EDUCATE
RESEARCH
IMPROVE
EVALUATE

2014 Annual Report

DEFENSE CENTERS OF EXCELLENCE
For Psychological Health & Traumatic Brain Injury

MISSION

The mission of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) is to improve the lives of our nation's service members, veterans and their families by advancing excellence in psychological health and traumatic brain injury prevention and care.

VISION

To be the leader of profound improvements in psychological health and traumatic brain injury prevention and care.

VALUE

DCoE is uniquely positioned to collaborate across the Defense Department, Department of Veterans Affairs (VA), and other agencies to provide leadership and expertise, drive policy, and achieve improvements in outcomes.

Specifically, DCoE provides value to stakeholders by embodying the following tenets of the DCoE Value Proposition:

- **Quality:** Identifies, prioritizes and translates evidence-based practices and research into clinical standards thereby improving quality and increasing efficiency in health care delivery across the continuum of care
- **Treatment and Outcomes:** Develops Military Health System (MHS) psychological health and traumatic brain injury (TBI) metrics, pathways of care, clinical tools, and other products that benefit providers, service members, veterans, and families to improve understanding and treatment
- **Research and Evaluation:** Provides MHS leaders with focused analyses, research, and program evaluations to achieve the greatest return on investment. DCoE is responsible for creating, evaluating and integrating psychological health and traumatic brain injury practices and policies across the services

DIRECTOR'S LETTER

Dear Stakeholders,

Through a strong commitment to partnerships across the Defense Department and VA communities, the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) achieved continued growth and success in 2014. I am very pleased to present the "2014 DCoE Annual Report" to highlight our programs and initiatives and demonstrate their value.

DCoE provides MHS leaders with current and emerging psychological health and TBI clinical, educational and research information. Our success depends on identifying gaps and prioritizing needs in psychological health and TBI research and then translating that research into clinical practice to improve patient outcomes. A few of our accomplishments include:

- We redesigned our **Program Evaluation Guide** to increase its applicability to a broader military audience, thus enabling continuous improvement across the continuum of care.
- The assistant secretary of defense for Health Affairs designated the Defense and Veterans Brain Injury Center (DVBIC), a DCoE center, as the Military Health System TBI Pathway of Care manager for clinical, research, education and training activities.
- We executed more than 66 **webinars** and Web-based events that reached 13,000 participants. In addition, 1,800 TBI education events reached almost 200,000 service and family members, veterans, civilians and care providers.
- Our cadre of clinical professionals shared their expertise around the world, publishing more than 60 articles and book chapters.

DCoE continued a trend of excellence by providing new resources for providers and beneficiaries, including:

- "**Management of Sleep Disturbances Following Concussion/Mild TBI: Guidance for Primary Care Management in Deployed and Non-Deployed Settings**"
- "**A Parent's Guide to Returning Your Child to School After a Concussion**"
- A suite of clinical support tools to augment the "**2013 VA/DoD Assessment and Management of Patients at Risk for Suicide Clinical Practice Guideline**"
- "DoD Health Care Provider Military Sexual Assault/Military Sexual Harassment Clinical Recommendation Guide" (scheduled for publication in 2015)
- The **Virtual Hope Box mobile app**, which received the "2014 DoD Innovation Award" for its unique application of technology to support behavioral health of service members and military families. This smartphone app contains simple tools to help patients with coping, relaxation, distraction and positive thinking.

We remain dedicated while providing the foundation for profound improvements in the understanding and treatment of psychological health and TBI conditions for our service members, veterans and their families.

Navy Capt. Richard F. Stoltz
DCoE Director

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2014 AWARDS & HIGHLIGHTS

AWARDS

DCoE

- The 2013 DCoE Annual Report received an "American Graphic Design Award" from Graphic Design USA

Real Warriors Campaign earned three awards in 2014

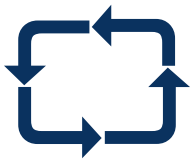
- "Platinum Hermes Creative Award," Social Marketing category (May 2014)
- Public Relations Society of America "Silver Anvil Award of Excellence," Public Service/Government category (June 2014)
- "Ragan Health Care Public Relations & Marketing Award," "Best Health Campaign" (August 2014)

National Center for Telehealth and Technology (T2)

- The **Virtual Hope Box mobile app** received the "2014 Department of Defense Innovation Award"
- **Moving Forward** online course received five awards in 2014:
  - "Silver Award" from the Television, Internet & Video Association of DC for Government/ Web-based resource
  - "Silver OMNI Inter-media Award"
  - "Silver Innovative Award" from the Federal Government Distance Learning Association
  - "Best in Class Interactive Media Award"
  - "Gold Brandon Hall Award"
- **Parenting for Service Members** online course received five awards in 2014:
  - "Silver Award" from the Television, Internet & Video Association of DC for Government/ Web-based resource
  - "Gold Innovative OMNI Inter-media Award"
  - "Gold Innovative Award" from the Federal Government Distance Learning Association
  - "Best in Class Interactive Media Award"
  - "Gold Brandon Hall Award"

HIGHLIGHTED ACCOMPLISHMENTS

DCoE distributed over 150 individualized program feedback reports that identified psychological health and TBI programs, detailing strengths and opportunities for development; launched monthly program evaluation webinars designed to familiarize program managers with universal program evaluation concepts; redesigned the "**Program Evaluation Guide**" to increase its applicability to a broader audience of Defense Department program administrators; implemented an operational and secure database solution to serve as a central repository of collected program information.



DVBIC was designated the MHS TBI Pathway of Care manager for clinical, research, education, and training activities through the assistant secretary of defense for Health Affairs memorandum, "The Military Health System Traumatic Brain Injury Pathway of Care and Alignment of the National Intrepid Center of Excellence Within That Pathway," dated Sept. 17, 2014. DVBIC drafted and began staffing a TBI Pathway of Care Advisory Committee charter with the services and VA.

DCoE successfully executed a total of 49 webinar events reaching 12,859 participants, offering continuing education credits to 4,102 learners, and providing certificates of attendance to 538 participants.

DVBIC was a finalist for the "7th Annual Major Jonathan Letterman Award for Medical Excellence." The center was nominated for its leadership in care, research and education efforts that have improved TBI patient outcomes. The National Museum of Civil War Medicine presents the annual award to one individual and one organization that have led innovative efforts in improving outcomes for patients with catastrophic injuries or developing new medical technologies to assist armed forces or severely wounded civilians.

DCoE continued to provide educational resources for providers and beneficiaries, to include:

- "**Management of Sleep Disturbances Following Concussion/Mild TBI: Guidance for Primary Care Management in Deployed and Non-Deployed Settings**"
- "**A Parent's Guide to Returning Your Child to School After a Concussion**" a suite of clinical support tools to accompany the "**2013 VA/DoD Assessment and Management of Patients at Risk for Suicide Clinical Practice Guideline**"
- "DoD Healthcare Provider Military Sexual Assault/Military Sexual Harassment Clinical Recommendation Guide" (scheduled for publication in 2015)
- **Virtual Hope Box** mobile app

DCoE centers published 63 articles and book chapters, with an additional 19 accepted for future publication.

- T2 published 21 peer-reviewed scientific articles, with another 13 accepted for publication, including papers addressing technology market research in the military population, gap analyses and systematic reviews, best practice and policy papers, data supporting the use of T2 products and military suicide research data.
- DVBIC published 29 peer-reviewed scientific articles addressing TBI and how it relates to anger control, other bodily injuries, neuropsychological testing, symptom reporting, neuroimaging, genetics, resilience and hyperbaric oxygen.
- DHCC published 13 articles and book chapters, with another six accepted for publication addressing methodology and results of effectiveness trials for posttraumatic stress disorder (PTSD) treatments, clinical indications for the use of complementary and alternative medicine, innovative use of statistical models, the role of chaplains in mental health care, and the mental health of women service members.

DCOE HISTORY

As a result of the nature of recent conflicts, as well as greater scientific knowledge and public awareness of mind and brain sciences, U.S. service members commonly report PTSD and traumatic brain injuries. Since 2000, more than 170,000 service members were diagnosed with PTSD and more than 320,000 have sustained a traumatic brain injury. These injuries, and the people dedicated to the recovery of service members and veterans, ignited significant research and advancement of clinical care and prevention strategies.

Congress called for the establishment of DCoE in 2007 as the lead Defense Department agency responsible for the advancement of psychological health and TBI prevention and care in the Military Health System. The DoD/VA Wounded, Ill, and Injured Senior Oversight Committee, chaired by the Deputy Secretary of Defense and the Deputy Secretary of Veterans Affairs, officially established DCoE in a memorandum dated Aug. 31, 2007. DCoE was charged with evaluating, integrating and promoting psychological health and TBI practices and policies across the services.

From the start, DCoE brought together existing centers with expertise on psychological health and TBI-related issues to form a collaborative and integrated framework. The original network of centers included the Center for Deployment Psychology, Center for the Study of Traumatic Stress, Defense and Veterans Brain Injury Center and Deployment Health Clinical Center. In addition to the existing centers, DCoE was involved in the creation of two new centers: National Intrepid Center of Excellence and National Center for Telehealth and Technology.

While no longer a part of DCoE, the National Intrepid Center of Excellence was established to serve as the Military Health System's institute for complex, comorbid TBI and psychological health conditions. The National Center for Telehealth and Technology is still a part of DCoE and was created to develop, research, evaluate, standardize and deploy new and existing technologies to improve the lives of our nation's service members, veterans and families.

As the structure and capabilities of DCoE continued to evolve, so did its place within the MHS. On Jan. 23, 2009, under the authority of the deputy secretary of defense, the under secretary of defense for Personnel and Readiness directed the establishment of DCoE as an operating entity in the TRICARE Management Activity.

In an April 2011 report to Congress, the MHS Center of Excellence (CoE) Oversight Board was established. The CoE Oversight Board is responsible for providing policy guidance and oversight of all MHS CoEs, including DCoE. The report also directed the transfer of support responsibility for DCoE to the U.S. Army Medical Research and Materiel Command (MRMC).

Per the direction of the CoE Oversight Board, DCoE was formally moved to MRMC with Department of Defense Directive, Number 6000.17E, dated Jan. 2, 2013. This directive designated the Secretary of the Army as the DoD Executive Agency for DCoE in accordance with DoD Directive 5101.1 and transferred control and organizational support for DCoE to the Secretary of the Army. The transfer included the three centers under DCoE headquarters: DVBIC, DHCC and T2.

Currently, DCoE is working with the Defense Health Agency (DHA) and MRMC team to facilitate the transition of DCoE from MRMC to DHA.

KEY DATES

FEBRUARY 1992	Defense and Veterans Head Injury Program established; later renamed Defense and Veterans Brain Injury Center
JUNE 1995	Gulf War Health Center established; later renamed Deployment Health Clinical Center
NOVEMBER 2007	Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury established
JANUARY 2008	Establishment of National Center for Telehealth and Technology
JUNE 2008	Groundbreaking ceremony of National Intrepid Center of Excellence (NICoE)
JUNE 2010	Defense Department releases Policy Guidance for Management of Concussion/ Mild Traumatic Brain Injury in the Deployed Setting
SEPTEMBER 2012	DCoE and centers receive Defense Department Joint Meritorious Unit Award
JANUARY 2013	Defense Department Directive designates DCoE a DoD Executive Agency under U.S. Army
SEPTEMBER 2014	The Defense and Veterans Brain Injury Center designated MHS TBI Pathway of Care manager for clinical, research, education and training activities

DCOE CENTERS

DEFENSE AND VETERANS BRAIN INJURY CENTER

DEPLOYMENT HEALTH CLINICAL CENTER

NATIONAL CENTER FOR TELEHEALTH AND TECHNOLOGY

DVBIC
DEFENSE AND VETERANS BRAIN INJURY CENTER

DEFENSE AND VETERANS BRAIN INJURY CENTER

DVBIC was founded in 1992 in response to the first Persian Gulf War, under the name Defense and Veterans Head Injury Program. At the time, its goal was to integrate specialized TBI care, research, and education across military and veteran medical care systems.

Twenty years later, DVBIC is a network of 16 centers, operating out of 11 military treatment facilities and five VA polytrauma centers. The specific activities vary at each site and include conducting research; helping service members, veterans and their families locate services; providing education in military and civilian settings; providing direct care to service members; and assessing TBI injury data.

DVBIC develops, provides and distributes educational materials for military and civilian providers, service members, veterans and their families.

The Defense Department has further solidified DVBIC's role by naming it the office of responsibility for these tasks:

- Create and maintain a TBI surveillance database to describe the scope of the TBI issue
- Chair of the chartered Neurocognitive Assessment Implementation Working Group
- Design and execute a 15-year longitudinal study of the effects of TBI in Operations Enduring and Iraqi Freedom for service members and their families
- Design and complete an independent head-to-head study to evaluate the reliability and validity of computerized neurocognitive tests
- Design and execution of a study of the effectiveness of cognitive rehabilitation for mild TBI

DEPLOYMENT HEALTH CLINICAL CENTER

DHCC was first established in 1995 at the Walter Reed Army Medical Center as the Gulf War Health Center. It was re-established with its current name in 1999 as one of three Defense Department centers of excellence for deployment health. For more than 17 years, DHCC provided direct tertiary care and expert referral care for service members with complex deployment-related health concerns and consultation services for clinicians.

In 2008, DHCC became a DCoE center and in 2012, became the psychological health operational arm for DCoE. The mission of DHCC is to advance excellence in psychological health care across the Military Health System by enhancing care quality, effectiveness and efficiencies; facilitating the translation of research to practice; and providing leadership, advocacy and implementation support.

DHCC's work is structured around five major focus areas:

- Improve early identification and treatment of psychological health concerns through the integration of behavioral health in primary care
- Develop and implement evidence-based treatments and clinical support tools to improve psychological health specialty care
- Promote a culture of support for psychological health via psychological health literacy, patient empowerment, help-seeking behavior and reducing barriers to care
- Conduct an integrated portfolio of research to improve the psychological health system of care
- Provide program monitoring and evaluation services; develop metrics and measures to inform performance, outcomes and utilization

NATIONAL CENTER FOR TELEHEALTH AND TECHNOLOGY

Established in 2008, T2 leads the innovation of health technology solutions to deliver tested, valued solutions that improve the lives of our nation's service members, veterans and their families.

T2 leverages behavioral science and technology to optimize health care in the Defense Department.

The advanced health technology solutions of T2 are user-friendly, valued by our service members and cost-effective. These qualities align with the MHS goals to ensure readiness, population health, experience of care, and responsible management of the total cost of health care. T2 also supports the Defense Department's goals of increasing access to care, establishing best practices and quality standards for health technology and telehealth, and reducing both military suicide rates and the prevalence of stigma associated with seeking behavioral health services.

T2 produces Web- and mobile-based psychological health care resources and tools that support the individual whenever and wherever they need help. These resources are based on clinical evidence and developed in collaboration with other DCoE centers, the military services, the Department of Veterans Affairs, academia and other government agencies. T2's products are developed with multidisciplinary teams of psychologists, software engineers and product managers.

COLLECTIVE ACCOMPLISHMENTS

RESEARCH AND KNOWLEDGE TRANSLATION

RESOURCES AND TOOLS

EDUCATION AND TRAINING

PROGRAM EFFECTIVENESS

LEADERSHIP AND COLLABORATION

RESEARCH AND KNOWLEDGE TRANSLATION

In collaboration with MRMC, DCoE and its centers launched a knowledge translation initiative to develop a systematic approach to transition evidence-based knowledge into effective and accessible practices, policies and products that improve the quality of care and outcomes for service members and their families.

Knowledge Translation Initiative

DCoE plays an integral role accelerating the adoption of targeted knowledge products to enhance clinical care. DCoE facilitates knowledge translation by collecting, collating and analyzing knowledge in which stakeholder needs are systematically identified, validated and prioritized. This knowledge is then used to inform decisions on prioritizing research and the development of new products. This year, DCoE drafted a written knowledge translation process and launched two pilots of the process.

15-year Longitudinal Study

This is a long-term longitudinal study on TBI in Operation Enduring Freedom and Operation Iraqi Freedom service members and veterans, as well as the impact on their families. Currently in year five, the study includes a data repository of clinical and health data, and bio specimens collected from injured and non-injured service members. The study documents long-term outcomes throughout 15 years to improve understanding of TBI in a military cohort. It also investigates the effect of caring for a service member with TBI on the caregiver's health and well-being, and the effect of the TBI has on the health and behavior of service members' children. Finally, the study examines the health care needs and use of services to facilitate the recovery following TBI.

In 2014, recruitment expanded to additional sites, including the Naval Medical Center at San Diego and Camp Pendleton. Also, recruitment efforts were coordinated with the Department of Veterans Affairs longitudinal study, which is part of the Chronic Effects of Neurotrauma Consortium. Focus groups were completed with caregivers of TBI patients, to inform the development of a quality of life measure specifically for TBI caregivers.

Cognitive Rehabilitation Effectiveness in Mild TBI (SCORE!)

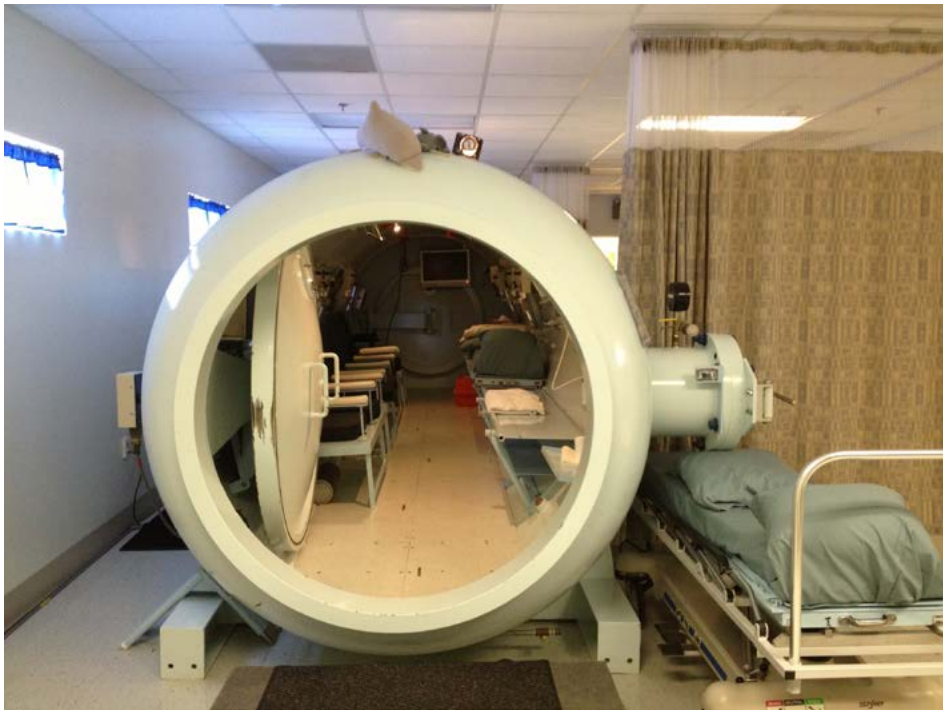
This study evaluates the effectiveness of integrated cognitive rehabilitation treatments, including computer treatments geared to improve brain fitness, in veterans of Operations Enduring and Iraqi Freedom with a history of mild TBI. The study will determine which therapies are most effective and associated with better treatment outcomes. The goal is to see whether cognitive rehabilitation therapy improves chronic mild TBI symptoms and, if so, which interventions work best, on whom and why. Enrollment and data collection for this study were completed in 2014. Following a letter to inform Congress of the Defense Department's progress to date on cognitive rehabilitation including preliminary findings, results will be disseminated at scientific conferences and in peer-reviewed publications in 2015. A comprehensive study manual will also be published.

Head to Head

This study compares four computer-based cognitive tests to identify service members who are at risk for brain injury-related problems. The tests, which measure memory, attention, reaction time and other cognitive skills, are usually given to athletes after they've had a head injury. The results of this study will help determine if any test is better suited than the others for assessing service members who sustain a TBI in the military environment. Enrollment and data collection of this study was completed in 2014. Following a report to Congress on the study findings, results will be disseminated through scientific conferences and publications in 2015.

Hyperbaric Oxygen for Mild TBI

In 2014, DVBIC developed **information papers** to provide an overview of the current level of evidence for the effectiveness of hyperbaric oxygen for the treatment of persistent post-concussion symptoms. While some studies demonstrate hyperbaric oxygen effectiveness for reducing symptoms months to years after mild TBI, results of those studies must be interpreted with caution, as lack of subject randomization, treatment group blinding, and control groups weakened the scientific rigor and potentially induced experimenter and selection bias. Recent randomized controlled trials funded by the Defense Department provide no evidence for efficacy of hyperbaric oxygen intervention compared to sham for improving symptoms in mild TBI patients, either immediately after intervention, or three months post-intervention. The information papers serve to provide the evidence base for use of hyperbaric oxygen for reducing persistent post-concussion symptoms. Stakeholders can use the information to support responses on taskers, inquiries from the public and questions from patients. By making the information papers available to our military service partners and the DVBIC network, we ensure the Defense Department message on the topic of hyperbaric oxygen is unified.



DoD Photo by Wesley Elliott, DDEAMC Public Affairs Officer, Dwight D. Eisenhower Army Medical Center, U.S. Army/Released

Translation Potential of Completed Studies Funded in 2007 from MRMC's TBI Research Portfolio

In 2014, DVBIC partnered with the Joint Program Committee-6 to provide "translation potential" information on completed TBI studies funded by the Defense Department and the committee in 2007. Access to this type of information will ensure that DVBIC can use the most current research findings to develop state-of-the-science clinical and education products. Also, the translation potential can inform what research should be done next to advance the state of the science to impact clinical practice.

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

The Stepped Enhancement of PTSD Services Using Primary Care (STEPS UP) trial tests whether a system of collaborative care within military primary care improves the quality of care and outcomes for service members with PTSD and depression as compared to those service members who receive standard care. The Primary Care Behavioral Health program, a collaborative care management program for PTSD and depression, already exists as the standard of care. The STEPS UP intervention offers significant enhancements to the optimized usual care, including an option for centralized, telephone-based care management, a centralized care team, care manager training, and an option for psychosocial interventions to supplement pharmacotherapy.

Study recruitment was completed in August 2013 with more than 600 active-duty service members who screened positive for PTSD and/or depression, randomized to either the STEPS UP intervention or optimized usual care at six Army installations. Follow-up data collection was completed in October 2014 and a manuscript describing study design and baseline data was published in "Contemporary Clinical Trials" in November 2014. DHCC is analyzing the full research survey dataset and developing a main outcomes manuscript with projected publication in 2015. Approximately 15 additional manuscripts related to the STEPS UP findings are also in progress.

Single Item PTSD Screener for Primary Care

To address under-diagnosis of PTSD in military primary care, DHCC previously developed and evaluated the Single Item PTSD Screener (SIPS) to facilitate screening among primary care providers in a Defense Department primary care population. DHCC was awarded additional grant funding to complete phase two of the study, in which the SIPS will be further refined and evaluated. The goal of the project is to improve the SIPS' sensitivity and specificity with the desired outcome that it will perform as well as or better than the widely used four-item Primary Care PTSD Screen. The original SIPS and two alternate versions are being tested against a gold standard PTSD structured diagnostic interview and a self-report questionnaire with a representative sample of Defense Department health care beneficiaries recruited from a primary care clinic waiting area.

In the spring of 2014, DHCC developed a revised recruitment strategy to maintain a random sample, while over-sampling a subset of the screened participants who would be more likely to meet diagnostic criteria for PTSD, and received approval to increase the total sample from 288 to 600. By the end of 2014, 412 participants had been recruited with 39 participants meeting the PTSD diagnostic criteria. With an 82 percent completion rate, the team anticipates meeting their recruitment goals in late spring 2015.

Multiple Somatic Symptoms in U.S. Military Personnel

Military conflicts dating back to the Civil War have been marked by the emergence of poorly defined physical symptoms, but the causes, correlates and prognoses of these war-related syndromes remain poorly understood. With large numbers of service members returning from deployment to Iraq and Afghanistan, the Multiple Somatic Symptoms in U.S. Military Personnel Study launched to support efforts to understand multiple physical symptoms and their relationship to deployment over time. The study used a multinomial logistic regression model to examine the prevalence, incidence, relationship to deployment and longitudinal trends of multiple physical symptoms in 76,924 service members. A prospective health project launched in 2001 at the Defense Department Center for Deployment Health Research to evaluate the long-term health effects of military service, including deployments. DHCC completed data analyses and is preparing a manuscript with publication expected in 2015.

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

Delivery of Self Training and Education for Stressful Situations – Primary Care (DESTRESS-PC) is an online self-management tool for PTSD based on empirically valid cognitive behavioral therapy strategies. The goal of the study was to improve primary care mental health services for combat-deployed military personnel and veterans with PTSD by providing early, high-quality access to low-stigma mental health care. The two-parallel-arm randomized controlled trial assessed the feasibility and efficacy of DESTRESS-PC for reducing PTSD, depression, generalized anxiety and somatic symptoms; increasing mental health-related functioning; and improving attitudes regarding formal mental health treatment.

Recruitment ended in 2011 at the three study sites. Eighty combat veterans meeting full eligibility criteria were randomized to the study condition and 66 participants completed the full study protocol. DHCC completed primary data analysis and submitted a manuscript with publication expected in summer 2015.

Alternate Response Formats of the Posttraumatic Stress Disorder Checklist, Civilian Version

The Posttraumatic Stress Disorder Checklist, Civilian Version (PCL-C) is a 17-item self-report measure developed for measuring PTSD symptom severity, which is often used to estimate PTSD “caseness” when administration of a structured clinical interview is not feasible. The purpose of the study was to evaluate the equivalence of a zero-anchored PCL-C in a primary care sample by comparing the responses of 120 DoD primary care patients on the validated version of the PCL-C (with a Likert scale range of 1-5) to the responses on a modified version (with a Likert scale range of 0-4). DHCC completed data collection and analysis and is preparing a manuscript with publication expected in 2015.

Veteran Status, Health and Mortality in Older Americans

Using data from the study of Asset and Health Dynamics among the Oldest Old and the Health and Retirement Study, the Veteran Status, Health and Mortality in Older Americans Study has shown 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. The study provides evidence that without considering the selection bias in the process of health transitions, estimating the effects on health transitions of older persons could be severely biased. Consequently, the study team is currently working to develop advanced longitudinal models on health transitions in older persons using updated data on health dynamics. Two project-related manuscripts are currently under review by scientific journals and two more are in development.

Internal Behavioral Health Consultant Practice Evaluation

Internal Behavioral Health Consultants (IBHC) are mental health providers embedded within primary care clinics who assist primary care managers in the recognition, treatment and management of service members and family members with behavioral health concerns. The purpose of this project is to conduct a program evaluation on National Capital Region IBHCs to determine whether they're adhering to their training model and to identify areas that need improvement. The final product from this evaluation will provide the Defense Health Agency with a more robust understanding of IBHC practices, which can inform future training activities to promote greater practice adherence among IBHCs.

The evaluation will include a retrospective chart review on IBHC notes, tracking program use and trends over time using administrative data, and self-report questions that assess compliance with IBHC training. Data collection is underway with a final report expected in 2015.

In-home Tele-behavioral Health Care

A three-year randomized controlled trial was completed that evaluated the safety and effectiveness of using in-home tele-behavioral health care (by video conferencing via a computer) to deliver psychotherapy for service members and veterans with depression. The results were compared to the same treatment delivered face-to-face with a provider. Analyses are underway.

Grant for Unique Mobile App

T2 was awarded a grant in collaboration with the Telemedicine and Advanced Technology Research Center (TATRC) to test the integration of two separate IT systems: the secure TATRC Mobile Health Care Environment Research System and the T2 Mood Tracker smartphone application. This will result in a mobile app that can transmit data from patient to provider within a completely secure environment to securely hold a patient's information from their mobile device into their clinician's existing records.

Integrated Mental Health Strategy Strategic Actions

In 2014, DHCC completed working group participation and final reports for six Integrated Mental Health Strategy (IMHS) strategic actions. The strategic actions were among 28 developed in 2010 as part of a joint Departments of Defense and Veterans Affairs strategy to promote early recognition of mental health conditions; delivery of effective, evidence-based treatments; implementation and expansion of preventive services; and education, outreach and external partnerships.

Risk of Suicide Among U.S. Military Service Members Following Operation Enduring Freedom or Operation Iraqi Freedom Deployment and Separation From the U.S. Military

In 2014, T2 completed the most comprehensive study to date on the relationship between U.S. military deployment and suicide. An analysis of data from more than four million service members found that suicide wasn't associated with deployment to Operation Enduring Freedom or Operation Iraqi Freedom. However, there was an increase in the hazard of suicide as a function of separation from military service, especially among those who served for less than four years. A manuscript describing the detailed results will publish in "JAMA Psychiatry" in 2015.

U.S. Air Force photo by Master Sgt. Adrian Cadiz

RAND CORPORATION STUDIES

"**Deployment Life Study: Defining and Measuring Family Readiness**" research evaluated aspects of family readiness to determine what behaviors and programs best buffer and protect families from negative effects associated with deployment. RAND Corp. released findings on the prevalence of family discord, substance use, and vulnerability and resource use patterns across families in the baseline study population. Additional data analyses and findings will be released through briefings and summary reports in 2015.

"**Family Resilience in the Military**" is identifying a set of key metrics, constructs and related outcomes associated with family resilience, setting the stage for future evaluation of Defense Department sponsored family resilience programs cataloged in phase one. The project will also include an outline of short-, medium- and long-term goals to create a Defense Department support infrastructure to facilitate family resilience program evaluations across all components. RAND Corp. expects to release a report of phase one findings in early 2015.

"**Sleep in the Military: Promoting Healthy Sleep Among U.S. Service Members**" was completed in November 2014 and will be released in early 2015. The goal of the research was to identify promising policy options and best practices for Defense Department to mitigate the negative consequences of sleep problems and promote greater sleep health among service members. The report identifies the prevalence of poor sleep quality and sleep disorders among military personnel returning from deployment and practices and programs related to improving sleep quality.

"**Evaluate Stigma Reduction Efforts in the DoD**" reviewed and assessed stigma reduction strategies across the services and Defense Department to identify programmatic strengths and gaps. The report, released in September 2014, presented priorities for ensuring service members receive the treatment they need and recommendations to improve stigma reduction efforts.

"**Postvention in the Department of Defense: The Evidence, DoD Policies and Procedures, and Perspectives of Survivors**" provides an overview of the assessment of the Defense Department's response to suicides among military personnel. The report recommends that the Defense Department create guidelines for local leaders responding to a suicide in their unit, standardize training of casualty assistance officers and reconsider whether eligibility for Defense Department and Department of Veterans Affairs benefits should be affected by line of duty determinations. The report is expected to be released in April 2015.

"**Access to Behavioral Health Care for Geographically Remote Service Members and Dependents in the U.S.**" evaluated the mental health needs of service members and families in rural and remote areas and their degree of access to high-quality psychological health care delivered by providers familiar with military culture. The report findings include a series of recommendations on ways the Defense Department can establish policies to enhance access to care among service members in rural and remote settings, ways MHS can monitor the effects and implementation of these policies and areas of policy that deserve special focus.

The central goal of "**Assessment of Fidelity to Clinical Practice Guidelines for Posttraumatic Stress Disorder and Major Depressive Disorder in the Military Health System**" is to understand the extent to which mental health providers in the MHS implement evidence-based care consistent with established clinical practice guidelines for PTSD and major depressive disorder (MDD), and evaluate the relationship between guideline-consistent care and clinical outcomes for these conditions. The study has a projected end date in 2016.

"**Framework for Quality Assessments of Department of Defense Traumatic Brain Injury and Psychological Health System of Care**" is in its second year of funding. RAND Corp. reviewed more than 500 existing quality measures germane to care for PTSD, MDD and other conditions. Based on this review, 58 candidate quality measures were selected. The report will be released in early 2015.

"**Psychological Health Treatment Needs and Outcomes of Minority Service Member Groups in DoD**" launched to research differences in mental health needs, treatment preferences, treatment outcomes and use of services between minority groups and non-minority groups in the military, and between minority groups in the military and civilian populations, to include women, racial minorities, and gay, lesbian, bisexual and transgender populations. The study has received all necessary internal review board approvals and subject recruitment processes are ongoing.

"**Pathways, Experiences, and Outcomes of Primary Care Versus Specialty Care Treatment for PTSD and Depression in Active Duty Service Members**" qualitatively examines how service members use mental health services, the underlying thought processes related to treatment decision-making, the experiences which shape their attitudes and perceptions, and how these factors influence care trajectories and outcomes. The study findings are expected to shed light on previous reports indicating that many service members with identified mental health needs don't complete an adequate course of treatment and will provide recommendations for process and policy improvements. The study is in its first year of funding and has a projected end date in 2017.

"**Environmental Scan of CAM Services across the MHS**" pinpoints specific policy needs and provides baseline information on provider training and credentialing, patient volume, demand and level of integration of each complementary and alternative medicine (CAM) service into existing military treatment facility and MHS infrastructure. The final report will be available in September 2015. To expediently translate CAM research findings into evidence-based clinical recommendations, RAND Corp. is conducting 10 systematic reviews to evaluate efficacy and comparative effectiveness of acupuncture, meditation, omega-3 fatty acids, and St. John's Wort for psychological health conditions and comorbidities such as PTSD, MDD, substance use disorder, nicotine dependence and chronic pain. The systematic reviews will be used to inform clinical practice guidelines regarding up-to-date research findings in CAM applications for mental health.

RESOURCES AND TOOLS

DCoE develops **resources and tools** such as educational materials, product fact sheets, brochures, clinical practice recommendations, and mobile applications to impact the psychological health and TBI medical treatment, care and advocacy of our nation's service members and their families.

Traumatic Brain Injury Recovery Support Program Brochure and Fact Sheet

DVBIC's TBI Recovery Support Program published a **brochure** and **fact sheet** that explains the purpose of the program, who is eligible, and where to find help within the network. The program and its recovery support specialists provide TBI expertise, support and connections to TBI and psychological health services and other resources for clients as they navigate their path to recovery.

Quarterly TBI Surveillance Reports and Event Monitoring Summaries

DVBIC provides **worldwide numbers** (updated quarterly on its website) representing active-duty medical diagnoses of TBI that occurred anywhere U.S. forces are located, listed in total and identified by service and injury severity since 2000. With 24,833 new medical diagnoses of TBI in 2014, the total of all severities diagnosed since 2000 had risen to 320,344. DVBIC broadened data source partnerships with Joint Trauma Analysis and Prevention of Injury in Combat program and Armed Forces Health Surveillance Center; expanded surveillance capabilities with internal and external stakeholders; and developed major reports to guide and influence staffing and policy, to include the Event Monitoring Summaries, Medical Encounters Report, TBI Worldwide Numbers report and others. DVBIC analyzed reporting variables and provided a historical comparison of previous data for the Defense Department in quarterly reports from the Blast Exposure Concussion Incident Report database.

Department of Defense Suicide Event Report

T2 prepared and submitted the sixth annual suicide surveillance report for the DoD Suicide Event Report (DoDSER) program to the Defense Suicide Prevention Office for their use in improving suicide prevention efforts across the Defense Department. The DoDSER is widely used by suicide preventionists and leadership (e.g., Congressional testimony), and is frequently cited by the press. This year, the DoDSER team made significant efforts to continue to improve the DoDSER's data quality to further improve report accuracy and utility. Changes included refining the help content available to users and establishing a process to assess and resolve problems that are commonly encountered. Additionally, meetings to identify potential strategies to better understand suicide risk factors experienced by reservists while in civilian status occurred.

Concussion/Mild Traumatic Brain Injury and Posttraumatic Stress Disorder Fact Sheet

This **fact sheet** provides the definitions for concussion/mild traumatic brain injury and posttraumatic stress disorder, lists overlapping symptoms and includes guidance for the recovery process.

CLINICAL SUPPORT TOOLS

Suicide Prevention Clinical Support Tools

DHCC developed and disseminated **four clinical support tools** to support adoption and use of the VA/DoD Clinical Practice Guideline for the Assessment and Management of Patients at Risk for Suicide. The clinical suite includes:

Suicide Risk Provider Pocket Guide	Presents a concise overview of guidelines and decision aids for primary and specialty care providers related to prevention, symptom recognition, treatment and patient management
Suicide Prevention: Overcoming Suicidal Thoughts and Feelings	A tool providers can use with patients to educate them on risk management, strategies to build inner sources of strength, how to recognize warning signs, effective coping strategies and the importance of treatment engagement
Safety Plan Worksheet	A provider-driven tool that enables the health care professional and patient to collaboratively identify stressful triggers, warning signs, sources of support, coping strategies and ways to access health care assistance within a quick reference guide. The worksheet is typically completed during a face-to-face appointment. Providers should give a copy to the patient and include a copy in the electronic medical record.
Suicide Prevention: A Guide for Military and Veteran Families	A family member is often the first to know when a loved one is in crisis. Health care professionals should use this guide with family members to educate them about suicide warning signs, how to access care, appropriate treatments and ways they can best help a loved one who is suicidal or in crisis.

DoD Health Care Provider Sexual Assault Clinical Support Tools

DHCC developed new clinical recommendations and support tools for all Defense Department health care providers on the management of patients who disclose sexual assault or sexual harassment. The effort is a partnership between DCoE, the services, DoD Psychological Health Council Sexual Assault Advisory Group, Health Affairs Women's Issues Work Group, DoD Family Advocacy Office, and DoD Sexual Assault Prevention and Response Office (SAPRO). The clinical recommendations will improve consistency in health care provider training, provision of care and availability of support resources for patients who disclose sexual assault or sexual harassment. The suite of clinical tools, which support the new recommendations, includes a clinical recommendations guide electronic tool and manual for providers and a patient education pamphlet. These tools are scheduled for publication in 2015. Additional products scheduled for development in 2015 include a joint SAPRO and DHA sexual assault safety assessment and planning tool for Defense Department providers, patients and victim advocates and a companion mobile application.

Progressive Return to Activity Following Acute Mild TBI Clinical Suite

DVBIC released two clinical recommendations on **Progressive Return to Activity Following Acute Concussion/Mild TBI in Deployed and Non-deployed Settings** in January 2014. The clinical recommendations were developed at the request of the TBI program managers of the military services to provide standardized guidance for returning service members to pre-injury activity levels after mild TBI. These clinical recommendations offer primary care managers and rehabilitation providers standardized guidance on how and when service members should return to activity following a mild TBI. The clinical suite includes four separate clinical support tools for primary care managers and rehabilitation providers, including a clinical recommendation, clinical support tool, training slides and patient education tool.

Management of Sleep Disturbances Following Concussion/Mild TBI Clinical Suite

This **clinical suite** provides guidance to help primary care managers assess and manage sleep disturbances associated with mild TBI. It includes specific recommendations for managing symptoms of insomnia, circadian rhythm sleep-wake disorder and obstructive sleep apnea. Included in the clinical suite is a clinical recommendation, clinical support tool, training slides and fact sheet on healthy sleep.

Automated Neurological Assessment Metric Training

Automated Neurological Assessment Metric (ANAM) training was mandated through Department of Defense Instruction 6490.13, Comprehensive Policy on Neurocognitive Assessments by the military services. Training decks were developed by a joint working group consisting of representatives from the services and DVBIC in May 2014. The training decks target two primary audiences, general medical officer or primary care provider and a more in-depth training for psychology and neuropsychology specialists.

PROGRAMS

Joint Incentive Fund Projects

DHCC initiated three Defense Department and Department of Veterans Affairs Joint Incentive Fund (JIF) projects that continue the work of IMHS strategic actions related to chaplains' roles, resilience programs and translation of research into practice. JIF 1 addresses improved integration of chaplains with mental health care, JIF 7 focuses on providing problem solving training for behavioral health clinicians and JIF 26 creates a Defense Department and Department of Veterans Affairs Practice Based Implementation Network to speed the translation of mental health research into innovative practice.

Primary Care Behavioral Health Program

DHCC supports the tri-service Primary Care Behavioral Health (PCBH) program which combines two collaborative primary care programs, the PCBH consultative model of service delivery and the care management model. In the integrated model, psychologists and social workers, called internal behavioral health consultants, provide focused interventions on a number of health psychology issues such as weight control, smoking cessation, pain management and diabetes, as well as interventions to improve primary care treatment of a wide range of psychological health conditions (e.g., depression, anxiety, adjustment disorders). Registered nurses, called behavioral health care facilitators, provide care management services to improve recognition, management and follow-up of depression, anxiety and PTSD. The program aims to improve access to quality services, increase dispersal of PTSD and depression best practices, and promote a focus on prevention. 2014 highlights include:

- Created eight clinical pathways for problems that commonly present in primary care: obesity, diabetes, alcohol misuse, sleep problems, pain, tobacco cessation, anxiety and depression
- Hosted 12 IBHC monthly sustainment training webinars averaging 150 participants per webinar
- Provided in-residence skills qualifications trainings for 81 IBHCs and 53 behavioral health care facilitators
- Developed and conducted a series of five tri-service trainings for all DoD IBHCs on the Behavioral Health Measure-20
- Developed a training package and conducted tri-service training for all DoD IBHCs on the topic of IBHC documentation
- Produced and disseminated three education tools to promote broader awareness and implementation of the PCBH program
- Contracted with NORC at the University of Chicago to develop computer-based trainings for providers in Screening, Brief Intervention, and Referral to Treatment (SBIRT), an evidence-based approach to identify, reduce and prevent problematic alcohol use, abuse and dependence

TBI Recovery Support Specialists

DVBIC's TBI Recovery Support Program expanded its focus and outreach during 2014. Based on recommendations from external and internal reviews, the following measures were adopted: expansion of the program's service mandate to include coordinating care for TBI and co-occurring psychological health conditions; expansion of client services to include caregivers and family members of service members and veterans impacted by TBI; and development and expansion of marketing of program resources to increase the referral network and expand knowledge of and client access to available services regionally and nationally. The program adapted and now uses a customized version of the Wounded, Ill, and Injured Registry database to better track and facilitate coordination of care, as well as assess client outcomes and satisfaction with the program.

Real Warriors Campaign

The **Real Warriors Campaign** is DCoE's multimedia public health awareness campaign designed to encourage service members, veterans and military families to seek care for psychological health concerns and to promote psychological health. The campaign was created in response to the 2007 Defense Department Mental Health Task Force recommendation to develop a campaign to help dispel stigma as a barrier to seeking care. The campaign strives to educate and reduce misperceptions, foster a culture of psychological health, restore faith in the MHS, improve support systems and empower behavior change. Key 2014 campaign highlights include:

- Produced two new video profiles of a Marine Corps first sergeant and an Army first sergeant who sought help for mental health concerns
- Launched a new mobile app and complementary responsive website that offers peer support for warriors, veterans and military families, garnering 842 downloads
- Produced 14 articles and four print products (mini-brochures and event materials)
- Received 245,240 unique visitors, 290,151 visits and 777,528 page views to the campaign website
- Directly interacted with 2,155 individuals and distributed 18,180 materials at 15 events
- Engaged 54,646 Facebook fans and 33,569 Twitter followers through the campaign's social media channels, averaging 1,079 interactions daily
- Campaign video and radio public service announcements (PSAs) aired more than 15,850 times to Armed Forces Radio and Television Service potential audiences of more than 2 million service members in 177 countries each week, including Afghanistan and Iraq
- Achieved a campaign milestone of disseminating more than 1.5 million pieces of material via the shopping cart to service members, veterans and family members
- Aired campaign's video PSAs 78 times on the Jumbo-Tron during the Indianapolis 500 in May 2014, reaching more than 1.2 million viewers

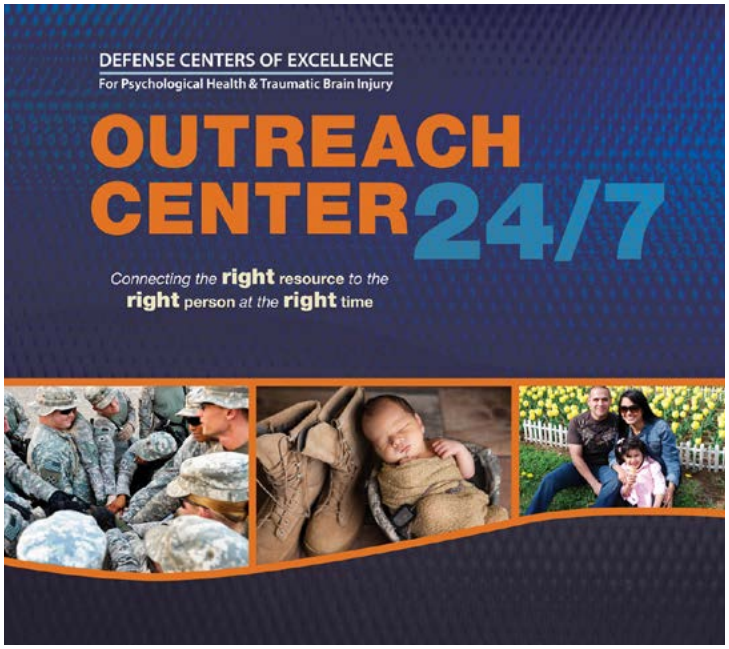
inTransition

The **inTransition** program is a collaborative effort between the Defense Department and Department of Veterans Affairs that bridges the gap for service members with psychological health concerns who are transitioning between behavioral health care systems. The program also connects health care providers with licensed behavioral health care specialists trained in military culture. During 2014, the inTransition team conducted 33 provider trainings through video teleconferences, conference calls or site visits that were attended by more than 550 participants. Program staff also conducted exhibits and briefs at eight Yellow Ribbon Reintegration Program events and 17 military conferences. As a result, the program received 14,191 calls; 2,943 of these calls became intake calls and 99 percent of those resulted in service members accepting program services.

In August 2014, the inTransition program was part of the Presidential Executive Action to change program enrollment process from voluntary to automatic. This required the identification of service member profiles and the development of a staffing plan to cover the proposed increase in use of inTransition. DCoE developed a cost proposal to cover the staffing expansion needed to reach out to a projected list of more than 76,000 eligible service members who will separate from service each year and who have seen a behavioral health provider within 12 months of their separation date.

DCoE Outreach Center

The **DCoE Outreach Center** provided information and resources regarding psychological health and traumatic brain injury in 2014 through almost 4,400 calls, emails and online chat sessions, connecting with more than 2,000 service members, veterans, military families, health care providers, researchers and the public. As the only Defense Department resource center dedicated exclusively to psychological health and TBI concerns, the DCoE Outreach Center has collaborative agreements with other Defense Department and Department of Veterans Affairs hotlines and resource centers to ensure service members, veterans and families get a warm hand-off to the agency or program that can best address their needs.



MOBILE APPS

Virtual Hope Box

The **Virtual Hope Box mobile app**, developed by T2, is a tool that helps patients who are struggling with coping and negative thoughts, including patients who may be at-risk for suicide. Users can combine meaningful memories with relaxation coaching and distracting activities to help them cope. The mobile app has received numerous accolades, including a "2014 Department of Defense Innovation Award." A clinical evaluation of the Virtual Hope Box mobile app revealed that high-risk patients used the app regularly and found it to be beneficial, easy to use, and would recommend it to their peers. A second and much larger clinical trial of the app's effectiveness is underway and will be completed in late 2015. A manuscript on Virtual Hope Box was published in the "Journal of Suicide and Life Threatening Behavior" in 2014.

Moving Forward

Developed in partnership with the Department of Veterans Affairs as part of the Integrated Mental Health Strategy, the **Moving Forward mobile app** is used to teach problem-solving and stress management skills to military and veteran populations. This is a companion app to the Moving Forward website, which received five awards in 2014.

Parenting2Go

Developed in partnership with the Department of Veterans Affairs as part of the Integrated Mental Health Strategy, the **Parenting2Go mobile app** is used to address both everyday parenting problems and family issues unique to military life. This is a companion app to the Parenting for Service Members and Veterans online course, which received five awards in 2014.

The Big Moving Adventure

T2 worked in partnership with Sesame Workshop, the non-profit educational organization behind Sesame Street, to develop **The Big Moving Adventure mobile app**. This app was created for preschool children of military families to help them cope with the stress of frequent moves, and includes a section for parents.

Collaborative Mobile Apps

The following mobile apps were developed in partnership with the Department of Veterans Affairs National Center for PTSD:

ACT Coach

Designed for use with face-to-face treatment in acceptance and commitment therapy (ACT). This app incorporates mindfulness and acceptance strategies to help cope with unpleasant emotions and symptoms of mental health conditions

Concussion Coach

Designed for use with face-to-face treatment for those with symptoms of a concussion or mild to moderate TBI. This app provides tools for people to assess symptoms and cope with TBI-related problems

CPT Coach

Designed for those participating in cognitive processing therapy (CPT), which is used for treating PTSD. This app improves engagement and participation in CPT and helps CPT providers better adhere to the treatment protocol

Mindfulness Coach

Designed to reduce tension and worry and improve coping by helping people focus on present experiences and away from potentially distressing thoughts about the past or future

PFA Mobile

Designed to supplement the training of responders who provide psychological first aid (PFA) following a disaster or emergency. This app allows responders to review PFA guidelines and learn tips to practice PFA in the field

WEBSITES

AfterDeployment

AfterDeployment celebrated its sixth anniversary in 2014. Acknowledged as best-in-class by multiple governmental organizations, the website continues to deliver useful psychological health and TBI self-care information and assessments for service members, veterans and their families. The LifeArmor mobile app complements the AfterDeployment site by bringing many of its features to mobile platforms.

Military Kids Connect

The **Military Kids Connect** website addresses stressful issues and transitions common in military life for children of service members. Sections for parents and educators focus on supporting children through frequent periods of transition. The educator's section features instructional aids for helping civilian classmates better understand the language and culture of their friends from military families. In 2014, teen-led video tours of 10 military bases were added to the teen section.

Moving Forward

The **Moving Forward** website is an eight-module online educational and life coaching program to teach problem solving and stress management skills to our military and veteran populations. The website received five awards in 2014.

Military Parenting

The **Parenting for Service Members** course on the Military Parenting website addresses both everyday parenting problems and family issues unique to military life. It was developed in partnership with the Department of Veterans Affairs as part of the Integrated Mental Health Strategy. The course received five awards in 2014.

EDUCATION AND TRAINING

Through multiple training venues, DCoE provides stakeholders with tools to help them deliver quality and reliable care of service members, veterans and their families dealing with psychological health and TBI issues.

Internal Behavioral Health Consultant Sustainment Training

DHCC began conducting training in April 2013 for members of the Patient-Centered Medical Home behavioral health team who serve as internal behavioral health consultants. In 2014, 11 webinars offered training to improve brief assessment and intervention for health conditions, behavioral health problems and populations commonly seen in MHS Patient-Centered Medical Home settings. Some of these training events offered continuing education credit.

Regional Education Coordinators

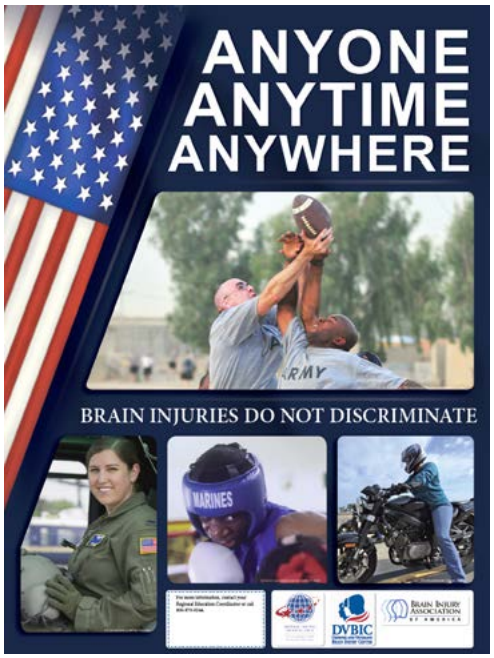
DVBIC Regional Education Coordinators provided 1,881 outreach briefs and educational presentations related to TBI in 2014, more than doubling the 2013 efforts. The coordinators reached over 205,443 service members, veterans, families and community-based organization members.

Monthly Webinars

DCoE successfully executed a total of 49 webinar events reaching 12,859 participants, offering continuing education credits to 4,102 learners, and providing certificates of attendance to 538 participants. In addition, DCoE provided support and executed 17 other meeting and training events.

TBI Global Synapse

DVBIC hosted the second annual DVBIC TBI Global Synapse, which brought together 699 Defense Department and VA health care providers worldwide through a live and online education event Sept. 15-17 at Defense Health Headquarters in Falls Church, Virginia. Sessions addressed best practices in TBI assessment, diagnosis and treatment; innovative approaches to multidisciplinary care; management of comorbidities, including psychological health conditions; and successful reintegration strategies. Seven pre-recorded, on-demand, sessions complemented the two and a half day live event. Participants were eligible for up to 12.25 hours of continuing education credit if they attended the TBI Global Synapse in person and up to 8 hours of credits if they viewed the pre-recorded on-demand sessions on line.



2014 Brain Injury Awareness Month

Brain Injury Awareness Month, recognized during March, featured events that highlighted the Defense Department's efforts to prevent TBI and provide care for service members and veterans with TBI through state-of-the-art clinical care, research and education. DVBIC hosted a kickoff event at the Fort Belvoir Intrepid Spirit Center in Virginia. DVBIC leadership participated in a resource fair on Capitol Hill, a roundtable featured on the Pentagon Channel and more than 250 events hosted by DVBIC regional education coordinators. The 2014 theme was "Anyone, Anytime, Anywhere: Brain Injuries Do Not Discriminate."

A Head for the Future Initiative

The Defense and Veterans Brain Injury Center launched the A Head for the Future initiative in 2014. The purpose of this multi-year initiative is to raise awareness of noncombat-related brain injuries in the military community and educate military families on how to prevent TBI. According to Defense Department data, the majority of TBIs in the military are diagnosed in a nondeployed setting. These brain injuries can result from incidents like motorcycle and bicycle collisions, sports-related accidents, altercations and falls. Visit dvbic.dcoe.mil/aheadforthefuture to learn more about the initiative and access information about brain injury prevention and recovery.

2014 DCoE Psychological Health and Resilience Summit

DCoE hosted the DCoE Psychological Health and Resilience Summit in September 2014. More than 800 participants from around the world joined the hybrid, cross-service training on the prevention and treatment of psychological health concerns and evolving best practices to enhance resilience and readiness.

T2 Education & Training Program

In 2014, T2 launched the T2 Education & Training Program to deliver training to providers on how to integrate technology applications in behavioral health practice into clinical care. This comprehensive education and training initiative included four webinars, three clinician-directed face-to-face interactive workshops, outreach events and provider resource tools.

PROGRAM EFFECTIVENESS

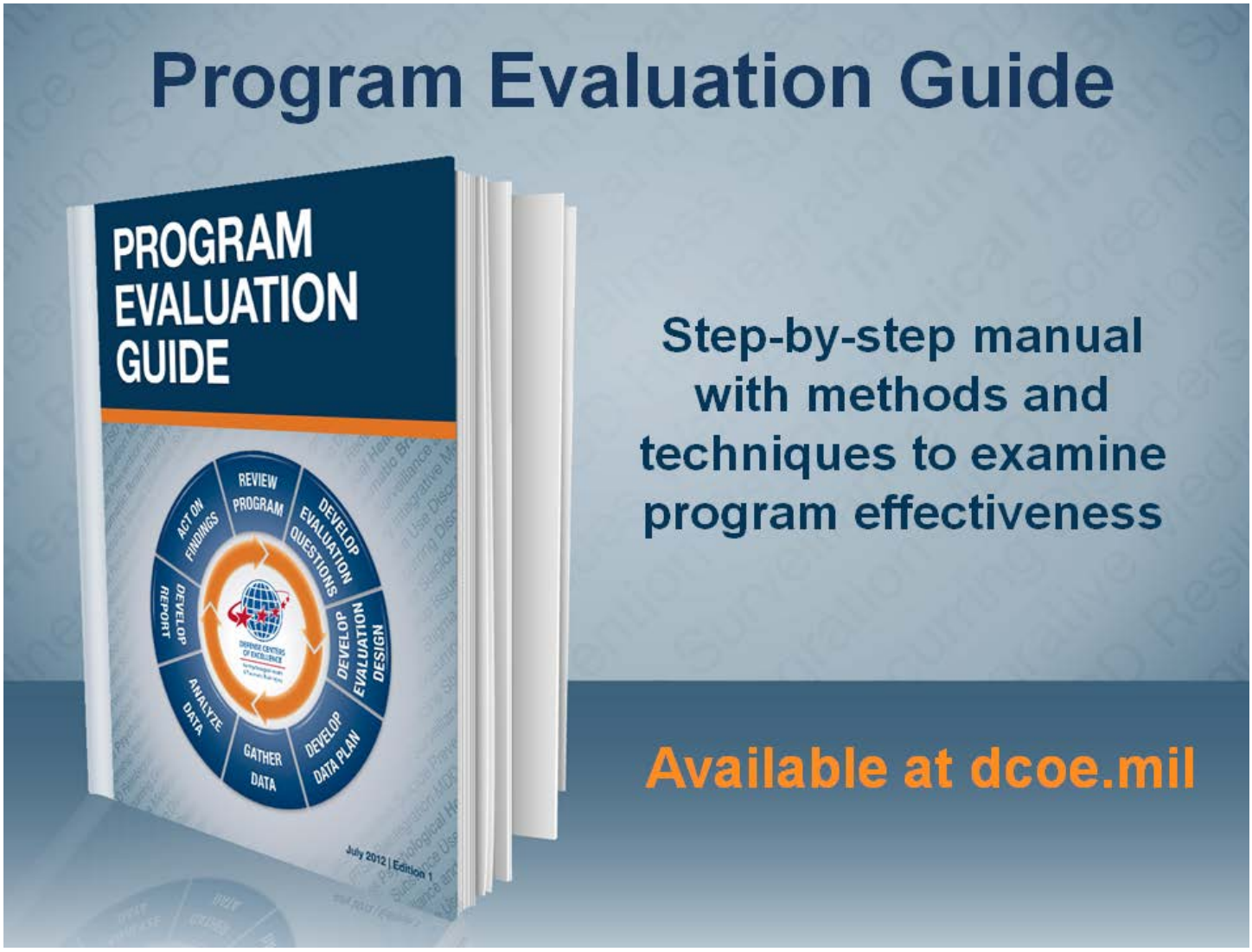
DCoE's Program Evaluation and Improvement (PEI) capability supports a critical component of DCoE's mission to enhance the effectiveness of psychological health and TBI programs that provide care to an estimated 4.4 million service members and their families through systematic, evidence-based evaluation activities.

Program Evaluation and Improvement (PEI)

The PEI effort provides a foundation to improve program evaluation standards and metrics across Defense Department psychological health and TBI programs to establish a culture that values continuous improvement through evaluation activities.

In 2014, the PEI capability was extended beyond the sole focus on psychological health programs to include the identification, validation and assessment of over 150 psychological health and TBI programs. A scientific panel comprised of non-Defense Department federal experts in program evaluation and related fields was conducted for identified Defense Department-funded TBI programs, identical to the Fiscal Year 2013 panel review of psychological health programs. A rapid evaluation process was employed for programs and the analysis of programmatic data informed the development of a plan to eliminate gaps and redundancies in services and treatment as mandated by Section 739 of the National Defense Authorization Act for Fiscal Year 2013. Individualized program feedback reports were distributed to each program detailing strengths and opportunities for development based on the initial evaluation.

At the beginning of the fiscal year, DCoE hosted information sessions for points of contact from each service's Office of Manpower and Reserve Affairs and Public Health Command to present planned activities with identified programs. DCoE also hosted a quarterly in-progress review with external stakeholders, including senior leadership from the aforementioned offices. These meetings provided progress updates and reviewed upcoming plans regarding program evaluation and training and change management activities. Additionally, PEI staff engaged with service-level stakeholders at their request to address ongoing concerns or to provide relevant updates regarding program evaluation activities planned for programs within their purview.



Continuous Process Improvement

In April 2014, DVBIC created a Program Evaluation and Continuous Process Improvement Office with the mission to help DVBIC staff implement evaluation and process improvement processes to enhance DVBIC programs, products and services. The office established work procedures and began teaching staff on program evaluation and process improvement practices to build-up a capacity to conduct evaluations of center programs, and incorporate process improvement processes into products and services. They developed performance metrics for four projects. The office plans to pilot test its program evaluation processes in early 2015.

LEADERSHIP AND COLLABORATION

DCoE recognizes that advancement cannot happen without the help and knowledge of others. To get the best care possible for U.S. service members, veterans and their families, DCoE partners with military, government and academic organizations to identify gaps, eliminate redundancies, and prioritize needs in psychological health and TBI research. DCoE plays an active role in Defense Department working groups for psychological health and TBI.

DCoE often serves as the Defense Department's lead for psychological health and TBI related activities and has built a strong network of strategic partners such as the VA, other government agencies, academic institutions and communities of interest to support those activities. Sources include:

- National Defense Authorization Acts
- Defense Department Task Force on Mental Health
- Defense Department Suicide Prevention Task Force recommendations
- Defense Department and Department of Veterans Affairs Integrated Mental Health Strategy
- Senior Military Medical Advisory Council
- DoD/VA Health Executive Council
- DoD/VA Joint Executive Council

DCoE recognizes that advancement cannot happen without the help and knowledge of others. The following pages note some of those collaborative efforts.

Mild TBI Health Care Outcomes Policy Draft

DVBIC drafted the Concussion/Mild TBI Health Care Outcome Policy, which establishes guidelines for the administration of the Neurobehavioral Symptom Inventory and the Patients' Global Impression of Change with the goal of standardizing mild TBI assessment in the MHS. Along with the policy draft was the development of the Concussion Health Care Outcome Standardization Plan. Data from the two measures will be used to evaluate mild TBI outcomes. Additionally, a business case analysis examined four methods of administering the measures and the ability to retrieve data for analysis from each of these methods. At the time of assessment, the Behavioral Health Data Portal was the model identified as the best option. Information papers on the measures were also published.

Outcome Data Collection

DVBIC collaborated with the developer for the Armed Forces Health Longitudinal Technology Application and Alternate Input Method form for use in the primary care medical home for mild TBI care. The project team developed standardized data fields for the forms that can collect outcomes data for analysis. A questionnaire template was developed to capture the Neurobehavioral Symptom Inventory and the Patients' Global Impression of Change scores. This template will be available to MHS providers. Standard operating procedures were developed to establish the processes of data collection, analyses and site visits.

Screening, Brief Intervention and Referral to Treatment Implementation Pilot

The Screening, Brief Intervention and Referral to Treatment (SBIRT) implementation pilot is a translation initiative designed to ensure effective psychological health evidence-based practices for alcohol misuse intervention are implemented in the primary care setting. In 2014, DHCC developed an implementation guide to support the services in delivering consistent implementation and execution of the SBIRT model, to include administration of the Alcohol Use Disorders Identification Test – Consumption. The team developed workflows and implementation tools to allow for standardized processes within and across clinics, and to support providers and patients throughout the SBIRT process. Four military treatment facilities will pilot and monitor the fidelity of the SBIRT process. Two facilities were selected in 2014 to begin the initial phases of implementing the SBIRT process within their primary care or internal medicine clinics in 2015. The SBIRT pilot is leveraging the PBI-Network to enhance communication and processes and to gather data for program evaluation. The project is scheduled for completion in September 2016.

Defense Department Psychological Health Research and Capabilities Data Call

DCoE developed, administered, analyzed and delivered to MRMC the first Defense Department provider psychological health research and capabilities data call. One hundred providers and psychological health clinic leaders across the Defense Department were requested to provide their opinions about what psychological health research and capabilities they would like to see developed within the department. This information was used to inform MRMC research portfolios and contributed to clinical documentation development for the Behavioral Health Data Portal.

International Initiative for Mental Health Leadership

DHCC is the Defense Department host for the Substance Abuse and Mental Health Services Administration International Initiative for Mental Health Leadership (IIMHL) military match site, which is a collaboration of mental health leaders from eight sponsor countries who join with other countries throughout the world to share knowledge to improve mental health and addictions services. Since 2011, this leadership collaboration has focused on the mental health needs of rural and remote service members and their families, a critical need identified by mental health leaders from the Unites States, United Kingdom, Canada and Australia. The RAND Corp. "Access to Behavioral Health Care for Geographically Remote Service Members and Dependents in the U.S." study on the mental health needs of rural and remote family members was initiated in support of this IIMHL project. This past year, a representative from DHCC attended the match meeting in London, where she contributed to the IIMHL International Outcomes Measures Council. DHCC will host the 2015 annual meeting and expects participants from New Zealand, Germany, Australia, United Kingdom, Denmark and Canada.

International Outreach

- Col. Leonard B. Brennan, Chief of Army Fellow of the Australian Defense Force, visited DVBIC headquarters to examine the differences between minor TBI from direct and indirect blast exposures. Brennan previously visited DVBIC sites at Fort Sam Houston, Texas, Fort Bragg, North Carolina, and Walter Reed National Military Medical Center and Naval Support Activity at Bethesda, Maryland. The visit focused on DVBIC's coordination with the Defense Department Blast Injury Research Program Coordinating Office, the Joint Trauma Analysis and Prevention of Injury in Combat Program and the Joint Program Committees.
- DVBIC National Director Army Col. (Dr.) Sidney R. Hinds II met with Lt. Col. George Georgiadis, Command Health Officer, Special Operations Command of the Australian Defense Force, during the Association of Military Surgeons of the United States Conference in Washington, D.C., and provided him with information on DVBIC's TBI efforts.
- On Aug. 28, 2014, Mr. Oliver Krueckel, a German psychologist, joined DCoE for a one-year tour as part of the Engineer and Scientist Exchange Program.
- USPHS Cmdr. Anne Dobmeyer, a psychologist with the Deployment Health Clinical Center also went to Liberia as part of the Public Health Service Ebola support mission.

Photo courtesy of T2 Public Affairs

Working Groups

DCoE achieves success through participating in a variety of interdisciplinary working groups to improve psychological health and TBI care. Examples include: Psychological Health Quad Service Working Group, TBI Quad Service Working Group, Chaplain Working Group, DoD/VA Telehealth Work Group, and Health Executive Council/Joint Executive Council on TBI Working Group.

Telehealth Integrated Product Team

T2 acts as the principal support organization for the Telehealth Integrated Product Team, which was established by the assistant secretary of defense for Health Affairs to identify needs and recommend potential courses of action to develop telehealth across MHS. In 2014, T2 authored the Defense Department's annual report to Congress on the status of telehealth, "Use of Telemedicine to Improve the Diagnosis and Treatment of Posttraumatic Stress Disorder, Traumatic Brain Injuries and Mental Health Conditions" as mandated by Section 702 of the National Defense Authorization Act for Fiscal Year 2014.

LOOKING FORWARD

As DCoE moves into 2015 and beyond, we will maintain our momentum as we advance psychological health and TBI prevention and care by:

Continuing to strengthen our relationships with the services with a collaborative approach toward evaluation, analysis and standardization of psychological health and TBI information

Working with partner organizations to identify gaps, eliminate redundancies and prioritize needs in psychological health and TBI research

Promoting evidence-based practices and care standards by creating clinical tools and care pathways that translate research into practice

Ensuring stakeholders are aware of DCoE products and services and increasing use of those products and services, especially within the services

Providing a thorough, robust program evaluation and effectiveness capability to support MHS and service level psychological health and TBI programs

PUBLICATIONS, BOOKS AND BOOK CHAPTERS

2014 PUBLICATIONS

Armstrong, C. M., Reger, M. A., & Gahm, G. A. (2014). Emerging and Young Adulthood: Military Suicides. In M. van Dulmen, R. Bossarte, & M. Swahn (Eds.), *Developmental and Public Health Perspectives on Suicide Prevention: An Integrated Approach* (pp. 152-165). New York, NY: Sciknow Publications Ltd.

Bailie, J.M., Cole, W.R., Ivins, B., Boyd, C., Lewis, S., Neff, J., Schwab, K. (2014). The experience, expression, and control of anger following traumatic brain injury in a military sample. *Journal of Head Trauma Rehabilitation*, 95(3 Suppl):S230-7.

Bell, K.R., Brockway, J.A., Fann, J.R., Cole, W.R., De Lore, J.S., Bush, N., et al. (2014). Concussion treatment after combat trauma: Development of a telephone based, problem solving intervention for service members. *Contemporary Clinical Trials*, 40c:54-62.

Belsher, B.E., Curry, J., McCutchan, P., Oxman, T., Corso, K.A., Williams, K., & Engel, C.C. (2014). Implementation of a collaborative care initiative for PTSD and depression in the Army primary care system. *Social Work in Mental Health*, 12(5-6), 500-522.

Brickell, T.A., Lange, R.T., French, L.M. (2014). Three-year outcome following moderate-to-severe TBI in U.S. military service members: a descriptive cross-sectional study. *Military Medicine*, 179(8):839-48.

Bush, N. E., Ouillette .G., & Kinn .J. T. (2014). Utility of the T2 Mood Tracker Mobile Application among Army Warrior Transition Unit Service Members. *Military Medicine*, 179(12), 1453-1457. doi:10.7205/MILMED-D-14-00271

Bush, N. E., Prins, A., Laraway, S., O'Brien, K., Ruzek, J., & Ciulla, R. (2014). A pilot evaluation of the AfterDeployment.org online posttraumatic stress workshop for military service members and Veterans. Psychological Trauma: Theory, Research, Practice, and Policy, 6(2) 109-119. doi:10.1037/a0032179

Carlozzi, N.E., Kratz, A.L., Sander, A., Chiaravalloti, N.D., Brickell, T., Lange, R., Hahn, E.A., Austin, A., Miner, J.A., Tulsky, D.S. (2014). Health-related quality of life in caregivers of individuals with traumatic brain injury: Development of a conceptual model. *Archives of Physical Medicine and Rehabilitation*.

Cifu, D.X., Hart, B.B., West, S.L., Walker, W., Carne, W. (2014). The effect of hyperbaric oxygen on persistent postconcussion symptoms. *Journal of Head Trauma Rehabilitation*, 29(1):11-20.

Cifu, D.X., Walker, W.C., West, S.L., Hart, B.B., Franke, L.M., Sima, A., Graham, C.W., Carne, W. (2014). Hyperbaric oxygen for blast-related postconcussion syndrome: Three-month outcomes. *Annals of Neurology*, 75(2):277-86.

Cooper, D.B., Vanderploeg, R.D., Armistead-Jehle, P., Lewis, J.D., Bowles, A.O. (2014). Factors associated with neurocognitive performance in OIF/OEF servicemembers with postconcussive complaints in postdeployment clinical settings. *Journal of Rehabilitation Research and Development*, 51(7):1023-34.

Dobmeyer, A. C., Goodie, J. L., & Hunter, C. L. (2014). Healthcare provider and system interventions promoting health behavior change. In Riekert, J. Ockene, & L. Pbert (Eds.), *Handbook of Health Behavior Change (4th ed.),* pp. 417-436. New York: Springer.

Dobmeyer, A.C., & Miller, B. (2014). Collaborative care: Health psychologists in primary care settings. In R. Kessler, C. Hunter & C. Hunter (Eds.), *Handbook of Clinical Psychology in Medical Settings: Evidence Based Assessment and Intervention (2nd ed.).* New York: Springer.

Dobmeyer, A.C., & Rowan, A. B. (2014). Core competencies for psychologists: How to succeed in medical settings. In R. Kessler, C. Hunter & C. Hunter (Eds.), *Handbook of Clinical Psychology in Medical Settings: Evidence Based Assessment and Intervention (2nd ed.).* New York: Springer.

Edwards, J., Vess, J., Reger, G., & Cernich, A. (2014) The Use of Virtual Reality in the Military's Assessment of Service Members with Traumatic Brain Injury: Recent Developments and Emerging Opportunities. *Applied Neuropsychology: Adult*, 21(3) 220-30. doi:10.1080/09084282.2013.796554

Engel, C.C., Bray, R.M., Jaycox, L., Freed, M.C., Zatzick, D., Lane, M.E., Brambilla, D., Olmstead, K.R., Vandermaas-Peeler, R., Litz, B., Tanielian, T., Belsher, B.E., Evatt, D.P., Novak, L.A., Unutzer, J., & Katon, W.J. (2014). Collaborative primary care for depression and posttraumatic stress disorder in the U.S. Military Health System: Design and baseline findings of a multisite randomized effectiveness trial. *Contemporary Clinical Trials*, 39(2), 310-319.

Engel, C.C., Cordova, E.H., Benedek, D.M., Liu, X., Gore, K.L., Goertz, C., Freed, M.C., Crawford, C., Jonas, W.B., & Ursano, R.J. (2014). Randomized effectiveness trial of a brief course of acupuncture for posttraumatic stress disorder. *Med Care*, 52(12 Suppl 5), s57-s64.

Fitchett, G., Nieuwsma , J.A., Bates, M.J., Rhodes, J.E., & Meador, K.G. (2014) Evidence-based chaplaincy care: Attitudes and practices in diverse healthcare chaplain samples. *Journal of Health Care Chaplaincy*, 20(4), 144-160.

Franke, L.M., Czarnota, J.N., Ketchum, J.M., Walker, W.C. (2014). Factor analysis of persistent postconcussive symptoms within a military sample with blast exposure. *Journal of Head Trauma Rehabilitation*.

French, L.M., Lange, R.T., Marshall, K., Prokhorenko, O., Brickell, T.A., Bailie, J.M., Asmussen, S.B., Ivins, B., Cooper, D.B., Kennedy, J.E. (2014). Influence of the severity and location of bodily injuries on post-concussive and combat stress symptom reporting after military-related concurrent mild traumatic brain injuries and polytrauma. *Journal of Neurotrauma*.

Goodie, J. L., Dobmeyer, A., & Corso, M. L. (in press). United States Public Health Service (USPHS). In R. Cautin & S. Lilienfeld (Eds.). *The Encyclopedia of Clinical Psychology*. Wiley-Blackwell.

Hamaoka, D., Bates, M.J., McCarroll, J.E., Brim, W.L., Lunasco, T.K., & Rhodes, J.E. (2014). An introduction to military service. In S.J. Cozza, M.N. Goldenberg, and R.J. Ursano (Eds.), *Care of Military Service Members, Veterans, and Their Families*. Washington, DC: American Psychiatric Publishing.

Heinzelmann, M., Reddy, S., French, L., Wang, D., Lee, H., et al. (2014). Military personnel with chronic symptoms following blast traumatic brain injury have differential expression of neuronal recovery and epidermal growth factor receptor genes. *Frontiers in Neurology*, 5:198

Hunter, C.L., Goodie, J. L., Dobmeyer, A. C., & Dorrance, K. (2014). Tipping points in the Department of Defense's experience with psychologists in primary care. *American Psychologist*, 69, 388-398.

Ivins, B.J., Lange, R.T., Cole, W.R., Kane, R., Schwab, K.A., Iverson, G.L. (2014). Using base rates of low scores to interpret the ANAM4 TBI-MIL battery following mild traumatic brain injury. *Archives of Clinical Neuropsychology*, 30(1): 26-38.

Khusid, M. (2014). Clinical indications for acupuncture in chronic posttraumatic headache management. *Military Medicine*.

Lange, R.T., Brickell, T.A., Kennedy, J.E., Bailie, J.M., Sills, C., Asmussen, S., Amador, R., Dilay, A., Ivins, B., French, L.M. (2014). Factors influencing postconcussion and posttraumatic stress symptom reporting following military-related concurrent polytrauma and traumatic brain injury. *Archives of Clinical Neuropsychology*, 29(4): 329-47.

Lange, R.T., Panenka, W.J., Shewchuk, J.R., Heran, M.K., Brubacher, J.R., Bioux, S., et al. (2014). Diffusion tensor imaging findings and postconcussion symptom reporting six weeks following mild traumatic brain injury. *Archives of Clinical Neuropsychology.*

Lange, R.T., Shewchuk, J.R., Heran, M.K., Rauscher, A., Jarrett, M., Brubacher, J.R., Iverson, G.L. (2014). To exclude or not to exclude: further examination of the influence of white matter hyperintensities in diffusion tensor imaging research. *Journal of Neurotrauma,* 31(2): 198-205.

Liu, X. (2014). Survival models on unobserved heterogeneity and their applications in analyzing large-scale survey data. *J Biomet Biostat*, 5(191), 2-12.

Luxton, D. D. (2014). Artificial intelligence in psychological practice: Current and future applications and implications. *Professional Psychology: Research and Practice*, 45(5), 332-339. doi:10.1037/a0034559

Luxton, D. D. (2014). Recommendations for the ethical use and design of artificial intelligent care providers. *Artificial Intelligence in Medicine*, 62(1), 1-10. doi:10.1016/j.artmed.2014.06.004

Luxton, D. D., Hansen, R. N., & Stanfill, K. (2014). Mobile app self-care versus in-office care for stress reduction: A cost minimization evaluation. *Journal of Telemedicine and Telecare*, 20(8), 431-435. doi:10.1177/1357633X14555616

Luxton, D. D., O'Brien, K., Pruitt, L. D., Johnson, K., & Kramer, G. (2014). Suicide Risk Management during Clinical Telepractice. *International Journal of Psychiatry in Medicine*, 48(1), 19-31. doi:10.2190/PM.48.1.c

Luxton, D. D., Pruitt, L. D., O'Brien, K., Stanfill, K., Jenkins-Guarnieri, M., Johnson, K,…Gahm, G.A. (2014). Design and methodology of a randomized clinical trial of home-based telemental health treatment for military service members and veterans with depression. *Contemporary Clinical Trials*, 38(1),134-144. doi:10.1016/j.cct.2014.04.002

Luxton, D. D., Pruitt, L. D., & Osenbach, J. E. (2014). Best practices for remote psychological assessment via telehealth technologies. *Professional Psychology: Research & Practice*, 45(1), 27-35. doi:10.1037/a0034547

Luxton, D. D., Thomas, E. K., Chipps, J., Relova, R. M., Brown, D., McLay, R. & Smolenski, D. J. (2014). Caring letters for suicide prevention: Implementation of a multi-site randomized clinical trial in the U.S. military and veteran affairs healthcare systems. *Contemporary Clinical Trials*, 37(2), 252-260. doi:10.1016/j.cct.2014.01.007

Marion, D.W., Regasa, L.E. (2014). Revisiting therapeutic hypothermia for severe traumatic brain injury again. *Critical Care* (London, England), 18(3):160.

McCann, R. A., Armstrong, C. M., Skopp, N. A., Edwards-Stewart, A., Smolenski, D. J., June, J. D,… Reger, G. M. (2014). Virtual reality exposure therapy for the treatment of anxiety disorders: An evaluation of research quality. *Journal of Anxiety Disorders*, 28(6), 625-631. doi:10.1016/j.janxdis.2014.05.010

McCrea, M., Guskiewicz, K., Doncevic, S., Helmick, K., Kennedy, J., Boyd, C., Asmussen, S., Ahn, K.W., Wang, Y., Hoelzle, J., Jaffee, M. (2014). Day of injury cognitive performance on the military acute concussion evaluation (MACE) by U.S. military service members in OEF/OIF. *Military Medicine,* 179(9):990.

Merritt, V., Lange, R., Bowles, S., French, L. (2014). C-39 resilience and symptom reporting following mild traumatic brain injury. *Archives of Clinical Neuropsychology*, 29(6):588.

Mysliwiec, V., Williams, S., Baxter, T., Germain, T., O'Reilly, B., & Luxton, D. D. (2014). Preventing Sleep Casualties: Understanding the Unique Aspects of Sleep and Sleep Disorders in Active Duty Service Members. *Combat Stress*.

Pogoda, T.K., Stolzmann, K.L., Iverson, K.M., Baker, E., Krengel, M., Lew, H.L., et al. (2014). Associations between traumatic brain injury, suspected psychiatric conditions, and unemployment in operation enduring freedom/operation Iraqi freedom veterans. *Journal of Head Trauma Rehabilitation*.

Pruitt, L. D., Luxton, D. D., & Shore, P. (2014). Additional Clinical Benefits of Home-Based Telemental Health. *Professional Psychology: Research and Practice*, 45(5), 340-346. doi:10.1037/a0035461

Reid, M.W., Miller, K.J., Lange, R., Cooper, D., Tate, D.F., Bailie, J., Brickett, T.A., French, L.M., Asmussen, S., Kennedy, J. (2014). A multisite study of the relationships between blast exposures and symptom reporting in a post-deployment active duty military population with mild traumatic brain injury. *Journal of Neurotrauma*, 31(23):1899-906.

Shore, J., Aldag, M., McVeigh, F., Hoover, R., Ciulla, R., & Fisher, A. (2014). Review of Mobile Health Technology for Military Mental Health. *Military Medicine*, 179(8), 865-78. doi:10.7205/MILMED-D-13-00429

Shore, J. H., Mishkind, M. C., Bernard, J., Doarn, C. R., Bell Jr., I., Bhatla, R,…Vo, A. (2014). A Lexicon of Assessment and Outcome Measures for Telemental Health. *Telemedicine and e-Health*, 20(3), 282-292. doi:10.1089/tmj.2013.0357

Skopp, N. A., Smolenski, D. J., Metzger-Abamukung, M. J., Rizzo, A. S., & Reger, G.M. (2014). A Pilot Study of the VirtuSphere© as a Virtual Reality Enhancement. *International Journal of Human-Computer Interaction*, 30(1), 24-31. doi:10.1080/10447318.2013.796441

Soble, J., Silva, M., Vanderploeg, R., Curtiss, G., Belanger, H., Donnell, A., Scott, S. (2014). Normative data for the neurobehavioral symptom inventory (NSI) and post-concussion symptom profiles among TBI, PTSD, and nonclinical samples. *The Clinical Neuropsychologist*.

Stanfill, K. E., Kinn, J., & Bush, N. (2014). Soldiers' Preferences for Follow-Up Communications with Behavioral Health Providers. *Telemedicine and e-Health*, 20(8), 742-743. doi:10.1089/tmj.2013.0306

Stratton, K.J., Clark, S.L., Hawn, S.E., Amstadter, A.B., Cifu, D.X., Walker, W.C. (2014). Longitudinal interactions of pain and posttraumatic stress disorder symptoms in U.S. Military service members following blast exposure. *The Journal of Pain*, 15(10):1023-32.

Tate, D.F., York, G.E., Reid, M.W., Cooper, D.B., Jones, L., Robin, D.A., et al. (2014). Preliminary findings of cortical thickness abnormalities in blast injured service members and their relationship to clinical findings. *Brain Imaging and Behavior*, 8(1):102-9.

Tate, R., Kennedy, M., Posford, J., Douglas, J., Velikonja, D., Bayley, M., Stergiou-Kita, M. (2014). INCOG recommendations for management of cognition following traumatic brain injury, part III: executive function and self-awareness. *Journal of Head Trauma Rehabilitation*, 29(4):338-52.

Teyhen, D. S., Aldag, M., Centola, D., Edinborough, E., Ghannadian, J. D., Haught, A,…Parramore, D. J. (2014). Incentives to create and sustain healthy behaviors: technology solutions and research needs. *Military Medicine*, 179(12), 1419-1431. doi:10.7205/MILMED-D-14-00111

Teyhen, D. S., Aldag, M., Centola, D., Edinborough, E., Ghannadian, J. D., Haught, A,…Parramore, D. J. (2014). Key Enablers to Facilitate Healthy Behavior Change: Workshop Summary. *Journal of Orthopaedic & Sports Physical Therapy*, 44(5), 378-387. doi:10.2519/jospt.2014.0301

Teyhen, D. S., Aldag, M., Edinborough, E., Ghannadian, J. D., Haught, A., Kinn, J,…Parramore, D. J. (2014). Leveraging Technology: Creating and Sustaining Changes for Health. Telemedicine and e-Health, 20(9), 835-849. doi:10.1089/tmj.2013.0328

Toyinbo, P.A., Vanderploeg, R.D., Donnell, A.J., Mutolo, S.A., Cook, K.F., Kisala, P.A., et al. (2014). Development and initial validation of military deployment-related TBI quality-of-life item banks. *Journal of Head Trauma Rehabilitation*.

Ursano, R.J., McKibben, J.B., Reissman, D.B., Liu, X., Wang, L., Sampson, R.J., Fullerton, C.S. (2014). Posttraumatic stress disorder and neighborhood cohesion following the 2004 Florida hurricanes. *PLoS One*, 9(2), e88467.

Vanderploeg, R.D., Belanger, H.G. (2014). Stability and validity of the Veterans Health Administration's traumatic brain injury clinical reminder screen. *Journal of Head Trauma Rehabilitation.*

Vanderploeg, R.D., Cooper, D.B., Belanger, H.G., Donnell, A.J., Kennedy, J.E., Hopewell, C.A., Scott, S.G. (2014). Screening for postdeployment conditions: development and cross-validation of an embedded validity scale in the neurobehavioral symptom inventory. *Journal of Head Trauma Rehabilitation*, 29(1): 1-10.

Verbrugge, L. M. & Liu, X. (2014). Midlife trends in activities and disability. *Journal of Aging and Health*, 26(2), 178-206.

West, A., Sharp, S. (2014). Neuroendocrine dysfunction following mild traumatic brain injury: When to screen for it. *Journal of Family Practice*, 63(1).

West, T.A., Marion, D.W. (2014). current recommendations for the diagnosis and treatment of concussion in sport: A comparison of three new guidelines. *Journal of Neurotrauma,* 31(2):159-68.

Yeh, P.H., Wang, B., Oakes, T.R., French, L.M., Graner, J., Liu, W., Riedy, G. (2014). Postconcussional disorder and PTSD symptoms of military-related traumatic brain injury associated with compromised neurocircuitry. *Human Brain Mapping,* 35(6): 2652-73.

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