
American Medical Association	University of Virginia School of Medicine Office of Continuing Medical Information