



Department of Defense

DEPLOYMENT HEALTH CLINICAL CENTER

DHCC

Annual Report FY2002



DEPLOYMENT HEALTH CLINICAL CENTER



*DEPLOYMENT-RELATED HEALTH PROTECTION,
ASSESSMENT AND CARE FOR AMERICA'S FINEST*



DEPARTMENT OF DEFENSE
DEPLOYMENT HEALTH CLINICAL CENTER
ANNUAL REPORT
FY 2002



EXECUTIVE SUMMARY

BACKGROUND

The DoD Deployment Health Clinical Center (DHCC) was established on 30 September 1999 pursuant to the Thurmond National Defense Authorization Act. Located at the Walter Reed Army Medical Center in Washington, DC, it is one of three centers of excellence dedicated to improving deployment health.

The **core mission** of the DHCC is to **improve deployment health** through optimized health care across the Military Health System (MHS). The Center is accomplishing this mission through a three-pronged strategy that consists of: (1) **Health care services**, including direct health care delivery, clinical consultation, and process improvement; (2) **Education and informatics** support, including health information, communication, and clinical education; and (3) **Research**, including deployment-related clinical and health services research.

PROGRAM IN REVIEW

Health Care Services

The health care services component of the DHCC comprehensive deployment health strategy encompasses direct patient care, clinical consultation to medical professionals, and quality and process improvement. Direct care was delivered through more than 3000 patient care visits in FY 2002. Consultation and quality improvement services were provided to clinicians across the MHS as well as to our colleagues in the Veteran's Health Administration. The six program elements of health care services are described below.

Evidence-based Post-Deployment Health Care Improvement: The Comprehensive Clinical Evaluation Program (CCEP) is a specialty care-based medical evaluation program designed to support the health care needs of Gulf War veterans reporting health concerns they associate with their experiences in the Gulf. In 2002, this program was transitioned to a broader, primary care-based evaluation and management treatment strategy through the **DoD/VA Post Deployment Health Evaluation and Management Clinical Practice Guideline (PDH-CPG)**.

The PDH-CPG is the cornerstone of post-deployment health care and is transforming how this care is provided. The PDH-CPG was developed over a two-year period and incorporates best practices associated with post-deployment health clinical program components. In addition, three supporting guidelines (Medically Unexplained

Symptoms, Depression, and Post-Traumatic Stress Disorder) have followed to supplement care under the PDH-CPG umbrella. PDH-CPG implementation began with a worldwide satellite broadcast on January 31, 2002, which was viewed by over 300 military medical treatment facilities around the world. Its use is now mandatory at all DoD health care facilities and it has been recognized by DoD, the Veterans Health Administration, and Congressional representatives as one of the most significant steps forward in deployment health in the last decade. DHCC supports PDH-CPG implementation across the MHS through continuing process improvement, supporting guideline development, clinical consultation, a toll-free help line, email support, electronic and print informatics, a robust system of clinical education, and on-going research to support evidence-based practice.

The Specialized Care Program (SCP): The SCP provides three weeks of rehabilitative care for service members, veterans, and family members with chronic deployment health concerns, including Medically Unexplained or Idiopathic Symptoms. Accommodations have also been made to treat civilian employees who have significant chronic deployment-related illness. The treatment regimen is designed to help patients improve physical, cognitive, and social functioning in their personal and family lives as well as in their roles as members of the armed forces. The SCP is based on principles and practices effective for treating chronic illnesses and was originally established as the final phase of the Comprehensive Clinical Evaluation Program (CCEP). As the CCEP transitioned to the newly implemented Post Deployment Health Evaluation and Management Clinical Practice Guideline (PDH-CPG), the SCP continued to provide referral care to Gulf War veterans, while expanding services to individuals with health concerns related to all deployments. In FY 02, over 50 patients were seen in 10 cycles of this intensive treatment program. Patient received an average of 36 individual provider contacts and 78 hours of group treatment. In addition, 80% of these patients received clinical follow-up for 40 weeks.

A Worldwide Ambulatory Referral Care Program (ARP): The DHCC provides ambulatory care for patients, both local and worldwide, with post-deployment health concerns, symptoms, diseases, and disabilities. Originally formulated as Phase II of the Gulf War CCEP, the ARP has transitioned to providing care to referral patients from all deployments. Many of these patients have experienced multiple, complex problems and may be disillusioned with the care they received from the MHS in the past. The DHCC evaluation and treatment procedures are designed not only to treat individuals, but also to restore trust by providing individualized, compassionate care and intensive follow-up. Approximately 800 new patients have been seen in this program.

Patient Follow-up and Advocacy: The on-going health and well-being of patients entering treatment at the DHCC are high priorities. In FY02, the DHCC clinical team had 2800 patient encounters and 255 clinical phone-based follow-up contacts. Follow-up with SCP patients exceeded 500 visits and ensured that patient concerns were heard and patient needs were met. Patients consistently rate DHCC clinical programs as “very good” and “excellent.”

Operation Solace: Operation Solace provided direct care, care coordination, advocacy, and case management for individuals in the national capital region (NCR) with physical

and emotional health concerns related to terrorism, bio-terrorism or deployment health issues following the September 11, 2001, terrorist attacks. Operation Solace health care professionals were stationed between February and July 2002 in seven primary care portals across the NCR. Solace Care Managers provided clinical care through over 800 patient visits and provided 55 training sessions to over 1500 attendees. The compliance rate for implementation of the PDH-CPG at clinics with a Solace Care Manager reached 81% in the first six months of program implementation.

Clinical Consultation through Toll-Free Help Line and E-Mail Support Services: DHCC operates a toll-free telephone help line as well as an e-mail support service that can be accessed directly and through the Center's website. The help line provides information about Gulf War health concerns, referral services, and advocacy support to veterans and their families. An additional telephone support line was established to provide DoD health professionals deployment-related clinical consultation and guideline implementation support from our experienced, multi-disciplinary staff. The consultation service responded to 435 email inquiries and 1160 phone inquiries from February to September, 2002.

Information, Communication, and Education

DHCC Website: The DHCC Website, located at www.PDHealth.mil, represents a comprehensive source of information for health care providers, veterans, and family members and is the primary source of communication and support for the implementation of the PDH-CPG around the world. Visitors to the site find information on such areas as the health aspects of and environmental health risks in major deployments, the PDH-CPG, the war on terrorism, biological and chemical agents, and current news and events. The website officially debuted on 31 Jan 2002 following the PDH-CPG worldwide satellite broadcast. During FY02, utilization data reflected 1,412,433 total page hits, 839,772 website hits, and 118,985 unique users.

Deployment Health News: The *Deployment Health News* is a daily electronic newsletter that covers health issues related to military service, deployments, homeland security, and the War on Terrorism. Information is gathered from publicly available sources including periodicals, professional journals, and government and private sector websites. Since its debut in May 2002, word-of-mouth referrals have led to a rapidly expanding list of subscribers. Satisfaction ratings from readers have all been positive.

Clinical Risk Communication: Clinical health risk communication is a key element of the PDH-CPG. Information on the use of risk communication, both as a part of the guideline and in general clinical settings, is available through the DHCC website. In FY02, DHCC staff submitted manuscripts to professional publications and provided presentations on clinical communication and patient-provider relationships at several prestigious conferences. DHCC also partnered with the US Army Center for Health Promotion and Preventive Medicine (USACHPPM) and the Department of Veterans Affairs (VA) to produce a world-wide broadcast to educate clinicians about effective communication with patients in situations where health risk concerns may be high but the level of trust in the health care relationship is low. To further facilitate PDH-CPG implementation, in-depth clinical health risk communication training was provided to

military treatment facilities and guideline implementation teams in both CONUS and EUCOM.

Partnerships for Comprehensive Information: DHCC has established active working relationships with USACHPPM, Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis (AFIERA), Navy Environmental Health Center (NEHC), the Department of Energy and the VA, including the VA's two War-Related Injury and Illness Study Centers. Partnerships have resulted in fact sheets for clinicians, patient educational materials, clinical risk communication efforts, four worldwide television broadcasts, a comprehensive USCENTCOM Combined Joint Task Force Campaign Plan for Deployment Occupational and Environmental Surveillance, and the DHCC First Annual Conference.

Print Information and Outreach: DHCC developed integrated print materials and multi-format, multi-product clinical tool kits to facilitate PDH-CPG implementation. These tool kits, along with those created for supporting guidelines, were shipped to all 677 DOD health care facilities around the world. Outreach efforts for the PDH-CPG were enhanced by media coverage in military and civilian news outlets to educate both clinicians and patients about the new guideline features and about the implications of the new guideline for them. In addition, DHCC exhibited Center information at five national and international conferences.

DHCC First Annual Conference: The Department of Defense, in collaboration with the Department of Energy, convened the DHCC first annual meeting on September 9 through 11 in Alexandria, VA. This meeting, entitled "Risk Communication and Terrorism: New Clinical Approaches," attracted over 200 physicians, nurses, psychologists, social workers and other health care professionals from the Departments of Defense and Energy, and other federal and private sector agencies. Ms. Ellen Embrey, Deputy Assistant Secretary of Defense for Force Health Protection and Readiness, and The Honorable Beverly A. Cook, Assistant Secretary of Energy for Environment, Safety, and Health, were keynote speakers. Seventy-four national and international experts in risk communication, bio-terrorism, and clinical work presented specific techniques and models to improve care for patients during these challenging times. The overall evaluations from attendees were excellent.

Clinical Training: DHCC staff provided 18 educational seminars during the year. Presentations covered a range of deployment health issues, including health risk communication, provider ethics, the treatment of multi-symptom illnesses, clinical practice guideline implementation, and post-traumatic stress disorder.

Deployment-Related Clinical Research

Cooperative Studies: DHCC is engaged in cooperative studies with the VA on Exercise Behavioral Therapy (20 sites and 1,100 participants), Antibiotic Therapy (30 sites and 500 participants), and Treatment of Post Traumatic Stress Disorder (PTSD) in Women (12 sites and 40 participants). In addition DHCC is carrying out a NIMH-sponsored study on PTSD Prevention for September 11 victims with co-investigators from Boston University and the Boston VA.

Health-e VOICE: The Healthcare-Oriented, Electronic, Values-Based, Open, Interactive, Collaborative Education (Health-e VOICE) is a Centers for Disease Control (CDC)-funded concept for a web-based distance learning tool to teach health risk communication skills to primary care providers. The project is in a developmental stage. In the coming year, the DHCC research team plans to conduct focus groups representing all Services, both in the continental United States and overseas. These groups will help to identify the most effective teaching methods and messages. The program is coordinated with a parallel CDC-funded effort at Rutgers University to ensure completeness and sufficient scope of physician and patient education tools.

Research Publications: During FY02, DHCC staff presented over 40 professional presentations and completed 30 professional publications across a multi-disciplinary journal base including the *Journal of the American Medical Association*, *New England Journal of Medicine*, *Archives of Internal Medicine*.

Program Evaluation: Assessment and clinical information from Operation Solace and the Specialized Care Program was entered into comprehensive databases for program evaluation efforts during FY02. Entrance and exit questionnaires are collected on all patients entering the SCP and at one and three months after graduation. Evaluation efforts include assessing patient satisfaction and functional status improvements as a result of care received. These long-term evaluation processes are planned for completion in the coming fiscal year.

FUTURE PLANS

Health Care Services

VA Collaboration: DHCC initiated and participates in a sharing agreement between Walter Reed Army Medical Center and the War-Related Illness and Injury Center (WRIISC) at the Washington VA Medical Center. Through this agreement, the DHCC will provide 50 VA beneficiaries access to the intensive treatment program offered through the Specialized Care Program. This coordination effort is an example of DHCC's efforts to comply with Department of Defense and Congressional guidance for increased coordination and efficiency in the provision of deployment health care to our country's veterans.

PDH Clinical Practice Guideline: In the coming year, a traveling team of trainers and consultants will provide consultative services across the MHS. Services will focus on training and assisting clinicians and medical administrators in PDH-CPG use to ensure that the guideline meets the needs of service members returning from deployments. In addition, DHCC will begin work with DoD, VA, the Department of Health and Human Services, and civilian collaborators to revise the guideline based on the experiences of both clinicians and patients in working with it.

Information, Communication, and Education

Information, Communication, and Education Team (ICE-T): Through ICE-T, all of the Center's communication, education, and information professionals participate in planning, coordinating, and implementing programs. This effort ensures maximum efficiency in the use of DHCC resources as well as completeness in the coverage of DHCC programs. The ICE-T will see additional staff and programs in FY03, with the addition of the traveling training team to facilitate improved implementation of the PDH-CPG as well as medical informatics and information management specialists to improve the quality of the data and content information on which we base our decisions. In coordination with the research team, ICE-T will use the improved data to evaluate and plan programs that will further the DHCC goal of enhanced post-deployment health care.

Website Continuous Improvement: DHCC will continue to add information and to improve its website to make the site easy to navigate for clinicians and veterans, ensuring that it becomes the preferred choice for effectively delivered, scientifically based information. It will also serve an information clearinghouse function for clinically relevant post-deployment health issues. New functional capabilities, including a multimedia training center, planned for the coming year. New directories to increase information targeted to special populations include Resource Centers to support the Total Force, including Reserve Component Personnel and Families. The Library is continually expanding. An updated organizational plan will facilitate continued ease of use as the volume of resources expands to meet the ever-growing need for current and valid information.

Clinical Training: DHCC will conduct its Second Annual Meeting in the coming year. In addition, DHCC is expanding education and training opportunities, adding both depth and breadth to the clinical training program. To facilitate access to a wider audience, especially those busy clinicians who are unable to attend a one-time broadcast, a clinical risk communication broadcast originally telecast in September 2002, is being repackaged and reformatted for video-conference, webcast, and individual videotape viewing. The tapes are scheduled for distribution to all branches of the Armed Services in February 2003. Also in FY03, a deployment health grand rounds series will include such topics as post-traumatic stress syndrome, medically unexplained symptoms, employee assistance programs, medical informatics, and clinical health risk communication. This training program will be made available worldwide through videotapes, disk formats, and webcasts on the DHCC website. Added to these e-training experiences, our traveling training team will be readied and deployed in FY03 to provide on-site assistance with clinical risk communication and post-deployment health guideline implementation at MTFs around the globe.

Deployment-Related Clinical Research

In FY03, the DHCC Research Team will continue to move forward with its existing projects while it explores opportunities for new research efforts. Current projects, including four externally funded projects are: *A Randomized Clinical Trial of Cognitive-Behavioral Treatment For Post-Traumatic Stress Disorder in Women-VA/DoD Cooperative*

Study 494; Health-e VOICE: Optimized Implementation of a Stepped Clinical Risk Communications Guideline; Brief Cognitive-Behavioral Intervention for Victims of Mass Violence; and, Longitudinal Health Study of Gulf War Era Veterans. These will progress according to the approved protocol for each effort.

In addition to these research projects, data routinely collected through our clinical programs will continue to be examined to determine program effectiveness and to plan actions to improve clinical post-deployment care. A computer-assisted personal interview (CAPI) and computer-assisted telephone interview (CATI) system is being implemented and will become operational in the spring of 2003. This new system will enhance our ability to capture and analyze data for program and patient management.

Individuals being seen in primary clinics in the National Capital Region as part of Operation Solace are invited to complete a Clinical Assessment Tool (CAT) to assist with program and patient management. The CAT is being expanded and will be included in the Integrated Clinical Database, a medical outcomes management program operated by HealthForces (<http://www.healthforces.org>). During 2003 we anticipate that the CAT will come into wider use at many DoD healthcare facilities across the country and OCONUS. Data collected from these programs will be used to brief care providers and planners as well as to determine how the programs should be expanded or modified. With approval from the appropriate Human Use Committees, the data from these programs will be used in presentations and publications in peer-reviewed journals.

DHCC is moving forward to meet the deployment health needs of all our nation's service members and their families. From systemic implementation of clinical practice guidelines, to electronic communications support and consultation, to individual patient care, we will continue to provide responsive services to those who make health sacrifices for our country.

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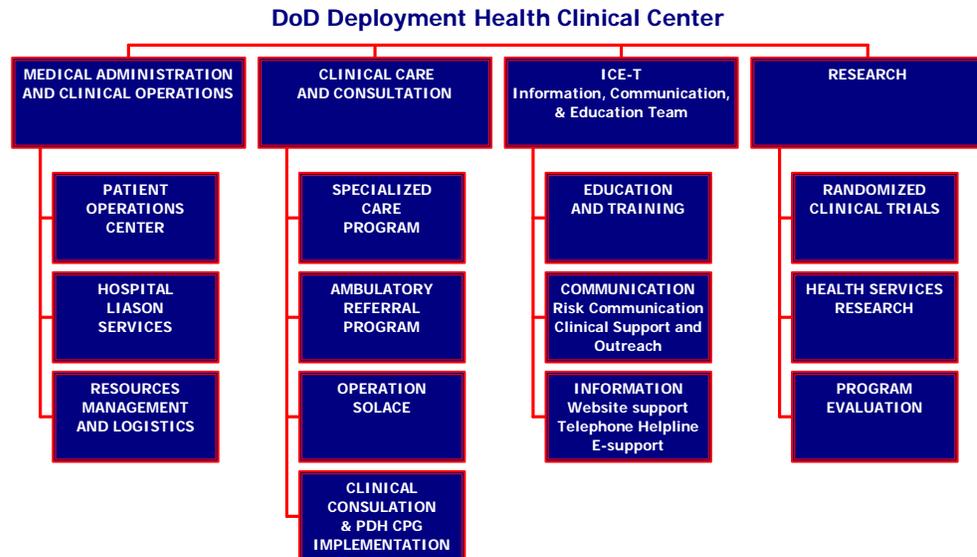
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DHCC: THE ORGANIZATION



The mission of the Deployment Health Clinical Center (DHCC) is to provide caring assistance and advocacy for military personnel and families with post-deployment health concerns as well as to provide guidance to clinicians serving this community.

The Center is accomplishing this mission through a three-pronged strategy to improve the foundation of military health care. These strategic components consist of: (1) **Health care services**, including direct health care delivery, clinical consultation, and process improvement; (2) **Information, Communication, and Education** support, including health information, risk communication guidance, and clinical education; and (3) **Research**, including deployment-related clinical and health services research.

HEALTH CARE SERVICES

Patient Care

DHCC's FY02 health care service activities centered on the stages of a stepped care program for patients with deployment-related illness. Services range from more intensive rehabilitative care to clinical consultation for Military Health System (MHS) providers and implementation of the Post Deployment Health Clinical Practice Guideline (PDH-CPG).



The DHCC multi-disciplinary clinical team evaluates and manages care for both secondary ambulatory referrals through the Ambulatory Referral Program (ARP) and the more intensive tertiary treatment of patients with chronic, multi-symptom illness, through the Specialized Care Program (SCP). The SCP has historically represented the final phase (Phase III) offered to patients who have completed Phases I and II of the Comprehensive Clinical Evaluation Program (CCEP).

The CCEP, originally designed as a comprehensive system of evaluation for chronic health concerns experienced by returning service members, family members and selected civilian employees following the Gulf War, has transitioned into a broader continuum of care based on the new PDH-CPG. While access to the CCEP program remains an entitlement for Gulf War veterans, the PDH-CPG offers continuity of care for everyone with post-deployment health concerns, centered in a primary care setting. Since not all health concerns can be fully addressed in that setting, the ARP, SCP and DHCC's worldwide clinical consultation services assist in filling the need for more extensive specialty-based care. While the patients seen in these programs have historically tended to be Gulf War veterans, the creation of DHCC ensured access to these important health care services to patients from other deployments.

The Specialized Care Program (SCP)

The SCP is a three-week program, based on effective principles and practices for treatment of chronic illnesses, designed to assist service members and their families with knowledge and skills for coping with multi-symptom chronic illnesses. Accommodations have also been made to treat civilian employees who have significant chronic deployment-related illness. Employing a multi-disciplinary system of care, the SCP provides a comprehensive package to the patient including medical care, nursing, psycho-educational learning, counseling, family support and education, resource coordination, exercise and physical activity, and case management. Clinicians from

internal medicine, psychiatry, psychology, social work, physical therapy, nursing, occupational therapy and nutritional medicine provide guidance to patients on an individual as well as a group basis. The treatment regimen is designed to help patients improve physical, cognitive, and social functioning in their personal and family lives as well as in their roles as members of the armed forces. In FY02, 51 patients participated in 10 SCP treatment cycles.

In individual and group short-term therapy sessions, patients develop a symptom management plan including goals and action steps allowing them to use the treatment strategies and techniques they learn. Patients receive counseling, symptom and disease management, and Cognitive Behavioral Therapy (CBT), which seeks to address cognitive and emotional issues underlying illness behavior. Patients learn and practice health self-care and relaxation skills along with general lifestyle wellness techniques and exercise routines, with exercise routines tailored to patients with disabilities. Patients received an average of 36 individual provider contacts and 78 hours of group treatment in FY02.



Patients who complete SCP tend to enjoy higher levels of functioning and are better able to cope with chronic and/or uncertain illnesses. They also learn strategies to access the health care system with improved knowledge and expectations. In addition, the program emphasizes the importance of a primary care manager to coordinate specialists' recommendations when patients return to their local health care system.

DHCC follows patients who have completed the SCP with clinical and program evaluations to improve service, to ensure post-discharge treatment plan implementation, and to monitor their status and provide on-going support. Follow-up is important not only for current and former patients but also for future program participants, as DHCC is involved in continuous quality improvement. In FY02, the DHCC clinical team completed 2800 patient encounters and 255 clinical phone-based follow-up contacts. Follow-up with SCP patients exceeded 500 visits and ensured that patient concerns were heard and patient needs were met. In post-program follow-up, patients consistently rate DHCC clinical programs as "very good" and "excellent." Completion of core follow-up phone contacts at 2, 6, and 8 weeks is 86.4%, while total completion rate for all clinical follow-up contacts (40 weeks) is 80%.

Worldwide Ambulatory Referral Care Program (ARP)

Counseling, medical evaluation and treatment, and social and physical therapy are offered to deployed service and family members through the ARP. While originally designed as Phase II of the Gulf War CCEP, it has transitioned to provide care to referral patients from all deployments and includes medical evaluations for domestic deployment issues such as vaccine health and terrorism. Many of these patients have experienced multiple, complex problems and may be disillusioned with the care they received from the MHS in the past. The DHCC evaluation and treatment procedures are designed not only to treat individuals, but also to restore trust by providing individualized, compassionate care and intensive follow-up. The ARP provided care to approximately 800 patients through 2895 patient encounters in FY02.



Visits – Comprehensive Clinical Evaluation Program

✱	FY00.....2808
✱	FY01.....3001
✱	FY02.....2895

Operation Solace

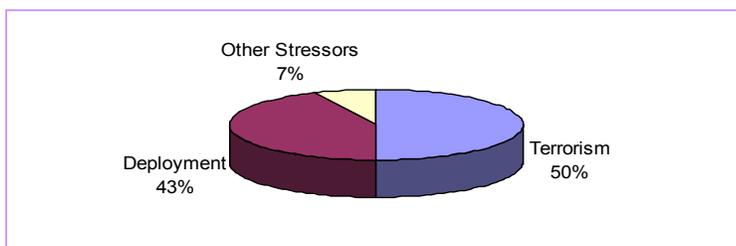
Operation Solace is a tri-service program of surveillance and intervention in the national capital region (NCR) for TRICARE beneficiaries affected by the terrorist attacks of September 11th. With pre-clinical outreach to 74,226 employees in the Pentagon and 7 other NCR facilities, the program offers direct behavioral health support in the Pentagon as well as surveillance and intervention.

During FY02, DHCC was responsible for Solace planning, implementation, administration, and clinical oversight. A clinical assessment tool (CAT) was developed to measure patient clinical outcomes and health care satisfaction. Seven Care Managers

were placed in primary care clinics throughout the Walter Reed Health Care System, including the Ft Belvoir, Ft Myer, Ft Meade systems, as well as Andrews Air Force Base and the Pentagon clinic.

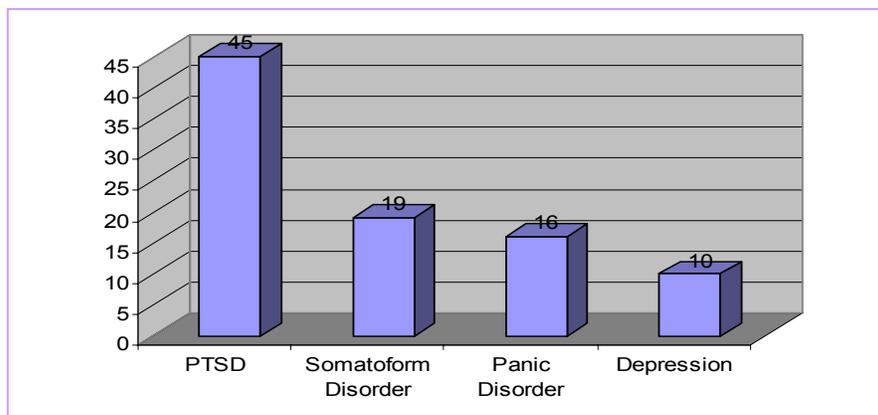
Operation Solace offered over 55 command-level briefs and staff development in-service training sessions were delivered to more than 1500 personnel. In addition, Operation Solace provided two panel presentations: 1) **Treatment after Terror, Risk Communication Conference**, 11 September 2002, approximately 50 attendees, and 2) **Operation Solace: the Comprehensive Response to the Pentagon Attack, Force Health Protection Conference**, August 2002, approximately 80 attendees.

Placed in their clinics between February and July 2002, care managers have opened 160 cases and completed over 800 patient visits. Reasons for visits are presented below:



* 19% of patients reported two or more stressors and 78% reported stress levels as moderate to high.

The CAT items contain diagnostic “triggers” that alert both the care manager and primary care provider to patients at risk for developing a behavioral health (BH) diagnosis. While 70% of patients were identified as being at risk for one, 51% were at risk for two or more BH diagnoses. The percent of presenting triggers are listed below:



PTSD = Post Traumatic Stress Disorder

** 34% of PTSD diagnoses were directly related to the Pentagon attack.

The Care Managers have also been instrumental in implementing the PDH-CPG in their respective clinics, improving both pre- and post- deployment health assessment. Results of chart audits to determine compliance with the PDH-CPG screening question show an average compliance rate of 81%

CLINICAL CONSULTATION

DHCC makes important deployment-related clinical learning experiences available through its worldwide clinical consultation program. The PDH-CPG, which represents a system of evidence-based care specifically focused on deployment health issues, was developed to ensure that the lessons learned from past conflicts are implemented to the benefit of our veterans returning from current and future deployments.

* The PDH CPG implements lessons learned during the past 10 years

The Department of Defense recognizes the necessity to learn from both the successes and mistakes in military medicine. A case in point is Gulf War Illness. Shortly after the Gulf War, some service members began presenting for care with a wide range of symptoms they believed were related to the conflict. In many cases, the military medical community was not prepared to deal with these health issues, particularly where presenting symptoms did not fit with a known disease. The lack of detailed information on Gulf War-related exposures and expertise in effective risk communication techniques left many providers and patients feeling frustrated.

War-related syndromes have been recognized since the Civil War. They are frequently characterized by symptoms such as fatigue, sleep disturbances, forgetfulness, and persistent headaches. Exhaustive medical evaluations often yielded no recognized physiologic diseases and many of these patients have appeared to be in fair to normal overall health. The Gulf War experience shows that the length of the operation and the number of battle-related casualties are not good predictors of subsequent post-deployment health concerns suggesting that all service and family members may potentially experience deployment-related health concerns.

* We made mistakes in dealing with the health concerns of Gulf War era Veterans.

In some instances following the Gulf War, health care providers discounted patient's complaints of physical symptoms when no recognized disease was identified. This led to some patients feeling they were being disenfranchised by the military medical system. It sometimes took months before the military medical system responded to veterans' complaints.

The Comprehensive Clinical Evaluation Program (CCEP) was implemented in response to these concerns. One of the CCEP's goals was to serve as a prototype for best practices in surveillance, evaluation, and treatment of deployment-related health concerns. Originally, the CCEP provided exhaustive medical evaluations for veterans who reported health concerns they associated with their experiences in the Gulf. In 2002, this program was transitioned to a broader, primary care-based evaluation and management treatment

strategy through the DoD/VA Post Deployment Health Evaluation and Management Clinical Practice Guideline (PDH-CPG).

A lesson learned from the CCEP is that it is a mistake to separate deployment health care from primary care and the individual's primary care manager. The Institute of Medicine's (IOM's) evaluation of CCEP yielded a recommendation to focus evaluation and care of deployed forces at the primary care-level, both to enhance the continuity of care and foster the establishment of ongoing therapeutic relationships.^{1,2}

- ★ **The PDH-CPG represents the promised improvement in treatment of patients with deployment-related health concerns.**

The IOM further recommended that the Post-Deployment Health Clinical Practice Guideline (PDH-CPG) be created to include standardized guidelines that address the need for screening, assessing, evaluating, and treating this population. These guidelines enhance the ability of health care providers to identify, communicate with, and manage patients with deployment health concerns.

PDH-CPG

The DoD/VA PDH-CPG is a set of tools to help primary care providers evaluate and manage the deployment-related health concerns of service members and their families. The DHCC serves as the primary consultant for implementation of the Guideline. DHCC specialists are only a phone call or email message away and provide guidance in dealing with specific disease conditions, medically unexplained symptoms, and effective clinical risk communication. The DHCC website, www.PDHealth.mil, also provides a critical support component to clinicians as they implement guideline-based care.

- ★ **The Guideline is designed as a tool for use by providers in primary care.**

Most deployment-related health concerns are straightforward, diagnosable conditions. Only a few cases are complex enough to require extensive follow-up. By using the guideline, clinicians can effectively triage and treat these concerns. The risk communication tools in the guideline are particularly helpful in assuring the patients that military medical staff are concerned about their problems and are ready to help in any way possible.

¹ Institute of Medicine, Committee on the Evaluation of the Department of Defense Comprehensive Clinical Evaluation Program, Division of Health Promotion and Disease Prevention. 1997. [Adequacy of the Comprehensive Clinical Evaluation Program: A Focused Assessment](#). Washington DC: National Academy Press.

² Institute of Medicine, Committee on the Evaluation of the Department of Veteran Affairs Uniform Case Assessment Protocol. 1998. [Adequacy of the VA Persian Gulf Registry and Uniform Case Assessment Protocol](#). Washington DC: National Academy Press.

Active duty military members are not alone in their experience of deployment-related health concerns; deployments can also affect family members by creating or exacerbating existing family problems or concerns associated with contaminants or illnesses possibly brought back by the returning service member. For these reasons, the PDH-CPG is to support all military health-care beneficiaries.

★ **Protecting the health of U. S. forces before, during, and after deployment is a national obligation.**

PDH-CPG Development and Implementation

The DoD/VA PDH-CPG, an evidence- and consensus-based tool, was the product of an expert multi-disciplinary, multi-agency panel.

★ **The PDH-CPG required both program and tool development**

Once the guiding principles and algorithms for the guideline were established, supporting clinical tools were developed to aid health care providers and ancillary staff in implementing the guideline. This “tool kit” included a variety of products:

- Reminder cards containing the key elements of the guideline and the three related algorithms for use by the clinician in the exam room.
- A mnemonic developed as a reminder of the steps in risk communication provided on a reminder card.
- Patient education materials to assist in building effective relationships and to assist patients in taking a more active role in their health care.
- Health screening guidance including how to ask the question, “Is the reason for your visit today related to a deployment,” and how to document the clinic visit.

Rather than being used at the discretion of the medical facility or health care provider, this guideline has been mandated for implementation throughout the DoD and recommended as the standard of care in VA health care facilities. The PDHealth.mil Web site and DHCC toll-free help line were established to allow easy, timely access to Center staff for both clinical support and patient education regarding guideline-based care.

Is the reason for your visit related to a deployment?

★ **Pilot testing was completed to ensure effective implementation.**

To test and refine the guideline, toolkit, and implementation policies, a set of demonstration projects was initiated. This approach of small-scale piloting prior to full implementation had proven successful in previous clinical guideline implementation

efforts.³ Three test sites serving large contingents of frequently deployed service members agreed to participate in the pilot project: Womack Army Medical Center at Fort Bragg, North Carolina, Camp Lejuene, North Carolina, and McGuire Air Force Base, New Jersey.

The pilot demonstration sites selected implementation teams to plan and carry out implementation in their medical facilities. These teams were assembled for a two-day planning conference. Each team developed a plan and timeline for guideline implementation and continued to meet on a regular basis at their hospital. This process was recommended for all health care facilities tasked to implement the guideline. Information in how to form the team, the team tasks, and related planning documents is available in the toolkit and on the supporting Web site. Similar outreach was made to medical facilities in Europe.

The RAND Corporation conducted the pilot project evaluations during two sets of site visits to each location. The visits comprised a process evaluation and used a participant-observer approach along with administration of a semi-structured group interview. The site visits and monthly teleconferences also facilitated technical support to staff involved in the implementation process. The pilot project results were used to refine the tool kit, the policy guidance, support procedures, and the implementation processes.

★ Guideline-base information, communication, and education are vital links for PDH-CPG practice and implementation.

A multi-faceted, multi-level program of information, education, and training was required for guideline implementation. Previous research in guideline implementation has found recurrent education to be an important component of guideline implementation.⁴

A four-hour clinical health risk communication training program was delivered to the pilot test sites and its effectiveness evaluated by RAND. Based on feedback, the training was provided in the guideline toolkit along with CD-ROM-based information on evidence-based medicine.

★ PDH CPG policies were developed and implemented across DoD.

Policies were developed for distribution across the military health care system. The original policy statement, prepared with input from the Guideline Development Team, was issued by the Assistant Secretary of Defense for Health Affairs to the Surgeons General of each Service. It directed the adoption of the PDH-CPG and set an implementation date. Attachments to the policy directed each military medical facility to

³ Cretin, S., Farley, D.O., Dolter, K.J., and Nicholas, W. 2001. Evaluating an integrated approach to clinical quality improvement: Clinical guidelines, quality measurement, and supportive system design, Medical Care, 39(8), 70S-84S.

⁴ Grimshaw, J.M, and Russell, I.T. 1993. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations, The Lancet, 342, 1317-1321.

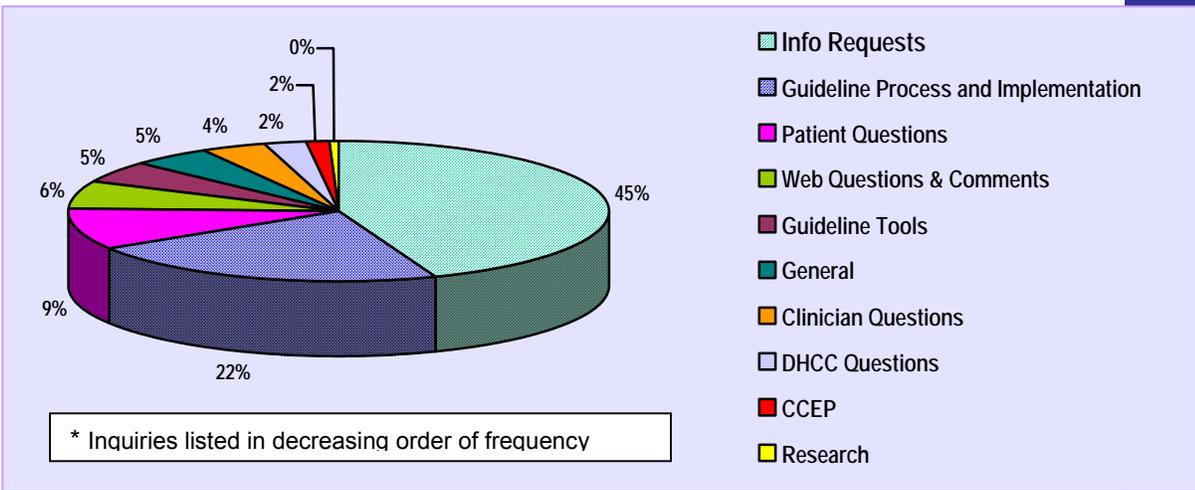
form an implementation team and to report back to the Guideline Development Team with a list of implementation team members, an implementation plan, and a timeline. Each of the Services appointed a point of contact to manage this tasking.

Guideline implementation was formally initiated with a two-hour worldwide satellite broadcast. Endorsements from DoD and VA senior leadership and from the Surgeon General of each of the armed services helped secure the participation of the field medical staff. Satellite links were established at each of the over 600 participating VA and DoD health care sites. A second satellite broadcast focusing solely on clinical health risk communication was also produced. Follow-on training is planned through the traveling training team, Web-based and electronic training venues, and train-the-trainer programs.

*** PDH CPG implementation efforts were bolstered by consultation and support.**

Clinical Consultation through Toll-Free Help Line and E-Mail Support Services

DHCC operates a toll-free telephone help line as well as an email support service that can be accessed both directly and through the Center’s Web site. The former DoD CCEP help line was transitioned to the DHCC, but continued to serve this important function. An additional telephone support line was also established for clinicians seeking clinical consultation and referral for post-deployment health issues and guideline implementation questions. The consultation service responded to 1160 phone and 435 DHCC Web site inquiries from February to September 2002. The breakout of Web requests is shown in the chart below:

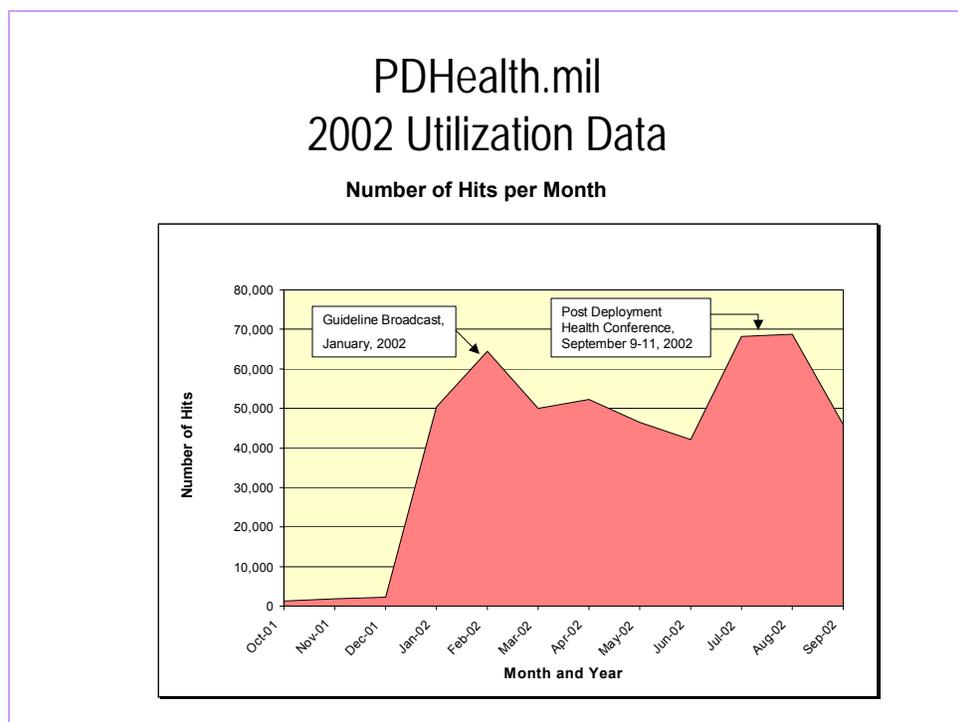


INFORMATION, COMMUNICATION, AND EDUCATION

DHCC Web site

DoD and VA clinicians requested a Web-based tool to support practices under the PDH CPG. The DHCC took on this task and launched PDHealth.mil in May 2001. After usability studies were evaluated, a redesigned site was released in August 2002.

PDHealth.mil has received nearly a half million hits from 119,000 visitors since its inception in May 2001 including more than 300 hits/month from military personnel posted in overseas locations such as Europe, Asia, Africa, and Australia. Over the past year, there has been a steady increase of visitors, averaging more than 41,000 hits/month. While a third of all visitors are repeat users, 8% have accessed the site at least 10 times.



The most popular PDHealth.mil sections in FY02 included:

★ Clinicians

- ❖ Online version of the PDH-CPG
- ❖ PUBMED search option
- ❖ Downloadable PDH-CPG toolkit
- ❖ Gulf War Database search option
- ❖ PTSD screening questionnaires
- ❖ SF 36 v2 Health Survey with automatic scoring
- ❖ Risk communication tools
- ❖ Health concerns associated with specific deployments

★ **Education and Training**

- ❖ Conference, seminar, workshop and training event announcements
- ❖ Health services, Gulf War Illness, and deployment health research clinical trials
- ❖ A library containing books, articles, government policies and directives, and a consortium of fact sheets
- ❖ Training tools on providing post deployment health care

★ **Veterans and Families**

- ❖ Major deployment information
- ❖ Alphabetized listing of fact sheets on medical conditions

★ **War on Terrorism**

- ❖ Operations involved
- ❖ Relevant links
- ❖ Coping strategies

CLINICAL HEALTH RISK COMMUNICATION

Deployment Health News

The Deployment Health Clinical Center publishes an on-line newsletter, the *Deployment Health News*, each business day. This electronic newsletter covers health issues related to military service, deployments, homeland security, and the War on Terrorism. Drawing from publicly available sources, it includes topics such as environmental and occupational health, medications, immunizations, biological and chemical warfare, and medically unexplained symptoms. From May to September 2002, the DHCC published 146 editions of the newsletter. Newsletter distribution has grown consistently since its introduction.

Training and practice dissemination

Clinical health risk communication may entail new terminology and practices for primary care providers. Disseminating information and providing training in the area is considered a critical element in support of the PDH CPG. A number of outreach activities over FY02 assisted in achieving our goal in promoting more effective health risk communication in a clinical setting.

- ★ **RISK COMMUNICATION FOR CLINICIANS: An Approach to Doctor-Patient Partnerships**, a poster session at the 2002 Force Health Protection Conference, covered an explanation of risk communication concepts, a brief history of this relatively new field, and how its concepts can be focused into a communication strategy for individual patients.

- ★ **Risk Communication: Exploring Interview Approaches to Patients with Unexplained Symptoms and Occupational Exposures**, an interest group session at the 2002 American Academy of Physician and Patient meeting, covered how a physician can relate to patients with "Multiple Chemical Sensitivity," "Chronic

Fatigue Syndrome," "Gulf War Syndrome," or other conditions that are poorly defined and whose symptoms may have many different causes.

- ★ **Hearing on Medical System Surveillance Challenges** was called by the House Committee on Veterans Affairs, Subcommittee on Health February 27, 2002 in response to a January General Accounting Office (GAO) report, which detailed deficiencies in the Department of Defense's ability to keep accurate medical records of troops deployed on active duty. DHCC covered this hearing.
- ★ **DHCC Annual Meeting—Applied Risk Communication Sessions** involved an interactive response to a possible terrorist attack on a city's water supply. Participants in the sessions were given an overview of risk communication principles and a scenario to react to. In small group sessions, the participants prepared and delivered a response to the scenario as part of a televised news conference.

Fact Sheets

As events emerge in a post-deployment health environment, clear, concise, and accurate information is needed. DHCC moved to fill the need through the development of print and electronic fact sheets for both clinician use and patient education efforts.

- ★ **Mefloquine**, a medication used to prevent malaria in areas where older medications are no longer effective, gained public attention when news reports linked it to several violent incidents at Ft. Bragg. This fact sheet provides information for clinicians and service members about this medication.
- ★ **K2** is a base used by U.S. Troops in Uzbekistan on which traces of Soviet-era chemical weapons have been discovered. The fact sheets address the concerns of service members about potential exposure and provides information to clinicians.
- ★ **Anthrax** fact sheets were prepared during the period when anthrax-filled letters were sent through the Brentwood post office to several members of Congress. Anthrax was also detected in the Walter Reed post office.
- ★ **Doxycycline and Ciprofloxacin** are the two medications used to treat inhalation anthrax. The fact sheets describe these medications.



Risk Communication and Terrorism:

New Clinical Approaches

The First Annual Conference
on Post-Deployment Care

September 9-11, 2002

www.pdhealth.mil

First Annual Conference on Post Deployment Care

The conference, **Clinical Risk Communication and Terrorism: New Clinical Approaches**, was held on September 8–11, 2002. Attracting 200 attendees, the conference featured 74 speakers/moderators and 10 exhibitors. The conference involved important collaborations with providers and staff from the Department of Defense, the Department of Energy, and Federal and private healthcare organizations. The content explored clinical risk communication and its application to provider-patient relationships in the context of the “new war” on terrorism.

Ms. Ellen Embrey, the Deputy Assistant Secretary of Defense (DASD) for Force Health Protection & Readiness (FHP&R) and the Honorable Beverly A. Cook, Assistant Secretary for Environment, Safety, and Health, United States Department of Energy opened the conference, which included 14 breakout sessions. These breakouts reported their findings and recommendations to the larger group. Conference evaluations were very positive, with an average satisfaction score of 4.9 on a five-point scale.

HEALTH SERVICES RESEARCH



DHCC's Research Team comprises epidemiologists, a statistician, psychologists, a social worker, project directors and research associates, as well as an administrative assistant. The team has a number of functions in support of the Deployment Health Clinical Center. These missions include:

- ★ Supporting the DHCC mission through:
 - ❖ Clinical epidemiologic and health services research
 - ❖ Statistical analysis
 - ❖ Questionnaire development
 - ❖ Data collection
 - ❖ Database creation and management assistance
 - ❖ Preparing clinical research manuscripts

- ★ Maintaining the DHCC library, consisting of approximately 500 volumes
- ★ Maintaining the DHCC reference database; providing reference retrieval services
- ★ Assisting investigators with preparing and submitting research protocols
- ★ Document clearance and tracking for protocols, articles, and abstracts that must be approved by offices and agencies at Walter Reed Army Medical Center, Uniformed Services University of Health Sciences, and U.S. Army Medical Research and Material Command.

Clinical Trials

CSP 494: Treatment of PTSD in Women

This randomized clinical trial, which evaluates two methods of psychotherapy for Post-Traumatic Stress Disorder (PTSD) in military women, is being conducted in the NCR and 11 VA hospitals around the country. Each participant must be referred by a mental health clinician or by an appointed DoD mental health therapist with a provisional diagnosis of PTSD and must undergo a mental health evaluation prior to entering the study.

The women are randomized into Prolonged Exposure therapy (PE) or Present Centered therapy (PCT). They are then assessed one week after the conclusion of therapy and at 3 month and 6 month intervals. The research staff is tasked to recruit 16 women meeting eligibility criteria per year for two years. Recruiting active duty military women is a challenge because of the stigma associated with a “mental health” diagnosis and the impact this could have on careers. The IRB process at multiple sites culminated in final approval to begin the study in June of 2002.

Brief Cognitive-Behavioral Intervention For Victims Of Mass Violence

This NIMH-funded study is being conducted in collaboration with the Boston University School of Medicine. It seeks to compare the effectiveness of two therapies for treatment of individuals exposed to the September 11, 2001 terrorist attack on the Pentagon and its immediate aftermath. The two therapies are Stress Inoculation Training (SIT) and the non-specific standard care provided in primary care settings, called Supportive Counseling (SC).

The major aim of this study is to evaluate an abbreviated, primary care-based format of SIT, a therapy that helps people manage stress and recover from trauma that typically requires several individual meetings with therapists. This research will test whether SIT can be successfully completed in a single meeting with a therapist, followed by a program of self-directed Web-based information and guidance with daily homework activities.

One hundred participants (50 in each intervention group) will be recruited from the NCR primary care clinics during this two-year study. The Web site has been developed for both treatment conditions, including educational materials, symptom reporting, and daily homework assignments for 56 days. The treatment manual for the SIT condition has been completed, and recruitment materials are currently being developed. Subject enrollment is expected to begin in 2003.

Health Services Research

Health-e VOICE

Health professionals caring for military personnel and veterans need to be prepared to address the concerns of patients presenting with ambiguous symptoms as fully as they do for people with more clinically identifiable diseases. In response to the need for enhanced providers' clinical risk communication skills, the DHCC, in collaboration with

associates at Widmeyer Communications and Affiliated Computer Systems (ACS), will develop and evaluate a web-based interactive distance-learning tool called "Health-e VOICE."

The Health-e VOICE protocol is based on the hypothesis that improved clinical risk communication may alleviate unnecessary patient distress and physical health concerns, reduce frustration and tension in the doctor-patient relationship, and rebuild patient trust in both care providers and the health system. The overall objective of the trial will be to assess the effect of Health-e VOICE training on the ability of primary care providers to appropriately address the issues of veterans presenting with deployment related health concerns and improve patient satisfaction with care.

Focus groups will be used to describe and construct providers' and patients' mental models (knowledge base, misconceptions, and beliefs) pertaining to deployment-related health concerns in general and medically unexplained symptoms (MUS) specifically. Focus groups will consist of: 1) Primary care providers and 2) Previously deployed veterans and their spouses. The Health-e VOICE tool will be developed using the findings and conclusions from these focus groups. Following development and usability testing, the Health-e VOICE tool will be evaluated in a randomized controlled trial.

Estimating Prevalence and Incidence Rates of Mental Illnesses in the Military Using ECA Study Data

This project uses existing population-based data from the Epidemiologic Catchment Area (ECA) survey to estimate the expected prevalence and incidence rate of a variety of mental diseases among Army active duty personnel. The major aim of this project is to provide knowledge useful for fashioning health policies and programs for policy-makers and planners in the military. Intensified efforts to understand the distribution of various mental diseases in the military may foster trust between veterans and the government agencies that provide benefits and health care for them.

Veteran Status, Health, and Mortality in Older Americans

This study examines the excess mortality among American veterans age 70 years or older during a 2–3 year interval from 1993/94 to the end of 1995. Data used for this study come from the Survey of Asset and Health Dynamics Among the Oldest Old (AHEAD). The research decomposes the effect of veteran status (veterans versus non-veterans) into the direct effect and the indirect effects by means of physical health conditions and mental disorders on the mortality of older Americans, using a structural hazard rate model.

The major aim of the research is to develop a series of structural survival models to test the underlying hypothesis that at older ages veterans tend to have higher mortality than do their non-veteran counterparts, and that this excess mortality will be elevated as a cohort age. Specifically, these structural models will describe the process of how veteran status affects the mortality of older Americans by means of physical health, mental disorders, and some unidentified factors while controlling for the confounding effects of other related factors.

Program Evaluation

Specialized Care Program Outcome Evaluation

An update version of the SCP Clinical Management Tool was put into practice in June 2002. The new questionnaire captures patient information on basic demographics, health status, social functioning, program satisfaction and other items. Patients are now assessed at four intervals: 1) Program entry (intake), 2) Program completion (exit), 3) One-month follow-up, and 4) Three-month follow-up.

Work is currently underway to automate the SCP data collection using Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI) software. The CAPI system will enable the DHCC to develop computerized versions of the questionnaires to allow provide patients another way to complete the assessment tools, to facilitate real-time data storage and organization, and to give providers immediate access to patient information.

The CATI component, designed for telephone interviews, will be used for the one- and three-month follow-up assessments. This system will use the same data collection and storage capacity as the CAPI with added features such as automatic dialing and call-back. Additionally, it will include a scheduling function that will aid with follow-up calls and assist clinicians with their scheduling of patients. CATI information can be easily exported to the CAPI system or to other statistical software packages for data analysis.

Operation Solace Program Evaluation

One of the primary tools used by the Operation Solace Care Managers is the Clinical Assessment Tool (CAT). The CAT is a self-administered 34-item questionnaire comprised of a Pentagon Checklist and other pre-existing subscales that are designed to screen for functional status, anxiety, PTSD, depression, alcohol abuse, and other disorders. Care Managers use this assessment tool to gather information that will aid in ensuring that patients are properly referred and receive the appropriate care.

The paper version CAT has been recently loaded into Point of View boxes (POV), and this computer-based version of the questionnaire is being piloted in different MTFs throughout the area. Upon successful completion of the pilot project, the computerized version of the tool will be placed in every facility at which an Operation Solace Care Manager is located. In FY03, the data collected using the computer-based CAT will be loaded onto the Interactive Clinical Database (ICDB), which will provide access to primary care physicians and other military health care workers.

Completed Research Projects

CSP 475

Although most veterans of the Gulf War requiring medical care had a diagnosable and treatable condition, approximately 15-20% experienced a constellation of unexplained symptoms that have been termed Gulf War Veterans' Illnesses (GWI). Although there have been several explanations offered as to the cause of GWI, none of the putative

etiologic agents or conditions is currently supported by sufficient evidence. One plausible explanation that has received fairly widespread attention is systemic *Mycoplasma fermentans* infection. It was the purpose of this VA/DoD Cooperative Study to determine if a one-year course of antibiotic treatment directed against *Mycoplasma* species (i.e., doxycycline) would improve functioning and symptoms in deployed Gulf War veterans with GWI. A randomized, double-blind placebo controlled design was used among veterans who tested positive for one of four species of *Mycoplasma*. From May, 1999 until its completion in November 2001, a total of 491 patients were enrolled in 28 sites across the country.

Publications:

Collins JF, Donta ST, Engel CC, *et al.* The Antibiotic Treatment Trial of Gulf War Veterans' Illnesses: issues, design, screening, and baseline characteristics. *Control Clinical Trials* 2002, 23, 333-353.

Presentation (with accompanying abstract):

Donta, S.T., Engel, C.C., Baseman, J.B., Collins, J.F., Martin, S.E., Feussner, J.R. *Doxycycline therapy of mycoplasma-positive veterans with Gulf War Illness. Conference on Illnesses among Gulf War Veterans: A Decade of Scientific Research*, Alexandria, Virginia, January 2001.

CSP 470

The primary hypothesis of this study was that both aerobic exercise and cognitive behavioral therapy would significantly improve physical function (as measured by the Physical Component Scale of the SF-36V) in veterans with Gulf War Illness (GWI), and the combination of cognitive behavioral therapy and aerobic exercise would be more beneficial than either therapy alone. Central to this hypothesis was the belief that GWI remained an unexplained illness within the same spectrum as fibromyalgia and CFS, and modalities effective in those other conditions could be used to successfully treat GWI.

This clinical trial studied Gulf War era veterans who had unexplained chronic physical symptoms such as pain, fatigue, and/or cognitive difficulties. Patients were randomized to one of four groups: 1) CBT plus aerobic exercise, 2) aerobic exercise alone, 3) CBT alone, and 4) usual and customary care. The primary outcome measure was a clinically meaningful improvement in the Physical Component Summary scale of the SF-36V at one year relative to baseline. All patients were followed over for one year and outcomes were measured at 3 months (immediately following the end of treatment), 6 months and 12 months post randomization.

At the end of the trial there had been 63 veterans enrolled at WRAMC and 1092 total, counting multi-sites. As data analysis is still in progress, no conclusions have yet been made.

DHCC research and collaboration activities have resulted in numerous publications, which are listed in Appendix C. Further information on DHCC research projects can be found in Appendix D.

FUTURE PLANS

Health Care Services

VA Collaboration: DHCC initiated and participates in a sharing agreement between Walter Reed Army Medical Center and the War-Related Illness and Injury Center (WRIISC) at the Washington VA Medical Center. Through this agreement, the DHCC will provide 50 VA beneficiaries access to the intensive treatment program offered through the Specialized Care Program. This coordination effort is an example of DHCC's efforts to comply with Department of Defense and Congressional guidance for increased coordination and efficiency in the provision of deployment health care to our country's veterans.

PDH Clinical Practice Guideline: In the coming year, a traveling team of trainers and consultants will provide consultative services across the MHS. Services will focus on training and assisting clinicians and medical administrators in PDH-CPG use to ensure that the guideline meets the needs of service members returning from deployments. In addition, DHCC will begin work with DoD, VA, the Department of Health and Human Services, and civilian collaborators to revise the guideline based on the experiences of both clinicians and patients in working with it.

Information, Communication, and Education

Information, Communication, and Education Team (ICE-T): Through ICE-T, all of the Center's communication, education, and information professionals participate in planning, coordinating, and implementing programs. This effort ensures maximum efficiency in the use of DHCC resources as well as completeness in the coverage of DHCC programs. The ICE-T will see additional staff and programs in FY03, with the addition of the traveling training team to facilitate improved implementation of the PDH-CPG as well as medical informatics and information management specialists to improve the quality of the data and content information on which we base our decisions. In coordination with the research team, ICE-T will use the improved data to evaluate and plan programs that will further the DHCC goal of enhanced post-deployment health care.

Website Continuous Improvement: DHCC will continue to add information and to improve its website to make the site easy to navigate for clinicians and veterans, ensuring that it becomes the preferred choice for effectively delivered, scientifically based information. It will also serve an information clearinghouse function for clinically relevant post-deployment health issues. New functional capabilities, including a multi-media training center, planned for the coming year. New directories to increase information targeted to special populations include Resource Centers to support the Total Force, including Reserve Component Personnel and Families. The Library is continually expanding. An updated organizational plan will facilitate continued ease of use as the volume of resources expands to meet the ever-growing need for current and valid information.

Clinical Training: DHCC will conduct its Second Annual Meeting in the coming year. In addition, DHCC is expanding education and training opportunities, adding both depth and breadth to the clinical training program. To facilitate access to a wider audience, especially those busy clinicians who are unable to attend a one-time broadcast, a clinical risk communication broadcast originally telecast in September 2002, is being repackaged and reformatted for video-conference, webcast, and individual videotape viewing. The tapes are scheduled for distribution to all branches of the Armed Services in February 2003. Also in FY03, a deployment health grand rounds series will include such topics as post-traumatic stress syndrome, medically unexplained symptoms, employee assistance programs, medical informatics, and clinical health risk communication. This training program will be made available worldwide through videotapes, disk formats, and webcasts on the DHCC website. Added to these e-training experiences, our traveling training team will be readied and deployed in FY03 to provide on-site assistance with clinical risk communication and post-deployment health guideline implementation at MTFs around the globe.

Deployment-Related Clinical Research

In FY03, the DHCC Research Team will continue to move forward with its existing projects while it explores opportunities for new research efforts. Current projects, including four externally funded projects are: *A Randomized Clinical Trial of Cognitive-Behavioral Treatment For Post-Traumatic Stress Disorder in Women-VA/DoD Cooperative Study 494*; *Health-e VOICE: Optimized Implementation of a Stepped Clinical Risk Communications Guideline*; *Brief Cognitive-Behavioral Intervention for Victims of Mass Violence*; and, *Longitudinal Health Study of Gulf War Era Veterans*. These will progress according to the approved protocol for each effort.

In addition to these research projects, data routinely collected through our clinical programs will continue to be examined to determine program effectiveness and to plan actions to improve clinical post-deployment care. A computer-assisted personal interview (CAPI) and computer-assisted telephone interview (CATI) system is being implemented and will become operational in the spring of 2003. This new system will enhance our ability to capture and analyze data for program and patient management.

Individuals being seen in primary clinics in the National Capital Region as part of Operation Solace are invited to complete a Clinical Assessment Tool (CAT) to assist with program and patient management. The CAT is being expanded and will be included in the Integrated Clinical Database, a medical outcomes management program operated by HealthForces (<http://www.healthforces.org>). During 2003 we anticipate that the CAT will come into wider use at many DoD healthcare facilities across the country and OCONUS. Data collected from these programs will be used to brief care providers and planners as well as to determine how the programs should be expanded or modified.

DHCC is moving forward to meet the deployment health needs of all our nation's service members and their families. From systemic implementation of clinical practice guidelines, to electronic communications support and consultation, to individual patient care, we will continue to provide responsive services to those who make health sacrifices for our country.

APPENDIX A

DHCC Inter-service, Inter-agency, and University Partnerships Summary List of Collaborations

Department of Defense

- Office of Clinical & Public Health Program Policy (OASD/HA)
- Deployment Health Support Directorate (DASD/FHP&R)
- National Quality Management Program (OASD/TMA)

Department of the Air Force

- Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis (AFIERA)

Department of the Navy

- Naval Health Research Center, San Diego
- Naval Environmental Health Center

Department of the Army

- MEDCOM Quality Management Directorate
- National Capital Area Primary Care Clinics
- US Army CHPPM
- WRAIR Department of Military Medicine
- WRAMC Vaccine Health Center
- US Army MRMC

Department of Veterans Affairs

- Employee Education Service
- Environmental Epidemiology Service
- Environmental Agents Services
- National Research & Development Office
- Cooperative Studies Program Coordinating Centers (Perry Point MD, West Haven CT, Palo Alto CA)
- National Center for PTSD
- Office of Quality & Performance
- War-Related Illness & Injury Centers (East Orange NJ, Washington DC)
- East Orange VAMC
- Washington VAMC
- White River Junction VAMC

Department of Health & Human Services

- Centers for Disease Control National Center for Environmental Health
- Food & Drug Administration
- National Institute of Mental Health
- National Institute of Aging

Other Collaborations

- Armed Forces Epidemiology Board
- Boston University School of Medicine
- Dartmouth University School of Medicine
- RAND Corporation
- University of Michigan School of Medicine
- University of New South Wales, Sydney, Australia
- Uniformed Services University of the Health Sciences
- Institute of Medicine

DETAILED LIST OF DHCC COLLABORATIONS

Collaborations to Improve Quality of Post-Deployment Health Care.

1. VA-DoD Clinical Practice Guideline Development. The principal DHCC mission is to improve post-deployment health care. DHCC has past and on-going collaborations with the Department of Veterans Affairs (VA), the National Quality Management Program, Institute of Medicine, and Office of the Assistant Secretary of Defense for Health Affairs and Tricare Management Activity in the development of evidence-based clinical practice guidelines to improve health care related to deployment health and military occupational health issues. Completed guidelines include: DoD-VA Clinical Practice Guideline for Post Deployment Health Evaluation and Management (PDH CPG), VA-DoD Clinical Practice Guideline for the Management of Major Depressive Disorder in Adults, and VA-DoD Clinical Practice Guideline on Medically Unexplained Symptoms: Chronic Pain & Fatigue. Currently pending completion is the VA-DoD Clinical Practice Guideline for Post Traumatic Stress Disorder. The DoD “Champion” for these guidelines is a member of the DHCC staff.
2. Clinical Practice Guideline Implementation. DHCC collaborates with the VA Employee Education System, the VA Office of Quality & Performance, Federal Drug Administration, RAND Corporation health care researchers, Army MEDCOM Quality Management Directorate, Army Center for Health Promotion and Preventive Medicine, and all other Services in introduction and training necessary to implement the guidelines developed. This training begins with worldwide-televised broadcasts. Broadcasts have been scripted, produced and telecast to all DoD and VA medical treatment facilities on the above-mentioned guidelines.
3. Federal Clinician Education and Consultation. In addition to providing initial education, on-going education and consultation efforts are targeted for the PDH CPG, the military specific occupational health guideline, through collaborations with the VA health care system, Office of the Assistant Secretary of Defense for Health Affairs, the Walter Reed Vaccine Health Center, and medical staff from all Services. Ongoing support is provided to all DoD MTFs through the development and distribution of toolkits that facilitate clinical implementation; a state of the art website (www.pdhealth.mil) that provides a one-stop repository for post-deployment health information targeting Federal clinicians and patients; a toll-free hotline for both clinicians with questions and for patients who need care and

advocacy; a daily newsletter providing current events and newly developed information in the area of post-deployment health; and clinical training materials to enhance health risk communication and improve the doctor-patient relationship.

4. Informatics Solutions for Post-Deployment Health Care Quality Data Collection and Emerging Illness Surveillance. DHCC is coordinating with Office of the Assistant Secretary of Defense for Health Affairs and TRICARE Management Activity to link deployment health tracking information through CHCS2 and the mobile MODS system.

Collaborations in Provision of Post-Deployment Clinical Care

1. Comprehensive Clinical Evaluation Program (CCEP) for Gulf War Veterans with Health Concerns: The DHCC serves as the POC for transition from the former CCEP program, or Gulf War “registry” to the new PDH CPG. Collaborative relationships with the VA, Office of the Assistant Secretary of Defense for Health Affairs, and Surgeon General Staff for all three Services ensure that these program transitions are effective. A toll-free hotline helps to maintain communication with all parties.
2. VA Sharing Agreement, Specialized Care Program: DHCC operates under a Walter Reed – Washington VAMC sharing agreement. The DHCC Specialized Care Program is a three-week day treatment program designed for veterans with persistent, disabling symptoms as a result of wartime deployment. VA sends patients to the Specialized Care Program for rehabilitative care of chronic deployment related health concerns. The initiative was started as a part of the DHCC collaboration with the Washington VAMC’s War-Related Illness & Injury Study Center (WRIISC). The sharing agreement extends from June 1, 2002 through September 30, 2004.
3. Operation Solace Response to September 11: In response to the September 11 attack in the national capital region, TSG, Army chartered “Operation Solace”. DHCC is overseeing the clinical component of this project. Six “care managers” serve in primary care clinics at Ft. Belvoir, Ft. Meyer, DiLorenzo Clinic in the Pentagon, Ft. Detrick, Ft. Meade, and Andrews Air Force Base. These care managers oversee local efforts to implement the PDH CPG for those affected by the events of September 11, the subsequent bioterror attacks, and the “New War”. Other tasks the care managers perform include participation in soldier readiness programs, demobilization, responding to and coordinating care for patients reporting health concerns related to terrorism, bioterrorism, and deployments. In addition, the care managers provide training to primary care clinicians across the national capital region in areas associated with stress and trauma and medically unexplained symptoms.
4. Clinically Oriented Health Risk Communication. DHCC collaborates with multiple agencies and organizations to build effective systems to facilitate federal clinician and military/veteran health risk communication as well as clinical and public health education around deployment health issues. On-going collaboration with Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis (AFIERA), CHPPM, Naval Environmental Health Center have resulted in the development of a

variety of health risk communication materials (e.g., fact sheets on the antimalarial mefloquine and on suspected environmental exposures at K-2 in Uzbekistan) and a USCENTCOM Combined Joint Task Force Campaign Plan for Deployment Occupational and Environmental Surveillance.

5. Distance Satellite Broadcast Learning. In coordination with the VA Environmental Agents Service, the East Orange VAMC's War-Related Illness & Injury Study Center, USACHPPM, and Service SG representatives, DHCC has developed a video training program on Health Risk Communication for Federal clinicians. This video training program will be distributed through video-teleconferences and a web-available just in time training program for all DoD medical facilities. CME is provided through the VA Employee Education System.
6. Scientific Advice & Review: Armed Forces Epidemiologic Board. DHCC information and research products are validated through coordination with the Armed Forces Epidemiologic Board. The AFEB is a DoD advisory body of prominent civilian epidemiologists and scientists. Their input adds depth and independent external validation to DHCC clinical, research, and quality improvement initiatives.

DHCC Health Services Research Collaborations

During the FY02 fiscal year, DHCC investigators published 29 scholarly articles in scientific journals and books. Major ongoing projects and collaborations are as follows.

1. A Randomized Clinical Trial of Cognitive-Behavioral Treatment For Post-Traumatic Stress Disorder in Women-VA-DoD Cooperative Study 494. This is a multicenter randomized clinical trial to evaluate two methods of psychotherapy for PTSD in military women. It is being conducted at WRAMC and 11 VA hospitals around the country. It is funded by the U.S. Army Medical Research and Materiel Command for \$445,078.00 – 17 September 2002 to 16 October 2004 with the research ending on 16 September 2004. It is conducted in collaboration with the VA as Cooperative Study Program 494. Key collaborations include the VA National Center for PTSD, White River Junction VAMC, Dartmouth University Medical School Department of Psychiatry, and the Palo Alto California VA Cooperative Studies Program Coordinating Center.
2. Randomized Controlled Trial of Doxycycline for Gulf War Veterans' Illnesses, VA Cooperative Study 475, VA Cooperative Studies Program. This is a multicenter randomized controlled trial of doxycycline versus placebo for 450 ill Gulf War veterans testing positive for *Mycoplasma fermentans*. The study has been completed and a draft manuscript describing the study results is currently in review with JAMA. DHCC is one of 30 sites and one of the national co-PI's is a member of the DHCC research staff. Key collaborations include Boston University Medical School Department of Medicine, Perry Point Maryland VA Cooperative Studies Program Coordinating Center, and the Naval Health Research Center in San Diego. Funding for the study was from US Army Medical Research & Materiel Command and the VA Research & Development Office.

3. Randomized, Multicenter Controlled Trial of Multimodal Therapy in Veterans with Gulf War Illnesses. VA Cooperative Study No. 470, VA Cooperative Studies Program. The study has been completed and a draft manuscript describing the study results is currently in review with JAMA. DHCC one of 20 sites and one national co-PI is a member of the DHCC research staff. Key collaborations include Boston University Medical School Department of Medicine, University of Michigan Department of Medicine, West Haven Connecticut VA Cooperative Studies Program Coordinating Center, and the Naval Health Research Center in San Diego. Funding for the study was from US Army Medical Research & Materiel Command and the VA Research & Development Office.

4. “Health-e VOICE”: Tool to Optimize Clinical Risk Communication Practices Using A Stepped Communication Model. It is important for health professionals who care for military personnel and veterans to be prepared to address the concerns of patients who present with ambiguous symptoms as fully as they do for people with more clinically identifiable diseases. In response to the need for enhanced providers' clinical risk communication skills, DHCC, in collaboration with associates from the Centers for Disease Control and Prevention (CDC) as well as contractors and consultants, will develop and evaluate a web-based interactive distance learning tool called “Health-e VOICE”. This project is funded by CDC at \$461,177 per year for three years. Key CDC collaborators include Drue Barrett, PhD, and Vickie Booth. The Health-e VOICE protocol is based on the hypothesis that improved clinical risk communication may alleviate unnecessary patient distress and physical health concerns, reduce frustration and tension in the doctor-patient relationship and reintroduce patient trust in both care providers and the health system. The foundation for this tool is the Clinical Practice Guidelines for Post-Deployment Evaluation and Management which prescribes a stepped care strategy for treatment in which interventions are matched to the patient’s needs in a stepped fashion, going from least to most intensive.

5. Randomized Controlled Trial of a Brief Cognitive-Behavioral Intervention for Victims of Mass Violence. This study compares the effectiveness of a primary care-based self-management program of Stress Inoculation Training (SIT), an evidence-based treatment for PTSD, to standard supportive primary care (Supportive Counseling (SC)) for individuals who were exposed to the September 11, 2001 terrorist attack on the Pentagon. Both SIT and SC are provided in one 2-hour session with eight subsequent weeks of daily systematic web-based follow up to promote self-help. Outcomes of treatment are assessed at three and six months following intervention. The major aim of this study is to evaluate an abbreviated program of primary care-based self-management skills to destigmatize and decrease barriers to effective mental health care following war, terror, or other traumatic events. This is a two-year study funded at approximately \$250,000 per year by the National Institute of Mental Health. Collaborators include Brett Litz, PhD (Co-Investigator) of Boston University & Boston VAMC, Richard Bryant, PhD (Co-Investigator) University of New South Wales, Sydney, Australia, and COL Derm Cotter, MD (Associate Investigator), of WRAMC Department of Psychiatry.

6. Veteran Status, Health and Mortality in Older Americans. This study examines the excess mortality among American veterans age 70 years or older during a 2-3-year interval from 1993/94 to the end of 1995. Data used for this study come from the Survey of Asset and Health Dynamics Among the Oldest Old (AHEAD). The primary study hypothesis is that aging veterans manifest a “crossover effect” in rates of mortality compared with civilians at the same ages. At ages below 65-70, veterans have a lower mortality than their civilian counterparts, while at ages greater than 70, veterans have “crossed over” the civilian mortality rate so they have a higher rate than their civilian counterparts. The major aim of the research is to use structural survival modeling to investigate the crossover mortality effect and characterize some its root causes. Specifically, structural models will describe the process of how veteran status affects the mortality of older Americans by means of physical health, mental disorders, and some unidentified factors while controlling for the confounding effects of other related factors. This project is funded by the National Institute of Aging for a total of \$50,000. Collaborations include Uniformed Services University of the Health Sciences Department of Psychiatry and Han Kang, Dr.P.H. of the Department of Veterans Affairs Environmental Epidemiology Service.
7. Estimating Prevalence and Incidence Rates of Mental Illnesses in the Military Using ECA Study Data. This project uses existing population-based data from the National Institute of Mental Health Epidemiologic Catchment Area survey to estimate the expected prevalence and incidence rate of a variety of mental illnesses among Army active duty personnel. A series of multivariate statistical models have been employed to model the relationship between socio-demographic characteristics and the distribution of mental disorders in US workers. Then regression coefficients derived from these models and known socio-demographic characteristics of US Army active duty personnel are used to predict mental status in the Army. High, Medium, and low estimates of prevalence and incidence rates for selected mental illnesses are obtained by altering the value of regression intercepts. The major aim of this project is to provide knowledge useful for fashioning health policies and programs for policy-makers and planners in the military. Intensified efforts to understand the distribution of various mental diseases in the military may foster trust between veterans and the government agencies that provide benefits and health care for them. The key DHCC collaboration is with the Walter Reed Army Institute of Research Psychiatric Epidemiology Division in the Department of Military Psychiatry.
8. Longitudinal Study of Gulf War Veterans. This is a 3-year prospective study of a representative sample of Gulf War veterans’ health. DHCC is collaborating with the VA Environmental Epidemiology Service, Washington VAMC’s WRIISC, the St Louis VAMC, and Washington University School of Medicine’s Department of Medicine. The DHCC portion of the project is funded for approximately \$20,000 per year for two years. US Army Medical Research & Materiel Command funds this study.

APPENDIX B

Comprehensive Clinical Evaluation Program (CCEP) Transition to the Post-Deployment Health Clinical Practice Guideline (PDH CPG) FAQs

★ What is the CPG?

The Post-Deployment Health Evaluation and Management Clinical Practice Guideline, often referred to as the PDH CPG or deployment health CPG, was designed to provide a systematic basis of care for patients in the military and VA health care systems who have health concerns related to a deployment of

any kind or at any time. It was developed over a two-year period of time, taking advantage of lessons learned in evaluating and treating health concerns presented by Gulf War Veterans along with basic advances in medicine, especially evidence-based medicine.

★ Why was this CPG developed?

Over the last decade the medical field learned many valuable lessons related to deployment health and the Comprehensive Clinical Evaluation Program, or CCEP, was an instrumental part of that learning experience. Since the Gulf War, the frequency of deployments and the nature of deployments has been continually changing. We have seen an increase in the number of members deployed to military operations other than war and recently have seen domestic

deployments associated with the War on Terrorism. The problems that arise as a result of this diversity of venues and operations would not lend themselves to a single formatted program of care. The DoD saw a need for a set of guidelines that could address deployment related health concerns, regardless of when the soldier had been deployed. The best starting place to develop such guidelines was to look at the experiences with the CCEP.

DoD asked the Institute of Medicine (IOM), a civilian organization that provides expert consultation on medical practices, to conduct a review of the CCEP and make recommendations for improvement. That review, in conjunction with advances in

general medicine over the past 10 years, led to suggestions for improved practices for both evaluation and treatment of health concerns post-deployment. The report and recommendations from the IOM was used as a foundation in building the PDH CPG.

The Comprehensive Clinical Evaluation Program was designed in response to challenges in providing evaluation and treatment of symptoms that were presented by veterans returning from the Gulf War. It used the best medical knowledge at the time to provide a comprehensive evaluation process for complex symptoms presented by Gulf War veterans. It has served a very valuable purpose in providing the best possible medical care to our Gulf War veterans for its

time. However, it was never really set up for any other deployments. In addition, the CCEP was developed as a system of evaluation, not as a system to deliver follow-up care and management of a veteran's deployment related health concerns. The PDH CPG took the best practices of the CCEP and enhanced them so long-term evaluation and management of deployment health concerns could be delivered for veterans in a primary care setting.

Clinical practice guidelines are not restricted to just deployment health. In past years, there has been an increased awareness of the need to base health care practices on the best medical research evidence that demonstrates the most efficacy for a variety of common health concerns. We now have CPGs for

numerous health problems ranging from diabetes to tobacco use cessation. The deployment health CPG is another in this series. It uses the very best medical information available to provide a foundation of information to guide the care for patients with deployment related health concerns.

The CPG also takes into account the fact that medical knowledge grows and improves over time. So, a two-year review process has been established. Every two years the practices used for deployment health will be reviewed and revised to reflect new medical knowledge and practices. We have all seen government programs that were put into

place with good intentions but then take on a life of their own, continuing even when their usefulness no longer is realized. It's hard to start a new program, but it's almost impossible to stop one. By having a required two-year review process for the CPG, our deserving service members and their families will always have a continuously improving system of care.

★ **How is the CPG different from CCEP?**

The CCEP used a process of intensive specialist evaluations to identify Gulf War health problems for treatment. This practice had the advantage of using a "no stone unturned" method of evaluation. However, it also had many disadvantages. It separated care for deployment related symptoms from other health care concerns the veteran may have, creating a "fragmented" approach to health care. The CPG method moves health care back into an integrated framework, by focusing care for all health concerns with the Primary Care Manager.

recent years, we have seen a shift in medical management for all health concerns, moving from a system of highly fragmented specialty care back to a single source of medical management, similar to the family doctor in years past. Because of this, patients have been seeing more of their health care concerns treated in primary care. That same medical knowledge has been applied to deployment health. By centering all health care issues with one point of contact, and with one health care provider having full knowledge of the whole person, care can be better integrated so that parts of it don't fall through the cracks. The primary care provider will be provided with information and clinical tools to effectively manage deployment specific issues in the primary care setting. Of course, specialty referrals are still available, just as they always were. The difference is that all the medical information will come back to the primary care provider for comprehensive health management, rather than going to a separate clinic or health care information system. The patient and the primary care provider will collaborate to ensure that the patients presenting concerns are addressed using the

The clinical practice guideline was designed for implementation in Primary Care. It gives both the responsibility for and comprehensive information about the patients total health picture to his or her doctor. In most cases, types of symptoms and different illnesses are not mutually exclusive. For example, a robustly healthy person who gets a cold presents a different medical picture than a person with asthma who gets a cold. Similarly, different medications can conflict with each other. Recent medical knowledge supports the practice of integrating care. In

best medical evidence available, including specialty care evaluation and consultation.

★ **Was the CCEP completed eliminated?**

The CCEP is not going away. Eligible Gulf War veterans wanting a medical evaluation can still obtain one. By calling the same toll-free hotline previously used, veterans will be able to schedule an evaluation. While they will be encouraged to have the evaluation done using the PDH CPG, they can still have the evaluation conducted using previous CCEP procedures. Those veterans who are currently enrolled in CCEP and undergoing evaluation can complete the process. They will be given

the option of continuing in the old program or choosing to receive care according to PDH CPG guidance at the primary care or family practice clinic of their local MTF. In some cases, their symptoms no longer persist and those patients may simply choose not to continue in care at this time. They will always be welcomed later by their primary care provider should symptoms recur or new problems arise which they feel are related to either the Gulf War or any other deployment.

★ **Does the CPG have a registry?**

The “Gulf War registry” involved a toll-free number that individual service members called to enter the CCEP program. It was helpful at the time to have a centralized source of information about the numbers and the kinds of problems experienced by members who had Gulf War symptoms and to track their care through the CCEP program. However, the responsibility was given to the individual patient to know that there was such a number, to find out the number, and to take the time to call the number to get their name on the list for an evaluation. In the past decade, information technology has advanced tremendously. We now have electronic medical records and advanced medical information systems. We no longer need to place the responsibility for identifying health problems on the patient. The CPG has given that responsibility back to the health care system. The initial step in the CPG is for clinic staff to ask each and every patient that presents to any military primary care or family practice oriented clinic with a health concern a simple question: “Is the health concern that brings you to the clinic today related to a deployment?” If the patient responds, “yes,” then that response is coded

using a diagnostic code specifically created to designate a deployment-related visit (ICD-9, V70.5__6) in the health information system along with an additional diagnosis and related code to correspond with the specific concern being identified. In this way, an electronic “registry” of sorts is created, but without the patient having to take any special action. The information is maintained in the patient’s medical record and will remain there for future follow-up.

This new method of tracking deployment-related concerns does not mean that the Gulf War CCEP database is going away. On the contrary, Gulf War veterans who experience a concern and have not had the opportunity to enter into the CCEP can still do so. Many veterans have appreciated having this service available to them and it will continue to be available, even as we transition to the new PDH CPG. Veterans may call the same toll-free number that has been associated with the CCEP in the past to request a comprehensive evaluation of their health concerns associated with their Gulf War service. As an alternative, they can report their problem as deployment-related and associated with Gulf War service

through their primary care clinic as part of the deployment health guideline system of care. Either way, their concerns will be documented in the medical information system. Those who are currently enrolled in the CCEP and have

evaluations pending, but wish to transition to the new CPG system of care through their primary care clinic are also encouraged to call the toll-free number to indicate that transition decision.

★ **Will Phase I and Phase II evaluations continue to be conducted?**

Phase I and Phase II were terms used in the CCEP program to indicate levels or steps of intensity in evaluation of the patient's symptoms. Phase II evaluations were generally conducted in a CCEP-designated specialty clinic. The CPG prescribes care in the primary care clinic. However, since problems vary in complexity and intensity, a stepped-level of care, similar to what we

have come to know as the "Phase" approach in CCEP, has been built into the recommended process of care in the clinical practice guideline. There are basically four steps or four types of deployment-related concern that receive attention appropriate to the symptoms presented.

Level 1: Patients who have a definitive diagnosis associated with a prior deployment. An example would be poison ivy or a sprained ankle that occurred while the service member was deployed but persists even after they return. These problems are easily diagnosed and are treated just as they would be based on the diagnosis.

Level 2: Patients with deployment health-related questions. Some patients don't currently have any symptoms and may, in fact, have not been deployed. But, they have questions or need health information related to concerns they may have about a past or future deployment. They come to the primary care clinic with questions for the provider about those issues. For example, they may have concerns about potential anthrax exposure or issues associated with an on-going health problem and how that might be affected by a deployment. They will receive the information they need from the provider or other clinic patient education provider. If the provider does not have all the information readily available, or doesn't have the time to review the information during a standard appointment timeframe, they may arrange for a longer 30-minute appointment time for follow-up to ensure the patient has the information they need to satisfactorily answer their questions. This follow-up appointment time has been built into the guideline to allow for effective clinical communication and patient education.

Level 3: Some patients may come to the primary care clinic with symptoms following a deployment that simply don't fit into a clear-cut medical diagnosis. We sometimes refer to these symptoms as medically unexplained physical symptoms or MUPS. For these patients, information and education are generally important, along with appropriate medical tests. The primary care provider again has the option to arrange for a longer appointment time for follow-up to discuss the tests, their results, and/or other associated health questions and concerns. In addition to the standard specialty consults at their local or regional MTF, they also have access to clinical experience at the DoD Deployment Health Clinical Center or DHCC. DHCC provides web-based information, education, and training for clinicians as well as patient education materials. In addition, the Department of Defense has established this Center to provide support to clinicians in the management of these complex situations. Providers can consult the DHCC clinicians with questions they have specific to the evaluation and treatment of medically unexplained physical symptoms related to deployments.

Level 4: There are times, although relatively few, when medically unexplained physical symptoms turn into chronic and even disabling conditions. These conditions create significant distress for the patient and sometimes also for the patient's family. The quality of life of the patient tends to suffer. Consultation with a multi-disciplinary health care team is generally indicated in these cases, as is laid out in the CPG. Specialty referral care through the local and/or regional MTF is generally sought, even though overall health management, including information from that specialty care, still comes back to the primary care provider. However, even the best of medical care isn't always effective in meeting the needs of every individual. For patients who don't respond to available medical treatment through their local or regional MTF, referral tertiary care, organized around a rehabilitative model, is available at the DHCC Specialized Care Program. The primary care provider can contact the DHCC at the toll-free number to discuss the services available and the process of referral to the specialized care program.

APPENDIX C

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ACADEMIC PRESENTATIONS AND PANELS

Adkins, J. , McCalla, I. [Presentation] New technologies for clinical risk communication: PDHealth.mil. Risk Communication and Terrorism: New Clinical Approaches, Alexandria, VA, September 9, 2002.

Adkins, J. [Presentation] Best clinical practices: New clinical practice guidelines. Risk Communication and Terrorism: New Clinical Approaches, Alexandria, VA, September 9, 2002

Adkins, J. [Presentation] Best clinical practices: Implementation initiatives. Risk Communication and Terrorism: New Clinical Approaches, Alexandria, VA, September 10, 2002

Engel CC Jr. [Presentation] A Primary Care Guide to the Psychiatric Aspects of War & Terror. Annual Meeting of the Washington DC Chapter of the American College of Physicians. Bethesda, Maryland, November 10, 2001

Engel CC Jr. [Presentation] In Return For Their Sacrifice: Optimizing the Continuum of Post-Deployment Health Care. Annual Meeting of the American Society of Tropical Medicine & Hygiene. New Orleans Louisiana, November 13, 2001

Engel CC Jr. [Presentation] A Randomized Controlled Trial of Cognitive Behavioral Therapy for PTSD Among Women: VA Cooperative Study #494. Annual Plenary Session of the Military & Veterans Health Coordinating Board. Rockville, Maryland, December 11, 2001

Engel CC Jr. [Presentation] Review of the DoD-VA Clinical Practice Guideline on Post-Deployment Health Evaluation and Management. Annual Plenary Session of the Military & Veterans Health Coordinating Board. Rockville, Maryland, December 11, 2001

Engel CC Jr. [Presentation] Depression Screening and Treatment in DoD and VA Primary Care Settings. PRO Workshop Spring 2002 Series: State-of-the-Art in Screening,

Assessment and Treatment Tools. Substance Abuse and Mental Health Services Administration. Long Island, New York, April 2, 2002

Engel CC Jr. [Presentation] Recognizing and Treating the Psychological Effects of Terrorism. Annual Session of the American College of Physicians – American Society of Internal Medicine. April 11 & 12, 2002

Engel CC Jr. [Presentation] Sociogenic Illness and Risk Management Following Deployment, War, & Terrorism. Carlisle Barracks Army War College. Carlisle, Pennsylvania, May, 2002

Engel CC Jr. [Presentation] Critical Incident Stress Debriefing: Does It Do Harm? Army Medical Department Center & School 91X/56M Postgraduate Professional Short Course 2002, Fort Sam Houston, Texas, July 16, 2002

Engel CC Jr. [Presentation] Deployment Health Clinical Center: Building Trust With Concerned Veterans. Department of Psychiatry Grand Rounds, Washington VA Medical Center, Washington DC, August 8, 2002

Engel CC Jr. [Presentation] First Annual Conference on Post-Deployment Care: Dedicated To Those Who Serve The Country. For, Risk Communication & Terrorism: New Clinical Approaches, First Annual Conference on Post-Deployment Care. Alexandria, Virginia, September 9, 2002

Engel CC Jr. [Panel Moderator] Best Clinical Practice: New Clinical Practice Guidelines. For, Risk Communication & Terrorism: New Clinical Approaches, First Annual Conference on Post-Deployment Care. Alexandria, Virginia, September 9, 2002

Engel CC Jr. [Presentation] Treatment After Pentagon Terror: Primary Care Elements of Operation Solace. For, Risk Communication & Terrorism: New Clinical Approaches, First Annual Conference on Post-Deployment Care. Alexandria, Virginia, September 9, 2002

Engel CC Jr. [Presentation] Review of the VHA/DoD Clinical Practice Guideline for the Management of Major Depressive Disorder in Adults. Grand Rounds for Army Medical Department - Europe, Landstuhl Germany, October 8, 2002

Engel CC Jr. [Invited Lecture] Post-Traumatic Disorders Among Military Personnel & Veterans. 28th Annual Meeting of the American Academy of Clinical Psychiatrists. Las Vegas, Nevada, October 11, 2002

RESEARCH GRANTS & CONTRACTS

Bell N (PI), Amoroso P (PI), **Engel CC Jr**, Wegman D, Mangione T: Stress, behavior and health: Developing a model for predicting post-deployment morbidity, mortality, and other adverse health outcomes. US Army Medical Research and Materiel Command. Project Funding: \$500,000. 10% FTE. 1999-2002

Donta ST (PI), **Engel CC Jr** (PI), Baseman J, Lo SC, See DM, Tully J, Taylor-Robinson D, Nicolson G, Gordon V, Collins J: Antibiotic Treatment of Gulf War Veterans' Illnesses. VA Cooperative Study No. 475, VA Cooperative Studies Program. Project funding: \$12,000,000 (30 sites). 20% FTE. 1999-2002.

Donta ST (PI), **Engel CC Jr** (PI), Clauw DJ (PI), Paduzzi P, Reeves WC, Barkhuizen A, Williams D, Natelson B: A Randomized, Multicenter Controlled Trial of Multimodal Therapy in Veterans with Gulf War Illnesses. VA Cooperative Study No. 470, VA Cooperative Studies Program. Project funding: \$9,000,000 (20 sites). 20% FTE. 1999-2002.

Schnurr P (PI), Friedman M (PI), **Engel CC Jr** (PI), et al. Randomized Trial of Prolonged Exposure Versus Present Centered Therapy for Women with PTSD. VA Cooperative Study No. 494, VA Cooperative Studies Program. Project Funding: ~\$5,000,000 (12 sites). 15% FTE. 2001-2005

Liu, X. Principal Investigator. Veteran Status, Health, and Mortality in Older Americans. R03 project funded by National Institute on Aging. Total direct cost: \$50,000. TTP: 09/30/01 - 09/29/03.

Engel CC Jr (PI), **Adkins JA** (Co-PI), Tinker T, **Cowan DN**, Debakey S. "Health-e VOICE": Tool to Optimize Clinical Risk Communication Practices Using A Stepped Communication Model. Centers for Disease Control and Prevention Special Emphasis Panel. Project Funding: ~\$1.5M. 15% FTE. 2001-2004

Litz B (PI), Bryant R (PI), **Engel CC Jr**. Brief Cognitive Treatment for Victims of Mass Violence. National Institute of Mental Health RAPID Grant. Project Funding: ~\$500,000. 5% FTE. 2002-2003

APPENDIX D: RESEARCH PROJECTS

Name of Project: A Randomized Clinical Trial of Cognitive-Behavioral Treatment For Post-Traumatic Stress Disorder in Women-VA-DoD Cooperative Study N. 494

Funding Organization: U.S. Army Medical Research and Material Command

Amount of Funding: \$445,078.00 – 17 September 2002 to 16 October 2004 with the research ending on 16 September 2004.

DHCC Staff Assigned:

Renee Clauselle, Psy.D., study coordinator; Phyllis Betts, LGSW, assessment social worker.

Principal Investigator/Site Investigator:

LTC Charles Engel, Jr. (PI and Study Co-Chair); Vivian Sheliga, DSW, BCD, LCSW (SI)

Collaborating external personnel and organizations:

Paula P. Schnurr, Ph.D., and Matthew J. Friedman, M.D., Ph.D., VA National Center for PTSD; Kenneth E. James, Ph.D., Cooperative Studies Program Coordinating Center, Palo Alto, CA; Study therapists: Catherine Sheehan, LCSW, and Ann Kraszewski, LCSW, Department of Social Work, WRAMC; Corina Miller, LCSW, Psychiatric Liaison, the Department of Psychiatry, WRAMC; and Pam Woodard, LCSW, DHCC.

Name of Project: Health-e VOICE

Funding Organization: Centers of Disease Control and Prevention (CDC)

Amount of Funding: \$461,177

DHCC Staff Assigned:

Lt Col Joyce Adkins, PhD (Associate Investigator)

Dr. David Cowan, PhD, MPH (Associate Director of Research)

Principal Investigator/Project Leader:

LTC Charles Engel, Jr., MD, MPH (Principal Investigator)

Terry Sjoberg, BSc (Project Leader)

Collaborating External Personnel and Organizations:

Dr. Tim Tinker, DrPH, MPH, Widmeyer Communications

Dr. Samar DeBakey, MD, MPH, Affiliated Computer Systems (ACS)

Presentations/Publications:

Sjoberg TJW, Jaffer A, Cowan DN, Tinker T, DeBakey S, Engel CC. [Abstract] HEALTH-e VOICE: A Randomized Clinical Trial of Improving Clinical Risk Communications between Providers and Redeployed Veterans. Fifth Annual Force Health Protection Conference, US Army Center for Health Promotion & Preventive Medicine. Baltimore, Maryland, August, 2002

Name of Project: Brief Cognitive-Behavioral Intervention for Victims of Mass Violence

Funding Organization: National Institute of Mental Health

Amount of Funding:

\$257,240 (for year 1 of the study). Year 2 funding of \$ 219,240 is contingent upon successful enrollment of human subjects and demonstrated progress.

DHCC staff assigned:

Frances Thorndike, Doctoral candidate in Clinical Psychology, Kristie Gore, Doctoral candidate in Clinical Psychology, Victoria Bruner, RN, LCSW, BCETS

Principal Investigator/ Project Leader:

LTC. Charles C. Engel, Jr., MD, MPH (Principal Investigator)

Ambereen Jaffer, MPH (Project Leader)

Collaborating external personnel and organizations:

Dr. Brett Litz, PhD (Co-Investigator) Boston University/ Boston Department of Veterans Affairs Medical Center

Dr. Richard Bryant, PhD (Co-Investigator) University of New South Wales, Sydney, Australia

LTC Dermot Cotter, MD (Associate Investigator) WRAMC.

Name of Project: Specialized Care Program (SCP) - Data Collection & Analysis

Funding Organization: N/A

Amount of Funding: N/A

DHCC staff assigned: Ronnie Robinson, MSc.

Principal Investigator/ Project Leader: Ambereen Jaffer, MPH (Project Leader)

Name of Project: Operation Solace (Data Collection/Management)

Funding Organization: NA

Amount of Funding: NA

DHCC staff assigned: Ronnie Robinson, MSc.

Principal Investigator/Project leader: Dr. Charles Engel, M.D and (PL): Ronnie Robinson, MSc

Presentations/publications:

Cowan DN, Murdock, PH, Robinson R, Jaffer A, Cassidy C, Engel CC. Operation Solace: Data Collection for Clinical and Program Management in Primary Care. The 5th Annual Army Force Health Protection Conference/2nd Annual DOD Population Health & Health Promotion Conference, Baltimore, MD August 13, 2002

