



Deployment Health Clinical Center

Annual Report FY 2005



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Armed Forces Epidemiological Board

Deployment Health Support Directorate

The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.

North Atlantic Regional Medical Command

Uniform Services University of the Health Sciences

Walter Reed Army Medical Center

Our Soldiers, Sailors, Airmen, Marines, and Their Families



History

Gulf War Health Center

WALTER REED ARMY MEDICAL CENTER



Expert, Compassionate Care for Deployment Veterans—Resources for Clinicians

The Deployment Health Clinical Center (DHCC), currently situated at Walter Reed Army Medical Center, was chartered as the Gulf War Health Center in 1994. Shortly after the 1991 Gulf War, some of the 700,000 veterans of that conflict began to experience symptoms related to deployment. The unclear etiology of some symptoms, such as excessive fatigue, memory/concentration problems, and certain physical complaints, presented a challenge for both military providers and patients. The Comprehensive Clinical Evaluation Program was implemented in response to these concerns. The Gulf War Health Center developed the Specialized Care Program, a tertiary treatment component for veterans who remained symptomatic after secondary level treatment in the Comprehensive Clinical Evaluation Program. More than 110 cycles of this three-week, multidisciplinary program have been delivered to deployment veterans.

The 1999 Strom Thurmond National Defense Authorization Act established three centers of excellence devoted to deployment health. In 2001, the Gulf War Health Center transitioned into the Deployment Health Clinical Center, the clinical component of these centers of excellence.

DHCC's mission was expanded to include clinical care of veterans of all conflicts. At that time, DHCC was also tasked with providing deployment-related health research and developing deployment-related health education and training programs and products for both clinicians and service members and their families. DHCC added risk communication, clinical and health services research, and epidemiological expertise to its staff.

DHCC's research program began with a focus on illnesses associated with the 1991 Gulf War and has grown into a research portfolio comprising more than a dozen demographic, epidemiologic, and health services research projects, as well as clinical trials. Major focus areas include post-war syndromes, medically unexplained physical symptoms, and diagnosis and treatment of posttraumatic stress. Each year DHCC staff members publish 10–20 articles in peer-reviewed publications and give presentations world-wide.

DHCC launched its Web site, PDHealth.mil, in January 2001, redesigning it in May 2002. The Web site receives more than 10,000 unique visitors per month. DHCC risk communication outreach was

History

enhanced in 2002 with daily distribution of the electronic *Deployment Health News*. In collaboration with Walter Reed medical departments, DHCC began the Deployment Health Guest Lecturer series in 2003. In 2001, DHCC sponsored a conference entitled, *Risk Communication and Terrorism: New Clinical Approaches*. Beginning in 2004, the Center began providing a Deployment Healthcare Track at the U.S. Army Center for Health Promotion and Preventive Medicine's Annual Force Health Protection Conference.

DHCC was involved in the creation of the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline. The guideline was completed in 2001 following Institute of Medicine recommendations to incorporate deployment healthcare into primary care and to regularly screen all military beneficiaries. The stepped-care guideline was launched in 2002 and revitalized in 2004. DHCC supports the use of this guideline through Web-based and desktop tools, the DHCC Clinicians Helpline, and visits to military treatment facilities by the Staff Training and Assistance Team. DHCC also supports the DoD/VA guidelines for primary-care based detection

and treatment of depression, PTSD, and medically unexplained symptoms through training programs and research projects. DHCC helped redesign the DD Form 2796 and the assessment process for re-deploying veterans at the beginning of the Iraq War, and the Center continues to provide Web-based information for clinical management of emerging health concerns for current operations.

In response to the increased operational tempo associated with Operations Iraqi Freedom and Enduring Freedom, DHCC has developed a new program, the Specialized Care Program Track II. This program is designed to treat service members with combat stress, posttraumatic stress disorder (PTSD), or difficulties re-adjusting to life after deployment. The program is based on the best available evidence regarding effective treatments for PTSD and employs the successful therapeutic milieu of the original Specialized Care Program for medically unexplained physical symptoms.

DHCC remains committed to providing compassionate state-of-the-art care for America's Heroes and their families while giving their providers the research, resources, and tools they need to do the same.



Deployment Health Clinical Center

Introduction

Executive Summary

The core mission of the DoD Deployment Health Clinical Center (DHCC) is to improve deployment-related health by providing expert, caring assistance and medical advocacy for military personnel with deployment-related health concerns and their families while simultaneously serving as a catalyst and resource center for the continuous improvement of deployment-related healthcare across the military healthcare system. This mission is accomplished through a three-component strategy of:

- **Direct Health Service Delivery:**
Tertiary referral care for individuals with deployment-related health issues, clinical consultation, and primary healthcare quality improvement programs
- **Outreach and Provider Education:**
The championing of deployment healthcare best practices through development and dissemination of clinical practice guidelines, health information, health risk communication strategies, and clinical education programs
- **Clinical and Health Services Research:**
Deployment-related clinical and health services research that uses science to advance the effective delivery of deployment-related healthcare.

This FY 2005 Annual Report summarizes DHCC's accomplishments in its support of the military healthcare system as it delivers cutting-edge, highly effective health services to deployment veterans and their families.

What's New

- DHCC offered its new Specialized Care Program Track II for intensive treatment of operational and posttraumatic stress. The program uses traditional and complementary medical practices to ameliorate the symptoms of service members who have been experienced combat.
- The DHCC Staff Training and Assistance Team visited eight sites from all Branches of Service presenting to more than 400 providers. These site visits supported the implementation of the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline.
- In July 2005, DHCC's director testified regarding DHCC programs to the United States House of Representatives Committee on Veterans' Affairs.
- DHCC's research programs are funded by institutions such as the Centers for Disease Control and Prevention, the Department of Veterans Affairs, the Department of Defense, the U.S. Congress, the National Institute on Aging, the National Institute of Mental Health, and the Henry M. Jackson Foundation for the Advancement of Military Medicine. In FY 2005, DHCC's researchers and clinicians collaborated with 13 medical schools, educational, and research institutions, 14 VA hospitals, and medical treatment facilities at five armed forces installations on 13 research protocols. This research focuses on innovative ways to improve deployment-related healthcare.



Introduction

- DHCC collaborated with the MacArthur Foundation and investigators from Dartmouth University School of Medicine, Duke University Medical School, Indiana University, and the Regenstrief Institute on the RESPECT project, a primary care-based multimodal effort to improve care of the mental health sequelae of combat.



FY 2005 Accomplishments— Ongoing Programs

- Web activity increased by all measures. The Center's Web site, PDHealth.mil, received 10,500 unique visitors per month at the end of FY 2005, up from 8,700 the previous year. Average Web visit duration increased from 21 to 24 minutes.
 - DHCC's clinical team provided services to nearly 2100 patients during 3900 patient encounters in FY 2005.
 - Subscriptions to the Deployment Health News grew to 1,379 from 587 during FY 2005, an increase of 240%.
 - Nearly 7,000 copies of DHCC's award-winning Providers Desk Reference Toolbox were distributed to military medical facilities throughout the Army, Air Force, and Navy.
 - DHCC staff responded to more than 700 Web and helpline inquiries from military personnel, families, and providers.
 - DHCC offered eight cycles of its new Specialized Care Program Track II. Five cycles of the Specialized Care Program Track I for medically unexplained physical symptoms were also offered.
 - Intensive clinical evaluations were performed for approximately 250 patients referred to DHCC with deployment-related chronic illnesses with unclear etiologies.
- DHCC is one of the activities responsible for conducting the Post-Deployment Health Assessment for outpatient Soldiers returning from deployment through Walter Reed Army Medical Center. Credentialed DHCC providers administered this assessment to 171 Soldiers in FY 2005.
 - DHCC was represented at fifteen national and international meetings, conferences, and symposiums.
 - DHCC sponsored or cosponsored the Deployment Health Guest Lecturer Program for the third year with five lectures and an all day WRAMC symposium on combat stress.
 - For the third year, DHCC sponsored the Deployment Healthcare Track, consisting of 51 presentations, at the 8th Annual Force Health Protection Conference. Senator Max Cleland was the keynote speaker.
 - DHCC's clinicians and scientists submitted 15 manuscripts for publication in peer-reviewed journals, developed 25 abstracts, and delivered 49 presentations at conferences and workshops.

Introduction

Organizational Oversight

Deployment Health Support Directorate

The Thurmond National Defense Authorization Act of 1999 authorized the Secretary of Defense to charter three “centers of excellence” regarding deployment health issues. At that time, the Comprehensive Clinical Evaluation Program of the Gulf War Health Center at Walter Reed was converted to the DHCC. The two other centers of excellence chartered at that time were the National Health Research Center in San Diego, CA and the Defense Medical Surveillance System. The centers were tasked to provide annual reports to the Office of the Assistant Secretary of Defense for Health Affairs (HA). This office exercises this monitoring activity substantially through the Deployment Health Support Directorate (DHSD) whose mission is to advise the Under Secretary of Defense (Personnel and Readiness) on force health issues, foster actions to protect the health of all those involved in deployments, assess deployments to understand and communicate information concerning non-traditional threats to health, and facilitate change to enhance the health of and support for the deploying forces. Given this mission, there are often close working relations between DHSD and DHCC. For example, in 2005, DHCC took over DHSD’s health services hotline and DHSD and DHCC have worked closely together on their respective health risk communication activities and products.

Armed Forces Epidemiological Board

The Armed Forces Epidemiological Board (AFEB) is an independent board comprising renowned scientists whose mission is to provide consultation and recommendations to the DoD healthcare system. DHCC provides annual reports to the AFEB and receives its feedback and recommendations.

In 2005, the Armed Forces Epidemiological Board stated it “continues to be impressed with the DHCC’s efforts in addressing deployment-related health concerns.” Its observation



that the newly developed Specialized Care Program Track II for patients with posttraumatic stress problems showed “promise as a model for the entire DoD” served as a springboard for the Specialized Care Program’s renewed efforts in 2005 to showcase their program to the field. The best examples of this were intensive consultations and on-site visits with Fort Benning providers who were explicitly focused on building a program modeled after the Specialized Care Program. A heavily attended Force Health Protection Conference briefing focused on the building blocks of the Track II program. Specialized Care Program staff will continue to try to export the successful ingredients of this program to the field and to consult with providers in 2006.

The Armed Forces Epidemiological Board’s suggestion to DHCC to expand efforts of outreach and care for problems not leading to the Specialized Care Programs (e.g., traumatic injuries, antibiotic therapy, traumatic brain injury) and to enhance DHCC’s consultation and guidance for physical (versus psychiatric) injury in general fed into several initiatives. Such topics received a renewed focus during the 2005 Force Health Protection Conference, to include a plenary presentation by the Director of the National Traumatic Brain Injury Center. The DHCC was also represented on the VA/DoD Clinical Practice Working Group

Introduction

on Amputation Management and Rehabilitation. DHCC has established stronger working relations with the Army, Navy, and Air Force Family Practice Consultants. Utilizing service consultants to assess the pulse of primary care providers in the field revealed that these providers are indeed interested in receiving more education and information on the conditions the Armed Forces Epidemiological Board highlighted (e.g., traumatic injuries). Accordingly, these efforts will continue in the coming year, to include a renewed working relationship with the Psychiatry Consult Liaison services to traumatically injured soldiers medically evacuated to Walter Reed.

In 2005, the Armed Forces Epidemiological Board recommended that DHCC promote wider dissemination of tools for mental health delivery in primary care areas. There was significant focus on this recommendation and strategy in 2005. The most significant activity was the launching of the **Re-Engineering Systems of Primary Care Treatment in the Military** (RESPECT-MIL) research protocol at Fort Bragg primary care clinics. RESPECT-MIL is an evidence-based structured intervention program for posttraumatic stress disorder and depression in the primary care setting. It utilizes an evidence-based program developed by clinical researchers at Dartmouth University that also incorporates Post-Deployment Health Evaluation and Management Clinical Practice Guideline (PDH-CPG) principles and strategies. Although this is a research program, it is important to note that it is also a highly functional program serving the needs of



re-deploying personnel at one of the most “high ops” facilities in the country. Because providing structured intervention programs for psychiatric problems in a primary care setting is a cutting-edge, un-chartered activity, DHCC staff provides intensive ongoing consultation and monitoring to Fort Bragg providers implementing this program. In other words, this research effort also has a high degree of practical “real world” utility with returning soldiers. DHCC will continue to pursue such strategies in the future. DHCC primary care-based psychiatric clinical research will expand the psychosocial aspects of treatment by integrating evidence-based internet-delivered treatment packages that remain consistent with the presumably reduced “stigma,” more accessible care delivered out of primary (versus specialty) care settings. *A Behavioral Health Integration in Primary Care Workshop* will be offered at the 2006 Force Health Protection Conference, which will focus on current and historical efforts to integrate behavioral health into the primary care arena in all three military services. There will be a concerted focus on disseminating relevant behavioral health integration models and protocols at this workshop. DHCC plans to disseminate evidence-based manualized treatment programs for posttraumatic stress disorder to the field. It is hoped that this will lead to efficacious research focused on active duty (versus veteran) populations.

In 2005, the Armed Forces Epidemiological Board also recommended renewed focus on assessing processes implementation and efficacy, particularly with regard to deployment-related clinical practice guidelines (i.e., it noted the limited efficacy information that exists with regard to clinical practice guidelines). DHCC has continued to work closely with the Scientific Advisory Panel of the National Quality Management Program, which studies such issues and this will continue into 2006.

Direct Health Service Delivery

The Deployment Health Clinical Center (DHCC), the clinical component of three DoD deployment health centers of excellence, provides direct, tertiary care to service members, expert referral care for complex deployment-related health concerns, consultation services to clinicians, service members, and families, and longitudinal tracking of veterans with deployment exposures. Through the Center's various programs, DHCC's clinical team provided services to nearly 2100 patients during 3900 patient encounters in FY 2005.

Specialized Care Programs

DHCC offers two programs of intensive, tertiary care for deployment veterans: the Specialized Care Programs Track I and Track II. Employing evidence-based therapies, these comprehensive, three-week programs are delivered by a multidisciplinary staff of deployment-health specialists including an internist, health psychologist, physical therapist, registered nurse, and a clinical social worker. Alternative and complementary practices including yoga, massage therapy, and guided meditation are employed as well.

Begun in 1995 to care for individuals with idiopathic symptoms related to the 1991 Gulf War, the Specialized Care Program Track I is a prescribed level of care under the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline. The program is designed to treat the sickest patients who continue to present with deployment-related chronic illness or idiopathic

physical symptoms that interfere significantly with their life and work in spite of comprehensive guideline-based care and multiple visits with primary and specialty care physicians.

The program seeks to improve physical conditioning and decrease symptoms through a gradual, paced physical reactivation program. Program participants receive cognitive behavioral therapy to adopt a more constructive attitude towards their physical challenges and to become active partners in their healthcare. They are empowered to improve their ability to cope with their illness and to adopt positive health behaviors. Each program member receives an individualized symptom management plan, while the members of each cycle of three-to-eight participants support one another. The program emphasizes clinical follow-up and primary care management after return to the local healthcare system. In FY 2005, 25 patients participated in 5 cycles of the Specialized Care Program Track I.

"I have regained my life and now I can honestly say I see a light at the end of the tunnel"

—A Specialized Care Program Track II Graduate

Launched in August 2004, the Specialized Care Program Track II provides evidence-based treatments for posttraumatic stress for individuals who have been through basic care and continue to experience difficulty after deployment. Through traditional and alternative treatment modalities, patients receive help in dealing with the lingering effects of combat and the process of re-integration. These veterans may be referred after receiving treatment according to the DoD/VA guidelines for posttraumatic stress or depression. Exposure therapy in a group setting is crucial to the success of the program. The members of the groups draw courage from one another in exploring and articulating difficult feelings and distressing memories.



Direct Health Service Delivery

“Most of...us have had feelings of loss, restlessness, sorrow, hopelessness...”

With evidence that anywhere from 11% (Army returning from Afghanistan) to 29% (Marines returning from Iraq) of returning military personnel experience one or more psychiatric problems following deployment,¹ DHCC sees the Specialized Care Program Track II as a response to the current needs of the military. Responding to interest in creating similar programs from military treatment facilities in the U.S. armed forces and from as far away as Thailand, DHCC continuously improves this program using after-action analysis and will continue to share best practices in the treatment of posttraumatic stress.

“The exposure therapy sessions forced us (in a good way) to look within ourselves and go to that ‘place’ where we locked away all our bad and scary feelings and actually deal with them. Hearing all our feelings together, we also realized that we were not alone and we are feeling the same things. Same things...different times...different circumstances.”

In FY 2005, DHCC delivered 8 cycles of the Specialized Care Program Track II program to 34 participants. Feedback has been extremely positive. Patients of both programs received an average of 28 provider contacts and 48 hours of group treatment during the program as well as clinical follow-up contacts for up to 40 weeks to monitor status and provide on-going support.



“We can now go home and deal with our illnesses. We can now go deal with PTSD. We can now deal with our families, our friends, our employees without a sense of dread, but with a sense of knowledge, understanding and triumph”

—Specialized Care Program Track II Class 11-05

Worldwide Ambulatory Referral Care Program

The DHCC's Worldwide Ambulatory Referral Care Program receives referrals for care of patients with chronic physical symptoms that have unclear etiologies and that present challenges to the patient and their care provider. Administered by an internal medicine physician with extensive experience in post-deployment medicine, the program receives referrals from throughout the United States and overseas. The internist performs a clinical evaluation, including necessary laboratory diagnostics, and may initiate medical and pharmacological treatment for any new diagnoses. If diagnosis and the pathway to appropriate treatment remain

¹ Hoge C.W., Castro C.A., Messer S.C., McGurk D., Cotting D.I., Koffman R.L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 1, 13-22.

Direct Health Service Delivery



unclear, the internist may pursue more imaging studies or referrals to specialists. Appropriate follow-up is offered until all necessary treatments have been completed. Should the patient go on to enter one of the Specialized Care Programs, the internist continues to address his or her health concerns during the program. The Ambulatory Referral Care Program provided these services to approximately 245 patients in FY 2005. Commonly, these individuals suffer from a variety of musculoskeletal injuries, sleep disorders, and chronic pain conditions related to deployment or war.

Tracking Depleted Uranium Exposures

Part of the Post-Deployment Health Assessment, administered after deployment, is a list of questions concerning possible exposure to

depleted uranium. DHCC worked with Office of the Assistant Secretary of Defense for Health Affairs and representatives from the Army, Navy, Marines, and Air Force to create and disseminate the medical management and tracking process for depleted uranium exposure. DHCC provides central archiving of depleted uranium test results and continues to work on policy and procedural updates for this important deployment healthcare issue. During FY 2005, DHCC received the results of 435 24-hour urine bioassays for depleted uranium analysis bringing the total archived to 1,454. Among the records received, there were two new confirmed cases of depleted uranium exposure in FY 2005. DHCC facilitates referral of patients with positive exposure to the VA's Depleted Uranium Follow-up Program and will continue to coordinate medical management follow-up for them, as needed.

Figure 1. Contact DHCC

DHCC Helplines
DHCC Helpline for Clinicians/Providers: Provides clinical consultation, referral services for post-deployment health issues, and information on Post-Deployment Health Clinical Practice Guideline (PDH-CPG) implementation US Toll Free: (866) 559-1627 Local No.: (202) 356-0907 (DSN: 642) Outside US DSN: (312) 642-0907 Hours of Operation: 7:30 a.m.–4:30 p.m. EST
DoD Helpline for Service Members, Veterans and Families: Provides information and advice on deployment-related health concerns U.S. Toll Free: (800) 796-9699 Local No.: (202) 782-3577 or (DSN: 662) From Europe Toll Free: 00800-8666-8666 Outside US DSN: (312) 662-3577 Hours of Operation: 7:30 a.m.–4:30 p.m. EST
DHCC Email To obtain information on a deployment-related health concern or question pdhealth@amedd.army.mil

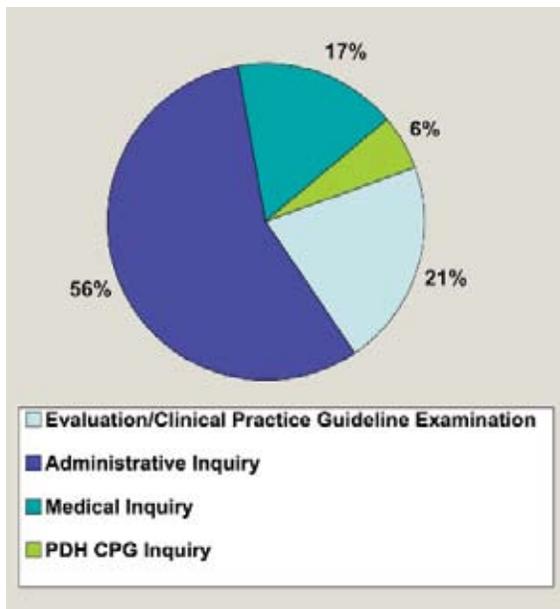


Direct Health Service Delivery

Clinical Consultation through Helplines and Email

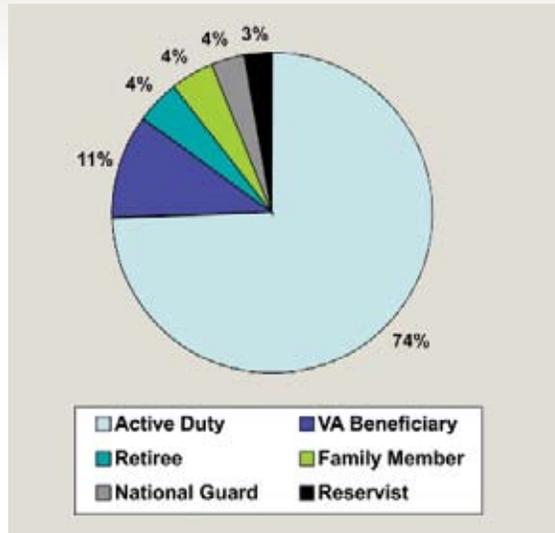
DHCC operates two toll-free telephone helplines with access from Europe and the United States: the DoD Helpline for Military Personnel and Families and the DHCC Helpline for Clinicians and Providers. DHCC also provides an email support service that can be accessed both directly and through the Center's Web site.

Figure 2. Inquiries to DHCC Helplines



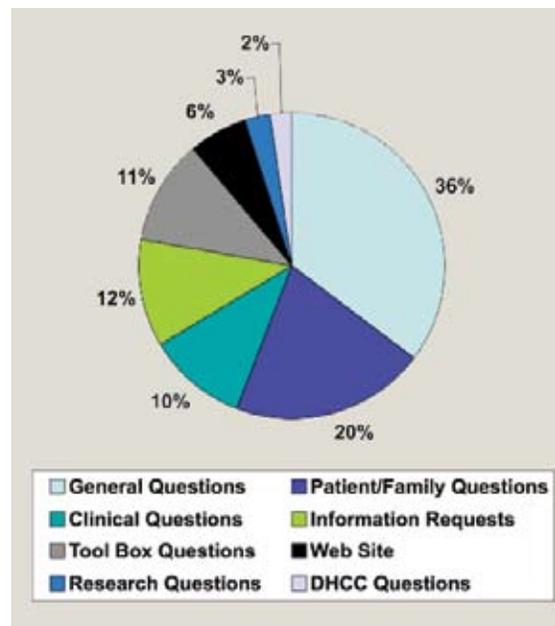
During the past year, military personnel and their family members have sought information and assistance from the DoD Helpline for a variety of deployment-related concerns including possible leishmaniasis infections. The Clinician Helpline provides access for clinical consultation, referral services for post-deployment health issues, and guideline implementation information. Since the announcement of the Post-Deployment Health Reassessment Program in March 2005,

Figure 3. DHCC Helpline Evaluation Request Demographics



DHCC staff members have fielded questions from military sites regarding program implementation. The consultation service responded to 551 phone inquiries during FY 2005 and 184 inquiries through the DHCC Web site.

Figure 4. Web/Email Questions



Outreach and Provider Education



DHCC is chartered with the mission to develop, implement, and sustain deployment-related health education programs for disseminating clinically relevant knowledge to providers. DHCC's FY 2005 outreach to military healthcare providers included making site visits, developing Web content, sponsoring training programs locally and the 8th Annual Force Health Protection Conference, and delivering presentations in the U.S. and around the world. DHCC continued to champion the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline. It also promoted the use of associated guidelines for medically unexplained symptoms, posttraumatic stress, and depression by primary care providers. DHCC staff participated in research on the efficacy of current guidelines and the creation of new ones.



Figure 5. DHCC Exhibit Participation at Military Healthcare Conferences

- **Annual Meeting of the Association of the United States Army**, October 24–27, 2004, Washington, DC—10,000 Attendees
- **Association of Military Surgeons of the United States**, November 14–19, 2004, Denver, Colorado—5000 Attendees
- **TRICARE Conference**, January 24–26, 2005, Washington DC—2500 Attendees
- **44th Annual Navy Occupational Health & Preventive Medicine Conference**, February 12–18, 2005, Virginia Beach, Virginia—250 Attendees
- **Uniformed Services Academy of Family Physicians Annual Meeting and Expo**, April 16–18, 2005, Salt Lake City, Utah—500 Attendees
- **National Gulf War Resources 2004 Conference**, May 6–8, 2005, San Antonio, Texas—200 Attendees
- **Association of the United States Army Medical Symposium**, June 26–July 3, 2005, San Antonio, Texas—1300 Attendees
- **8th Annual Force Health Protection Conference**, August 8–12, 2005, Louisville, Kentucky—2000 Attendees
- **United States Army, Europe—Land Combat Expo 2005**, September 17–23, 2005, Heidelberg, Germany—15,000 Attendees

Outreach and Provider Education

Deployment Health Integration in Primary Care

The Department of Defense and the Army are working proactively to identify service members with deployment-related stressors and to treat them in a timely and appropriate way. Many recent combat veterans who have experienced psychological trauma do not seek care for their health issues because they are intimidated by the stigma associated with suffering from post-traumatic stress or because they believe they can work through the issues by themselves.² Recent data shows that while 28% of returning Soldiers met survey criteria for posttraumatic stress disorder, major depression, or generalized anxiety disorder, only 27% of these Soldiers received care.³ Since 90% or more of service members have at least one primary care visit per year, the primary care setting represents a unique opportunity to address behavioral health issues proactively and effectively.

DHCC has championed the concept of behavioral health integration into primary care for several years beginning with Operation Solace. This program, launched immediately after the September 11, 2001 attack on the Pentagon, placed behavioral health care managers in seven primary care clinics in the Washington DC region to provide outreach and supportive care to individuals suffering stress-related symptoms from the attack.

“What makes Soldiers go out and be heroic warriors is the same thing that makes it difficult for them to ask for mental health treatment...a lot of the Soldiers who could potentially use mental health treatment won't come to see me.”

—MAJ (Dr.) Darin Gould, 82nd Airborne Division psychiatrist, Fort Bragg.⁴

The Center is currently involved in an innovative research program in cooperation with the MacArthur Foundation and its Initiative on Depression and Primary Care called

Re-Engineering Systems for the Primary Care Treatment of Depression and PTSD (RESPECT-MIL). The research project is pilot testing a care manager model at Fort Bragg to try to improve the treatment response for depression and posttraumatic stress disorder in primary care. Providers are trained to screen all their patients for posttraumatic stress disorder and depression, employing nurse care managers for treatment monitoring and follow-up care for those who screen positive. For more information on this project see page 26.

“We can't just sort of open the doors and expect them to come...we have to find ways to reach out to them.”

—Army psychiatrist COL (Dr.) Charles Engel, director of the Defense Department Deployment Health Clinical Center.⁵

In FY 2006, DHCC staff will sponsor a workshop at the 9th Annual Force Health Protection Conference on *Behavioral Health Integration in Military Primary Care*. While reviewing current initiatives in the Army, Air Force, and Navy for integrating behavioral health consultation services into primary care, the workshop will present the historical and theoretical background of the concept with a “how-to-do-it” focus. The advantages of the concept will be examined including the preventive focus on identifying and treating problems early, the inherently less stigmatizing method of delivering behavioral healthcare, and the promotion of a more effective partnership between primary care and behavioral health. Designed for both behavioral health and primary care providers, the workshop will be conducted by experts from both disciplines.

² Engel C.C. (2005, July 17). Statement to the Committee on Veterans' Affairs, United States House of Representatives Subcommittee on Health.

³ Hoge et al. (2004).

⁴ Funk D. (2005, October 31). Program aims to widen mental health screening tests, treatment offered through primary caregivers. *Army Times*.

⁵ Funk D. (2005).

Outreach and Provider Education

Clinical Practice Guidelines

DHCC was designated champion for the original rollout of the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline in early 2002 and tasked with re-energizing adoption of the guideline in 2003. In FY 2004, DHCC responded by creating 18 Web-based training modules and the award-winning Post-Deployment Health Providers Desk Reference Toolbox. By the end of FY 2005, nearly 7,000 Toolboxes had been distributed to Army, Air Force, Navy providers.

The Toolbox contains reference cards on many topics pertaining to the provision of deployment-related healthcare along with the guideline algorithms. In FY 2005, DHCC created new Toolbox reference cards for medical management of posttraumatic stress disorder in primary care and administration of the new Post-Deployment Health Reassessment (DD Form 2900). Coding information for post-deployment health clinic visits was updated. These new and updated cards were made available to clinicians on the DHCC Web Site, PDHealth.mil.

The DHCC Staff Training and Assistance Team is available to provide training on the Post-Deployment Health Guideline and supporting tools to primary care providers and support staff as well as to offer advice and assistance to military treatment facility commanders on guideline implementation. The team made eight visits to military treatment facilities from all Branches of Service, presenting to more than 400 providers during 13 sessions.



Figure 6. DHCC Staff Training and Assistance Team Visits

- **56th Medical Group, Luke AFB,** September 22–23, 2004, Phoenix, Arizona—Four sessions, 51 Attendees
- **305th Medical Group, McGuire AFB,** October 7, 2004, New Jersey—One session, 30 Attendees
- **Malcom Grow Medical Center, Andrews AFB,** October 14, 2004, Maryland—Two sessions, 64 Attendees
- **Winn Army Community Hospital, Fort Stewart,** October 27–28, 2004, Savannah, Georgia—Two sessions, 40 Attendees
- **436th Medical Group, Dover AFB,** November 8–9, 2004, Dover, Delaware—One session, 65 Attendees
- **Martin Army Community Hospital, Fort Benning,** December 9, 2004, Columbus, Georgia—One session, 35 Attendees
- **Madigan Army Medical Center, Fort Lewis,** March 31, 2005, Tacoma, Washington—One session, 90 Attendees
- **Bethesda Naval Medical Center,** April 21, 2005, Bethesda, Maryland—One session, 50 Attendees



Outreach and Provider Education

“Thank you...for teaching us how to better serve our returning veterans.”

—LTC Reginald W. Howard, Chief, Department of Social Work, Madigan AMC in his letter to the DHCC Staff Training and Assistance Team.

DHCC provided input to the Amputation Management/Rehabilitation Clinical Practice Guideline Development Working Group. The working group consists of orthopedic surgeons, physical therapists, occupational therapists, prosthetists, orthotists, behavioral health providers, physical medicine physicians, rehabilitation planning specialists, nurse practitioners, and clinical practice guideline specialists/medical education consultants from all Branches of Service and the VA Department of Evidence-Based Practice. The group reviewed and graded literature related to pre- and post-operative management and rehabilitation of amputations, formulated specific, evidence-based recommendations for the management of amputation rehabilitation, developed an algorithm defining and outlining the care and management of amputation rehabilitation, and developed an outline of patient education topics/processes. It is anticipated that the new guideline will be completed in mid-2006.

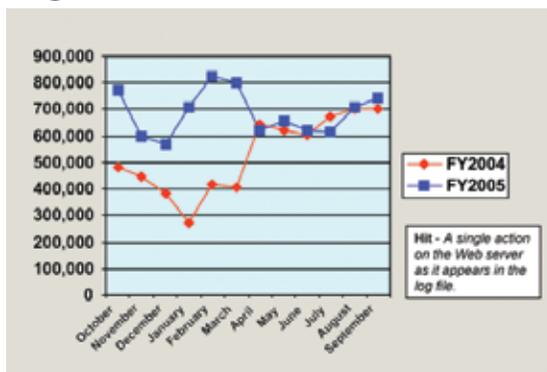
The DHCC director and deputy director are consultants to the Scientific Advisory Panel of the National Quality Management Program. The National Quality Management Program performs research and program evaluation of DoD healthcare problems, processes, and high interest issues, including evaluation of clinical practice guideline implementation and utility. DHCC consultants have contributed to research studying the implementation and efficacy of the DoD/VA post-deployment health, medically unexplained symptoms, depression, and posttraumatic stress disorder clinical practice guidelines. The 2005 focus was on researching the screening and referral patterns for posttraumatic stress, utilizing the

DD Form 2796/Post-Deployment Health Assessment for a population of close to 300,000. DHCC consultants helped develop the research design and methodology, interpretation of results, and provided functional area expertise in the development of a written report.

Web-Based Outreach to Providers and Military Personnel

DHCC's Web site, PDHealth.mil, is fundamental to the Center's communication function. All the print, online, and video-enabled outreach products developed by DHCC are made available for worldwide access on the site. With demand for deployment health information increasing due to current deployments in Afghanistan, Iraq, and on humanitarian missions in the United States and abroad, Web

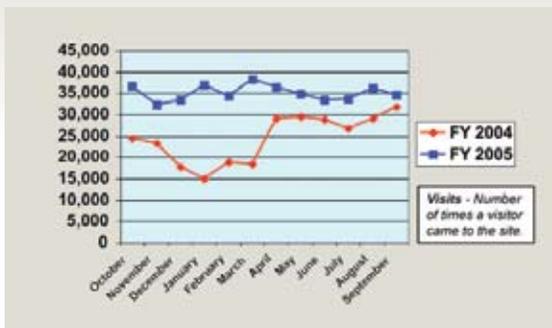
Figure 7. Web Hits Per Month



activity by all measures increased with 10,500 unique visitors per month at the end of FY 2005, up from 8,700 the previous year. Average Web visit duration increased from 21 to 24 minutes. Web traffic by top-level domain types included military hits (*.mil) at 37%, commercial (*.com) at 29%, network (*.net) at 25%, other government (*.gov) areas at 3%, and educational institutions (*.edu) at 3%.

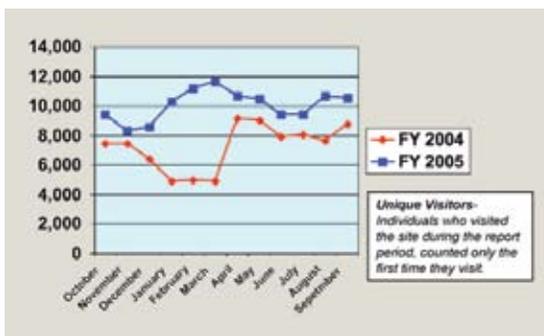
Outreach and Provider Education

Figure 8. Web Visits Per Month



Content added to PDHealth.mil in FY 2005 focused on the following areas. DHCC supported the deployments to Iraq and Afghanistan and the challenge of screening and caring for re-deploying military personnel by adding Enhanced Post-Deployment Health Assessment Process pages, a Forms section containing all forms used for post-deployment health screening, and extensive information on the new Post-Deployment Health Reassessment Program. The tutorial on the Enhanced Post-Deployment Health Assessment Process and the Forms section, specifically requested by user feedback, were among the most visited pages on the Web site.

Figure 9. Unique Web Visitors Per Month

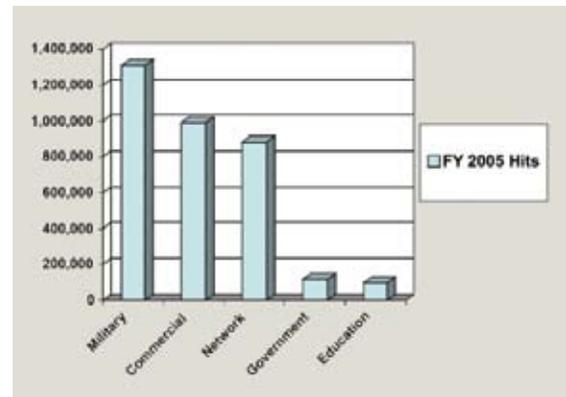


DHCC continues to champion the post-deployment health guideline and added new and updated tools to the Web site this year. The

PDH Guideline Page was updated by adding a brief summary of the guideline with links to pertinent documents and a Table of Contents with links to related pages on the post-deployment health guideline and supporting guidelines. A PDH Guidelines News and Updates Section was added to the Clinicians Page to inform clinicians of changes and new information.

Military clinicians are invited to visit the Clinicians Page of PDHealth.mil frequently for updated information on post-deployment health policies, new deployment areas, and emerging health concerns of military importance. The Emerging Health Concerns Section

Figure 10. Web Visitor Domain Types



contains current policies, articles, and training material on health concerns such as depleted uranium, leishmaniasis, operational stress, malaria, and influenza. Health concerns added in FY 2005 include: *Acinetobacter* infections in service members injured during Operations Iraqi Freedom and Enduring Freedom; acute eosinophilic pneumonia among military personnel deployed in or near Iraq; and health-related consequences of the South Asia Tsunami and Hurricane Katrina. Approximately 12 new or updated links were added to the Web site each week.

Outreach and Provider Education



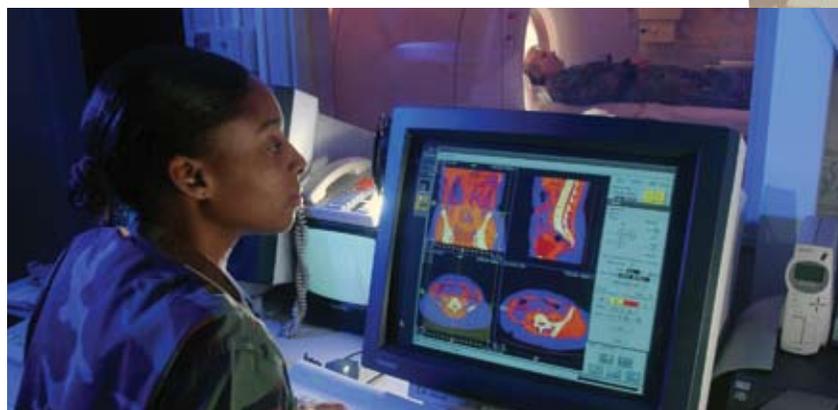
Post-Deployment Health Assessment and Reassessment

Ambulatory patients returning from Operations Iraqi and Enduring Freedom and other deployments require post-deployment screening using the DD Form 2796. DHCC providers administer this Post-Deployment Health Assessment for Soldiers who return from deployment through Walter Reed Army Medical Center with injuries and other health concerns. The assessment is administered in the context of a comprehensive medical interview and insures assessment of the individual's overall medical and psychological status. The Post-Deployment Health Assessment also provides the opportunity for counseling regarding individual exposure concerns and post-exposure malaria chemo-prophylaxis. Participating personnel receive post-deployment tuberculosis skin testing, have a blood sample taken and sent to the DoD Serum Repository per Congressional mandate, and other testing as medically indicated. Illness or injuries not previously addressed are identified and appropriate care and consultation are rendered.

The Post-Deployment Health Reassessment (PDHRA) Program, mandated by the Assistant Secretary of Defense for Health Affairs in March 2005, is designed to provide a way for

the military healthcare system to check in with veterans between 90 and 180 days after deployment to see if any health concerns, specifically mental health concerns, have emerged since their deployment. The PDHRA makes use of the DD Form 2900 for this second health assessment.

Officially launched in June 2005, the program will be piloted in selected locations through December 2005 by the Army, Navy, and Marines in both active and Reserve Components. Lessons learned from this pilot testing will be incorporated into the broader implementation of the program in each of the Services beginning in 2006. The memorandum creating the PDHRA Program designated PDHealth.mil, DHCC's Web site, as the location for healthcare providers to find relevant information. This information includes clinical guidance, policies, and resource material for program implementation, clinician training developed by the Deployment Health Support Directorate and DHCC, and a new Toolbox reference card (http://www.pdhealth.mil/downloads/DD-Form2900_Primer.pdf). DHCC helplines also provide a place for service members and clinicians to get their questions answered about the program.



Outreach and Provider Education

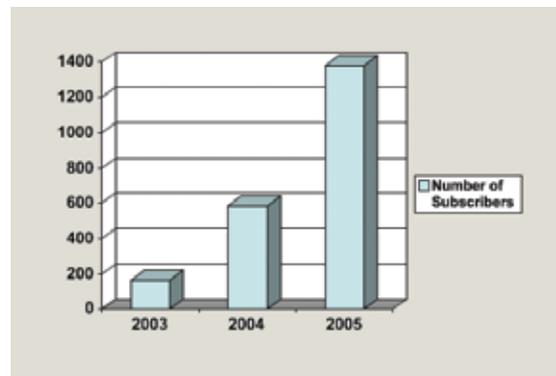
Fostering Trust between Providers and Military Personnel

Health risk communication is the science of communicating technical information about health risk under circumstances involving some combination of medical uncertainty, low trust, high concern, or perceived crisis. DHCC is the only DoD activity that uniquely focuses on improving the risk communication skills of military clinicians, and has the designated responsibility to develop and disseminate deployment-related health risk communication materials for clinician use. DHCC's health risk communication outreach activities in FY 2005 included daily distribution of the *Deployment Health News*, delivery of the *Risk Communication Workshop for Public Affairs Officers* at the 2005 Force Health Protection Conference, and the update and distribution of fact sheets for Mefloquine and *Acinetobacter* infections in collaboration with the Office of the Assistant Secretary of Defense for Health Affairs Risk Communication Working Group.

DHCC published 227 issues of the *Deployment Health News* in FY 2005, and subscriptions to this daily electronic newsletter increased significantly to 1,379 from 587. The newsletter covers health issues related to military service, deployments, homeland security, and the War on Terrorism. It includes topics such as environmental and occupational health, medications, immunizations, biological and chemical warfare, and medically unexplained

symptoms. Information is gathered from the news media and publicly available sources including periodicals, professional journals, and government and private sector Web sites. Provision of these articles is intended to rapidly inform clinicians of information to which patients may be exposed, in part, because that information sometimes causes patients to seek medical advice and care.

Figure 11. Subscribers to the Deployment Health News



Deployment-Related Healthcare Track at the Force Health Protection Conference

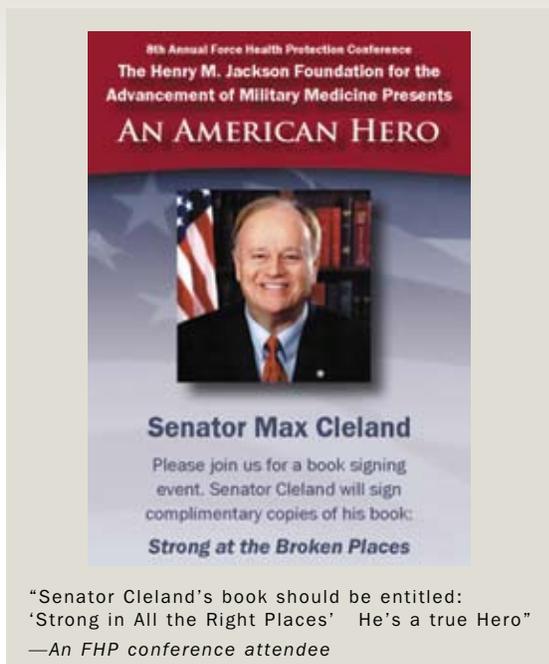
For the third year, DHCC staff coordinated the Deployment Healthcare Track at the Force Health Protection Conference held in August in Louisville, Kentucky. Nearly 2000 individuals registered for the 8th Annual Conference, an increase of more than 30% from the previous year. Nine tracks sponsored 600 presentations. Attendees included physicians, nurses, behavioral health providers, researchers, and healthcare administrators and policymakers. The Deployment Healthcare Track provided 51 presentations with an aggregate attendance of more than 2000.

The track's keynote speaker, Senator Max Cleland, spoke on *Strong in Broken Places: Pathways to Recovery from Combat*. Describing his blast injuries in Viet Nam where he lost both legs and one arm, and detailing his



A Copy of the Deployment Health News

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progression through the military healthcare system, he made valuable connections between his own experiences and the current needs of returning combat veterans from Iraq and Afghanistan. Plenary speaker Major General (Ret.) Harold Timboe presented on *Operation Tsunami Aid*, and Colonel Rhonda Cornum, the new FORSCOM Surgeon and former Landstuhl Army Medical Center Commander, discussed *Landstuhl’s Role in the Global War on Terrorism*. DHCC held its first workshop on health services research: *Clinical Epidemiologic Research Methods Applied to Post-Deployment Healthcare*. Registration for this workshop was expanded from 25 to 50 due to high interest.

Deployment Healthcare Track speakers included active duty, retired, and Reserve Component service members from the Army, Air Force, and Navy. Speakers included military and civilian personnel from Canada, the United Kingdom, and South America, as well researchers from government and educational institutions. Sixty-seven abstracts were submitted and 51 were selected.

Figure 12. Highly-Attended Deployment Healthcare Track Sessions

- **Traumatic Brain Injuries in Returning Combat Veterans: Important Post-Deployment Healthcare Considerations.** Deborah Warden, MD, Director, Defense and Veterans Head Injury Program, WRAMC—60 Attendees
- **Soldier Perceptions of Deployment Environment Exposures.** Lori Geckle, U.S. Army Center for Health Promotion and Preventive Medicine—60 Attendees
- **Overview of the Adverse Childhood Experiences Study.** Robert Anda, MD, Centers for Disease Control and Prevention—60 Attendees
- **Use of Evidence to Improve Post-Deployment Healthcare.** COL Charles Engel, MC, MPH, DHCC, WRAMC, USUHS—55 Attendees
- **Detecting and Treating PTSD in Primary Care Settings.** Kathy Magruder, PhD, Ralph H. Johnson VA Medical Center—55 Attendees

A list of presentations and speakers from the Deployment Healthcare Track at the 8th Annual Force Health Protection Conference is available in Appendix D. DHCC will again sponsor the Deployment Healthcare Track at the 9th Annual Force Health Protection Conference in Albuquerque, New Mexico in August 2006.

Outreach and Provider Education

Deployment Health Guest Lecturer Program

“Outstanding presentation! The lecture showed us what works, and what should be done. I learned a lot.”

—Lecture attendee

DHCC sponsored the Guest Health Lecturer Program for the third year. The Center collaborated with the WRAMC Departments of Psychiatry, Medicine, Nursing, Social Work, and Psychology to put on five events including a two-day clinical workshop and the Artiss Symposium: *Combat Stress and its Sequelae*.

Continuing health education credits were provided for physicians, nurses, psychologists, and social workers through the Uniformed Services University of the Health Sciences. Attendance at individual sessions ranged from 20 to 150, and quality feedback remained high, in the 2.8 range on the Uniformed Services University scale of 0.0–3.0.

“Very well presented; common sense, down to earth. It reminded me to talk plainly and honestly without jargon to patients.”

—Lecture attendee

Figure 13. The 2005 DHCC Deployment Health Guest Lecturer Program

- **Two-Day Behavioral Health Clinical Workgroup on the Treatment of Returning Service Members from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).** Richard A. Bryant, PhD, University of New South Wales, Sydney, Australia, presented in collaboration with the WRAMC Department of Psychiatry—30 Attendees
- **Taken As Directed: A Documentary Film about the Anti-Malarial Drug, Mefloquine (Lariam).** Dr. Susan G. Rose, MPH, JD, Adjunct Assistant Professor in the Departments of Environmental and Occupational Health and Health Policy, George Washington University—20 Attendees
- **Health Effects Among World Trade Center Responders.** Dr. Stephen M. Levin, Medical Director, The Mount Sinai-Irving J. Selikoff Occupational Health Clinical Center, Principal Investigator, World Trade Center Data and Coordination Center of the Medical Monitoring Program—21 Attendees
- **The Understanding of Violent Trauma, Conceptualizations and Implications for Intervention with Children, Families, and Communities.** Steven Marans, MSW, PhD, Yale University, presented in collaboration with the WRAMC Department of Social Work—90 Attendees

Continued on next page

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- **Artiss Symposium: Combat Stress and its Sequelae.** Presented in collaboration with the WRAMC Department of Psychiatry—150 Attendees
 - **The Challenges of Treating the Combat Exposed.** COL Stephen J. Cozza, MC, USA, Chief, Department of Psychiatry, WRAMC, Associate Director, Center for the Study of Traumatic Stress, Child and Family Programs, USUHS
 - **Mental Health Impact of Combat Duty in Iraq and Afghanistan.** COL Charles Hoge, MC, USA, Chief, WRAIR Department of Behavioral Health, Geriatric Psychiatry Fellowship, WRAMC
 - **Social Context and Post-War Syndromes.** COL Charles Engel, Jr., MC, USA, Director, Deployment Health Clinical Center, WRAMC, Assistant Chief, Department of Psychiatry, USUHS
 - **Psychobiology of Stress and PTSD.** Matthew J. Friedman, MD, Executive Director, National Center for PTSD, Department of Veterans Affairs, Dartmouth College School of Medicine
 - **Combat Stress Care: Concepts and Practice During OIF II.** MAJ Geoffrey G. Grammer, MC, USA, Assistant Program Director, Geriatric Psychiatry Fellowship, WRAMC
 - **Therapeutic Implications of the Disability System.** COL (USA Ret.) R. Gregory Lande, MD, Chief, Continuity Services, WRAMC
 - **Coming Home but Not Returning to Normal: Separation, Grief, Stigma and Reintegration in Returning Soldiers and Their Families.** Holly Prigerson, PhD, Associate Professor of Psychiatry, Brigham and Women's Hospital, Director, Center for Psycho-Oncology and Hospital Palliative Care Research, Harvard Medical School
 - **Lessons Learned from Treating Returning Combat Veterans: Overcoming Challenges, Improving Care.** Richard A. Bryant, PhD, University of New South Wales, Sydney, Australia
 - **Psychological Sequelae of Returning Combat Veterans: Panel Discussion.** Facilitated by MAJ Brett Schneider, MC, USA, Chief, Telepsychiatry and Community Psychiatry Services, Assistant Program Director, Forensic Psychiatry Fellowship, WRAMC

Health Services Research

DHCC's deployment-related clinical research is mainly extramurally funded, strives to be self-sustaining and supports the clinical, scientific, and policy goals of the Center. DHCC has successfully completed a wide range of projects that put science behind post-deployment healthcare delivery process improvement. Current projects are competitively funded by the Centers for Disease Control and Prevention, the Department of Veterans Affairs, the Department of Defense, the National Institute of Mental Health, and the National Institute on Aging. DHCC's scientists and staff complete scientifically credible work and regularly publish in peer-reviewed medical journals. DHCC's clinicians and scientists submitted or published 15 manuscripts in peer-reviewed journals, presented 25 abstracts, and delivered 49 presentations at conferences and workshops in the U.S. and the United Kingdom in FY 2005.

The research team consists of personnel with expertise in general medicine, psychiatry, epidemiology, statistics, demography, risk communication, the social and behavioral sciences, as well as administrative personnel. The team serves a number of functions in support the DHCC mission to improve post-deployment care, to include:

- Clinical, epidemiological, and health services research
- Guideline implementation
- Statistical analysis
- Survey development
- Data collection
- Database creation and management
- Research consultation to clinicians
- Manuscript and report preparation

DHCC's FY 2005 research portfolio consisted of the following thirteen projects.

A Simple Screening Tool for PTSD in Primary Care

Posttraumatic stress disorder (PTSD) among recently deployed Soldiers is a critical psychiatric problem facing the Department of Defense.



Experiencing traumatic stress may lead to serious and sometimes permanent functional impairment. Research in civilian settings indicates that while most mental healthcare is delivered in primary care, primary care providers often do not recognize symptoms of posttraumatic stress disorder. The stigma associated with seeking psychiatric medical care, particularly in the military, also creates an obstacle to the diagnosis and treatment of posttraumatic stress disorder. Improving screening procedures for primary care patients presenting with posttraumatic stress disorder may lead to earlier diagnosis and intervention.

The goal of this study is to develop and test a simple screening tool for use in a primary care setting for rapid identification of patients with symptoms of posttraumatic stress disorder. The screening tool will be compared to longer survey measures of posttraumatic stress disorder along with a research diagnostic interview to determine the sensitivity and specificity of the screening tool. Research surveys are being administered to primary care patients at three DoD primary care clinics to determine the rates of the disorder in the sample as well as the validity of the screening tool.

So far testing indicates that the screener question is capturing PTSD-related concerns. The research team expects this screening device to

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improve the primary care provider's ability to recognize posttraumatic stress disorder symptomatology in their patients and to facilitate early intervention to reduce the burden of this disorder within the DoD. Clinics collaborating in this study are the primary care clinics at Walter Reed Army Medical Center, the Rader Clinic at Fort Belvoir, and DiLorenzo Clinic at the Pentagon.

A Study of Prazosin for the Relief of Combat Stress-Induced Nightmares and Sleep Disturbance

Trauma-related nightmares and sleep disruptions following exposure to life-threatening events are persistent symptoms that often cause significant impairment in social and occupational functioning. Paroxetine (marketed as Paxil) is one of only two FDA approved medications for the treatment of posttraumatic stress disorder, but its treatment efficacy remains mixed. Preliminary research shows that the medication prazosin ameliorates both nightmares and sleep disturbances in veterans from Vietnam and OEF/OIF. It is expected that results from this double-blind, 12-week randomized controlled clinical trial will support the use of prazosin over both paroxetine and placebo for the treatment of combat-related nightmares.

Funded by the Departments of Defense and Veterans Affairs, this multi-site study is a collaboration between DHCC and researchers from Madigan Army Medical Center and the VA Puget Sound Healthcare System.

Acupuncture for the Treatment of Trauma Survivors

Posttraumatic stress resulting from combat-related traumatic events has been treated with only moderate success using presently available psycho- and pharmacological therapies. Furthermore, an important subset of people who suffer from posttraumatic stress disorder find currently efficacious treatments undesirable because of side-effects, psychosocial

stigma, and high cost. Acupuncture, with few known side effects, has the potential to be an effective alternative treatment for posttraumatic stress disorder or an adjunct to other therapies. Acupuncture has been shown to improve well-being and to successfully treat stress, anxiety, and pain conditions. The objective of the proposed study is to determine the effectiveness of acupuncture for alleviating symptoms associated with posttraumatic stress disorder. The study will be carried out using a two-arm, 12-week randomized controlled trial of active duty military personnel with a diagnosis of posttraumatic stress disorder.

The study is Congressionally funded and the study team consists of personnel from DHCC, the Uniformed Services University of the Health Sciences, the VA, the Samueli Institute, the University of Western Ontario, and the National Center for PTSD.

CSP 494: A Randomized Controlled Trial of Military Women with Post-Traumatic Stress Disorder (PTSD)

This VA Cooperative Study included 11 VA sites and Walter Reed Army Medical Center. It was a randomized single-blind clinical trial that compared two types of individual psychotherapies for the treatment of posttraumatic stress disorder (PTSD) in women. The efficacy of prolonged exposure therapy for treating PTSD and associated problems in active duty and veteran women was evaluated. The study hypothesis was that prolonged exposure



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therapy would be more effective than present centered therapy for the treatment of PTSD in female veterans and active duty personnel. The primary outcome variable was PTSD severity at the 3-month follow-up assessment as measured by the Clinician Administered PTSD Scale (CAPS), a diagnostic interview that captures PTSD symptom severity.

A total of 284 participants were randomized in the multi-site trial. Two hundred-one (71%) completed all treatment sessions. Two hundred thirty-five participants (83%) completed the post-treatment assessment, 230 (81%) completed the three-month follow-up assessment, and 213 (75%) completed the six-month follow-up assessment. Participants reported high levels of satisfaction with treatment approaches and, on average, experienced PTSD symptom reduction. All analyses were conducted by the VA Cooperative Studies Program Coordinating Center. The study team is currently preparing the manuscripts that report study outcomes.

DE-STRESS: Web-Based Therapy for Victims of Mass Violence

This study, funded by the National Institute of Mental Health, was implemented in June 2002. Key collaborations included Boston University, the Boston VAMC, the University of New South Wales, Sydney, Australia, and the Walter Reed Army Medical Center Department of Psychiatry. The major aim of this study was to evaluate an abbreviated, primary care-based form of Stress Inoculation Therapy (SIT), a Web-based therapeutic modality that helps people manage stress and recover from trauma that otherwise would typically require several individual meetings with a therapist. This research tested whether SIT could 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. Recruitment has ended and 3-month and 6-month follow-up symptom assessments are being completed. Data analysis and reporting are ongoing.

Evaluation of Acceptability of Collecting Information About Adverse Childhood Events from Military Personnel

The National Defense Authorization Act 2005, Section 733, "Baseline Health Data Collection Program," mandates that DoD implement a baseline health instrument to improve health surveillance and contribute to a system that supports early intervention and prevention programs among service personnel throughout their military careers. This baseline assessment has been called for by past Presidential Review Directive, Institute of Medicine reports, and the Armed Forces Epidemiological Board.⁶ The assessment will collect relevant demographic, medical, psychosocial, occupational, and health risk factor data from all U.S. military personnel upon entry into the armed forces.

Current research indicates that adverse childhood events, such as loss of a parent, abuse, or living in a household which includes a person who is incarcerated, a substance abuser, or mentally ill may contribute to negative adulthood consequences.^{7,8,9,10} Recent efforts to use self-reported adverse childhood event information as part of military health surveillance have raised questions regarding the validity of the information. If sensitive questions are viewed as unacceptable by military respondents and family members, then the accuracy of reported information will be compromised.

⁶ Armed Forces Epidemiological Board (2005). Armed Forces Epidemiological Board 2005 June Meeting. Wright-Patterson AFB, OH.

⁷ Anda, R. F., Croft, J. B., Felitti, V. J., Nordenberg, D., Giles, W. H., Williamson, D. F. et al. (1999). Adverse childhood experiences and smoking during adolescence and adulthood. *Journal of the American Medical Association*, 282, 17, 1652-1658.

⁸ Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, 82, 217-225.

⁹ Dong, M., Dube, S. R., Felitti, V. J., Giles, W. H., & Anda, R. F. (2003). Adverse childhood experiences and self-reported liver disease: new insights into the causal pathway. *Archives of Internal Medicine*, 163, 1949-1956.

¹⁰ Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: the adverse childhood experiences study. *Pediatrics*, 111, 3, 564-57.

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This proposed study is a DoD, VA, and Centers for Disease Control and Prevention collaborative effort to examine the acceptability of collecting adverse childhood event data as a part of routine military health surveillance. The study will consist of three components: (1) a focus group-based study to assess the views of service members and their spouses regarding the collection of adverse childhood event data, (2) a panel of subject matter experts who will convene to discuss the acceptability, practicality, legal, and ethical aspects of using adverse childhood event data as a part of routine health surveillance, and (3) a review of past efforts in the military to collect anonymously adverse childhood event data will be conducted and lessons learned will be used to inform the current Collaborative Childhood Experiences Study Committee. The study will yield publications in peer-reviewed journals and a report to the Office of the Assistant Secretary of Defense for Health Affairs.

Health-e VOICE—A Clinical Communication Training Tool

Health-e VOICE, the **Health**care **e**lectronic **V**alues-based, **O**pen, **I**nteractive **C**ollaborative **E**ducation project, is funded by the Centers for Disease Control and Prevention. The project hypothesis is that improved health risk communication by primary care providers helps to alleviate unnecessary patient distress and physical health concerns, reduce frustration and tension in the doctor-patient relationship, and rebuild patient trust in care providers and the health system.

The Health-e VOICE tool contains six electronic patient-care vignettes, which interactively teach providers appropriate clinical risk communication techniques to employ with patients presenting with deployment-related health concerns. During the summer of 2005, the Health-e VOICE tool was evaluated by a randomized controlled trial. The trial assessed the

effect of Health-e VOICE training on the ability of primary care providers to appropriately address veterans' deployment-related health issues and evaluated patients' satisfaction with their care. Forty primary care providers at the Family Medicine Clinic at the Womack Army Medical Center, Fort Bragg participated in the trial and more than 2,000 patient satisfaction questionnaires were completed. Data from the study is presently being analyzed.

Prospective Study of Functional Status in Veterans at Risk for Unexplained Illness

DHCC is collaborating with the East Orange New Jersey VA War-Related Illness and Injury Study Center on a prospective longitudinal study to understand whether stress response, ability to cope with stress, or personality affect the likelihood of developing medically unexplained symptoms after service in OIF/OEF. Measures are both self-reported and physiological and include pre- and post-deployment physicals as well as phone interviews and mailed surveys after return from deployment. The study is expected to help identify individuals at risk for developing medically unexplained symptoms after future deployments and guide future work on intervention strategies.

Real-Time Measurement of Daily Stress Responses Among Soldiers with Occupational Stress—A Feasibility Study

There is a lack of research on how everyday patterns of responding to stress relate to symptoms of occupational stress in the military or how these patterns predict recovery as a result of treatment. Assessment instruments such



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as global, retrospective, single-administration questionnaires do not provide sufficient real-time information on stress responses. This study evaluates the use of portable personal digital assistants (PDAs) to track stress response processes over time providing a closer approximation of what individuals actually do and feel on a day to day basis. This technique, termed Ecological Momentary Assessment (EMA), will be used with members of DHCC's Specialized Care Programs during their three-week program at WRAMC to ascertain the feasibility of broader use. The long-range goal of this research is to provide a better understanding of stress-response processes and how these responses affect the onset and endurance of symptoms in order to improve treatment services for veterans with disorders such as posttraumatic stress disorder and/or medically unexplained physical symptoms. DHCC study staff members are collaborating with researchers from American University on this effort.

RESPECT-MIL: Primary Care-Based Management of Depression

Re-Engineering Systems of Primary Care Treatment in the Military (RESPECT-MIL) is a project designed to improve the primary care implementation of the three DoD clinical practice guidelines that are central to post-deployment care. This quality improvement initiative tests a care manager model to improve recognition and treatment of depression and posttraumatic stress disorder in military

primary care for troops returning from Afghanistan and Iraq. The study proposes implementation of a Three Component Model approach to care that utilizes care managers to foster improved implementation of practice guideline recommendations for these conditions after deployment.

In this approach, providers are trained to use relevant screening instruments; to communicate successfully with primary care patients about posttraumatic stress disorder, depression, idiopathic symptoms, and deployment-related health concerns; and to implement effective primary care-based management approaches. The treatment model is based on MacArthur Foundation-funded research and involves collaborators in the VA, Duke University, and Dartmouth Medical School. After primary care treatment is initiated, nurse care managers track patients through periodic phone contact to determine their progress in following their treatment plan. The care managers also convey relevant information to primary care providers and mental health supervisors. This coordinated care system leads to better treatment outcomes and increased satisfaction with post-deployment primary care.

Manuals for primary care providers, care managers, and psychiatrist supervisors were produced in FY 2004. In FY 2005 and into FY 2006, the RESPECT-MIL care manager model is being pilot tested at Fort Bragg.

Sleep Deprivation and the Immune System

Insomnia, lack of sleep leading to fatigue, may affect the immune system. Deployed Soldiers can suffer from lack of sleep for many reasons. These include an intense operational tempo, poor sleep environment, or acute operational stress reactions causing disordered sleep. Recently published experiments on sleep-deprived mice reveal immunological defects. Similar experiments have not yet been performed in humans. Microarray technology

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can be used to explore how the 10,000 genes related to the immune system are expressed in white blood cells. If insomnia affects Soldiers' immune systems, this could contribute to susceptibility to infectious diseases in the battlefield environment. These include malaria, leishmaniasis, yellow fever, and dengue. With knowledge of what immune deficiencies arise due to insomnia, preventive measures could be developed to counteract this susceptibility.

The purpose of this pilot exploratory study of 20 Soldiers from Iraq, is two-fold: (1) to determine what immunological factors are altered in Soldiers from the field with insomnia, and (2) to obtain genetic microarray results for these 20 Soldiers, not suffering from infectious disease, to serve as normal controls for comparison to a larger recently completed microarray study of Iraq returnees with leishmaniasis. The results from the disease-free Soldiers will also be placed in a new database of normal controls for future genetic microarray studies. This research is being conducted in collaboration with personnel from Walter Reed Army Medical Center, the Uniformed Services University of the Health Sciences, and Walter Reed Army Institute of Research.

Veteran Status, Health and Mortality in Older Americans

In its third year, this study is funded by the National Institute on Aging. The study evaluates whether older veterans experience higher mortality than do their non-veteran counterparts and uses demographic modeling to see if this trend increases with age and whether physical health is more important than mental health in the process of mortality convergence and crossover between older veterans and non-veterans. The project uses data from the Survey of Asset and Health Dynamics among the Oldest-Old (AHEAD) and the Survey of Health and Retirement Study (HRS). Statistical techniques employed include the structural hazard rate model, the multinomial logit regression, and mathematical simulation.



The study hypothesizes that older veterans experience higher mortality than do their non-veteran counterparts and that this trend increases with age, have been borne out by the analysis, which indicates that after 70 years of age the mortality differences between the two groups diverge at a considerable pace.

Yoga as an Adjunctive Treatment for PTSD—A Feasibility Study

The scientists leading this study have a long-term research goal of developing complementary and alternative therapies that might ameliorate the symptoms of posttraumatic stress disorder. The style of yoga chosen for this study does not require physical poses and can therefore be practiced by anyone. While most people associate the practice of yoga with physical postures, yoga nidra, selected for this study, emphasizes the less strenuous practices of yoga including deep relaxation, deep breathing, and meditation. Yoga nidra can reduce physical, emotional, mental, and even subconscious tension. The technique produces a deep state of relaxation through body scanning, deep breathing techniques, and arousal of the parasympathetic nervous system. Yoga nidra is practiced while the participant lies on his or her back, which is more comfortable for many than seated meditation.

FY 2006 Outlook

The Armed Forces Epidemiological Board serves in an advisory role to the DHCC and the other centers of excellence dedicated to improving deployment health. In FY 2006, DHCC will continue to coordinate efforts to support continuous improvement of deployment-related healthcare across the military healthcare system in light of Armed Forces Epidemiological Board recommendations.

Direct Health Service Delivery

The DHCC clinical team plans to continue to deliver the Specialized Care Programs Track I and Track II, provide Post-Deployment Health Assessments to re-deploying service members, and provide evaluation and care for veterans with difficult-to-diagnose deployment-related health concerns. DHCC will continue to share its best practices from the Specialized Care Programs with other military treatment facilities that have shown interest in implementing similar programs.

In FY 2006, the DHCC director will be project manager for the Army Surgeon General tasked implementation of the RESPECT-MIL primary care treatment model for depression and post-traumatic stress disorder in 15 Army installations throughout the continental United States, Hawaii, and Germany.

Outreach and Provider Education

DHCC will provide input into the Amputation Management/Rehabilitation Clinical Practice Guideline Development Working Group as required. PDHealth.mil will be upgraded to an integrated portal-based Web application. Web site content will be reorganized, navigation will be made more intuitive, and the search capability enhanced. DHCC will continue to consult with the Scientific Advisory Panel of the National Quality Management Program on a new posttraumatic stress disorder study in 2006 as well as on a study examining the efficacy and utility of clinical practice guidelines across the DoD. In 2006, DHCC leadership will advocate for a more formal look at revising the Post-Deployment Health Evaluation and Management

Clinical Practice Guideline. This appears indicated given the fact that the current guideline was developed before current intensive deployment activities and associated health issues of the past several years and in the context of new DoD healthcare policy developments (e.g., the Post Deployment Health Reassessment process). Formal revision processes will require a systematic review of the guideline processes that work well and those that do not, which is consistent with Armed Forces Epidemiological Board recommendations.

The Deployment Health Support Directorate, Office of the Assistant Secretary of Defense for Health Affairs has requested that DHCC assume responsibility for its 1-800 Contact Center. DHCC will work out the implementation of this transition in FY 2006, while continuing to support patients and providers through its two existing helplines. DHCC will conduct the fourth Deployment Healthcare Track at the 9th Annual Force Health Protection Conference, taking place in Albuquerque, New Mexico in August. DHCC will solicit input from providers in the field regarding presentation topics that address their specific needs while continuing to highlight best practices in the provision of deployment-related healthcare with a particular emphasis on primary care.

Health Services Research

Four new projects are scheduled to be approved and commence in early FY 2006 funded by the Departments of Defense and Veterans Affairs and the U.S. Congress. Collaborators to include the Uniformed Services University of the Health Sciences, the Samueli Institute, the University of Western Ontario, American University, the Centers for Disease Control and Prevention, and selected DoD and VA medical treatment facilities.

As recommended by the Armed Forces Epidemiological Board, the DHCC research team will develop Web-based and print materials to disseminate the tools it is developing and testing along with research findings on addressing deployment-related mental health concerns in the military population.

Appendix A: Collaborations

DHCC Inter-Service, Inter-Agency, and University Collaborations

Department of Defense and Military Services

- Armed Forces Epidemiological Board
- Armed Forces Institute of Pathology
- Armed Forces Radiobiology Research Institute
- Defense and Veterans Brain Injury Center
- Deployment Health Support Directorate, Office of the Assistant Secretary of Defense for Health Affairs
- Office of Clinical Program Policy, Office of the Assistant Secretary of Defense for Health Affairs
- National Quality Management Program, TRICARE Management Activity
- Navy Environmental Health Center
- Naval Health Research Center (San Diego, California)
- Uniformed Services University of the Health Sciences
- U.S. Air Force Institute for Operational Health
- U.S. Air Force Medical Support Agency
- U.S. Army Medical Command Quality Management Directorate
- U.S. Army Center for Health Promotion and Preventive Medicine
- U.S. Army Medical Research and Materiel Command
- U.S. Army Medical Surveillance Activity
- U.S. Army Proponency Office for Preventive Medicine
- Walter Reed Army Institute of Research
- Walter Reed National Vaccine Healthcare Center

Department of Veterans Affairs

- Cooperative Studies Program Coordinating Centers (Palo Alto, California)
- Environmental Agents Service
- Environmental Epidemiology Service
- National Center for PTSD
- Office of Quality and Performance
- 14 Veterans Affairs Medical Centers
- Veterans Affairs Maryland Health Care System Depleted Uranium Follow-Up Program (Baltimore, Maryland)
- War-Related Illness and Injury Centers (East Orange, New Jersey, and Washington, DC)

Department of Health & Human Services

- Centers for Disease Control and Prevention
- National Institute of Mental Health
- National Institute on Aging

University and Other Collaborations

- American University
- Boston University School of Medicine
- Center for the Study of Traumatic Stress
- Dartmouth University School of Medicine
- Duke University Medical School
- Indiana University
- Regenstrief Institute, Inc.
- Rutgers University/University of Medicine and Dentistry of New Jersey
- The John D. and Catherine C. MacArthur Foundation
- Samueli Institute for Information Biology
- University of New South Wales (Sydney, Australia)
- University of Western Ontario
- Walter Reed Society
- Washington University School of Medicine

Appendix A: Collaborations

Detailed List of DHCC Collaborations

Collaborations to Improve Quality of Post-Deployment Healthcare

- 1. Clinical Practice Guideline Creation:**

The DHCC deputy director has been appointed to the Amputation Management/Rehabilitation Clinical Practice Guideline Development Working Group. He has been the primary contributor regarding behavioral health issues. The working group consists of healthcare providers and clinical practice guideline specialists/medical education consultants from all Branches of Service and the VA Dept of Evidence-Based Practice. The group has been reviewing and grading literature related to amputation, formulating recommendations, developing an algorithm defining and outlining care, and developing patient education materials. It is anticipated that the new guideline will be completed in mid-2006.
- 2. Clinical Practice Guideline Implementation:**

DHCC continues education and consultation efforts to promote use of the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline through collaborations with the VA healthcare system, Office of the Assistant Secretary of Defense for Health Affairs, the National Vaccine Healthcare Center, Army Medical Command, Navy Environmental Health Center, Air Force Medical Support Agency, and medical staff from all Branches of Service. In FY 2004, DHCC created 18 Web-based courses and the award-winning PDH-CPG Toolbox to support this effort. By the end of FY 2005, 3,254 Toolboxes had been distributed to Army providers, 1,576 to the Air Force, and 2,152 to Navy providers.
- 3. DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline Quality Monitoring:**

The DHCC director and deputy director are consultants to the Scientific Advisory Panel of the National Quality Management Program helping researchers assess implementation of the DoD/VA post-deployment health, depression, and posttraumatic stress disorder clinical practice guidelines. The 2005 research focus was on screening and referral patterns for posttraumatic stress. DHCC will continue to consult with the Scientific Advisory Panel on a new posttraumatic stress disorder study in 2006 as well as on examining the efficacy and utility of clinical practice guidelines in the DoD more generally. The DHCC director collaborated with National Quality Management Program to create a Web-enabled CME presentation on the background of the post-deployment health guideline, sample activities, and resources to help military medical personnel translate National Quality Management Program recommendations into practice.
- 4. Federal Clinician Education and Consultation:**

Ongoing support is provided to all DoD medical treatment facilities through DHCC's state-of-the-art Web site, PDHealth.mil (<http://www.PDHealth.mil>). PDHealth.mil provides a one-stop repository for deployment-related health information for clinicians and patients. DHCC also furnishes toll-free helplines for both clinicians with questions and for patients who need care, a daily electronic newsletter highlighting current events and newly developed information in the area of post-deployment health, and clinical resources to enhance health risk communication and improve the doctor-patient relationship.

Appendix A: Collaborations

Collaborations in Provision of Post-Deployment Clinical Care

1. **Center for the Study of Traumatic**

Stress: The Center for the Study of Traumatic Stress provides DHCC with valuable input about the health risks associated with extreme warfare environments and terrorism. Established in 1987, the Center addresses Department of Defense concerns about psychological, behavioral and healthcare consequences resulting from these health threats. The Center pioneered research on the effects of exposure to weapons of mass destruction prior to Desert Storm generating an unprecedented body of research, scholarship and one of the world's largest databases (over 18,000 articles) on psychological, social and behavioral consequences of exposure to traumatic events and other extreme environments (e.g., desert, space, undersea). This includes mental health responses ranging from resilience, distress, health risk behaviors, disaster behaviors and psychiatric illness such as posttraumatic stress disorder, acute stress disorder and depression. In addition, the Center has developed an extensive knowledge and research capability to address preparing, responding to, mitigating and recovery from natural and human made disasters.

2. **Clinical Follow-up after Depleted**

Uranium Exposure: DHCC provides central archiving for records pertaining to depleted uranium exposure tests. Collaboration between DHCC, the Deployment Health Support Directorate, the Army Center for Health Promotion and Preventive Medicine, the Armed Forces Institute of Pathology, and the Veterans Health Administration's Depleted Uranium Follow-up Program continued in FY 2005. During FY 2005, DHCC received the results of 435 24-hour urine bioanalyses for depleted uranium bringing the total archived to 1,454. Among the records

received there were two new confirmed cases of depleted uranium exposure in FY 2005. DHCC facilitates referral of patients with positive exposure to the VA's Depleted Uranium Follow-up Program and will continue to coordinate medical management follow-up for them, as needed.

3. **Clinically Oriented Health Risk**

Communication: DHCC collaborates with multiple agencies and organizations to build effective systems for federal clinician and military/veteran health risk communication as well as clinical and public health education on deployment health issues. On-going collaboration with the Office of the Assistant Secretary of Defense for Health Affairs Risk Communication Working Group, the DoD Global Emerging Infections Surveillance and Response System, the Air Force Institute for Operational Health, the Army Center for Health Promotion and Preventive Medicine, and the Navy Environmental Health Center has resulted in the development of a variety of health risk communication materials and fact sheets. In FY 2005, the topics of greatest interest were *Acinetobacter* infection and mefloquine.

4. **Nerve and Mustard Agent Exposure:**

In FY 2004, DHCC collaborated with the Army Proponency Office for Preventive Medicine on policies for the evaluation and follow-up of casualties of nerve and mustard agent exposure incidents that did not occur in storage, demilitarization, or research settings. DHCC is available to coordinate healthcare evaluations for military personnel exposed to these agents to ensure appropriate follow-up. This activity will continue in FY 2006.

Appendix A: Collaborations

- 5. Staff Training and Assistance Team Outreach:** The Staff Training and Assistance Team was assembled in late FY 2003 to provide staff training and assistance to military treatment facilities in each Branch of Service for the implementation of the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline and use of newly created guideline tools. The team made eight visits to military treatment facilities from all Branches of Service, presenting to more than 400 providers. The DHCC Staff Training and Assistance Team also began distribution of the guideline Providers Desk Reference Toolbox to the services in the summer of 2004 in coordination with the Army Medical Command, the Air Force Medical Support Agency, and the Navy Environmental Health Center. By the end of FY 2005, nearly 7,000 Toolboxes had been sent out to military primary care providers.
- 6. Walter Reed Society:** Throughout the year the DHCC staff members provide volunteer support to the Walter Reed Society, which was established in 1996 to assist the hospital command with issues related to patient care, education, and family support for staff and patients. Past projects of the Society include the improvement of waiting rooms, provision of playground equipment, and creation of a healing garden. In response to the

Global War on Terrorism, the Society has set up the Operation Iraqi Freedom Family Support Fund to provide assistance to family members of patients at Walter Reed. DHCC personnel support the Society's efforts to care for these Soldiers and their family members who come to the hospital to be with them during their recovery. Many volunteer hours are spent meeting Soldiers and family members, assessing their financial and related needs, and receiving and distributing packages that are sent in support of our troops. This work keeps the DHCC close to the Soldiers and helps the staff understand their experiences and their needs.

Appendix B: Publications

Manuscripts

Caldwell, J. Y., Davis, J. D., Du Bois, B., Echo-Hawk, H., Erickson, J. S., Goins, R. T. et al., (2005). Culturally Competent Research with American Indians and Alaska Natives: Findings and Recommendations of the First Symposium of the Work Group on American Indian Research and Program Evaluation Methodology (AIRPEM). *American Indian and Alaska Native Mental Health Research: The Journal of the National Center*, 12, 1, 1-21.

Clymer, R. (2005). How I Crossed the Road. *Voices: the Art and Science of Psychotherapy*, 41, 2, 36-40.

Engel, C. C. (2005). Improving Primary Care for Military Personnel and Veterans with Post-traumatic Stress Disorder – The Road Ahead. *General Hospital Psychiatry*, 27, 3, 158-60.

Engel, C. C., Barsky, A. J., Reissman, D. B., DeMartino, R., Kutz, I., McDonald, M., et al., (2005). *Assessment and Triage of Mass Idiopathic Illness Associated with Chemical, Biological, or Radiological Terrorist Attack*. Manuscript submitted for publication.

Litz, B.T., Williams, L., Wang, J., Bryant, R., Engel, C. C. (2004). A Therapist-Assisted Internet Self-Help Program for Traumatic Stress. *Professional Psychology: Research and Practice*, 35, 6, 628-634.

Liu, X., Engel C. C., Armstrong, D. W., Kang, H. (2005). *Linkages of Health Conditions, Functional Status and Self-Rated Health in Older Americans*. Manuscript submitted for publication.

Liu, X., Engel, C. C., Armstrong, D. W., Kang, H. (2005). *Survival Convergence and the Preceding Mortality Crossover for Two Population Subgroups*. Manuscript submitted for publication.

Liu, X., Engel, C. C., Kang, H., Armstrong, D. W. (in press). Veterans and Functional Status Transitions in Older Americans. *Military Medicine*.

Liu, X., Engel, C. C., Kang, H., Cowan, D. N. (in press). The Effect of Veteran Status on Mortality Among Older Americans and Its Pathways. *Population Research and Policy Review*.

Liu, X., Engel, C. C., Liang, J. (2005). *Decomposition of Causal Effects in Multinomial Logit Models*. Manuscript submitted for publication.

Newby, J. H., Ursano, R. J., McCarroll, J. E., Liu, X., et al., (2005). Post-deployment Domestic Violence by U.S. Army Soldiers. *Military Medicine*, 170, 8, 643-648.

Osuch, E., Engel, C. C. (2004). Research on the Treatment of Trauma Spectrum Responses: The Role of the Optimal Healing Environment and Neurobiology. *Journal of Alternative and Complementary Medicine*, 10, S1, S211-S221.

Roesel, T. R. (in press). To the Editor: Dengue in Travelers. *New England Journal of Medicine*, 353, 23, 2512.

Rue, J. H., Armstrong, D. W., Frassica, F. J., Deafenbaugh, M., Wilckens, J. H. (2004). The Effect of Pulsed Ultrasound in the Treatment of Tibial Stress Fractures. *Orthopedics*, 27, 11, 1192-1195.

Schnurr, P. P., Friedman, M. J., Engel, C. C., Foa, E. B., Shea, M. T., Resick, P. M. et al., (2005). Issues in the Design of Multisite Clinical Trials of Psychotherapy: VA Cooperative Study No. 494 as an Example. *Contemporary Clinical Trials*, 26, 626-636.

Abstracts

Bruner, V., Frederich, P., Thurmond, V. Caring for the Care Giver: Preventing Compassion Fatigue. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Bruner, V., Gore, K., DeDeyn, J., Jaffer, A., Litz, B., Engel, C. C., A Therapist-Guided Internet-Based Self-Management Approach to Post-Traumatic Stress After Military Events. Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Appendix B: Publications

Clymer, R., Bruner, V. New Program for Returning OIF/OEF Service Members: The Deployment Health Clinical Center Specialized Care Track II. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Crowley, B. Comprehensive Psychiatry: Patients with Medically Unexplained Physical Symptoms and PTSD. Symposium 92, American Psychiatric Association Annual Meeting, Atlanta, GA. May 2005.

Engel, C. C. Clinical Utility of Post-Deployment Health Assessment Updates: Improving Care to Returning Combat Veterans and Families. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C. Improving Access to Quality Military Care for Post-Traumatic Stress—Stigma, Barriers, and Innovations. Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Engel, C. C. Introduction to the Collaborative Adverse Childhood Experiences Study in Military Personnel. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C. The Role of Evidence to Improve Post-Deployment Health Care. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C., Barsky, A. J., Reissman, D. B., DeMartino, R., Kutz, I., McDonald, M. D., Locke, S. E. Assessment and Triage of Mass Idiopathic Illness Associated with Chemical, Biological, or Radiological Terrorist Attack. 63rd Annual Scientific Meeting of the American Psychosomatic Society, Vancouver, Canada. March 2005.

Engel, C. C., Friedman, M. J., Hoge, C. W., Dietrich, A. J., Zatzick, D. Improving Care for Trauma-Related Psychiatric Disorders in General Medical Settings. Symposium at the 158th Annual Meeting of the American Psychiatric Association, Orlando, FL. May 2005.

Engel, C. C., Gore, K., Armstrong, D. W., Bruner, V., Betlyon, D., Bryant, R., Litz, B. Adherence to Web-Based Treatment for Post-traumatic Stress Disorder. Critical Issues in eHealth Research Conference, Bethesda, MD. June 2005.

Engel, C. C., Hoge, C. Adverse Childhood Experiences in Military Personnel. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C., Hollandsworth, J. Deployment Health Care 2005: Critical Issues and Trends of Returning OIF/OEF Service Members and Families. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C., O'Malley, P., Thurmond, V., Magruder, K. Clinical Epidemiologic Research Methods Applied to Post-Deployment Health Care. Full Day Workshop. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Gonzalez, D., Meyer, N., Gore, K., DeDeyn, J., Bruner, V., Peterson, C., Engel, C. C. Post-Traumatic Healthcare Needs: What Do Military Women Say? Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Grieger, T. A., Cozza, S. J., Ursano, R. J., Engel, C. C., Hoge, C., Martinez, P. E., Wain, H. J. Onset and Course of Post-Traumatic Stress Disorder and Depression in Battle Injured Soldiers. Annual Meeting of the American Psychiatric Association, Atlanta, GA. May 2005.

Liu, X., Engel, C. C., Kang, H. Survival Convergence and the Preceding Mortality Crossover for Two Population Subgroups. 2004 Annual Meeting of the Southern Demographics Association, Hilton Head Island, SC. October 14-16, 2004.

Appendix B: Publications

Liu, X., Engel, C. C., Hang, K. Survival Convergence and the Preceding Mortality Crossover for Two Population Subgroups. Annual Meeting of the Population Association of America, Philadelphia, PA. March 31-April 2, 2005.

O'Leary, T., Simmons, M. A., Geckle, L. Risk Communication Workshop for Public Affairs Officers. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Roesel, T. Side Effects of Mefloquine and Doxycycline Anti-Malarial Prophylaxis as Reported During the Post-Deployment Interview. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Roesel, T. The Specialized Care Program at the Deployment Health Clinical Center, Walter Reed. Uniformed Services Personnel: Treatment Interventions for Toxic Exposure Conference, New York, NY. October 2004.

Rogut, D., Vaeth, M. Post-Deployment Health Clinical Practice Guideline (PDH-CPG) Update. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Sjoberg, T., Jaffer, A., Mishkind, M., O'Leary, T., Engel, C. C. Disparate Views Between Military Physicians & Their Patients Regarding War-Related Health Concerns and Military Health Care Quality. American Academy on Physician and Patient 2004 Research and Teaching Forum, Indianapolis, IN. October 2004.

Thomas, A., Grieger, T. A., Cozza, S. J., Ursano, R. J., Engel, C. C., Hoge, C., Martinez, P. E., Wain, H. J. Onset and Course of Posttraumatic Stress Disorder and Depression in Battle Injured Soldiers. Abstract NR-604. 158th Annual Meeting of the American Psychiatric Association, Orlando, FL. May 2005.

Vaeth, M., Rogut, D. Depleted Uranium (DU) Medical Management. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Presentations

Bruner, V., Frederich, P., Thurmond, V. Caring for the Care Giver: Preventing Compassion Fatigue. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Bruner, V., Gore, K., DeDeyn, J., Jaffer, A., Litz, B., Engel, C. C. A Therapist-Guided Internet-Based Self-Management Approach to Post-Traumatic Stress After Military Events. Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Clymer, R., Bruner, V. New Program for Returning OIF/OEF Service Members: The Deployment Health Clinical Center Specialized Care Track II. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Crowley, B. Comprehensive Psychiatry: Patients with Medically Unexplained Physical Symptoms and PTSD. Symposium 92, American Psychiatric Association Annual Meeting, Atlanta, GA. May 2005.

Engel, C. C. Clinical Force Health Protection. 2005 Annual Research Day, Uniformed Services University of the Health Sciences, Bethesda, MD. May 2005.

Engel, C. C. Clinical Utility of Post-Deployment Health Assessment Updates: Improving Care to Returning Combat Veterans and Families. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C. Congressional Testimony. Statement before the Committee on Veterans' Affairs, United States House of Representatives. Hearing on the Department of Defense and Department of Veterans Affairs: The Continuum of Care for Posttraumatic Stress Disorder. July 2005.

Appendix B: Publications

Engel, C. C. Department of Defense Deployment Health Clinical Center – Annual Concept of Operations Review. Meeting of the Armed Forces Epidemiological Board, Fort Detrick, MD. March 2005.

Engel, C. C. DoD/VA Update: Gulf War and Current Operations. 2005 Annual Meeting of the National Gulf War Resource Center, Orlando, FL. May 2005.

Engel, C. C. DoD Opportunities for Collaboration on PTSD Health Services Research. For the 24th Annual Department of Veterans Affairs Health Services Research & Development National Meeting, Washington, DC. February 2005.

Engel, C. C. Force Health Recovery: The United States Experience. United Kingdom Triservice Occupational Medicine Conference, Royal Military Academy at Sandhurst, Camberley, England. November 2004.

Engel, C. C. Health Services Research & the Challenge of Medically Unexplained Symptoms after War. Department of Psychology Grand Rounds, Uniformed Services University, Bethesda, MD. February 2005.

Engel, C. C. History and Characteristics of Post-War Syndromes. Grand Rounds, Department of Environmental and Occupational Health, George Washington University, Washington, DC. February 2005.

Engel, C. C. Improving Access to Quality Military Care for Post-traumatic Stress—Stigma, Barriers, and Innovations. Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Engel, C. C. Improving Post-Deployment Care: The VA-DoD Clinical Practice Guidelines, The Association of Military Surgeons of the United States Annual Meeting, Denver, CO. November 2004.

Engel, C. C. Improving Primary Care for Post-War Health Concerns – What Can We Learn from the Evidence Regarding Depression? Grand Rounds for New Jersey Department of Veterans Affairs War-Related Illness & Injury Study Center, East Orange, NJ. June 2005.

Engel, C. C. Improving the Mental Healthcare of Deployed Military Personnel. Presentation for the National Academy of Science Institute of Medicine Medical Follow-up Agency, Washington, DC. June 28 & July 11, 2005.

Engel, C. C. “In Return for Their Sacrifice”: Conceptual Basis and Clinical Outcomes of the Specialized Care Program. Presentation to the Department of Veterans Affairs Research Advisory Committee on Gulf War Veterans’ Illnesses, Washington, DC. October 2004.

Engel, C. C. Introduction to Risk Communication for Military & Veterans with War-Related Health Concerns. VA War-Related Illness and Injury Study Center Meeting, Baltimore, MD. December 2004.

Engel, C. C. Introduction to the Collaborative Adverse Childhood Experiences Study in Military Personnel. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C. Introduction to the DoD-CDC Collaborative Adverse Childhood Experiences Study (CACES). Meeting of the Armed Forces Epidemiological Board, Wright-Patterson Air Force Base, Ohio. June 2005.

Engel, C. C. Medically Unexplained Physical Symptoms after Wartime Service. Annual Meeting of the American College of Occupational & Environmental Medicine, Washington, DC. May 2005.

Appendix B: Publications

Engel, C. C. Psychiatric Impact of the Global War On Terrorism: Illness Burden, Barriers to Care, & Intervention Efforts. The Association of Military Surgeons of the United States Annual Meeting, Denver, CO. November 2004.

Engel, C. C. Rethinking Somatization: The Causes & Care of Multiple Idiopathic Physical Symptoms. Department of Psychiatry Grand Rounds, Georgetown University, Washington, DC. January 2005.

Engel, C. C. Social Context and Post-War Syndromes. 3rd Annual Ken Artiss Symposium on Military Psychiatry, Walter Reed Army Medical Center, Washington, DC. June 2005.

Engel, C. C. Suicide and Its Prevention in the U.S. Military. 2005 National Conference of the Department of Veterans Affairs Mental Illness Research Education & Clinical Centers, New Orleans, LA. June 2005.

Engel, C. C. The Role of Evidence to Improve Post-Deployment Health Care. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C. Treating Somatic Symptoms and Related Syndromes: Does Duloxetine Work? Department of Psychiatry Grand Rounds, Walter Reed Army Medical Center, Washington, DC. September 2005.

Engel, C. C. Update on Post Deployment Health Findings in DoD and VA. Joint DoD/VA Conference on Post Deployment Mental Health, Alexandria VA. March 2005.

Engel, C. C. War-Related Posttraumatic Stress Disorder. Annual Meeting of the American College of Occupational & Environmental Medicine, Washington, DC. May 2005.

Engel, C. C. What Do We Know About the Mental and Physical Health of Military Personnel Returning from the Wars in Iraq and Afghanistan? National Defense University, Fort McNair, Washington, DC. October 27 & November 1, 2004.

Engel, C. C., Barsky, A. J., Reissman, D. B., DeMartino, R., Kutz, I., McDonald, M. D., Locke, S. E. Assessment and Triage of Mass Idiopathic Illness Associated with Chemical, Biological, or Radiological Terrorist Attack. 63rd Annual Scientific Meeting of the American Psychosomatic Society, Vancouver, Canada. March 2005.

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Engel, C. C., Gore, K., Armstrong, D., Bruner, V., Betlyon, D., Bryant, R., Litz, B. Adherence to Web-Based Treatment for Posttraumatic Stress Disorder. Poster presentation. Critical Issues in eHealth Research 1st Annual Conference in Bethesda, MD. June 2005.

Engel, C. C., Hoge, C. Adverse Childhood Experiences in Military Personnel. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Engel, C. C., Hollandsworth, J. Deployment Health Care 2005: Critical Issues and Trends of Returning OIF/OEF Service Members and Families. Annual Force Health Protection Conference, Louisville, KY. August 2005.

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Appendix B: Publications

Grieger, T. A., Cozza, S. J., Ursano, R. J., Engel, C. C., Hoge, C., Martinez, P. E., Wain, H. J. Onset and Course of Post-Traumatic Stress Disorder and Depression in Battle Injured Soldiers. Annual Meeting of the American Psychiatric Association, Atlanta, GA. May 2005.

Liu, X., Engel, C. C., Kang, H. Survival Convergence and the Preceding Mortality Crossover for Two Population Subgroups. Annual Meeting of the Southern Demographics Association, Hilton Head Island, SC. October 2004.

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Vaeth, M., Rogut, D. Depleted Uranium (DU) Medical Management. Annual Force Health Protection Conference, Louisville, KY. August 2005.

Yates, B.T., Mannix, D., Freed, M. C., Campbell, J., Johnsen, M., Merrill, J. C., Jones, K., Blyler, C. Costs, benefits, cost effectiveness, and cost-benefit of consumer-operated services: Findings of a multi-site study. In C. Blyler, J. Campbell, C. Lichtenstein, B. Yates, & M. Johnsen Multisite Findings of Consumer Operated Programs. Scientific session presented at the annual meeting of the American Public Health Association, Washington, DC. November 2004.

Appendix C: Research Projects

Name of Project: A Placebo-Controlled Trial of Prazosin Vs. Paroxetine for Combat Stress-Induced Nightmares and Sleep Disturbance.

Funding Organization: Department of Defense.

DHCC Staff Assigned:
Michael C. Freed, PhD (Clinical Research Psychologist).
David W. Armstrong, III, PhD, FACSM.

Principal Investigator:
COL Charles Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:
Murray A. Raskind, MD, University of Washington School of Medicine, VA Puget Sound Health Care System.
Elaine R. Peskind, MD, University of Washington School of Medicine, VA Puget Sound Health Care System.
Miles M. McFall, PhD, University of Washington School of Medicine, VA Puget Sound Health Care System.

Status:
Awaiting IRB approval.

Name of Project: A Randomized Clinical Trial of Cognitive-Behavioral Treatment for Posttraumatic Stress Disorder in Women—VA-DoD Cooperative Study No. 494.

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

DHCC Staff Assigned:
Kristie L. Gore, PhD (Study Coordinator).

Principal Investigator:
COL Charles Engel, Jr., MD, MPH (Principal Investigator and Study Co-Chair).

Collaborating External Personnel and Organizations:

Paula P. Schnurr, PhD, and Matthew J. Friedman, MD, PhD, VA National Center for PTSD.
Kenneth E. James, PhD, Cooperative Studies Program Coordinating Center, Palo Alto, CA.
Study therapists: Catherine Sheehan, LCSW, Department of Social Work, WRAMC; Victoria Bruner, LISW, BCETS, DHCC; and Corina Miller, LCSW-C, Psychiatric Liaison, the Department of Psychiatry, WRAMC.

Presentations:
Sheliga, V., Woodward, P., Gonzalez, D., Engel, C.C. Implementing a Randomized Clinical Trial for Military Women with PTSD. Sixth Annual Force Health Protection Conference, U.S. Army Center for Health Promotion & Preventive Medicine. August 2003.

Sheliga, V., Peterson, C., Gonzalez, D., Woodward, P., Engel, C. C. Special Care for Special Women. A 7 minute video of the CSP494 Randomized Clinical Trial Team discussing the challenges and rewards of participating in a clinical trial for military women with Post-Traumatic Stress Disorder. Sixth Annual Force Health Protection Conference, U.S. Army Center for Health Promotion & Preventive Medicine. August 2003.

Gonzalez, D., Meyer, N., Gore, K., DeDeyn, J., Bruner, V., Peterson, C., Engel, C. C. The Care of Military Women with Traumatic Stress Concerns: What They've Said and What We've Learned. Seventh Annual Force Health Protection Conference, U.S. Army Center for Health Promotion & Preventive Medicine, Albuquerque, NM. August 2004.

Gonzalez, D., Meyer, N., Gore, K., DeDeyn, J., Bruner, V., Peterson, C., Engel, C. C. Post-traumatic Healthcare Needs: What Do Military Women Say? Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Status:
Trial complete. Data analysis is ongoing.

Appendix C: Research Projects

Name of Project: Acupuncture for the Treatment of Trauma Survivors.

Funding Organization: U.S. Congress.

DHCC Staff Assigned:

Elizabeth Harper-Cordova, MA (Study Coordinator).
David W. Armstrong, III, PhD, FACSM (Co-Investigator).
Thomas Roesel, MD, PhD (Medical Monitor).

Principal Investigator:

COL Charles Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:

David M. Benedek, MD, DFAPA, Uniformed Services University of the Health Sciences (Co-Investigator).
Elizabeth A. Osuch, MD, University of Western Ontario.
Thomas A. Grieger, MD, DFAPA, Uniformed Services University of the Health Sciences.
Robert J Ursano, MD, Uniformed Services University of the Health Sciences.
Christine H. Goertz, DC, PhD, Samueli Institute.
Wayne Jonas, MD, Samueli Institute.

Status:

Awaiting HUC approval.

Name of Project: An Ecological Momentary Assessment Study of Daily Stress Responses Among Soldiers with Occupational Stress—A Feasibility Study.

Funding Organization: DHCC.

DHCC Staff Assigned:

David W. Armstrong, III, PhD, FACSM (Associate Investigator).
Jamie D. Davis, PhD (Associate Investigator).

Principal Investigator:

COL Charles Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:

Kathleen C. Gunthert, PhD, American University.
Susan Wenze, American University.
Nicholas Forand, American University.

Status:

Awaiting IRB approval.

Name of Project: Collaborative Adverse Childhood Experiences Study.

Funding Organization: Department of Defense, Office of the Assistant Secretary of Defense for Health Affairs.

DHCC Staff Assigned:

Ronnie Robinson, MS (Study Coordinator).
David W. Armstrong, III, PhD, FACSM.

Principal Investigator/Associate Investigator:

MAJ Mary Krueger, MD (Principal Investigator), Womack Army Medical Center.
COL Charles Engel, Jr., MD, MPH (Associate Investigator).

Collaborating External Personnel and Organizations:

COL Bruce Ruscio, MPH, DrPH, Office of the Assistant Secretary of Defense for Health Affairs.
Shanta Dube, MPH, Centers for Disease Control and Prevention.
Tim Tinker, DrPH, MPH, Widmeyer Communications.
Marty McCough, MPA, Widmeyer Communications.
Stacia Tipton, MA, Widmeyer Communications.

Status:

Awaiting IRB approval.

Appendix C: Research Projects

Name of Project: Exploratory Study of Biological Markers in Blood as Assessed by Microarray in Operation Iraqi Freedom Patients.

Funding Organization: Uniformed Services University of the Health Sciences, Walter Reed Army Institute of Research

Principal Investigator/Associate Investigator:

Thomas Roesel, MD, PhD, FACP (Principal Investigator).
COL Naomi Aronson, Medical Corps, USUHS, WRAMC (Associate Investigator).

Collaborating External Personnel and Organizations:

Sheila Peel, PhD, Walter Reed Army Institute of Research.

Status:
Active.

Name of Project: Health-e VOICE.

Funding Organization: Centers for Disease Control and Prevention.

DHCC Staff Assigned:
Terry Sjoberg, BSc (Project Director).
David W. Armstrong, III, PhD, FACSM.

Principal Investigator:
COL Charles C. Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:
Tim Tinker, DrPH, MPH, Widmeyer Communications.
David Frank, MA, Widmeyer Communications.

Presentations:

Sjoberg T. J., Jaffer A., Cowan D.N., Tinker T., DeBakey S., Engel C. C. Health-e VOICE: A randomized clinical trial of improving clinical risk communications between providers and redeployed veterans. Fifth Annual Force Health Protection Conference, U.S. Army Center for Health Promotion & Preventive Medicine, Baltimore, MD. August 2002.

Engel C. C., Sjoberg T. J., Jaffer A., Adkins J., Tinker T., DeBakey S., Cowan D. N. Health-e VOICE: A randomized clinical trial of improving clinical risk communications between providers and patients with military-related health concerns. Sixth International Conference of the Scientific Committee on Education and Training in Occupational Safety and Health. The International Commission on Occupational Health, Baltimore, MD. October 2002.

Sjoberg T. J., Jaffer A., Mishkind M., O'Leary T., Engel C. C. Military providers and patients with deployment-related health concerns: A disparity of perceptions regarding health care delivery. Seventh Annual Force Health Protection Conference, Albuquerque, NM. August 2004.

Status:
Active.

Name of Project: Primary Care PTSD Screener (PPS): A Feasibility Study Comparing Measures of PTSD.

Funding Organization: DHCC.

DHCC Staff Assigned:
Kristie L. Gore, PhD (Study Coordinator).
David W. Armstrong, III, PhD, FACSM.

Principal Investigator:
COL Charles Engel, Jr., MD, MPH.

Appendix C: Research Projects

Collaborating External Personnel and Organizations:

CPT El Castro, MD, WRAMC.
LTC Van Coots, MD, Rader Clinic, Fort Belvoir.
COL Dale K. Block, Medical Corps, DiLorenzo Clinic, Army Pentagon.

Status:

Active.

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

Funding Organization: National Institute of Mental Health.

DHCC Staff Assigned:

Kristie Gore, PhD (Assessment Social Worker).

Principal Investigator/Site Investigator:

COL Charles Engel, Jr., MD, MPH (Principal Investigator and Study Co-Chair).
Vivian Sheliga, DSW, BCD, LCSW (Site Investigator).

Collaborating External Personnel and Organizations:

Paula P. Schnurr, PhD, and Matthew J. Friedman, MD, PhD, VA National Center for PTSD.
Kenneth E. James, PhD, Cooperative Studies Program Coordinating Center, Palo Alto, CA.
Study therapists: Catherine Peterson, LCSW, Department of Social Work, WRAMC; Victoria Bruner, LCSW, BCETS, DHCC; and Corina Miller, LCSW-C, Psychiatric Liaison, the Department of Psychiatry, WRAMC.

Presentations:

Bruner, V., Gore, K., DeDeyn, J., Jaffer, A., Litz, B., Bryant, R., Engel C. C. Can an Internet-Based Self-Management Approach Reduce Traumatic Stress? Seventh Annual Force Health Protection Conference, U.S. Army Center for Health Promotion & Preventive Medicine, Albuquerque, NM. August 2004.

Bruner, V., Gore, K., DeDeyn, J., Jaffer, A., Litz, B., Bryant, R., Engel C. C. Using Computer Technology for Stress Reduction after Military Trauma Exposure. International Congress on Military Medicine, Washington, DC. September 2004.

Bruner, V., Gore, K., DeDeyn, J., Jaffer, A., Litz, B., Bryant, R., Engel C. C. A Therapist-Guided Internet-Based Self-Management Approach to Post-Traumatic Stress after Military Events. 2004 Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. November 2004.

Status:

Trial complete. Data analysis is ongoing.

Name of Project: Prospective Study of Functional Status in Veterans at Risk for Unexplained Illness

Funding Organization: East Orange, New Jersey VA

Principal Investigator:

COL Charles Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:

Karen S. Quigley, PhD, War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.
Michael Byrnes, MD, Dept of Veterans Affairs, Ft Dix, New Jersey.
Karen G. Raphael, PhD, Univ. of Medicine and Dentistry of New Jersey.
Chin-Lin Tseng, PhD, Univ. of Medicine and Dentistry of New Jersey.
Shelley A. Weaver, PhD, War Related Illness and Injury Study Center, Department of Veterans, East Orange, NJ.
Drew A. Helmer, MD, MS, War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.
Thomas Findley, MD, PhD, War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Appendix C: Research Projects

Patricia A. Findley, PhD, MSW, LCSW, School of Management and Labor Relations Rutgers, the State of University of New Jersey.
Hannah L. Reade, BA, CMA, War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Status:
Active.

Name of Project: Re-Engineering Systems for the Primary Care Treatment of Depression and PTSD—Military (RESPECT-MIL).

Funding Organization: The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.

DHCC Staff Assigned:
David W. Armstrong, III, PhD, FACSM.

Principal Investigator:
COL Charles Engel, Jr., MD, MPH.

Collaborating External Personnel and Organizations:
CPT Chris J. Yamamoto, MC, USA, Womack Army Medical Center.
Allen J. Dietrich, MD, Dartmouth Medical School.
Sheila L. Barry, Dartmouth Medical School.
John Williams, MD, MHSc, Durham VA Medical Center.
Thomas Oxman, MD, Dartmouth Hitchcock Medical Center.

Status:
Active.

Name of Project: Veteran Status, Health and Mortality in Older Americans.

Funding Organization: National Institute on Aging.

DHCC Staff Assigned:
Xian Liu, PhD.

Principal Investigator:
Xian Liu, PhD.

Articles Accepted for Publication:
Liu, X., Engel, C. C., Kang, H., Cowan, D. N. (in press). The Effect of Veteran Status on Mortality Among Older Americans and Its Pathways. *Population Research and Policy Review*.

Articles in Progress:
Liu, X., Engel C. C., Armstrong, D. W., Kang, H. (2005). *Linkages of Health Conditions, Functional Status and Self-Rated Health in Older Americans*. Manuscript submitted for publication.

Liu, X., Engel, C. C., Liang, J. (2005). *Decomposition of Causal Effects in Multinomial Logit Models*. Manuscript submitted for publication.

Status:
Active.

Name of Project: Yoga as an Adjunctive Treatment for PTSD—A Feasibility Study.

Funding Organization: Samueli Institute for Information Biology.

DHCC Staff Assigned:
David W. Armstrong III, PhD, FACSM.

Principal Investigator:
COL Charles C. Engel, Jr., MD, MPH (Principal Investigator).
Christine Goertz, DC, PhD, Samueli Institute (Principal Investigator).

Collaborating External Personnel and Organizations:
Joan Walter, JD, PA-C, Samueli Institute.
Damara Cockfield, MPA, Samueli Institute (Project Coordinator).
Rachel Greene, Henry Jackson/ICHP (Yoga Instructor).

Status:
Active.

Appendix D: Deployment Healthcare Track Presentations

Anda, Robert F., MD, MS, Centers for Disease Control and Prevention. *Overview of the Adverse Childhood Experiences Study.*

Auchterlonie, Jennifer, Walter Reed Army Institute of Research. *Mental Health and Occupational Impact of Deployments to Iraq and Afghanistan: Findings from the Post-Deployment Health Assessment (DD 2796) and DMSS.*

Bruder, Teresa, PhD, Whorley, Larry, and Barnhill, Richard, Madigan Army Medical Center. *90 Day Post-Deployment Program.*

Bruner, Victoria, RN, LCSW, Deployment Health Clinical Center (DHCC). Frederich, Peter, Chaplain, LTC, USA, Office of the Chief of Chaplains, Fort Benning. Kenny, Deborah, LTC, AN, USA, PhD, MSN, EdM, WRAMC. *Caring for the Caregiver Panel.*

Burton, Denise, PhD, Chronic Medical Diseases Rehabilitation Research and Development, Department of Veterans Affairs. *Improving Clinical Care with Scientific Evidence: A Research Agenda for Those Who Have Borne the Battle.*

Cersovsky, Steven, MAJ, MC, USA, MPH, U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM). *Acute Eosinophilic Pneumonia among US Military Personnel Deployed during Operation Iraqi Freedom.*

Cleland, Max, Former U.S. Senator. *Strong in Broken Places: Pathways to Recovery from Combat.*

Clymer, Roy, PhD. Bruner, Victoria, RN, LCSW, DHCC. *New Program for Returning OIF/OEF Service Members: The Deployment Health Clinical Center Specialized Care Program.*

Cornum, Rhonda, COL, MC, USA, PhD, FORSCOM Surgeon, HQ Forces Command, Fort McPherson. *The Role of Landstuhl Regional Medical Center in the Global War on Terrorism.*

Dickey, Wayne, PhD, Center for Applied Health Research and Evaluation, Lockheed Martin Federal Healthcare. *Post-Traumatic Stress Disorder Screening.*

Eagan, Paul, CPT, MC, Canadian Forces, MBA, MPH, Uniformed Services University of the Health Sciences (USUHS). *The Post-Deployment Health Questionnaire as a Risk Communication and Management Tool.*

Engel, Charles Jr., COL, MC, USA, MPH, DHCC, USUHS. *Deployment Healthcare 2005: Critical Issues and Trends of Returning OIF/OEF Service Members and Families.*

Engel, Charles Jr., COL, MC, USA, MPH. *Use of Evidence to Improve Post-Deployment Healthcare.*

Engel, Charles Jr., COL, MC, USA, MPH. Hoge, Charles, COL, MC, USA, Walter Reed Army Institute of Research. *Adverse Childhood Experiences in Military Personnel.*

Engel, Charles Jr., COL, MC, USA, MPH. O'Malley, Patrick, LTC, MC, USA, WRAMC. Thurmond, Veronica, LTC, AN, USA, PhD, Nursing Research, WRAMC. Magruder, Kathryn, PhD, Ralph H. Johnson VA Medical Center. *Clinical Epidemiologic Research Methods Applied to Post-Deployment Healthcare (Workshop).*

Ferguson, Cynthia, LCDR, NC, USN, National Naval Medical Center. Pickel-Plappert, Diane CDR, NC, USNR. *Sexual Assault Healthcare: New DoD Policies, the Role of Healthcare Personnel and the Challenges of Sexual Assault Care in the Deployed Arena.*

Appendix D: Deployment Healthcare Track Presentations

Fortin, Auguste, MD, MPH, Yale University.
Dwamena, Francesca, MD, Michigan State University. *Patient Centered Communication: A Clinical Exercise.*

Geckle, Lori, USACHPPM. *Soldier Perceptions of Deployment Environment Exposures.*

Junnila, MAJ, MC, USA, MPH, Madigan Army Medical Center. *Humanitarian Assistance in Afghanistan: A Prospective Analysis of Clinical Effectiveness.*

Kelly, Joseph, PhD, Center for Applied Health Research/Evaluation, Lockheed Martin. *Post-Deployment Health Screening and Evaluation in the Direct Care System.*

Kugler, John, COL, MC, USA, Family Practice Consultant to the Office of the Army Surgeon General. Nichols, Donald L., CAPT, MC, USN, Specialty Leader Family Medicine. Haynes, James W., LtCol, MC, USAF, Chief USAF Consultant for Family Medicine. *Family Practice/Primary Care Providers: Critical in the Provision of Quality Deployment Related Healthcare.*

Lee, Robyn, USACHPPM. *Comparison of Different Environmental Exposure Indices Calculated from Post-Deployment Health Assessment (DD 2796).*

Lee, Terrence, MPH, USACHPPM. *Linking Pre- and Post-Deployment Forms and Subsequent Medical Visits.*

Magruder, Kathryn, PhD, Ralph H. Johnson VA Medical Center. *Detecting and Treating PTSD in Primary Care Settings.*

McDiarmid, Melissa, MD, MPH, Baltimore VA Medical Center. Squibb, Katherine, PhD, University of Maryland. *DU Exposure and Medical Surveillance Update and Current Issues.*

Nang, Roberto, COL, MC, USA, HHC, 1st Cavalry Division HQ, Division Surgeon, Fort Hood, Texas. *Combat Injuries in the 1st Cavalry Division's TF Baghdad.*

O'Leary, Timothy, MA, DHCC. Simmons, Mary Ann, Navy Environmental Health Center. Geckel, Lori, USACHPPM. *Risk Communication Workshop with Public Affairs Officers.*

Oxman, Thomas, MD, Dartmouth University. *RESPECT: Re-engineering Systems for the Primary Care Treatment of Depression.*

Pastel, Ross, LTC, MC, USA, PhD, U.S. Army Medical Research Institute for Infectious Diseases. *Psychological Effects of Anthrax Vaccination.*

Postlewaite, Craig, Col (Ret.), USAF, DVM, MPH, DoD Deployment Health Support Directorate. *DoD Deployment Health Risk Communication Products and Messages.*

Roesel, Thomas, MD, PhD, DHCC. *Side Effects for Mefloquine and Doxycycline Anti-Malarial Prophylaxis as Reported During the Post-Deployment Interview.*

Rogut, Dori, APRN, BC, Dewitt Army Community Hospital. Vaeth, Mary, MD, MS, COL (Ret.), USA, DHCC. *Update on the Post-Deployment Health Clinical Practice Guideline.*

Rush, Vivian, MD, USACHPPM. *Introduction to DEEP Update.*

Salmon, Gabriella, Lescanos, Andres, PhD, Chretien, Jean Paul, LT, MC, USN, MPH, MHS, Naval Medical Research Center Detachment, Peru. *Outbreak Detection for Health Care Providers.*

Salmon, Peter, PhD, University of Liverpool, United Kingdom. *Collaboration and Conflict in Consultations about Medically Unexplained Symptoms.*

Appendix D: Deployment Healthcare Track Presentations

Schneiderman, Aaron, PhD, VA War Related Illness and Injury Study Center, Washington, DC. *The War Related Illness and Injury Study Centers: A Resource for Deployment Related Health Concerns.*

Sivan, Anjali, MPH, USACHPPM. *Mental Health Analysis of Post-Deployment Health Assessment (DD 2796).*

Small, Mark M., JD, PhD, Clemson University. *Ethical Considerations Related to Using Adverse Childhood Experiences in the Recruit Assessment Program Health Surveillance Tool for DoD Military Personnel.*

Tilton, Susan, MD, MPH, JD, Office of the Secretary of Defense for Health Affairs, Deployment Health Support Directorate. McClain, David, PhD, Armed Forces Radiobiology Research Institute. *Round Table on Embedded Tungsten Alloy Fragment Research and Its Implications.*

Timboe, Harold, MD, MPH, Major General (Ret.), USA, University of Texas Health Science Center at San Antonio. *Operation Tsunami Aid: Hope in the Time of Despair, Deployment Health's Role and Importance in the Currency of Peace.*

Vaeth, Mary, MD, MS, COL (Ret.), USA, DHCC. Rogut, Dori, APRN, BC, Dewitt Army Community Hospital. *Depleted Uranium Medical Management.*

Warden, Deborah, MD, Director, Defense and Veterans Head Injury Program, WRAMC. *Traumatic Brain Injuries in Returning Combat Veterans: Important Post-Deployment Healthcare Considerations.*

Wells, Timothy, LtCol, USAF, DVM, PhD, MPH, DoD Center for Deployment Health Research. *Mefloquine Use and Hospitalizations Among US Service Members 2002–2004.*

Wenzel, Robert B., MAJ, MC, USA, Fort Benning. *Providing Optimal Care for GWOT Service Members and Their Families.*

Williams, Larry, CAPT, DC, USNR, Great Lakes Naval Hospital. *The Impact of Tobacco Use on Our Deployed Forces.*

Zhou, Joey, PhD, USACHPPM. *Dealing With Inconsistency of Self-Perceived Health Changes in Pre- and Post-Deployment Health Assessment.*

Zhou, Joey, PhD, USACHPPM. *Impact of Respondent Errors on Percentages of Self-Perceived Declining Health Status during Deployment.*

Zhou, Joey, PhD, USACHPPM. *Preventive Medicine Application of Classification and Regression Tree (CART) to Analyze the Questionnaire Data from Pre- and Post-Deployment Health Assessment.*





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