Deployment Health Clinical Center

FY 2009 and FY 2010 Report

DEFENSE CENTERS OF EXCELLENCE

For Psychological Health & Traumatic Brain Injury

DHCC

DEPLOYMENT HEALTH CLINICAL CENTER

It is our duty to embrace, care for and help heal those wounded warriors returning from battle.

It is our solemn obligation to honor those who have given the ultimate sacrifice...

and it is part of our oath to never leave a fallen comrade behind.

This report is dedicated to the Soldiers, Sailors, Marines, Airmen, and Coast Guard members of our Armed Forces and their families whose selfless sacrifices allow all to be free.

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Defense Health Board

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Uniformed Services University of the Health Sciences

U.S. Army Public Health Command (Provisional), formerly U.S. Army Center for Health Promotion and Preventive Medicine

U.S. Army Medical Command (MEDCOM)

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

Introduction

EXECUTIVE SUMMARY

The DoD Deployment Health Clinical Center (DHCC), a component center of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE), is uniquely positioned to support service members, their families, and their healthcare providers during the current overseas operations. DHCC's core mission is to **improve deployment-related healthcare** through caring assistance and health advocacy for military personnel and families, while simultaneously serving as a military health system resource center and catalyst for deployment-related healthcare innovation, evaluation, and research. 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, evaluation, and primary healthcare quality improvement programs

• **Outreach and Provider Education:** The championing of deployment healthcare best practices through development and dissemination of innovative collaborative care systems, clinical practice guidelines, health information, health risk communication strategies, and clinical education programs

• **Health Services Delivery Research and Evaluation Programs:** Deployment-related clinical and health services research that uses science to advance the effective delivery of deployment-related healthcare.

This FY 2009–2010 Report summarizes DHCC's accomplishments in support of this mission.

FY 2009–2010 FOCUS ITEMS

• **R**e-**E**ngineering **S**ystems of **P**rimary **C**are **T**reatment (for Depression and PTSD) in the **Mil**itary (RESPECT-Mil) is an innovative collaborative care model where primary care providers screen all their patients for posttraumatic stress disorder and depression. If treatment is initiated, RESPECT-Mil Care Facilitators track patients through periodic phone contact and convey relevant information to their primary care providers and behavioral health supervisors. The care is monitored and coordinated by the site behavioral health champion who evaluates all cases and provides treatment recommendations, which are implemented in primary care.

• In coordination with the U.S. Army Medical Command, the roll-out of RESPECT-Mil to 42 clinics at 15 Army Medical Department sites, which began in 2007, moved toward completion in FY 2010. In FY 2010, implementation also commenced at 53 more clinics at 19 additional sites under the authority of U.S. Army Medical Command OPORD 10-25 dated 05 February 2010.

• From program inception through the end of September 2010, forty-two clinics at 18 active Army RESPECT-Mil sites provided 985,806 primary care visits to active duty soldiers with 720,369 of those visits screened for PTSD and depression. This represents an overall 73% screening rate for active duty primary care visits to participating clinics since February 2007. Of screened visits, 91,961 (or 12.8%) resulted in a positive screen, and 49% of positive screens resulted in a primary care diagnosis of depression, possible PTSD, or both. More than 6,200 soldiers have been referred to and followed by RESPECT-Mil and more than 16,000 soldiers with previously unmet behavioral health needs were referred for care.

• In FY 2010, 357,328 visits were screened (83.5% of total visits), 43,474 visits generated positive screens, and 18,156 resulted in a diagnosis. Approximately 40,000 visits were screened per month at the end of FY 2010, and 6,700 soldiers with unmet needs received care last year.

• RESPECT-Mil contributes to Army efforts to secure soldier safety. By the end of FY 2010, more than 7000 soldiers screened by RESPECT-Mil reported either passive or active suicidal ideation at the time of their primary care visit.

Introduction

About 1% of screened visits were associated with suicidal ideation, and 25% of these were rated by the provider as intermediate or high risk. All of these soldiers were rapidly assisted.

• Meetings were initiated in 2009 with representatives from the other Services on a blended offering for tri-service dissemination called Re-Engineering Healthcare Integration Program (REHIP). The REHIP working group approved two Army, two Navy, and two Air Force sites as designated demonstration sites. The demonstration project is a blending of the Army RESPECT-Mil; the Air Force Behavioral Health Optimization Program (BEHOP); and the Navy Behavioral Health Integration Program (BEHIP). The project is expected to commence at the demonstration sites in 2011.

• DHCC's research programs are funded by institutions such as the Department of Veterans Affairs, the Department of Defense, the U.S. Congress, the National Institute on Aging, and the National Institute of Mental Health. Funding is coordinated through the Henry M. Jackson Foundation for the Advancement of Military Medicine. This health services delivery research focuses on innovative ways to improve deployment-related healthcare including the primary care detection and treatment of combat-related traumatic stress.

• DHCC offered its first ever gender specific session of the Specialized Care Program Track II for treatment of deployment-related trauma symptoms to a group of seven military women in March 2009.

• DHCC staff delivered its first one-week educational program for spouses and significant others of military personnel with PTSD in April 2009.

FY 2009–2010 ACCOMPLISHMENTS—ONGOING PROGRAMS

• DHCC's clinical team provided intensive clinical assessments to members of all Branches of Service referred to DHCC for tertiary care. These service members were suffering from chronic pain conditions and/or were candidates for admission to one of the Specialized Care Programs.

• Subscriptions to the *Deployment Health News* grew to 3,869 from 2,915 during FY 2009–2010.

• The staff responded to Web and email inquires as well as to more than 5700 inquiries received through its helplines in FY 2009–2010 from military personnel, families, and providers.

• DHCC offered 16 cycles of its Specialized Care Program Track II for posttraumatic combat-related stress. Five cycles of the Specialized Care Program Track I for medically unexplained physical symptoms were also offered.

• The Center was represented at 26 national and international meetings, conferences, and symposiums attended by more than 58,000 participants in FY 2009–2010.

• DHCC sponsored the Deployment Healthcare Track at the 12th Annual Force Health Protection Conference in August 2009. The track offered two full day pre-conference workshops and featured a total of 80 presenters and 71 presentations over a seven day period.

• DHCC sponsored the Deployment Healthcare Track, again, at the 13th Annual Force Health Protection Conference in August 2010. The 2010 track offered a pre-conference workshop and 48 presentations by 71 presenters.

• The Center's clinicians and scientists submitted or published 15 articles in peer-reviewed periodicals, submitted or published seven book chapters, wrote or were interviewed for three additional articles in the media, created 42 published abstracts for conference presentations, delivered 28 invited presentations, and exhibited 14 poster presentations at conferences in FY 2009–2010. ❖

Direct Health Service Delivery

DHCC is a component center of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) and provides direct, tertiary care to service members; expert referral care for complex deployment-related health concerns; and consultation services to clinicians, service members, and families.

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 clinical social worker. Alternative and complementary practices including yoga, acupuncture, and relaxation therapy are employed as well.

Track I

> "My son had reached a dead-end road, and you helped him to continue on. You have restored my faith in the military medical system."—*Father of a Specialized Care Program Track I Graduate*

The Specialized Care Program Track I is the tertiary level of care specified by the DoD/VA Post-Deployment Health Evaluation and Management Clinical Practice Guideline. The program is designed to treat the patients who experience treatment failure and 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. Originally designed to care for soldiers from the Operations Desert Shield/Desert Storm, the program is also helpful for OIF/OEF veterans with mild Traumatic Brain Injury who suffer from frustrating idiopathic physical symptoms for which their care providers cannot provide relief.

> "It took two years for me to reach the rapport with the doctors at home that I established with you in three weeks. You've turned things around for me. Thank you."—*Specialized Care Program Track I Graduate*

The program seeks to improve physical conditioning and decrease symptoms through a gradual, paced physical reactivation program. Program participants receive cognitive behavioral therapy to help them forge a more constructive attitude towards their physical challenges and to become active partners in their healthcare. Empowered to better cope with their illness, they are taught useful tools and positive health behaviors. Each program member receives an individualized symptom management plan, and the members of each cycle encourage one another through the development of mutually supportive relationships. The program emphasizes clinical follow-up and primary care management after return to the local healthcare system. DHCC delivered two cycles of the Specialized Care Program Track I in FY 2009 and three cycles in FY 2010.

> "My doctor said 'I don't know what to do with you because I don't know what's causing your symptoms.' You were able to help me. Thank you."—*Specialized Care Program Track I Graduate*

Track II

The Specialized Care Program (SCP) Track II is designed to benefit service members with PTSD and trauma spectrum symptoms. The program uses evidence-based treatments for PTSD including cognitive behavioral therapy and relaxation training. In daily exposure therapy sessions, each cohort of six-to-eight combat-tested service members support one another as they explore difficult memories and dissipate powerful emotions from their combat experiences. This intensive therapy is followed daily by physical therapy, where the participants "let off steam" and recover their physical fitness. Participants also receive daily integrative therapies such as acupuncture and yoga to help them calm and manage their physical and mental stress reactions.

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"When you see someone die downrange, you have one day to deal with it. Then you have to go back to work or more people will die."—*Specialized Care Program Track II Graduate*

Psychoeducation is an important element of the SCP Track II program. DHCC clinicians teach patients to understand the ways in which their combat experience has affected them and how to handle the various symptoms they may be experiencing in a more constructive way. The milieu-based program is designed to facilitate bonding among program participants as they share their experiences and continue to build these relationships in the off-base lodging where all program members are housed. Since these combat-tested service members have had experiences that the larger population has not, the sharing of their combat experiences is integral to the success of the program. These combat-tested warriors no longer feel alone and alienated. They now have "battle buddies" that they describe as being closer to them than brothers or sisters.

"I was relentlessly searching for relief. My soul was crushed. I had given up on my country, my family, my friends, and myself. I was completely isolated. Now my desire to 'change the world' has been revived. You've become closer to me than my family."—*Specialized Care Program Track II Graduate*

The pacing of extremely intense psychological work followed by evidenced-based relaxation therapies is also critical to the success of the program as is the feeling participants have of being respected and cared for by DHCC staff. Graduates of the program consistently report that they feel cared for and appreciated by DHCC staff to a degree not experienced elsewhere in military healthcare. DHCC delivered nine cycles of the Specialized Care Program Track II program in FY 2009 and seven cycles in FY 2010.

"I got my fears out. It was hard. I was drained, but you got them all out of me. The way the program is structured, it works. I would feel drained after the exposure sessions with a headache. Then the physical therapy and yoga would help me relax and recover."—*Specialized Care Program Track II Graduate*

Patients of both programs receive an average of 28 provider contacts and 48 hours of group treatment during the program as well as clinical follow-up contacts to monitor status and provide on-going support for 40 weeks or longer if the patient wishes it.

ALTERNATIVE AND COMPLEMENTARY THERAPIES

Yoga and Meditation

After their combat experience, some service members describe feeling fragmented or disconnected. The word *yoga*, meaning "to yoke" or "to bind," conveys the idea of restoring wholeness and bringing things together. The yoga offered in DHCC's Specialized Care Program is intended to help participants rebalance their inner lives and reconnect with what's important to them.

Yoga practices are millennia-old but are entering the mainstream of health and wellness practice more and more today. While

most people think of poses and stretches when they hear the word "yoga," the forms practiced in the Specialized Care Program are very gentle and do not involve strenuous physical activity. The main point of the easy stretches and exercises as well as the guided meditation is to help participants focus non-judgmental awareness on physical sensations, breath, emotions, thoughts, and even the experience of being aware. Participants do not have to adopt a philosophy or religious perspective to practice yoga in the program, and any misgivings or misunderstandings they have about practicing yoga or meditation are respectfully discussed and cleared up before they begin.

During their yoga sessions, especially through the iRest (Integrative Restoration) meditation, participants practice methods of focusing their attention. Focusing on breathing or on a physical sensation may seem simple, but it can grow into a powerful skill. Participants in the Specialized Care Program often have painful physical symptoms and/or intrusive PTSD symptoms such as flashbacks and hyper-reactivity. The ability to focus attention on these difficult symptoms and to gently shift their attitude to one of curiosity and openness can make the pain seem more tolerable—in short, people learn to become more comfortable and less distressed when they experience discomfort. This gives participants a sense of self-efficacy and allows them some distance from and perspective on their symptoms.

Specialized Care Program participants are led by a yoga instructor through a session of iRest (Integrative Restoration) guided meditation.

Yoga also implies the notion of flexibility. While Specialized Care Program participants do not have the goal of attaining physical flexibility, the notion of interior flexibility is very important. As participants gain some distance from what is troubling them and see that they can quiet their minds and shift their attitudes, they find ways to lessen their reactivity to stimuli that used to distress them. Participants report greater flexibility in their responses to the challenges life brings, and they also report being able to see options for changing long-ingrained self-destructive habits. This can decrease the amount of physical and psychological stress they experience and leads to reports that they feel less pain, sleep better, have clearer minds, and experience less of a battle going on inside them. On the positive side, the practice of yoga helps participants to get their minds "off the hamster wheel of persistent negative thoughts" in order to focus on what's really important to them and achieving it. Participants report that practicing yoga makes them feel more peaceful, more balanced, more grounded, centered and connected.

Specialized Care Program graduates receive a CD of iRest (Integrative Restoration) guided meditation so that they can continue practicing yoga after they return home.

Acupuncture

Auricular acupuncture has been used as adjunctive therapy for the treatment of chemical dependency for more than 25 years. *Battlefield Acupuncture*, developed in 2001 for use in the military, is an efficient auriculotherapy system for rapid pain relief. Acupuncture is also being studied as an adjunctive therapy for the relief of PTSD symptoms. In March 2009, DHCC added acupuncture to the Specialized Care Program.

The practice of acupuncture is centuries old, is currently used across the globe, and is based upon a close observation of nature over thousands of years. The basic principle behind the practice of acupuncture is *Qi* (pronounced "chee"), the energy and life force flowing in living things and nature at large.

Acupuncture treatment addresses the "excesses" and "deficiencies" that are causing symptoms in a patient. *Qi* in a person can be likened to the "invisible forces in a car," and service members get that analogy. According to this understanding of the human body, there are 12 channels or "meridians" where this invisible (but real and tangible) energy flows through the person. Acupuncture is a means by which this flow, if impaired in some way, can be restored to a more optimal state.

Although the acupuncture performed as a part of the Specialized Care Program can be used for and does result in the relief of physical pain or symptoms, an important element is the way that it can be used to help settle and balance the nervous system. As the result of a psychological trauma or acute combat stress, a service member can end up with "somatic experiencing" of that trauma. It is thought that extreme stress experienced for more than 15 seconds can cause the sympathetic and parasympathetic nervous systems to be "stuck on" or "stuck off" resulting in hyper-alertness, anxiety, and irritability on the one hand or emotional numbness, disconnection from family and friends, and isolation symptoms on the other—both of which can be involved in posttraumatic stress.

Each Specialized Care Program participant receives an individual full-body acupuncture treatment one to three times a week that has been customized to his or her individual needs.

The theory is that acupuncture can be used to soothe and balance these nervous system excesses that may contribute to the aggressive symptoms of PTSD or, alternatively, to activate and restore the flow when deficiencies in nervous system activity are present. The technique uses very narrow needles about the width of a hair, which are sterile, single use, and are not hollow, but solid. Inserted in various combinations and patterns, the needles are used to adjust the flow of energy along the 12 meridians.

Each Specialized Care Program participant receives an individual full-body acupuncture treatment one to three times a week that has been customized to his or her individual needs. Since participants are usually coming to the acupuncture session after daily exposure therapy, they can be quite flustered and upset. The acupuncturist focuses on what is going well for the patients as a result of their time in the program and uses acupuncture to try to amplify those positive effects. Participants are encouraged to place their experiences in a broader context that will open up more possibilities, to reframe negative experiences, and to let go of what no longer serves them.

Anecdotally, SCP acupuncture treatments have produced some dramatic results including resolution of reflux symptoms, back pain, neck pain, and headaches. Other participants report feeling more relaxed and settled. Some patients chose to continue acupuncture at their home station.

SPECIALIZED CARE PROGRAM TRACK II SESSION FOR MILITARY WOMEN

DHCC delivered the first gender-specific session of the Specialized Care Program Track II for a group of seven military women in FY 2009. Military women tend to have different experiences in the combat theater than their male counterparts. Feedback from SCP Track II women patients from the more than forty cycles already delivered indicates that military women believe that it would be easier for them to express their emotions and explore difficult memories about their traumatic exposures downrange in a gender-specific group.

This SCP Track II gender-specific session gave participants an opportunity to be in a supportive environment together with other military women struggling with similar difficulties. Most of the participants suffered from some degree of combat exposure and some had experienced sexual assault.

ONE-WEEK EDUCATIONAL PROGRAM FOR MILITARY SPOUSES

In April 2009 DHCC delivered its new educational program to support spouses and significant others of military personnel with PTSD. Participants in the SCP Track II Program have given DHCC staff feedback that they wished there were an educational program available for their spouses/significant others that would enable them to better understand what their recently deployed family members were going through. While spouses and family members have always been welcome to accompany their service member to Walter Reed and encouraged to attend some aspects of the SCP Track II curriculum while making use of therapeutic resources available from the Walter Reed Department of Social Work, funding was not previously available to underwrite the travel and expenses for these spouses and family members.

> "It gets overwhelming to have to pick up all the pieces in our families all the time, and it was so great to have a program like this to help us pick up those pieces."—*SCP Spouse's Program Graduate*

An offer was made to DHCC by the Walter Reed Society to provide funding for a program that would bring military spouses to Walter Reed to attend a one-week program specifically designed to assist them. Designed to give military spouses an understanding of their service member's experiences and state of mind, the program also gives them tools to help them care for themselves so that the whole family benefits.

The group of five women shared with one another what it's like to have a family member with combat-related PTSD in a daily support group led by a two psychologists, received education on the mind-body effects of combat stress on their loved one, attended seminars on family relationships and parenting, and learned self-care through a physical therapist-led exercise program along with relaxation/meditation led by a yoga instructor.

DHCC staff will incorporate the feedback and lessons learned from this one-week educational program into refining this concept in support of military families.

SPECIALIZED CARE PROGRAM EVALUATION

DHCC collects medical and behavioral health status along with socio-demographic data from Specialized Care Program participants at four time points: entrance, exit, one-month follow-up and three-month follow-up. The data collection methodology is designed to facilitate longitudinal analyses in order to reveal the impact of the programs on participants' health. So far DHCC has gathered data for 345 patients at entrance, 351 patients at exit, 139 patients at one-month follow-up, and 101 patients at three-month follow-up.

A series of data analyses have been performed on the data. The t-test analysis demonstrates that in the period between entrance and exit, patients' average number of physical symptoms significantly declined from 6.7 to 5.7 ($t = 3.35$, $p < 0.01$). The PTSD Checklist (PCL) scores also decreased (from 67.4 to 64.2), to a statistically significant degree ($t = 2.96$, $p < 0.01$). Additionally, the Transformed Physical Score (PCS), using the SF-12 Health Survey to measure physical health improvement, differs slightly, 38.4 versus 38.3, which is not statistically significant ($t = 0.05$, $p = 0.96$). On the other hand, the Transformed Mental Score (MCS), measuring mental health improvement, increased fairly strongly from 29.0 to 34.0, and this enhancement is statistically significant ($t = -6.08$, $p < 0.01$). Overall, these results suggest that participants in the Specialized Care Programs achieve modest, but statistically significant, improvements in physical as well as mental/emotional functioning.

SCP participants report considerable satisfaction with their SCP care. They are asked to rate their

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satisfaction with the care they received in the three months prior to program entry and are queried again at program exit to rate the care they received during the SCP. Only 17.7% of the participants report that the care they received in the three months prior to entry was "very good" or "excellent," while 92.2% say the care they received in the SCP is "very good" or "excellent." This marked increase in patient satisfaction is highly statistically significant ($X^2 = 304.46$, $p < 0.01$).

As more data is collected, DHCC staff will further examine the trends indicated by these health scores.

SYNCHRONIZING EFFORTS TO TREAT PTSD

DHCC has begun the process of coordinating efforts with other intensive outpatient programs serving service members with PTSD in the DoD. DHCC and U.S. Army MEDCOM coordinated a review of existing PTSD programs to assess their methods and structure and to find best practices in order to optimize and disseminate these best practices throughout the military.

Representatives from many of the Army programs met together in August 2010 to review successes and challenges and to initiate a process for synchronizing efforts. The recommendation was to establish a consortium whose mission would be to reach a consensus on optimal core program characteristics, outcome measures, and minimum standards/expectations for programs offering services for this population.

WORLDWIDE AMBULATORY REFERRAL CARE PROGRAM

DHCC's Worldwide Ambulatory Referral Care Program receives referrals of patients with chronic physical symptoms who are potential candidates for the Specialized Care Program Track I. These service members have activity limiting symptoms, sometimes with unclear etiologies, that present challenges to 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 as well as from the military services of U.S. allies. 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 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. Candidates for the Specialized Care Program Track II also receive intensive clinical evaluations since co-morbid physical injuries often accompany and exacerbate post-deployment stress or depression symptoms. DHCC's internal medicine physician provided 400 evaluations with 700 follow-up visits in FY 2009 and 624 evaluations with 348 follow-up visits in FY 2010. The most common physical complaints were related to musculoskeletal injuries, war-related chronic pain conditions, and sleep disorders, including sleep apnea.

CLINICAL CONSULTATION THROUGH HELPLINES AND EMAIL

DHCC operates two toll-free telephone helplines with access from Europe and the

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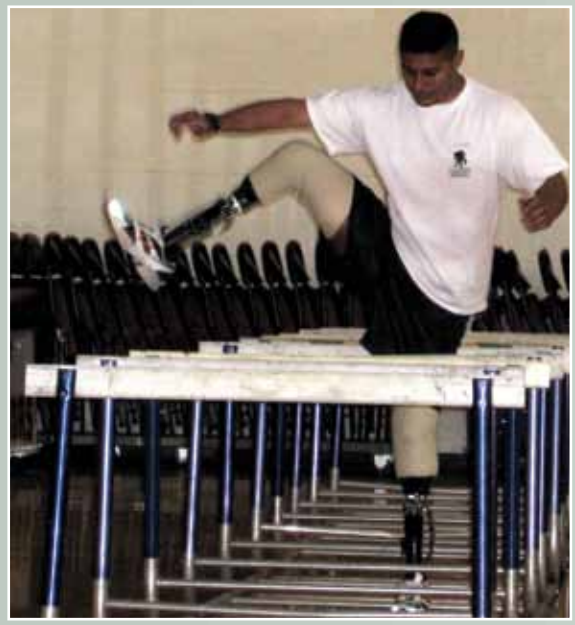
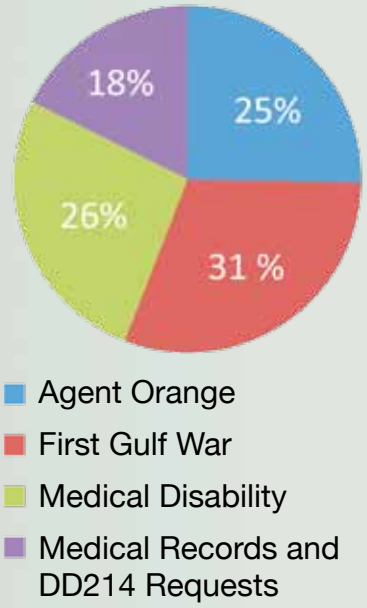


United States: the DoD Helpline for Military Personnel and Families and the DHCC Helpline for Clinicians and Providers. DHCC also provides an email support service that can be accessed both directly and through the Center's Web site. Military personnel most often ask for information regarding specific health concerns, especially depleted uranium exposure and leishmaniasis. Service members also call for information on specific deployment-related medical policies and for help in completing their Deployment Health Assessments (DD 2795, 2796, and 2900) or getting a copy of forms they completed previously.

DHCC's Clinician Helpline provides access to clinical consultation, referral services for post-deployment health issues, and guideline implementation information. In FY 2009–2010 healthcare providers called DHCC to get training on how to fill out their patients' Deployment Health Assessments (DD 2795, 2796, and 2900), to ask questions about interpretation of specific deployment-related military healthcare policies, to inquire about treatment for specific health conditions, to ask how to interpret the PCL (PTSD Checklist), for coding guidance for deployment-related visits, and for resource information on PTSD and TBI. DHCC staff responded to more than 1000 phone inquiries through these two helplines in the last two years in addition to nearly 200 email inquiries.

DHCC also staffs the 1-800 DoD-HA Deployment Health Support Contact Center located at Force Health Protection & Readiness, Office of the Assistant Secretary of Defense for Health Affairs. Initiated in 1996 to assist veterans of the first Gulf War with questions and concerns about the health effects of their deployment, this helpline now provides a place for service members, veterans, and their family members to ask questions about specific chemical or biological agent test or deployment exposures, medical disability, transition to VA care, and other health questions related to their deployments. DHCC staff responded to more than 4700 questions on this helpline in FY 2009 and FY 2010. ❖

Figure 1. Inquiries to the DoD/HA Helpline FY 2009–2010



Outreach and Provider Education

DHCC's charter includes the mission to create deployment-related health education programs for military providers. DHCC's FY 2009–2010 outreach to military healthcare providers included implementation support for the Re-Engineering Systems of Primary Care Treatment (for Depression and PTSD) in the Military (RESPECT-Mil) program at military treatment facilities throughout the U.S. and in Europe, developing Web content, sponsoring the Deployment Healthcare Track at the 12th and 13th Annual Force Health Protection Conferences, and delivering presentations in the U.S. and around the world. DHCC continued to help revise, champion, and promote use of the DoD/VA clinical practices guidelines including the Post-Deployment Health Evaluation and Management Clinical Practice Guideline and associated guidelines for medically unexplained symptoms, posttraumatic stress, and major depressive disorder.

DEPLOYMENT HEALTH INTEGRATION IN PRIMARY CARE—RESPECT-MIL

Re-Engineering Systems of Primary Care Treatment (for Depression and PTSD) in the Military (RESPECT-Mil) is an innovative and low-stigma way to deliver behavioral health support to service members in primary care. The Three Component Model (3CM), developed by DHCC in cooperation with the MacArthur Foundation's *Initiative on Depression and Primary Care at Dartmouth and Duke* and researchers from Dartmouth and Duke Universities, features primary care providers, RESPECT-Mil Care Facilitators (RCFs), and behavioral health specialists in a collaborative care systems approach.

Based upon a civilian primary care-based model for treating depression, whose effectiveness over usual primary care has been demonstrated in multiple clinical trials, RESPECT-Mil structured the model for use in the military. The 2005–2006 demonstration project at Fort Bragg revealed that primary care providers liked the program and showed that it was feasible for use in military healthcare.

The advantages of the model are many. The first is the primary care setting. Since nearly 90% of soldiers access primary care annually and the average soldier receives about 3.5 primary care visits per year, this setting offers the best opportunity to increase access to psychological health services, to greatly reduce the stigma of using these services, and to intervene early—increasing the likelihood that treatment will be successful. This arrangement is preferred by many soldiers, increases the acceptability of psychological health services, and reduces fear of resulting career harm.

The second advantage is the primary care screening element. The RESPECT-Mil system of care calls for all active duty patients at participating clinics to be screened for depression and PTSD as part of routine clinic check-in and vital signs assessment. Individuals who screen positive complete additional symptom severity assessments, and their primary care provider performs a diagnostic interview during their appointment. Patients who appear to have depression or PTSD are informed of treatment options and given the opportunity to choose one after a discussion with their provider. A suicide assessment is also included in this assessment, and patients with urgent or emergent suicidality are rapidly assisted. Universal RESPECT-Mil screening is a key element of the model and helps the Army to seek out and assist soldiers with unmet behavioral health needs.

A third advantage of the RESPECT-Mil model is the nurse RESPECT-Mil Care Facilitator (RCF) resource. Patients are provided with brochures about depression and PTSD and receive a self-management worksheet for setting goals to add beneficial activities to their routines.

Patients referred to RESPECT-Mil are provided with brochures about understanding and managing depression and/or PTSD and with a self-management worksheet for setting goals to add beneficial activities to their routines.

Outreach and Provider Education

The care facilitator schedules regular phone contacts with patients to monitor how well they are following their treatment plan, to ask about medication side effects, and to measure patient improvement by using symptom severity questionnaires. RCFs also help patients solve problems they are having with treatment adherence. Information from each patient contact is entered into a Web-based case management support and reporting system, FIRST-STEPS, which generates reports to be used by the behavioral health provider during weekly supervisory staffing reviews of the RCF's caseload.

This leads to another advantage of the RESPECT-Mil model. A patient's treatment can be adjusted based upon behavioral health provider recommendations through the weekly RCF staffing meetings. RCFs relay behavioral health provider input to the primary care provider (who can also communicate with the behavioral health provider directly) so that treatment modifications still occur within the primary care setting, which many soldiers prefer. The RCF resource extends the primary care provider's treatment effectiveness through frequent contact with the patient, systematic monitoring of the patient's symptom level, and conveying weekly behavioral health provider input on treatment modifications to the primary care provider.

RESPECT-Mil Implementation

The U.S. Army Medical Command OPORD 07-34 dated 03 January 2007 directed the roll-out of RESPECT-Mil to up to 42 primary care clinics at 15 Army Medical Department sites. In FY 2010, implementation at 53 more clinics at 19 additional sites commenced under the authority of U.S. Army Medical Command OPORD 10-25 dated 05 February 2010.

Site preparation for new implementation consists of selection and training of site primary care and behavioral health champions, the hiring of RN RCFs and administrative staff, and the training of personnel in new clinic processes and workload. Site preparation usually takes about four months. RESPECT-Mil is then begun at select clinics at the site to refine local protocols for an additional four months. Finally, RESPECT-Mil is fully disseminated to all clinics at the site. The RESPECT-Mil Implementation Team mentors each site through this process.

In FY 2009, the manuals for each role in RESPECT-Mil were redesigned. These manuals and other tools are distributed to clinics implementing RESPECT-Mil.

The RESPECT-Mil Implementation Team makes periodic site visits in support of these efforts and delivers Champion Training Sessions and RESPECT-Mil Care Facilitator (RCF) Training courses. The team presented a one-day pre-conference workshop on RESPECT-Mil at the 12th Annual Force Health Protection Conference in 2009 as well as a special half-day workshop for RESPECT-Mil Site Champions. The team held two three-day training sessions in FY 2010 attended by 75 site champions as well as three sessions training 26 new RESPECT-Mil Care Facilitators and administrative assistants.

Figure 2. RESPECT-Mil MTFs — Primary Care Clinic Visits Screened FY 2009-2010

RESPECT-Mil Results

From program inception through the end of September 2010, forty-two clinics at 18 active Army RESPECT-Mil sites provided 985,806 primary care visits to active duty soldiers with 720,369 of those visits screened for PTSD and depression. This represents an overall 73% screening rate for active duty primary care visits to participating clinics since February 2007.

Outreach and Provider Education

Of screened visits, 91,961 (or 12.8%) resulted in a positive screen and 49% of positive screens resulted in a primary care diagnosis of depression, possible PTSD, or both.

In FY 2010, 357,328 visits were screened (83.5% of total visits), 43,474 visits generated positive screens, and 18,156 resulted in a diagnosis. Program participation continues to increase with approximately 40,000 visits screened per month at the end of FY 2010. More than 6,200 soldiers have been referred to and followed by RESPECT-Mil and more than 16,000 (nearly 6,700 in FY 2010) soldiers with previously unmet behavioral health needs were referred for care.

RESPECT-Mil Technical Enablers

The RESPECT-Mil Center of Excellence partnered with Army MEDCOM social work leaders and a civilian company to develop a Web-based care management tracking system for care facilitator use when working with RESPECT-Mil soldiers. FIRST-STEPS (Fast Informative Risk & Safety Tracker and Stepped Treatment Entry & Planning System), launched in September 2009, increases care facilitator adherence to the RESPECT-Mil protocol.

RCFs document all information gathered during their periodic contacts with patients. During these telephonic consultations, RCFs periodically administer symptom checklists for depression (Patient Health Questionnaire or PHQ-9) and PTSD (PTSD Checklist or PCL) to assess patient response to treatment. FIRST-STEPS automatically calculates the PHQ-9 and PCL with change scores, tracks changes in patient status relative to medication and counseling adherence, tracks patient progress on self-management goals, and tracks general issues such as pending change in status (PCS, ETS, MEB, deployment, etc.).

FIRST-STEPS is used to facilitate weekly staffing sessions where RESPECT-Mil behavioral health supervisors review and discuss cases with RESPECT-Mil Care Facilitators.

An Army Behavioral Health Specialist and a RESPECT-Mil Care Facilitator (RCF) receive training on FIRST-STEPS. RCFs record data from their periodic telephone consultations with patients into FIRST-STEPS. The system flags cases that need to be staffed during weekly RCF/BH Specialist staffing sessions and provides the BH Specialist with a detailed view into each patient's case as needed to make treatment recommendations

FIRST-STEPS – Web-Based Care Manager Support & Reporting System

FIRST-STEPS enables "real-time" program evaluation and benchmarking and greatly improves capacity to monitor program-related quality of care and to manage the program at implementing sites.

FIRST-STEPS offers the RESPECT-Mil program "real-time" program evaluation and benchmarking. Version 2.1, which provides more advanced outcome measurement and metrics reporting, was launched in April 2010. The tool enhances overall capacity to monitor program-related quality of care and to manage the program at implementing sites. Password protection systems, state-of-the-art computer security measures, and prescribed level of information access tailored to an individual's program role insure that personal health information remains tightly controlled and protected.

The RESPECT-Mil OPORD requires universal training for all Army primary care providers on effective strategies to screen, assess, and manage depression and PTSD in a primary care setting. An interactive

training product was released in December 2008 and is available on the DHCC Web site at http://www.pdhealth.mil/respect-mil/index.asp.

During FY 2009–2010, 2,062 primary care providers completed the online course on screening for and managing depression in primary care and 2,401 completed the course on PTSD.

Re-Engineering Healthcare Integration Program (REHIP)

Meetings were initiated in 2009 with representatives from the Services on a blended offering for tri-service dissemination called Re-Engineering Healthcare Integration Program (REHIP). The REHIP working group approved two Army, two Navy, and two Air Force sites as designated demonstration sites. The demonstration project is a blending of the Army RESPECT-Mil; the Air Force Behavioral Health Optimization Program (BEHOP); and the Navy Behavioral Health Integration Program (BEHIP). The project is expected to commence at the demonstration sites in 2011.

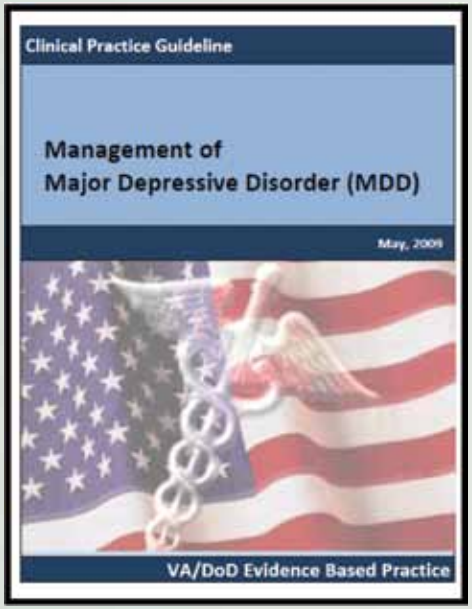
All Army primary care providers receive 2.5 hours of online training on strategies to screen, assess, and manage depression and PTSD in the primary care setting.

CLINICAL PRACTICE GUIDELINES

DHCC has been an important contributor and champion of DoD/VA Clinical Practice Guidelines including the Post-Deployment Health Evaluation and Management Clinical Practice Guideline and the supporting guidelines for PTSD, Major Depressive Disorder, and Medically Unexplained Symptoms since 2002.

The DHCC director serves as the DoD champion of the VA/DoD Major Depressive Disorder (MDD) Guideline and was the Co-Chair of the Management of MDD Working Group that revised the guideline. The former DHCC deputy director also participated on this expert panel, which included internists, family practitioners, psychiatrists, psychologists, psychiatric nurses, and social workers, from specialty and primary care settings, diverse geographic regions, and both the VA and DoD healthcare systems. The group followed a rigorous methodological approach that included the following:

- Determining appropriate criteria, such as effectiveness, efficacy, population benefit, or patient satisfaction



The DHCC director is DoD champion of the VA/DoD Major Depressive Disorder Guideline and Co-Chair of the working group that revised the guideline, released May 2009.

- Reviewing literature to determine the strength of the evidence in relation to these criteria

- Formulating the recommendations and grading the level of evidence supporting the recommendation.

The updated guideline, which was released in May 2009, can be found at this location: http://www.healthquality.va.gov/Major_Depressive_Disorder_MDD_Clinical_Practice_Guideline.asp.

Outreach and Provider Education

BUILDING BRIDGES

In FY 2009, DHCC staff participated in the *Building Bridges Project* sponsored by the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). The purpose of this multi-agency, multi-disciplinary collaborative group was to support the psychological health and traumatic brain injury needs of military and veteran families through information and resource sharing, community capacity building activities, and resource development. DHCC representatives participated in the Health Professionals Resource Guide Working Group, which developed a guide designed to assist medical and behavioral health providers as they assist service members, veterans, and their families with their health and positive family functioning. The guide contains information and Web links to relevant resources and organizes them into a user-friendly format for quick reference.

DHCC representatives served on the working group that developed this guide for medical and behavioral health providers in 2009.

WEB-BASED OUTREACH TO PROVIDERS AND MILITARY PERSONNEL

DHCC's Web site, www.PDHealth.mil, is fundamental to the Center's communication function. The Web site has information for a wide audience, which includes clinicians, active and reserve component service members, veterans, and family members. The content covers the deployment cycle; the Post-Deployment Health Clinical Practice Guideline and other deployment-related clinical practice guidelines; health conditions and concerns related to deployment; healthcare and support services; education and training; risk communication; deployment-related research; news; and a forms library.

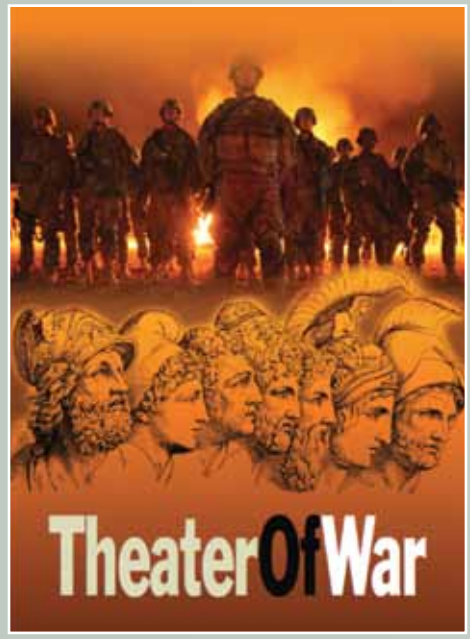
The types of material contained on the Web site include tri-service policies and directives; clinical guidance; provider/patient education material including manuals, fact sheets, and videos; deployment-related health research; relevant news articles; forms and measures; and links to Web sites with related information. All the print, online, and video-enabled outreach products developed by DHCC are made available for worldwide access on the site. Approximately 15 new or updated links are added to the Web site each week.

THE DEPLOYMENT HEALTH NEWS

DHCC published 498 issues of the *Deployment Health News* in FY 2009–2010, and subscriptions to this daily electronic newsletter increased to 3,869 from 2,915. Covering health issues related to military service, deployments, homeland security, and the War on Terrorism, the newsletter 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.

STRATEGIC COMMUNICATIONS PROGRAM

DHCC initiated a strategic communications program in FY 2010 to build public awareness and to promote discussion about deployment-related health concerns such as PTSD, TBI, and medically unexplained physical symptoms (MUPS). The program also seeks to educate military personnel and the wider community about DHCC clinical and education programs to optimize enrollment and to help those who could benefit take advantage of these programs. FY 2010 strategic communications activities included responding to media requests by facilitating interviews with Center staff and by placing articles



The Deployment Healthcare Track 2009 plenary session Theater of War featured readings from Sophocles' plays, Ajax and Philoctetes, and an audience discussion facilitated by an expert panel.

in mass media outlets as well as in scientific and medical publications and Web sites.

The DHCC strategic communication program sponsored the January 2010 staging of *Theater of War* at Walter Reed Army Medical Center attended by news outlets including the BBC, Agence France Presse, and the *PBS NewsHour with Jim Lehrer*. DHCC and several graduates of the Specialized Care Program were featured during Walter Reed's July Foreign Media Day with the theme "Warrior Care and Family Support." DHCC facilitated a taping and interview with DHCC's director and Specialized Care Program graduates in support of an HBO documentary on the history of posttraumatic stress disorder. *Wartorn* aired on Veteran's Day 2010. Previous releases from the HBO team include *Baghdad ER* and *Section 60*. DHCC also facilitated articles and interviews describing yoga and acupuncture as treatments for PTSD as well as an *Encyclopedia Britannica* online article entitled "PTSD in War Veterans: 5 Questions for Psychiatrist and U.S. Army Col. Charles C. Engel."

DEPLOYMENT HEALTHCARE TRACK AT THE FORCE HEALTH PROTECTION CONFERENCE

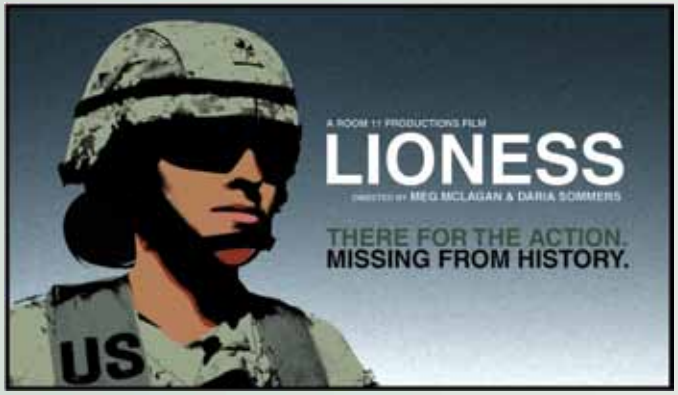
DHCC staff coordinated the Deployment Healthcare Track at the 12th Annual Force Health Protection Conference in Albuquerque, NM in August 2009 and the 13th Annual Conference in Phoenix, AZ in August 2010. This is the largest public health conference conducted within the Army Medical Department and is attended by professionals from the U.S. Army, Air Force, Navy, Public Health Service, Veteran's Administration, academia, non-government organizations, and foreign military medical services.

The track's plenary session in 2009 and 2010, *Theater of War,* drew around 200 attendees each year. Director Brian Doerries selected and translated scenes from Sophocles' plays, *Ajax* and *Philoctetes*, which were read by professional actors. The focus in 2010 was spouse, family, and community reaction to the loss of a soldier to suicide. Following the readings, a panel consisting of combat veterans and military spouses facilitated an audience discussion.

2009 Conference

With an attendance of 2500, the 2009 conference boasted more than 700 sessions by 500 speakers, 150 posters, 80 exhibits, 30 meetings, and five different Army specialty consultant visits.

The Deployment Healthcare Track's special presentation, a screening of the film *Lioness*, drew 210 attendees. *Lioness* profiles five women who saw action in Iraq's Sunni Triangle during 2003 and 2004. In Iraq to provide supplies and logistical support to their male colleagues and not trained for combat duty, the women unexpectedly became involved in fighting on the streets of Ramadi. Following the screening, a panel that included three female combat veterans, facilitated an audience discussion.



The Deployment Healthcare Track featured the film, Lioness, which profiles five women who saw combat action in Iraq.

Outreach and Provider Education

The 2009 Deployment Healthcare Track provided two day-long pre-conference workshops: *RESPECT-Mil Program Workshop* (50 attendees) and *Building Resilience: Rebounding from and Preventing Compassion Fatigue* (82 attendees), as well as a half-day workshop for RESPECT-Mil Site Champions. Three sub-tracks were also offered during the course of the week: *Military Women's Health Issues, The Millennium Cohort Study,* and *Traumatic Brain Injury*, presented in collaboration with Defense and Veterans Brain Injury Center.

DHCC played a significant role in support and planning of the Force Health Protection Conference forum, *The Soldier at Risk*. Brig. Gen. Loree Sutton was the keynote speaker for this program, which was a joint effort by the Army Substance Abuse Program, the Behavioral Health Track, the Deployment Healthcare Track, and the Health Promotion for Readiness Track. The three-hour symposium featured four graduates of DHCC's Specialized Care Program Track II for PTSD, who provided insight into the experience of soldiers and family members seeking behavioral health services after deployment. More than 200 persons attended the forum.

Overall, the 2009 Deployment Healthcare Track delivered a total of 80 presenters, 71 presentations.

2010 Conference

The 2010 conference, attended by 2300 healthcare professionals, featured 11 tracks including the Deployment Healthcare Track. The track provided a pre-conference meeting: *Promoting Quality and Synergy in Combat Trauma Spectrum Programs* that brought together representatives from eleven U.S. Army MEDCOM intensive outpatient programs currently treating patients with PTSD. The goal of the meeting was to understand the structure of each program, what works, what does not work, and to brainstorm ideas on what the core components of an optimal program would look like.

Themes and sub-tracks of the 2010 Deployment Healthcare Track included:

- Total Health Fitness for the Service Member and Family
- Integrative Care for Functional Recovery
- International Deployment Issues
- Innovations in Care
- Traumatic Brain Injury
- Cutting Edge Telehealth Applications in Psychological and Neuroscience Treatments
- Vitamin D: Mitigating Deployment Health Risk
- Enhancing Assessment
- Preventive Innovations
- They Served Too: Military Families and Children

Overall, the 2010 Deployment Healthcare Track delivered a total of 71 presenters, 48 presentations.

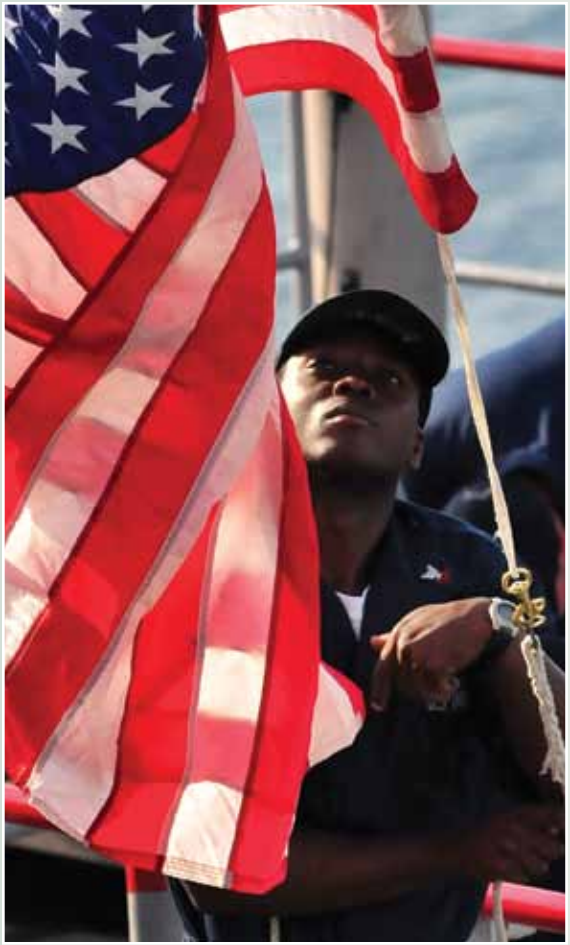
Each year, the track collaborated with VA staff; universities; volunteer/non-profit initiatives; U.S. Navy, Air Force and Army active duty personnel; the Samueli Institute; the Substance Abuse and Mental Health Services Administration (SAMHSA); DCoE; the Uniformed Services University of the Health Sciences; theater/documentary arts organizations; medical schools; and representatives from other nations and other DoD agencies. A listing of track presentations can be found in Appendix D.

THEATER OF WAR

Theater of War is a state-of-the-art public health campaign that presents readings of ancient Greek plays as a catalyst for town hall discussions about the challenges faced by post-combat service members, veterans, and their families today. Administered by DHCC during FY 2010, the project presented 100 performances of scenes from the Trojan War plays, *Ajax* and *Philoctetes*, in 50 military venues worldwide to an aggregate audience of close to 18,000.

Director Bryan Doerries selected and translated the scenes from plays written 2,500 years ago by Sophocles, a highly decorated General Officer in the Greek Army as well as a playwright. During each performance, well-known theater and television actors performed for 85 minutes, followed by a thoughtfully moderated discussion lasting up to an hour involving the actors, the audience, and invited discussants including combat veterans, medical personnel, caregivers, and family members.

Depicting the timelessness of the psychological and physical wounds inflicted upon soldiers by war, this respectful and apolitical approach called upon the power of art to evoke deep emotional connections with the topic and a greater sense of connection between participants in the intimacy of a theater setting. The project aimed to reduce stigma surrounding combat-related psychological injuries by placing them in the larger context of ancient warrior culture. The discussion following each performance created a safe space for family, active duty service personnel, and veterans to dialogue about the psychological health challenges faced after combat. The project is both a powerful tool for military and medical combat stress training and an advocacy platform generating compassion, understanding and support for those who have served in the American Armed Forces.



Data collected on comment cards at the performances as well as through surveys administered on the *Theater of War* Facebook page is being analyzed to assess ways in which such performances could promote the healing and resilience of military personnel and their families in the future. ❖

Health Services Research

DHCC's deployment-related clinical research is driven largely by extramural funding. DHCC's research efforts support the clinical, scientific, and policy goals of the Center. The Center has successfully completed and continues to be engaged in a wide range of projects designed to scientifically evaluate health services for post-deployment medical concerns. Current projects are competitively funded by the U.S. Congress, the National Institute of Mental Health, the Department of Defense, and the Department of Veterans Affairs.

DHCC's scientists and staff regularly publish in peer-reviewed medical journals. The Center's clinicians and scientists submitted or published 15 articles in peer-reviewed periodicals, submitted or published 7 book chapters, wrote or were interviewed for three articles in the media, created 42 published abstracts for conference presentations, delivered 28 invited presentations, and exhibited 14 poster presentations at conferences in FY 2009–2010.

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

- Clinical, epidemiological, and health services research
- Clinical practice guideline implementation
- Program evaluation
- Development of surveys and mental health screening tools
- Database creation and management
- Research consultation to clinicians
- Manuscript and report preparation

FY 2009–2010 RESEARCH PORTFOLIO

DHCC's FY 2009–2010 research portfolio consisted of the following nine projects.

A Study of Prazosin as an Augmentation Treatment for the Relief of Combat Stress-Induced Nightmares and Sleep Disturbance

Trauma-related nightmares and sleep disruption continue to be major issues for service members returning from the wars in Iraq and Afghanistan. Standard treatments have had limited success in alleviating these problems. Prazosin, a medication originally used to treat high blood pressure as well as enlarged prostate in men, has been demonstrated to improve overall sleep quality while significantly reducing both the frequency and severity of trauma-related nightmares in populations such as Vietnam-era veterans and holocaust or rape survivors. Although promising, limited data supports the use of prazosin in active duty service members.

DHCC, in conjunction with researchers from the VA Puget Sound Healthcare System, University of Washington School of Medicine, and Madigan Army Medical Center have been collaborating on a DoD-funded multi-site study to examine the effectiveness of prazosin for the treatment of combat-related nightmares and sleep disturbance in service members returning from OIF and OEF. Characteristics differentiating active duty service members from previously studied populations temper the ability to generalize findings from these previously studied populations to OIF/OEF service members in terms of treatment efficacy, medication tolerability, and dose recommendations. For example, today's returning service members may not have the same baseline blood pressure as older Vietnam veterans or holocaust survivors, and thus may require a more gradual titration to effective dose.

Despite creative and robust efforts by the DHCC study team, recruitment at Walter Reed Army Medical Center (WRAMC) proved

challenging for a variety of reasons. Most notably and despite the limited data, prazosin was widely and aggressively prescribed across the WRAMC system as a treatment for nightmares, significantly reducing the pool of potential study participants with nightmares who were not already being treated with the study medication. Twenty-five participants were screened during FY 2010, but only 2 participants were able to complete the 15-week trial.

Participant recruitment at the other study sites of this 4-year, double-blind, placebo-controlled clinical trial was more successful. To capitalize on the opportunity to maximize participation and attain the study goals, the study team decided to close the study to recruitment at WRAMC and allocate its resources to the other study sites.

DHCC study staff is currently focusing on completing required documentation as well as exploring methods and techniques to enhance recruitment efforts for future studies at WRAMC.

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 current 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 adjunct to other therapies. Acupuncture has been shown to improve well-being and to successfully treat stress, anxiety, and pain conditions.

The objective of this 2007 two-arm, 12-week randomized controlled trial of active duty military personnel with posttraumatic stress disorder was to determine the effectiveness of acupuncture for alleviating symptoms associated with PTSD. Two-hundred forty-five potential participants were screened for entrance into the study, seventy-five were enrolled after meeting preliminary criteria, and 55 met full eligibility criteria and were randomized to study condition. Forty-three of the 55 randomized soldiers (78%) provided complete follow-up data.

In a clinical trial, acupuncture was shown to decrease PTSD symptoms.

Data analyses indicate that compared to Optimized Usual Care (UC), Acupuncture (ACU) was associated with a significantly greater decrease in PTSD symptoms, which was maintained through the 12-week follow-up. The mean score on the primary outcome measure, the PTSD Checklist (PCL), dropped 19.7 points in ACU, compared to 9.6 points in UC. Effect sizes ranged from 1.41 to 1.66 in ACU versus 0.32 to 0.74 in UC. Similar significant decreases in symptoms of depression and pain as well as increases in mental functioning were seen in ACU compared to UC.

The study was Congressionally-funded and the study team consisted of personnel from DHCC, the Uniformed Services University of the Health Sciences, the Samueli Institute, and the University of Western Ontario. Study results are expected to be published in 2011.

DESTRESS-PC: A Brief Online Self-Management Tool for PTSD

The broad objective of this research is to improve primary care mental health services for military personnel and veterans with posttraumatic stress disorder related to war-zone trauma. The research is also relevant to providing early, high quality access to low-stigma mental health services for victims of other traumatic events, including terrorist attacks and natural or man-made disasters.

DESTRESS-PC is a brief Internet-based online self-management tool for posttraumatic stress disorder based on empirically valid cognitive behavioral therapy strategies. This primary

care-based two-parallel-arm randomized controlled trial assesses the feasibility and efficacy of DESTRESS-PC for reducing the posttraumatic stress disorder symptoms of war-zone exposed soldiers and veterans; increasing their mental health-related functioning; reducing depression, generalized anxiety, and somatic symptoms; and improving attitudes regarding formal mental health treatment. Participants are randomly assigned to either the DESTRESS-PC intervention or optimized usual care (the control condition).

The DESTRESS-PC intervention is delivered through the Internet, with participants logging on to a secure Web site hosted on private (i.e., nonmilitary) servers. Participants' progression through the intervention is monitored by a DESTRESS Nurse, and participants have both scheduled and as-needed access to their nurse via e-mail and telephone. DESTRESS Nurses are supervised by mental health professionals and have contact with participants' primary care providers.

As of the end of FY 2010, recruitment was complete at two of the study sites—Charleston VA (Goose Creek, DC) and Womack Army Medical Center (WAMC). Recruitment continues at the second Charleston VA (Savannah, GA) site, and is expected to wrap up in early 2011. Thus far, 124 combat veterans meeting preliminary study criteria have been consented with 72 meeting full eligibility criteria randomized to the study condition. This puts the study two thirds of the way toward its recruitment goal.

DESTRESS-T: Telephonic Psychotherapy for PTSD

Recently, DHCC and its partner the VA National Center for PTSD in Boston were awarded a $1.3 million dollar grant to develop and evaluate Delivery of Self Training and Education for Stressful Situations—Telephone (DESTRESS-T): an intensive, low stigma, and low burden psychosocial intervention for service members seeking mental health treatment. DESTRESS-T consists of a six-week telephone-based structured psychotherapy intervention for war-zone exposed service members diagnosed with PTSD along with care managers who will monitor and support participants' treatment adherence telephonically.

A two-site randomized controlled trial, comparing the DESTRESS-T package to optimized usual PTSD treatment for service members in primary care, will be conducted to determine the efficacy of DESTRESS-T. The study hypothesis is that DESTRESS-T will help redeployed OIF/OEF service members achieve:

- Less severe symptoms of PTSD, depression, generalized anxiety, panic and somatization at follow-up than service members receiving optimized usual primary care.
- Significantly improved mental and occupational functioning and attitudes toward mental health treatment at follow-up when compared to service members receiving optimized usual primary care.

This will be the first study of telephone psychotherapy for PTSD in a military population. At the end of FY 2010, protocol development was in progress. The DESTRESS-T intervention and manuals are currently being developed and planning activities are ongoing.

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 characteristics affect the likelihood of developing medically unexplained symptoms after service in OIF/OEF. Measures are both self-reported and physiological and participating military personnel are tested during their pre-deployment (phase I) and post-deployment (phase II) processing. Participants also complete phone interviews and mailed surveys

three months and a year after return from deployment (phases III and IV). 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. Phase I data collection was completed in the fall of 2008. By the end of FY 2010, 439 service members had completed phase II, 290 had completed phase III, and 295 had finished phase IV.

Refining a Single Item PTSD Screener (SIPS) for Primary Care

PTSD is frequently under-diagnosed in military primary care. To facilitate screening among primary care providers, DHCC developed and evaluated the Single Item PTSD Screener (SIPS) in a DoD primary care population during a previous research study.

DHCC has been awarded additional grant funding to further refine and evaluate the SIPS. The goal of the current project is to improve the SIPS sensitivity and specificity with the desired outcome that the item will perform as well as or better than the widely used four-item screen, the PC-PTSD.

During FY 2010, the original version of the SIPS was refined and a second version was developed with the assistance of an expert panel review, secondary data analysis of the prior data set, and brief cognitive interviews. Based on the PTSD Checklist (PCL) items that have the most predictive power for PTSD diagnosis, researchers generated various single item symptom-driven questions for the development of the second version of SIPS. Experts in the fields of epidemiology, primary care, psychiatry, and mental health test construction were asked to review all the potential SIPS and provide feedback on each item's utility, understandability, and face validity. Then, the acceptability of the potential screeners was evaluated by conducting brief (five minute) cognitive interviews with 15 DoD healthcare beneficiaries. Data from these interviews were used to finalize the two resulting SIPS. These versions as well as the original version will be tested with a representative sample of 500 DoD primary care patients recruited from three DoD primary care clinic waiting rooms. Comparisons of the three SIPS versions to an independently assessed standard structured research PTSD diagnostic interview will be performed.

STEPS UP: A Randomized Effectiveness Trial for PTSD and Depression in Primary Care

Approximately one-fifth of returning service members from the wars in Iraq and Afghanistan have been identified as having symptoms of PTSD and/or depression. Many service members with these symptoms are referred for specialty mental healthcare, but less than half actually follow through with the referral. With 90–95% of service members visiting their military primary care provider annually, primary care is an ideal platform to manage PTSD and depression. Empirically tested systems strategies for treating depression and other mental disorders can fill the urgent need to improve access, quality, and outcomes of mental healthcare in the military health system. These strategies include care manager coordination (connecting patient, provider, and specialist), collaborative care (negotiated patient-provider problem definition, monitoring of status and treatment response, self-management support, tele-health sustained follow-up), and stepped care (logical, patient-centered and guideline-concordant treatment sequencing). These strategies are unstudied in the military health system and virtually unstudied for PTSD.

STepped Enhancement of PTSD Services Using Primary care (STEPS UP) integrates (1) in-person and telephone-based telephone care management, with (2) a stepped evidence-based treatment package for PTSD and

depression. In this treatment package, service members can receive (1) Web-, (2) telephone-, and/or (3) in-person therapy, along with (4) medication. All components of this treatment package will be delivered within a primary care setting by nurse-level care managers, primary care providers, and mental health specialists. The effectiveness of the STEPS UP package will be compared against optimized usual care at six Army posts.

The RESPECT-Mil collaborative care management program for PTSD and depression already exists as the standard of care. Although similar in some ways, STEPS UP is poised to offer significant enhancements to the optimized usual care by way of these stepped and evidence-based non-pharmacological interventions along with centralized telephone care management.

The STEPS UP team plans to randomize 1500 active duty OIF/OEF returnees with PTSD to either STEPS UP or optimized usual care. Research participants will be assessed four times over a one-year period. The study team hypothesizes that STEPS UP will improve (1) PTSD and depression symptom severity (primary hypothesis) and (2) other anxiety, and somatic symptom severity, alcohol use, mental health functioning, and work functioning. The team further hypothesizes that (3) STEPS UP will be deemed a cost-effective management package for PTSD and depression and (4) patients, their family members, and clinicians will find the approach acceptable, effective, and a satisfying way to deliver and receive care.

This $14.6 million project is funded through the Department of Defense Deployment Related Medical Research Program. The award was made to the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., RAND Corporation, and RTI International. Army COL Charles C. Engel, M.D., M.P.H., is the initiating PI and partnering PIs include Robert M. Bray, Ph.D., from RTI International and Lisa Jaycox, Ph.D., from RAND Corporation. Other study Co-Investigators and Collaborators are from the University of Washington, VA Boston Healthcare System, 3CM, RAND Corporation, RTI International, DHCC, and the Uniformed Services University of the Health Sciences.

Veteran Status, Health and Mortality in Older Americans

This study was funded by the National Institute on Aging and extended by Walter Reed Army Medical Center and the Uniformed Services University of the Health Sciences. It 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. Using data from the Survey of Asset and Health Dynamics among the Oldest-Old (AHEAD) and the Survey of Health and Retirement Study (HRS), the study employs such statistical techniques as the structural hazard rate model, the multinomial logit regression, mathematical simulation, and mixed models with repeated measures.

Project findings suggest a mortality crossover between veterans and non-veterans that probably occurs just before age 70. Since this crossover does not tend to happen abruptly, the two mortality schedules seem to experience a long-standing process of convergence. At age 70, variations in physical health and mental disorders account for approximately 61% of the

total effect of veteran status on the mortality of older Americans. At age 75, the portion of such indirect effects falls to 42%. At age 85, only one-fifth of the excess mortality among veterans is captured by physical health conditions and mental disorders. However, veteran status does not have significant influences on transitions in functional status among those functionally independent at baseline.

The study shows that the application of different statistical models leads to distinct variations in the predicted values of health transition scores at a series of time points, providing evidence that without considering the selection bias in the process of health transitions, estimation of the effects on health transitions of older persons could be severely biased.

Because of this finding, the study team is attempting to construct an unbiased longitudinal model on health transitions in older persons using updated data on health dynamics and a newly developed longitudinal model that was presented at the International Network on Health Expectancy (REVES) 2009 meeting, held in Copenhagen, Denmark.

To date, three manuscripts have been published in scientific journals and a fourth is in press. Publication of results will continue into FY 2011.

Vitamin D Deficiency in OIF/OEF Veterans with Chronic Pain, Fatigue, and Anxiety

Vitamin D has been long recognized as essential to bone health. Primarily generated by the skin through sun-light exposure, vitamin D can also be acquired through fortified milk consumption. Vitamin D deficiency is prevalent in the general population. As much as 5–36% of the U.S. population, nineteen to 50 years of age, may have deficiency depending on a number of factors. Variables affecting vitamin D levels include the latitude where individuals live, the amount of seasonal sun-exposure they receive, the time spent indoors, the amount consumed through milk, food, or supplements, or the degree of their skin pigmentation.

The exact prevalence of vitamin D deficiency in the U.S. military population is not known, however an Army multiple sclerosis study suggests that it reflects that of the general population. A study of Finnish military recruits found that 5% were deficient in the summertime. Those deficient were more than three times as likely to have a stress fracture over the next 90 days, when compared to those with adequate vitamin D stores. Recently, vitamin D deficiency in the general population has also been linked to chronic musculoskeletal pain. Ninety-three percent of 151 patients seen at the Mayo Clinic with chronic musculoskeletal pain had vitamin D deficiency. Since vitamin D receptors have been found in pain control areas in the human brain, it has been proposed that the central nervous system plays a role in vitamin D deficiency related chronic pain. The degree of anxiety found in patients with fibromyalgia has been correlated to low vitamin D levels. Experimental knockout mice for the vitamin D receptor reveal anxiety behaviors, further suggesting that vitamin D has a role in brain function.

The purpose of this study was to retrospectively analyze the diagnoses of Specialized Care Program patients, primarily OIF/OEF veterans, to see if there was a correlation with their vitamin D levels, as determined during their routine care. Specifically, the focus was on chronic musculoskeletal pain, fatigue, and anxiety. However, other illnesses such as bone-related illnesses were looked at as well. The degree of vitamin D deficiency present in this segment of the OIF/OEF veteran military population was analyzed.

Results from the small study cohort revealed that 30 of 61 OIF/OEF veterans who had chronic pain also had vitamin D deficiency. Since half of these patients suffered from deployment-related bone or joint injuries, the recommendation was made to consider screening OIF/OEF veterans with chronic musculoskeletal pain for vitamin D deficiency, so that optimum bone health can be achieved through proper supplementation. ❖

FY 2011 Outlook

In FY 2011, DHCC will continue to coordinate efforts to support continuous improvement of deployment-related healthcare across the military health system, especially in the area of combat-related behavioral health.

DIRECT HEALTH SERVICE DELIVERY

The DHCC clinical team will continue to deliver the Specialized Care Programs Track I and Track II and to provide evaluation and care for veterans with difficult-to-diagnose deployment-related health concerns. DHCC also plans to continue its one-week program for spouses/ significant others of service members with PTSD.

EVALUATION OF INTENSIVE OUTPATIENT PROGRAMS FOR PTSD

In FY 2011, DHCC plans to create a team to liaise with the approximately thirty Intensive Outpatient Programs (IOPs) for the treatment of PTSD in military healthcare with the intention of surveying and interviewing POCs from these programs to gather information about their methods and structure.

The **Tri**-service **I**ntensive **O**utpatient **P**rogram **S**ynchronization (TrIOPS) team has the mission of seeking best practices in order to optimize and disseminate these best practices throughout the Army and the military. The team will facilitate a resource network among the IOPs to encourage the sharing and implementation of the most effective structures and treatments among established and developing programs.

OUTREACH AND PROVIDER EDUCATION

DHCC will provide input into clinical practice guideline development and update efforts as required. The DHCC Web site is slated for a redesign in FY 2011.

The RESPECT-Mil Implementation Team will continue to assist 53 Army primary care clinics at 19 MTFs with their implementation of RESPECT-Mil.

The Re-Engineering Healthcare Integration Program (REHIP) demonstration project is expected to commence at two Army, two Air Force, and two Navy sites in FY 2011.

DHCC will conduct the eighth Deployment Healthcare Track at the Inaugural Armed Forces Public Health Conference in Hampton Roads, Virginia in March 2011. The track will solicit abstracts for presentations on population-based health interventions and on deployment-related health topics such as sleep hygiene, intervention strategies for high risk behaviors, and overcoming stigma about behavioral health concerns. The track will also focus on how to serve at-risk populations including military women, rural veterans, and contractors who have deployed as well as exploring strategies for continuity of care with the National Guard and Reserve Components.

HEALTH SERVICES RESEARCH

In FY 2011, the DHCC Research Team will continue to administer its portfolio of existing research projects as they progress according to the approved protocol for each effort. Opportunities for additional studies will be pursued through the appropriate channels. DHCC will continue to recruit participants for its ongoing clinical *DESTRESS-PC: A Brief Online Self-Management Tool for PTSD*. The study teams for *STEPS UP: Stepped Enhancement of PTSD Services Using Primary Care: A Randomized Effectiveness Trial* and *DESTRESS-T: A Randomized Trial of Telephonic Psychotherapy for Combat-Related Posttraumatic Stress Disorder* will continue with protocol development and the approval process in 2011.

The DHCC Research Team will continue to prepare manuscripts detailing research findings for submission to peer-reviewed publications as well as presenting these findings at conferences.

OPERATIONAL IMPACT OF BRAC

In FY 2011, as DHCC's mission and staff continue to expand, the RESPECT-Mil and research teams are slated to move to leased space in Silver Spring, MD, while the balance of DHCC staff will move to the new Walter Reed National Military Medical Center in Bethesda in August 2011. ❖

Appendix A: Collaborations

DHCC INTER-SERVICE, INTER-AGENCY, AND UNIVERSITY COLLABORATIONS

Department of Defense and Military Services

- Armed Forces Health Surveillance Center
- Armed Forces Institute of Pathology
- Armed Forces Radiobiology Research Institute
- Defense and Veterans Brain Injury Center
- Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury
- Defense Health Board
- Department of Defense Deployment Related Medical Research Program
- Force Health Protection & Readiness, Office of the Assistant Secretary of Defense for Health Affairs
- Military Heath System Clinical Quality Management
- National Intrepid Center of Excellence (NICoE)
- Naval Health Research Center (San Diego, California)
- Navy and Marine Corps Public Health Center
- Office of Clinical Program Policy, Office of the Assistant Secretary of Defense for Health Affairs
- 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 Public Health Command (Provisional), formerly U.S. Army Center for Health Promotion and Preventive Medicine
- U.S. Army Medical Command Quality Management Directorate
- U.S. Army Medical Research and Materiel Command
- U.S. Army Proponency Office for Preventive Medicine
- Walter Reed Army Institute of Research
- Walter Reed National Vaccine Healthcare Center

Department of Veterans Affairs

- Boston Veterans Affairs Medical Center
- Cooperative Studies Program Coordinating Centers (Palo Alto, California)
- Environmental Agents Service
- Environmental Epidemiology Service
- Montgomery Veterans Affairs Medical Center, Jackson, MS
- National Center for PTSD
- Office of Quality and Performance
- Ralph H. Johnson Veterans Affairs Medical Center
- Veterans Affairs Maryland Health Care System Depleted Uranium Follow-Up Program (Baltimore, Maryland)
- Veterans Affairs Puget Sound Health Care System
- 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

- Boston University School of Medicine
- Center for the Study of Traumatic Stress
- Dartmouth University School of Medicine
- Duke University Medical School
- Indiana University
- International Society for Traumatic Stress Studies (ISTSS)

DHCC's Director, Colonel Charles C. Engel, USA, M.D., M.P.H. was elected to the International Society for Traumatic Stress Studies (ISTSS) Board of Directors in September 2010.

- Medical University of South Carolina
- NATO Research and Technology Organisation Panel on Medically Unexplained Physical Symptoms in Military Health
- Regenstrief Institute, Inc.
- Rutgers University/University of Medicine and Dentistry of New Jersey
- The John D. and Catherine T. MacArthur Foundation
- Samueli Institute for Information Biology
- University of Washington School of Medicine
- University of Western Ontario
- Walter Reed Society

Appendix A: Collaborations

DETAILED LIST OF DHCC COLLABORATIONS

Collaborations to Improve the Quality of Post-Deployment Healthcare

Clinical Practice Guideline Creation and Revision: The former DHCC deputy director contributed behavioral health expertise to the Amputation Management/Rehabilitation Clinical Practice Guideline Development Working Group, which reviewed and graded literature related to amputation, formulated recommendations, developed an algorithm, and created patient education materials. The new guideline was released in late 2007. In 2008, the former DHCC deputy director participated on a working group tasked to develop tool kits to enhance this guideline's implementation. These tool kits were made available in 2009. The DHCC director serves as the DoD champion of the VA/DoD Major Depressive Disorder Guideline and was the Co-Chair of the Management of MDD Working Group that revised the guideline. The former DHCC deputy director also participated on this expert panel. The updated guideline, which was released in May 2009, can be found at this location: http://www.healthquality.va.gov/Major_Depressive_Disorder_MDD_Clinical_Practice_Guideline.asp.

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 (PDH-CPG) 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 and Marine Corps Public 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. In FY 2006, a Web-based training module on the Medically Unexplained Symptoms Clinical Practice Guideline was added to the Deployment Health Clinical Training Series on the DHCC Web site, and in FY 2007 another module on the Major Depressive Disorder Clinical Practice Guideline was added. By the end of FY 2010, 4,219 Toolboxes had been distributed to Army providers, 1,870 to Air Force providers, and 2,663 to Navy providers.

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.

Collaborations in Provision of Post-Deployment Clinical Care

Center for the Study of Traumatic Stress: For nearly a quarter of a century, the Center for the Study of Traumatic Stress (CSTS) has been on the forefront of translational research on the psychological effects and health consequences

of exposure to traumatic events, especially those related to war, disasters, terrorism and public health threats. The Center, part of the Department of Psychiatry in the School of Medicine of the Uniformed Services University, has been uniquely attuned and responsive to our nation's trauma history encompassing events of national and international impact such as 9/11, the anthrax attacks, major hurricanes and H1N1. DHCC's director and several members of DHCC's research staff share their expertise with CSTS as USUHS professors and scientists. A fellow component center of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE), CSTS brings scholarly and research oriented problem solving to the mental and behavioral health problems of the Department of Defense and the nation.

Clinical Follow-up after Depleted Uranium Exposure: DHCC provides central archiving for records pertaining to depleted uranium exposure tests. Collaboration between DHCC, Force Health Protection & Readiness, the Army Public Health Command (Provisional), the Armed Forces Institute of Pathology, and the Veterans Health Administration's Depleted Uranium Follow-up Program continues. As of the end of FY 2010, there were 3,988 depleted uranium test results archived. No positive test results were submitted during the two year period. In addition to archiving DU records, DHCC's role is to facilitate referral of patients with positive DU exposure to the VA's Depleted Uranium Follow-up Program and to help coordinate follow-up medical management for them, as needed. In November 2009, DHCC updated the Medical Management of Depleted Uranium Provider Reference Pocket Card for the PDH-CPG Desk Reference Toolbox.

DoD Deployment Mental Health Assessments Training: The National Defense Authorization Act for Fiscal Year 2010, Section 708 (Public Law 111-84) mandated the provision of "person-to-person" mental health assessments for each member of the Armed Forces deployed in connection with a contingency operation. Deployment Mental Health Assessments are completed to identify and assess symptoms of PTSD, depression, suicidality, or any other mental health concern before or after deployment. If concerns are identified, indicated referrals are made for further evaluation, care, and follow-up. To train and certify medical personnel to implement these pre- and post-deployment mental health assessments, the Office of Force Health Protection & Readiness (Health Affairs) and the Deployment Health Clinical Center collaborated to develop a Web-based learning module and post-test.

Medical Management of Embedded Metal Fragments: In December 2007, the Office of the Assistant Secretary of Defense for Health Affairs published a policy requiring the Services to conduct laboratory analyses of the metal fragments of munitions fire removed from DoD personnel in DoD military treatment facilities. This policy, which resulted from input from a panel of experts solicited from each Service, the Armed Forces Institute of Pathology, the Armed Forces Radiobiology Research Institute, the Deployment Health Clinical Center and the Veterans Health Administration's Depleted Uranium Follow-Up Program, is the first step in establishing a procedure for tracking and medically managing DoD personnel exposed to potentially hazardous embedded fragments. DHCC maintains information on its Web site including Service-specific policies on embedded fragments as well as fact sheets

Appendix A: Collaborations

and current research. When requested, DHCC consultants participate in discussions on removal guidelines, fragment analysis, and the development of a registry.

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. In 2009, the team presented a briefing on the PDH-CPG and PDHealth.mil to the Air Force Health Care Integrators via teleconference. The DHCC Staff Training and Assistance Team 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 and Marine Corps Public Health Center. By the end of FY 2010, more than 8,700 copies had been sent out to military primary care providers.

Walter Reed Society: Throughout the year the DHCC staff members provide volunteer support to the Walter Reed Society (WRS), which was established in 1996 to assist the hospital command with issues related to patient care, education, and family support for staff and patients. The Society sponsors events, funds projects, and purchases goods that enhance patient care services and that support the welfare and morale of soldiers and other staff. Projects include refurbishing waiting rooms, providing playground equipment at Fisher House, building a healing garden in the hospital courtyard, adding amenities to the patient recreation center, as well as furnishing equipment for physical therapy and wheel chairs for patient use. In response to the Global War on Terrorism, the Society set up the Operation Iraqi Freedom Warrior/Family Support Fund to provide assistance to service members and/or their families when support provided through Invitational Travel Orders (ITO) does not meet immediate needs during the patient's treatment at WRAMC. Funding is approved on a case by case review of the applications, after a personal meeting with a WRS representative, and it is considered a grant. Scores of wounded warriors and their family members have received assistance from this fund. Help with travel, lodging and subsistence expenses are frequent needs. DHCC personnel support the Society's efforts spending many volunteer hours 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 soldiers and helps the staff understand their experiences and their needs. ❖

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Mansfield A.J., Kaufman J.S., Gaynes B.N., Engel C.C. Deployment and Mental Health Diagnoses Among U.S. Military Children. Society for Epidemiologic Research, Seattle, WA, June 25, 2010.

McAndrew L., D'Andrea E.A., Ackerman A., Chandler H., Yen C., Batorsky B., Engel C.C., Quigley K. Impact of Combat Deployment on Weight. Society for Behavioral Medicine, Seattle, WA, April 7–10, 2010.

McAndrew L., D'Andrea E.A., Engel C.C., Batorsky B., Yen C., Quigley K. Gender Differences in Psychological and Deployment Factors Immediately After OEF/OIF Deployment. HSR&D National Meeting on Building the Evidence Base to Improve Healthcare Outcomes for Women Veterans, Washington, DC, July 14–16, 2010.

Novy P. The Deployment Health Clinical Center Specialized Care Program Track II. 13th Annual Force Health Protection Conference, Phoenix, AZ, August 7–13, 2010.

Novy P. Women Warriors: The Experiences and Subsequent Needs of Women Veterans. VA Women's Healthcare Providers, Washington, DC, July 27–28, 2010.

Quigley K., D'Andrea E., Ackerman A., Yen C., Raphael K., Engel C.C. Unit Cohesion and Pre-War Stress Reactivity: What Makes Soldiers More Resilient After Deployment to Iraq or Afghanistan. Annual Meeting of the American Psychosomatic Society, Chicago, IL, March 7, 2009.

Quigley K.S., D'Andrea E.A., Ackerman A., Hamtil H., Engel C.C. Stress Reactivity During Preparation for Combat Deployment: Resilience and Risk Factors for Post-Deployment Physical Health. Annual Meeting of the Association of Applied Psychophysiology and Biofeedback, Albuquerque, NM, April 3, 2009.

Quigley, K.S., D'Andrea E., Engel C.C., Lyons J., Raphael K. The HEROES Project: Prospective Study of Post-Deployment Health in Iraq and Afghanistan Veterans. Evolving Paradigms II: A National VA/DoD OEF/OIF Conference, Las Vegas, NV, September 23, 2009.

Roesel T. Vitamin D and the Central Nervous System. 12th Annual Force Health Protection Conference, Albuquerque, NM, August 16–21, 2009.

Roesel T., Gorham E. Optimal Vitamin D Levels for Force Health Protection and Cancer Prevention. 13th Annual Force Health Protection Conference, Phoenix, AZ, August 7–13, 2010.

INVITED PRESENTATIONS

Bruner V. Behavioral Health Response to the Fort Hood Shooting. Dot Mil Docs, April 24, 2010.

Bruner V. Combat Related PTSD Treatment. WRAMC Foreign Media Day, July 12, 2010.

Bruner V. Commentary on the Screening of Film, *Lioness*. 2nd Annual New Mexico VA Women Veterans Conference, Las Cruces, NM, September 25, 2010.

Bruner V. PTSD and sexual trauma in military women. Four Corners Women Veterans Conference, Farmington, NM, July 23, 2010.

Bruner V. Understanding the Burden of War. DFAS Conference, Indianapolis, IN, April 29–30, 2010.

Crowley B. Aiming for Fame: The Assassination Attempt by Arthur Herman Bremer on Governor George Wallace in the 1972 Presidential Campaign. CME Conference on Forensic Psychiatry: Crimes of the Washington Metropolitan Area, Washington Hospital Center, Washington, DC, November 15, 2008.

Crowley B. "Ask the Experts" Workshop. Annual Meeting of American Academy of Psychiatry and the Law, Baltimore, MD, October 30, 2009.

Duffy F.F., Moscicki E., West J., Engel C.C., Regier D. A Comprehensive Approach to Disseminating Evidence-Based Care for PTSD and Depression. 61st Institute for Psychiatric Services, New York, NY, October 8, 2009.

Engel C.C. Commentary on the *Lioness* Documentary. Walter Reed Army Medical Center, Washington, DC, December 11, 2009.

Engel C.C. Facilitated Presentation of Theater of War. Walter Reed Army Medical Center, Washington, DC, January 12, 2010.

Engel CC. Post-war illness with mixed mental and physical symptoms: An interdisciplinary approach. SRMC/BAMC/VA TBI Grand Rounds, Brook Army Medical Center, San Antonio, TX, September 14, 2010.

Engel C.C. Re-Engineering Systems for the Primary Care-Based Treatment of Depression and PTSD in the Military (RESPECT-Mil): A Workshop for Military Family Physicians. Annual Meeting of the Uniformed Services Academy of Family Physicians, New Orleans, LA, February 22–27, 2010.

Engel C.C. Re-Engineering Systems of Primary Care Treatment in the Military (RESPECT-Mil), American Psychiatric Association Annual Meeting, New Orleans, LA, May 22–26, 2010.

Engel C.C. Re-Engineering Systems of Primary Care Treatment in the Military (RESPECT-Mil), AUSA's ILW Army Medical Symposium and Exposition, San Antonio, TX, May 21, 2010.

Engel C.C. Re-Engineering Systems of Primary Care Treatment in the Military (RESPECT-Mil), Southern Regional Medical Command TBI/BH Conference, San Antonio, TX, April 19–22, 2010.

Appendix B: Publications

Engel C.C. Re-Engineering Systems of Primary Care Treatment in the Military (RESPECT-Mil) Overview. National Intrepid Center of Excellence, Bethesda, MD, July 14, 2010.

Engel C.C. Speaking of Service: Personal Accounts of Access, Needs, & Choices. Trauma Spectrum Disorders: The Role of Gender, Race, & Other Socioeconomic Factors (Sponsored by DoD/DCoE, NIH and DVA), NIH Natcher Conference Center, Bethesda, M.D., October 1–2, 2008.

Engel C.C., Doerries B., Konopast L. Theater of War: Ajax—From Combat Honor to Utter Loss of Self. 12th Annual Force Health Protection Conference, Albuquerque, NM, August 16–21, 2009.

Feliciano M. Nursing Documentation and Legal Ramifications. DeWitt Army Medical Center, Fort Belvoir, VA, April 27, 2009.

Freed M.C. An Overview of Prolonged Exposure for the Treatment of PTSD. Center for the Study of Traumatic Stress, Bethesda, MD, January 23, 2009.

Feliciano M. Nursing documentation and legal ramifications: Presentation to the nursing staff at Fort Meyer. Radar Health Clinic, Fort Meyer, VA, December 12, 2009.

Feliciano M. Overview of Posttraumatic Stress Disorder. WRAMC Nurses' Week, Washington, DC, May 10, 2010.

Feliciano M. Posttraumatic Stress Disorder and Care. Walter Reed Army Medical Center Nurses Appreciation Week, Washington, DC, May 7, 2009.

Feliciano M., Russell L., Engel C.C., Freed M. Posttraumatic Stress Disorder for the Non-Clinician. Chaplain's Monthly Training, Walter Reed Army Medical Center, Washington, DC, November 2009.

Feliciano M., Russell L., Engel C.C., Freed M. Prazosin for Combat-Related Nightmares. Warrior Transition Brigade Formation, Walter Reed Army Medical Center, Washington, DC, March 2010.

Freed M. Returning from War: An Overview of Common Mental Health Problems Affecting our Servicemembers and Veterans. Equal Rights Center, Washington, DC, August 6, 2010.

Gore K. DoD Approaches to PTSD Treatment: Implementing New Systems of Care. Society for Women's Health Research Conference on Posttraumatic Stress Disorder (PTSD) in Women Returning from Combat, Washington, DC, December 8, 2008.

Griffith J. Changing Identities of Reservists: Implications for Recruitment, Retention, and Readiness. American Psychological Association, San Diego, CA, August 12–15, 2010.

POSTER PRESENTATIONS

D'Andrea E.A., Ackerman A., Yen C., Hamtil H., Engel C.C., Quigley K.S. Social Support in Soldiers Returned from Deployment in Iraq or Afghanistan: Predicting Physical Symptoms. 114th Annual Meeting of the Association of Military Surgeons of the United States, San Antonio, TX, November 9–14, 2008.

Engel C.C., Bray R.M., Jaycox L., Litz B., Zatzick D., Tanielian T. A Randomized Effectiveness Trial of a Systems-Level Approach to Stepped Care for War-Related PTSD. Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 11–13, 2009.

Engel C.C., Harper Cordova E., Benedek D., Gore K., Osuch E., Grieger T., Choate C., Jonas W., Ursano R. A Randomized Controlled Trial Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress Disorder in a Military Population. Institute on Psychiatric Services, Chicago, IL, October 2–5, 2008.

Appendix B: Publications

Engel C.C., Harper Cordova E., Benedek D., Jonas W., Ursano R. A Randomized Controlled Trial Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress Disorder in a Military Population. Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 11–13, 2009.

Gore K., Prins A., Freed M., Liu X., Kuesters P., Engel C. Operating Characteristics of the PTSD Checklist (PCL) in a Military Primary Care Setting. 24th Annual Meeting of the International Society of Traumatic Stress Studies, Chicago, IL, November 13–15, 2008.

Kilgore J., Engel C.C. Theater of War: War-Related Trauma Training Using the Humanities. Association for Academic Psychiatry, Washington, DC, September 30–October 3, 2009.

Liu X., Engel C.C., Kang H. Longitudinal Impact of Specific Health Conditions on Functional Limitations of Older Americans. Population Association of America Annual Meeting, Detroit, MI, April 30–May 2, 2009.

Magruder K., Engel C.C., Litz B., Gore K., Yeager D. Primary Care Intervention for PTSD in Operation Iraqi Freedom and Operation Enduring Freedom Veterans: A VA and DoD Randomized Controlled Trial of a Novel Web-Based Approach. 114th Annual Meeting of Association of Military Surgeons of the United States, San Antonio, TX, November 9–14, 2008.

Prins A., Angeli N., Gregg J., Gore K., Dollar K. Provider Knowledge of PTSD: Considerations for Developing a PTSD Tool Kit for Integrated Primary Care. 4th Annual VHA Mental Health Conference, Baltimore, MD, July 27–29, 2010.

Quigley K., D'Andrea E., Ackerman A., Yen C., Hamtil H., Engel C.C. Blood Pressure Reactivity and Recovery to a Lab Stressor in Soldiers Deploying to Iraq and Afghanistan Predicted Self-Reported Physical Health at Return from Deployment. 48th Annual Meeting of the Society for Psychophysiological Research, Austin, TX, October 1–5, 2008.

Roesel T. Vitamin D Deficiency in Active Duty War Veterans with Chronic Musculoskeletal Pain and Stress Fractures: Implications for Measures to Reduce Occupational and Environmental Health Risks. American Occupational Health Conference, San Diego, CA, April 26–29, 2009.

Roesel T. A Novel Hypothesis Explains the Syndrome of Chronic Musculoskeletal Pain and Comorbid Painful Healed Fracture Sites in Vitamin D Deficiency. Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 11–13, 2009.

Roesel T. Can Vitamin D Potentiate Gabapentin and Pregabalin Efficacy in Vitamin D Deficiency Related Chronic Musculoskeletal Pain? American Society for Bone and Mineral Research, Denver, CO, September 11–15, 2009.

Russell L., Weil J., Gore K., Freed M., Liu X., Arnold M., Melvin K., Engel C.C. Refining a Single Item PTSD Screener (SIPS) for Use in DoD Primary Care. USUHS Research Week, Bethesda, MD, May 10–12, 2010.

Appendix C: Research Projects

Name of Project: A Placebo-Controlled Augmentation Trial of Prazosin for Combat Trauma PTSD.

Funding Organization:
Department of Defense.

DHCC Staff Assigned:
Michael C. Freed, Ph.D. (Clinical Research Psychologist; Project Director).

Leah Russell, M.A. (Project Coordinator).

Molly Feliciano, M.S.N., RN, CRNP (Nurse Practitioner, Certified).

Brian Crowley, M.D. (Psychiatrist).

Jennifer Weil, Ph.D. (Clinical Research Psychologist).

Principal Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:
Murray A. Raskind, M.D., University of Washington School of Medicine, VA Puget Sound Health Care System.

Elaine R. Peskind, M.D., University of Washington School of Medicine, VA Puget Sound Health Care System.

Miles M. McFall, Ph.D., University of Washington School of Medicine, VA Puget Sound Health Care System.

Scott C. Moran, M.D., MAJ, MC, USA, Walter Reed Army Medical Center.

John C. Bradley, M.D., COL, MC, USA, Walter Reed Army Medical Center.

Status:
Closed to recruitment at WRAMC.

Name of Project: A Randomized Trial of Telephonic Psychotherapy for Combat-Related Posttraumatic Stress Disorder.

Funding Organization:
Defense Medical Research and Development Program (DMRDP)-DHP.

DHCC Staff Assigned:
Jennifer Weil, Ph.D. (Co-Investigator).

Principal Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:

Brett Litz, Ph.D., M.A., VA Boston Healthcare System, Boston University.

Status:
Protocol development.

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

Funding Organization:
U.S. Congress.

DHCC Staff Assigned:
Elizabeth Harper-Cordova, M.A. (Study Coordinator).

Thomas Roesel, M.D., Ph.D. (Medical Monitor).

Principal Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:
David M. Benedek, M.D., DFAPA, Uniformed Services University of the Health Sciences (Co-Investigator).

Elizabeth A. Osuch, M.D., University of Western Ontario.

Thomas A. Grieger, M.D., DFAPA, Uniformed Services University of the Health Sciences.

Robert J Ursano, M.D., Uniformed Services University of the Health Sciences.

Christine H. Choate, D.C., Ph.D., Samueli Institute.

Wayne Jonas, M.D., Samueli Institute.

Presentations:
Cordova E., Benedek D., Armstrong D.W., Osuch E., et al. Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress in Military Personnel. 9th Annual Force Health Protection Conference, Albuquerque, NM, August 2006.

Cordova E., Benedek D., Gore K., Armstrong D., Osuch E., Grieger T., Choate C., Jonas W., Ursano R., Engel C.C. Rationale and Design of a Randomized Controlled Trial of Acupuncture

for PTSD. 10th Annual Force Health Protection Conference, Louisville, KY, August 2007.

Engel, C., Benedek D., Gore K., Armstrong D., Osuch E., Grieger T., Choate C., Jonas W., Ursano R. Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress in Military Personnel. 11th Annual Force Health Protection Conference, Albuquerque, NM, August 2008.

Engel C.C., Harper Cordova E., Benedek D., Gore K., Osuch E., Grieger T., Choate C., Jonas W., Ursano R. A Randomized Controlled Trial Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress Disorder in a Military Population. Institute on Psychiatric Services, Chicago, IL, October 2–5, 2008.

Engel C.C., Harper Cordova E., Benedek D., Jonas W., Ursano R. Acupuncture for Posttraumatic Stress Disorder: A Randomized Trial in a Military Population. 24th Annual Meeting of the International Society of Traumatic Stress Studies, Chicago, IL, November 13–15, 2008.

Engel C.C., Harper Cordova E., Benedek D., Jonas W., Ursano R. A Randomized Controlled Trial Evaluating the Efficacy of Acupuncture as a Treatment for Posttraumatic Stress Disorder in a Military Population. Uniformed Services University of the Health Sciences Research Week, Bethesda, M.D., May 11–13, 2009.

Status:
Data collection and analyses are complete; manuscript preparation is in process.

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

Funding Organization: East Orange, New Jersey VA Medical Center.

Principal Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:
Karen S. Quigley, Ph.D., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Elizabeth A. D'Andrea, Ph.D., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Michael Byrnes, M.D., Dept of Veterans Affairs, Fort Dix, New Jersey.

Karen G. Raphael, Ph.D., Univ. of Medicine and Dentistry of New Jersey.

Chin-Lin Tseng, Ph.D., Univ. of Medicine and Dentistry of New Jersey.

Shelley A. Weaver, Ph.D., War Related Illness and Injury Study Center, Department of Veterans, East Orange, NJ.

Drew A. Helmer, M.D., M.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Thomas Findley, M.D., Ph.D., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Patricia A. Findley, Ph.D., M.S.W., LCSW, School of Management and Labor Relations Rutgers, The State University of New Jersey.

Judith Lyons, Ph.D., G.V. (Sonny) Montgomery Veterans Affairs Medical Center, Jackson, MS.

Adam Ackerman, B.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Isabella Rodrigues, Ph.D., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Conway Yen, B.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Gladstone Reid, M.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Florence Chua, M.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Appendix C: Research Projects

Michael Bergen, M.S., War Related Illness and Injury Study Center, Department of Veterans Affairs, East Orange, NJ.

Presentations:
D'Andrea E.A., Ackerman A., Hamtil H., Engel C.C., Quigley K.S. Health and Psychological Features of Soldiers Deploying to Iraq and Afghanistan. Health Services Research and Development Service National Meeting, Washington, DC, February 21–23, 2007.

Quigley K.S., D'Andrea E.A., Ackerman A., Hamtil H., Yen C., Engel C.C. Military Stress: Pre-War Physiological Predictors of Post-War Health Outcomes. Talk given as part of a symposium "Military Stress and Virtual Reality Stress Inoculation and Treatment" (Chair: K.S. Quigley) at the Annual Meeting of the Association for Applied Psychophysiology and Biofeedback, Daytona Beach, FL, May 16, 2008.

Quigley K., D'Andrea E., Ackerman A., Yen C., Hamtil H., Engel C.C. Blood Pressure Reactivity and Recovery to a Lab Stressor in Soldiers Deploying to Iraq and Afghanistan Predicted Self-Reported Physical Health at Return from Deployment. 48th Annual Meeting of the Society for Psychophysiological Research, Austin, TX, October 1–5, 2008.

D'Andrea E.A., Ackerman A., Yen C., Hamtil H., Engel C.C., Quigley K.S. Social Support in Soldiers Returned from Deployment in Iraq or Afghanistan: Predicting Physical Symptoms. 114th Annual Meeting of the Association of Military Surgeons of the United States, San Antonio, TX, November 9–14, 2008.

Quigley K., D'Andrea E., Ackerman A., Yen C., Raphael K., Engel C.C. Unit Cohesion and Pre-War Stress Reactivity: What Makes Soldiers More Resilient After Deployment to Iraq or Afghanistan. Annual Meeting of the American Psychosomatic Society, Chicago, IL, March 7, 2009.

Quigley K.S., D'Andrea E.A., Ackerman A., Hamtil H., Engel C.C. Stress Reactivity During Preparation for Combat Deployment: Resilience and Risk Factors for Post-Deployment Physical Health. Annual Meeting of the Association of Applied Psychophysiology and Biofeedback, Albuquerque, NM, April 3, 2009.

Quigley, K.S., D'Andrea E., Engel C.C., Lyons J., Raphael K. The HEROES Project: Prospective Study of Post-Deployment Health in Iraq and Afghanistan Veterans. Evolving Paradigms II: A National VA/DoD OEF/OIF Conference, Las Vegas, NV, September 23, 2009.

McAndrew L., D'Andrea E.A., Engel C.C., Batorsky B., Yen C., Quigley K. Gender Differences in Psychological and Deployment Factors Immediately After OEF/OIF Deployment. HSR&D National Meeting on Building the Evidence Base to Improve Healthcare Outcomes for Women Veterans, Washington, DC, July 14–16, 2010.

McAndrew L., D'Andrea E.A., Ackerman A., Chandler H., Yen C., Batorsky B., Engel C.C., Quigley K. Impact of Combat Deployment on Weight. Society for Behavioral Medicine, Seattle, WA, April 7–10, 2010.

Status:
Active. Data collection continues.

Name of Project: Refining a Single Item PTSD Screener (SIPS) for Use in DoD Primary Care.

Funding Organization: Uniformed Services University of the Health Sciences.

DHCC Staff Assigned:
Jennifer Weil, Ph.D. (Co-Investigator).

Principal Investigator/Site Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:
None.

Presentations:
Russell L., Weil J., Gore K., Freed M., Liu X., Arnold M., Melvin K., & Engel C. Refining a Single Item Screener (SIPS) for Use in DoD Primary Care. Poster presentation at the Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 10–12, 2010.

Status:
Protocol development.

Name of Project: Randomized Trial of an Online Early Intervention for Combat PTSD in Primary Care: DESTRESS-PC.

Funding Organizations: National Institute of Mental Health and Department of Defense.

DHCC Staff Assigned:
Elizabeth Harper Cordova, M.A. (Project Director).

Principal Investigator/Site Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating External Personnel and Organizations:
Brett T. Litz, Ph.D., Boston University School of Medicine, the Boston VAMC.

Kathryn Magruder, M.D., M.P.H., Medical University of South Carolina/Charleston VA.

T. Ray Coe, Ph.D., LTC, MC, USA, Womack Army Medical Center, Fort Bragg, NC.

Presentations:
Magruder K., Engel C.C., Litz B., Gore K., Yeager D. Primary Care Intervention for PTSD in Operation Iraqi Freedom and Operation Enduring Freedom Veterans: A VA and DoD Randomized Controlled Trial of a Novel Web-Based Approach. 114th Annual Meeting of Association of Military Surgeons of the United States, San Antonio, TX, November 9–14, 2008.

Engel C.C., Harper Cordova E., Gore K., Litz B., Magruder K.M., Coe T.R., Yeager D., Liu X., Ursano R. Randomized Trial of a Web-Based Nurse-Assisted PTSD Self-Management Intervention for Primary Care: Study Design and Status. Mental Health Research Forum, Kansas City, MO, August 31–September 3, 2009.

Status:
Active recruitment.

Name of Project: Stepped Enhancement of PTSD Services Using Primary Care: A Randomized Effectiveness Trial.

Funding Organization: Department of Defense Deployment Related Medical Research Program.

DHCC Staff Assigned:
Michael C. Freed, Ph.D. (Clinical Research Psychologist; Program Director).

Phoebe Kuesters, M.P.H. (Clinical Research Coordinator).

Principal Investigator:
Charles Engel, M.D., M.P.H., COL, MC, USA.

Collaborating Co-Investigators, External Personnel and Organizations:
Robert M. Bray, Ph.D., RTI International (Partnering Principal Investigator).

Lisa Jaycox, Ph.D., RAND Corporation (Partnering Principal Investigator).

Donald Brambilla, Ph.D., RTI International.

Christine Eibner, Ph.D., RAND Corporation.

Wayne Katon, M.D., University of Washington.

Becky Lane, Ph.D., RTI International.

Brett Litz, Ph.D., M.A., VA Boston Healthcare System, Boston University.

Terri Tanielian, M.A., RAND Corporation.

Jürgen Unützer, M.D., M.P.H., University of Washington.

Douglas Zatzick, M.D., University of Washington.

Presentations:
Engel C.C., Bray R.M., Jaycox L., Litz B., Zatzick D., Tanielian T. A Randomized Effectiveness Trial of a Systems-Level Approach to Stepped Care for War-Related PTSD. Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 11–13, 2009.

Status:
Awaiting IRB approval.

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

Funding Organization: National Institute on Aging.

DHCC Staff Assigned:
Xian Liu, Ph.D.

Principal Investigator:
Xian Liu, Ph.D.

Presentations:
Liu X., Engel C., Kang H., Cowan D. The

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Effect of Veteran Status on Mortality Among Older Americans and Its Pathways. Population Association of America 2003 Annual Meeting, May 2003.

Liu X., Engel C.C., Kang H. Veteran Status and Transitions in Functional Conditions in Older Americans. 2004 Annual Meeting of the Population Association of America, Boston, Massachusetts, April 2004.

Liu X., Engel C.C., Kang H. Survival Convergence and the Preceding Mortality Crossover for Two Population Subgroups. Southern Demographic Association Annual Meeting, Hilton Head, South Carolina. October 2004.

Liu, X., Engel, C.C., Kang, H. 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.

Liu, X., Engel, C.C., Armstrong, D.W. Linkages of Health Conditions, Functional Status and Self-Rated Health in Older Americans. 2005 Annual Meeting of the Southern Demographic Association, Oxford, Mississippi, November 3–5, 2005.

Liu, X., Engel, C.C., Armstrong, D.W., Kang, H. Health Conditions, Disability and Self-Rated Health in Older Americans. 2006 Annual Meeting of the Population Association of America, Los Angeles, CA. March 31–April 2, 2006.

Liu, X., Engel, C.C., Armstrong, D.W., Kang, H. Health Conditions, Functional Status and Self-Rated Health in Older Americans. 2007 Annual Meeting of the Population Association of America, New York, New York, March 29–April 1, 2007.

Liu, X., Engel, C.C., Liang, J. Development of a structural multinomial logit model in population research. 2007 Annual Meeting of the Southern Demographic Association, Birmingham, Alabama, October 11–13, 2007.

Liu, X., Engel, C.C., Kang, H., Gore, K. Development of an unbiased longitudinal model on functional status transitions in older persons. 2008 Annual Meeting of the Population Association of America, New Orleans, Louisiana, April 16–19, 2008.

Liu X., Engel C.C., Kang H., Gore K. Reducing Selection Bias in Longitudinal Analysis of Functional Status Transitions in Older Persons. Southern Demographic Association 2008 Annual Meeting, Greenville, SC, October 30–November 1, 2008.

Liu X., Engel C.C., Kang H. Health Conditions and Functional Status Transitions in Older Americans. Population Association of America 2009 Annual Meeting, Detroit, MI, April 30–May 2, 2009.

Liu X., Engel C.C., Kang H. Longitudinal Impact of Specific Health Conditions on Functional Limitations of Older Americans. Population Association of America Annual Meeting, Detroit, MI, April 30–May 2, 2009.

Liu X., Engel C.C., Kang H., Gore K. Reducing Selection Bias in Analyzing Longitudinal Health Data with High Mortality Rates. 2009 REVES Meeting of the International Network on Health Expectancy, Copenhagen, Denmark, May 27–29, 2009.

Publications:

Liu, X., Engel, C.C., Kang, H., Cowan, D.N. (2005). The effect of veteran status on mortality among older Americans and its pathways. *Population Research and Policy Review 24*, 573–592.

Liu, X., Engel, C.C., Kang, H., Armstrong, D.W. (2006). Veterans and functional status transitions in older Americans. *Military Medicine 171*, 943–949.

Liu X., Engel C.C., Armstrong D.W., Kang H. (2008). Survival convergence and the preceding mortality crossover for two population subgroups. *Population Research and Policy Review, 27, 3*, 293–306.

Liu, X., Engel, C.C., Kang, H., Gore, K. (in press). Reducing selection bias in analyzing longitudinal health data with high mortality rates. *Journal of Modern Applied Statistical Methods.*

Status:
Manuscript preparation.

Name of Project: Vitamin D Levels and their Correlation to Pain, Fatigue, Anxiety, and other Co-morbidities in Specialized Care Program Service Members seen at the Deployment Health Clinical Center.

Funding Organizations: n/a.

Principal Investigators:
Thomas Roesel, M.D., Ph.D., FACP.

Charles Engel, M.D., M.P.H., COL, MC, USA.

Presentations:
Roesel T. Adult Vitamin D Deficiency: Review of the Literature and Implications for Force Health Protection. 10th Annual Force Health Protection Conference, Louisville, KY, August 5–10, 2007.

Roesel T. Vitamin D Deficiency in Chronic Pain. Medical Grand Rounds, Michigan State University, December 9, 2007.

Roesel T. Vitamin D Deficiency in OEF/OIF Veterans with Chronic Musculoskeletal Pain and Healing Fractures. 11th Annual Force Health Protection Conference, Albuquerque, NM, August 12–15, 2008.

Roesel T. (Poster). A Novel Hypothesis Explains the Syndrome of Chronic Musculoskeletal Pain and Comorbid Painful Healed Fractures Sites in Vitamin D Deficiency. American Society for Bone and Mineral Research, Montreal, Canada, September 12–16, 2008.

Roesel T. Vitamin D Deficiency in Active Duty War Veterans with Chronic Musculoskeletal Pain and Stress Fractures: Implications for Measures to Reduce Occupational and Environmental Health Risks. American Occupational Health Conference, San Diego, CA, April 26–29, 2009.

Roesel T. A Novel Hypothesis Explains the Syndrome of Chronic Musculoskeletal Pain and Comorbid Painful Healed Fracture Sites in Vitamin D Deficiency. Uniformed Services University of the Health Sciences Research Week, Bethesda, MD, May 11–13, 2009.

Roesel T. Vitamin D and the Central Nervous System. 12th Annual Force Health Protection Conference, Albuquerque, NM, August 16–21, 2009.

Roesel T. Can Vitamin D Potentiate Gabapentin and Pregabalin Efficacy in Vitamin D Deficiency Related Chronic Musculoskeletal Pain? American Society for Bone and Mineral Research, Denver, CO, September 11–15, 2009.

Roesel T. Optimal Vitamin D Levels for Force Health Protection and Cancer Prevention. 13th Annual Force Health Protection Conference, Phoenix, AZ, August 7–13, 2010.

Publications:
Roesel T. (2008). A novel hypothesis explains the syndrome of chronic musculoskeletal pain and comorbid painful healed fractures sites in vitamin D deficiency. [Abstract]. *Journal of Bone and Mineral Research, 23,* S223.

Roesel T. (2008). Vitamin D deficiency in Iraq and Afghanistan veterans with chronic musculoskeletal pain. *Journal of Occupational and Environmental Medicine, 50, 6*, 613–614.

Roesel T. (2009). Does the central nervous system play a role in vitamin D deficiency related chronic pain? [Letter to editor]. *Pain, 143, 1*, 159–160.

Roesel T. (2009). Does vitamin D potentiate gabapentin and pregabalin efficacy in vitamin D deficiency related chronic musculoskeletal pain? *Journal of Bone and Mineral Research, 24*, S1.

Status:
Complete.

Appendix D: Deployment Healthcare Track Presentations

2009 Conference

Adams, Sheila, Ph.D., LISW, MAJ, USA, AMEDD Center and School and Bicknell, Graeme, Ph.D., LISW, MAJ, USA, AMEDD Center and School. *Provider Resiliency Training Initiative and the MEDCOM Provider Resiliency Program Outcome Analysis.*

Bates, Mark, Ph.D., Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury and Bowles, Stephen, Ph.D., COL, USA, Uniformed Services University of the Health Sciences. *Overview of the Resilience/Reintegration Model and Efforts.*

Beder, Joan, Ph.D., Yeshiva University. *Provider Resilience/Compassion Fatigue/Burnout in DoD Social Workers: Impact of OEF/OIF Immersion.*

Bobrow, Joseph, Ph.D., Coming Home Project and Rabb, David, M.A., LICSW, ACSW, LTC, USA, Palo Alto Medical Center. *Coming All The Way Home: Residential Retreats as an Innovative Bio-Psycho-Social-Spiritual Approach to Promoting Wellness, Creating Community, and Alleviating the Psychological, Spiritual and Relationship Problems of OIF and OEF Families and Service Members.*

Bruner, Victoria, LCSW, RN, BCETS, DoD Deployment Health Clinical Center. *Building Resilience: Rebounding from and Preventing Compassion Fatigue.*

Bruner, Victoria, LCSW, RN, BCETS, DoD Deployment Health Clinical Center. *The Deployment Health Clinical Center Specialized Care Track II Program for OEF/OIF Service Members with Combat Related Adjustment.*

Duda, Roger, M.D., MAJ, USA, Walter Reed Army Medical Center and Oxman, Thomas, M.D., Dartmouth Medical School. *Applications of the Three Component Model to Depression and PTSD in RESPECT-Mil and the Development of a Collaborative Care Implementation Plan.*

Duda, Roger, M.D., MAJ, USA, Walter Reed Army Medical Center; Barry, Sheila, DoD Deployment Health Clinical Center and Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences. *Key Players of the RESPECT-Mil Program: A Unique, Collaborative Team.*

Duda, Roger, M.D., MAJ, USA, Walter Reed Army Medical Center; Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and Barry, Sheila, DoD Deployment Health Clinical Center. *Care Facilitation and Behavioral Health Staffing Demonstration and Key Players of the RESPECT-Mil Program.*

Duffy, Farifteh, Ph.D., American Psychiatric Institute for Research and Education. *A Comprehensive Approach to Disseminate Evidence-Based Care for Posttraumatic Stress Disorder (PTSD) and Depression.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences. *Developing Implementation Plans: A Group Exercise.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and Doerries, Bryan, M.F.A., Director, Philoctetes Project. *The Theater of War: Using Sophocles' "Ajax" and "Philoctetes" as Teaching Tools to Improve Military Health Care Today.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and Oxman, Thomas, M.D., Dartmouth Medical School. *RESPECT-Mil: History, Early Findings, the Road Ahead, and Key Principles of Effective Collaborative Care in Primary Care.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and RESPECT-Mil Staff. *RESPECT-Mil Champions Workshop.*

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Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and RESPECT-Mil Staff. *RESPECT-Mil: The Successes and Challenges of Implementation in the Field.*

Feliciano, Molly, M.S.N., RN, CRNP, DoD Deployment Health Clinical Center. *Enhancing Recognition of PTSD and Emotional Distress in Primary Care.*

Ferguson, Cynthia, M.S.N, M.P.H., CNM, LCDR, USN, National Naval Medical Center. *Providing Care for Sexual Assault Patients in the Military: Past, Present and Future.*

French, Louis, Psy.D., Defense Veterans and Brain Injury Center and Walter Reed Army Medical Center. *Occupational Outcomes of Patients with Traumatic Brain Injury Sustained in the Global War on Terrorism.*

Fudge-Morse, Elizabeth, M.S.N., M.P.H., Office of the Assistant Secretary of Defense (HA). *Baseline Pre-Deployment Neurocognitive Functional Assessment-Interim Guidance Policy Overview.*

Galloway, Kevin, Ph.D., PT, LTC, USA, OTSG Proponency Office for Rehabilitation and Reintegration. *Advances in Technology and Associated Evolution of Patient Rehabilitation Goals for Today's Military Wounded Warriors.*

Gearhart, Brenda, LCSW-C, CDR, USPHS; O'Donnell, Lolita T., Ph.D., RN, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury and Campise, Mary, LICSW, Program Analyst and Family Advocacy Program Military Community and Family Policy ODUSD (P&R). *Building Bridges to Support Military and Veteran Families: A Multi-Agency Collaborative Approach.*

Granado, Nisara, M.P.H., Ph.D., Maj, USAF, Naval Health Research Center. *Mental Health Care Needs and Utilization Among U.S. Active-Duty Millennium Cohort Study Participants Reporting Symptoms for Posttraumatic Stress and Other Mental Health Disorders.*

Hall, Jeffery, MAJ, USA; Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences; Doerries, Bryan, M.F.A., Director, Philoctetes Project and panel. *Our Theater of War: Finding Meaning and Purpose—Panel and Audience Discussion.*

Hammer, Paul, M.D., CAPT, USN, Navy Center for Combat and Operational Stress Control and McGinnis, Derek, American Pain Foundation/ Combat Veteran. *Chronic mTBI and PTSD Case Studies.*

Helmick, Kathy, M.S., CNRN, CRNP, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury. *The Evolution of TBI Care During the Global War on Terror.*

Holyfield, Lori, Ph.D., University of Arkansas. *Narratives of Identity: Construction of the Post-Combat Self.*

Jacobson, Isabel, M.P.H., Naval Health Research Center. *Is Mental Health Associated with Newly Self-Reported Diabetes in U.S. Military Participants of the Millennium Cohort Study?*

Jankosky, Chris, M.D., M.P.H., CAPT, USN, Uniformed Services University of the Health Sciences. *Self-Reported New-Onset Migraine and Other Headache Disorders Among U.S. Military Deployers with Reported Combat Exposures in the Millennium Cohort Study.*

King, Mary, M.D., LTC, USAR; Armes, Geoffrey, SFC, USA; Dorrer, Sheila, LTC, USA and Verschoore, Anna, LCSW, Walter Reed Army Medical Center Warrior Transition Brigade (WTB). *WTB Structure as Creating a New Paradigm in Health Care Delivery.*

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Kudler, Harold, M.D., VA Mid-Atlantic Mental Illness Research, Education, and Clinical Center (MIRECC) for Deployment Mental Health. *DoD, VA, State and Community OEF/OIF Partnership: Focus on Women.*

Leiner, Barbara, M.S.W., LCSW-C, Walter Reed Army Medical Center and Chun, Ryo Sook, M.D., Walter Reed Army Medical Center. *Parenting in Wartime: Operation Brave Families.*

Lunasco, Travis, M.A., Psy.D., Capt, USAF, Okinawa, Japan. *Clash of Cultures: The Need for Warrior-Centric Programming Through an Introduction to "One Shot One Kill"—A Performance Enhancement and Resiliency Program.*

McCrea, Michael, Ph.D., ABPP, Waukesha Memorial Hospital and Medical College of Wisconsin. *Evidence-Based Review of Acute Effects and Recovery After mTBI.*

McGonagle, Eileen, B.S., CCRN, COL, USARNG, Task Force NARMC/WRAMC and Tillman, Johnie, M.D., Clinical Operations SERMC. *Deployment of mCare, A Cell Phone Based Bi-Directional Messaging System in the Community Based Warrior in Transition Units (CBWTUs).*

O'Hara, Christiane, Ph.D., Consultant, Eisenhower Army Medical Center. *Bridging the Divide: Creating Community-Based Programs to Heal the Effects Of War.*

O'Hara, Christiane, Ph.D., Consultant, Eisenhower Army Medical Center and Simerly, Emily, Ph.D., Private Practice, Atlanta Georgia. *Combat Veterans and the Criminal Justice System: From Defending Our Liberty to Losing Their Own.*

O'Rourke, Kathleen, M.P.H., Ph.D., University of South Florida and Coulter, Mary, Ph.D., Professor, Department of Community and Family, College of Public Health, University of South Florida and Director, Harrell Center for the Study of Family Violence. *Selected Physical and Psychological Consequences of Deployment for Women in the Military.*

Oskin, Arne, M.Ed., LCSW, Naval Center Clinic Great Lakes. *Navy Safe Harbor Case Management: From Suicide Attempt to Survival—an Interactive Process.*

Patrin, George, M.D., CHE, COL, USA, California Medical Detachment. *Deploying a Universal Screening Program for Families Affected by Deployment.*

Poropatich, Ronald, M.D., COL, USA, Telemedicine and Advanced Technologies Research Center, U.S. Army Medical Research and Material Command. *Military Telemedicine & e-Health from the Battlefield: Updated Results & Lessons Learned.*

Powers, Timothy, M.S., Armed Forces Health Surveillance Center. *Prevalence of TBI and PTSD Among Military Personnel: Reconciling the Literature with the Data.*

Roesel, Thomas, M.D., Ph.D., DoD Deployment Health Clinical Center. *Vitamin D and the Central Nervous System.*

Rosenthal, Lisa, M.A., Vet Arts Project. *"Healing with the Arts:" The Vet Art Project as a Model to Support Veterans and Families and to Reconnect our Communities Using Creative Arts Programming.*

Sandweiss, Donald, M.D., Naval Health Research Center. *A Prospective Analysis of the Effects of Pre-Injury Psychological Status on the Psychological Impact of Injury During Deployment in Support of the Wars in Iraq and Afghanistan.*

Schwartz, Linda, M.S.N., Dr.P.H., RN, Connecticut Department of Veterans Affairs. *Post Deployment Needs of Recently Returned "Citizen Soldiers:" A Community Response.*

Seelig, Amber, M.P.H., Naval Health Research Center. *Does Deployment in Support of the Wars in Iraq and Afghanistan Affect Sleep Patterns in Military Personnel?*

Seibert, Diane, Ph.D., CRNP, Uniformed Services University of the Health Sciences. *Deployment Health: Are Women REALLY That Different?*

Smith, Tyler, M.S., Ph.D., Naval Health Research Center. *The Millennium Cohort Study: A 21-Year Longitudinal Contribution to the Understanding of Military Health.*

Sommers, Darla, B.F.A., Director, Lioness the Film. *"The Lioness Team:" Military Women—Strong, Brave and Emerging.*

Sommers, Darla, B.F.A., Director, Lioness the Film and panel. *"The Lioness Team:" Military Women—Strong, Brave and Emerging, Panel Discussion.*

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Stafford, Elisabeth, M.D., COL, USA, Brooke Army Medical Center. *Child Behavioral/Mental Health Screening in the Primary Care Setting.*

Steele, Nancy, Ph.D., RNC, NP, MAJ, USA, Landstuhl Army Medical Center. *Examination of the Practice Environment and Burnout Among Nursing Personnel at a Deployed Combat Support Hospital.*

Sugden, Brian, Ph.D., M.B.A., Force Health Protection and Readiness, Office of the Assistant Secretary of Defense (HA). *Post-Deployment Health Reassessment (PDHRA) Program: Three Years Old and Growing Up Fast.*

Ternus, Mona, Ph.D., CNS, LtCol, USAFR, 911th Aeromedical Staging Squadron. *Mom Deploys! Effect on Military Women's Health and Adolescents' Risk Behavior.*

Terrio, Heidi, M.D., M.P.H., COL, USA, Evans Army Community Hospital. *TBI Screening and Diagnosis.*

Vogt, Megumi, M.D., Maj, USAF, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury. *TBI Symptom Management: Headaches and Sleep.*

Woll, Pamela, M.A., CADP, Great Lakes Addiction Technology Transfer Center. *Resilience 101: Helping Veterans and Families Understand, De-Stigmatize, and Manage Post-Deployment Stress Effects.*

Wooten, Nikki, Ph.D., LCSW-C, Boston University. *Deployment Stressors and Posttraumatic Stress Symptoms Among ARNG Women: The Mediating Effect of Resilience.*

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Babcock-Parziale, Judi, Ph.D., Southern Arizona VA Health Care System and McKnight, Patrick, Ph.D., George Mason University. *Experts' Diagnostic Criterion for Mild Traumatic Brain Injury Identified through an Online Delphi Process.*

Bates, Mark, Ph.D., Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE); Yosick, Todd, LSW, MAJ, USA, DCoE; Pinder, Evette, M.P.H., DCoE and Phan, Rosie, DCoE. *Public Health Model of Psychological Health.*

Beckner, William, M.S., Samueli Institute. *Novel Technology-Based Prototype Assessment Toolkit for TBI and PIBI.*

Bowles, Stephen, Ph.D., MSW, Uniformed Services University of the Health Sciences; Bates, Mark, Ph.D., DCoE and panel. *Individual, Family and Organizational Resilience.*

Brown, Mark, M.D., M.P.H., LTC, USA, William Beaumont Army Medical Center, Fort Bliss, TX. *Proceedings of the Stigma and Barriers to Care Working Meeting, 24-26 March 2010.*

Butel, Michael, D.V.M., M.P.H., Col, USAF, Force Health Protection & Readiness (FHP&R), Assistant Secretary of Defense for Health Affairs and Vythilingam, Meena, M.D., M.P.H., CDR, USPHS, FHP&R. *Update on Health Assessments – Current and Future Changes.*

Chandra, Anita, Dr.P.H., RAND Corporation. *Understanding the Experience of Military Youth.*

Chun, Ryo Sook, M.D., Walter Reed Army Medical Center; Schmidt, Janet, Ph.D., Center for the Study of Traumatic Stress and Arata-Maiers, Terry, Ph.D., Brooke Army Medical Center, Fort Sam Houston, TX. *Emotional and Behavioral Changes in Children Following Parental Combat Injury.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences. *The RESPECT-Mil Program: Tri-Service and Growing.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and Doerries, Bryan, M.F.A., Director,

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Philoctetes Project. *The Theater of War—Ancient Wisdom for Today's Military, Families and Healthcare Providers.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences and Doerries, Bryan, M.F.A., Director, Philoctetes Project. *Theater of War: Reading of Ajax.*

Engel, Charles, M.D., M.P.H., COL, USA, DoD Deployment Health Clinical Center and the Uniformed Services University of the Health Sciences; Doerries, Bryan, M.F.A., Director, Philoctetes Project and panel. *Theater of War Panel.*

Friedl, Karl, Ph.D., COL, USA, Telemedicine & Advanced Technology Research Center (TATRC) and Vo, Alexander, Ph.D., TATRC. *Overview of TATRC's Mission, Function and Clinical Neuroscience Projects and AMEDD Transcranial Doppler Program.*

Hammer, Paul, M.D., CAPT, USN, Navy Center for Combat and Operational Stress Control. *Operational Stress Control for JTF-Haiti: Application of Operational Stress First Aid Principles.*

Horton, Phillip, M.D., FACP, COL, USA, Eisenhower Army Medical Center, Fort Gordon, GA, and Lenard, Janet, Ed.D., LCSW, Eisenhower AMC. *DDEAMC Residential Treatment Facility: A Dual Diagnosis Treatment Pilot—Recommendations for Working with a Challenging Population.*

Hughes, Julie, Real Warriors Campaign, Booz Allen Hamilton and Hall, Jeffery, MAJ, USA, Fort Riley, KA. *The Real Warriors Campaign: Promoting Resilience, Reducing Stigma.*

Jonas, Wayne, M.D., Samueli Institute and Macedonia, Christian. M.D., COL, USA, Defense Advanced Research Projects Agency. *Total Force Fitness for the 21st Century.*

Lappe, Joan, Ph.D., Creighton University. *Vitamin D and Calcium Supplementation Decreases Incidence of Stress Fractures in Female Navy Recruits.*

Larson, Mary Jo, Ph.D., Brandeis University. *Healthcare Changes of Family Member Dependents in Association with Deployment.*

Law, Wendy, Ph.D., Uniformed Services University of the Health Sciences. *Differential Diagnosis, Comorbidity, and Factors Complicating Outcome with OIF/OEF Service Members Reporting mTBI and PTSD Symptoms.*

Lund, Eric, M.D., M.P.H., COL, USA, U.S. Army Forces Command Surgeon's Office. *Medically Ready or Medically Not Ready—That is the Question.*

MacGregor, Andrew, M.P.H., Ph.D., LCDR, USN, Naval Health Research Center and Galarneau, Michael, M.S., EMT-D, Naval Health Research Center. *The Expeditionary Medical Encounter Database: Tracking Injury and Illness at All Levels of Care.*

Mansfield, Alyssa, Ph.D., M.P.H., RTI International. *The Effects of Deployment on Mental Health Service Use Among Children of U.S. Army Personnel.*

McGuire, Annabel, Ph.D., Centre for Military and Veterans Health, University of Queensland, Australia. *Australian Deployments to East Timor and Bougainville: Findings from the Studies.*

McGuire, Annabel, Ph,D., Centre for Military and Veterans Health, University of Queensland, Australia. *Investigating the Impact of Military Deployments on Australian Families.*

Milliken, Charles, M.D., COL, USA, Walter Reed Army Institute of Research. *The Army Alcohol Pilot, SBIRT, and RESPECT-Mil – A Major Shift in Practice.*

Nash, William, M.D., Operational Stress Consultant, Burke, VA. *Moral Injury and Moral Repair: Overview of Constructs and Early Data.*

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Nelson, David, Ph.D., Sam Houston State University and Esty, Mary Lee, Ph.D., LCSW-C, Brain Wellness and Biofeedback Center of Washington. *New Developments in Neurotherapy for OEF/OIF Veterans with Trauma Spectrum Disorders (TBI/PTSD).*

O'Donnell, Lolita, Ph.D., DCoE. *Continuity of Mental Health Care Across Transitions: Department of Defense "inTransition" Program.*

O'Hara, Christiane, Ph.D., Consultant, Eisenhower Army Medical Center, Fort Gordon, GA; Leaman, Karen, Ph.D., Eisenhower AMC and Putnam, Helen, PA-C, Eisenhower AMC. *Innovative Treatments for Combat Veterans with PTSD, TBI and Sleep Dysregulation: A Functional Recovery Team Approach.*

O'Hara, Christiane, Ph.D., Consultant, Eisenhower Army Medical Center, Fort Gordon, GA; Leaman, Karen, Ph.D., Eisenhower AMC and Putnam, Helen, PA-C, Eisenhower AMC. *The Warrior's Path: Providing a Universal Frame of Reference for Wounded Warriors in Group Psychotherapy within a Mind-Body Functional Recovery Program.*

Padden, Diane, Ph.D., Uniformed Services University of the Health Sciences. *Determinants of Health Promoting Behaviors in Military Spouses During Deployment Separation.*

Perdue, Christopher, M.D., M.P.H., MAJ, USA, Armed Forces Health Surveillance Center. *Association Between Exposures to Blasts and Diagnosis of TBI or PTSD Following Deployment to Iraq.*

Rabena, William, COL, USA, Resiliency Campus, Fort Hood, TX. *Building a Resiliency Campus on a Major Army Garrison – Lessons Learned from Fort Hood.*

Rasche, Jeanette, M.S., TATRC; Pavliscsak, Holly, M.H.S.A., TATRC and McVeigh, Francis, O.D., TATRC. *Army Wide Tele-TBI Network and mCare, a Cell Phone-Based Bi-directional Messaging System.*

Riechers, Ronald, M.D., Cleveland VA Medical Center. *Evaluating Traumatic Brain Injury: History and Examination in the Clinic or Hospital Setting.*

Roesel, Thomas, M.D., Ph.D., DoD Deployment Health Clinical Center. *Optimal Vitamin D Levels for Force Health Protection and Cancer Prevention.*

Ruohola, Juha-Petri, M.D., LtCdr, Finnish Defense Forces, Center for Military Medicine, Helsinki, Finland. *Vitamin D Deficiency As It Relates to Stress Fractures and Respiratory Infections in the Military Conscripts.*

Sherman, Nancy, Ph.D., Georgetown University. *The Untold War, Inside the Hearts, Minds and Souls of Our Warriors.*

Shore, Jay, M.D., TATRC; Friedl, Karl, Ph.D., COL, USA, TATRC and panel. *TATRC Panel Discussion.*

Steele, Susanne, COTA, Eisenhower AMC and Williams, Jennifer LCSW, Eisenhower AMC. *Animal Assisted Therapy and Individual Psychotherapy: An Interdisciplinary Intervention for Soldiers with TBI and PTSD.*

Sussman, Lewis, Psy.D., Brooke Army Medical Center, San Antonio, TX. *Interdisciplinary Management of High Interest Warriors in Transition.*

Topp, Dave, Ph.D., Military Family Research Institute, Purdue University. *Military Family Research Institute Overview.*

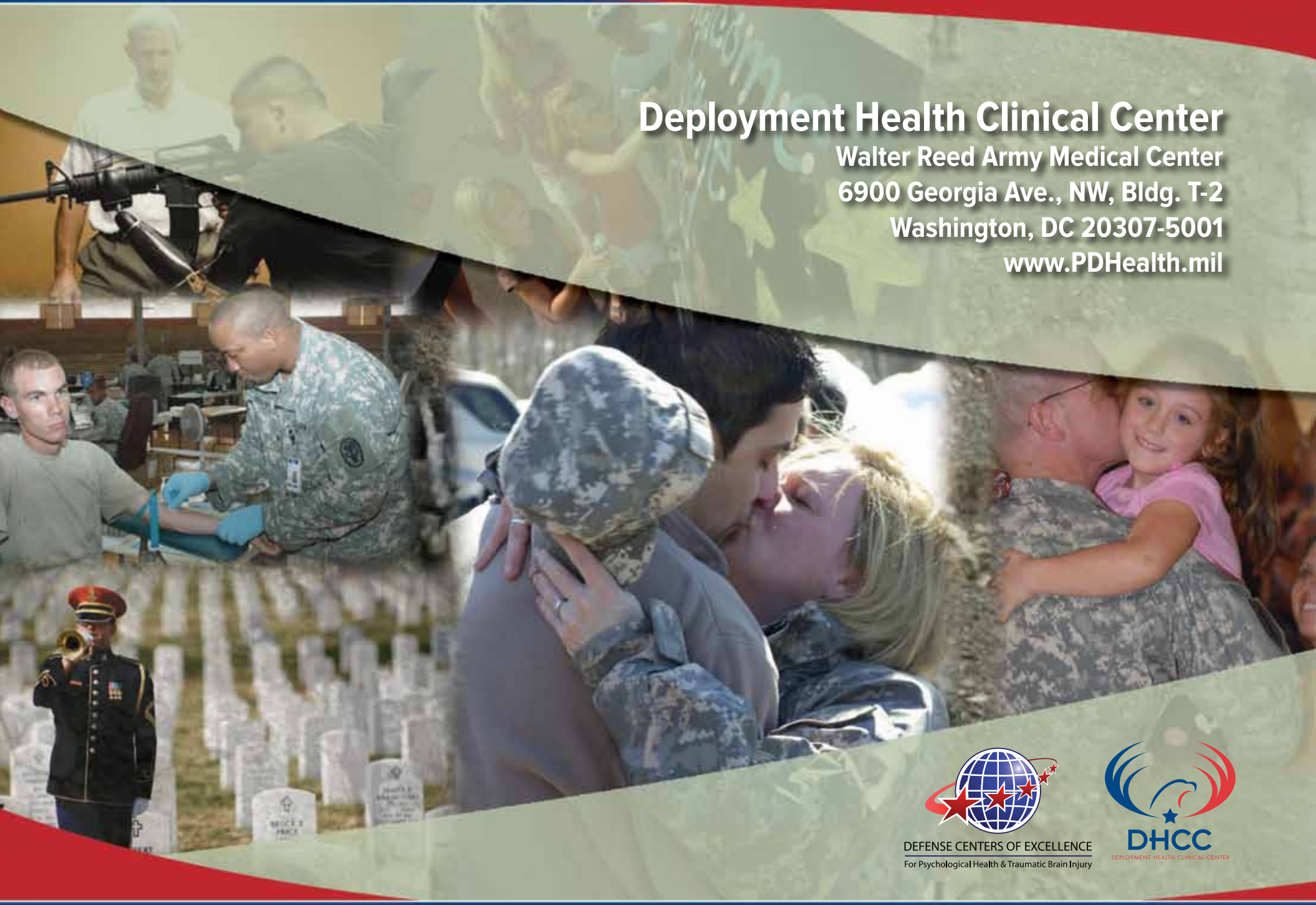
West, Kathleen, Dr.P.H., UCLA Semel Institute for Neuroscience and Human Behavior. *Focus Resiliency Training: A Model for Military Family-Centered Prevention Services.*

Woll, Pamela, M.A., CADP, Great Lakes Addiction Technology Transfer Center. *Resilience 101: Using the Workbook Tools with Service Members and Veterans (Part I).*

Woll, Pamela, M.A., CADP, Great Lakes Addiction Technology Transfer Center. *Resilience 101: Using the Workbook Tools with Service Members and Veterans (Part II).*

Wooten, Nikki, Ph.D., LCSW-C, Boston University. *Mission-Related and Interpersonal Deployment Stressors Among Army National Guard Women Veterans.*

Zamorski, Mark, M.D., M.H.S.A., Canadian Forces Health Services Group. *Traumatic Brain Injury in Canadian Forces Personnel Deployed in Support of a Combat and Peace Support Mission in Kandahar Province, Afghanistan.*



Deployment Health Clinical Center

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